

THIRD INTERIM REPORT
SITE CHARACTERIZATION
NINTH AVENUE TERMINAL STUDY AREA
PORT OF OAKLAND
OAKLAND, CALIFORNIA
SCI 133.004

VOLUME IV OF VI

APPENDIX F - ANALYTICAL TEST REPORTS, CHROMATOGRAPHS,
AND CHAIN-OF-CUSTODY FORMS FOR SCI'S
JANUARY/FEBRUARY 1997 DATA GAP STUDY (PART 2)

JULY 25, 1997

Subsurface Consultants, Inc.

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**APPENDIX F - ANALYTICAL TEST REPORTS, CHROMATOGRAPHS, AND
CHAIN-OF-CUSTODY FORMS FOR SCIP'S
JANUARY/FEBRUARY 1997 DATA GAP STUDY (PART 2)**



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Lafayette, CA 94549

Date: 19-FEB-97
Lab Job Number: 128194
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128194-001	SCI-51 @ 1'	32378	01/30/97	02/14/97	02/14/97	
128194-002	SCI-51 @ 5'	32250	01/30/97	02/06/97	02/06/97	

Matrix: Soil

Analyte	Units	128194-001	128194-002
Diln Fac:		1	1
Gasoline	mg/Kg	<1	<1
Surrogate			
Trifluorotoluene	%REC	80	93
Bromobenzene	%REC	84	85



Lab #: 128194

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32250
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/06/97
Analysis Date: 02/06/97

MB Lab ID: QC39624

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	89	52-127
Bromobenzene	80	45-140



Lab #: 128194

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32378
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/14/97
Analysis Date: 02/14/97

MB Lab ID: QC40114

Analyte	Result		
Gasoline	<1.0		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	77	52-127	
Bromobenzene	76	45-140	



Lab #: 128194

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32250
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/06/97
Analysis Date: 02/06/97

LCS Lab ID: QC39622

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.92	10	99	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	96	52-127		
Bromobenzene	98	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128194

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32378
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/14/97
Analysis Date: 02/14/97

LCS Lab ID: QC40112

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.02	10	90	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	84	52-127		
Bromobenzene	96	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128194

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/10/97
Lab ID: 128295-004	Received Date: 02/10/97
Matrix: Soil	Prep Date: 02/14/97
Batch#: 32378	Analysis Date: 02/14/97
Units: mg/Kg dry weight	Moisture: 3%
Diln Fac: 1	

MS Lab ID: QC40115

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	10.31	<1.031	9.227	90	65-135
Surrogate	%Rec	Limits			
Trifluorotoluene	86	52-127			
Bromobenzene	94	45-140			

MSD Lab ID: QC40116

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	10.31	9.619	93	65-135	4	30
Surrogate	%Rec	Limits				
Trifluorotoluene	87	52-127				
Bromobenzene	93	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128194-001	SCI-51 @ 1'	32255	01/30/97	02/05/97	02/14/97	
128194-002	SCI-51 @ 5'	32255	01/30/97	02/05/97	02/12/97	
128194-003	SCI-51 @ 11'	32255	01/30/97	02/05/97	02/12/97	
128194-004	SCI-51 @ 20'	32255	01/30/97	02/05/97	02/12/97	

Matrix: Soil

Analyte	Units	128194-001	128194-002	128194-003	128194-004
Diln Fac:		5	1	1	1
Diesel C12-C22	mg/Kg	80 YH	11 YH	19 YH	4.4YH
Motor Oil C22-C50	mg/Kg	930 Y	110 Y	54 Y	28 Y
Surrogate					
Hexacosane	%REC	100	104	117	118

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128194-005	SCI-54 @ 6.5'	32255	01/30/97	02/05/97	02/12/97	
128194-006	SCI-54 @ 15'	32255	01/30/97	02/05/97	02/13/97	
128194-007	SCI-55 @ 4.5'	32255	01/30/97	02/05/97	02/14/97	
128194-008	SCI-55 @ 7.5'	32255	01/30/97	02/05/97	02/13/97	

Matrix: Soil

Analyte	Units	128194-005	128194-006	128194-007	128194-008
Diln Fac:		1	1	20	10
Diesel C12-C22	mg/Kg	<1	8 YH	5600 YLH	1100 YLH
Motor Oil C22-C50	mg/Kg	<5	36 Y	3400 Y	970 Y
Surrogate					
Hexacosane	%REC	100	112	DO	DO

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128194-009	SCI-53 @ 2'	32255	01/30/97	02/05/97	02/13/97	
128194-010	SCI-53 @ 6'	32255	01/30/97	02/05/97	02/13/97	

Matrix: Soil

Analyte	Units	128194-009	128194-010
Diln Fac:		1	1
Diesel C12-C22	mg/Kg	17 YH	11 YH
Motor Oil C22-C50	mg/Kg	66 Y	48 Y
Surrogate			
Hexacosane	%REC	115	95

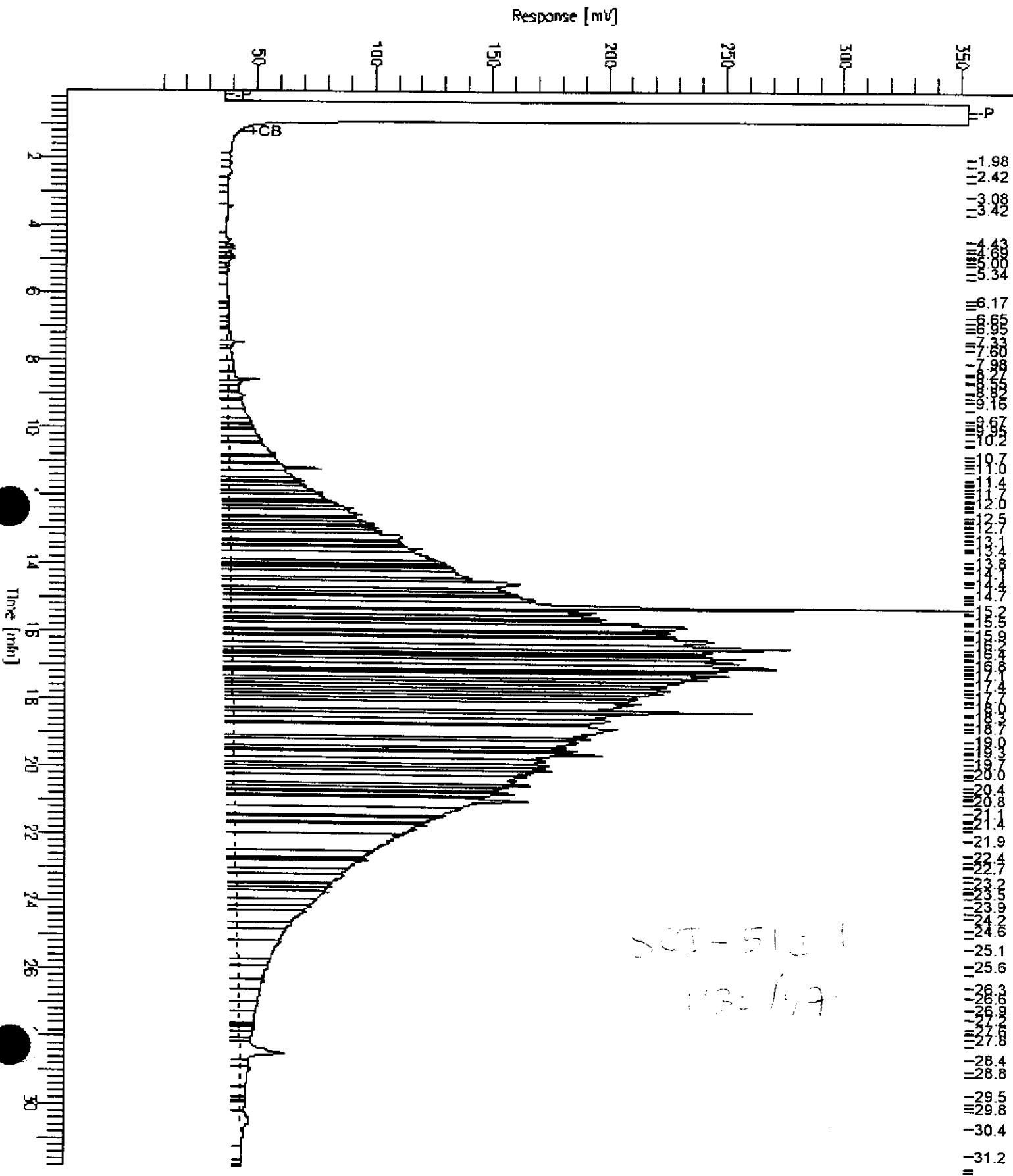
Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

Chromatogram

Sample Name : 128194-001,32255
 File Name : G:\GC11\CHB\044B029.RAW
 Method : BTEH036.MTH
 Start Time : 0.01 min
 Factor : 0.0

End Time : 31.85 min
 Plot Offset: 5 mV

Sample #: 32255
 Date : 2/17/97 11:55 AM
 Time of Injection: 2/14/97 10:59 AM
 Low Point : 8.05 mV
 High Point : 353.01 mV
 Plot Scale: 345.0 mV



Chromatogram

Sample Name : 128194-002,32255

FileName : G:\GC11\CHB\041B058.RAW

Method : BTEH050.MTH

Start Time : 0.00 min

End Time : 31.90 min

Factor : 0.0

Plot Offset : -17 mV

Sample #: 32255

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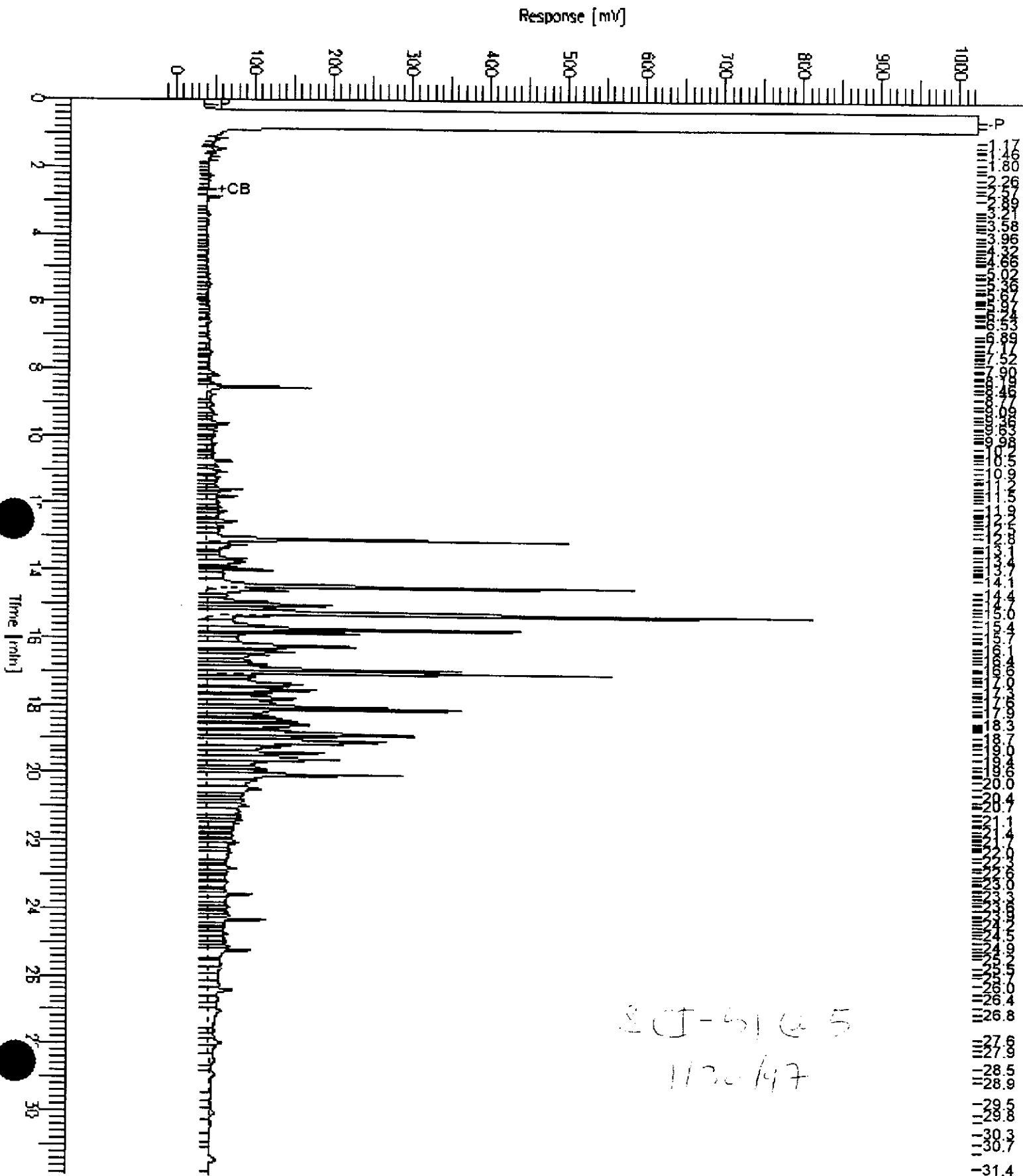
Date : 2/19/97 01:03 PM

Time of Injection: 2/12/97 09:10 PM

Low Point : -17.01 mV

High Point : 1024.00 mV

Plot Scale: 1041.0 mV

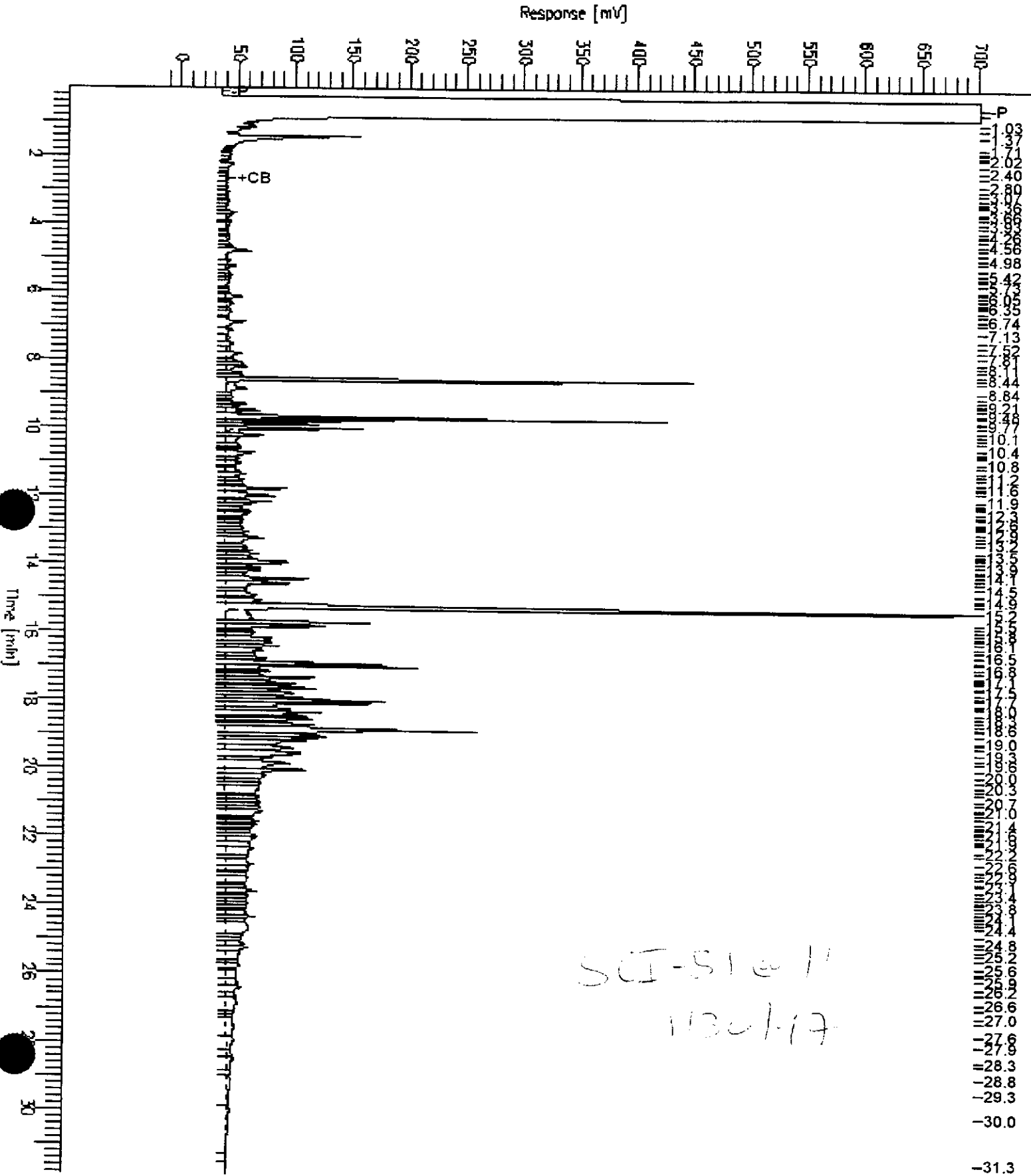


Chromatogram

Sample Name : 128194-003,32255
FileName : G:\GC11\CHB\041B059.RAW
Method : BTEH050.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -17 mV

Sample #: 32255
Date : 2/19/97 01:04 PM
Time of Injection: 2/12/97 09:53 PM
Low Point : -17.32 mV
Plot Scale: 718.9 mV
High Point : 701.55 mV

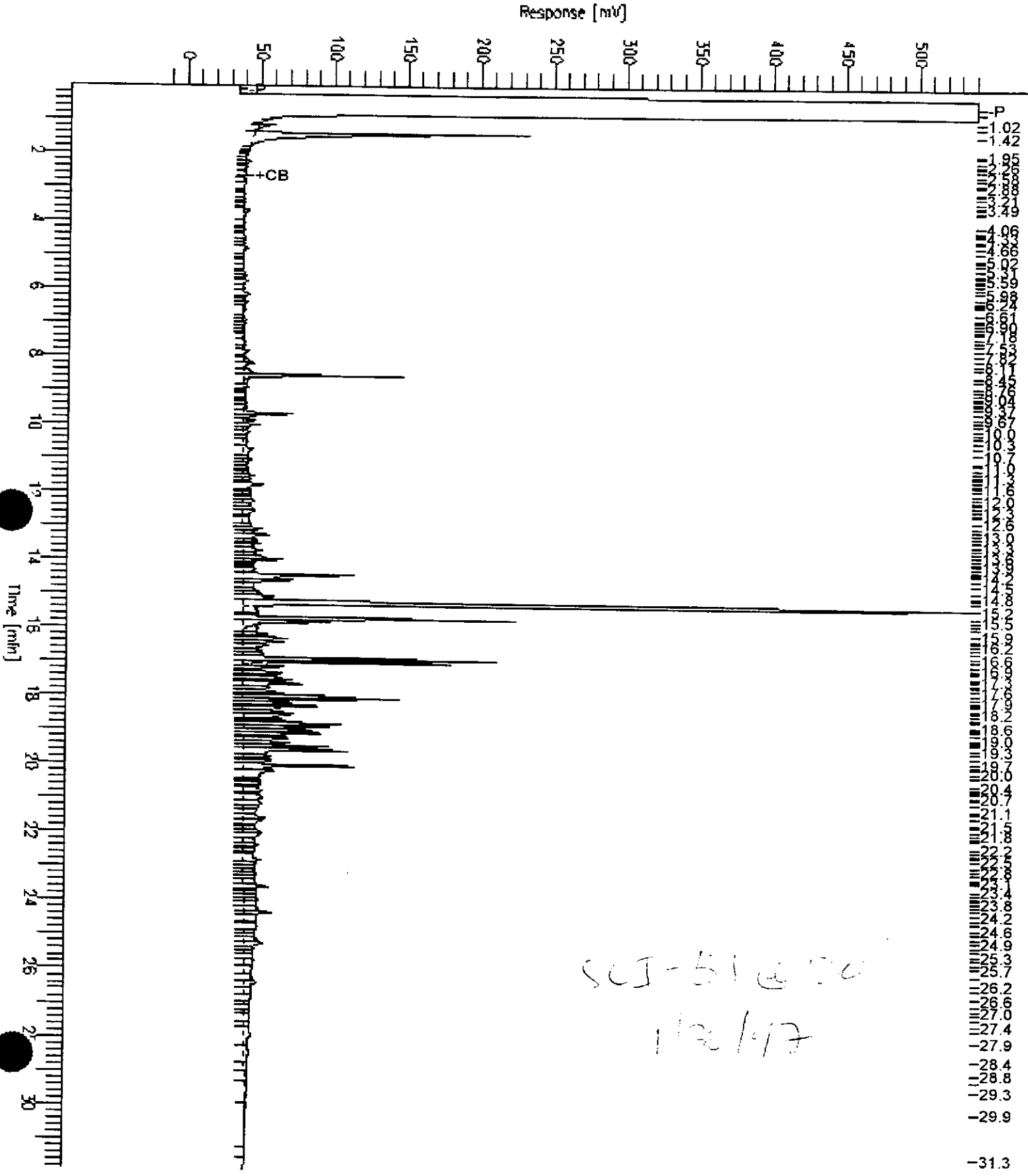


Chromatogram

Sample Name : 128194-004,32255
File Name : G:\GC11\CHB\041B060.RAW
Method : BTEH050.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -17 mV

Sample #: 32255
Date : 2/19/97 01:04 PM
Time of Injection: 2/12/97 10:36 PM
Low Point : -17.38 mV
High Point : 540.12 mV
Plot Scale: 557.5 mV



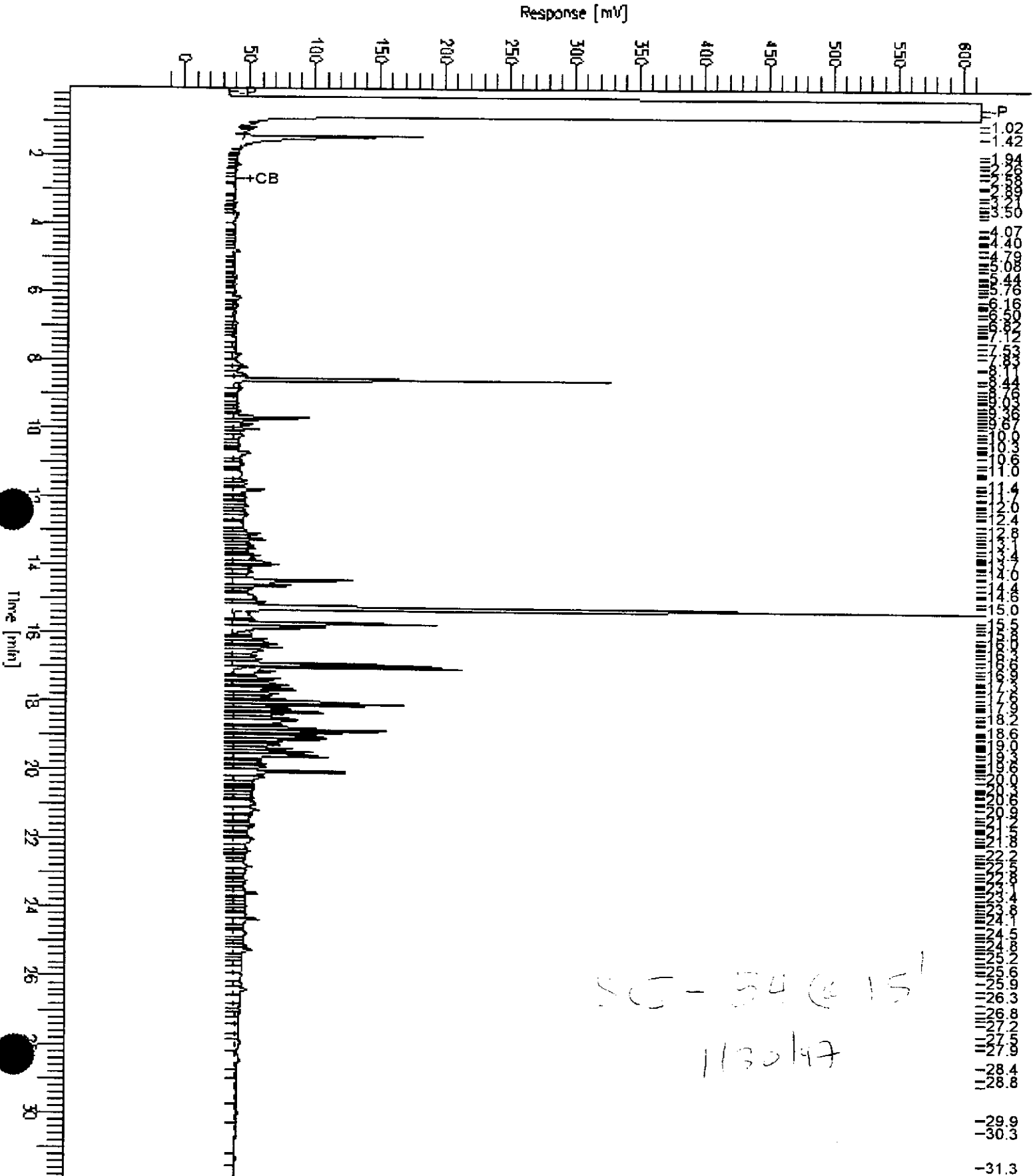
Chromatogram

Sample Name : 128194-006,32255
FileName : G:\GC11\CHB\041B062.RAW
Method : BTEH050.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -17 mV

Sample #: 32255
Date : 2/19/97 01:05 PM
Time of Injection: 2/13/97 12:03 AM
Low Point : -17.29 mV
High Point : 613.88 mV
Plot Scale: 631.2 mV

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Chromatogram

Sample Name : 128194-007,32255

Sample #: 32255

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FileName : G:\GC11\CHB\0448030.RAW

Date : 2/17/97 11:58 AM

Method : BTEH036.MTH

Time of Injection: 2/14/97 11:42 AM

Start Time : 0.01 min

End Time : 31.91 min

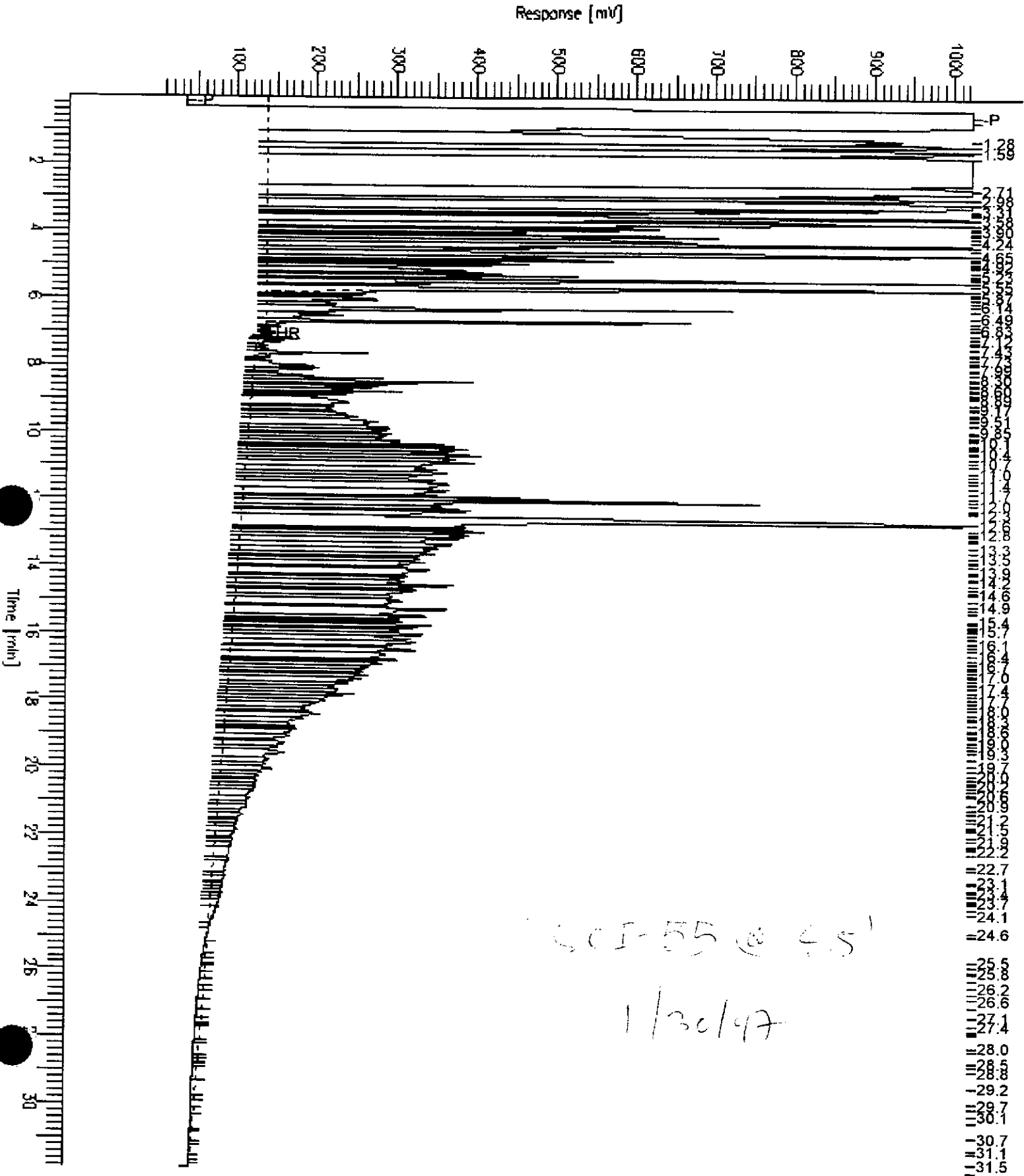
Low Point : 2.92 mV

High Point : 1024.00 mV

Factor: 0.0

Plot Offset: 3 mV

Plot Scale: 1021.1 mV

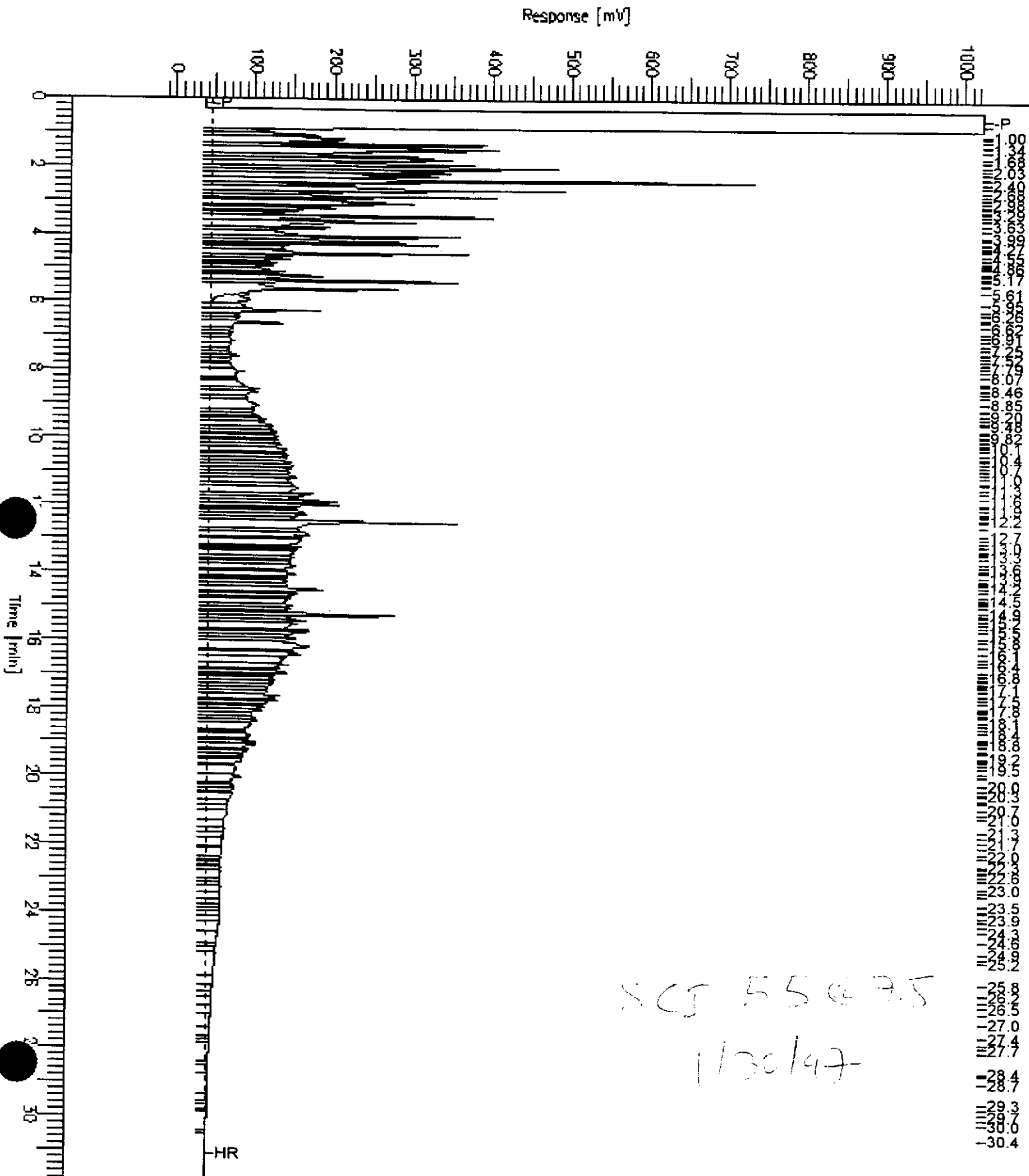


Chromatogram

Sample Name : 128194-008,32255
FileName : G:\GC11\CHBA\041B068.RAW
Method : BTEH050.MTH
Time : 0.00 min
Factor : 0.0

End Time : 31.90 min
Plot Offset : -16 mV

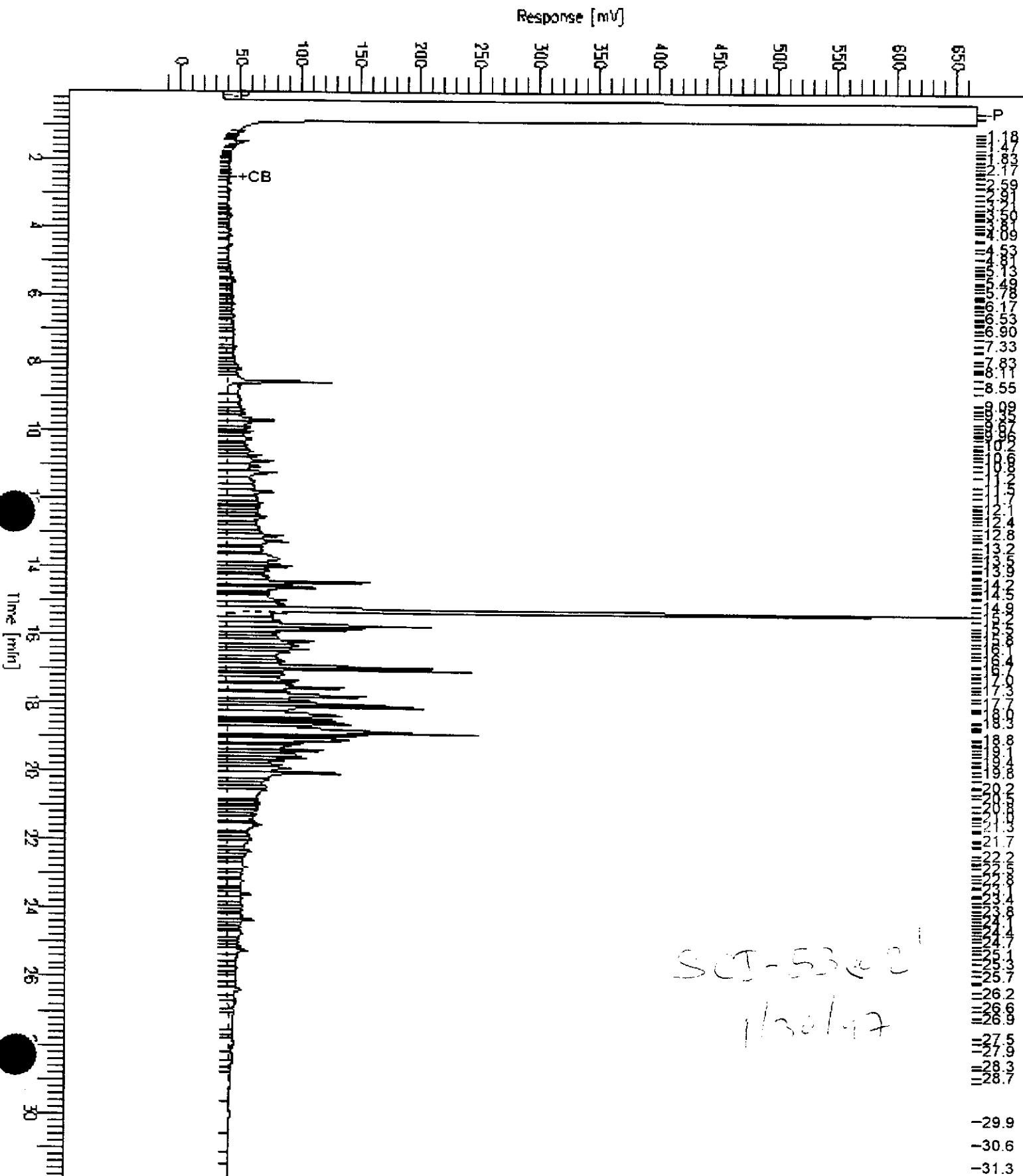
Sample #: 32255
Date : 2/19/97 01:06 PM
Time of Injection: 2/13/97 04:21 AM
Low Point : -16.31 mV
High Point : 1024.00 mV
Plot Scale: 1040.3 mV



Chromatogram

Sample Name : 128194-009,32255
FileName : G:\GC11\CHBA\041B069.RAW
Method : BTEH050.MTH
Start Time : 0.01 min
Factor : 0.0

Sample #: 32255
Date : 2/19/97 01:07 PM
Time of Injection: 2/13/97 05:04 AM
End Time : 31.91 min
Low Point : -16.49 mV
High Point : 666.94 mV
Plot Offset: -16 mV
Plot Scale: 683.4 mV



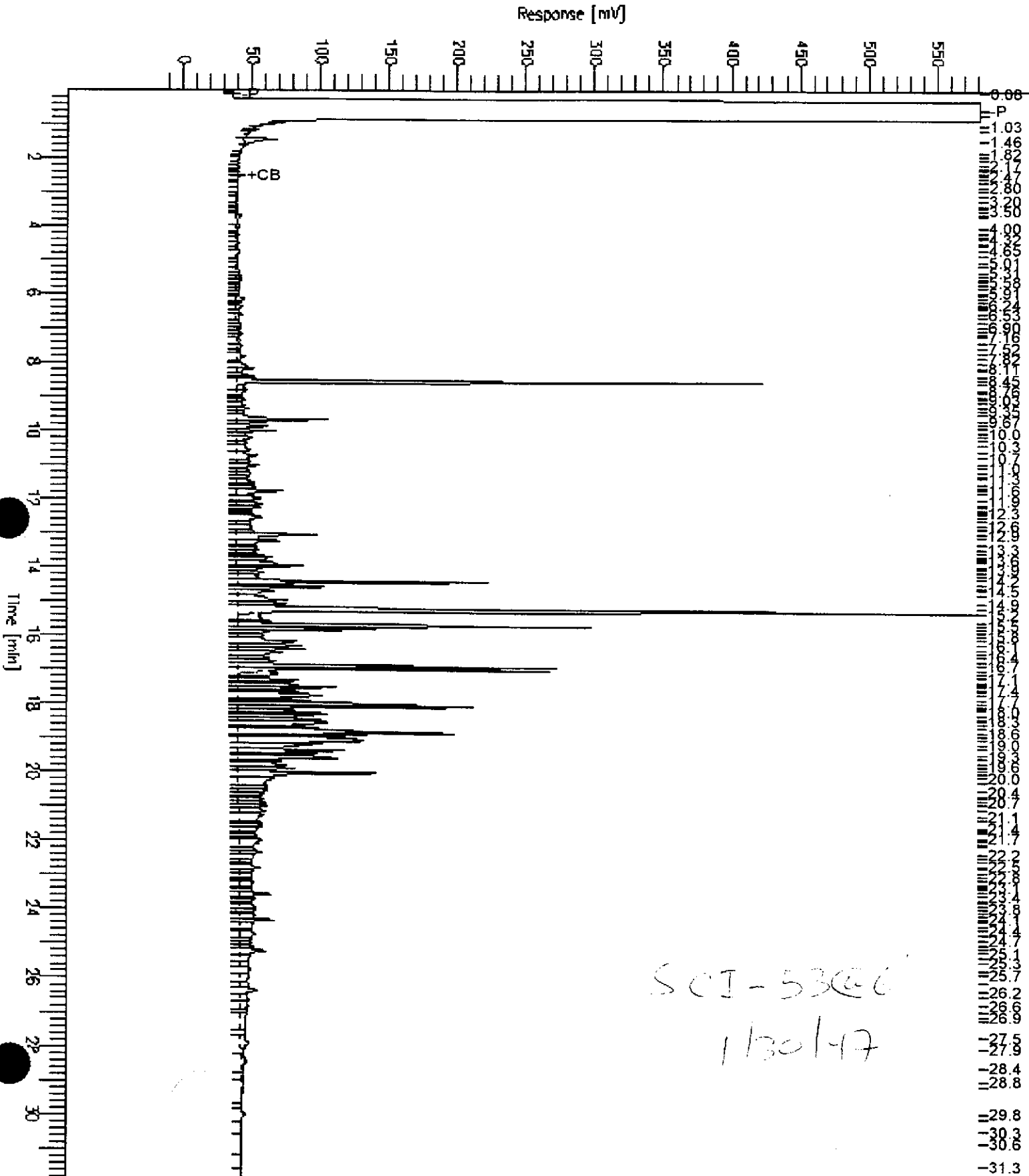
Chromatogram

Sample Name : 128194-010,32255
FileName : G:\GC11\CHB\041B070.RAW
Method : BTEH050.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset: -17 mV

Sample #: 32255
Date : 2/19/97 01:08 PM
Time of Injection: 2/13/97 05:47 AM
Low Point : -16.88 mV
High Point : 581.92 mV
Plot Scale: 598.8 mV

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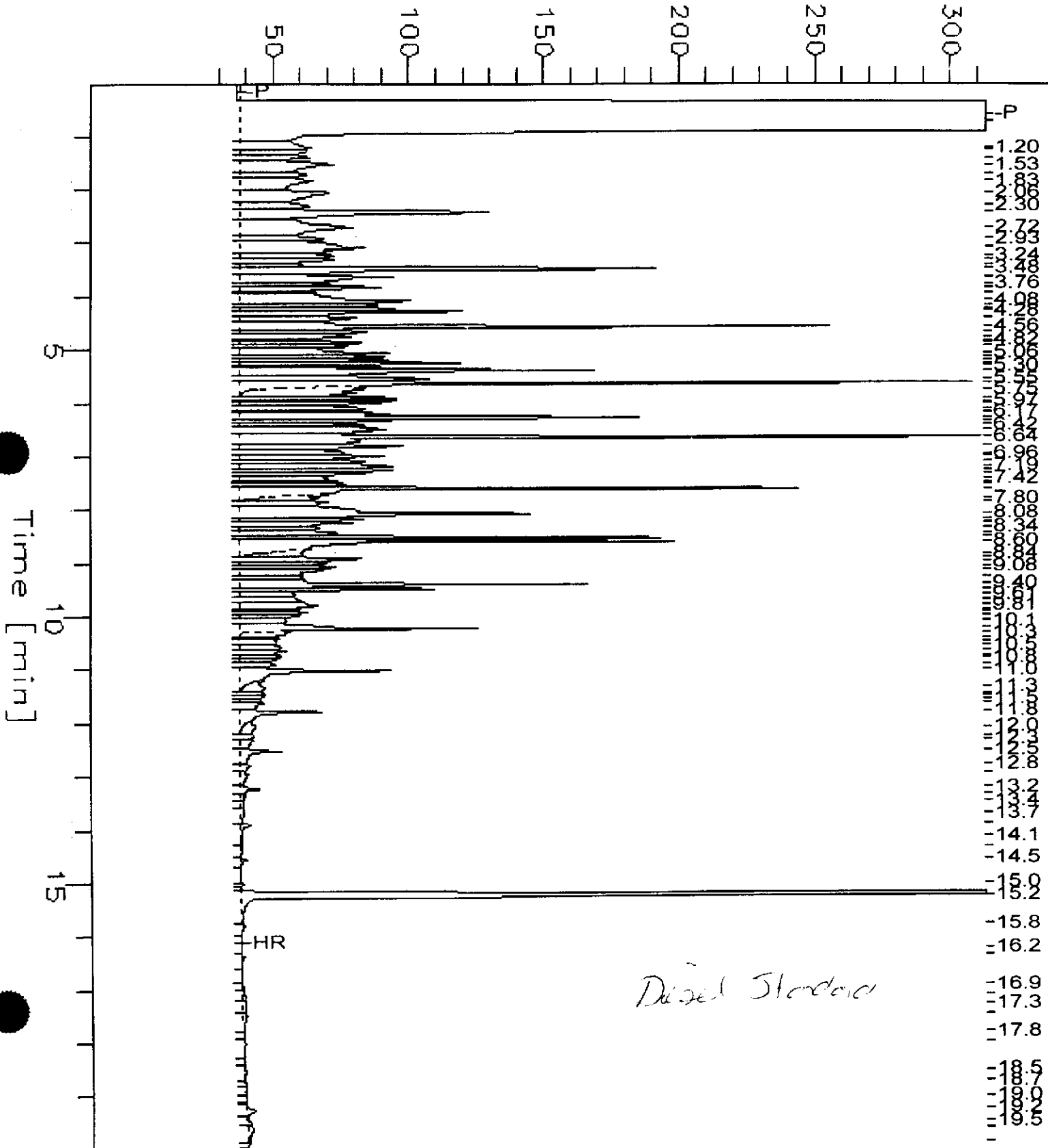
Chromatogram

Sample Name : CCV,97WS3659,DS
FileName : G:\GC11\CHB\044B007.RAW
Method : BTEH036.MTH
Start Time : 0.01 min
End Time : 19.99 min
Plot Offset : 29 mV

Sample #: 500MG/L
Date : 2/18/97 02:25 PM
Time of Injection: 2/13/97 07:24 PM
Low Point : 28.98 mV
High Point : 313.07 mV
Plot Scale: 284.1 mV

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Response [mV]



Chromatogram

Sample Name : CCV, 97WS3691, MO

FileName : G:\GC11\CHB\0419052.RAW

Method : BTEH036.MTH

Start Time : 0.01 min

Factor: 0.0

End Time : 31.91 min

Plot Offset: -16 mV

Sample #: 500MG/L

Date : 2/19/97 11:19 AM

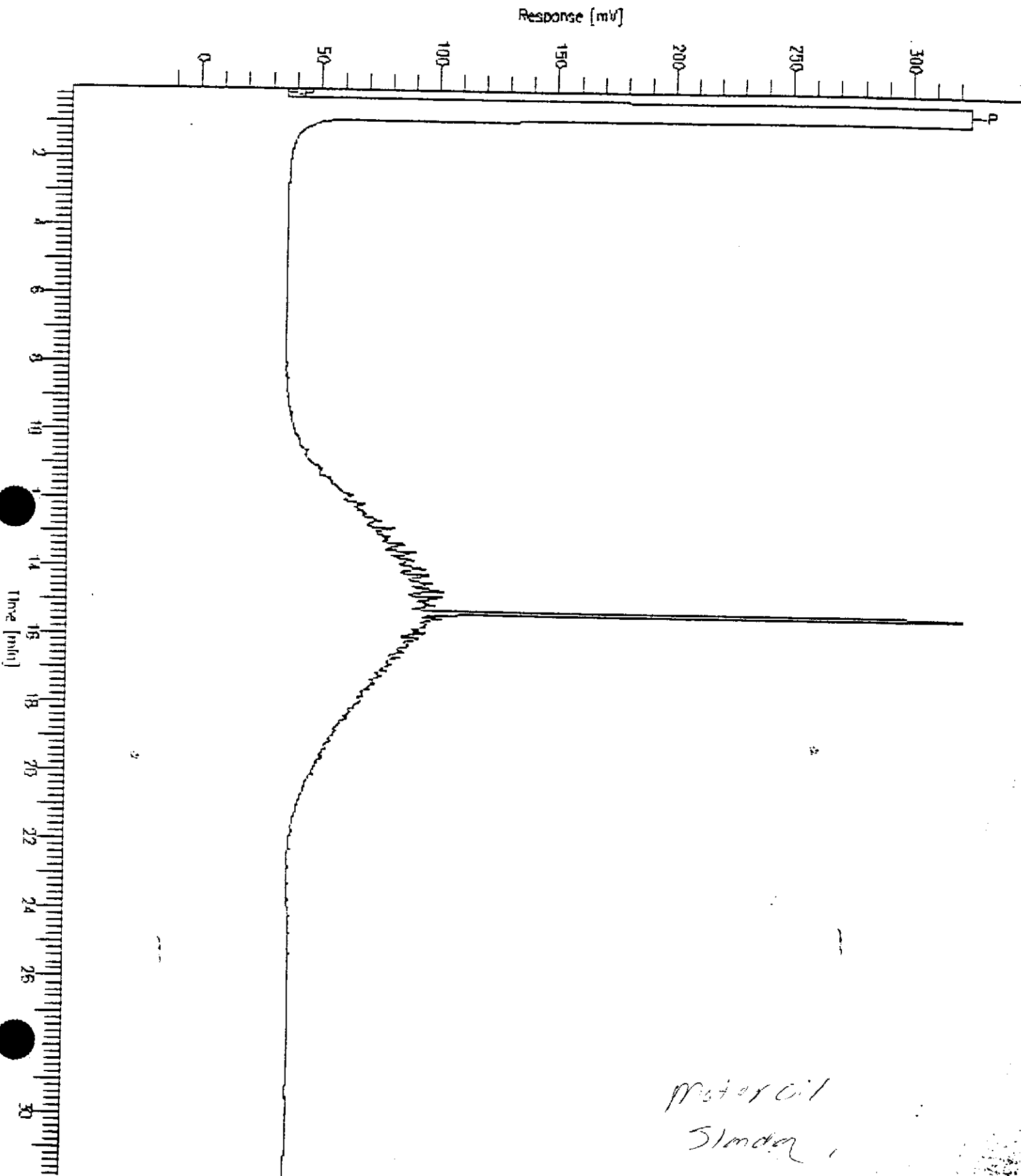
Time of Injection: 2/12/97 01:52 PM

Low Point : -15.95 mV

Plot Scale: 340.4 mV

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High Point : 324.44 mV





Lab #: 128194

BATCH QC REPORT

TEH-Tot. Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32255
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/13/97

MB Lab ID: QC39642

Analyte	Result		
Diesel C12-C22	<1.0		
Motor oil C22-C50	<5.0		
Surrogate	%Rec		Recovery Limits
Hexacosane	103		60-140



Lab #: 128194

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: CA LUFT		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date:	02/05/97	
Batch#: 32255	Analysis Date:	02/13/97	
Units: mg/Kg			
Diln Fac: 1			

LCS Lab ID: QC39643

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	42.8	49.5	86	60-140
Surrogate	%Rec	Limits		
Hexacosane	107	60-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128194-001	SCI-51 @ 1'	32378	01/30/97	02/14/97	02/14/97	
128194-002	SCI-51 @ 5'	32250	01/30/97	02/06/97	02/06/97	

Matrix: Soil

Analyte	Units	128194-001	128194-002
Diln Fac:		1	1
Benzene	ug/Kg	<5	<5
Toluene	ug/Kg	<5	6.7
Ethylbenzene	ug/Kg	<5	<5
m,p-Xylenes	ug/Kg	<5	<5
o-Xylene	ug/Kg	<5	<5
Surrogate			
Trifluorotoluene	%REC	74	92
Bromobenzene	%REC	85	89

Lab #: 128194

BATCH QC REPORT

Page 1 of 1

BTXE			
Client:	Subsurface Consultants	Analysis Method:	EPA 8020
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/06/97
Batch#:	32250	Analysis Date:	02/06/97
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC39624

Analyte	Result		
Benzene	<5.0		
Toluene	<5.0		
Ethylbenzene	<5.0		
m,p-Xylenes	<5.0		
o-Xylene	<5.0		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	89		52-127
Bromobenzene	86		45-140

Lab #: 128194

BATCH QC REPORT

Page 1 of 1

BTXE			
Client:	Subsurface Consultants	Analysis Method:	EPA 8020
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/14/97
Batch#:	32378	Analysis Date:	02/14/97
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC40114

Analyte	Result		
Benzene	<5.0		
Toluene	<5.0		
Ethylbenzene	<5.0		
m,p-Xylenes	<5.0		
o-Xylene	<5.0		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	77	52-127	
Bromobenzene	76	45-140	



Lab #: 128194

BATCH QC REPORT

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BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/06/97		
Batch#: 32250	Analysis Date: 02/06/97		
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39623

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	102.9	100	103	80-120
Toluene	106	100	106	80-120
Ethylbenzene	107.5	100	108	80-120
m,p-Xylenes	219.3	200	110	80-120
o-Xylene	107	100	107	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	93	52-127		
Bromobenzene	91	45-140		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits

Lab #: 128194

BATCH QC REPORT

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BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
LABORATORY CONTROL SAMPLE	
Matrix: Soil	Prep Date: 02/14/97
Batch#: 32378	Analysis Date: 02/14/97
Units: ug/Kg	
Diln Fac: 1	

LCS Lab ID: QC40113

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	91.01	100	91	80-120
Toluene	95.58	100	96	80-120
Ethylbenzene	95.51	100	96	80-120
m,p-Xylenes	190.5	200	95	80-120
o-Xylene	95.92	100	96	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	79	52-127		
Bromobenzene	86	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Lab #: 128194

BATCH QC REPORT

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BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/04/97
Lab ID: 128219-003	Received Date: 02/04/97
Matrix: Soil	Prep Date: 02/06/97
Batch#: 32250	Analysis Date: 02/06/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39625

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	100	<5	90.7	91	75-125
Toluene	100	<5	95.11	95	75-125
Ethylbenzene	100	9.16	110.9	102	75-125
m,p-Xylenes	200	<5	201.6	101	75-125
o-Xylene	100	<5	91.01	91	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	93	52-127			
Bromobenzene	92	45-140			

MSD Lab ID: QC39626

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	100	91.17	91	75-125	1	20
Toluene	100	96.21	96	75-125	1	20
Ethylbenzene	100	111.1	102	75-125	0	20
m,p-Xylenes	200	208.6	104	75-125	3	20
o-Xylene	100	91.27	91	75-125	0	20
Surrogate	%Rec	Limits				
Trifluorotoluene	94	52-127				
Bromobenzene	92	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-51 @ 1'
Lab ID: 128194-001
Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	94	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-51 @ 5'
Lab ID: 128194-002
Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

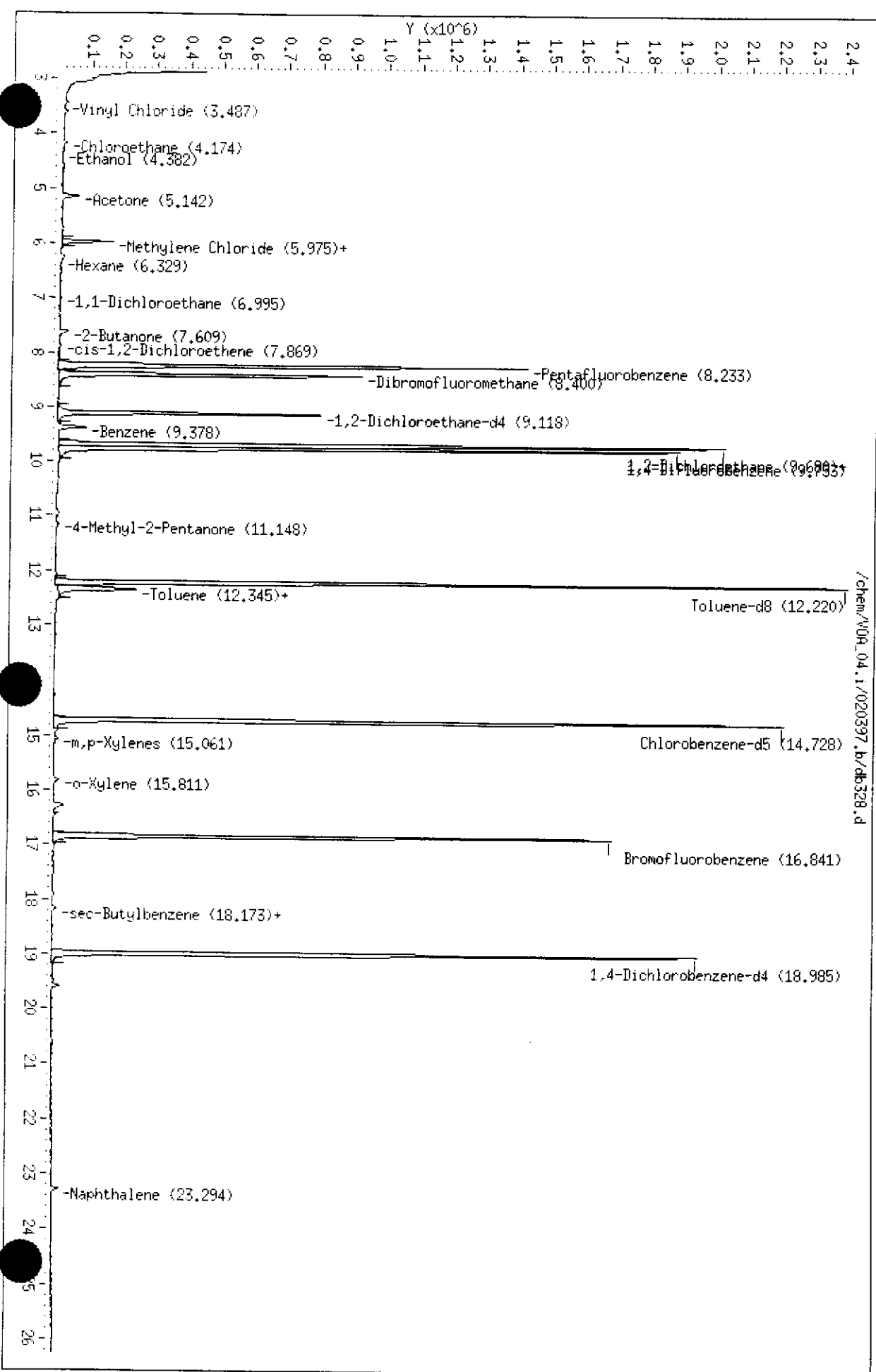
Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	39	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	7.9 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	2.7 J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	105	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	95	79-122

J: Estimated Value

Data File: /chem/V09_04.1/020397.b/db328.d
 Date: 04-FEB-97 01:33
 Client ID: DYNA P&I
 Sample Info: S.128194-002
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V09_04.1
 Operator: LH
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-51 @ 11'
Lab ID: 128194-003
Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	5.2	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	8.5	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	17	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	97	79-122

Data File: /chem/V09_04.1/020397.b/db329.d

Date : 04-FEB-97 02:05

Client ID: DYNA Pal

Sample Info: S.128194-003

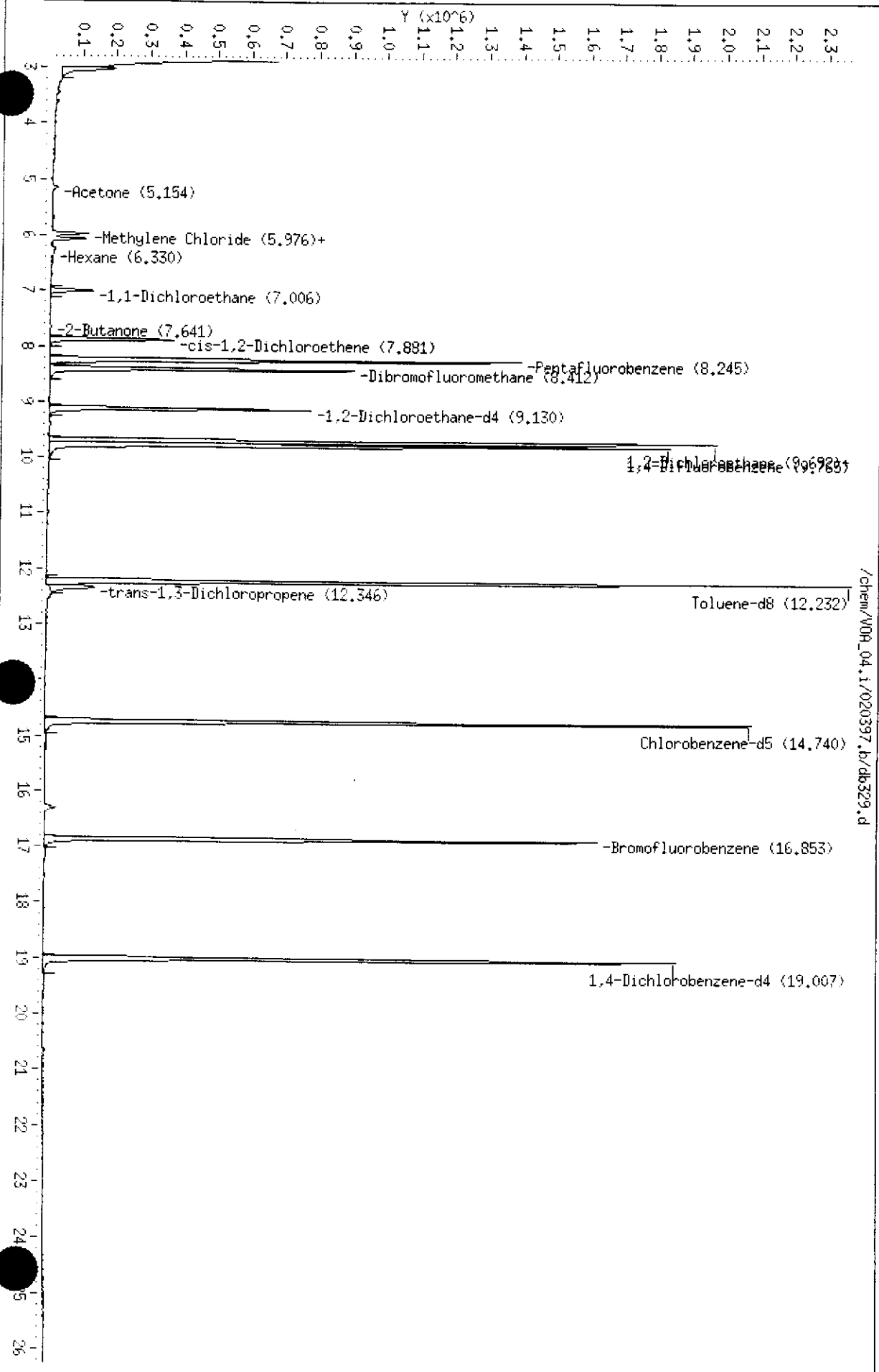
Purge Volume: 5.0

Column phases: RTX Volatiles

Instrument: V09_04.1

Operator: LLH

Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

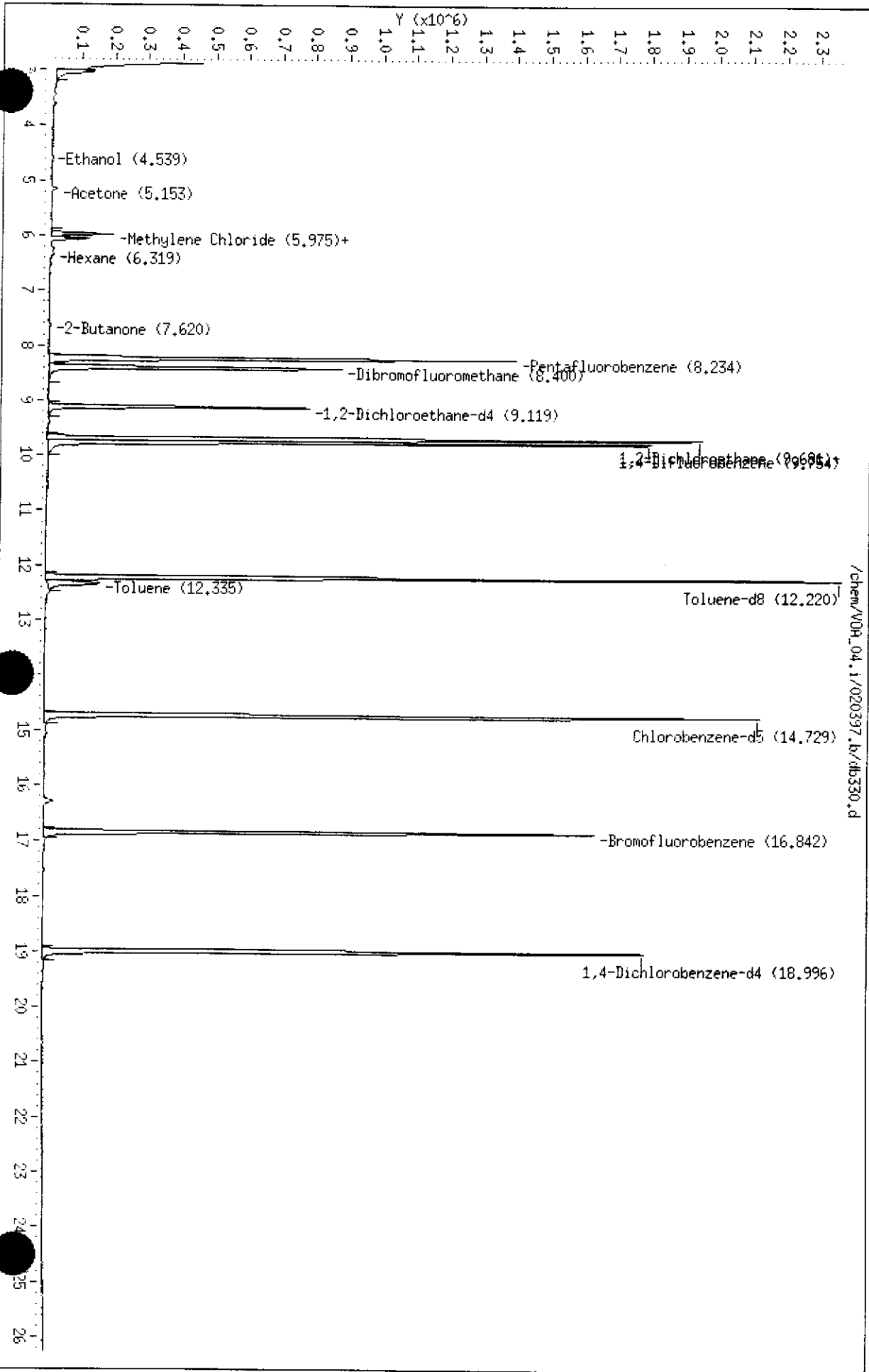
Field ID: SCI-51 @ 20'
Lab ID: 128194-004
Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	5.7	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	105	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	96	79-122

Data File: /chem/V09_04.1/020397.b/db330.d
Date: 04-FEB-97 02:37
Client ID: DYNA P&T
Sample Info: S.128194-004
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_04.1
Operator: LLH
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-54 @ 6.5'
 Lab ID: 128194-005
 Matrix: Soil
 Batch#: 32180
 Units: ug/Kg
 Diln Fac: 1

Sampled: 01/30/97
 Received: 01/31/97
 Extracted: 02/04/97
 Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	107	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	94	79-122

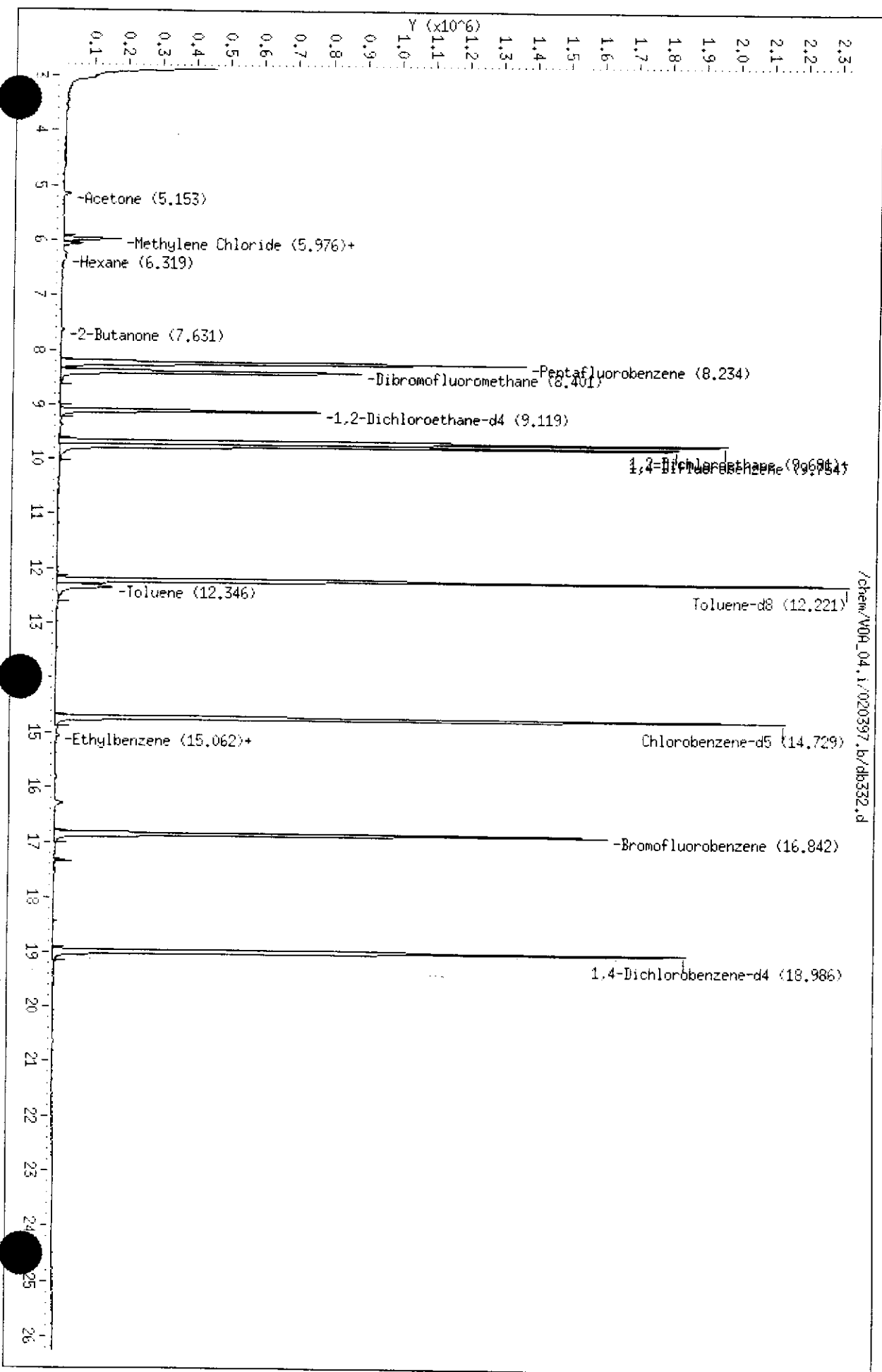


Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-54 @ 15'	Sampled:	01/30/97
Lab ID: 128194-006	Received:	01/31/97
Matrix: Soil	Extracted:	02/04/97
Batch#: 32180	Analyzed:	02/04/97
Units: ug/Kg		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	2.7 J	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	96	79-122

J: Estimated Value

Data File: /chem/V09_04.1/020397.b/db332.d
 Date: 04-FEB-97 03:41
 Client ID: DVMH P&I
 Sample Info: S.128194-006
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V09_04.1
 Operator: LLH
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-55 @ 4.5'
Lab ID: 128194-007
Matrix: Soil
Batch#: 32227
Units: ug/Kg
Diln Fac: 1000

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/05/97
Analyzed: 02/05/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10000
Bromomethane	ND	10000
Vinyl Chloride	ND	10000
Chloroethane	ND	10000
Methylene Chloride	ND	20000
Acetone	ND	20000
Carbon Disulfide	ND	5000
Trichlorofluoromethane	ND	5000
1,1-Dichloroethene	ND	5000
1,1-Dichloroethane	15000	5000
trans-1,2-Dichloroethene	ND	5000
cis-1,2-Dichloroethene	120000	5000
Chloroform	ND	5000
Freon 113	ND	5000
1,2-Dichloroethane	ND	5000
2-Butanone	ND	10000
1,1,1-Trichloroethane	5200	5000
Carbon Tetrachloride	ND	5000
Vinyl Acetate	ND	50000
Bromodichloromethane	ND	5000
1,2-Dichloropropane	ND	5000
cis-1,3-Dichloropropene	ND	5000
Trichloroethene	30000	5000
Dibromochloromethane	ND	5000
1,1,2-Trichloroethane	ND	5000
Benzene	ND	5000
trans-1,3-Dichloropropene	ND	5000
Bromoform	ND	5000
2-Hexanone	ND	10000
4-Methyl-2-Pentanone	ND	10000
1,1,2,2-Tetrachloroethane	ND	5000
Tetrachloroethene	ND	5000
Toluene	32000	5000
Chlorobenzene	ND	5000
Ethylbenzene	ND	5000
Styrene	ND	5000
m,p-Xylenes	9700	5000
o-Xylene	5100	5000
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	90	79-122

Data File: /chem/V09_04.1/020597.b/ds506.d

Date: 05-FEB-97 13:27

Client ID: DYNA P&I

Sample Info: S.128194-007

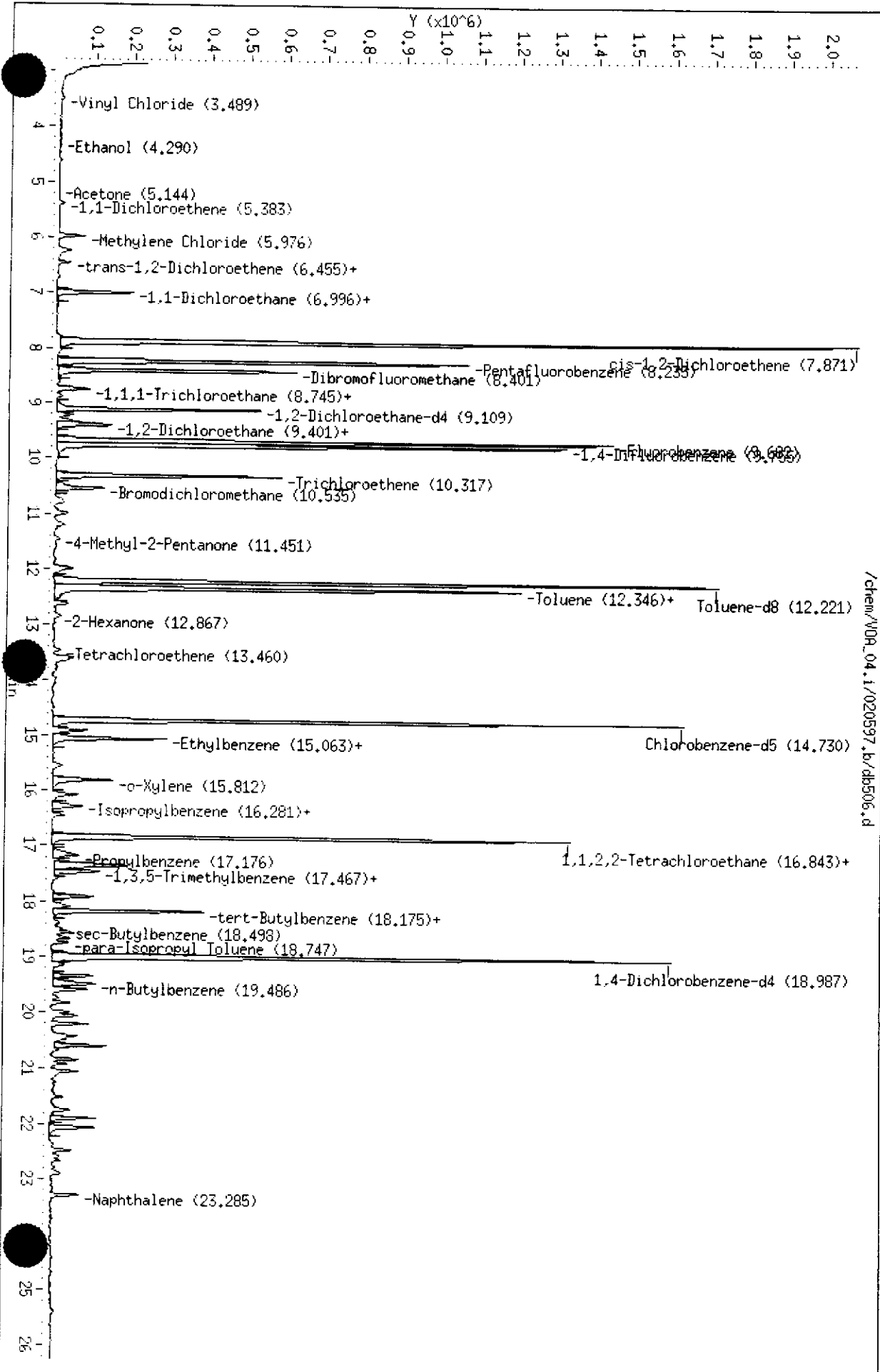
Purge Volume: 5.0

Column phase: RTX Volatiles

Instrument: V09_04.1

Operator: LLH

Column diameter: 0.32



/chem/V09_04.1/020597.b/ds506.d



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-55 @ 7.5'
 Lab ID: 128194-008
 Matrix: Soil
 Batch#: 32227
 Units: ug/Kg
 Diln Fac: 2000

Sampled: 01/30/97
 Received: 01/31/97
 Extracted: 02/05/97
 Analyzed: 02/05/97

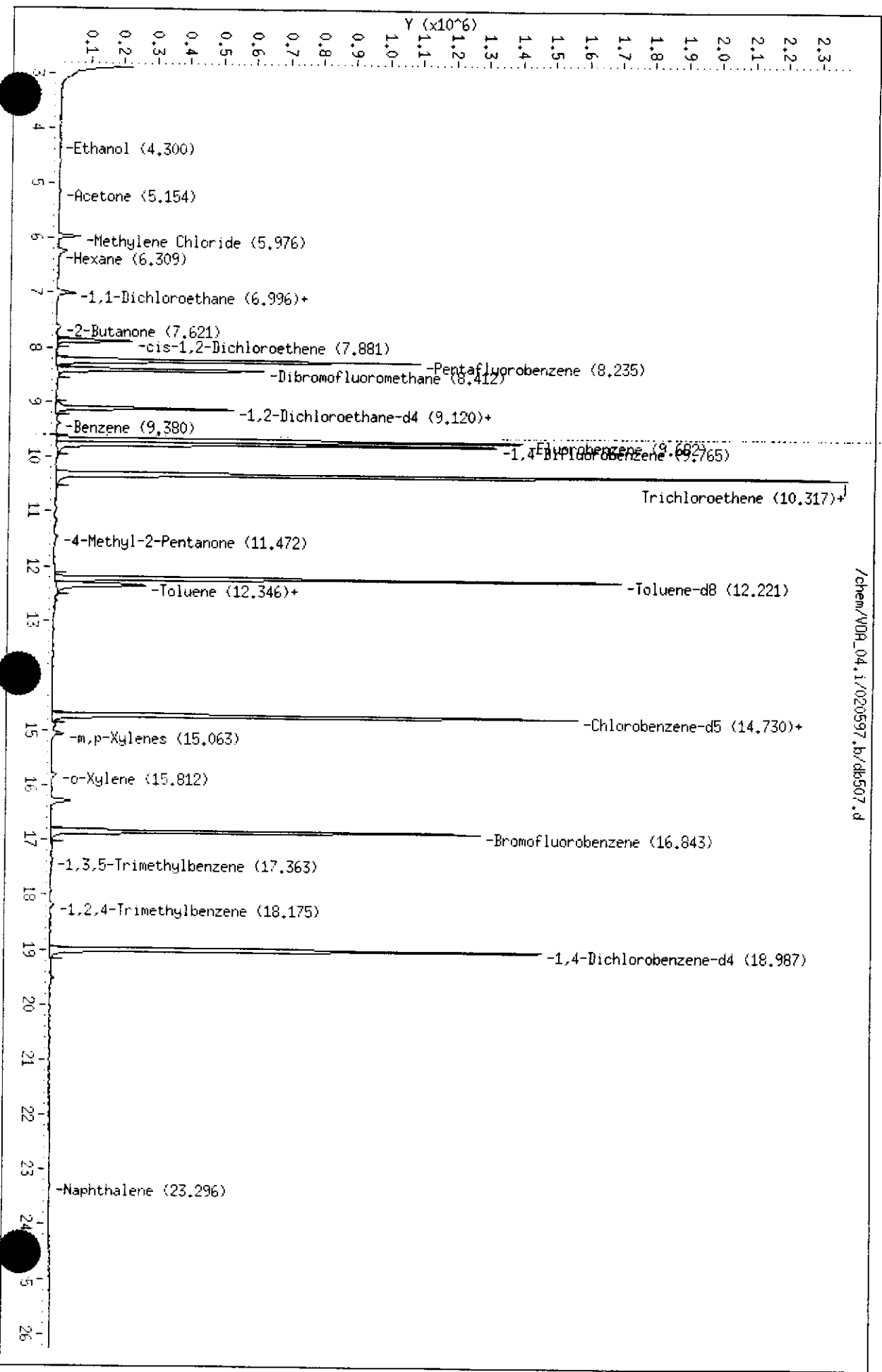
Analyte	Result	Reporting Limit
Chloromethane	ND	20000
Bromomethane	ND	20000
Vinyl Chloride	ND	20000
Chloroethane	ND	20000
Methylene Chloride	ND	40000
Acetone	ND	40000
Carbon Disulfide	ND	10000
Trichlorofluoromethane	ND	10000
1,1-Dichloroethene	ND	10000
1,1-Dichloroethane	7400 J	10000
trans-1,2-Dichloroethene	ND	10000
cis-1,2-Dichloroethene	26000	10000
Chloroform	ND	10000
Freon 113	ND	10000
1,2-Dichloroethane	ND	10000
2-Butanone	ND	20000
1,1,1-Trichloroethane	ND	10000
Carbon Tetrachloride	ND	10000
Vinyl Acetate	ND	100000
Bromodichloromethane	ND	10000
1,2-Dichloropropane	ND	10000
cis-1,3-Dichloropropene	ND	10000
Trichloroethene	250000	10000
Dibromochloromethane	ND	10000
1,1,2-Trichloroethane	ND	10000
Benzene	ND	10000
trans-1,3-Dichloropropene	ND	10000
Bromoform	ND	10000
2-Hexanone	ND	20000
4-Methyl-2-Pentanone	ND	20000
1,1,2,2-Tetrachloroethane	ND	10000
Tetrachloroethene	ND	10000
Toluene	7900 J	10000
Chlorobenzene	ND	10000
Ethylbenzene	ND	10000
Styrene	ND	10000
m,p-Xylenes	ND	10000
o-Xylene	ND	10000
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	90	79-122

J: Estimated Value

Data File: /chem/VD09_04.1/020597.b/dk507.d
Date : 05-FEB-97 13:59
Client ID: DYNA P&I
Sample Info: S.128194-008
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VD09_04.1
Operator: LLH
Column diameter: 0.32

/chem/VD09_04.1/020597.b/dk507.d



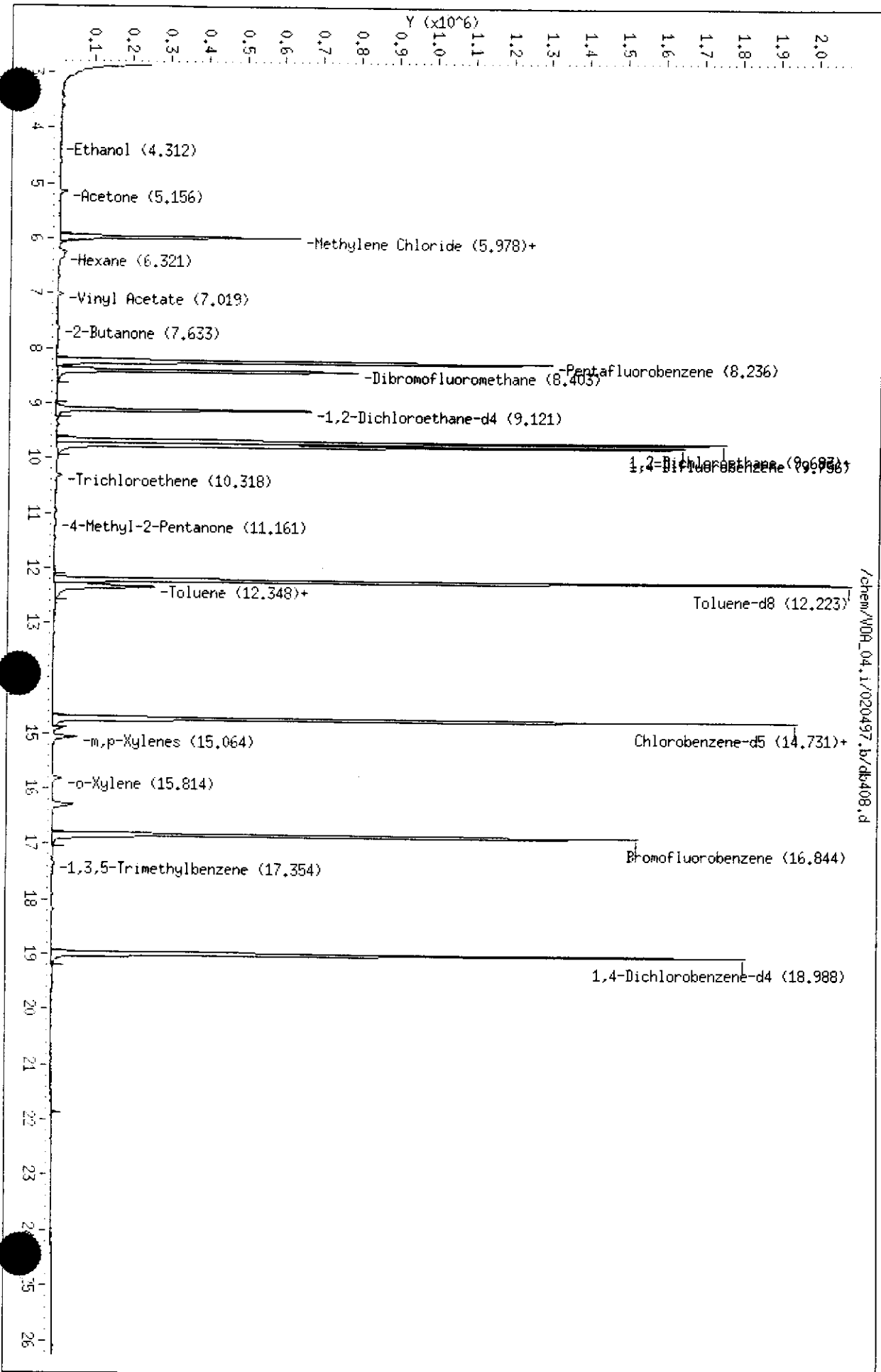


Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-53 @ 2'	Sampled:	01/30/97
Lab ID: 128194-009	Received:	01/31/97
Matrix: Soil	Extracted:	02/04/97
Batch#: 32203	Analyzed:	02/04/97
Units: ug/Kg		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	34	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	3.2 J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	91	79-122

J: Estimated Value

Data File: /chem/V0R_04.1/020497.b/db408.d
 Date: 04-FEB-97 14:32
 Client ID: DYMA P&T
 Sample Info: S,128194-009
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V0R_04.1
 Operator: LLH
 Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-53 @ 6'
Lab ID: 128194-010
Matrix: Soil
Batch#: 32203
Units: ug/Kg
Diln Fac: 1

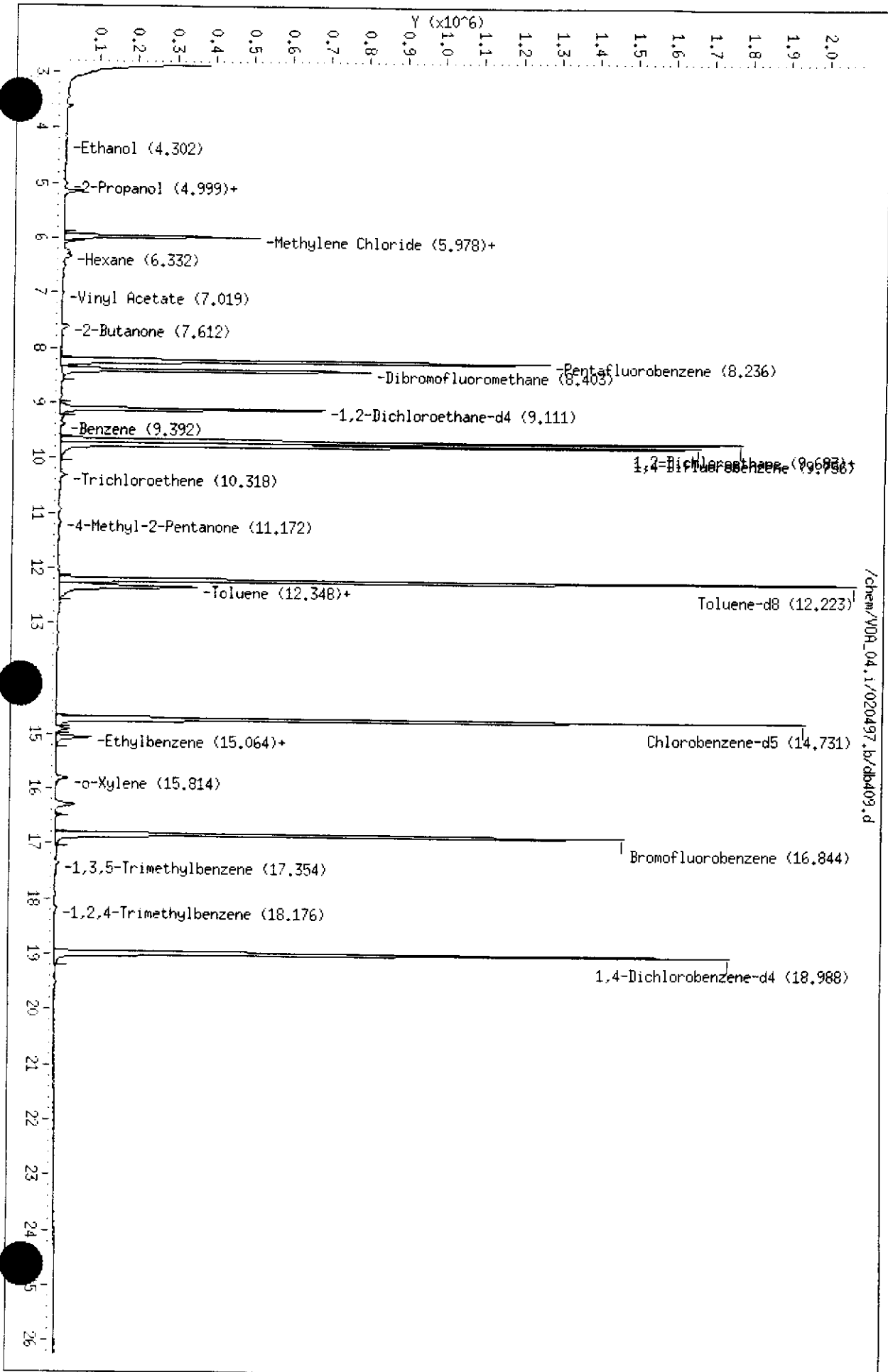
Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	27	20
Acetone	34	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	6.8 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	5.9	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	2.8 J	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	91	79-122

J: Estimated Value

Data File: /chem/V09_04.1/020497.b/db409.d
Date: 04-FEB-97 15:04
Client ID: DYNA P&T
Sample Info: NSS,128194-010
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_04.1
Operator: LLH
Column diameter: 0.32





Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32180
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/03/97
 Analysis Date: 02/03/97

MB Lab ID: QC39373

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	96	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	108	79-122



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/03/97
Analysis Date: 02/03/97

MB Lab ID: QC39428

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	91	79-122



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Soil	Prep Date:	02/04/97
Batch#: 32203	Analysis Date:	02/04/97
Units: ug/Kg		
Diln Fac: 1		

MB Lab ID: QC39459

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	90	79-122



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32227
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/05/97

MB Lab ID: QC39541

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	89	79-122

Lab #: 128194

BATCH QC REPORT



Curtis & Tompkins, Ltd.
Page 1 of 1

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32180
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/03/97
Analysis Date: 02/03/97

LCS Lab ID: QC39372

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	52.93	50	106	51-180
Trichloroethene	49.37	50	99	73-141
Benzene	49.13	50	98	78-142
Toluene	49.28	50	99	76-150
Chlorobenzene	52.98	50	106	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	95	68-126		
Toluene-d8	99	87-125		
Bromofluorobenzene	93	79-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32203
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/04/97
Analysis Date: 02/04/97

LCS Lab ID: QC39458

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	51.96	50	104	51-180
Trichloroethene	48.95	50	98	73-141
Benzene	47.62	50	95	78-142
Toluene	47.96	50	96	76-150
Chlorobenzene	52.62	50	105	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	94	68-126		
Toluene-d8	98	87-125		
Bromofluorobenzene	89	79-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 32227
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/05/97

LCS Lab ID: QC39540

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	47.19	50	94	51-180
Trichloroethene	47.5	50	95	73-141
Benzene	46.74	50	93	78-142
Toluene	47.32	50	95	76-150
Chlorobenzene	51.21	50	102	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	97	68-126		
Toluene-d8	101	87-125		
Bromofluorobenzene	90	79-122		

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits

Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ	Sample Date: 01/30/97
Lab ID: 128186-006	Received Date: 01/31/97
Matrix: Soil	Prep Date: 02/03/97
Batch#: 32180	Analysis Date: 02/03/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39429

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	49.23	98	51-180
Trichloroethene	50	<5	44.23	88	73-141
Benzene	50	<5	45.85	92	78-142
Toluene	50	<5	43.82	88	76-150
Chlorobenzene	50	<5	46.18	92	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	90	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	95	79-122			

MSD Lab ID: QC39430

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	49.77	100	51-180	1	22
Trichloroethene	50	42.76	86	73-141	3	24
Benzene	50	45.1	90	78-142	2	21
Toluene	50	42.45	85	76-150	3	21
Chlorobenzene	50	44.83	90	83-129	3	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	90	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	95	79-122				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 10 outside limits



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: SCI-53 @ 6'	Sample Date: 01/30/97
Lab ID: 128194-010	Received Date: 01/31/97
Matrix: Soil	Prep Date: 02/04/97
Batch#: 32203	Analysis Date: 02/04/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39486

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	49.54	99	51-180
Trichloroethene	50	<5	49.31	97	73-141
Benzene	50	<5	48.07	96	78-142
Toluene	50	5.853	53.51	95	76-150
Chlorobenzene	50	<5	51.92	104	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	86	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	91	79-122			

MSD Lab ID: QC39487

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	47.64	95	51-180	4	22
Trichloroethene	50	44.94	88	73-141	9	24
Benzene	50	45.04	89	78-142	7	21
Toluene	50	48.14	85	76-150	11	21
Chlorobenzene	50	45.77	92	83-129	13	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	88	68-126				
Toluene-d8	99	87-125				
Bromofluorobenzene	91	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Lab #: 128194

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-55 @ 4.5'
 Lab ID: 128194-007
 Matrix: Soil
 Batch#: 32227
 Units: ug/Kg
 Diln Fac: 1000

Sample Date: 01/30/97
 Received Date: 01/31/97
 Prep Date: 02/05/97
 Analysis Date: 02/05/97

MS Lab ID: QC39562

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50000	<5000	44970	87	51-180
Trichloroethene	50000	30010	76970	94	73-141
Benzene	50000	<5000	48730	93	78-142
Toluene	50000	32110	77590	91	76-150
Chlorobenzene	50000	<5000	51650	103	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	99	68-126			
Toluene-d8	101	87-125			
Bromofluorobenzene	90	79-122			

MSD Lab ID: QC39563

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50000	47510	92	51-180	6	22
Trichloroethene	50000	78450	97	73-141	2	24
Benzene	50000	49350	95	78-142	1	21
Toluene	50000	77800	91	76-150	0	21
Chlorobenzene	50000	52330	105	83-129	1	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	98	68-126				
Toluene-d8	99	87-125				
Bromofluorobenzene	90	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI-51 @ 5'
Lab ID: 128194-002
Matrix: Soil
Batch#: 32202
Units: ug/Kg
Diln Fac: 1

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/06/97

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330



Semivolatile Organics by GC/MS

Field ID: SCI-51 @ 5'	Sampled: 01/30/97
Lab ID: 128194-002	Received: 01/31/97
Matrix: Soil	Extracted: 02/04/97
Batch#: 32202	Analyzed: 02/06/97
Units: ug/Kg	
Diln Fac: 1	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	78	25-121
Phenol-d5	80	24-113
2,4,6-Tribromophenol	65	19-122
Nitrobenzene-d5	77	23-120
2-Fluorobiphenyl	71	30-115
Terphenyl-d14	81	18-137



Lab #: 128194

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

METHOD BLANK

Matrix: Soil
Batch#: 32202
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/04/97
Analysis Date: 02/05/97

MB Lab ID: QC39453

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700



Lab #: 128194

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

METHOD BLANK

Matrix: Soil
 Batch#: 32202
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/04/97
 Analysis Date: 02/05/97

MB Lab ID: QC39453

Analyte	Result	Reporting Limit
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzydine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	72	25-121
Phenol-d5	73	24-113
2,4,6-Tribromophenol	52	19-122
Nitrobenzene-d5	80	23-120
2-Fluorobiphenyl	71	30-115
Terphenyl-d14	70	18-137



Lab #: 128194

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8270
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	

LABORATORY CONTROL SAMPLE

Matrix: Soil	Prep Date: 02/04/97
Batch#: 32202	Analysis Date: 02/05/97
Units: ug/Kg	
Diln Fac: 1	

LCS Lab ID: QC39454

Analyte	Result	Spike Added	%Rec #	Limits
Phenol	2558	3333	77	26-90
2-Chlorophenol	2538	3333	76	25-102
4-Chloro-3-methylphenol	2458	3333	74	26-103
4-Nitrophenol	2233	3333	67	11-114
Pentachlorophenol	867.2	3333	26	17-109
1,4-Dichlorobenzene	1087	1667	65	28-104
N-Nitroso-di-n-propylamine	1082	1667	65	41-126
1,2,4-Trichlorobenzene	1026	1667	62	38-107
Acenaphthene	1027	1667	62	31-137
2,4-Dinitrotoluene	953.4	1667	57	28-89
Pyrene	1020	1667	61	35-142
Surrogate	%Rec	Limits		
2-Fluorophenol	71	25-121		
Phenol-d5	73	24-113		
2,4,6-Tribromophenol	54	19-122		
Nitrobenzene-d5	77	23-120		
2-Fluorobiphenyl	70	30-115		
Terphenyl-d14	68	18-137		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 11 outside limits
 DO: Surrogate diluted out



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

Field ID: SCI-51 @ 1'
Lab ID: 128194-001
Matrix: Soil
Batch#: 32192
Units: ug/Kg
Diln Fac: 3

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/03/97
Analyzed: 02/11/97

Analyte	Result	Reporting Limit
---------	--------	-----------------

alpha-BHC	ND	9.0
beta-BHC	ND	9.0
gamma-BHC	ND	9.0
delta-BHC	ND	9.0
Heptachlor	ND	9.0
Aldrin	ND	9.0
Heptachlor epoxide B	ND	9.0
Heptachlor epoxide A	ND	9.0
Endosulfan I	ND	9.0
Dieldrin	ND	18
4,4'-DDE	35	18
Endrin	ND	18
Endosulfan II	ND	18
Endosulfan sulfate	ND	18
4,4'-DDD	ND	18
Endrin aldehyde	ND	18
4,4'-DDT	190	18
Chlordane	ND	90
Methoxychlor	ND	90
Toxaphene	ND	180
Aroclor-1016	ND	36
Aroclor-1221	ND	72
Aroclor-1232	ND	36
Aroclor-1242	ND	36
Aroclor-1248	ND	36
Aroclor-1254	ND	36
Aroclor-1260	ND	36

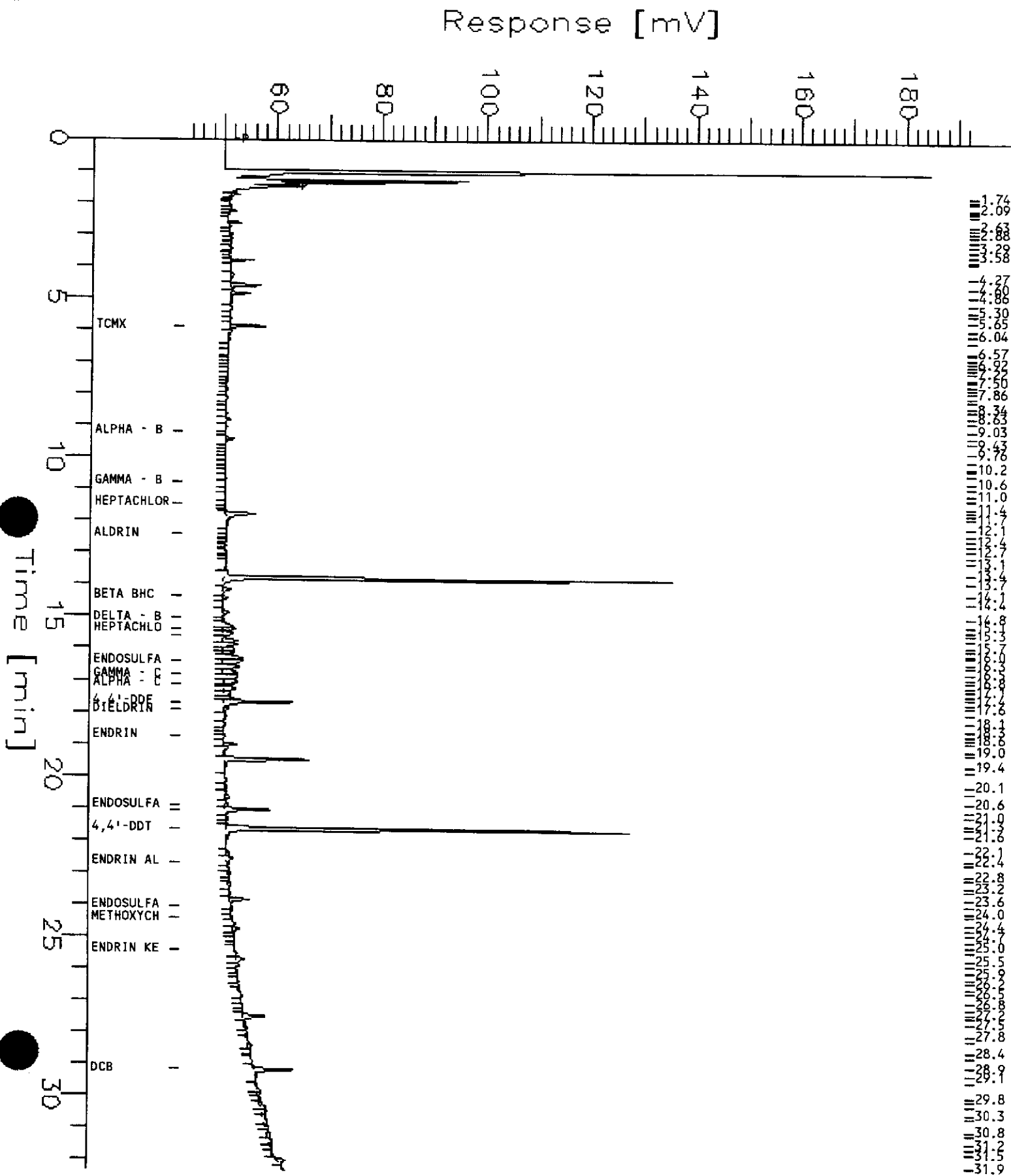
Surrogate	%Recovery	Recovery Limits
-----------	-----------	-----------------

TCMX	84	29-108
Decachlorobiphenyl	79	30-125

Sample Name : 128194-001
 FileName : g:\gc14\cha\041A056.raw
 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Scale Factor: -1.0

End Time : 32.35 min
 Plot Offset: 42 mV

Sample #: 32192
 Date : 2/12/97 12:07 AM
 Time of Injection: 2/11/97 11:35 PM
 Low Point : 42.37 mV
 High Point : 192.37 mV
 Plot Scale: 150.0 mV





Lab #: 128194

BATCH QC REPORT

EPA 8080 Pesticides & PCBs		
Client: Subsurface Consultants	Analysis Method: EPA 8080	
Project#: 133.005	Prep Method: EPA 3550	
Location: KOT		
METHOD BLANK		
Matrix: Soil	Prep Date:	02/03/97
Batch#: 32192	Analysis Date:	02/06/97
Units: ug/Kg		
Diln Fac: 1		

MB Lab ID: QC39408

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Surrogate	%Rec	Recovery Limits
TCMX	92	29-108
Decachlorobiphenyl	90	30-125



Lab #: 128194

BATCH QC REPORT

EPA 8080 Pesticides & PCBs			
Client: Subsurface Consultants	Analysis Method: EPA 8080		
Project#: 133.005	Prep Method: EPA 3550		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/03/97		
Batch#: 32192	Analysis Date: 02/06/97		
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39409

Analyte	Result	Spike Added	%Rec #	Limits
gamma-BHC	15.27	17	92	49-115
Heptachlor	15.79	17	95	51-119
Aldrin	15.4	17	92	55-112
Dieldrin	15.98	17	96	54-123
Endrin	17.09	17	102	63-128
4,4'-DDT	15.71	17	94	57-131
Surrogate	%Rec	Limits		
TCMX	94	29-108		
Decachlorobiphenyl	88	30-125		

† Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 6 outside limits



Lab #: 128194

BATCH QC REPORT

EPA 8080 Pesticides & PCBs	
Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 01/28/97
Lab ID: 128165-011	Received Date: 01/29/97
Matrix: Soil	Prep Date: 02/03/97
Batch#: 32192	Analysis Date: 02/12/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39410

Analyte	Spike Added	Sample	MS	%Rec #	Limits
gamma-BHC	17	<3	10.09	61	53-124
Heptachlor	17	<3	8.83	53 *	55-128
Aldrin	17	<3	7.99	48 *	49-128
Dieldrin	17	<6	8.01	48 *	54-128
Endrin	17	<6	11.38	68 *	69-131
4,4'-DDT	17	<6	8.07	48 *	53-144
Surrogate	%Rec	Limits			
TCMX	63	29-108			
Decachlorobiphenyl	58	30-125			

MSD Lab ID: QC39411

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	17	9.5	57	53-124	6	35
Heptachlor	17	8.53	51 *	55-128	3	35
Aldrin	17	8.13	49	49-128	2	35
Dieldrin	17	7.88	47 *	54-128	2	35
Endrin	17	11.46	69	69-131	1	35
4,4'-DDT	17	7.91	47 *	53-144	2	35
Surrogate	%Rec	Limits				
TCMX	63	29-108				
Decachlorobiphenyl	58	30-125				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 8 out of 12 outside limits

Client: Subsurface Consultants

Laboratory Login Number: 128194

 Project Name: KOT
 Project Number: 133.005

Report Date: 12 February 97

ANALYSIS: pH

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	Method	Analyst	QC Batch
128194-009	SCI-53 @ 2'	Soil	30-JAN-97	31-JAN-97	03-FEB-97	7.7	SU *	EPA 9045	HDD	32204
128194-010	SCI-53 @ 6'	Soil	30-JAN-97	31-JAN-97	03-FEB-97	7.6	SU *	EPA 9045	HDD	32204

* Soil pH measured as water

Q C B a t c h R e p o r t

Client: Subsurface Consultants
 Project Name: KOT
 Project Number: 133.005

Laboratory Login Number: 128194
 Report Date: 12 February 97

ANALYSIS: pH

QC Batch Number: 32204

Calibration Verification Results

Sample	Result	TV	Difference	Limit	Analyzed
ICV	7.03	7.00	.03	< 0.10	03-FEB-97
CCV	7.04	7.00	.04	< 0.10	03-FEB-97

Sample Duplicate Results

Sample	Duplicate	RPD	Analyzed
7.44	7.40	.5%	03-FEB-97



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128194
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/07/97
DATE REPORTED: 02/12/97
BATCH NO: 15062

=====
ANALYSIS: CHLORIDE
METHOD REFERENCE: EPA 325.2
=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-009	SCI-53 @ 2'	100	mg/Kg	2.5
128194-010	SCI-53 @ 6'	420	mg/Kg	13
METHOD BLANK	N/A	ND	mg/Kg	2.5

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/MSD OF SAMPLE NO: 128194-009

RPD, %	5
RECOVERY, %	103



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128194
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/05/97
DATE REPORTED: 02/12/97

=====

ANALYSIS: CYANIDE
METHOD REFERENCE: EPA 335.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-009	SCI-53 @ 2'	ND	mg/Kg	1.0
128194-010	SCI-53 @ 6'	ND	mg/Kg	1.0
METHOD BLANK	N/A	ND	mg/Kg	1.0

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/MSD OF 128194-009

RPD, %	10
RECOVERY, %	90

=====

LABORATORY NUMBER: 128194
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE ANALYZED: 02/13/97

=====
 ANALYSIS: HEXAVALENT CHROMIUM
 ANALYSIS METHOD: EPA 7196
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-009	SCI-53 @2'	0.08	mg/Kg	0.05
128194-010	SCI-53 @6'	0.08	mg/Kg	0.05
METHOD BLANK	N/A	ND	mg/Kg	0.05

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: LCS/SAMPLE DUPLICATE OF 128194-009

=====
 RPD, % <1
 RECOVERY, % 94
 =====



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128194
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/04/97
DATE REPORTED: 02/12/97

=====

ANALYSIS: NITRATE/NITRITE NITROGEN
METHOD REFERENCE: EPA 353.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-001	SCI-51 @ 1'	1.9	mg/Kg	0.20
METHOD BLANK	N/A	ND	mg/Kg	0.20

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/MSD OF SAMPLE NO: 128165-011

=====

RPD, % 2
RECOVERY, % 119

=====



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128194
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/07/97
DATE REPORTED: 02/12/97

=====
ANALYSIS: TOTAL PHOSPHORUS
METHOD REFERENCE: EPA 365.2
=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-001	SCI-51 @ 1'	0.8	mg/Kg	0.3
METHOD BLANK	N/A	ND	mg/Kg	0.3

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/SAMPLE DUPLICATE OF 128237-010

RPD, %	17
RECOVERY, %	82



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128194
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/06/97
DATE REPORTED: 02/12/97

=====

ANALYSIS: SULFATE
METHOD REFERENCE: EPA 375.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128194-009	SCI-53 @ 2'	73	mg/Kg	25
128194-010	SCI-53 @ 6'	100	mg/Kg	25
METHOD BLANK	N/A	ND	mg/Kg	25

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/MSD OF SAMPLE NO: 128194-009

RPD, %	1
RECOVERY, %	90

=====

SAMPLE ID: SCI-51 @ 1'
 LAB ID: 128194-001
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32216	EPA 6010A	02/05/97
Arsenic	8.8	0.25	1	32216	EPA 6010A	02/05/97
Barium	200	0.49	1	32216	EPA 6010A	02/05/97
Beryllium	0.58	0.098	1	32216	EPA 6010A	02/05/97
Cadmium	0.83	0.098	1	32216	EPA 6010A	02/05/97
Chromium (total)	55	0.49	1	32216	EPA 6010A	02/05/97
Cobalt	14	0.98	1	32216	EPA 6010A	02/05/97
Copper	2.5	0.49	1	32216	EPA 6010A	02/05/97
Lead	3.7	0.15	1	32216	EPA 6010A	02/05/97
Mercury	ND	0.091	1	32230	EPA 7471	02/05/97
Molybdenum	ND	0.98	1	32216	EPA 6010A	02/05/97
Nickel	55	0.98	1	32216	EPA 6010A	02/05/97
Selenium	1.7	0.25	1	32216	EPA 6010A	02/05/97
Silver	ND	0.49	1	32216	EPA 6010A	02/05/97
Thallium	0.51	0.25	1	32216	EPA 6010A	02/05/97
Vanadium	28	0.49	1	32216	EPA 6010A	02/05/97
Zinc	130	0.98	1	32216	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-51 @ 1'
LAB ID: 128194-001
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Soil

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Potassium	1500	25	1	32216	EPA 6010A	02/06/97

SAMPLE ID: SCI-55 @ 4.5'
 LAB ID: 128194-007
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32216	EPA 6010A	02/05/97
Arsenic	3.9	0.24	1	32216	EPA 6010A	02/05/97
Barium	23	0.48	1	32216	EPA 6010A	02/05/97
Beryllium	0.27	0.096	1	32216	EPA 6010A	02/05/97
Cadmium	0.28	0.096	1	32216	EPA 6010A	02/05/97
Chromium (total)	24	0.48	1	32216	EPA 6010A	02/05/97
Cobalt	4.2	0.96	1	32216	EPA 6010A	02/05/97
Copper	9.5	0.48	1	32216	EPA 6010A	02/05/97
Lead	26	0.14	1	32216	EPA 6010A	02/05/97
Mercury	ND	0.10	1	32230	EPA 7471	02/05/97
Molybdenum	ND	0.96	1	32216	EPA 6010A	02/05/97
Nickel	21	0.96	1	32216	EPA 6010A	02/05/97
Selenium	0.79	0.24	1	32216	EPA 6010A	02/05/97
Silver	ND	0.48	1	32216	EPA 6010A	02/05/97
Thallium	ND	0.24	1	32216	EPA 6010A	02/05/97
Vanadium	19	0.48	1	32216	EPA 6010A	02/05/97
Zinc	29	0.96	1	32216	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-53 @ 6'
 LAB ID: 128194-010
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3.0	1	32216	EPA 6010A	02/05/97
Arsenic	2.0	0.25	1	32216	EPA 6010A	02/05/97
Barium	33	0.50	1	32216	EPA 6010A	02/05/97
Beryllium	0.33	0.099	1	32216	EPA 6010A	02/05/97
Cadmium	0.70	0.099	1	32216	EPA 6010A	02/05/97
Chromium (total)	49	0.50	1	32216	EPA 6010A	02/05/97
Cobalt	5.4	0.99	1	32216	EPA 6010A	02/05/97
Copper	13	0.50	1	32216	EPA 6010A	02/05/97
Lead	5.0	0.15	1	32216	EPA 6010A	02/05/97
Mercury	0.11	0.095	1	32230	EPA 7471	02/05/97
Molybdenum	ND	0.99	1	32216	EPA 6010A	02/05/97
Nickel	33	0.99	1	32216	EPA 6010A	02/05/97
Selenium	1.7	0.25	1	32216	EPA 6010A	02/05/97
Silver	ND	0.50	1	32216	EPA 6010A	02/05/97
Thallium	0.35	0.25	1	32216	EPA 6010A	02/05/97
Vanadium	37	0.50	1	32216	EPA 6010A	02/05/97
Zinc	33	0.99	1	32216	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-53 @ 2'
 LAB ID: 128194-009
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32216	EPA 6010A	02/05/97
Arsenic	3.7	0.24	1	32216	EPA 6010A	02/05/97
Barium	48	0.48	1	32216	EPA 6010A	02/05/97
Beryllium	0.39	0.096	1	32216	EPA 6010A	02/05/97
Cadmium	0.63	0.096	1	32216	EPA 6010A	02/05/97
Chromium (total)	44	0.48	1	32216	EPA 6010A	02/05/97
Cobalt	6.2	0.96	1	32216	EPA 6010A	02/05/97
Copper	17	0.48	1	32216	EPA 6010A	02/05/97
Lead	13	0.14	1	32216	EPA 6010A	02/05/97
Mercury	0.23	0.10	1	32230	EPA 7471	02/05/97
Molybdenum	ND	0.96	1	32216	EPA 6010A	02/05/97
Nickel	44	0.96	1	32216	EPA 6010A	02/05/97
Selenium	1.3	0.24	1	32216	EPA 6010A	02/05/97
Silver	ND	0.48	1	32216	EPA 6010A	02/05/97
Thallium	0.57	0.24	1	32216	EPA 6010A	02/06/97
Vanadium	34	0.48	1	32216	EPA 6010A	02/05/97
Zinc	39	0.96	1	32216	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128194

DATE REPORTED: 02/12/97

 BATCH QC REPORT
 PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3	mg/Kg	1	32216	EPA 6010A	02/05/97
Arsenic	ND	0.25	mg/Kg	1	32216	EPA 6010A	02/05/97
Barium	ND	0.5	mg/Kg	1	32216	EPA 6010A	02/05/97
Beryllium	ND	0.1	mg/Kg	1	32216	EPA 6010A	02/05/97
Cadmium	ND	0.1	mg/Kg	1	32216	EPA 6010A	02/05/97
Chromium (total)	ND	0.5	mg/Kg	1	32216	EPA 6010A	02/05/97
Cobalt	ND	1	mg/Kg	1	32216	EPA 6010A	02/05/97
Copper	ND	0.5	mg/Kg	1	32216	EPA 6010A	02/05/97
Lead	ND	0.15	mg/Kg	1	32216	EPA 6010A	02/05/97
Mercury	ND	0.1	mg/Kg	1	32230	EPA 7471	02/05/97
Molybdenum	ND	1	mg/Kg	1	32216	EPA 6010A	02/05/97
Nickel	ND	1	mg/Kg	1	32216	EPA 6010A	02/05/97
Potassium	ND	25	mg/Kg	1	32216	EPA 6010A	02/06/97
Selenium	ND	0.25	mg/Kg	1	32216	EPA 6010A	02/05/97
Silver	ND	0.5	mg/Kg	1	32216	EPA 6010A	02/05/97
Thallium	ND	0.25	mg/Kg	1	32216	EPA 6010A	02/05/97
Vanadium	ND	0.5	mg/Kg	1	32216	EPA 6010A	02/05/97
Zinc	ND	1	mg/Kg	1	32216	EPA 6010A	02/05/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128194

DATE REPORTED: 02/12/97

 BATCH QC REPORT
 BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	25	24.7	23.55	mg/Kg	99	94	80-120	5	35	32216	EPA 6010A	02/05/97
Arsenic	100	92	89	mg/Kg	92	89	80-120	3	35	32216	EPA 6010A	02/05/97
Barium	100	98.5	95.5	mg/Kg	99	96	80-120	3	35	32216	EPA 6010A	02/05/97
Beryllium	2.5	2.52	2.435	mg/Kg	101	97	80-120	3	35	32216	EPA 6010A	02/05/97
Cadmium	2.5	2.485	2.415	mg/Kg	99	97	80-120	3	35	32216	EPA 6010A	02/05/97
Chromium (total)	10	9.75	9.4	mg/Kg	98	94	80-120	4	35	32216	EPA 6010A	02/05/97
Cobalt	25	23.85	23	mg/Kg	95	92	80-120	4	35	32216	EPA 6010A	02/05/97
Copper	12.5	13.1	12.6	mg/Kg	105	101	80-120	4	35	32216	EPA 6010A	02/05/97
Lead	25	23.7	23.1	mg/Kg	95	92	80-120	3	35	32216	EPA 6010A	02/05/97
Mercury	5	4.233	4.711	ug/L	85	94	80-120	11	35	32230	EPA 7470	02/05/97
Molybdenum	20	19.35	18.8	mg/Kg	97	94	80-120	3	35	32216	EPA 6010A	02/05/97
Nickel	25	24.45	23.6	mg/Kg	98	94	80-120	4	35	32216	EPA 6010A	02/05/97
Potassium	1000	874.5	890.5	mg/Kg	88	89	80-120	2	35	32216	EPA 6010A	02/06/97
Selenium	100	88	86	mg/Kg	88	86	80-120	2	35	32216	EPA 6010A	02/05/97
Silver	5	4.935	4.785	mg/Kg	99	96	80-120	3	35	32216	EPA 6010A	02/05/97
Thallium	100	89.5	89	mg/Kg	90	89	80-120	1	35	32216	EPA 6010A	02/05/97
Vanadium	25	24.35	23.55	mg/Kg	97	94	80-120	3	35	32216	EPA 6010A	02/05/97
Zinc	25	23.6	22.85	mg/Kg	94	91	80-120	3	35	32216	EPA 6010A	02/05/97

CHAIN OF CUSTODY FORM

128194

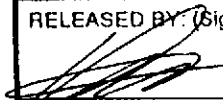
PAGE

See J6
Water
03.1
OF

PROJECT NAME: KOT
 JOB NUMBER: 133.005 LAB: STANDARD CURIES + SAMPLERS
 PROJECT CONTACT: Jerome de Verrier TURNAROUND: _____
 SAMPLED BY: John Wolfe REQUESTED BY: Meg Mendota

ANALYSIS REQUESTED	
TEH (d. + m. s.)	/
9240	/
Heavy Metals	/
Chromium 6+	/
pH	/
Sulfate	/
Sulfate	/
Chloride	/
Cyanide	/

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES		
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME			
19	SCC-53021	/													1	30	97				
20	SCC-53061	/													1	30	97				

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
	1-31-97 5:00	Jamara Moore	1/31/97 5pm
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Sulfate ?
one shot
SW
Diluted

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137

CHAIN OF CUSTODY FORM

128194

PAGE _____ OF _____

PROJECT NAME: KST
 JOB NUMBER: 133.005 LAB: Curtis and Tompkins
 PROJECT CONTACT: Jerome de Verrier TURNAROUND: Standard
 SAMPLED BY: John Wolfe REQUESTED BY: Mj Mendez

ANALYSIS REQUESTED	
TEH (d time)	
TUW/BTX	
8240	
8270	
8080	
Heavy Metals	
Tested Phosphorus	
K	
Nitrate/Nitrite	

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME	
-1	SCC-51 @ 1'		/												1	3	97		
-2	SCC-51 @ 5'		/																
-3	SCC-51 @ 11'		/																
-4	SCC-51 @ 20'		/																
-5	SCC-54 @ 6.5'		/																
-6	SCC-54 @ 15'		/																
-7	SCC-53 @ 4.5'		/																
-8	SCC-55 @ 2.5'		/																

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
<i>[Signature]</i>	1-31-97 5:00	<i>Damaris More</i>	1/31 5pm
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137

CURTIS & TOMPKINS, LTD. BERKELEY

LOGIN CHANGE FORM

Reason for change: Client Request: By: J. Alexander Date/Time: 2/5/97 3pm Initials: JA
 Login Review _____ Data Review _____

Current Lab ID	Previous Lab ID	Client ID	Matrix	Add/Cancel	Analysis	Due date
128194		A11	Soil	OK	Sulfite	—



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 13-FEB-97
Lab Job Number: 128196
Project ID: 133.005
Location: KOT

Reviewed by: Diana Moore

Reviewed by: Tracy Bell

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-001	TP-7	32267	01/29/97	02/07/97	02/07/97	

Matrix: Water

Analyte	Units	128196-001
Diln Fac:		1
Gasoline	ug/L	620 YH
Surrogate		
Trifluorotoluene	%REC	97
Bromobenzene	%REC	112

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

GC04 TVH 'J' File (Rtx1,FID)

Sample Name : S,128196-001,32267

Sample #:

Page 1 of 1

FileName : G:\GC04\DATA\037J027.raw

Date : 2/7/97 08:45 AM

Method : TVHBTXE

Time of Injection: 2/7/97 08:28 AM

Start Time : 0.00 min

End Time : 17.00 min

Low Point : 45.94 mV

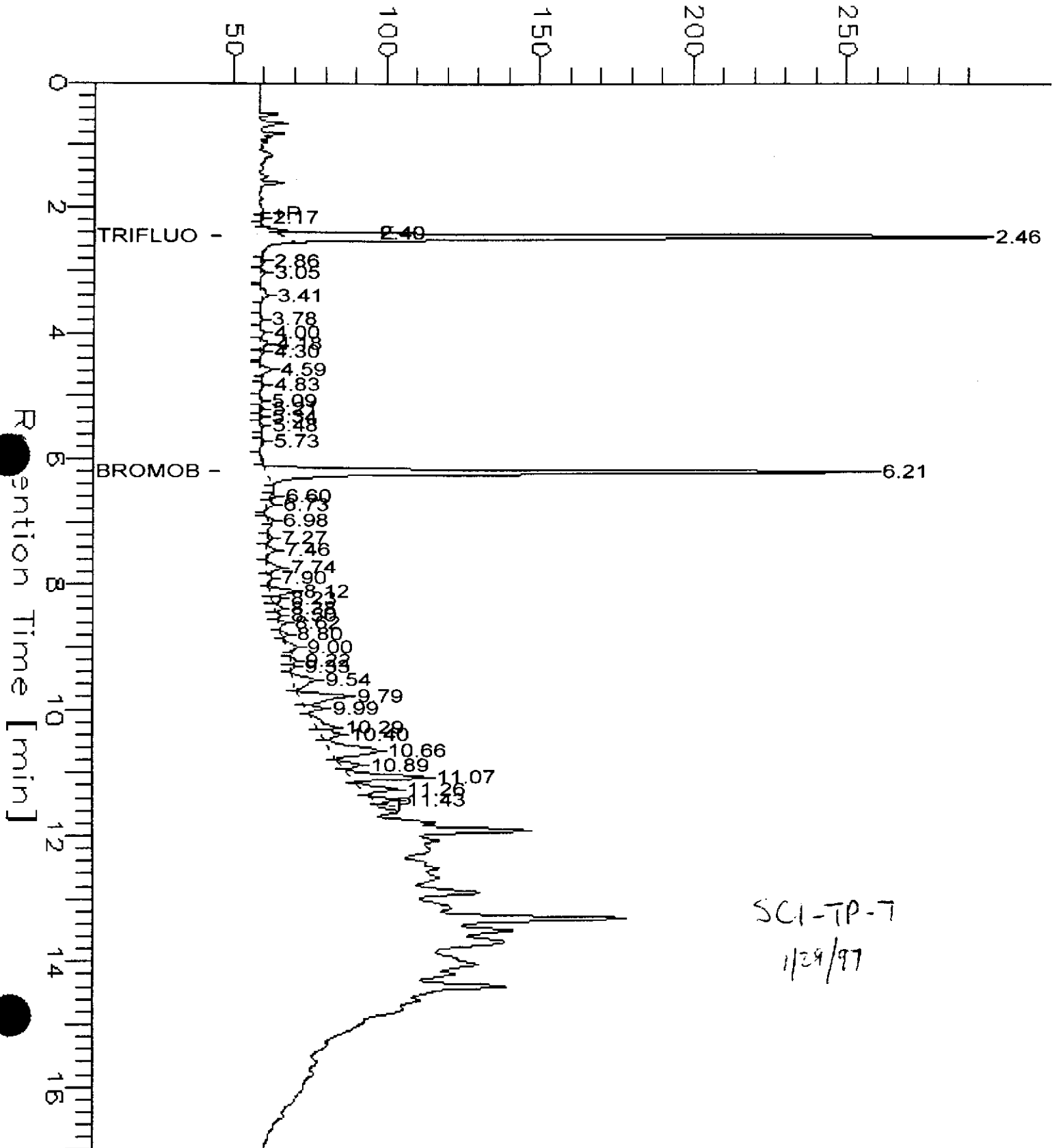
High Point : 295.94 mV

Gain Factor: -1.0

Plot Offset: 46 mV

Plot Scale: 250.0 mV

Response [mV]



SCI-TP-7
1/29/97



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-002	TP-7 @ 3.0-FILL	32250	01/29/97	02/06/97	02/06/97	

Matrix: Soil

Analyte	Units	128196-002
Diln Fac:		1
Gasoline	mg/Kg	<1
Surrogate		
Trifluorotoluene	%REC	77
Bromobenzene	%REC	67



Lab #: 128196

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Water	Prep Date:	02/06/97
Batch#:	32267	Analysis Date:	02/06/97
Units:	ug/L		
Diln Fac:	1		

ME Lab ID: QC39691

Analyte	Result		
Gasoline	<50		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	86	65-135	
Bromobenzene	94	65-135	



Lab #: 128196

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32250
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/06/97
Analysis Date: 02/06/97

MB Lab ID: QC39624

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	89	52-127
Bromobenzene	80	45-140



Lab #: 128196

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date:	02/06/97	
Batch#: 32267	Analysis Date:	02/06/97	
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39689

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1924	2000	96	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	141*	65-135		
Bromobenzene	109	65-135		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128196

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date:	02/06/97	
Batch#: 32250	Analysis Date:	02/06/97	
Units: mg/Kg			
Diln Fac: 1			

LCS Lab ID: QC39622

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.92	10	99	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	96	52-127		
Bromobenzene	98	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128196

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 01/31/97
Lab ID: 128197-006	Received Date: 01/31/97
Matrix: Water	Prep Date: 02/06/97
Batch#: 32267	Analysis Date: 02/06/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39692

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	1742	87	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	110	65-135			
Bromobenzene	122	65-135			

MSD Lab ID: QC39693

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1507	75	75-125	14	35
Surrogate	%Rec	Limits				
Trifluorotoluene	109	65-135				
Bromobenzene	123	65-135				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 1 outside limits
 Spike Recovery: 0 out of 2 outside limits

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-001	TP-7	32249	01/29/97	02/05/97	02/11/97	

Matrix: Water

Analyte	Units	128196-001
Diln Fac:		1
Diesel C12-C22	ug/L	2800 YH
Motor Oil C22-C50	ug/L	7900 YLH
Surrogate		
Hexacosane	%REC	107

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard
 L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 128196-001,32249

FileName : G:\GC11\CHB\041B040.RAW

Method : BTEH036.MTH

Start Time : 0.00 min

End Time : 31.90 min

Factor : 0.0

Plot Offset : -17 mV

Sample #: 32249

Page 1 of 1

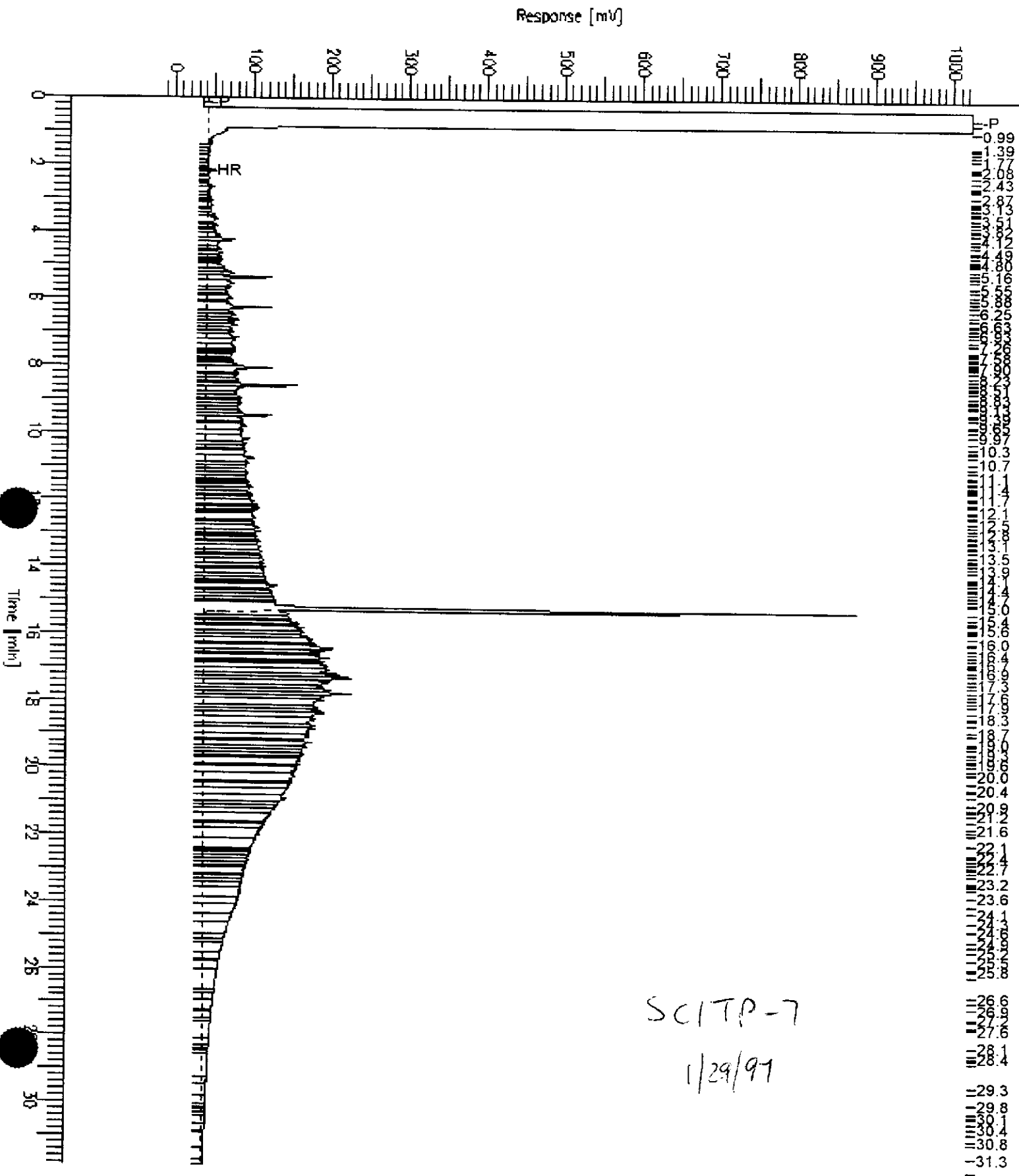
Date : 2/13/97 09:15 AM

Time of Injection: 2/11/97 02:13 PM

Low Point : -17.18 mV

High Point : 1024.00 mV

Plot Scale: 1041.2 mV





TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-002	TP-7 @ 3.0-FILL	32255	01/29/97	02/05/97	02/13/97	

Matrix: Soil

Analyte	Units	128196-002
Diln Fac:		100
Diesel C12-C22	mg/Kg	390 YH
Motor Oil C22-C50	mg/Kg	7000 YLH
Surrogate		
Hexacosane	%REC	DO

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

SC17P-7@3.0-FILL
1/29/97

Chromatogram

Sample Name : 128196-002,32255

Sample #: 32255

Page 1 of 1

FileName : G:\GC11\CHB\041B071.RAW

Date : 2/13/97 09:57 AM

Method : BTEH036.MTH

Time of Injection: 2/13/97 06:30 AM

Start Time : 0.01 min

End Time : 31.91 min

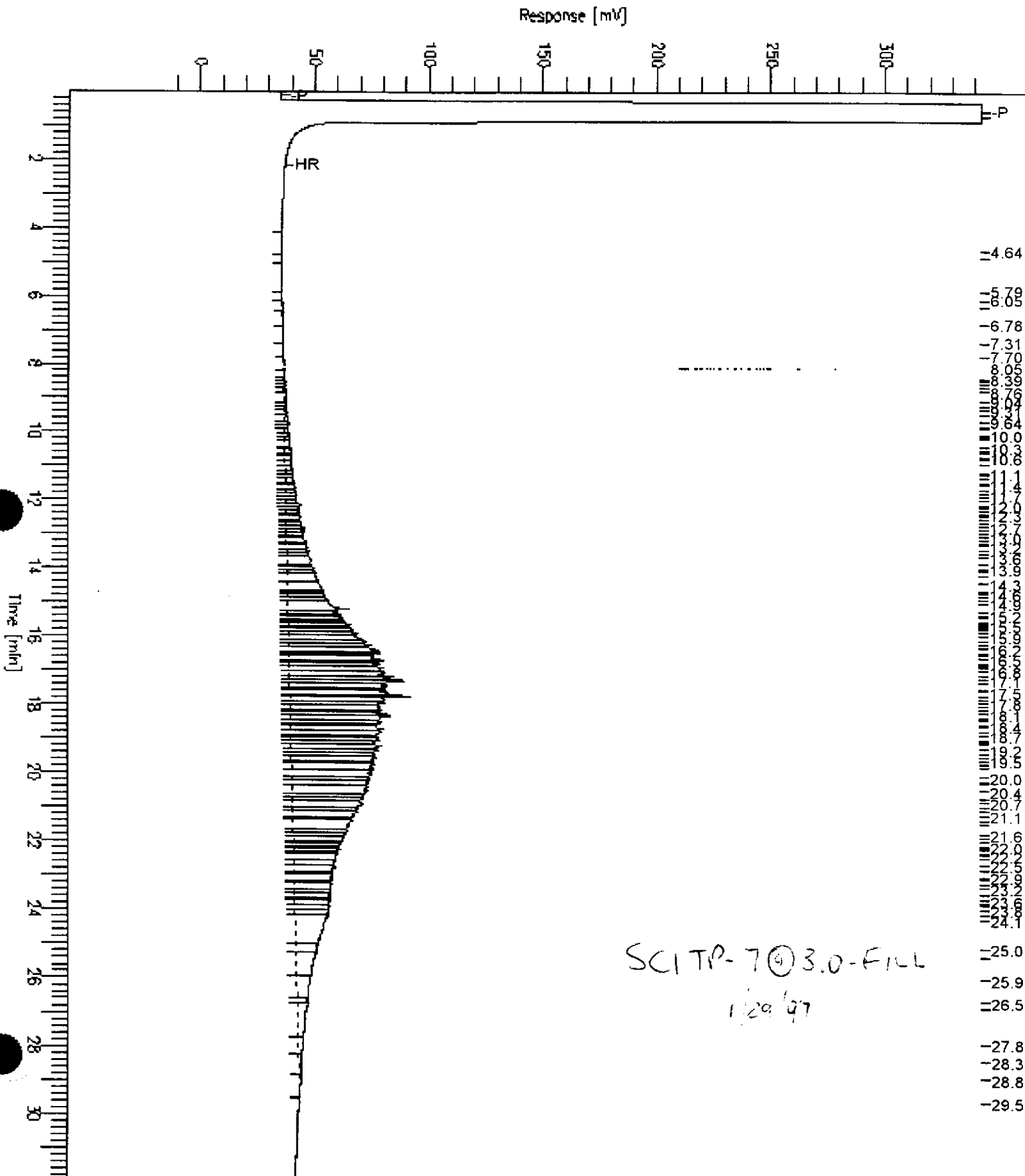
Low Point : -16.84 mV

High Point : 342.79 mV

Factor: 0.0

Plot Offset: -17 mV

Plot Scale: 359.6 mV

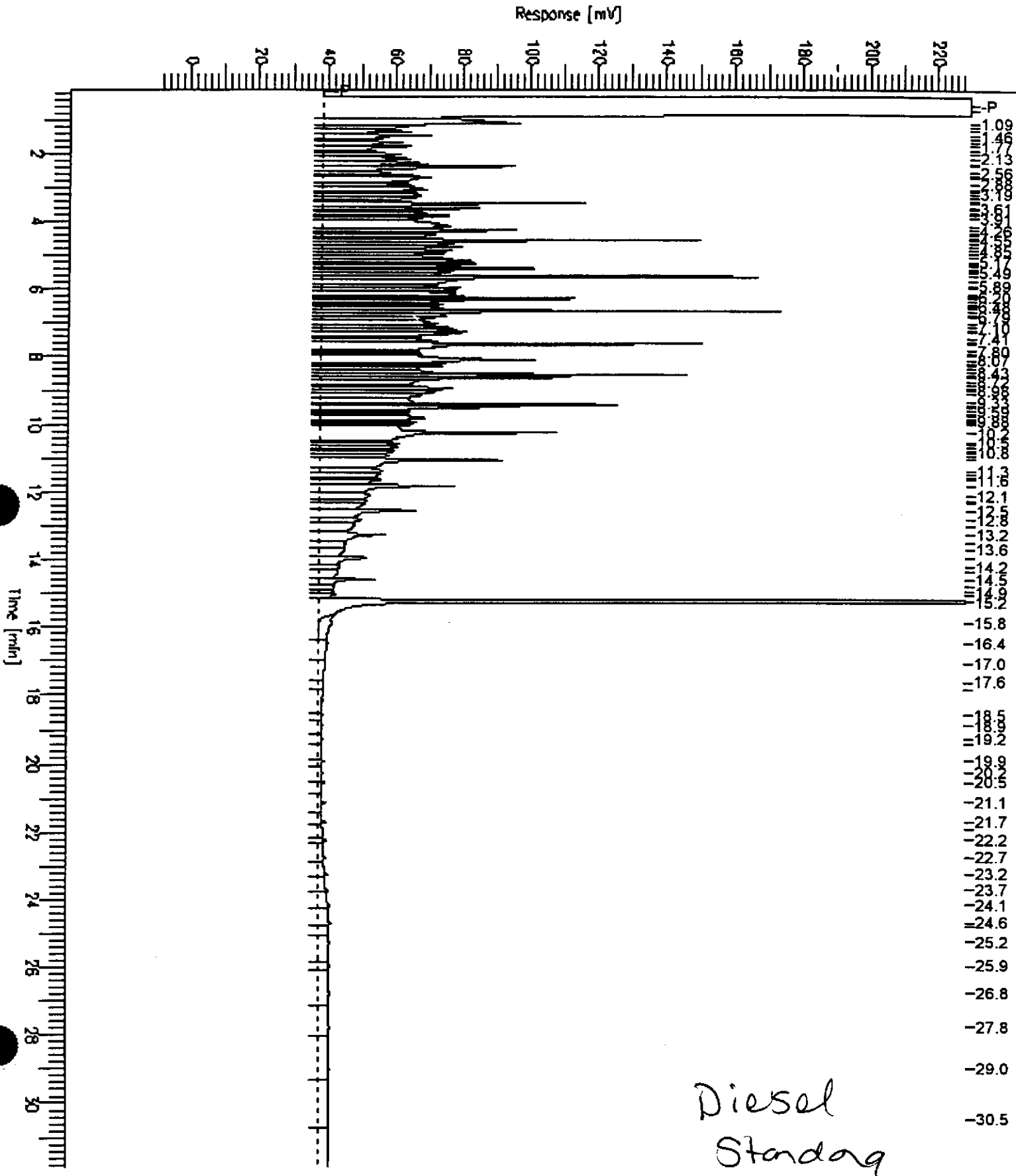


Chromatogram

Sample Name : BSD, QC39620, 32249
FileName : G:\GC11\CHB\041B027.RAW
Method : BTEH036.MTH
Start Time : 0.11 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : -9 mV

Sample #: 32249
Date : 2/12/97 12:52 PM
Time of Injection: 2/11/97 04:54 AM
Low Point : -8.70 mV
Plot Scale: 238.7 mV

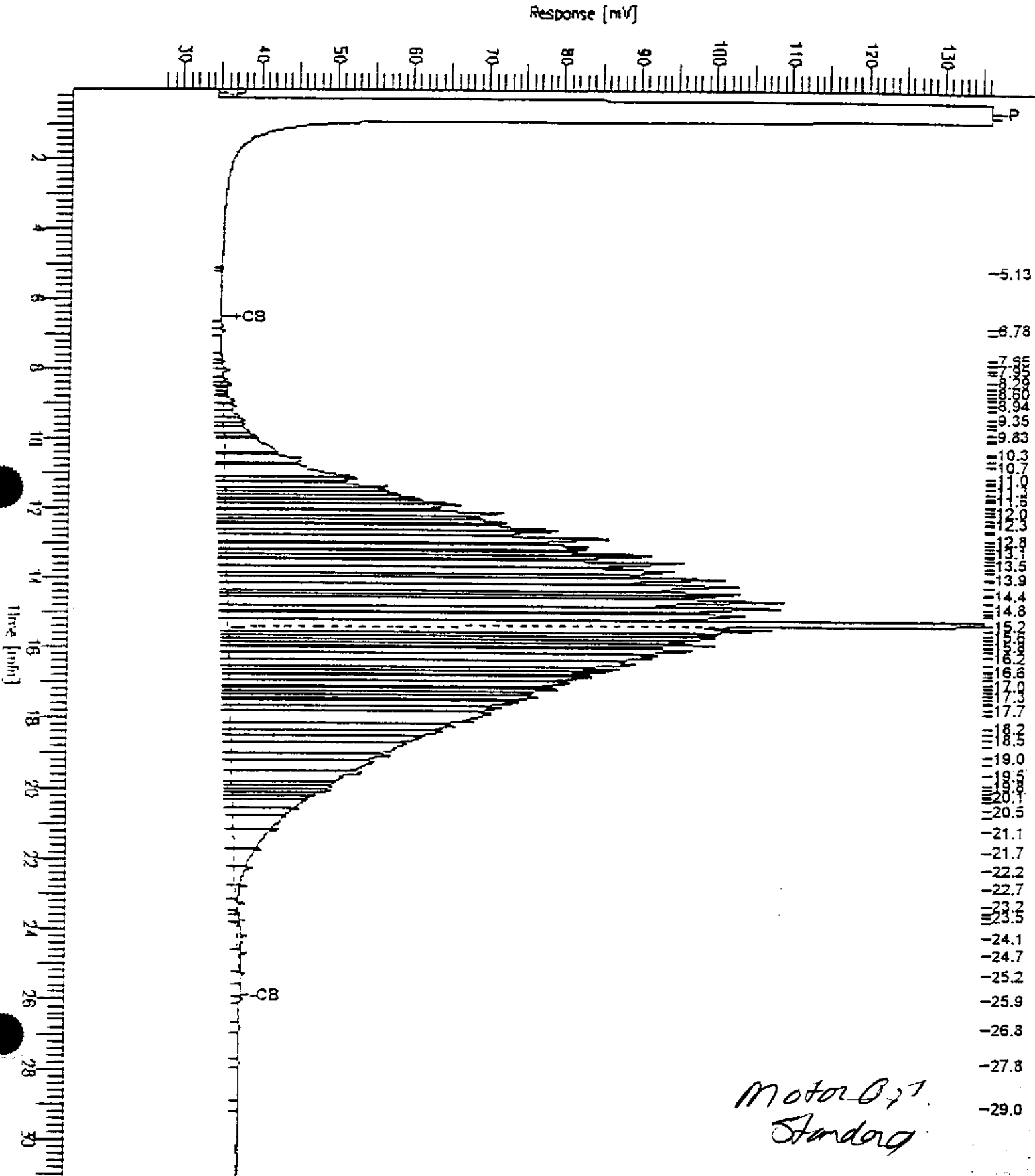


Chromatogram

Sample Name : ccv,96ws3096.mo
FileName : G:\GC11\CHB\035B004.RAW
Method : BTEHO35.MTH
rt Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 28 mV

Sample #: 500mg/l
Date : 2/5/97 09:28 AM
Time of Injection: 2/4/97 08:28 PM
Low Point : 27.87 mV
Plot Scale: 108.3 mV
Page 1 of 1
High Point : 136.17 mV





Lab #: 128196

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32249
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/11/97

MB Lab ID: QC39618

Analyte	Result		
Diesel C12-C22	<50		
Motor Oil C22-C50	<250		
Surrogate	%Rec		Recovery Limits
Hexacosane	109		60-140



Lab #: 128196

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	
BLANK SPIKE/BLANK SPIKE DUPLICATE	
Matrix: Water	Prep Date: 02/05/97
Batch#: 32249	Analysis Date: 02/11/97
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC39619

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1951	79	60-140
Surrogate	%Rec	Limits		
Hexacosane	108	60-140		

BSD Lab ID: QC39620

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	2180	88	60-140	11	35
Surrogate	%Rec	Limits				
Hexacosane	115	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Lab #: 128196

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32255
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/13/97

MB Lab ID: QC39642

Analyte	Result		
Diesel C12-C22	<1.0		
Motor Oil C22-C50	<5.0		
Surrogate	%Rec	Recovery Limits	
Hexacosane	103	60-140	



Lab #: 128196

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32255
 Units: mg/Kg
 Diln Fac: 1

Prep Date: 02/05/97
 Analysis Date: 02/13/97

LCS Lab ID: QC39643

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	42.8	49.5	86	60-140
Surrogate	%Rec	Limits		
Hexacosane	107	60-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128196

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32249
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/11/97

MB Lab ID: QC39618

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	%Rec	Recovery Limits
Hexacosane	109	60-140



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-001	TP-7	32267	01/29/97	02/07/97	02/07/97	

Matrix: Water

Analyte	Units	128196-001
Diln Fac:		1
Benzene	ug/L	<0.5
Toluene	ug/L	<0.5
Ethylbenzene	ug/L	<0.5
m,p-Xylenes	ug/L	<0.5
o-Xylene	ug/L	<0.5
Surrogate		
Trifluorotoluene	%REC	111
Bromobenzene	%REC	126



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128196-002	TP-7 @ 3.0-FILL	32250	01/29/97	02/06/97	02/06/97	

Matrix: Soil

Analyte	Units	128196-002
Diln Fac:		1
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethylbenzene	ug/Kg	<5
m,p-Xylenes	ug/Kg	<5
o-Xylene	ug/Kg	<5
Surrogate		
Trifluorotoluene	%REC	77
Bromobenzene	%REC	71



Lab #: 128196

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
METHOD BLANK			
Matrix: Water	Prep Date: 02/06/97		
Batch#: 32267	Analysis Date: 02/06/97		
Units: ug/L			
Diln Fac: 1			

MB Lab ID: QC39691

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	99	58-130	
Bromobenzene	89	62-131	



Lab #: 128196

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants		Analysis Method: EPA 8020	
Project#: 133.005		Prep Method: EPA 5030	
Location: KOT			
METHOD BLANK			
Matrix: Soil		Prep Date: 02/06/97	
Batch#: 32250		Analysis Date: 02/06/97	
Units: ug/Kg			
Diln Fac: 1			

MB Lab ID: QC39624

Analyte	Result		
Benzene	<5.0		
Toluene	<5.0		
Ethylbenzene	<5.0		
m,p-Xylenes	<5.0		
o-Xylene	<5.0		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	89		52-127
Bromobenzene	86		45-140

Lab #: 128196

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/06/97		
Batch#: 32267	Analysis Date: 02/06/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39690

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	18.06	20	90	80-120
Toluene	17.93	20	90	80-120
Ethylbenzene	19.78	20	99	80-120
m,p-Xylenes	37.28	40	93	80-120
o-Xylene	20.12	20	101	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	101	58-130		
Bromobenzene	101	62-131		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128196

BATCH QC REPORT

BTXE	
Client: Subsurface Consultants Project#: 133.005 Location: KOT	Analysis Method: EPA 8020 Prep Method: EPA 5030
LABORATORY CONTROL SAMPLE	
Matrix: Soil Batch#: 32250 Units: ug/Kg Diln Fac: 1	Prep Date: 02/06/97 Analysis Date: 02/06/97

LCS Lab ID: QC39623

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	102.9	100	103	80-120
Toluene	106	100	106	80-120
Ethylbenzene	107.5	100	108	80-120
m, p-Xylenes	219.3	200	110	80-120
o-Xylene	107	100	107	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	93	52-127		
Bromobenzene	91	45-140		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits

Lab #: 128196

BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/04/97
Lab ID: 128219-003	Received Date: 02/04/97
Matrix: Soil	Prep Date: 02/06/97
Batch#: 32250	Analysis Date: 02/06/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39625

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	100	<5	90.7	91	75-125
Toluene	100	<5	95.11	95	75-125
Ethylbenzene	100	9.16	110.9	102	75-125
m,p-Xylenes	200	<5	201.6	101	75-125
o-Xylene	100	<5	91.01	91	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	93	52-127			
Bromobenzene	92	45-140			

MSD Lab ID: QC39626

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	100	91.17	91	75-125	1	20
Toluene	100	96.21	96	75-125	1	20
Ethylbenzene	100	111.1	102	75-125	0	20
m,p-Xylenes	200	208.6	104	75-125	3	20
o-Xylene	100	91.27	91	75-125	0	20
Surrogate	%Rec	Limits				
Trifluorotoluene	94	52-127				
Bromobenzene	92	45-140				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 10 outside limits

SAMPLE ID: TP-7
 LAB ID: 128196-001
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 01/29/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Lead	ND	3.0	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: TP-7 @ 3.0-FILL
 LAB ID: 128196-002
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 01/29/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Lead	120	0.15	1	32216	EPA 6010A	02/05/97

CLIENT: Subsurface Consultants
 JOB NUMBER: 128196

DATE REPORTED: 02/12/97

 BATCH QC REPORT
 PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Lead	ND	0.15	mg/Kg	1	32216	EPA 6010A	02/05/97
Lead	ND	3	ug/L	1	32218	EPA 6010A	02/05/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128196

DATE REPORTED: 02/12/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Lead	25	23.7	23.1	mg/Kg	95	92	80-120	3	35	32216	EPA 6010A	02/05/97
Lead	500	490	505	ug/L	98	101	80-120	3	35	32218	EPA 6010A	02/05/97

CHAIN OF CUSTODY FORM

128196

PAGE

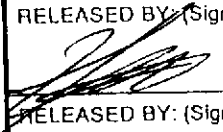
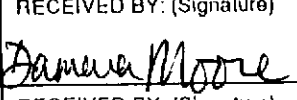
OF

PROJECT NAME: ADT
 JOB NUMBER: 133.005 LAB: C&T
 PROJECT CONTACT: Jerome de Verrier TURNAROUND: std.
 SAMPLED BY: John Wolfe REQUESTED BY: Jerome de Verrier

ANALYSIS REQUESTED											

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES	
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME		
1	TP-7	X				4	1						X	X	01	29	97	1500	X	X
										X			X		01	29	97	1500	X	
2	TP-(a, 3.0-fill)		X						X				X		01	29	97	1500	X	X
	TP-3 D-wastead		X						X				X		01	29	97	1500		

NOTES
 GAO/BTEX
 Preserv + VMO (TEH)
 Lead

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
	1-31-97 5:00	 Damaris Moore	7/3 5pm
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME

COMMENTS & NOTES:

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 19-FEB-97
Lab Job Number: 128197
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-001	SCI-52	32223	01/30/97	02/05/97	02/05/97	
128197-002	SCI-53	32223	01/30/97	02/05/97	02/05/97	
128197-003	SCI-51	32223	01/31/97	02/05/97	02/05/97	
128197-004	SCI-54	32223	01/31/97	02/05/97	02/05/97	

Matrix: Water

Analyte	Units	128197-001	128197-002	128197-003	128197-004
Diln Fac:		1	1	1	1
Gasoline	ug/L	<50	<50	<50	<50
Surrogate					
Trifluorotoluene	%REC	94	93	94	94
Bromobenzene	%REC	87	88	89	85



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-005	SCI-55	32267	01/31/97	02/07/97	02/07/97	
128197-006	SCI-56	32267	01/31/97	02/07/97	02/07/97	

Matrix: Water

Analyte	Units	128197-005	128197-006
Diln Fac:		25	1
Gasoline	ug/L	29000	<50
Surrogate			
Trifluorotoluene	%REC	100	97
Bromobenzene	%REC	111	116

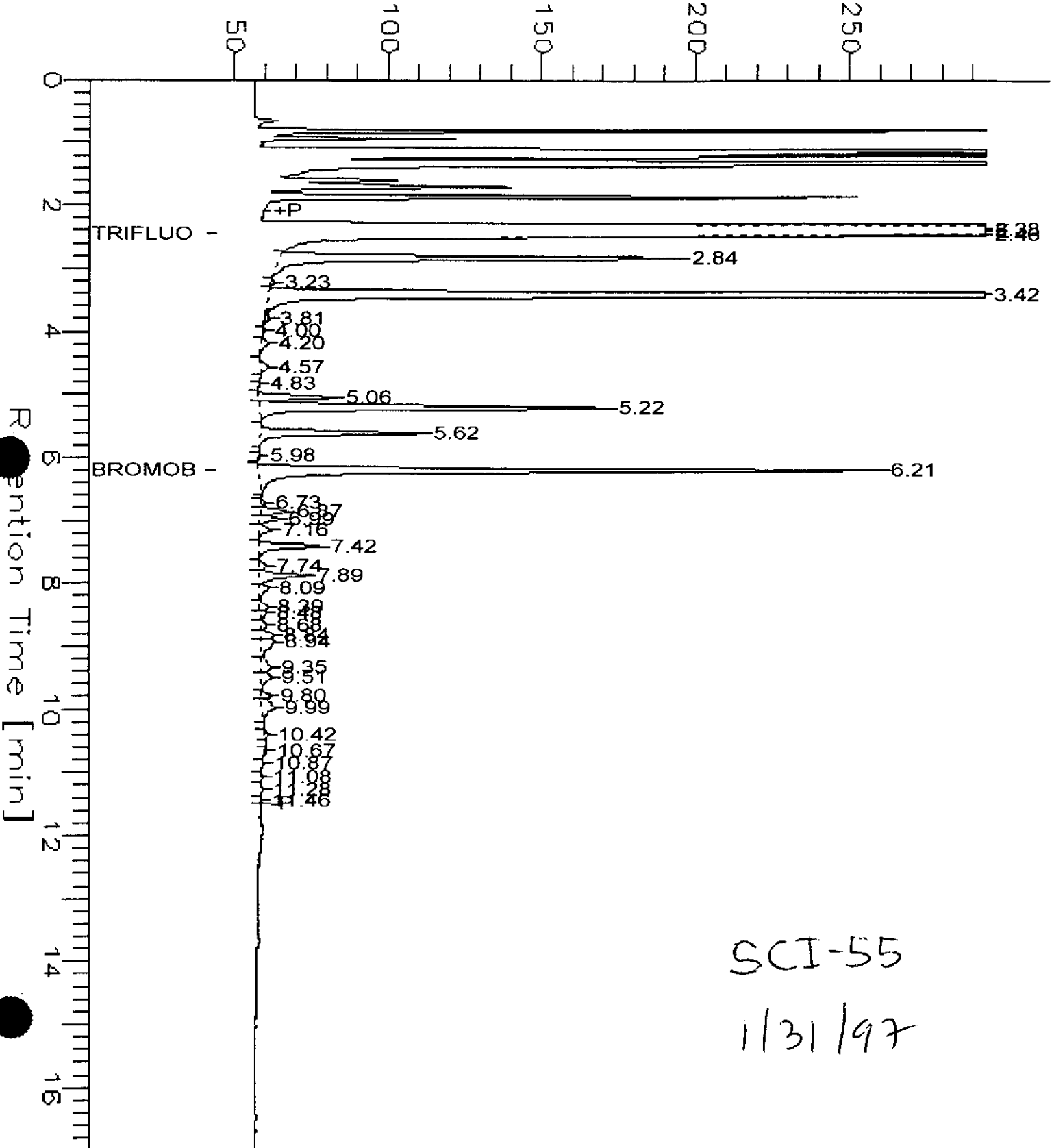
GC04 TVH 'J' File (Rtx1,FID)

Sample Name : DL,128197-005,32267
 FileName : G:\GC04\DATA\037J032.raw
 Method : TVHBTXE

Sample #: Page 1 of 1
 Date : 2/7/97 11:05 AM
 Time of Injection: 2/7/97 10:48 AM
 Low Point : 44.08 mV
 High Point : 294.08 mV
 Plot Scale: 250.0 mV

Start Time : 0.00 min
 End Time : 17.00 min
 Plot Offset: 44 mV

Response [mV]





Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 02/05/97
Batch#: 32223	Analysis Date: 02/05/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC39531

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	90	65-135
Bromobenzene	78	65-135



Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Water	Prep Date:	02/06/97
Batch#:	32267	Analysis Date:	02/06/97
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC39691

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	86	65-135
Bromobenzene	94	65-135



Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/05/97		
Batch#: 32223	Analysis Date: 02/05/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39529

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	2099	2000	105	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	97	65-135		
Bromobenzene	97	65-135		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-54	Sample Date: 01/31/97
Lab ID: 128197-004	Received Date: 01/31/97
Matrix: Water	Prep Date: 02/05/97
Batch#: 32223	Analysis Date: 02/05/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39532

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	2191	110	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	96	65-135			
Bromobenzene	101	65-135			

MSD Lab ID: QC39533

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	2183	109	75-125	0	35
Surrogate	%Rec	Limits				
Trifluorotoluene	99	65-135				
Bromobenzene	104	65-135				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 32267
Units: ug/L
Diln Fac: 1

Prep Date: 02/06/97
Analysis Date: 02/06/97

LCS Lab ID: QC39689

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1924	2000	96	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	141*	65-135		
Bromobenzene	109	65-135		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits



Lab #: 128197

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-56	Sample Date: 01/31/97
Lab ID: 128197-006	Received Date: 01/31/97
Matrix: Water	Prep Date: 02/06/97
Batch#: 32267	Analysis Date: 02/06/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39692

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	1742	87	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	110	65-135			
Bromobenzene	122	65-135			

MSD Lab ID: QC39693

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1507	75	75-125	14	35
Surrogate	%Rec	Limits				
Trifluorotoluene	109	65-135				
Bromobenzene	123	65-135				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-001	SCI-52	32249	01/30/97	02/05/97	02/11/97	
128197-002	SCI-53	32249	01/30/97	02/05/97	02/13/97	
128197-003	SCI-51	32249	01/31/97	02/05/97	02/13/97	
128197-004	SCI-54	32249	01/31/97	02/05/97	02/12/97	

Matrix: Water

Analyte	Units	128197-001	128197-002	128197-003	128197-004
Diln Fac:		1	1	1	1
Diesel C12-C22	ug/L	150 YH	230 YH	960 YH	550 YH
Motor Oil C22-C50	ug/L	660 H	370 YLH	1100 YLH	590 YLH
Surrogate					
Hexacosane	%REC	97	115	91	115

- Y: Sample exhibits fuel pattern which does not resemble standard
- H: Heavier hydrocarbons than indicated standard
- L: Lighter hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-005	SCI-55	32249	01/31/97	02/05/97	02/12/97	
128197-006	SCI-56	32249	01/31/97	02/05/97	02/12/97	

Matrix: Water

Analyte	Units	128197-005	128197-006
Diln Fac:		10	1
Diesel C12-C22	ug/L	28000 YL	660 LH
Motor Oil C22-C50	ug/L	3300 YLH	450 YH
Surrogate			
Hexacosane	%REC	95	110

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard
 L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 128197-001,32249

Sample #: 32249

Page 1 of 1

FileName : G:\GC11\CHB\041B041.raw

Date : 2/11/97 03:29 PM

Method : SINGB

Time of Injection: 2/11/97 02:56 PM

Start Time : 0.00 min

End Time : 31.90 min

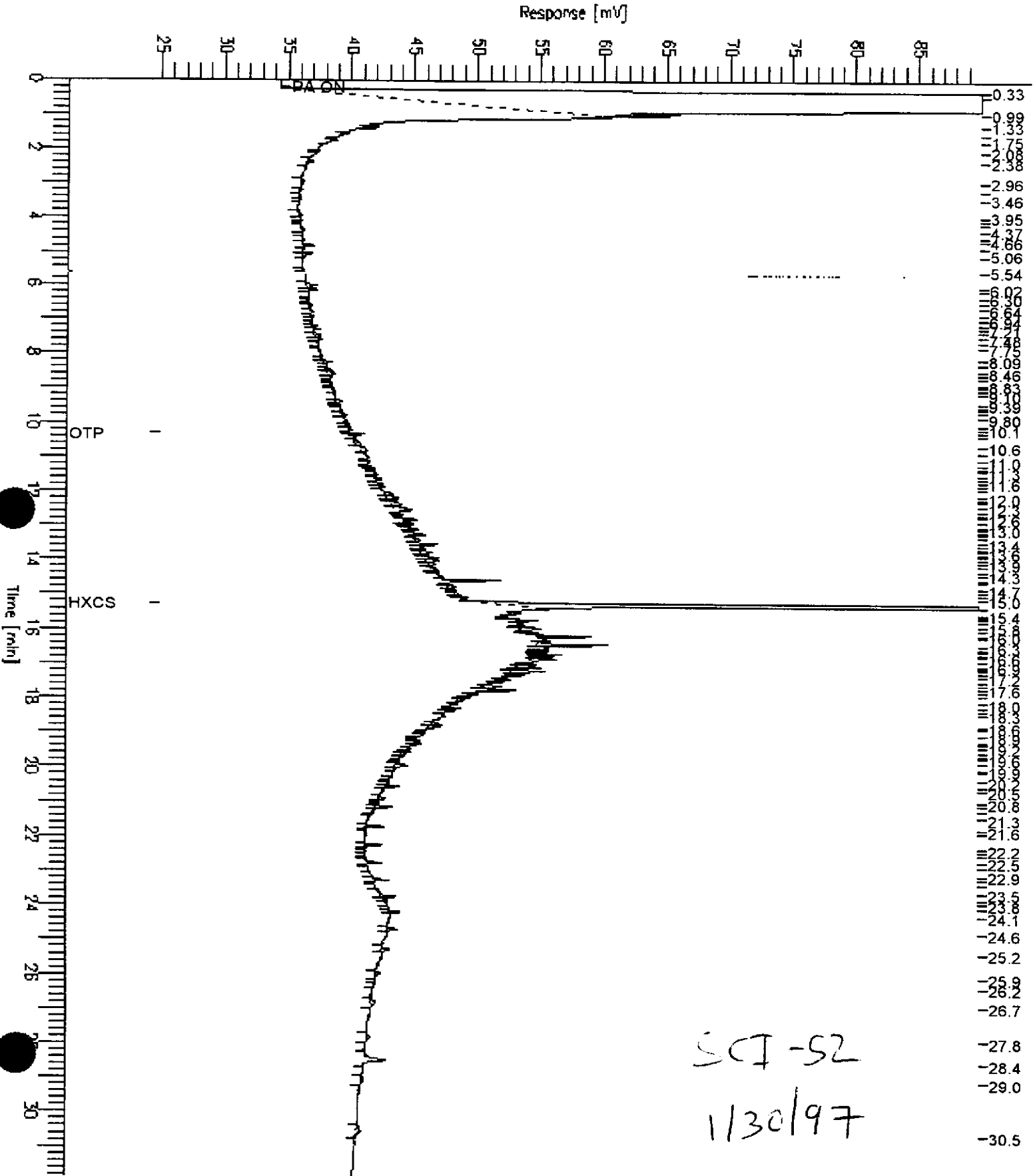
Low Point : 25.00 mV

High Point : 90.00 mV

Factor: 0.0

Plot Offset: 25 mV

Plot Scale: 65.0 mV



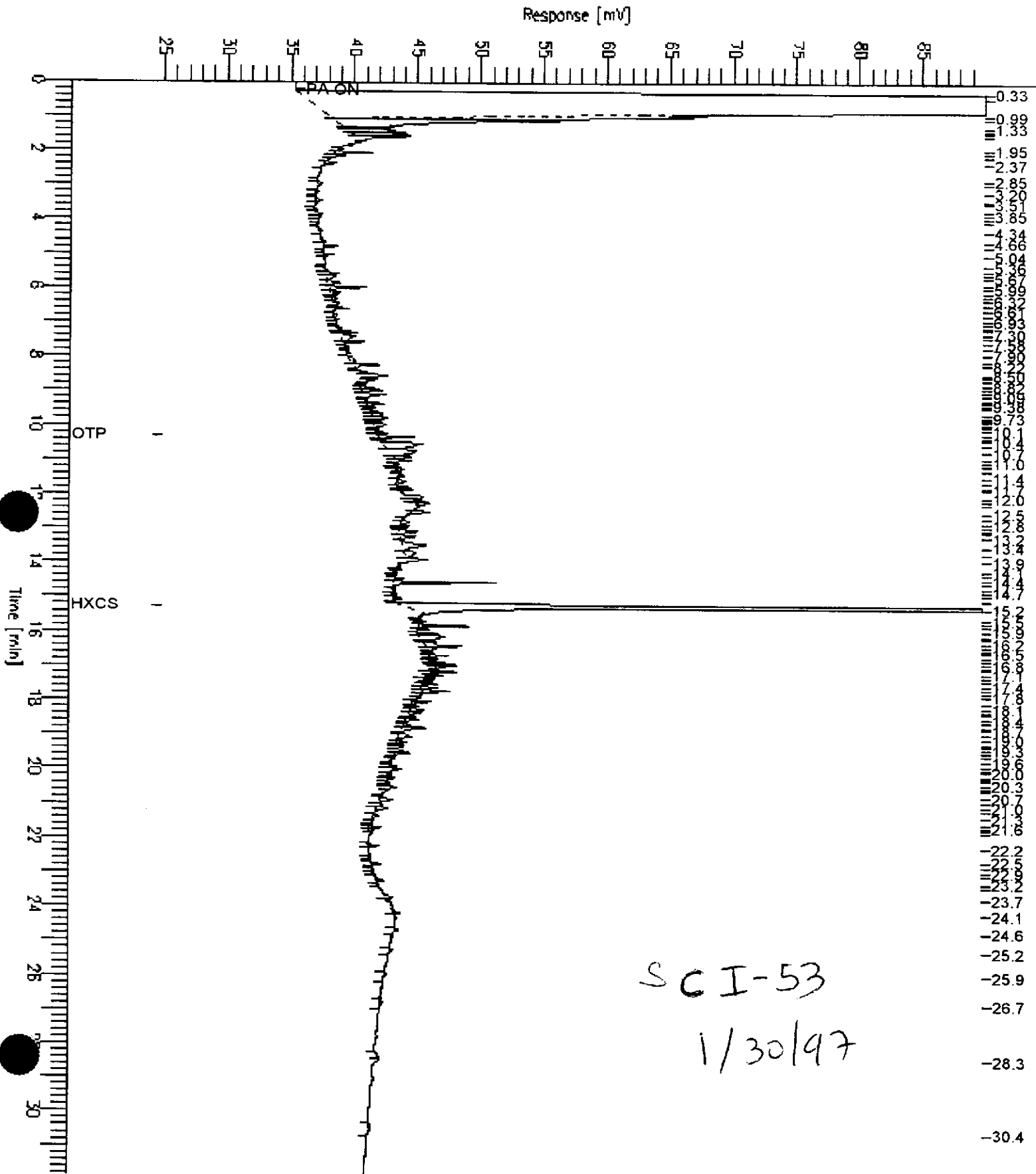
Chromatogram

Sample Name : 128197-002,32249
FileName : G:\GC11\CHB\041B072.raw
Method : SINGB
Start Time : 0.00 min
Factor : 0.0

End Time : 31.90 min
Plot Offset : 25 mV

Sample #: 32249
Date : 2/13/97 07:45 AM
Time of Injection: 2/13/97 07:13 AM
Low Point : 25.00 mV
High Point : 90.00 mV
Plot Scale: 65.0 mV

Page 1 of 1



SCI-53
1/30/97

Chromatogram

Sample Name : 128197-003,32249

Sample #: 32249

Page 1 of 1

FileName : G:\GC11\CHB\041B073.raw

Date : 2/13/97 08:29 AM

Method : SINGB

Time of Injection: 2/13/97 07:56 AM

Start Time : 0.00 min

End Time : 31.90 min

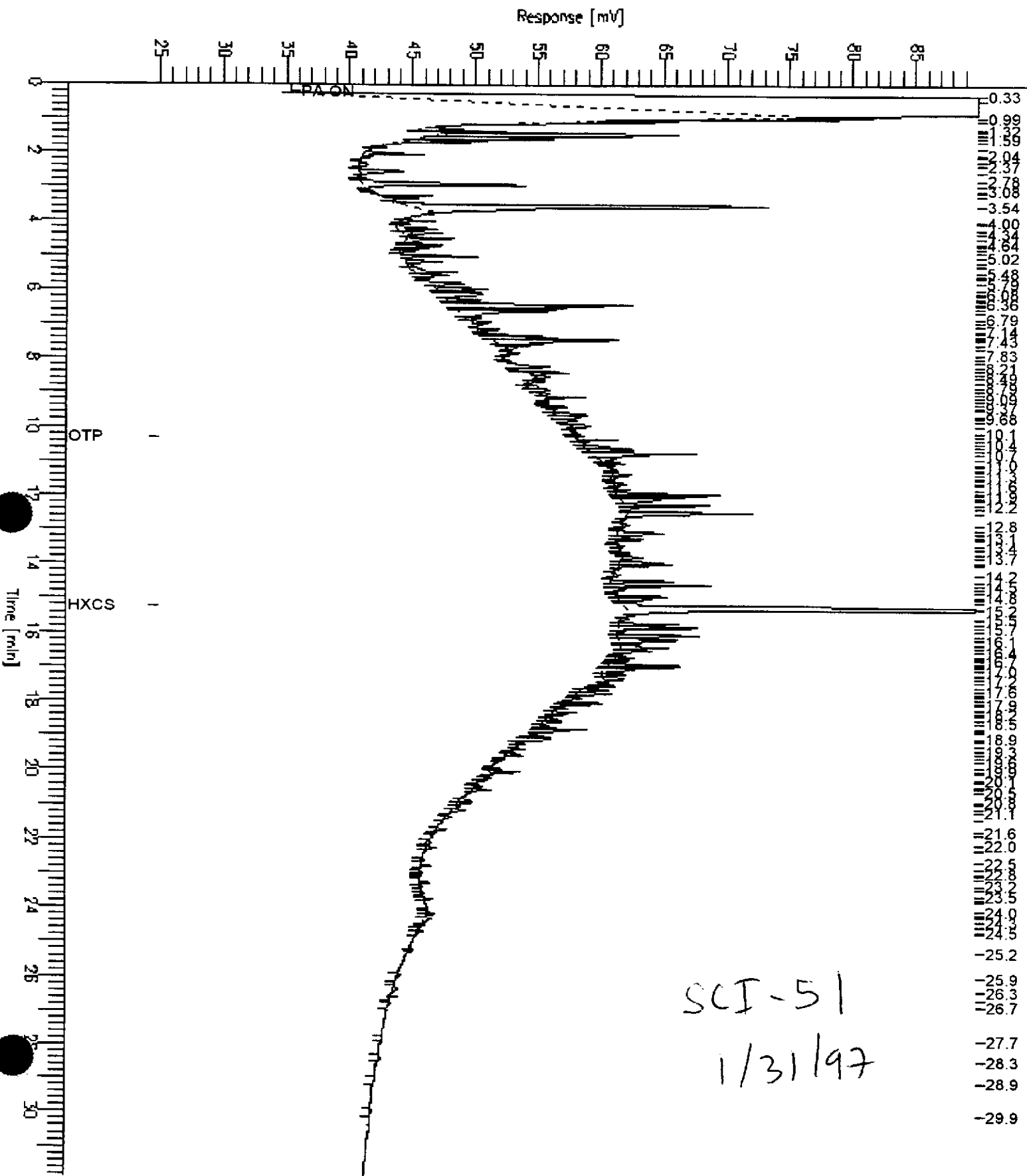
Low Point : 25.00 mV

High Point : 90.00 mV

Factor: 0.0

Plot Offset: 25 mV

Plot Scale: 65.0 mV



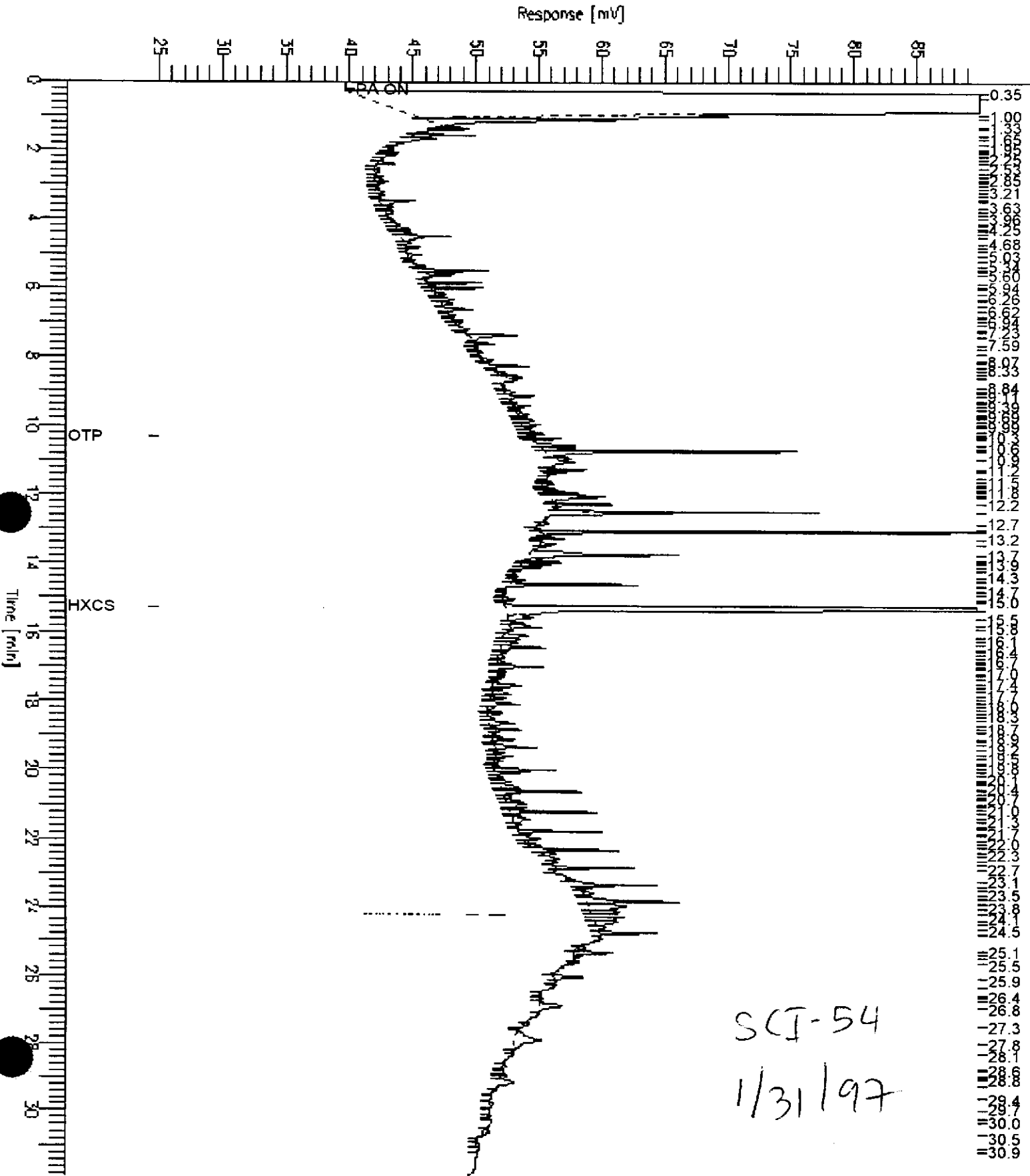
SCI-51
1/31/97

Chromatogram

Sample Name : 128197-004,32249
FileName : G:\GC11\CHB\041B044.raw
Method : SINGB
Start Time : 0.00 min
Factor : 0.0

End Time : 31.90 min
Plot Offset: 25 mV

Sample #: 32249
Date : 2/12/97 08:41 AM
Time of Injection: 2/12/97 08:08 AM
Low Point : 25.00 mV
High Point : 90.00 mV
Plot Scale: 65.0 mV



Chromatogram

Sample Name : 128197-005,32249

FileName : G:\GC11\CHBA\0418045.raw

Method : SINGB

Time : 0.00 min

Factor : 0.0

End Time : 31.90 min

Plot Offset : 25 mV

Sample #: 32249

Date : 2/12/97 09:24 AM

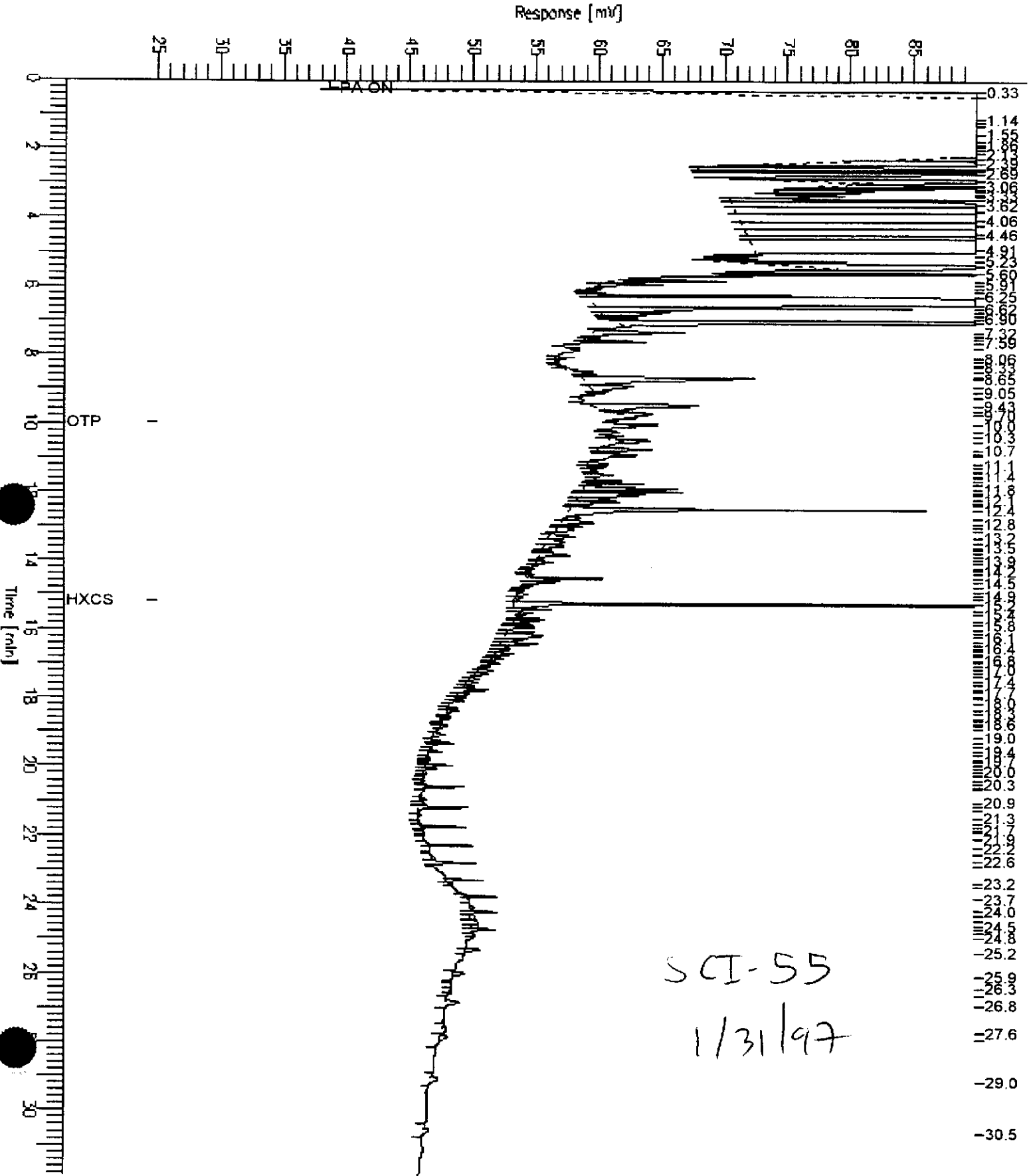
Time of Injection: 2/12/97 08:51 AM

Low Point : 25.00 mV

Plot Scale: 85.0 mV

Page 1 of 1

High Point : 90.00 mV



Chromatogram

Sample Name : 128197-006,32249

Sample #: 32249

Page 1 of 1

FileName : G:\GC11\CHB\041B056.raw

Date : 2/12/97 08:18 PM

Method : SINGB

Time of Injection: 2/12/97 07:44 PM

Start Time : 0.00 min

End Time : 31.90 min

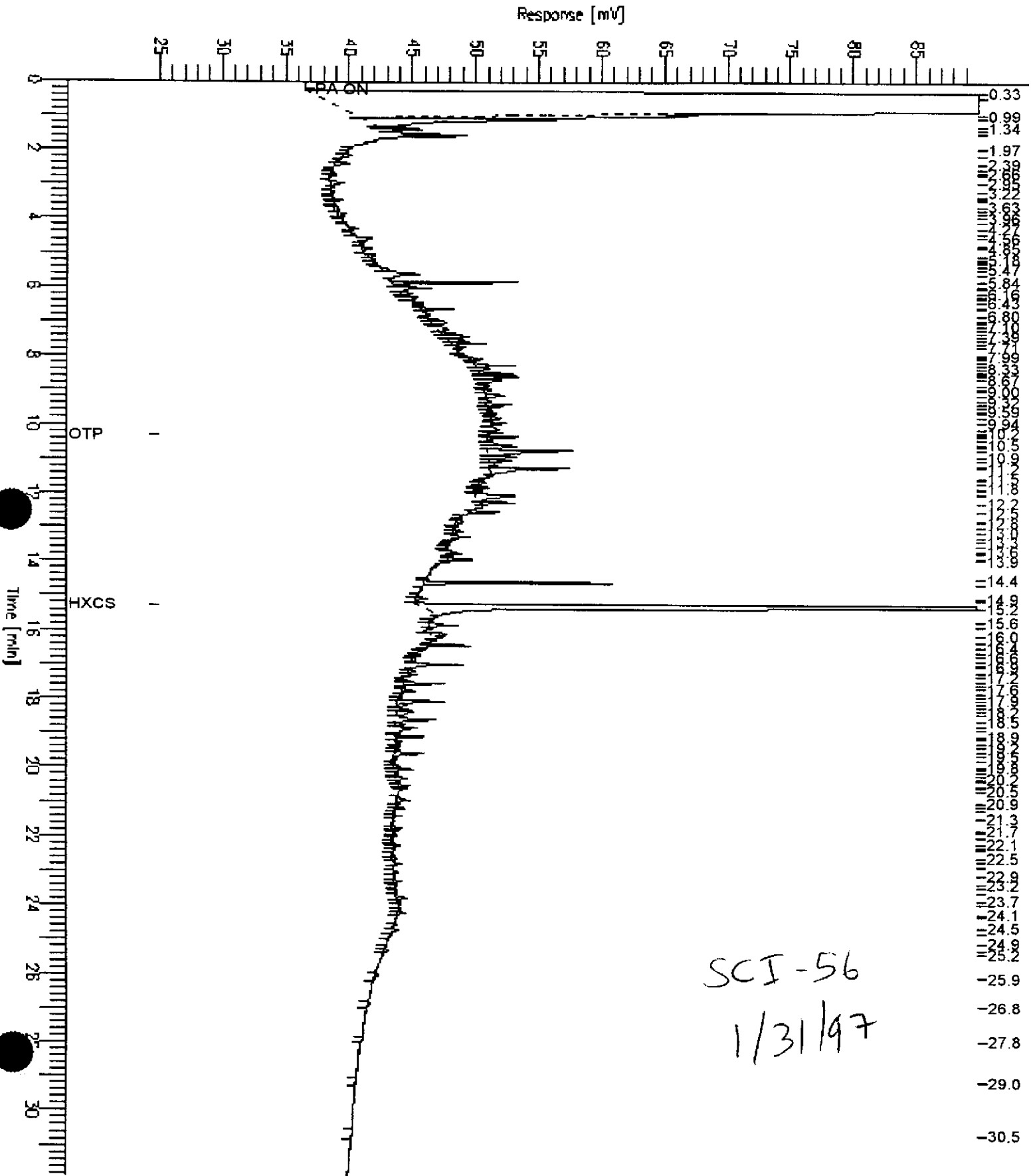
Low Point : 25.00 mV

High Point : 90.00 mV

Factor: C.C

Plot Offset: 25 mV

Plot Scale: 65.0 mV



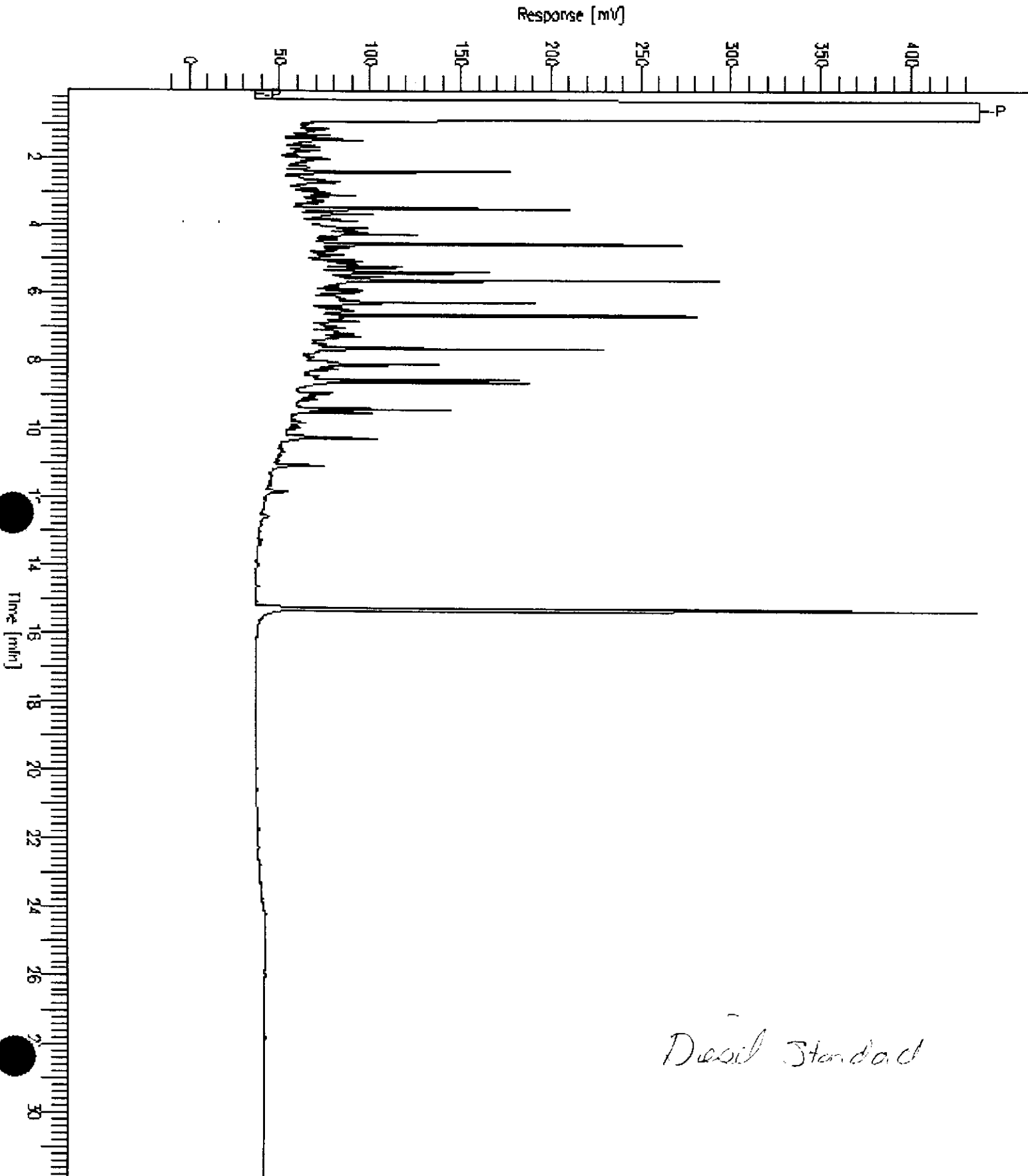
Chromatogram

Sample Name : CCV,97WS3659,DS
FileName : G:\GC11\CHB\041B049.RAW
Method : BTEHC36.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -16 mV

Sample #: 500MG/L
Date : 2/19/97 11:19 AM
Time of Injection: 2/12/97 11:43 AM
Low Point : -15.95 mV
High Point : 437.91 mV
Plot Scale: 453.9 mV

Page 1 of 1



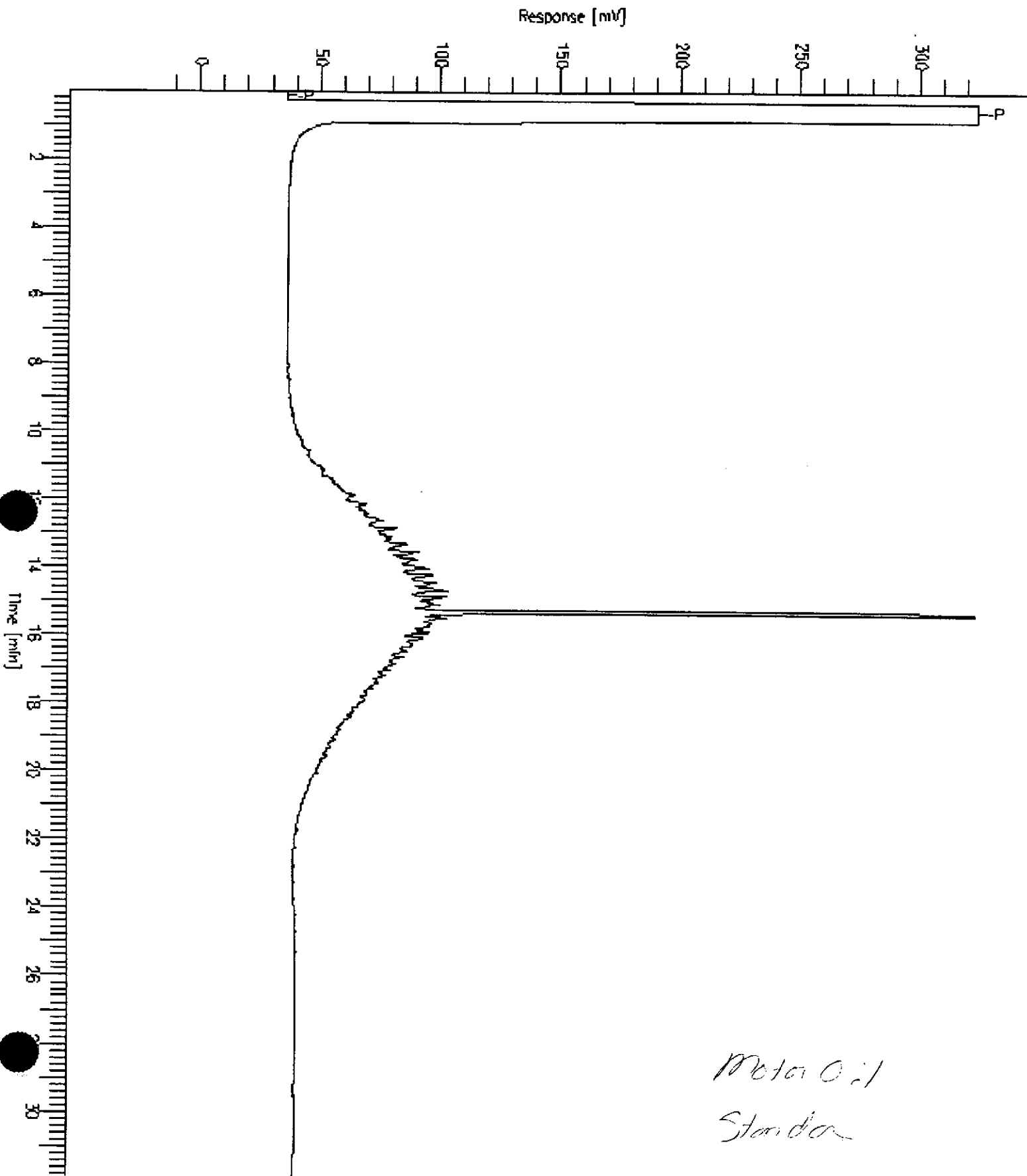
Chromatogram

Sample Name : CCV, 97WS3691, MO
FileName : G:\GC11\CHB\041B052.RAW
Method : BTEH036.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -16 mV

Sample #: 500MG/L
Date : 2/19/97 11:19 AM
Time of Injection: 2/12/97 01:52 PM
Low Point : -15.95 mV
High Point : 324.44 mV
Plot Scale: 340.4 mV

Page 1 of 1



*Motor Oil
Standard*



Lab #: 128197

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32249
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/11/97

MB Lab ID: QC39618

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	%Rec	Recovery Limits
Hexacosane	109	60-140



Lab #: 128197

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	
BLANK SPIKE/BLANK SPIKE DUPLICATE	
Matrix: Water	Prep Date: 02/05/97
Batch#: 32249	Analysis Date: 02/11/97
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC39619

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1951	79	60-140
Surrogate	%Rec	Limits		
Hexacosane	108	60-140		

BSD Lab ID: QC39620

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	2180	88	60-140	11	35
Surrogate	%Rec	Limits				
Hexacosane	115	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-001	SCI-52	32223	01/30/97	02/05/97	02/05/97	
128197-002	SCI-53	32223	01/30/97	02/05/97	02/05/97	
128197-003	SCI-51	32223	01/31/97	02/05/97	02/05/97	
128197-004	SCI-54	32223	01/31/97	02/05/97	02/05/97	

Matrix: Water

Analyte	Units	128197-001	128197-002	128197-003	128197-004
Diln Fac:		1	1	1	1
Benzene	ug/L	<0.5	<0.5	1.5	<0.5
Toluene	ug/L	<0.5	<0.5	7	3
Ethylbenzene	ug/L	<0.5	<0.5	0.6	<0.5
m,p-Xylenes	ug/L	<0.5	<0.5	2.5	1.1
o-Xylene	ug/L	<0.5	<0.5	0.8	<0.5
Surrogate					
Trifluorotoluene	%REC	93	93	94	92
Bromobenzene	%REC	93	93	92	89



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128197-005	SCI-55	32267	01/31/97	02/07/97	02/07/97	
128197-006	SCI-56	32267	01/31/97	02/07/97	02/07/97	

Matrix: Water

Analyte	Units	128197-005	128197-006
Diln Fac:		25	1
Benzene	ug/L	920	<0.5
Toluene	ug/L	4300	<0.5
Ethylbenzene	ug/L	190	<0.5
m,p-Xylenes	ug/L	810	<0.5
o-Xylene	ug/L	400	<0.5
Surrogate			
Trifluorotoluene	%REC	2000 *	111
Bromobenzene	%REC	130	121

* Values outside of QC limits



Lab #: 128197

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
METHOD BLANK			
Matrix: Water	Prep Date: 02/05/97		
Batch#: 32223	Analysis Date: 02/05/97		
Units: ug/L			
Diln Fac: 1			

MB Lab ID: QC39531

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	89	58-130	
Bromobenzene	83	62-131	



Lab #: 128197

BATCH QC REPORT

BTXE			
Client:	Subsurface Consultants	Analysis Method:	EPA 8020
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Water	Prep Date:	02/06/97
Batch#:	32267	Analysis Date:	02/06/97
Units:	ug/L		
Diln Fac:	1		

MB Lab ID: QC39691

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	99		58-130
Bromobenzene	89		62-131



Lab #: 128197

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/05/97		
Batch#: 32223	Analysis Date: 02/05/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39530

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	17.39	20	87	80-120
Toluene	17.97	20	90	80-120
Ethylbenzene	17.75	20	89	80-120
m,p-Xylenes	35.63	40	89	80-120
o-Xylene	18.13	20	91	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	89	58-130		
Bromobenzene	86	62-131		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Lab #: 128197

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8020
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32267
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/06/97
 Analysis Date: 02/06/97

LCS Lab ID: QC39690

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	18.06	20	90	80-120
Toluene	17.93	20	90	80-120
Ethylbenzene	19.78	20	99	80-120
m,p-Xylenes	37.28	40	93	80-120
o-Xylene	20.12	20	101	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	101	58-130		
Bromobenzene	101	62-131		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-52
Lab ID: 128197-001
Matrix: Water
Batch#: 32200
Units: ug/L
Diln Fac: 1

Sampled: 01/30/97
Received: 01/31/97
Extracted: 02/04/97
Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	98	79-122

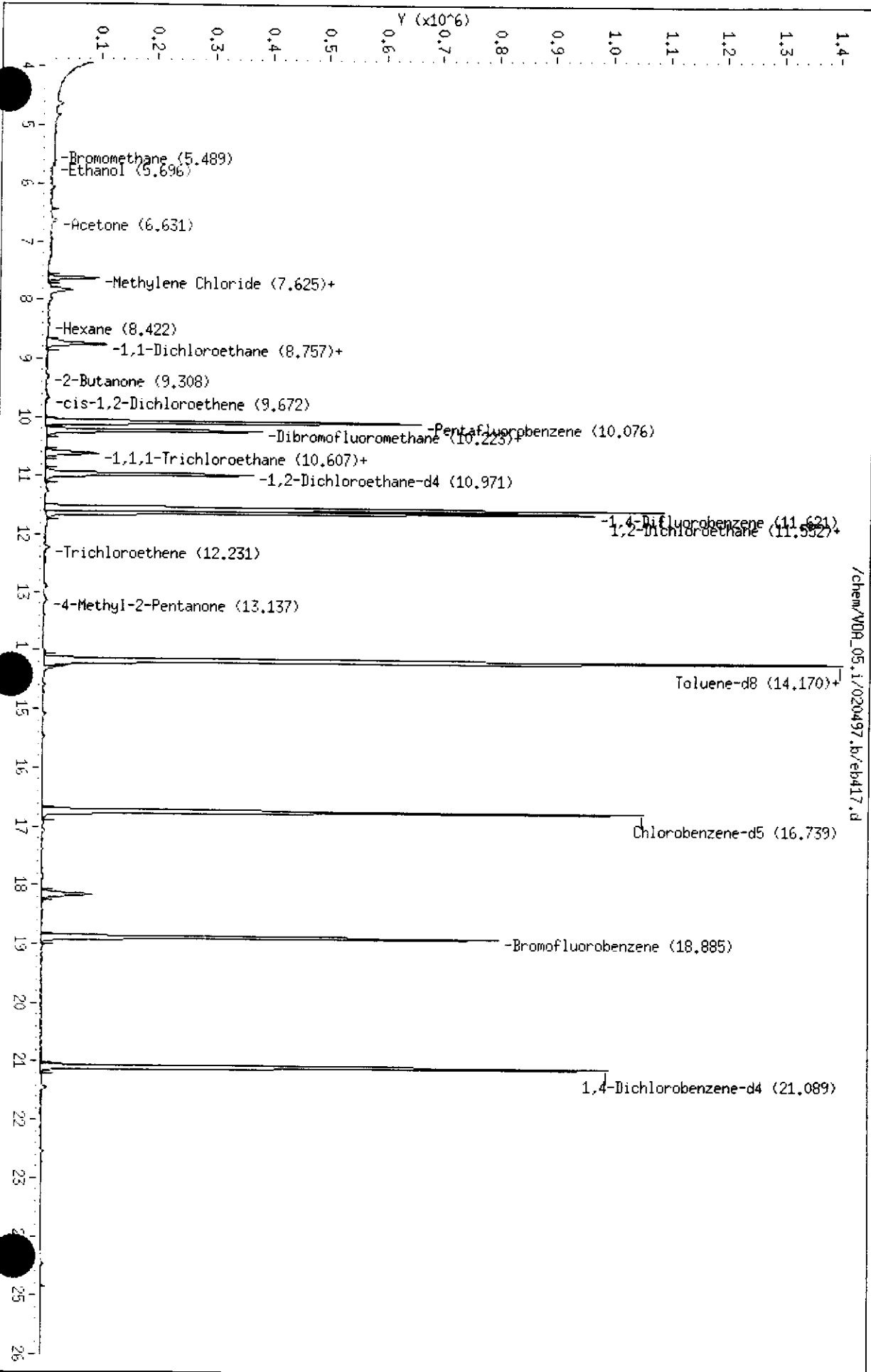


Volatile Organics by GC/MS

Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
Field ID: SCI-53	Sampled: 01/30/97
Lab ID: 128197-002	Received: 01/31/97
Matrix: Water	Extracted: 02/04/97
Batch#: 32200	Analyzed: 02/04/97
Units: ug/L	
Diln Fac: 1	

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	12	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	12	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	99	79-122

128197-2



Data File: /chem/V09_05.1/020497.b/eb417.d
Date: 04-FEB-97 18:28
Client ID: DYNAM P&T
Sample Info: S,128197-002
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32

/chem/V09_05.1/020497.b/eb417.d



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

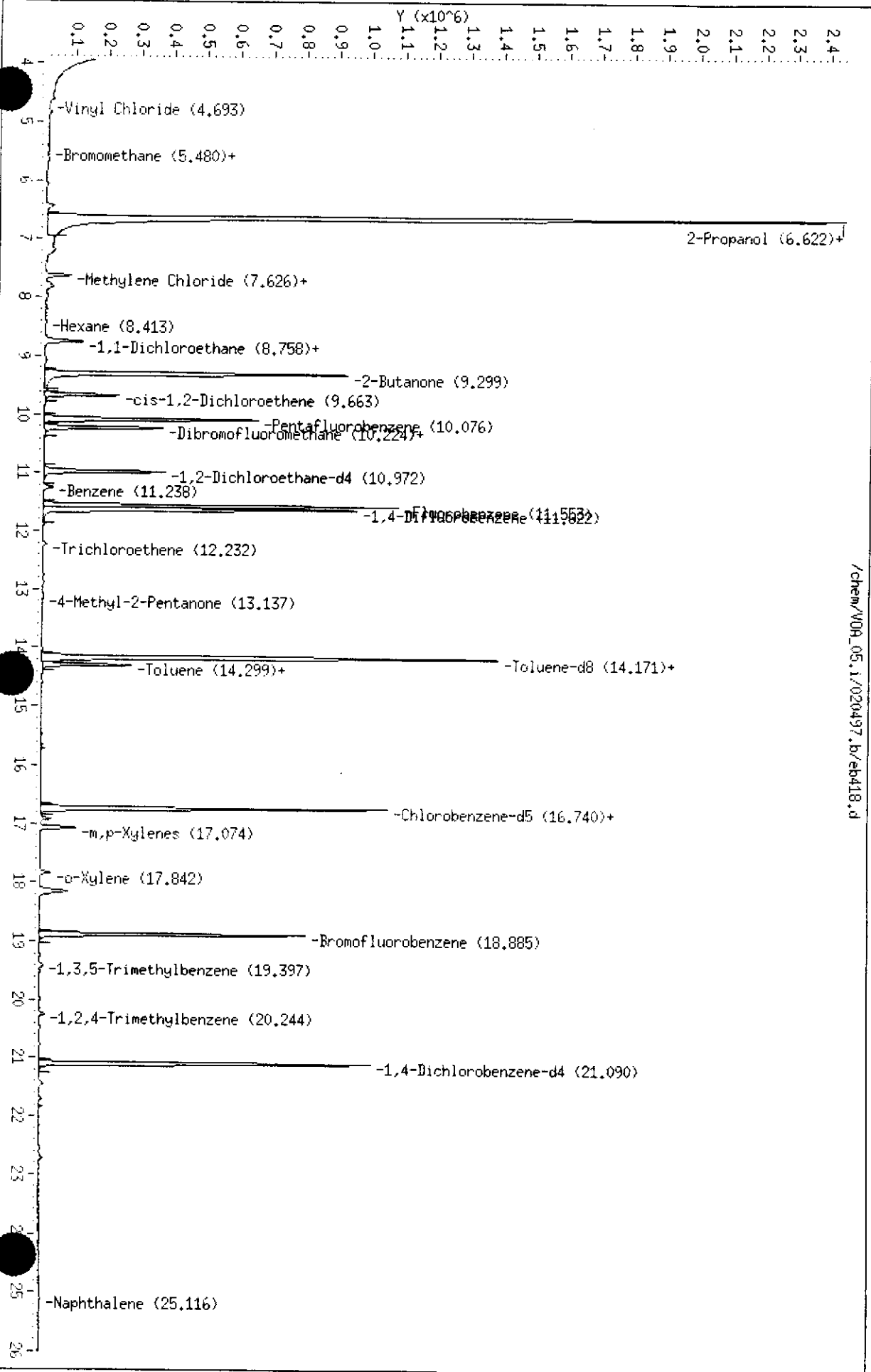
Field ID: SCI-51
 Lab ID: 128197-003
 Matrix: Water
 Batch#: 32200
 Units: ug/L
 Diln Fac: 1

Sampled: 01/31/97
 Received: 01/31/97
 Extracted: 02/04/97
 Analyzed: 02/04/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	1900	400
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	14	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	18	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	290	200
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	9.8	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	3.9 J	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	99	79-122

J: Estimated Value

12 8197-3



Data File: /chem/VDH_05.1/020497.b/eb418.d
Date: 04-FEB-97 18:59
Client ID: DYNA P&I
Sample Info: S.128197-003
Purge Volume: 5.0
Column phase: RTX Volatiles

/chem/VDH_05.1/020497.b/eb418.d

Instrument: VDH_05.1
Operator: DM
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-54
 Lab ID: 128197-004
 Matrix: Water
 Batch#: 32225
 Units: ug/L
 Diln Fac: 1

Sampled: 01/31/97
 Received: 01/31/97
 Extracted: 02/05/97
 Analyzed: 02/05/97

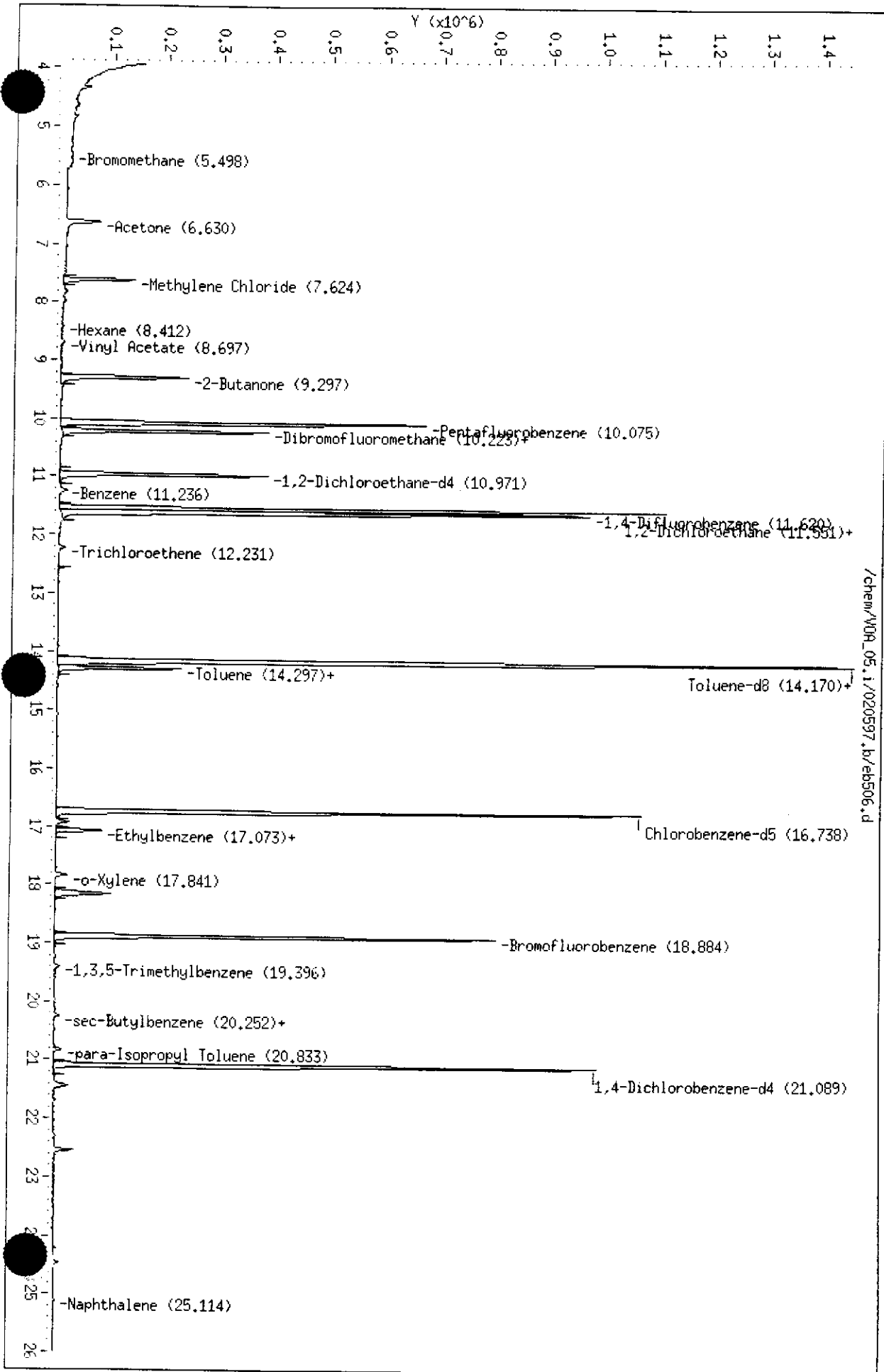
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	66	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	110	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	7.8	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	3.0 J	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	105	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	102	79-122

J: Estimated Value

128197-4

Data File: /chem/V09_05.1/020597.b/eb506.d
Date: 05-FEB-97 13:09
Client ID: DYNA P&T
Sample Info: MSS,128197-004
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32





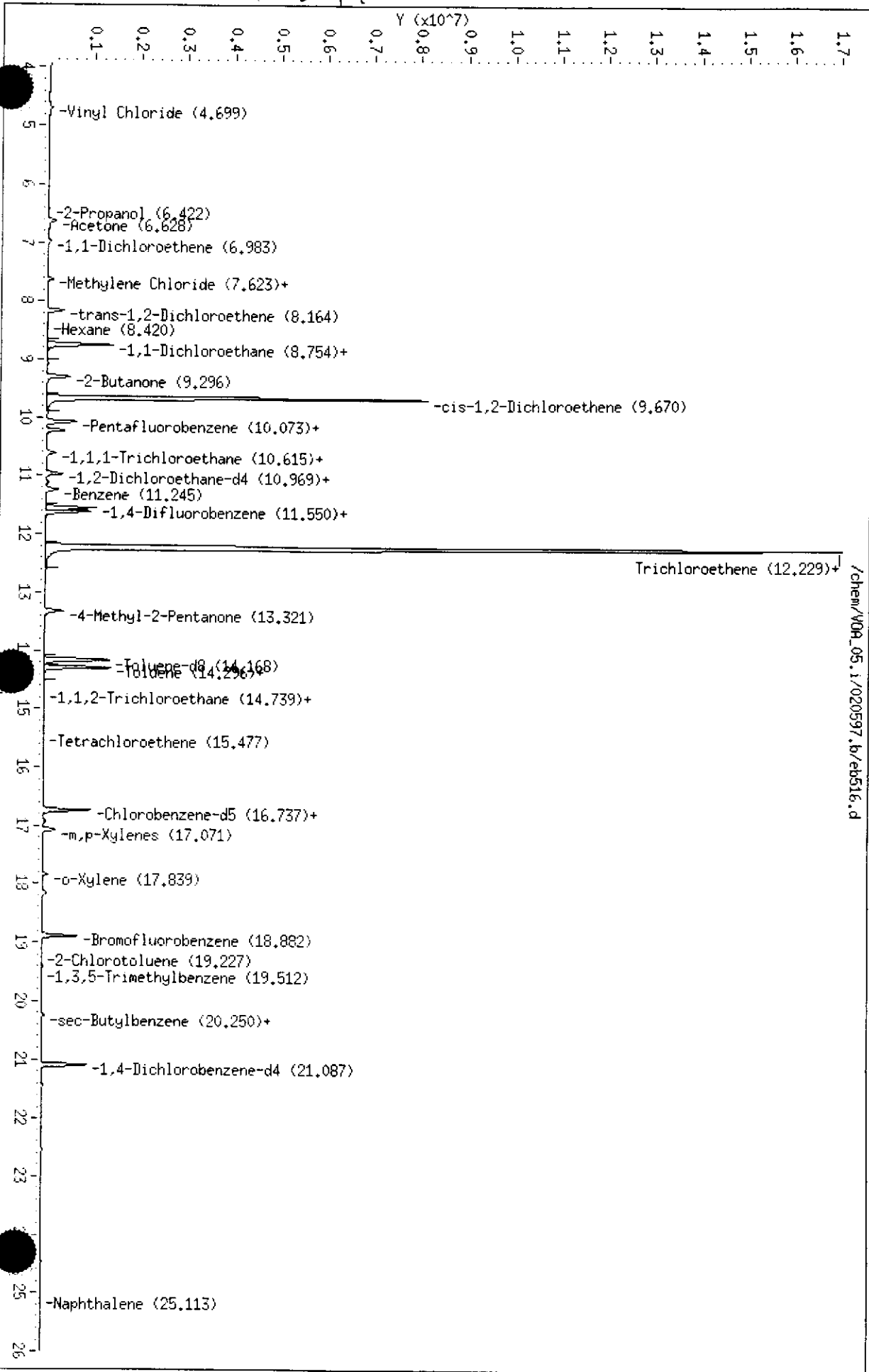
Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-55	Sampled:	01/31/97
Lab ID: 128197-005	Received:	01/31/97
Matrix: Water	Extracted:	02/05/97
Batch#: 32225	Analyzed:	02/05/97
Units: ug/L		
Diln Fac: 100		
Analyte	Result	Reporting Limit
Chloromethane	ND	1000
Bromomethane	ND	1000
Vinyl Chloride	2000	1000
Chloroethane	ND	1000
Methylene Chloride	ND	2000
Acetone	18000	2000
Carbon Disulfide	ND	500
Trichlorofluoromethane	ND	500
1,1-Dichloroethene	750	500
1,1-Dichloroethane	16000	500
trans-1,2-Dichloroethene	2700	500
cis-1,2-Dichloroethene	55000	5000
Chloroform	ND	500
Freon 113	ND	500
1,2-Dichloroethane	740	500
2-Butanone	14000	10000
1,1,1-Trichloroethane	2600	500
Carbon Tetrachloride	ND	500
Vinyl Acetate	ND	5000
Bromodichloromethane	ND	500
1,2-Dichloropropane	ND	500
cis-1,3-Dichloropropene	ND	500
Trichloroethene	160000	5000
Dibromochloromethane	ND	500
1,1,2-Trichloroethane	ND	500
Benzene	1100	500
trans-1,3-Dichloropropene	ND	500
Bromoform	ND	500
2-Hexanone	ND	1000
4-Methyl-2-Pentanone	5600	1000
1,1,2,2-Tetrachloroethane	ND	500
Tetrachloroethene	ND	500
Toluene	5400	500
Chlorobenzene	ND	500
Ethylbenzene	ND	500
Styrene	ND	500
m,p-Xylenes	1000	500
o-Xylene	460 J	500
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	100	79-122

J: Estimated Value

128197-5

Data File: /chem/V09_05.1/020597.b/eb516.d
Date: 05-FEB-97 18:55
Client ID: DYNH P&I
Sample Info: S.128197-005
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-56
Lab ID: 128197-006
Matrix: Water
Batch#: 32225
Units: ug/L
Diln Fac: 1

Sampled: 01/31/97
Received: 01/31/97
Extracted: 02/05/97
Analyzed: 02/05/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	104	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	99	79-122



Lab #: 128197

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32200
Units: ug/L
Diln Fac: 1

Prep Date: 02/04/97
Analysis Date: 02/04/97

MB Lab ID: QC39448

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	99	79-122

Lab #: 128197

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32225
Units: ug/L
Diln Fac: 1

Prep Date: 02/05/97
Analysis Date: 02/05/97

MB Lab ID: QC39537

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m, p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	101	79-122



Lab #: 128197

BATCH QC REPORT

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/04/97		
Batch#: 32200	Analysis Date: 02/04/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39447

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	62.41	50	125	51-180
Trichloroethene	57.16	50	114	73-141
Benzene	53.31	50	107	78-142
Toluene	54.17	50	108	76-150
Chlorobenzene	55.01	50	110	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	96	68-126		
Toluene-d8	99	87-125		
Bromofluorobenzene	100	79-122		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Lab #: 128197

BATCH QC REPORT

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/05/97		
Batch#: 32225	Analysis Date: 02/05/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39536

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	64.75	50	129	51-180
Trichloroethene	56.41	50	113	73-141
Benzene	52.82	50	106	78-142
Toluene	53.17	50	106	76-150
Chlorobenzene	54.36	50	109	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	104	68-126		
Toluene-d8	101	87-125		
Bromofluorobenzene	103	79-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128197

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: SCI-54	Sample Date: 01/31/97
Lab ID: 128197-004	Received Date: 01/31/97
Matrix: Water	Prep Date: 02/05/97
Batch#: 32225	Analysis Date: 02/05/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39549

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	57.17	114	51-180
Trichloroethene	50	<5	51.69	102	73-141
Benzene	50	<5	48.78	96	78-142
Toluene	50	7.799	56.04	96	76-150
Chlorobenzene	50	<5	50.74	101	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	103	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	100	79-122			

MSD Lab ID: QC39550

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	54.92	110	51-180	4	14
Trichloroethene	50	49.69	98	73-141	4	14
Benzene	50	47.36	93	78-142	3	11
Toluene	50	53.97	92	76-150	4	13
Chlorobenzene	50	49.44	99	83-129	3	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	103	68-126				
Toluene-d8	99	87-125				
Bromofluorobenzene	100	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128209-002
 Matrix: Water
 Batch#: 32200
 Units: ug/L
 Diln Fac: 1

Sample Date: 02/03/97
 Received Date: 02/04/97
 Prep Date: 02/04/97
 Analysis Date: 02/04/97

MS Lab ID: QC39460

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	49	98	51-180
Trichloroethene	50	<5	50.62	101	73-141
Benzene	50	0	48.66	97	78-142
Toluene	50	0	48.93	98	76-150
Chlorobenzene	50	<5	50.47	101	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	101	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	99	79-122			

MSD Lab ID: QC39461

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	48.69	97	51-180	1	14
Trichloroethene	50	51.12	102	73-141	1	14
Benzene	50	49.37	99	78-142	1	11
Toluene	50	48.67	97	76-150	1	13
Chlorobenzene	50	51.54	103	83-129	2	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	100	68-126				
Toluene-d8	99	87-125				
Bromofluorobenzene	100	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Semivolatile Organics by GC/MS

Client: Subsurface Consultants Analysis Method: EPA 8270
 Project#: 133.005 Prep Method: EPA 3520
 Location: KOT

Field ID: SCI-56 Sampled: 01/31/97
 Lab ID: 128197-006 Received: 01/31/97
 Matrix: Water Extracted: 02/04/97
 Batch#: 32221 Analyzed: 02/06/97
 Units: ug/L
 Diln Fac: 1

Analyte	Result	Reporting Limit
Phenol	ND	9.4
2-Chlorophenol	ND	9.4
Benzyl alcohol	ND	9.4
2-Methylphenol	ND	9.4
4-Methylphenol	ND	9.4
2-Nitrophenol	ND	47
2,4-Dimethylphenol	ND	9.4
Benzoic acid	ND	47
2,4-Dichlorophenol	ND	9.4
4-Chloro-3-methylphenol	ND	9.4
2,4,6-Trichlorophenol	ND	9.4
2,4,5-Trichlorophenol	ND	47
2,4-Dinitrophenol	ND	47
4-Nitrophenol	ND	47
4,6-Dinitro-2-methylphenol	ND	47
Pentachlorophenol	ND	47
N-Nitrosodimethylamine	ND	9.4
Aniline	ND	9.4
bis(2-Chloroethyl)ether	ND	9.4
1,3-Dichlorobenzene	ND	9.4
1,4-Dichlorobenzene	ND	9.4
1,2-Dichlorobenzene	ND	9.4
bis(2-Chloroisopropyl) ether	ND	9.4
N-Nitroso-di-n-propylamine	ND	9.4
Hexachloroethane	ND	9.4
Nitrobenzene	ND	9.4
Isophorone	ND	9.4
bis(2-Chloroethoxy)methane	ND	9.4
1,2,4-Trichlorobenzene	ND	9.4
Naphthalene	ND	9.4
4-Chloroaniline	ND	9.4
Hexachlorobutadiene	ND	9.4
2-Methylnaphthalene	ND	9.4
Hexachlorocyclopentadiene	ND	9.4
2-Chloronaphthalene	ND	9.4
2-Nitroaniline	ND	47
Dimethylphthalate	ND	9.4
Acenaphthylene	ND	9.4

Semivolatile Organics by GC/MS		
Field ID: SCI-56	Sampled:	01/31/97
Lab ID: 128197-006	Received:	01/31/97
Matrix: Water	Extracted:	02/04/97
Batch#: 32221	Analyzed:	02/06/97
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	9.4
3-Nitroaniline	ND	47
Acenaphthene	ND	9.4
Dibenzofuran	ND	9.4
2,4-Dinitrotoluene	ND	9.4
Diethylphthalate	ND	9.4
4-Chlorophenyl-phenylether	ND	9.4
Fluorene	ND	9.4
4-Nitroaniline	ND	47
N-Nitrosodiphenylamine	ND	9.4
Azobenzene	ND	9.4
4-Bromophenyl-phenylether	ND	9.4
Hexachlorobenzene	ND	9.4
Phenanthrene	ND	9.4
Anthracene	ND	9.4
Di-n-butylphthalate	ND	9.4
Fluoranthene	ND	9.4
Pyrene	ND	9.4
Butylbenzylphthalate	ND	9.4
3,3'-Dichlorobenzidine	ND	47
Benzo(a)anthracene	ND	9.4
Chrysene	ND	9.4
bis(2-Ethylhexyl)phthalate	ND	9.4
Di-n-octylphthalate	ND	9.4
Benzo(b)fluoranthene	ND	9.4
Benzo(k)fluoranthene	ND	9.4
Benzo(a)pyrene	ND	9.4
Indeno(1,2,3-cd)pyrene	ND	9.4
Dibenz(a,h)anthracene	ND	9.4
Benzo(g,h,i)perylene	ND	9.4
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	69	21-110
Phenol-d5	73	10-110
2,4,6-Tribromophenol	56	10-123
Nitrobenzene-d5	73	35-114
2-Fluorobiphenyl	48	43-116
Terphenyl-d14	12*	33-141

* Values outside of QC limits



Lab #: 128197

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
 Batch#: 32221
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/04/97
 Analysis Date: 02/05/97

MB Lab ID: QC39522

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50



Lab #: 128197

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32221
Units: ug/L
Diln Fac: 1

Prep Date: 02/04/97
Analysis Date: 02/05/97

MB Lab ID: QC39522

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	71	21-110
Phenol-d5	69	10-110
2,4,6-Tribromophenol	57	10-123
Nitrobenzene-d5	80	35-114
2-Fluorobiphenyl	80	43-116
Terphenyl-d14	78	33-141



Lab #: 128197

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32221
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/04/97
 Analysis Date: 02/05/97

LCS Lab ID: QC39523

Analyte	Result	Spike Added	%Rec #	Limits
Phenol	60.03	100	60	12-110
2-Chlorophenol	62.39	100	62	27-123
4-Chloro-3-methylphenol	63.99	100	64	23-97
4-Nitrophenol	51.59	100	52	10-80
Pentachlorophenol	44.56	100	45	9-103
1,4-Dichlorobenzene	23.48	50	47	36-97
N-Nitroso-di-n-propylamine	23.17	50	46	41-116
1,2,4-Trichlorobenzene	23.24	50	46	39-98
Acenaphthene	29.9	50	60	46-118
2,4-Dinitrotoluene	25.06	50	50	24-96
Pyrene	36.64	50	73	26-127
Surrogate	%Rec	Limits		
2-Fluorophenol	53	21-110		
Phenol-d5	55	10-110		
2,4,6-Tribromophenol	54	10-123		
Nitrobenzene-d5	62	35-114		
2-Fluorobiphenyl	66	43-116		
Terphenyl-d14	70	33-141		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits



Lab #: 128197

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128179-003
 Matrix: Water
 Batch#: 32221
 Units: ug/L
 Diln Fac: 1

Sample Date: 01/29/97
 Received Date: 01/30/97
 Prep Date: 02/04/97
 Analysis Date: 02/05/97

MS Lab ID: QC39524

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Phenol	94.34	0	65.78	70	12-110
2-Chlorophenol	94.34	0	70.34	75	27-123
4-Chloro-3-methylphenol	94.34	0	68.18	72	23-97
4-Nitrophenol	94.34	0	63.45	67	10-80
Pentachlorophenol	94.34	0	65.94	70	9-103
1,4-Dichlorobenzene	47.17	0	25.89	55	36-97
N-Nitroso-di-n-propylamine	47.17	2.818	22.81	48	41-116
1,2,4-Trichlorobenzene	47.17	0	25.33	54	39-98
Acenaphthene	47.17	0	30.54	65	46-118
2,4-Dinitrotoluene	47.17	0	26.27	56	24-96
Pyrene	47.17	0	30.09	64	26-127
Surrogate	%Rec	Limits			
2-Fluorophenol	62	21-110			
Phenol-d5	63	10-110			
2,4,6-Tribromophenol	63	10-123			
Nitrobenzene-d5	73	35-114			
2-Fluorobiphenyl	71	43-116			
Terphenyl-d14	41	33-141			

MSD Lab ID: QC39525

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Phenol	95.24	59.03	62	12-110	12	42
2-Chlorophenol	95.24	63.51	67	27-123	11	40
4-Chloro-3-methylphenol	95.24	61.39	65	23-97	11	42
4-Nitrophenol	95.24	62.58	66	10-80	2	50
Pentachlorophenol	95.24	63.78	67	9-103	4	50
1,4-Dichlorobenzene	47.62	22.74	48	36-97	14	28
N-Nitroso-di-n-propylamine	47.62	22.18	47	41-116	4	38
1,2,4-Trichlorobenzene	47.62	23.48	49	39-98	9	28
Acenaphthene	47.62	30.17	63	46-118	2	31
2,4-Dinitrotoluene	47.62	26.06	55	24-96	2	38
Pyrene	47.62	31.73	67	26-127	4	31
Surrogate	%Rec	Limits				
2-Fluorophenol	54	21-110				
Phenol-d5	56	10-110				
2,4,6-Tribromophenol	59	10-123				
Nitrobenzene-d5	68	35-114				
2-Fluorobiphenyl	70	43-116				
Terphenyl-d14	47	33-141				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

Field ID: SCI-51	Sampled: 01/31/97
Lab ID: 128197-003	Received: 01/31/97
Matrix: Water	Extracted: 02/04/97
Batch#: 32222	Analyzed: 02/11/97
Units: ug/L	
Diln Fac: 20	

Analyte	Result	Reporting Limit
alpha-BHC	ND	0.9
beta-BHC	ND	0.9
gamma-BHC	ND	0.9
delta-BHC	ND	0.9
Heptachlor	ND	0.9
Aldrin	ND	0.9
Heptachlor epoxide B	ND	0.9
Heptachlor epoxide A	ND	0.9
Endosulfan I	ND	0.9
Dieldrin	ND	1.9
4,4'-DDE	3.3	1.9
Endrin	ND	1.9
Endosulfan II	ND	1.9
Endosulfan sulfate	ND	1.9
4,4'-DDD	ND	1.9
Endrin aldehyde	ND	1.9
4,4'-DDT	28	1.9
Chlordane	ND	9.4
Methoxychlor	ND	9.4
Toxaphene	ND	19
Aroclor-1016	ND	9.4
Aroclor-1221	ND	19
Aroclor-1232	ND	9.4
Aroclor-1242	ND	9.4
Aroclor-1248	ND	9.4
Aroclor-1254	ND	9.4
Aroclor-1260	ND	9.4
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	34-128
Decachlorobiphenyl	DO*	50-150

* Values outside of QC limits

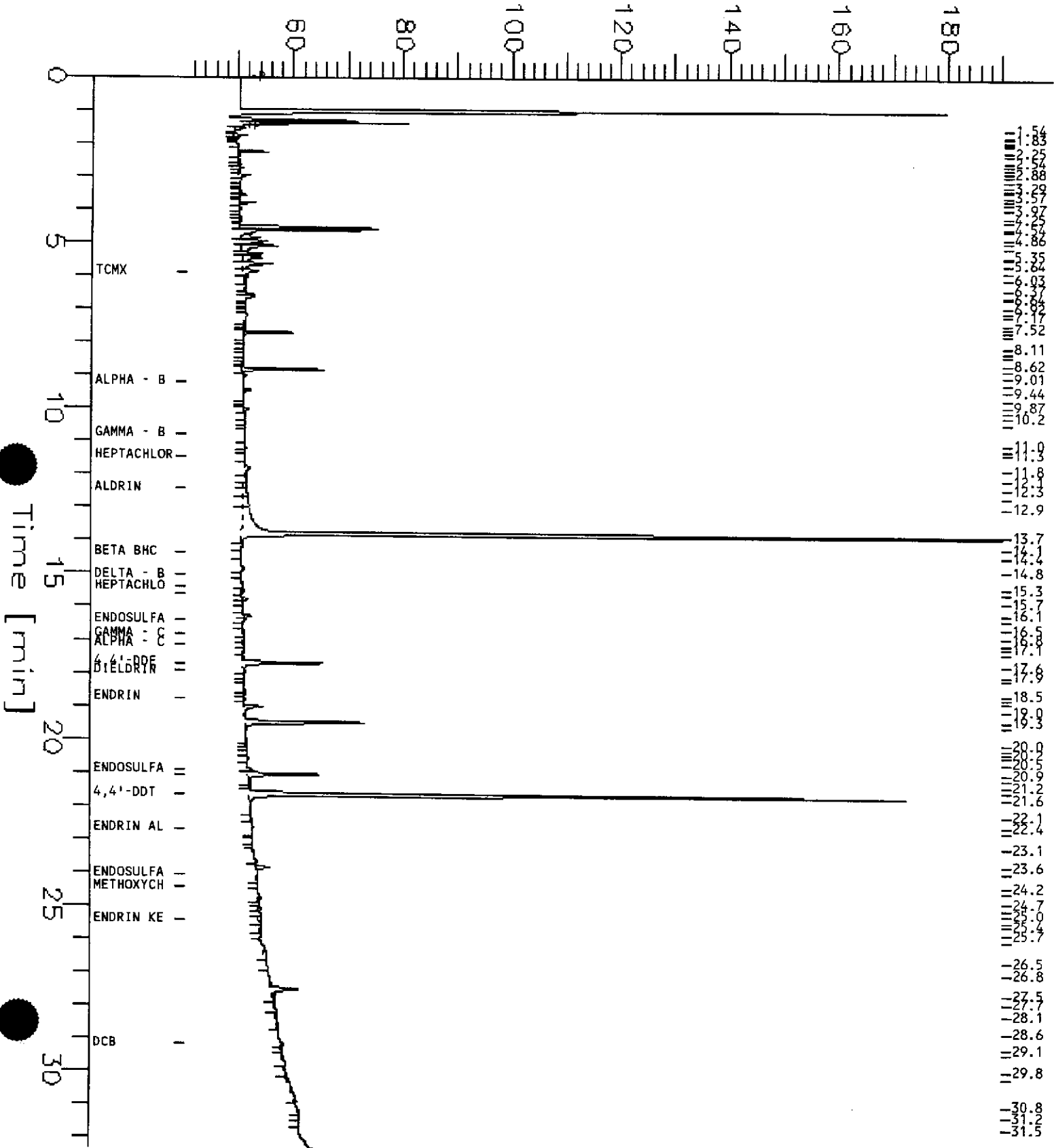
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Sample Name : 128197-003
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 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Scale Factor : -1.0

End Time : 32.35 min
 Plot Offset: 41 mV

Sample #: 32222
 Date : 2/11/97 05:06 PM
 Time of Injection: 2/11/97 04:34 PM
 Low Point : 40.71 mV
 High Point : 190.71 mV
 Plot Scale: 150.0 mV

Response [mV]





Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8080
 Prep Method: EPA 3520

Field ID: SCI-54
 Lab ID: 128197-004
 Matrix: Water
 Batch#: 32222
 Units: ug/L
 Diln Fac: 40

Sampled: 01/31/97
 Received: 01/31/97
 Extracted: 02/04/97
 Analyzed: 02/12/97

Analyte	Result	Reporting Limit
alpha-BHC	ND	1.9
beta-BHC	ND	1.9
gamma-BHC	ND	1.9
delta-BHC	ND	1.9
Heptachlor	ND	1.9
Aldrin	ND	1.9
Heptachlor epoxide B	ND	1.9
Heptachlor epoxide A	ND	1.9
Endosulfan I	ND	1.9
Dieldrin	ND	3.8
4,4'-DDE	ND	3.8
Endrin	ND	3.8
Endosulfan II	ND	3.8
Endosulfan sulfate	ND	3.8
4,4'-DDD	ND	3.8
Endrin aldehyde	ND	3.8
4,4'-DDT	31	3.8
Chlordane	ND	19
Methoxychlor	ND	19
Toxaphene	ND	38
Aroclor-1016	ND	19
Aroclor-1221	ND	38
Aroclor-1232	ND	19
Aroclor-1242	ND	19
Aroclor-1248	ND	19
Aroclor-1254	ND	19
Aroclor-1260	ND	19
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	34-128
Decachlorobiphenyl	DO*	50-150

* Values outside of QC limits

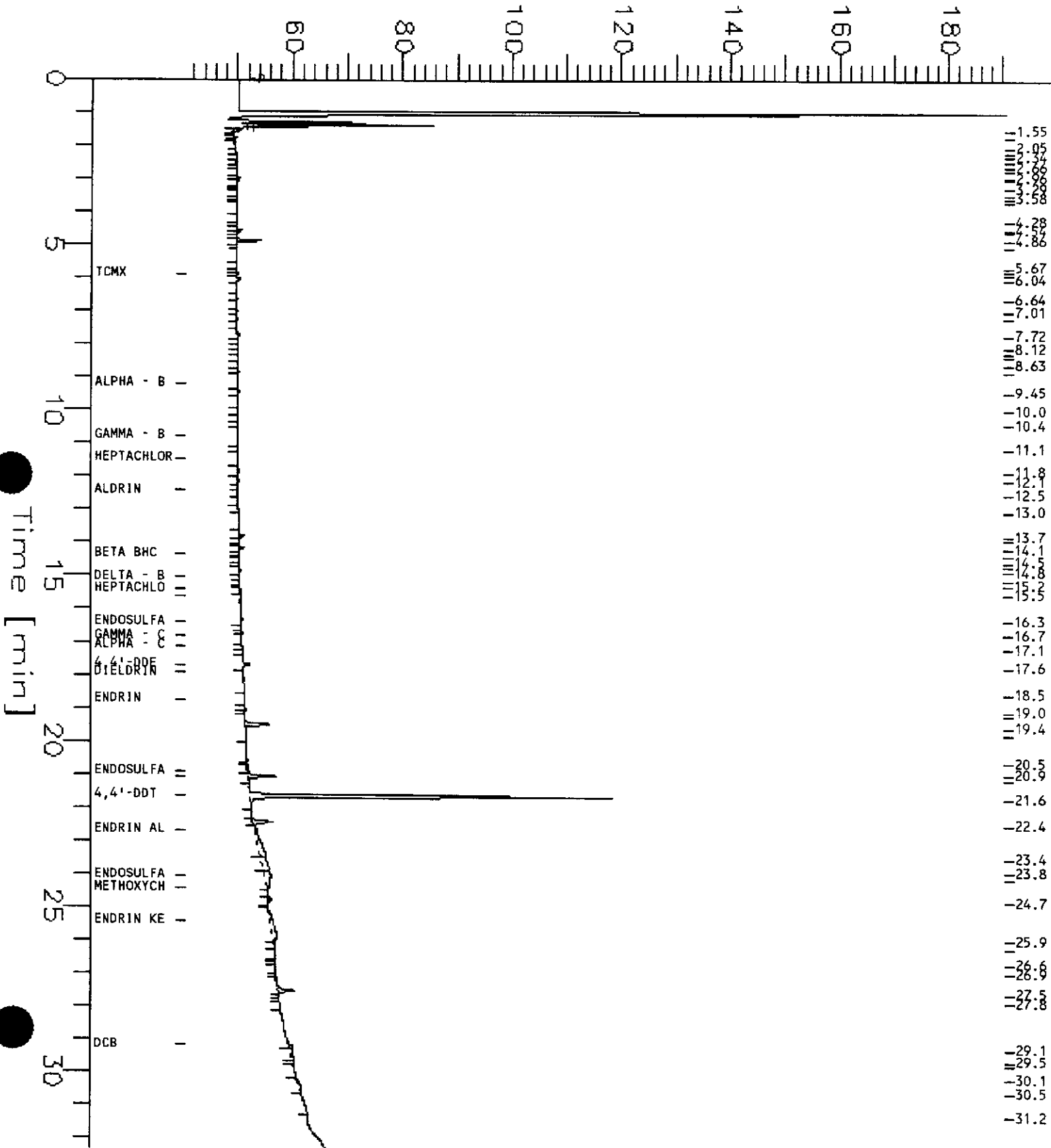
DO: Surrogate diluted out

Sample Name : 128197-004
 FileName : g:\gc14\cha\041A078.raw
 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Gain Factor: -1.0

End Time : 32.35 min
 Plot Offset: 41 mV

Sample #: 32222
 Date : 2/12/97 02:19 PM
 Time of Injection: 2/12/97 01:46 PM
 Low Point : 40.61 mV
 High Point : 190.61 mV
 Plot Scale: 150.0 mV

Response [mV]



Lab #: 128197

BATCH QC REPORT

EPA 8080 Pesticides & PCBs		
Client: Subsurface Consultants	Analysis Method: EPA 8080	
Project#: 133.005	Prep Method: EPA 3520	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/04/97	
Batch#: 32222	Analysis Date: 02/06/97	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39526

Analyte	Result	Reporting Limit
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
gamma-BHC	ND	0.05
delta-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor epoxide B	ND	0.05
Heptachlor epoxide A	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.1
4,4'-DDE	ND	0.1
Endrin	ND	0.1
Endosulfan II	ND	0.1
Endosulfan sulfate	ND	0.1
4,4'-DDD	ND	0.1
Endrin aldehyde	ND	0.1
4,4'-DDT	ND	0.1
Chlordane	ND	0.5
Methoxychlor	ND	0.5
Toxaphene	ND	1.0
Aroclor-1016	ND	0.5
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.5
Aroclor-1242	ND	0.5
Aroclor-1248	ND	0.5
Aroclor-1254	ND	0.5
Aroclor-1260	ND	0.5
Surrogate	%Rec	Recovery Limits
TCMX	81	34-128
Decachlorobiphenyl	85	50-150



Lab #: 128197

BATCH QC REPORT

Page 1 of 1

EPA 8080 Pesticides & PCBs			
Client: Subsurface Consultants	Analysis Method: EPA 8080		
Project#: 133.005	Prep Method: EPA 3520		
Location: KOT			
BLANK SPIKE/BLANK SPIKE DUPLICATE			
Matrix: Water	Prep Date:	02/04/97	
Batch#: 32222	Analysis Date:	02/06/97	
Units: ug/L			
Diln Fac: 1			

BS Lab ID: QC39527

Analyte	Spike Added	BS	%Rec #	Limits
gamma-BHC	0.5	0.47	94	57-120
Heptachlor	0.5	0.4	80	51-109
Aldrin	0.5	0.41	82	57-105
Dieldrin	0.5	0.44	88	62-122
Endrin	0.5	0.46	92	70-128
4,4'-DDT	0.5	0.43	86	67-128
Surrogate	%Rec	Limits		
TCMX	82	34-128		
Decachlorobiphenyl	88	50-150		

BSD Lab ID: QC39528

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	0.5	0.48	96	57-120	2	20
Heptachlor	0.5	0.41	82	51-109	2	20
Aldrin	0.5	0.42	84	57-105	2	20
Dieldrin	0.5	0.44	88	62-122	0	20
Endrin	0.5	0.46	92	70-128	0	20
4,4'-DDT	0.5	0.44	88	67-128	2	20
Surrogate	%Rec	Limits				
TCMX	81	34-128				
Decachlorobiphenyl	85	50-150				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 6 outside limits

Spike Recovery: 0 out of 12 outside limits

Client: Subsurface Consultants

Laboratory Login Number: 128197

Project Name: KOT
Project Number: 133.005

Report Date: 12 February 97

ANALYSIS: pH

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	Method	Analyst	QC Batch
128197-002	SC1-53	Water	30-JAN-97	31-JAN-97	03-FEB-97	7.8	SU	EPA 9040	HDD	32226

Q C B a t c h R e p o r t

Client: Subsurface Consultants
 Project Name: KOT
 Project Number: 133.005

Laboratory Login Number: 128197
 Report Date: 12 February 97

ANALYSIS: pH

QC Batch Number: 32226

Calibration Verification Results

Sample	Result	TV	Difference	Limit	Analyzed
ICV	7.04	7.00	.04	< 0.10	03-FEB-97
CCV	7.05	7.00	.05	< 0.10	03-FEB-97
CCV	7.03	7.00	.03	< 0.10	03-FEB-97
CCV	7.07	7.00	.07	< 0.10	03-FEB-97

Sample Duplicate Results

Sample	Duplicate	RPD	Analyzed
9.07	9.05	.2%	03-FEB-97

LABORATORY NUMBER: 128197
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE ANALYZED: 02/06/97
 BATCH#: 15037

=====

ANALYSIS: SULFATE
 ANALYSIS METHOD: EPA 375.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128197-002	SCI-53	30	mg/L	5.0
METHOD BLANK	N/A	ND	mg/L	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

=====

RPD, %	<1
RECOVERY, %	102

=====

LABORATORY NUMBER: 128197
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE ANALYZED: 02/07/97
 BATCH#: 15062

=====
 ANALYSIS: CHLORIDE
 ANALYSIS METHOD: EPA 325.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128197-002	SCI-53	740	mg/L	10
METHOD BLANK	N/A	ND	mg/L	0.50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: MS/MSD OF 128197-002

=====
 RPD, % 9
 RECOVERY, % 99
 =====



LABORATORY NUMBER: 128197
CLIENT: SUBSURFACE CONSULTANTS
PROJECT#: 133.005
LOCATION: KOT

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE ANALYZED: 02/06/97
BATCH#: 32257

=====

ANALYSIS: HEXAVALENT CHROMIUM
ANALYSIS METHOD: EPA 7196

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128197-002	SCI-53	ND	mg/L	0.01
METHOD BLANK	N/A	ND	mg/L	0.01

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: SAMPLE SPIKE AND DUPLICATE OF 128241-001

=====

RPD, %	<1
RECOVERY, %	83

=====

LABORATORY NUMBER: 128197
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE ANALYZED: 02/05/97
 BATCH#: 32238

=====
 ANALYSIS: CYANIDE
 ANALYSIS METHOD: EPA 335.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128197-002	SCI-53	ND	ug/L	10
METHOD BLANK	N/A	ND	ug/L	10

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

=====
 RPD, % <1
 RECOVERY, % 100
 =====



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-52
LAB ID: 128197-001
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 01/30/97
DATE RECEIVED: 01/31/97
DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32218	EPA 6010A	02/05/97
Arsenic	ND	5.0	1	32218	EPA 6010A	02/05/97
Barium	93	10	1	32218	EPA 6010A	02/05/97
Beryllium	ND	2.0	1	32218	EPA 6010A	02/05/97
Cadmium	ND	2.0	1	32218	EPA 6010A	02/05/97
Chromium (total)	ND	10	1	32218	EPA 6010A	02/05/97
Cobalt	ND	20	1	32218	EPA 6010A	02/05/97
Copper	ND	10	1	32218	EPA 6010A	02/05/97
Lead	4.6	3.0	1	32218	EPA 6010A	02/05/97
Mercury	ND	0.20	1	32256	EPA 7470	02/06/97
Molybdenum	21	20	1	32218	EPA 6010A	02/05/97
Nickel	ND	20	1	32218	EPA 6010A	02/05/97
Selenium	ND	5.0	1	32218	EPA 6010A	02/05/97
Silver	ND	5.0	1	32218	EPA 6010A	02/05/97
Thallium	ND	5.0	1	32218	EPA 6010A	02/05/97
Vanadium	ND	10	1	32218	EPA 6010A	02/05/97
Zinc	ND	20	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-53
 LAB ID: 128197-002
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 01/30/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32218	EPA 6010A	02/05/97
Arsenic	ND	5.0	1	32218	EPA 6010A	02/05/97
Barium	210	10	1	32218	EPA 6010A	02/05/97
Beryllium	ND	2.0	1	32218	EPA 6010A	02/05/97
Cadmium	ND	2.0	1	32218	EPA 6010A	02/05/97
Chromium (total)	ND	10	1	32218	EPA 6010A	02/05/97
Cobalt	ND	20	1	32218	EPA 6010A	02/05/97
Copper	ND	10	1	32218	EPA 6010A	02/05/97
Lead	ND	3.0	1	32218	EPA 6010A	02/05/97
Mercury	ND	0.20	1	32256	EPA 7470	02/06/97
Molybdenum	26	20	1	32218	EPA 6010A	02/05/97
Nickel	ND	20	1	32218	EPA 6010A	02/05/97
Selenium	8.5	5.0	1	32218	EPA 6010A	02/05/97
Silver	ND	5.0	1	32218	EPA 6010A	02/05/97
Thallium	ND	5.0	1	32218	EPA 6010A	02/05/97
Vanadium	ND	10	1	32218	EPA 6010A	02/05/97
Zinc	ND	20	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-51
 LAB ID: 128197-003
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 01/31/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32218	EPA 6010A	02/05/97
Arsenic	11	5.0	1	32218	EPA 6010A	02/05/97
Barium	32	10	1	32218	EPA 6010A	02/05/97
Beryllium	ND	2.0	1	32218	EPA 6010A	02/05/97
Cadmium	ND	2.0	1	32218	EPA 6010A	02/05/97
Chromium (total)	ND	10	1	32218	EPA 6010A	02/05/97
Cobalt	ND	20	1	32218	EPA 6010A	02/05/97
Copper	ND	10	1	32218	EPA 6010A	02/05/97
Lead	3.8	3.0	1	32218	EPA 6010A	02/05/97
Mercury	0.24	0.20	1	32256	EPA 7470	02/06/97
Molybdenum	ND	20	1	32218	EPA 6010A	02/05/97
Nickel	20	20	1	32218	EPA 6010A	02/05/97
Selenium	19	5.0	1	32218	EPA 6010A	02/05/97
Silver	ND	5.0	1	32218	EPA 6010A	02/05/97
Thallium	ND	5.0	1	32218	EPA 6010A	02/05/97
Vanadium	ND	10	1	32218	EPA 6010A	02/05/97
Zinc	ND	20	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-54
 LAB ID: 128197-004
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 01/31/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32218	EPA 6010A	02/05/97
Arsenic	11	5.0	1	32218	EPA 6010A	02/05/97
Barium	1200	10	1	32218	EPA 6010A	02/05/97
Beryllium	ND	2.0	1	32218	EPA 6010A	02/05/97
Cadmium	ND	2.0	1	32218	EPA 6010A	02/05/97
Chromium (total)	ND	10	1	32218	EPA 6010A	02/05/97
Cobalt	ND	20	1	32218	EPA 6010A	02/05/97
Copper	ND	10	1	32218	EPA 6010A	02/05/97
Lead	ND	3.0	1	32218	EPA 6010A	02/05/97
Mercury	0.26	0.20	1	32256	EPA 7470	02/06/97
Molybdenum	ND	20	1	32218	EPA 6010A	02/05/97
Nickel	ND	20	1	32218	EPA 6010A	02/05/97
Selenium	32	5.0	1	32218	EPA 6010A	02/05/97
Silver	ND	5.0	1	32218	EPA 6010A	02/05/97
Thallium	ND	5.0	1	32218	EPA 6010A	02/05/97
Vanadium	ND	10	1	32218	EPA 6010A	02/05/97
Zinc	29	20	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-56
 LAB ID: 128197-006
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 01/31/97
 DATE RECEIVED: 01/31/97
 DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Lead	ND	3.0	1	32218	EPA 6010A	02/05/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-60 @ 2
 LAB ID: 128237-010
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/03/97
 DATE RECEIVED: 02/05/97
 DATE REPORTED: 02/13/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3.0	1	32247	EPA 6010A	02/13/97
Arsenic	2.5	0.25	1	32247	EPA 6010A	02/06/97
Barium	100	0.50	1	32247	EPA 6010A	02/06/97
Beryllium	0.31	0.10	1	32247	EPA 6010A	02/13/97
Cadmium	0.40	0.10	1	32247	EPA 6010A	02/06/97
Chromium (total)	24	0.50	1	32247	EPA 6010A	02/06/97
Cobalt	5.6	1.0	1	32247	EPA 6010A	02/06/97
Copper	7.1	0.50	1	32247	EPA 6010A	02/06/97
Lead	5.3	0.15	1	32247	EPA 6010A	02/06/97
Mercury	ND	0.10	1	32279	EPA 7471	02/07/97
Molybdenum	ND	1.0	1	32247	EPA 6010A	02/06/97
Nickel	23	1.0	1	32247	EPA 6010A	02/06/97
Selenium	0.99	0.25	1	32247	EPA 6010A	02/13/97
Silver	ND	0.50	1	32247	EPA 6010A	02/06/97
Thallium	0.47	0.25	1	32247	EPA 6010A	02/13/97
Vanadium	18	0.50	1	32247	EPA 6010A	02/06/97
Zinc	23	1.0	1	32247	EPA 6010A	02/06/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-56 @ 1
 LAB ID: 128237-015
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/03/97
 DATE RECEIVED: 02/05/97
 DATE REPORTED: 02/12/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3.0	1	32247	EPA 6010A	02/07/97
Arsenic	1.5	0.25	1	32247	EPA 6010A	02/06/97
Barium	270	0.50	1	32247	EPA 6010A	02/06/97
Beryllium	0.17	0.10	1	32247	EPA 6010A	02/07/97
Cadmium	0.84	0.10	1	32247	EPA 6010A	02/06/97
Chromium (total)	1.1	0.50	1	32247	EPA 6010A	02/06/97
Cobalt	5.0	1.0	1	32247	EPA 6010A	02/06/97
Copper	16	0.50	1	32247	EPA 6010A	02/06/97
Lead	0.87	0.15	1	32247	EPA 6010A	02/07/97
Mercury	ND	0.095	1	32279	EPA 7471	02/07/97
Molybdenum	ND	1.0	1	32247	EPA 6010A	02/06/97
Nickel	2.2	1.0	1	32247	EPA 6010A	02/06/97
Selenium	1.1	0.25	1	32247	EPA 6010A	02/06/97
Silver	ND	0.50	1	32247	EPA 6010A	02/06/97
Thallium	2.5	0.25	1	32247	EPA 6010A	02/07/97
Vanadium	9.8	0.50	1	32247	EPA 6010A	02/06/97
Zinc	50	1.0	1	32247	EPA 6010A	02/06/97

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-61 @ 4.5
LAB ID: 128237-006
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Soil

DATE SAMPLED: 02/03/97
DATE RECEIVED: 02/05/97
DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Lead	3.6	0.15	1	32247	EPA 6010A	02/06/97



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-60 @ 2
LAB ID: 128237-010
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Soil

DATE SAMPLED: 02/03/97
DATE RECEIVED: 02/05/97
DATE REPORTED: 02/12/97

Metals Analytical Report

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Potassium	840	25	1	32247	EPA 6010A	02/10/97

CLIENT: Subsurface Consultants
 JOB NUMBER: 128237

DATE REPORTED: 02/12/97

**BATCH QC REPORT
 PREP BLANK**

Compound	Result	Reporting Units	IDF	QC Batch	Method	Analysis Date
		Limit				
Antimony	ND	3 mg/Kg	1	32247	EPA 6010A	02/07/97
Arsenic	ND	0.25 mg/Kg	1	32247	EPA 6010A	02/06/97
Barium	ND	0.5 mg/Kg	1	32247	EPA 6010A	02/06/97
Beryllium	ND	0.1 mg/Kg	1	32247	EPA 6010A	02/07/97
Cadmium	ND	0.1 mg/Kg	1	32247	EPA 6010A	02/06/97
Chromium (total)	ND	0.5 mg/Kg	1	32247	EPA 6010A	02/06/97
Cobalt	ND	1 mg/Kg	1	32247	EPA 6010A	02/06/97
Copper	ND	0.5 mg/Kg	1	32247	EPA 6010A	02/06/97
Lead	ND	0.15 mg/Kg	1	32247	EPA 6010A	02/06/97
Mercury	ND	0.1 mg/Kg	1	32279	EPA 7471	02/07/97
Molybdenum	ND	1 mg/Kg	1	32247	EPA 6010A	02/06/97
Nickel	ND	1 mg/Kg	1	32247	EPA 6010A	02/06/97
Potassium	ND	25 mg/Kg	1	32247	EPA 6010A	02/10/97
Selenium	ND	0.25 mg/Kg	1	32247	EPA 6010A	02/06/97
Silver	ND	0.5 mg/Kg	1	32247	EPA 6010A	02/06/97
Thallium	ND	0.25 mg/Kg	1	32247	EPA 6010A	02/06/97
Vanadium	ND	0.5 mg/Kg	1	32247	EPA 6010A	02/06/97
Zinc	ND	1 mg/Kg	1	32247	EPA 6010A	02/06/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128237

DATE REPORTED: 02/12/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	25	28	27.25	mg/Kg	112	109	80-120	3	35	32247	EPA 6010A	02/07/97
Arsenic	100	87	89.5	mg/Kg	87	90	80-120	3	35	32247	EPA 6010A	02/06/97
Barium	100	98.5	101.5	mg/Kg	99	102	80-120	3	35	32247	EPA 6010A	02/06/97
Beryllium	2.5	2.35	2.52	mg/Kg	94	101	80-120	7	35	32247	EPA 6010A	02/07/97
Cadmium	2.5	2.47	2.555	mg/Kg	99	102	80-120	3	35	32247	EPA 6010A	02/06/97
Chromium (total)	10	9.25	9.55	mg/Kg	93	96	80-120	3	35	32247	EPA 6010A	02/06/97
Cobalt	25	22.45	23.3	mg/Kg	90	93	80-120	4	35	32247	EPA 6010A	02/06/97
Copper	12.5	12.5	12.9	mg/Kg	100	103	80-120	3	35	32247	EPA 6010A	02/06/97
Lead	25	22.9	23.8	mg/Kg	92	95	80-120	4	35	32247	EPA 6010A	02/06/97
Mercury	5	4.187	4.812	ug/L	84	96	80-120	14	35	32279	EPA 7470	02/07/97
Molybdenum	20	18.55	19.1	mg/Kg	93	96	80-120	3	35	32247	EPA 6010A	02/06/97
Nickel	25	24	24.85	mg/Kg	96	99	80-120	4	35	32247	EPA 6010A	02/06/97
Potassium	1000	924	965	mg/Kg	92	97	80-120	4	35	32247	EPA 6010A	02/10/97
Selenium	100	84.5	87.5	mg/Kg	85	88	80-120	4	35	32247	EPA 6010A	02/06/97
Silver	5	4.74	4.9	mg/Kg	95	98	80-120	3	35	32247	EPA 6010A	02/06/97
Thallium	100	87.5	91	mg/Kg	88	91	80-120	4	35	32247	EPA 6010A	02/06/97
Vanadium	25	23.25	24	mg/Kg	93	96	80-120	3	35	32247	EPA 6010A	02/06/97
Zinc	25	23.15	23.6	mg/Kg	93	94	80-120	2	35	32247	EPA 6010A	02/06/97

CLIENT: Subsurface Consultants
 JOB NUMBER: 128237

DATE REPORTED: 02/12/97

**BATCH QC REPORT
 SAMPLE DUPLICATE**

Compound	Sample	Sample Result	Duplicate Result	Units	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	128237-006	<3.015	<3.015	mg/Kg	NC	35	32247	EPA 6010A	02/07/97
Arsenic	128237-006	1.533	1.291	mg/Kg	17	35	32247	EPA 6010A	02/06/97
Barium	128237-006	78.89	76.38	mg/Kg	3	35	32247	EPA 6010A	02/06/97
Beryllium	128237-006	<0.101	<0.101	mg/Kg	NC	35	32247	EPA 6010A	02/07/97
Cadmium	128237-006	0.2643	0.205	mg/Kg	25	35	32247	EPA 6010A	02/06/97
Chromium (total)	128237-006	15.58	16.18	mg/Kg	4	35	32247	EPA 6010A	02/06/97
Cobalt	128237-006	3.01	3.025	mg/Kg	0	35	32247	EPA 6010A	02/06/97
Copper	128237-006	4.638	5.98	mg/Kg	25	35	32247	EPA 6010A	02/06/97
Lead	128237-006	3.578	3.603	mg/Kg	1	35	32247	EPA 6010A	02/06/97
Mercury	128211-001	2.252	2.21	mg/Kg	2	35	32279	EPA 7471	02/07/97
Molybdenum	128237-006	<1.005	<1.005	mg/Kg	NC	35	32247	EPA 6010A	02/06/97
Nickel	128237-006	20.35	19.7	mg/Kg	3	35	32247	EPA 6010A	02/06/97
Potassium	128237-006	726.6	748.2	mg/Kg	3	35	32247	EPA 6010A	02/10/97
Selenium	128237-006	0.3141	0.5779	mg/Kg	59*	35	32247	EPA 6010A	02/07/97
Selenium	128237-006	0.3141	1.739	mg/Kg	139*	35	32247	EPA 6010A	02/07/97
Silver	128237-006	<0.503	<0.503	mg/Kg	NC	35	32247	EPA 6010A	02/06/97
Thallium	128237-006	<0.251	0.6784	mg/Kg	98*	35	32247	EPA 6010A	02/07/97
Thallium	128237-006	<0.251	2.709	mg/Kg	32	35	32247	EPA 6010A	02/07/97
Vanadium	128237-006	13.47	14.07	mg/Kg	4	35	32247	EPA 6010A	02/06/97
Zinc	128237-006	16.08	16.63	mg/Kg	3	35	32247	EPA 6010A	02/06/97

 * = Out of Limits
 NC = Not Calculable

CLIENT: Subsurface Consultants
 JOB NUMBER: 128237

DATE REPORTED: 02/12/97

**BATCH QC REPORT
 SAMPLE SPIKE**

Compound	Spike Amount	Sample	Sample Result	Spike Result	Units	Percent Rec.	Rec. Limit	QC Batch	Method	Analysis Date
Antimony	1225.25	128237-006	<2.970	7.97	mg/Kg	32*	65-135	32247	EPA 6010A	02/07/97
Arsenic	4901.49	128237-006	1.533	83.17	mg/Kg	82	65-135	32247	EPA 6010A	02/06/97
Barium	4901.49	128237-006	78.89	161.4	mg/Kg	83	65-135	32247	EPA 6010A	02/06/97
Beryllium	122.52	128237-006	<0.099	2.406	mg/Kg	97	65-135	32247	EPA 6010A	02/07/97
Cadmium	122.52	128237-006	0.2643	2.579	mg/Kg	94	65-135	32247	EPA 6010A	02/06/97
Chromium (total)	490.15	128237-006	15.58	22.82	mg/Kg	73	65-135	32247	EPA 6010A	02/06/97
Cobalt	1225.25	128237-006	3.01	24.85	mg/Kg	88	65-135	32247	EPA 6010A	02/06/97
Copper	612.87	128237-006	4.638	17.23	mg/Kg	102	65-135	32247	EPA 6010A	02/06/97
Lead	1225.25	128237-006	3.578	25.4	mg/Kg	88	65-135	32247	EPA 6010A	02/06/97
Mercury	1525	128211-001	2.252	4.678	mg/Kg	80	65-135	32279	EPA 7471	02/07/97
Molybdenum	980.2	128237-006	<0.990	16.93	mg/Kg	85	65-135	32247	EPA 6010A	02/06/97
Nickel	1225.25	128237-006	20.35	40.25	mg/Kg	80	65-135	32247	EPA 6010A	02/06/97
Potassium	49014.85	128237-006	726.6	1477	mg/Kg	76	65-135	32247	EPA 6010A	02/10/97
Selenium	4901.49	128237-006	0.3141	91.09	mg/Kg	92	65-135	32247	EPA 6010A	02/07/97
Silver	245.05	128237-006	<0.495	4.673	mg/Kg	94	65-135	32247	EPA 6010A	02/06/97
Thallium	4901.49	128237-006	<0.248	88.61	mg/Kg	88	65-135	32247	EPA 6010A	02/07/97
Vanadium	1225.25	128237-006	13.47	34.06	mg/Kg	83	65-135	32247	EPA 6010A	02/06/97
Zinc	1225.25	128237-006	16.08	35.05	mg/Kg	77	65-135	32247	EPA 6010A	02/06/97

* = Out of Limits

CHAIN OF CUSTODY FORM

128237

PROJECT NAME: KOT
 JOB NUMBER: 133.005 LAB: CAT
 PROJECT CONTACT: Ernie de Verra TURNAROUND: std.
 SAMPLED BY: Tom Wolfe REQUESTED BY: JD

ANALYSIS REQUESTED									

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES											
		WATER	SOIL	WASTE	AIR	VOL	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME												
-1	SCI-57(4)		X						X						02	03	97		X	TUH	TUH/STEX	TEH (a+mc)	F240	Heavy Metals	Lead	Phosphorus	Potassium	Nitrate/Nitrite	Asbestos	
-2	SCI-57(7)																		X											
-3	SCI-57(10)																		X											
-4	SCI-57(13)																		X											
-5	SCI-57(22)																		X											
-6	SCI-61(4) 4.5																		X											
-7	SCI-59(6)																		X											
-8	SCI-59(10)																		X											
-9	SCI-59(19)																		X											
-10	SCI-60(2)																		X											
-11	SCI-60(4)																		X											
-12	SCI-60(7)																		X											

COMMENTS & NOTES:

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
<i>[Signature]</i>	2/5/97 13:00	<i>[Signature]</i>	2/5/97 13:00

CHAIN OF CUSTODY FORM

12823A

PROJECT NAME: KOT
 JOB NUMBER: 133005 LAB: C&T
 PROJECT CONTACT: Jerome de Verrir TURNAROUND: std.
 SAMPLED BY: Sohn Wolfe / Dennis Alexander REQUESTED BY: JD

ANALYSIS REQUESTED	
TUM	X
TUM/BTEX	X
TEH (d.tmo)	X
8240	X
Heavy Metals	X
Lead	X
8080	X
8270 w/out surficial list	X

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES	
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H2SO4	HNO3	ICE	NONE	MONTH	DAY	YEAR	TIME		
-13	SCI-60(9) 10		X					X				X			02	03	97		X	TUM
-14	SCI-60(9) 19																		X	TUM/BTEX
-15	SCI-56(9) 1																		X	TEH (d.tmo)
-16	SCI-56(9) 3																		X	8240
-17	SCI-56(9) 11																		X	Heavy Metals
-18	SCI-58(9) surface														01	31	97		X	Lead

CHAIN OF CUSTODY RECORD			
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME
<i>[Signature]</i>	2/8/97 12:00	<i>[Signature]</i>	2/8/97 13:00

COMMENTS & NOTES:

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
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Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 21-FEB-97
Lab Job Number: 128238
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128238-001	SCI TP-8 @ 4.5	32269	02/03/97	02/08/97	02/08/97	
128238-002	SCI TP-8 @ 6	32269	02/03/97	02/08/97	02/08/97	
128238-003	SCI TP-9 @ 3.5	32318	02/03/97	02/12/97	02/12/97	
128238-004	SCI TP-9 @ 6	32293	02/03/97	02/09/97	02/09/97	

Matrix: Soil

Analyte	Units	128238-001	128238-002	128238-003	128238-004
Diln Fac:		1	1	25	1
Gasoline	mg/Kg	<1	<1	220 YH	<1
Surrogate					
Trifluorotoluene	%REC	92	92	73	92
Bromobenzene	%REC	84	84	100	88

Y: Sample exhibits fuel pattern which does not resemble standard

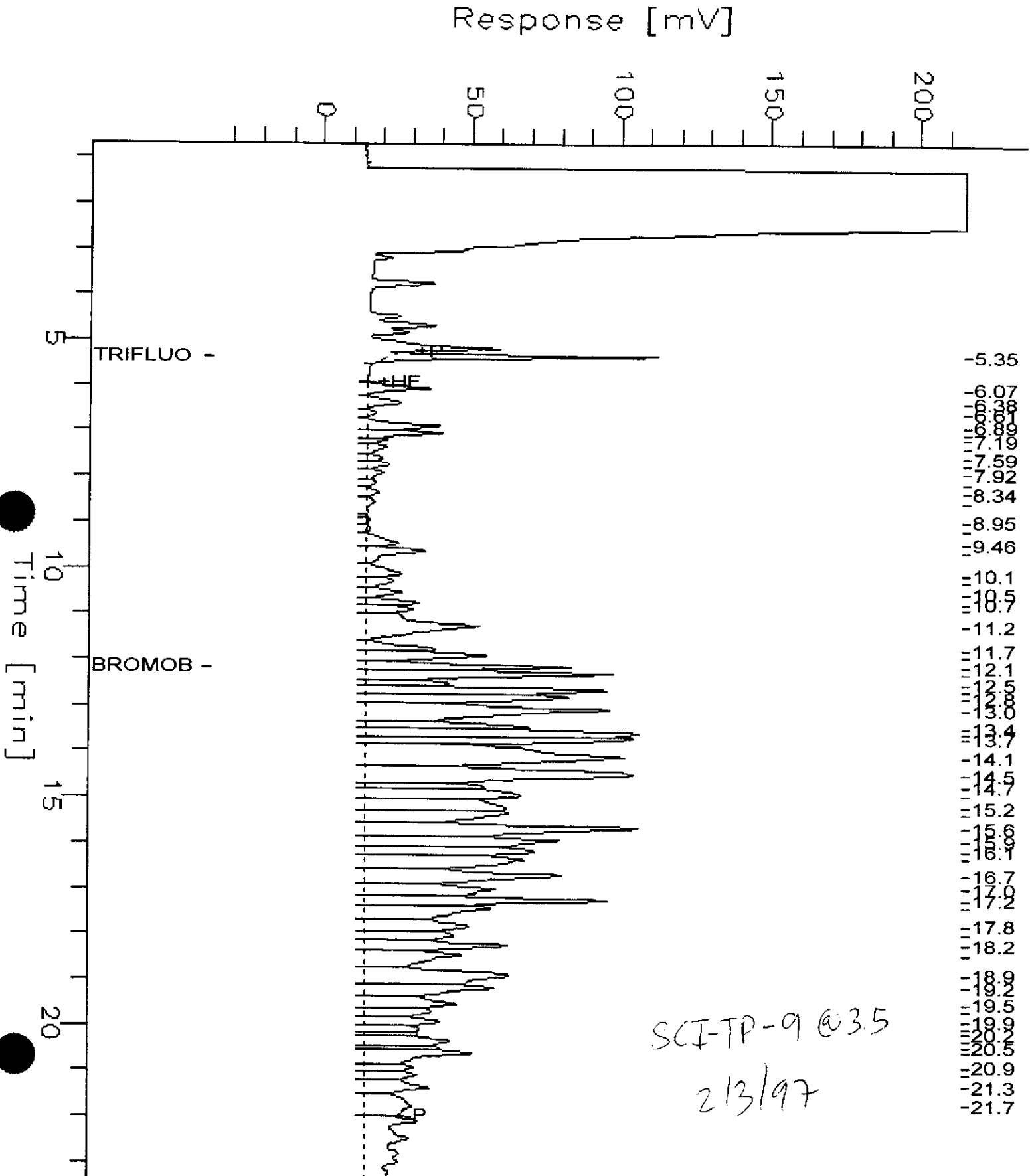
H: Heavier hydrocarbons than indicated standard

GC05 RTX1 TVH Chromatogram

Sample Name : D,128238-003,32318,S,
 FileName : G:\GC05\DATA\042H031.RAW
 Method :
 Start Time : 0.68 min
 Scale Factor : 0.0

End Time : 23.40 min
 Plot Offset: -36 mV

Sample #:
 Date : 2/12/97 11:51 PM
 Time of Injection: 2/12/97 03:11 AM
 Low Point : -36.48 mV
 Plot Scale: 251.5 mV
 High Point : 215.06 mV





TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128238-005	SCI TP-11 @ 1.5	32293	02/04/97	02/09/97	02/09/97	
128238-006	SCI TP-11 @ 4.5	32378	02/04/97	02/14/97	02/14/97	
128238-007	SCI TP-12 @ 4	32356	02/04/97	02/13/97	02/13/97	
128238-008	SCI TP-12 @ 5	32318	02/04/97	02/12/97	02/12/97	

Matrix: Soil

Analyte	Units	128238-005	128238-006	128238-007	128238-008
Diln Fac:		1	2	50	50
Gasoline	mg/Kg	6.6YH	95 YH	280 YH	140 YH
Surrogate					
Trifluorotoluene	%REC	87	69	82	81
Bromobenzene	%REC	77	72	115	77

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

GC05 RTX1 TVH Chromatogram

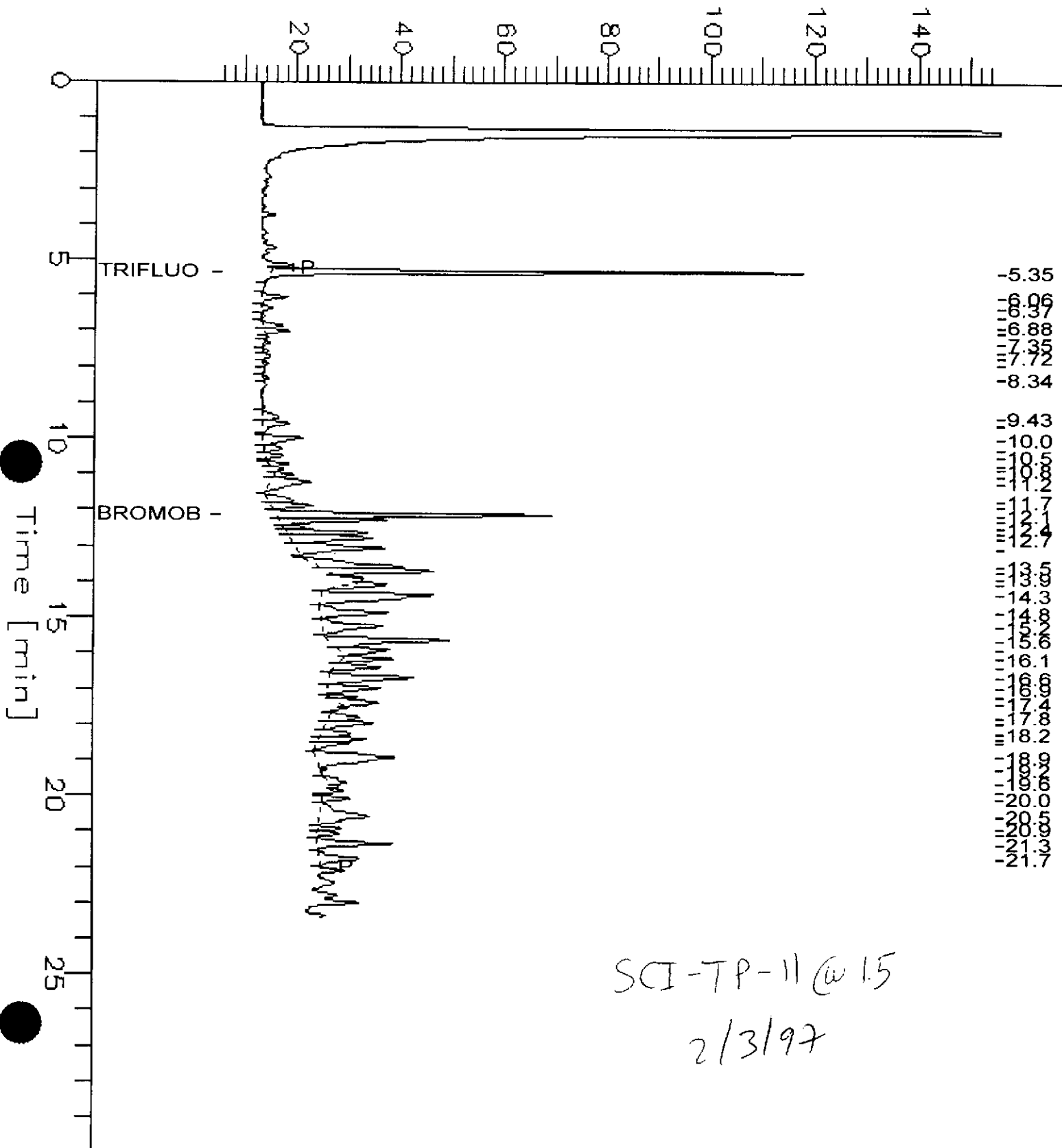
Sample Name : S,128238-005,32293,
FileName : G:\GC05\DATA\040H025.raw
Method : TVHBTXE

Sample # :
Date : 2/9/97 04:36 PM
Time of Injection: 2/9/97 04:11 PM
Low Point : 5.64 mV
High Point : 155.64 mV
Plot Scale: 150.0 mV

Page 1 of 1

Start Time : 0.00 min
End Time : 30.00 min
Factor: -1.0
Plot Offset: 6 mV

Response [mV]



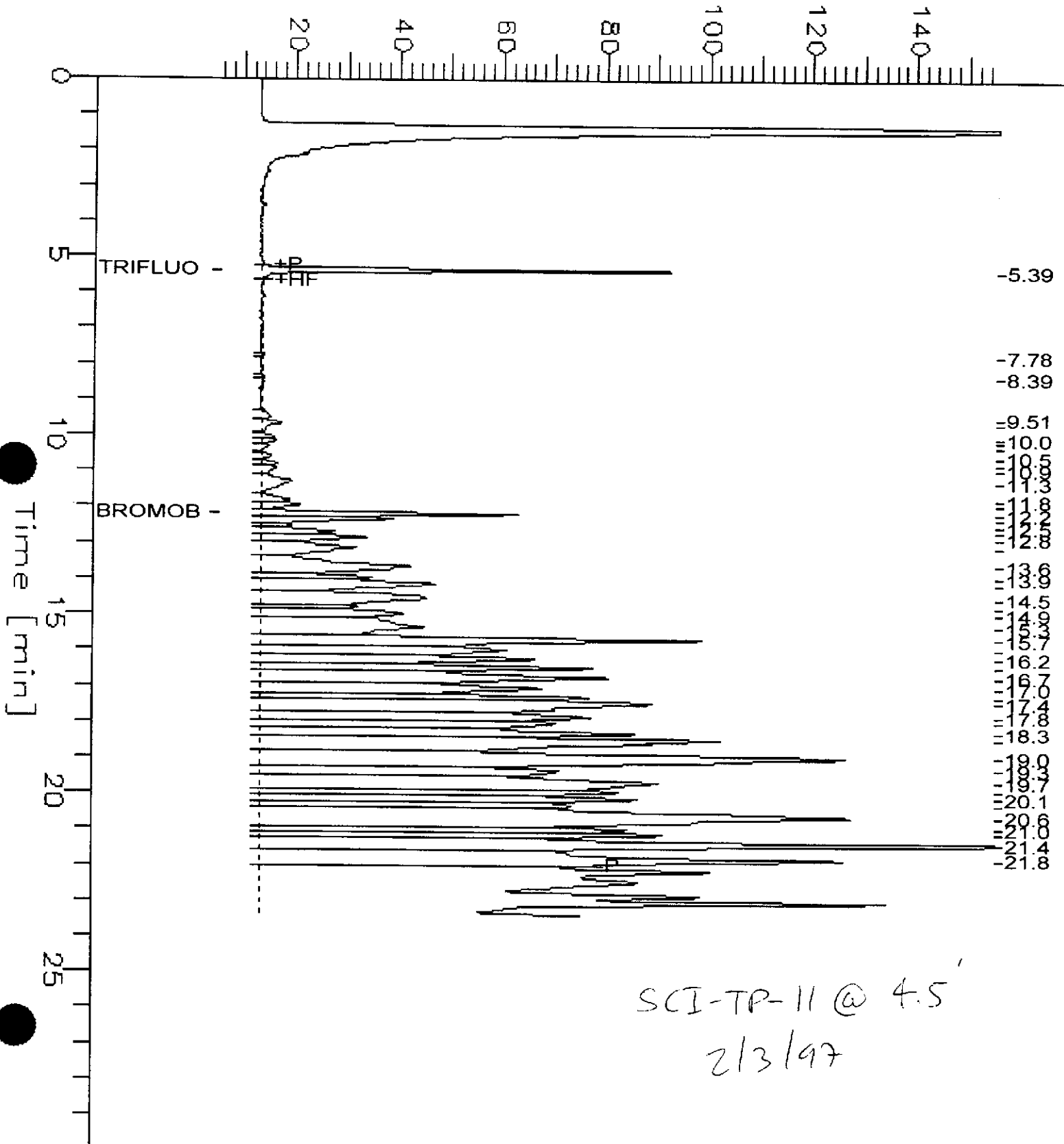
SCI-TP-11 @ 1.5
2/3/97

GC05 RTX1 TVH Chromatogram

Sample Name : D,128238-006,32378,
 FileName : G:\GC05\DATA\043H081.RAW
 Method :
 Start Time : 0.00 min
 End Time : 30.00 min
 Plot Offset: 6 mV

Sample #: Page 1 of 1
 Date : 2/17/97 04:52 PM
 Time of Injection: 2/14/97 12:10 PM
 Low Point : 5.73 mV High Point : 155.73 mV
 Plot Scale: 150.0 mV

Response [mV]



GC04 TVH 'J' File (Rtx1,FID)

Sample Name : D,128238-007,32356,50X,S

FileName : G:\GC04\DATA\043J021.RAW

Method :

Start Time : 0.00 min

End Time : 17.00 min

Gain Factor: -1.0

Plot Offset: 43 mV

Sample #:

Page 1 of 1

Date : 2/13/97 06:50 PM

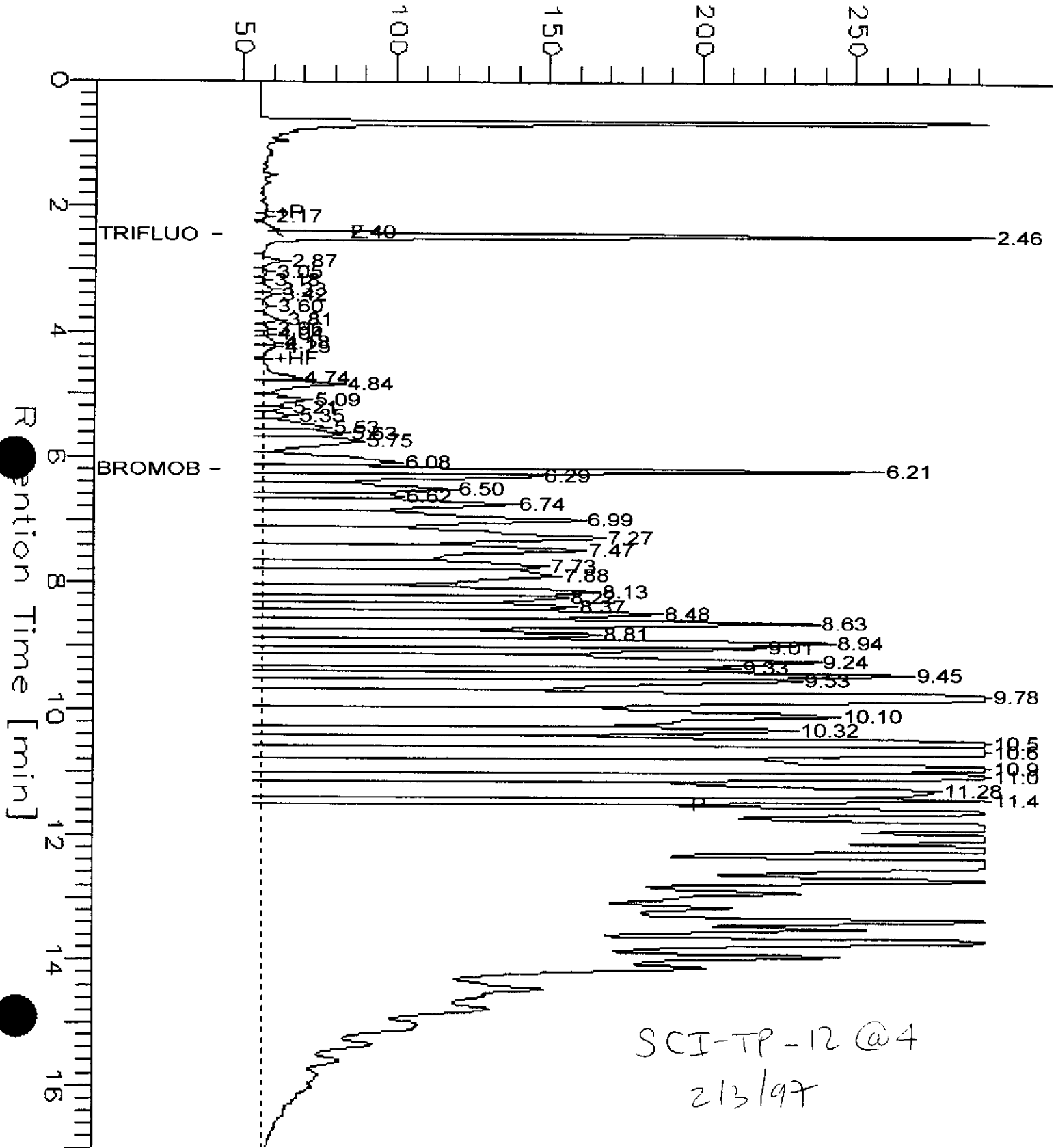
Time of Injection: 2/13/97 02:06 AM

Low Point : 42.98 mV

High Point : 292.98 mV

Plot Scale: 250.0 mV

Response [mV]



GC05 RTX1 TVH Chromatogram

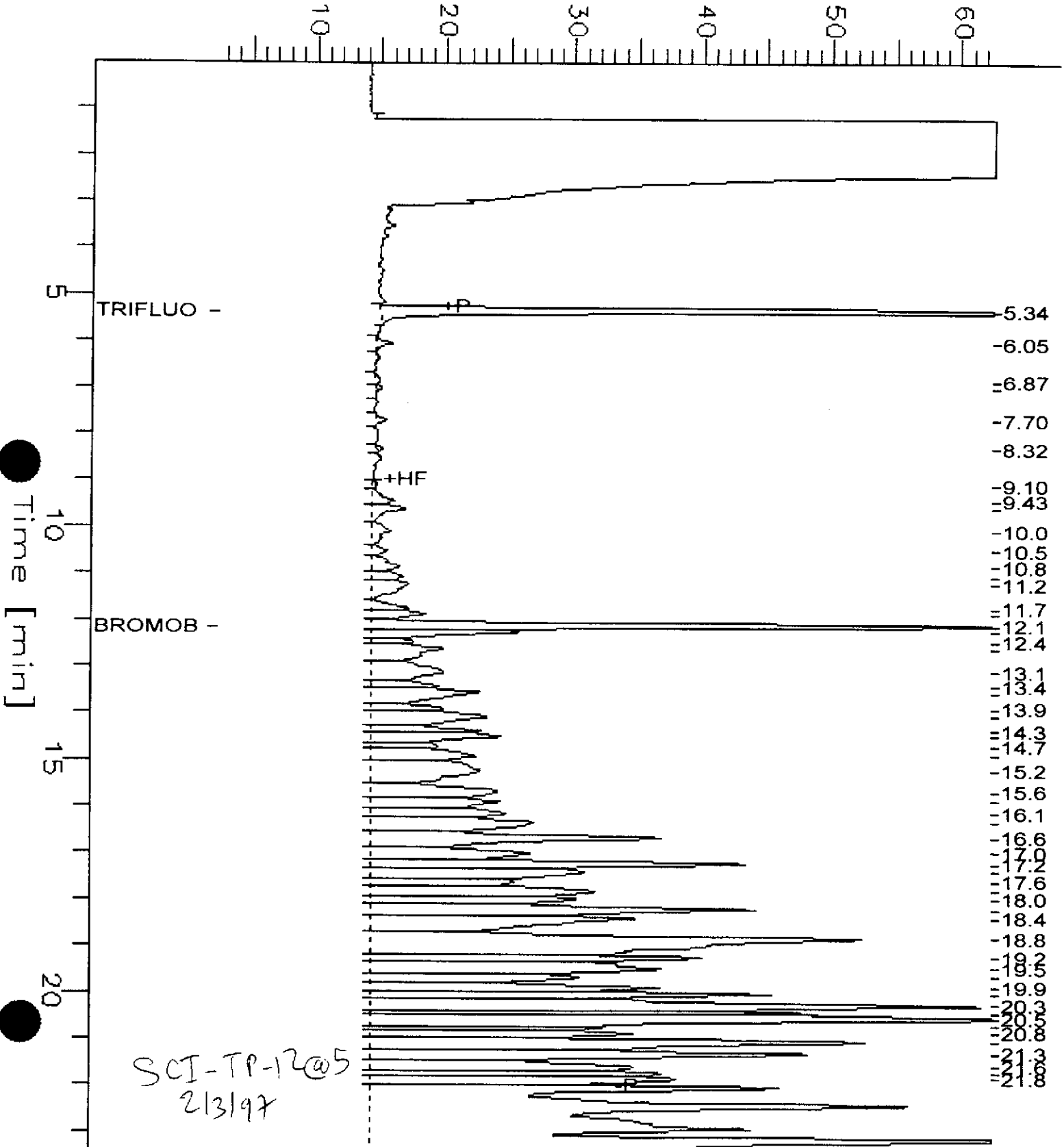
Sample Name : D,128238-008,32318,S,
FileName : G:\GC05\DATA\042H036.RAW
Method :

Sample #:
Date : 2/13/97 12:02 AM
Time of Injection: 2/12/97 07:08 AM
Low Point : 2.45 mV
High Point : 62.61 mV
Plot Scale: 60.2 mV

Page 1 of 1

Start Time : 0.02 min
End Time : 23.40 min
Factor: 0.0
Plot Offset: 2 mV

Response [mV]





Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32269
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/07/97

MB Lab ID: QC39700

Analyte	Result		
Gasoline	<1.0		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	88	52-127	
Bromobenzene	81	45-140	

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/09/97
Batch#:	32293	Analysis Date:	02/09/97
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC39785

Analyte	Result		
Gasoline	<1.0		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	91		52-127
Bromobenzene	84		45-140

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/12/97
Batch#:	32356	Analysis Date:	02/12/97
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC40027

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	82	52-127
Bromobenzene	95	45-140



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK

Matrix: Soil	Prep Date: 02/14/97
Batch#: 32378	Analysis Date: 02/14/97
Units: mg/Kg	
Diln Fac: 1	

MB Lab ID: QC40114

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	77	52-127
Bromobenzene	76	45-140

Lab #: 128238

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/07/97		
Batch#: 32269	Analysis Date: 02/07/97		
Units: mg/Kg			
Diln Fac: 1			

LCS Lab ID: QC39698

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.74	10	97	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	94	52-127		
Bromobenzene	94	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/09/97		
Batch#: 32293	Analysis Date: 02/09/97		
Units: mg/Kg			
Diln Fac: 1			

LCS Lab ID: QC39783

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.53	10	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	93	52-127		
Bromobenzene	96	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
LABORATORY CONTROL SAMPLE			
Matrix:	Soil	Prep Date:	02/12/97
Batch#:	32356	Analysis Date:	02/12/97
Units:	mg/Kg		
Diln Fac:	1		

LCS Lab ID: QC40025

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.56	10	96	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	90	52-127		
Bromobenzene	114	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

LABORATORY CONTROL SAMPLE

Matrix: Soil	Prep Date: 02/14/97
Batch#: 32378	Analysis Date: 02/14/97
Units: mg/Kg	
Diln Fac: 1	

LCS Lab ID: QC40112

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.02	10	90	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	84	52-127		
Bromobenzene	96	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128238

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 128185-021
Matrix: Soil
Batch#: 32293
Units: mg/Kg dry weight
Diln Fac: 1

Sample Date: 01/29/97
Received Date: 01/30/97
Prep Date: 02/09/97
Analysis Date: 02/09/97
Moisture: 30%

MS Lab ID: QC39786

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	14.29	<1.429	12.5	88	65-135
Surrogate	%Rec	Limits			
Trifluorotoluene	96	52-127			
Bromobenzene	101	45-140			

MSD Lab ID: QC39787

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	14.29	12.83	90	65-135	3	30
Surrogate	%Rec	Limits				
Trifluorotoluene	96	52-127				
Bromobenzene	100	45-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits



Lab #: 128238

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128295-004
 Matrix: Soil
 Batch#: 32378
 Units: mg/Kg dry weight
 Diln Fac: 1

Sample Date: 02/10/97
 Received Date: 02/10/97
 Prep Date: 02/14/97
 Analysis Date: 02/14/97
 Moisture: 3%

MS Lab ID: QC40115

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	10.31	<1.031	9.227	90	65-135
Surrogate	%Rec	Limits			
Trifluorotoluene	86	52-127			
Bromobenzene	94	45-140			

MSD Lab ID: QC40116

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	10.31	9.619	93	65-135	4	30
Surrogate	%Rec	Limits				
Trifluorotoluene	87	52-127				
Bromobenzene	93	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128238-001	SCI TP-8 @ 4.5	32309	02/03/97	02/10/97	02/13/97	
128238-002	SCI TP-8 @ 6	32309	02/03/97	02/10/97	02/13/97	
128238-003	SCI TP-9 @ 3.5	32309	02/03/97	02/10/97	02/13/97	
128238-004	SCI TP-9 @ 6	32309	02/03/97	02/10/97	02/13/97	

Matrix: Soil

Analyte	Units	128238-001	128238-002	128238-003	128238-004
Diln Fac:		1	1	50	1
Diesel C12-C22	mg/Kg	10 YH	32 YH	1300 YH	<1
Motor Oil C22-C50	mg/Kg	120 H	340	10000 H	16 H
Surrogate					
Hexacosane	%REC	87	135	DO	87

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

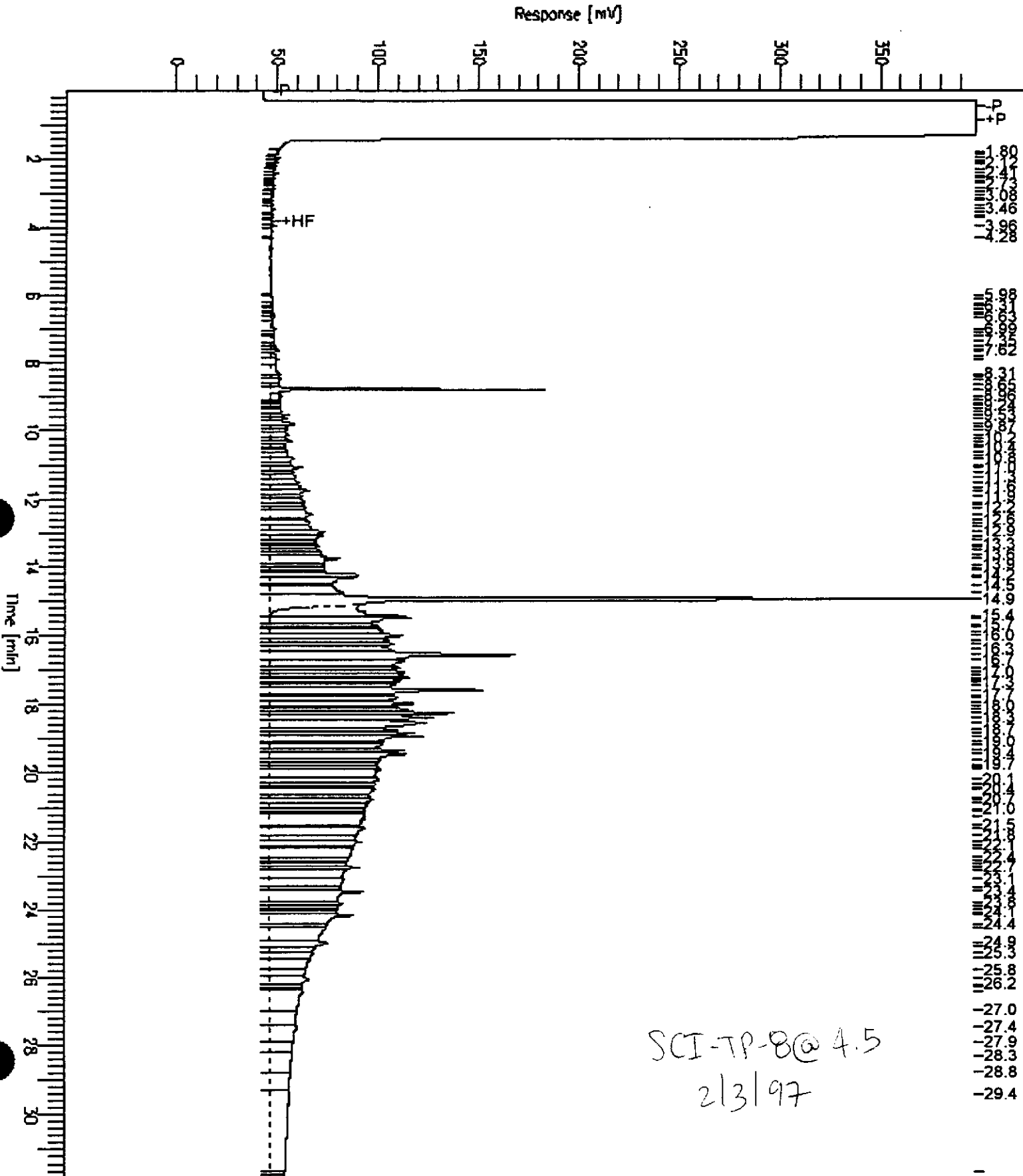
H: Heavier hydrocarbons than indicated standard

GC15 Channel B TEH

Sample Name : 128138-001,32309
 FileName : G:\GC15\CHB\0428072.RAW
 Method : B038TEH.MTH
 Start Time : 0.01 min
 File Factor : 0.0

End Time : 31.81 min
 Plot Offset : -9 mV

Sample #: 32309
 Date : 2/14/97 12:21 PM
 Time of Injection: 2/13/97 09:01 PM
 Low Point : -8.78 mV
 High Point : 397.90 mV
 Plot Scale: 406.7 mV



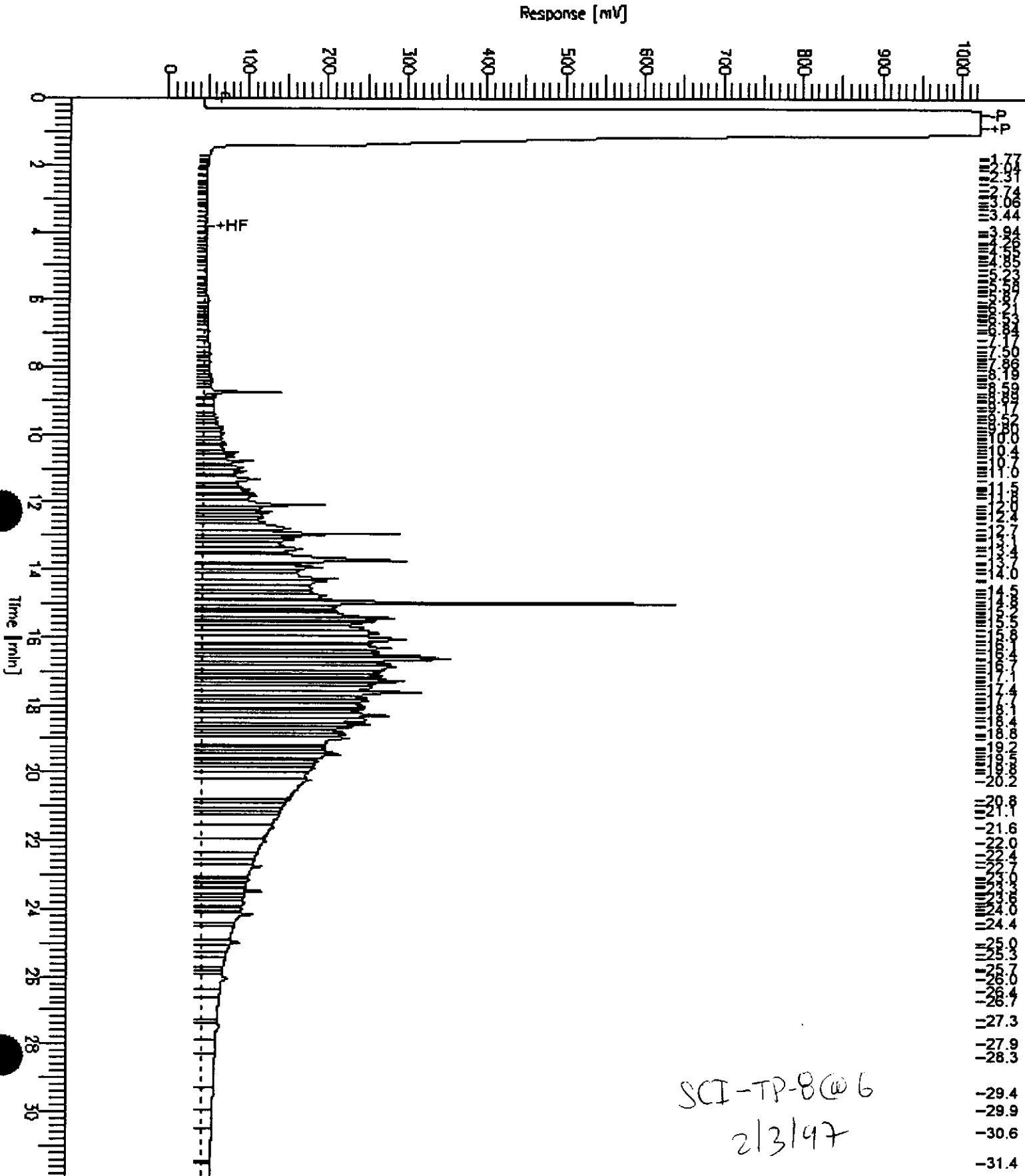
GC15 Channel B TEH

Sample Name : 128138-002,32309
FileName : G:\GC15\CHB\042B073.RAW
Method : B038TEH.MTH
Start Time : 0.00 min
File Factor: 0.0

End Time : 31.90 min
Plot Offset: -8 mV

Sample #: 32309
Date : 2/14/97 12:24 PM
Time of Injection: 2/13/97 09:44 PM
Low Point : -7.78 mV
Plot Scale: 1031.8 mV
High Point : 1024.00 mV

Page 1 of 1



SCI-TP-8@6
2/3/97

GC15 Channel B TEH

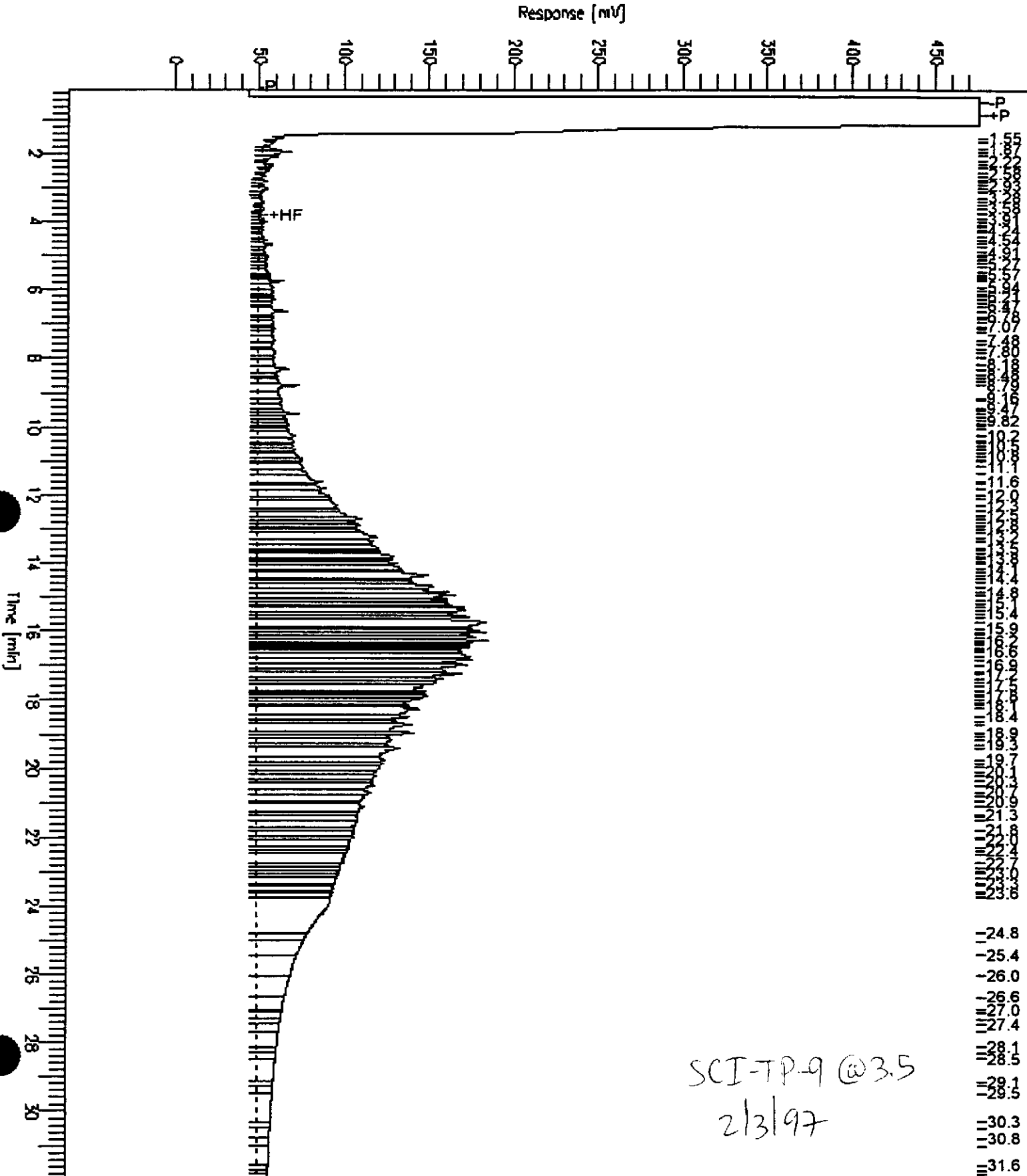
Sample Name : 128138-003,32309
FileName : G:\GC15\CHB\042B074.RAW
Method : B038TEH.MTH
Start Time : 0.11 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset: -8 mV

Sample #: 32309
Date : 2/14/97 12:25 PM
Time of Injection: 2/13/97 10:27 PM
Low Point : -8.01 mV
Plot Scale: 484.1 mV

Page 1 of 1

High Point : 476.08 mV



GC15 Channel B TEH

Sample Name : 128138-004, 32309

FileName : G:\GC15\CHB\042B075.RAW

Method : B038TEH.MTH

Start Time : 0.01 min

File Factor : 0.0

End Time : 31.91 min

Plot Offset : -6 mV

Sample #: 32309

Date : 2/14/97 12:26 PM

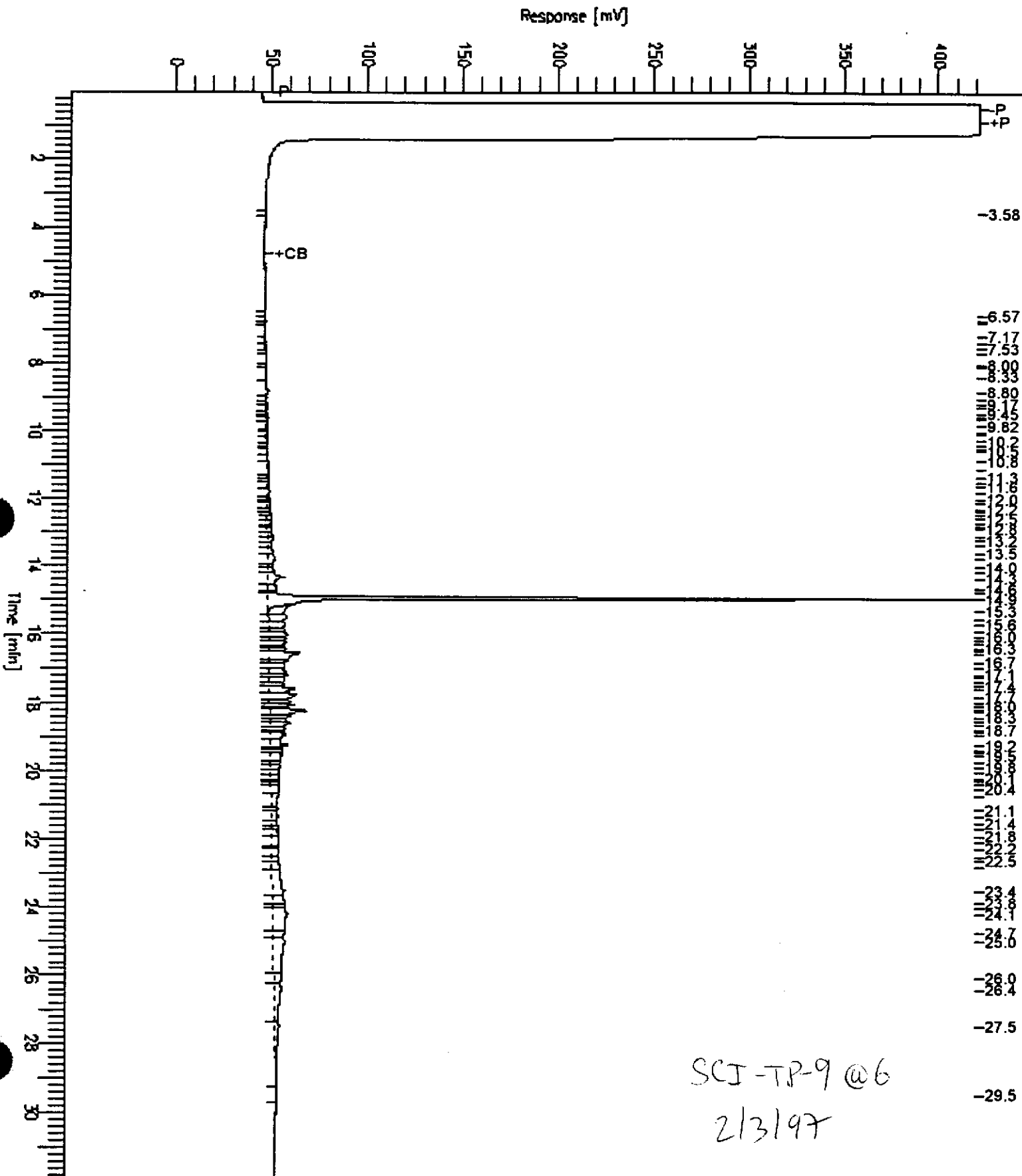
Time of Injection: 2/13/97 11:10 PM

Low Point : -6.49 mV

Plot Scale: 428.6 mV

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High Point : 422.06 mV





TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128238-005	SCI TP-11 @ 1.5	32309	02/04/97	02/10/97	02/16/97	
128238-006	SCI TP-11 @ 4.5	32309	02/04/97	02/10/97	02/16/97	
128238-007	SCI TP-12 @ 4	32309	02/04/97	02/10/97	02/14/97	
128238-008	SCI TP-12 @ 5	32309	02/04/97	02/10/97	02/14/97	

Matrix: Soil

Analyte	Units	128238-005	128238-006	128238-007	128238-008
Diln Fac:		10	20	50	50
Diesel C12-C22	mg/Kg	1500 YH	1700	21000	14000
Motor Oil C22-C50	mg/Kg	4500 L	830	33000 H	9500 H
Surrogate					
Hexacosane	%REC	DO	DO	DO	DO

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

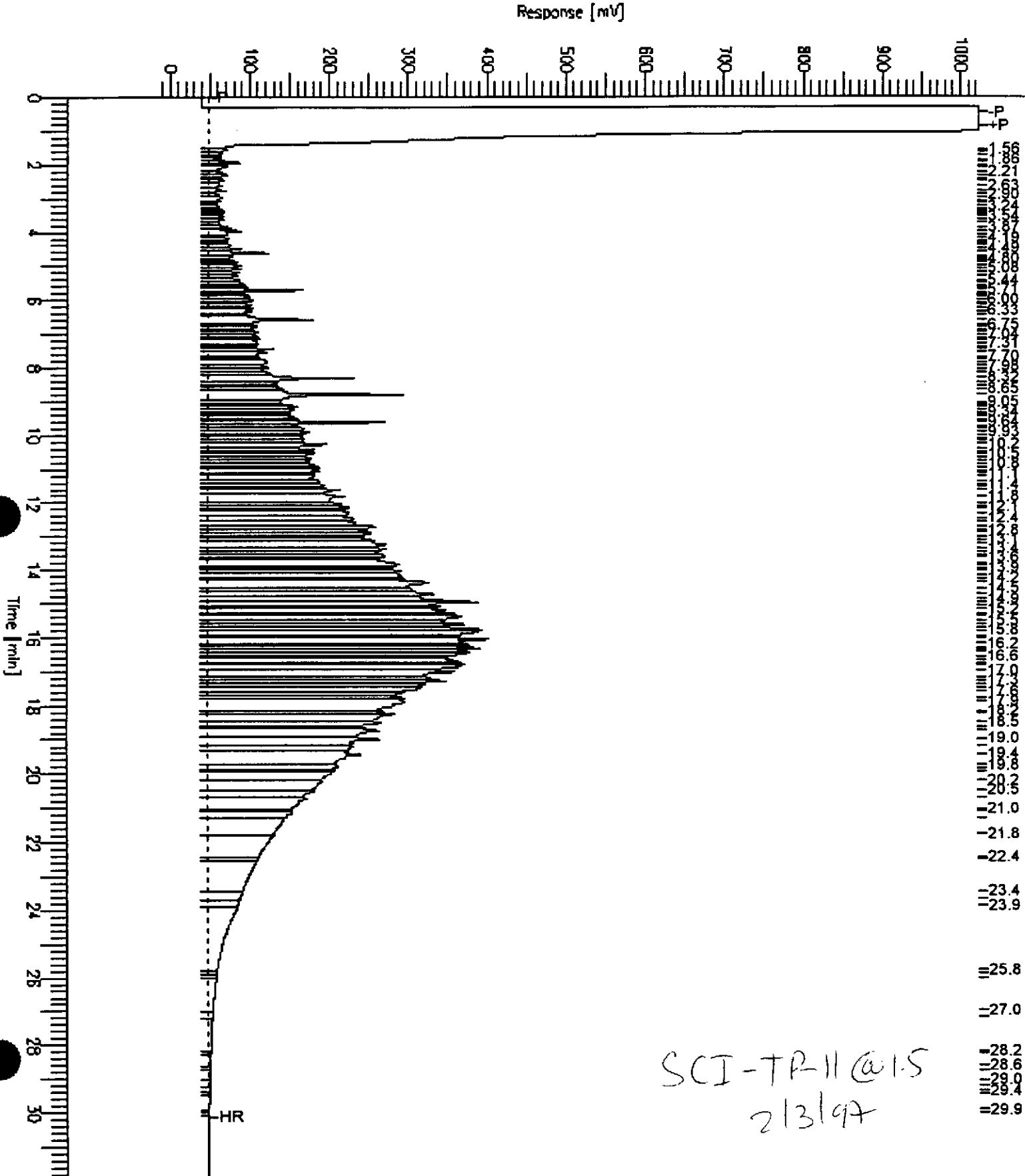
L: Lighter hydrocarbons than indicated standard

GC15 Channel B TEH

Sample Name : 128238-005,32309
 FileName : G:\GC15\CHB\045_037.RAW
 Method : B038TEH.MTH
 Start Time : 0.00 min
 Scale Factor : 0.0

End Time : 31.90 min
 Plot Offset : -12 mV

Sample #: 32309
 Date : 2/20/97 09:30 AM
 Time of Injection: 2/16/97 06:17 PM
 Low Point : -12.41 mV
 High Point : 1024.00 mV
 Plot Scale: 1036.4 mV

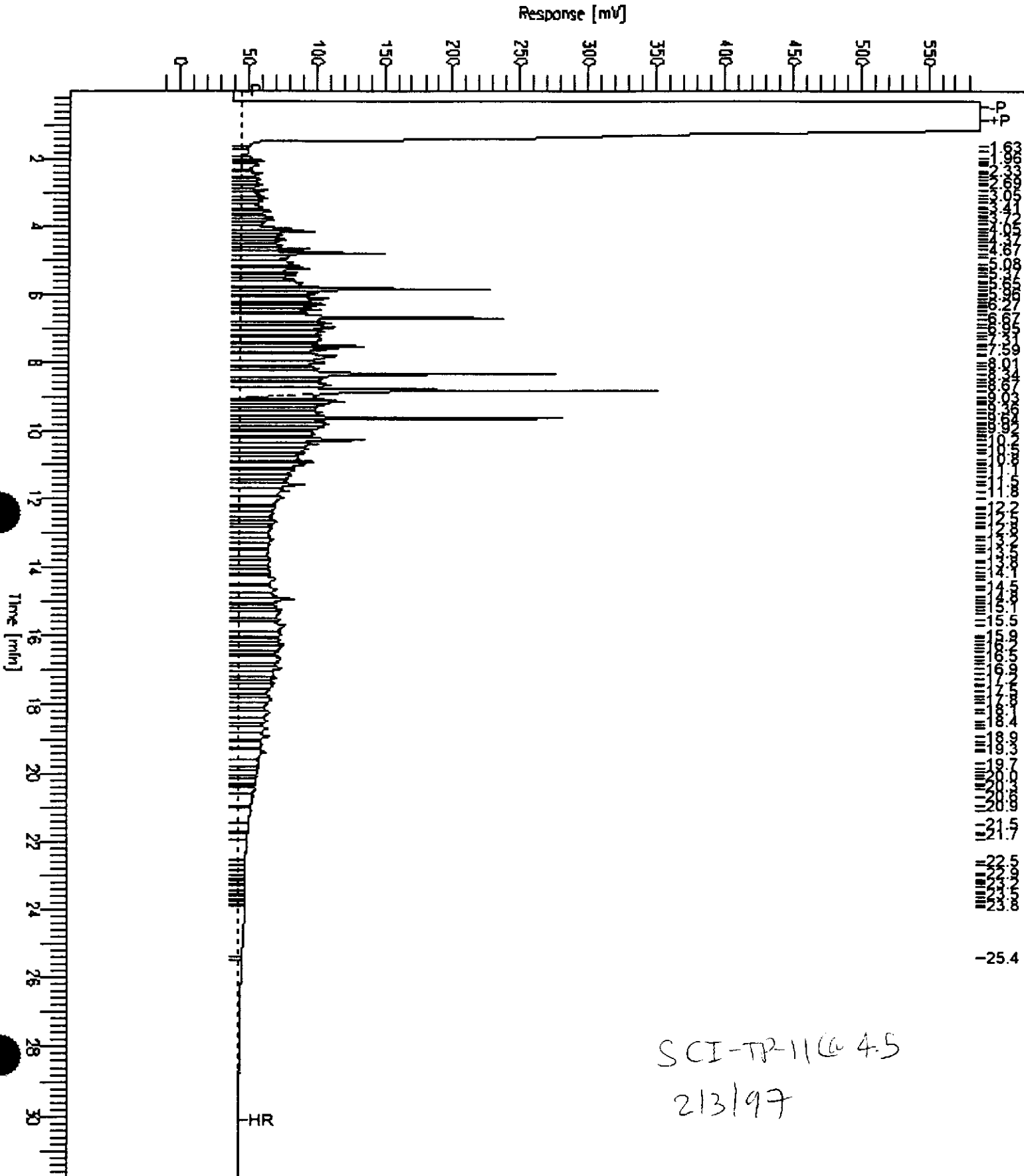


GC15 Channel B TEH

Sample Name : 128238-006,32309
FileName : G:\GC15\CHB\045_038.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.80 min
Plot Offset: -13 mV

Sample #: 32309
Date : 2/20/97 09:31 AM
Time of Injection: 2/16/97 07:00 PM
Low Point : -12.64 mV
High Point : 588.28 mV
Plot Scale: 600.9 mV



SCI-TR-116 4.5
2/13/97

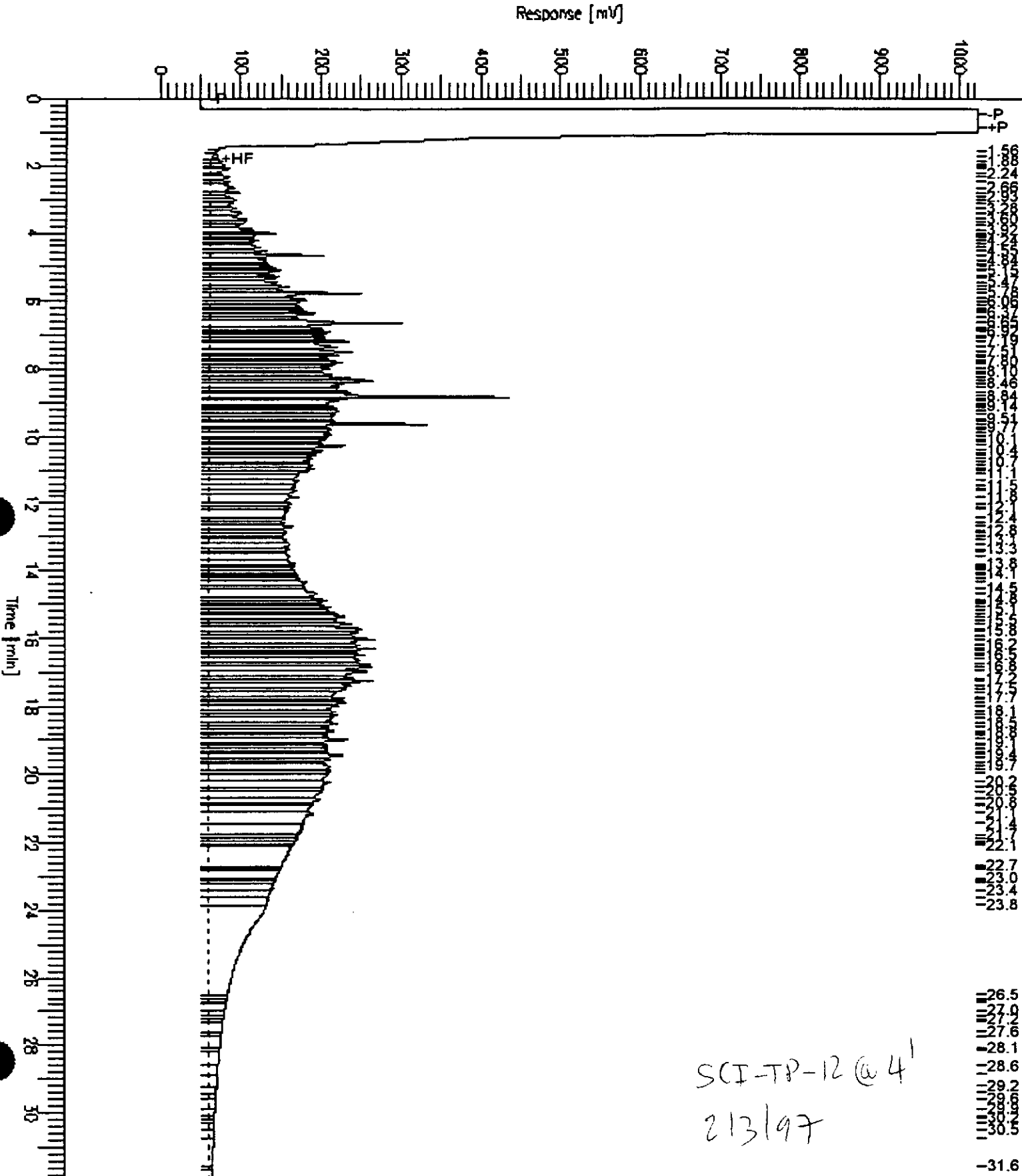
GC15 Channel B TEH

Sample Name : 128138-007,32309
 FileName : G:\GC15\CHB\042B078.RAW
 Method : B038TEH.MTH
 Start Time : 0.00 min
 Scale Factor: 0.0

End Time : 31.90 min
 Plot Offset: -2 mV

Sample #: 32309
 Date : 2/14/97 12:30 PM
 Time of Injection: 2/14/97 01:18 AM
 Low Point : -1.68 mV
 Plot Scale: 1025.7 mV

Page 1 of 1



SCI-TP-12 @ 4'
2/13/97

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GC15 Channel B TEH

Sample Name : 128138-008, 32309

Sample #: 32309

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FileName : G:\GC15\CHB\042B079.RAW

Date : 2/14/97 12:31 PM

Method : B038TEH.MTH

Time of Injection: 2/14/97 02:01 AM

Start Time : 0.00 min

End Time : 31.90 min

Low Point : -1.28 mV

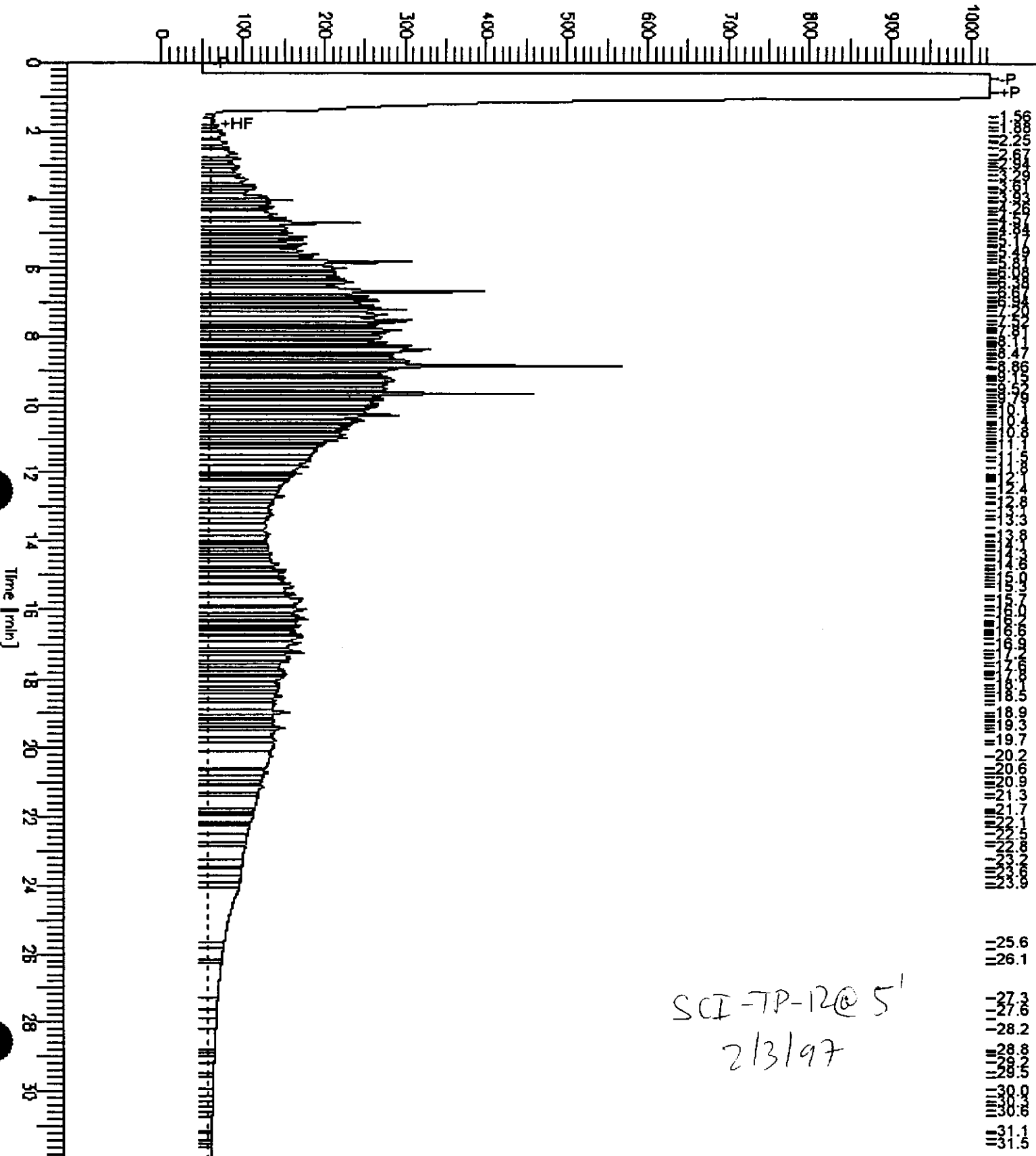
High Point : 1024.00 mV

Gain Factor: 0.0

Plot Offset: -1 mV

Plot Scale: 1025.3 mV

Response [mV]



SCI-TP-12@5'
2/3/97

GC15 Channel B TEH

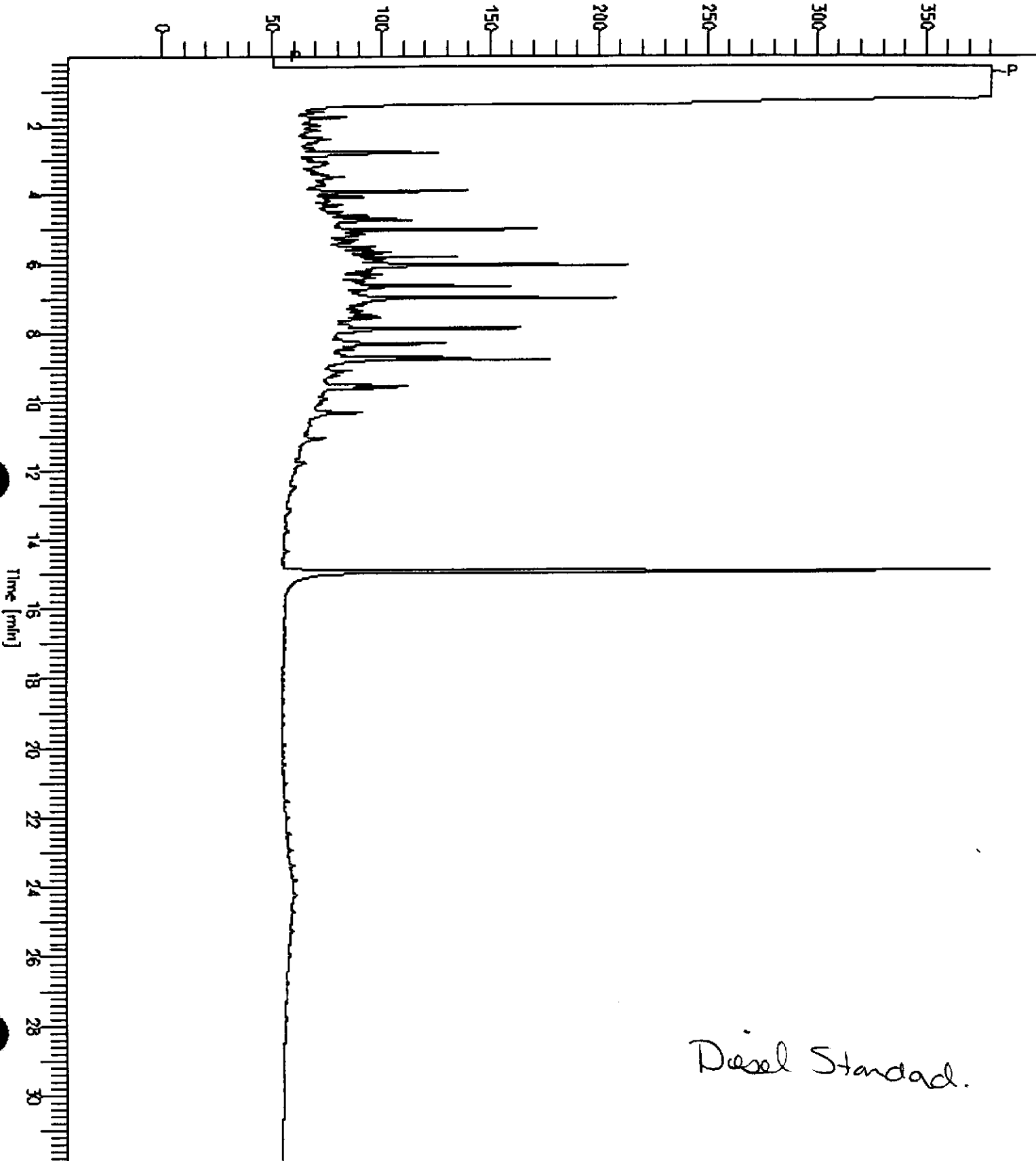
Sample Name : CCV,97WS3659,DS
FileName : G:\GC15\CHB\045_026.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Scale Factor : 0.0

End Time : 31.91 min
Plot Offset : -0 mV

Sample #: 500MG/L
Date : 2/18/97 02:27 PM
Time of Injection: 2/16/97 10:24 AM
Low Point : -0.18 mV
Plot Scale: 380.7 mV
High Point : 380.50 mV

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Response [mV]



GC15 Channel B TEH

Sample Name : CCV,97WS3691,MO
FileName : G:\GC15\CHB\045_014.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Scale Factor: 0.0

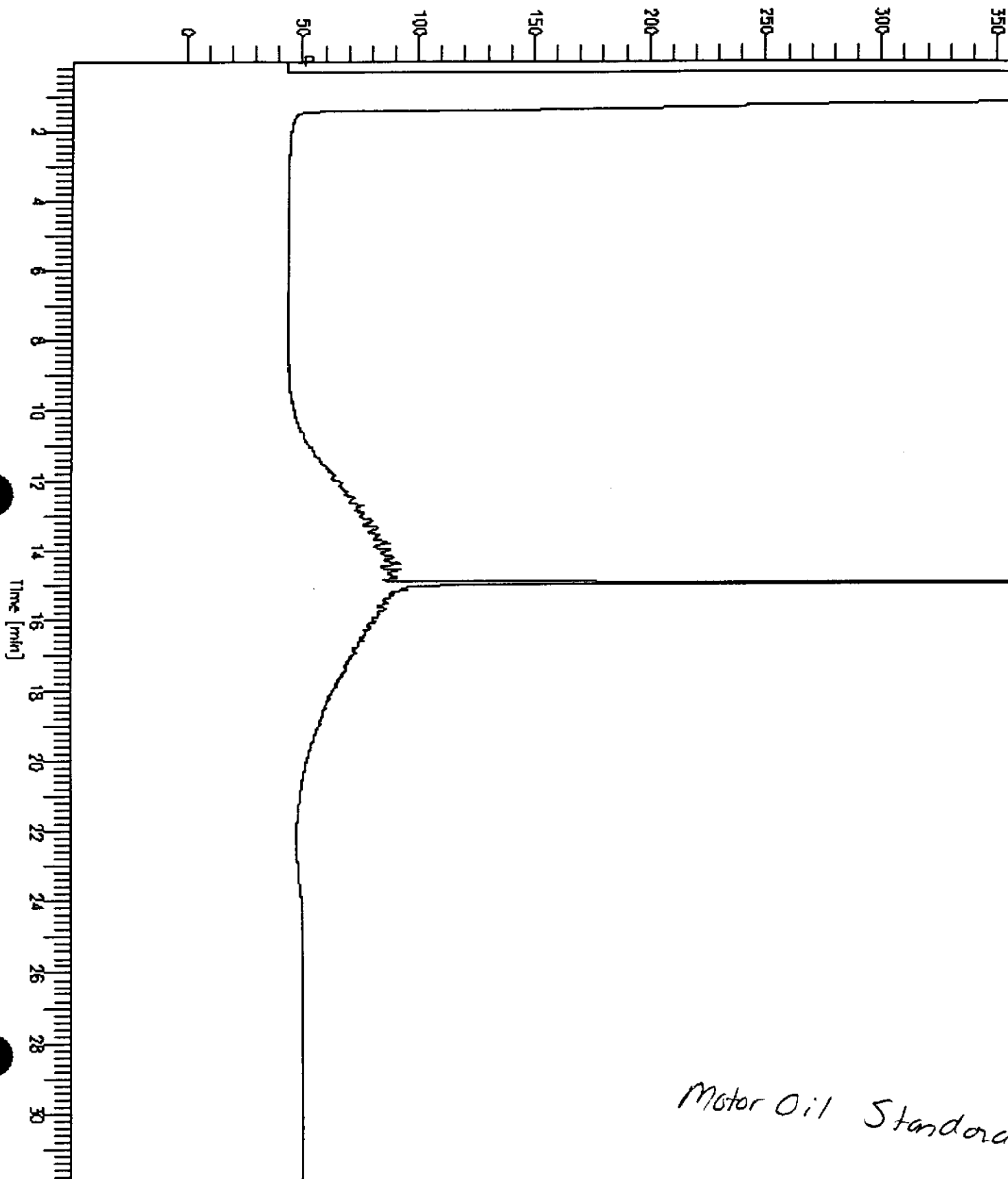
End Time : 31.91 min
Plot Offset: -8 mV

Sample #: 500MG/L
Date : 2/18/97 02:26 PM
Time of Injection: 2/14/97 09:46 PM
Low Point : -8.21 mV
Plot Scale: 364.4 mV

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High Point : 356.16 mV

Response [mV]



Motor Oil Standard



Lab #: 128238

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32309
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/14/97

MB Lab ID: QC39851

Analyte	Result		
Diesel C12-C22	<1.0		
Motor Oil C22-C50	<5.0		
Surrogate	%Rec		Recovery Limits
Hexacosane	102		60-140



Lab #: 128238

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32309
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/14/97

LCS Lab ID: QC39852

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	43.8	49.5	89	60-140
Surrogate	%Rec	Limits		
Hexacosane	102	60-140		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits



Lab #: 128238

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 128165-002
Matrix: Soil
Batch#: 32309
Units: mg/Kg
Diln Fac: 1

Sample Date: 01/27/97
Received Date: 01/29/97
Prep Date: 02/10/97
Analysis Date: 02/13/97

MS Lab ID: QC39853

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C12-C22	49.5	1.17	39.52	77	60-140
Surrogate	%Rec	Limits			
Hexacosane	78	60-140			

MSD Lab ID: QC39854

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	49.5	39.5	77	60-140	0	30
Surrogate	%Rec	Limits				
Hexacosane	79	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128238-001	SCI TP-8 @ 4.5	32269	02/03/97	02/08/97	02/08/97	
128238-002	SCI TP-8 @ 6	32269	02/03/97	02/08/97	02/08/97	

Matrix: Soil

Analyte	Units	128238-001	128238-002
Diln Fac:		1	1
Benzene	ug/Kg	<5	<5
Toluene	ug/Kg	<5	<5
Ethylbenzene	ug/Kg	<5	<5
m, p-Xylenes	ug/Kg	<5	<5
o-Xylene	ug/Kg	<5	<5
Surrogate			
Trifluorotoluene	%REC	92	91
Bromobenzene	%REC	88	88



Lab #: 128238

BATCH QC REPORT

BTXE			
Client:	Subsurface Consultants	Analysis Method:	EPA 8020
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/07/97
Batch#:	32269	Analysis Date:	02/07/97
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC39700

Analyte	Result		
Benzene	<5.0		
Toluene	<5.0		
Ethylbenzene	<5.0		
m,p-Xylenes	<5.0		
o-Xylene	<5.0		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	87		52-127
Bromobenzene	84		45-140



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

BTXE

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8020
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32269
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/07/97

LCS Lab ID: QC39699

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	84.31	100	84	80-120
Toluene	87.67	100	88	80-120
Ethylbenzene	86.06	100	86	80-120
m,p-Xylenes	173.2	200	87	80-120
o-Xylene	87.98	100	88	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	89	52-127		
Bromobenzene	87	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128238

BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 01/29/97
Lab ID: 128250-002	Received Date: 02/06/97
Matrix: Soil	Prep Date: 02/08/97
Batch#: 32269	Analysis Date: 02/08/97
Units: ug/Kg dry weight	Moisture: 9%
Diln Fac: 1	

MS Lab ID: QC39701

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Benzene	109.9	<5.495	95.19	87	75-125
Toluene	109.9	<5.495	96.95	88	75-125
Ethylbenzene	109.9	<5.495	96.87	88	75-125
m,p-Xylenes	219.8	<5.495	186.2	85	75-125
o-Xylene	109.9	<5.495	96.32	88	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	90	52-127			
Bromobenzene	89	45-140			

MSD Lab ID: QC39702

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Benzene	109.9	97.07	88	75-125	2	20
Toluene	109.9	99.41	90	75-125	3	20
Ethylbenzene	109.9	97.64	89	75-125	1	20
m,p-Xylenes	219.8	187.9	85	75-125	1	20
o-Xylene	109.9	97.82	89	75-125	2	20
Surrogate	%Rec	Limits				
Trifluorotoluene	91	52-127				
Bromobenzene	88	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-9 @ 3.5
 Lab ID: 128238-003
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 5

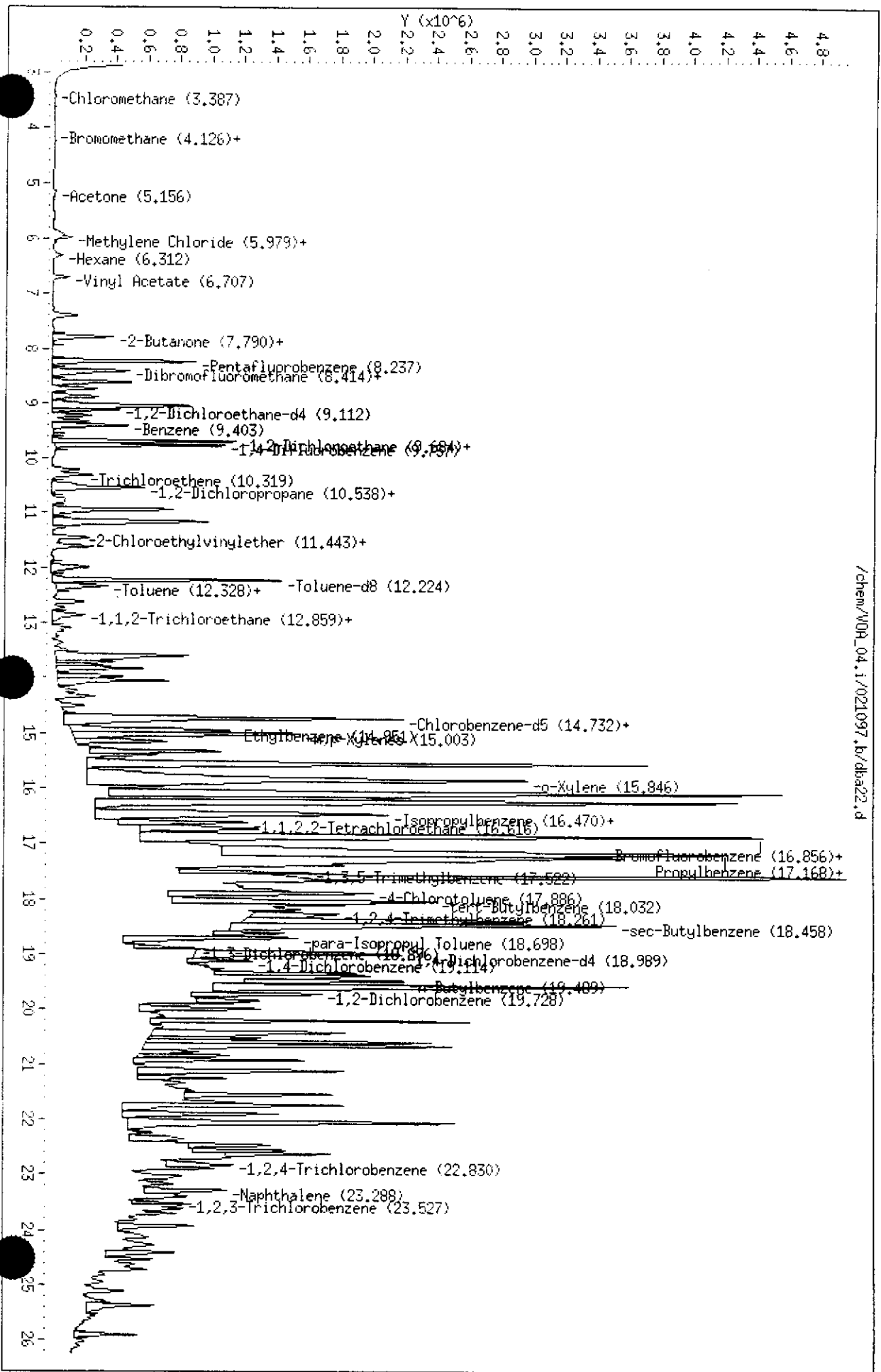
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	100
Acetone	ND	100
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
2-Butanone	ND	50
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	25
Vinyl Acetate	ND	250
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	25
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	25
Benzene	ND	25
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	25
2-Hexanone	ND	50
4-Methyl-2-Pentanone	ND	50
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
Chlorobenzene	ND	25
Ethylbenzene	ND	25
Styrene	ND	25
m,p-Xylenes	30	25
o-Xylene	30	25
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	87	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	124*	79-122

* Values outside of QC limits

Data File: /chem/MDR_04.1/021097.b/dhaz22.d
 Date: 11-FEB-97 03:47
 Client ID: DVNA P&I
 Sample Info: S,128238-003
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: MDR_04.1
 Operator: LLH
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-9 @ 6
 Lab ID: 128238-004
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

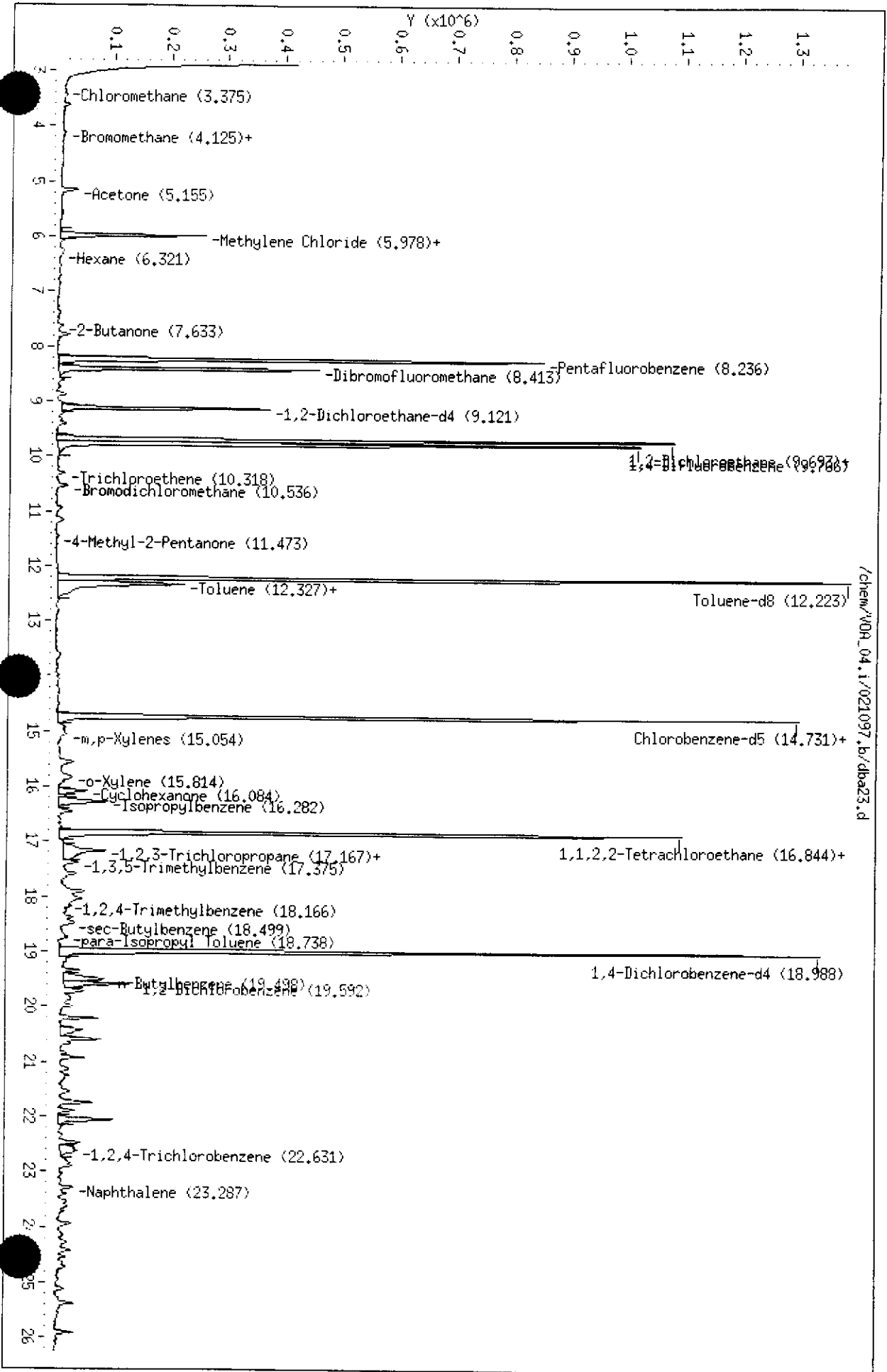
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	38	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	6.1 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	91	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	97	79-122

J: Estimated Value

Data File: /chem/W04_04.1/021097.b/d/a23.d
 Date: 11-FEB-97 04:20
 Client ID: DYNA P&I
 Sample Info: S.128238-004
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: W04_04.1
 Operator: LLH
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-11 @ 1.5
 Lab ID: 128238-005
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

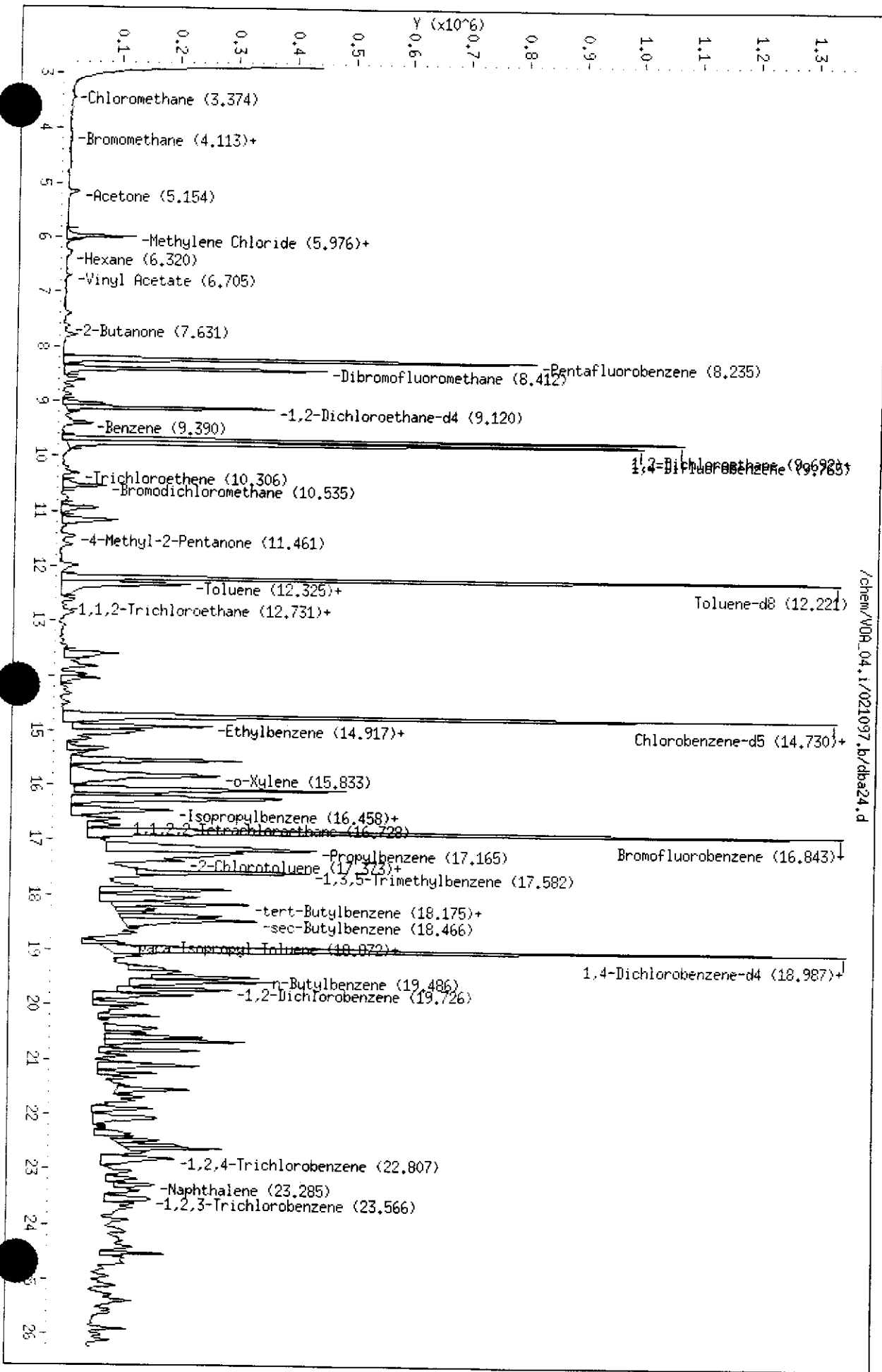
Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	28	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	5.1 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	7.4	5.0
Styrene	ND	5.0
m,p-Xylenes	2.7 J	5.0
o-Xylene	4.1 J	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	104	79-122

J: Estimated Value

Data File: /chem/V09_04.1/021097.b/dba24.d
 Date: 11-FEB-97 04:54
 Client ID: DYN4 P&I
 Sample Info: S.128238-005
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V09_04.1
 Operator: LLH
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-11 @ 4.5
 Lab ID: 128238-006
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 2

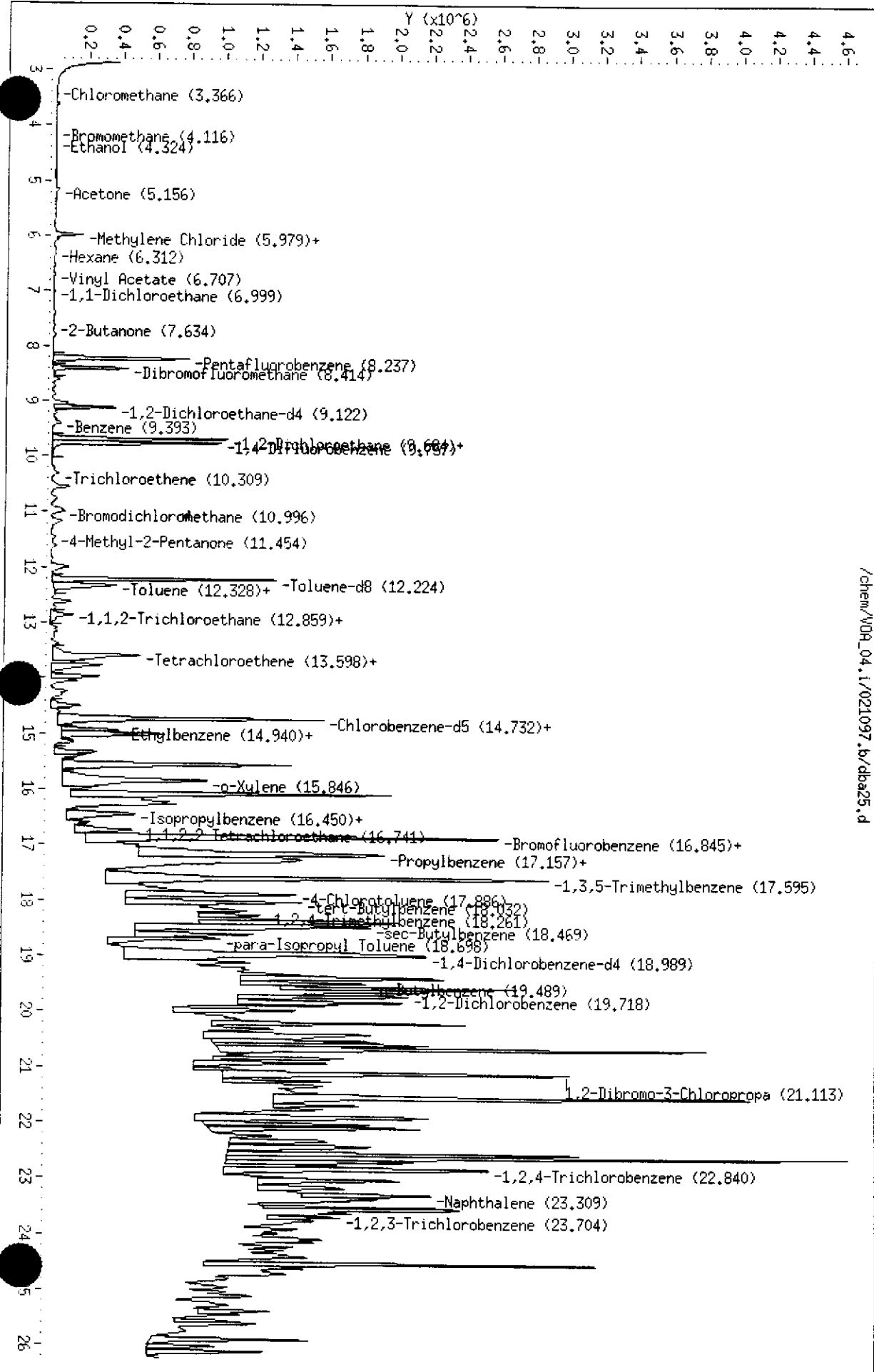
Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	20
Bromomethane	ND	20
Vinyl Chloride	ND	20
Chloroethane	ND	20
Methylene Chloride	ND	40
Acetone	62	40
Carbon Disulfide	ND	10
Trichlorofluoromethane	ND	10
1,1-Dichloroethene	ND	10
1,1-Dichloroethane	ND	10
trans-1,2-Dichloroethene	ND	10
cis-1,2-Dichloroethene	ND	10
Chloroform	ND	10
Freon 113	ND	10
1,2-Dichloroethane	ND	10
2-Butanone	ND	20
1,1,1-Trichloroethane	ND	10
Carbon Tetrachloride	ND	10
Vinyl Acetate	ND	100
Bromodichloromethane	ND	10
1,2-Dichloropropane	ND	10
cis-1,3-Dichloropropene	ND	10
Trichloroethene	ND	10
Dibromochloromethane	ND	10
1,1,2-Trichloroethane	ND	10
Benzene	ND	10
trans-1,3-Dichloropropene	ND	10
Bromoform	ND	10
2-Hexanone	ND	20
4-Methyl-2-Pentanone	ND	20
1,1,2,2-Tetrachloroethane	ND	10
Tetrachloroethene	ND	10
Toluene	ND	10
Chlorobenzene	ND	10
Ethylbenzene	ND	10
Styrene	ND	10
m,p-Xylenes	ND	10
o-Xylene	ND	10
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	92	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	113	79-122

Data File: /chem/VDA_04.1/021097.b/dba25.d
Date: 11-FEB-97 05:27
Client ID: DYN4 P&I
Sample Info: S.128238-006
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VDA_04.1
Operator: LLH
Column diameter: 0.32

/chem/VDA_04.1/021097.b/dba25.d





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-12 @ 4
 Lab ID: 128238-007
 Matrix: Soil
 Batch#: 32298
 Units: ug/Kg
 Diln Fac: 25

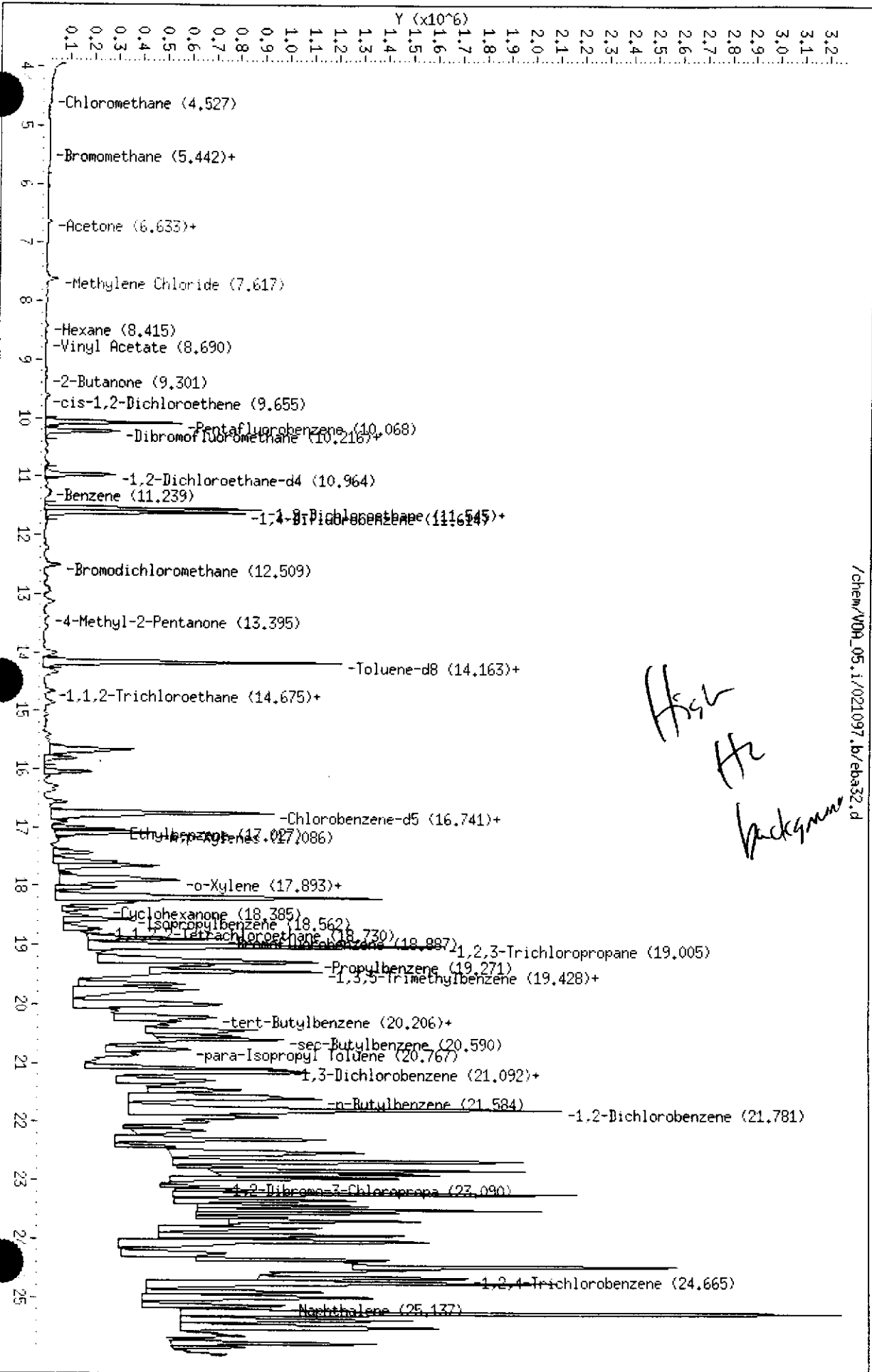
Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	500
Acetone	ND	500
Carbon Disulfide	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
1,1-Dichloroethane	ND	130
trans-1,2-Dichloroethene	ND	130
cis-1,2-Dichloroethene	ND	130
Chloroform	ND	130
Freon 113	ND	130
1,2-Dichloroethane	ND	130
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
Vinyl Acetate	ND	1300
Bromodichloromethane	ND	130
1,2-Dichloropropane	ND	130
cis-1,3-Dichloropropene	ND	130
Trichloroethene	ND	130
Dibromochloromethane	ND	130
1,1,2-Trichloroethane	ND	130
Benzene	ND	130
trans-1,3-Dichloropropene	ND	130
Bromoform	ND	130
2-Hexanone	ND	250
4-Methyl-2-Pentanone	ND	250
1,1,2,2-Tetrachloroethane	ND	130
Tetrachloroethene	ND	130
Toluene	ND	130
Chlorobenzene	ND	130
Ethylbenzene	ND	130
Styrene	ND	130
m,p-Xylenes	ND	130
o-Xylene	150	130
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	108	79-122

Data File: /chem/VDH_05.1/021097.b/eba32.d
Date: 11-FEB-97 03:24
Client ID: DVMQ P&I
Sample Info: S.128238-007
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VDH_05.1
Operator: DM
Column diameter: 0.32

*Asst
Hr
background*





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-12 @ 5
 Lab ID: 128238-008
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 5

Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

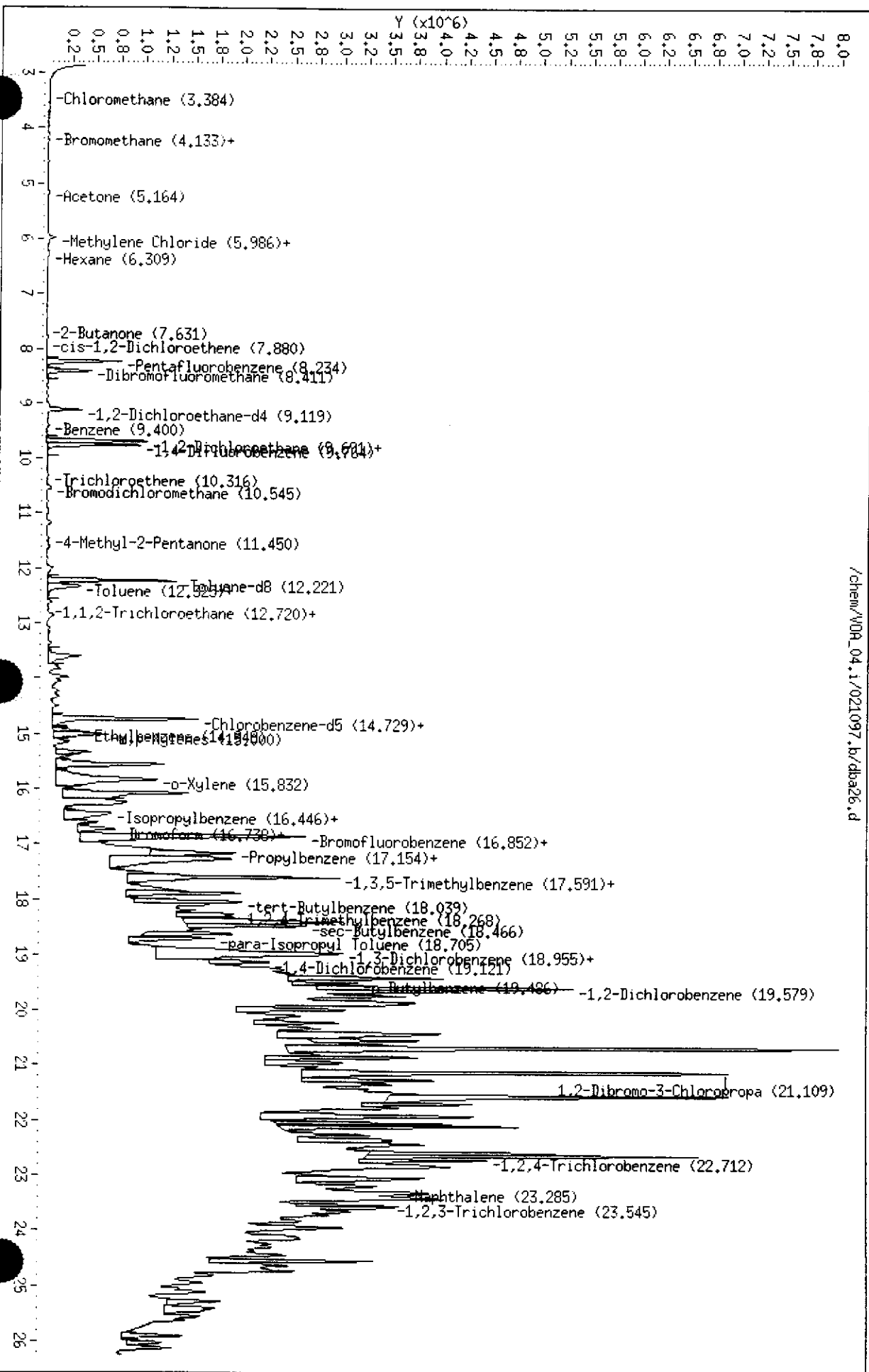
Analyte	Result	Reporting Limit
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	100
Acetone	ND	100
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
2-Butanone	ND	50
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	25
Vinyl Acetate	ND	250
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	25
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	25
Benzene	ND	25
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	25
2-Hexanone	ND	50
4-Methyl-2-Pentanone	ND	50
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
Chlorobenzene	ND	25
Ethylbenzene	ND	25
Styrene	ND	25
m,p-Xylenes	ND	25
o-Xylene	20 J	25
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	125*	79-122

J: Estimated Value

* Values outside of QC limits

Data File: /chem/VD09_04.1/021097.b/d0a26.d
 Date: 11-FEB-97 06:00
 Client ID: DVMQ P&I
 Sample Info: S.128238-008
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: VD09_04.1
 Operator: LLH
 Column diameter: 0.32



/chem/VD09_04.1/021097.b/d0a26.d

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date:	02/10/97
Batch#: 32298	Analysis Date:	02/10/97
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39806

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	113	79-122



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
 Batch#: 32298
 Units: ug/L
 Diln Fac: 25

Prep Date: 02/10/97
 Analysis Date: 02/10/97

MB Lab ID: QC39821

Analyte	Result	Reporting Limit
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	500
Acetone	ND	500
Carbon Disulfide	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
1,1-Dichloroethane	ND	130
trans-1,2-Dichloroethene	ND	130
cis-1,2-Dichloroethene	ND	130
Chloroform	ND	130
Freon 113	ND	130
1,2-Dichloroethane	ND	130
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
Vinyl Acetate	ND	1300
Bromodichloromethane	ND	130
1,2-Dichloropropane	ND	130
cis-1,3-Dichloropropene	ND	130
Trichloroethene	ND	130
Dibromochloromethane	ND	130
1,1,2-Trichloroethane	ND	130
Benzene	ND	130
trans-1,3-Dichloropropene	ND	130
Bromoform	ND	130
2-Hexanone	ND	250
4-Methyl-2-Pentanone	ND	250
1,1,2,2-Tetrachloroethane	ND	130
Tetrachloroethene	ND	130
Toluene	ND	130
Chlorobenzene	ND	130
Ethylbenzene	ND	130
Styrene	ND	130
m,p-Xylenes	ND	130
o-Xylene	ND	130
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	108	79-122

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/10/97	
Batch#: 32298	Analysis Date: 02/10/97	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39865

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	110	79-122

Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Soil	Prep Date: 02/10/97	
Batch#: 32307	Analysis Date: 02/10/97	
Units: ug/Kg		
Diln Fac: 1		

MB Lab ID: QC39849

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	100	79-122



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

MB Lab ID: QC39849

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	100	79-122



Lab #: 128238

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32298
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

LCS Lab ID: QC39805

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	66.78	50	134	51-180
Trichloroethene	56.13	50	112	73-141
Benzene	52.9	50	106	78-142
Toluene	52.07	50	104	76-150
Chlorobenzene	55.53	50	111	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	103	68-126		
Toluene-d8	97	87-125		
Bromofluorobenzene	108	79-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128238

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32307
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

LCS Lab ID: QC39848

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	45.46	50	91	51-180
Trichloroethene	48.86	50	98	73-141
Benzene	46.78	50	94	78-142
Toluene	49.27	50	99	76-150
Chlorobenzene	48.87	50	98	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	86	68-126		
Toluene-d8	102	87-125		
Bromofluorobenzene	101	79-122		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128238

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128237-001
 Matrix: Soil
 Batch#: 32298
 Units: ug/Kg
 Diln Fac: 25

Sample Date: 02/03/97
 Received Date: 02/05/97
 Prep Date: 02/10/97
 Analysis Date: 02/10/97

MS Lab ID: QC39839

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	1250	<125	1471	117	51-180
Trichloroethene	1250	2195	3513	105	73-141
Benzene	1250	<125	1310	104	78-142
Toluene	1250	<125	1318	100	76-150
Chlorobenzene	1250	<125	1340	107	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	94	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	103	79-122			

MSD Lab ID: QC39840

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	1250	1398	111	51-180	5	22
Trichloroethene	1250	3369	94	73-141	4	24
Benzene	1250	1258	99	78-142	4	21
Toluene	1250	1270	96	76-150	4	21
Chlorobenzene	1250	1309	105	83-129	2	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	95	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	104	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Organochlorine Pesticides and PCBs

Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	

Field ID: SCI TP-9 @ 3.5	Sampled: 02/03/97
Lab ID: 128238-003	Received: 02/05/97
Matrix: Soil	Extracted: 02/07/97
Batch#: 32278	Analyzed: 02/13/97
Units: ug/Kg	
Diln Fac: 20	

Analyte	Result	Reporting Limit
alpha-BHC	ND	60
beta-BHC	ND	60
gamma-BHC	ND	60
delta-BHC	ND	60
Heptachlor	ND	60
Aldrin	ND	60
Heptachlor epoxide B	ND	60
Heptachlor epoxide A	ND	60
Endosulfan I	ND	60
Dieldrin	ND	120
4,4'-DDE	ND	120
Endrin	ND	120
Endosulfan II	ND	120
Endosulfan sulfate	ND	120
4,4'-DDD	ND	120
Endrin aldehyde	ND	120
4,4'-DDT	ND	120
Chlordane	ND	600
Methoxychlor	ND	600
Toxaphene	ND	1200
Aroclor-1016	ND	240
Aroclor-1221	ND	480
Aroclor-1232	ND	240
Aroclor-1242	ND	240
Aroclor-1248	ND	240
Aroclor-1254	ND	240
Aroclor-1260	370	240
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	29-108
Decachlorobiphenyl	DO*	30-125

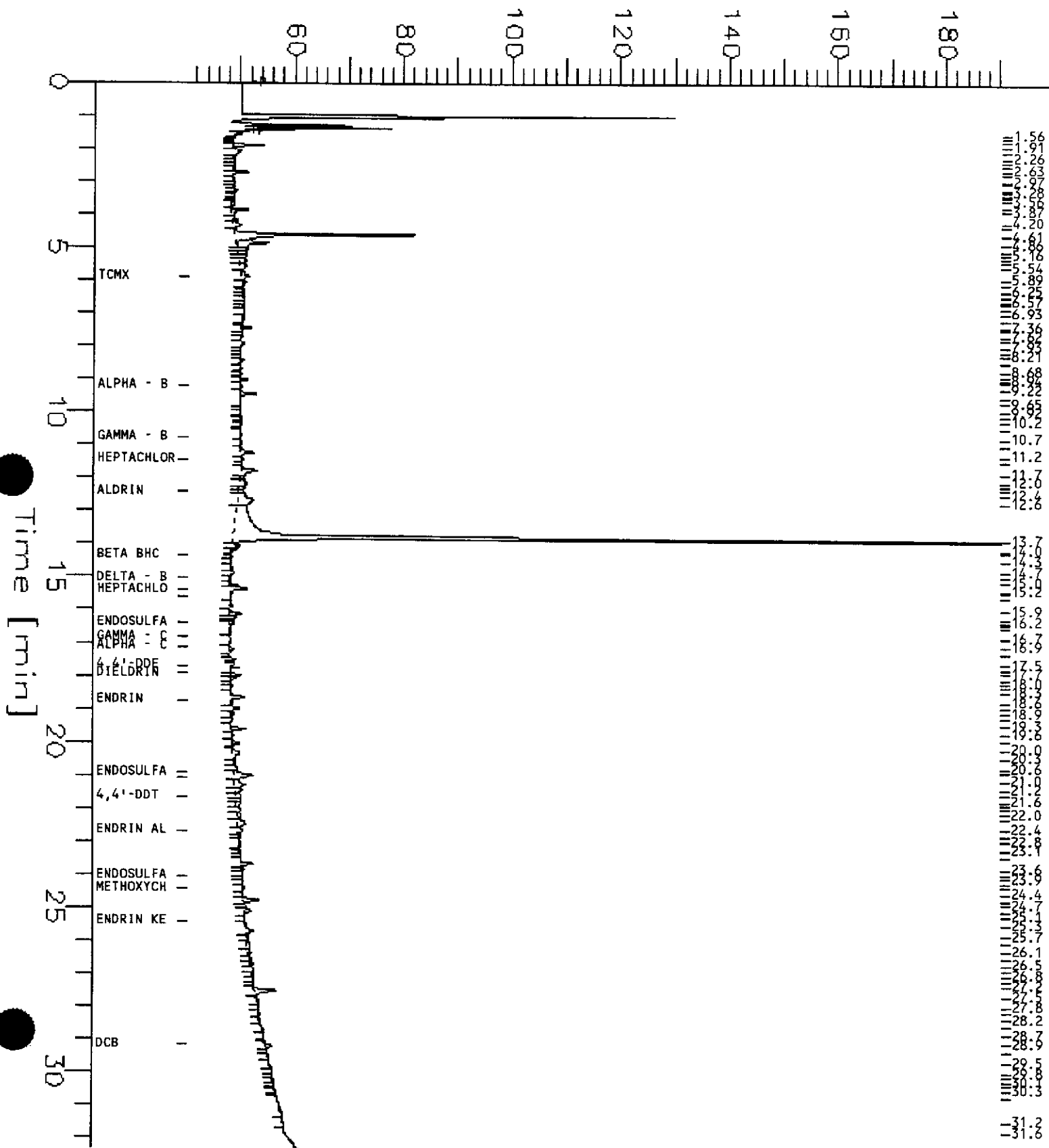
* Values outside of QC limits
 DO: Surrogate diluted out

Sample Name : 128238-003
 FileName : g:\gc14\cha\041A121.raw
 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Scale Factor: -1.0

End Time : 32.35 min
 Plot Offset: 41 mV

Sample #: 32278
 Date : 2/13/97 06:54 PM
 Time of Injection: 2/13/97 06:21 PM
 Low Point : 40.65 mV
 Plot Scale: 150.0 mV
 High Point : 190.65 mV

Response [mV]





Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

Field ID: SCI TP-9 @ 6
Lab ID: 128238-004
Matrix: Soil
Batch#: 32278
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/07/97
Analyzed: 02/12/97

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Surrogate	%Recovery	Recovery Limits
TCMX	81	29-108
Decachlorobiphenyl	65	30-125



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	

Field ID: SCI TP-11 @ 1.5	Sampled: 02/04/97
Lab ID: 128238-005	Received: 02/05/97
Matrix: Soil	Extracted: 02/07/97
Batch#: 32278	Analyzed: 02/13/97
Units: ug/Kg	
Diln Fac: 40	

Analyte	Result	Reporting Limit
alpha-BHC	ND	120
beta-BHC	ND	120
gamma-BHC	ND	120
delta-BHC	ND	120
Heptachlor	ND	120
Aldrin	ND	120
Heptachlor epoxide B	ND	120
Heptachlor epoxide A	ND	120
Endosulfan I	ND	120
Dieldrin	ND	240
4,4'-DDE	ND	240
Endrin	ND	240
Endosulfan II	ND	240
Endosulfan sulfate	ND	240
4,4'-DDD	ND	240
Endrin aldehyde	ND	240
4,4'-DDT	ND	240
Chlordane	ND	1200
Methoxychlor	ND	1200
Toxaphene	ND	2400
Aroclor-1016	ND	480
Aroclor-1221	ND	960
Aroclor-1232	ND	480
Aroclor-1242	ND	480
Aroclor-1248	ND	480
Aroclor-1254	ND	480
Aroclor-1260	4300	480
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	29-108
Decachlorobiphenyl	DO*	30-125

* Values outside of QC limits

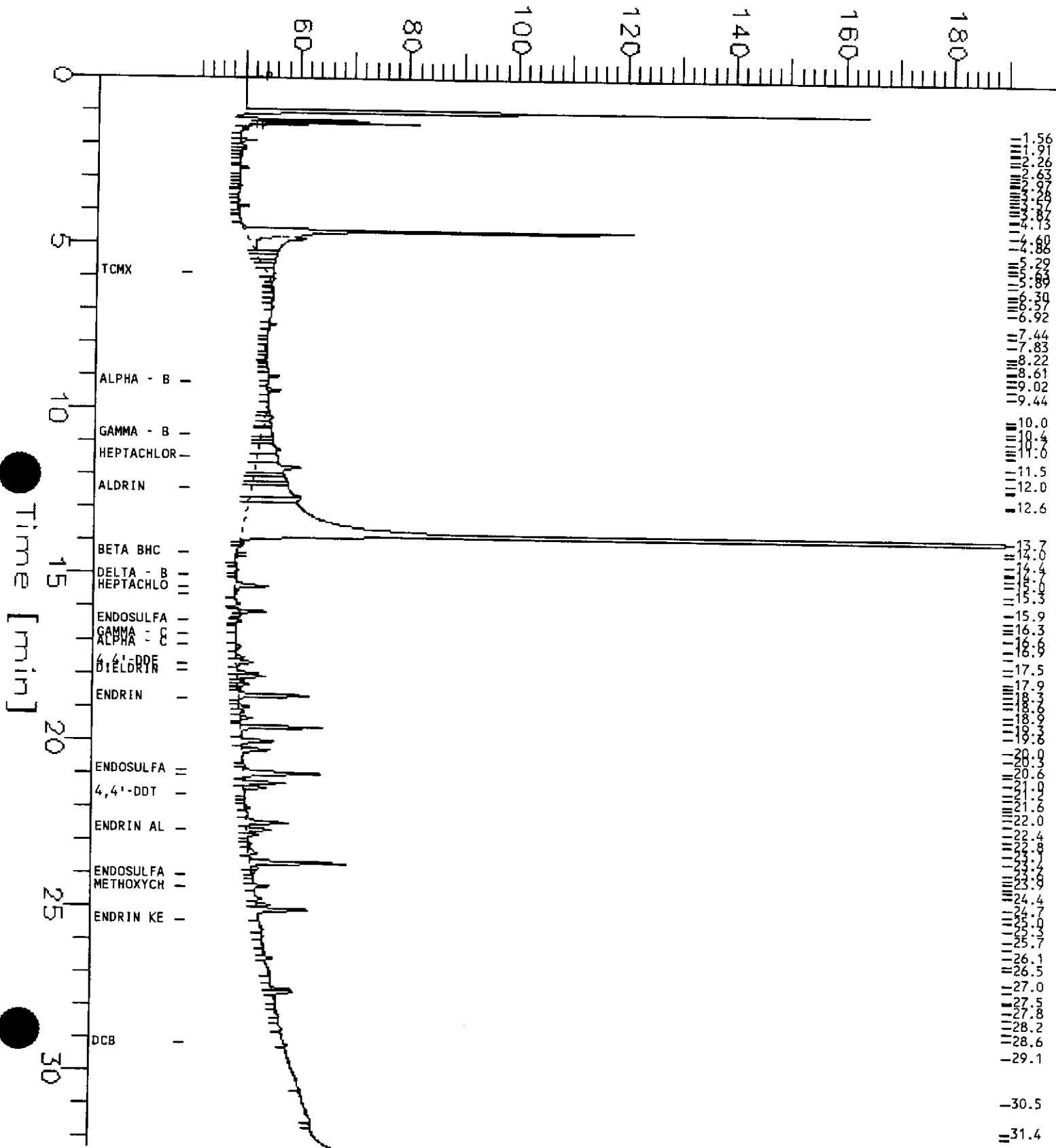
DO: Surrogate diluted out

Sample Name : 128238-005
FileName : g:\gc14\cha\041A094.raw
Method : PEST-CNT.ins
Start Time : 0.00 min
Scale Factor: -1.0

End Time : 32.35 min
Plot Offset: 41 mV

Sample #: 32278
Date : 2/13/97 12:46 AM
Time of Injection: 2/13/97 12:14 AM
Low Point : 40.58 mV
Plot Scale: 150.0 mV
Page 1 of 1
High Point : 190.58 mV

Response [mV]





Organochlorine Pesticides and PCBs

Client: Subsurface Consultants Analysis Method: EPA 8080
Project#: 133.005 Prep Method: EPA 3550
Location: KOT

Field ID: SCI TP-11 @ 4.5 Sampled: 02/04/97
Lab ID: 128238-006 Received: 02/05/97
Matrix: Soil Extracted: 02/07/97
Batch#: 32278 Analyzed: 02/13/97
Units: ug/Kg
Diln Fac: 1

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%Recovery	Recovery Limits
TCMX	87	29-108
Decachlorobiphenyl	78	30-125

Organochlorine Pesticides and PCBs

Client: Subsurface Consultants Analysis Method: EPA 8080
 Project#: 133.005 Prep Method: EPA 3550
 Location: KOT

Field ID: SCI TP-12 @ 4 Sampled: 02/04/97
 Lab ID: 128238-007 Received: 02/05/97
 Matrix: Soil Extracted: 02/07/97
 Batch#: 32278 Analyzed: 02/13/97
 Units: ug/Kg
 Diln Fac: 500

Analyte	Result	Reporting Limit
alpha-BHC	ND	1500
beta-BHC	ND	1500
gamma-BHC	ND	1500
delta-BHC	ND	1500
Heptachlor	ND	1500
Aldrin	ND	1500
Heptachlor epoxide B	ND	1500
Heptachlor epoxide A	ND	1500
Endosulfan I	ND	1500
Dieldrin	ND	3000
4,4'-DDE	ND	3000
Endrin	ND	3000
Endosulfan II	ND	3000
Endosulfan sulfate	ND	3000
4,4'-DDD	ND	3000
Endrin aldehyde	ND	3000
4,4'-DDT	ND	3000
Chlordane	ND	15000
Methoxychlor	ND	15000
Toxaphene	ND	30000
Aroclor-1016	ND	6000
Aroclor-1221	ND	12000
Aroclor-1232	ND	6000
Aroclor-1242	ND	6000
Aroclor-1248	ND	6000
Aroclor-1254	ND	6000
Aroclor-1260	ND	6000
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	29-108
Decachlorobiphenyl	DO*	30-125

* Values outside of QC limits
 DO: Surrogate diluted out



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	

Field ID: SCI TP-12 @ 5	Sampled: 02/04/97
Lab ID: 128238-008	Received: 02/05/97
Matrix: Soil	Extracted: 02/07/97
Batch#: 32278	Analyzed: 02/13/97
Units: ug/Kg	
Diln Fac: 40	

Analyte	Result	Reporting Limit
alpha-BHC	ND	120
beta-BHC	ND	120
gamma-BHC	ND	120
delta-BHC	ND	120
Heptachlor	ND	120
Aldrin	ND	120
Heptachlor epoxide B	ND	120
Heptachlor epoxide A	ND	120
Endosulfan I	ND	120
Dieldrin	ND	240
4,4'-DDE	ND	240
Endrin	ND	240
Endosulfan II	ND	240
Endosulfan sulfate	ND	240
4,4'-DDD	ND	240
Endrin aldehyde	ND	240
4,4'-DDT	ND	240
Chlordane	ND	1200
Methoxychlor	ND	1200
Toxaphene	ND	2400
Aroclor-1016	ND	480
Aroclor-1221	ND	960
Aroclor-1232	ND	480
Aroclor-1242	ND	480
Aroclor-1248	ND	480
Aroclor-1254	ND	480
Aroclor-1260	550	480
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	29-108
Decachlorobiphenyl	DO*	30-125

* Values outside of QC limits

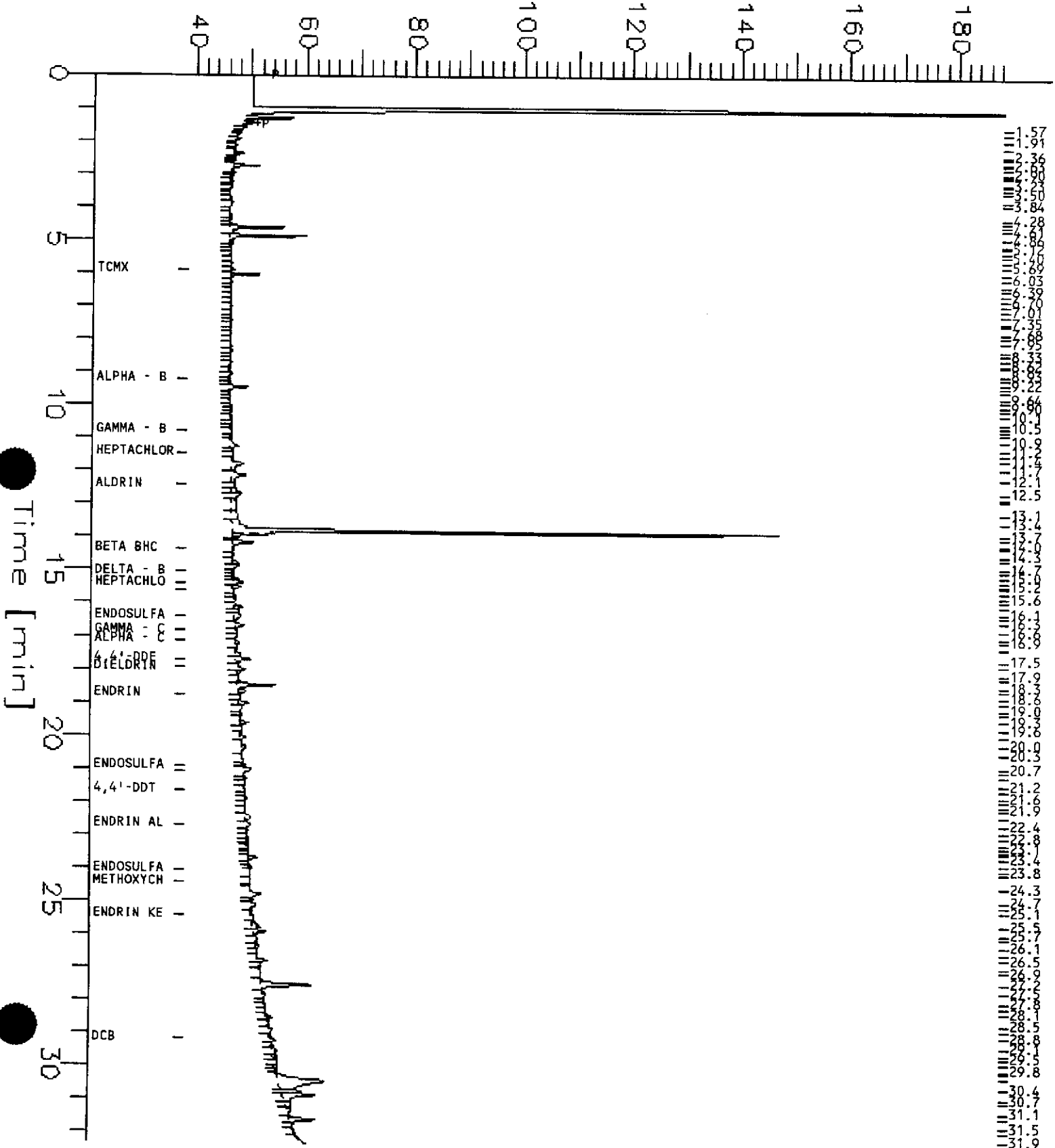
DO: Surrogate diluted out

Sample Name : 128238-008
FileName : g:\gc14\cha\041A119.raw
Method : PEST-CNT.ins
Start Time : 0.00 min
Scale Factor: -1.0

End Time : 32.35 min
Plot Offset: 38 mV

Sample #: 32278
Date : 2/13/97 05:37 PM
Time of Injection: 2/13/97 05:05 PM
Low Point : 38.45 mV
Plot Scale: 150.0 mV

Response [mV]





Lab #: 128238

BATCH QC REPORT

EPA 8080 Pesticides & PCBs		
Client: Subsurface Consultants	Analysis Method: EPA 8080	
Project#: 133.005	Prep Method: EPA 3550	
Location: KOT		
METHOD BLANK		
Matrix: Soil	Prep Date: 02/07/97	
Batch#: 32278	Analysis Date: 02/11/97	
Units: ug/Kg		
Diln Fac: 1		

MB Lab ID: QC39745

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Surrogate	%Rec	Recovery Limits
TCMX	87	29-108
Decachlorobiphenyl	84	30-125



Lab #: 128238

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8080
 Prep Method: EPA 3550

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32278
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/11/97

LCS Lab ID: QC39746

Analyte	Result	Spike Added	%Rec #	Limits
gamma-BHC	15	17	90	49-115
Heptachlor	15.39	17	92	51-119
Aldrin	14.67	17	88	55-112
Dieldrin	14.83	17	89	54-123
Endrin	15.86	17	95	63-128
4,4'-DDT	14.68	17	88	57-131
Surrogate	%Rec	Limits		
TCMX	91	29-108		
Decachlorobiphenyl	86	30-125		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

Lab #: 128238

BATCH QC REPORT

EPA 8080 Pesticides & PCBs	
Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/04/97
Lab ID: 128245-002	Received Date: 02/06/97
Matrix: Soil	Prep Date: 02/07/97
Batch#: 32278	Analysis Date: 02/12/97
Units: ug/Kg dry weight	Moisture: 18%
Diln Fac: 1	

MS Lab ID: QC39747

Analyte	Spike Added	Sample	MS	%Rec #	Limits
gamma-BHC	20.73	<3.659	17.3	85	53-124
Heptachlor	20.73	<3.659	16.67	82	55-128
Aldrin	20.73	<3.659	15.94	78	49-128
Dieldrin	20.73	<7.317	16.5	81	54-128
Endrin	20.73	<7.317	17.77	87	69-131
4,4'-DDT	20.73	<7.317	15.29	75	53-144
Surrogate	%Rec	Limits			
TCMX	86	29-108			
Decachlorobiphenyl	78	30-125			

MSD Lab ID: QC39748

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	20.73	17.29	85	53-124	0	35
Heptachlor	20.73	16.39	81	55-128	2	35
Aldrin	20.73	16.15	79	49-128	1	35
Dieldrin	20.73	17	84	54-128	3	35
Endrin	20.73	18.48	91	69-131	4	35
4,4'-DDT	20.73	15.94	78	53-144	4	35
Surrogate	%Rec	Limits				
TCMX	85	29-108				
Decachlorobiphenyl	85	30-125				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 6 outside limits
 Spike Recovery: 0 out of 12 outside limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-9 @ 3.5
Lab ID: 128238-003
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 03/05/97

Analyte	Result	Reporting Limit
Phenol	ND	3300
2-Chlorophenol	ND	3300
Benzyl alcohol	ND	3300
2-Methylphenol	ND	3300
4-Methylphenol	ND	3300
2-Nitrophenol	ND	17000
2,4-Dimethylphenol	ND	3300
Benzoic acid	ND	17000
2,4-Dichlorophenol	ND	3300
4-Chloro-3-methylphenol	ND	3300
2,4,6-Trichlorophenol	ND	3300
2,4,5-Trichlorophenol	ND	17000
2,4-Dinitrophenol	ND	17000
4-Nitrophenol	ND	17000
4,6-Dinitro-2-methylphenol	ND	17000
Pentachlorophenol	ND	17000
N-Nitrosodimethylamine	ND	3300
Aniline	ND	3300
bis(2-Chloroethyl)ether	ND	3300
1,3-Dichlorobenzene	ND	3300
1,4-Dichlorobenzene	ND	3300
1,2-Dichlorobenzene	ND	3300
bis(2-Chloroisopropyl) ether	ND	3300
N-Nitroso-di-n-propylamine	ND	3300
Hexachloroethane	ND	3300
Nitrobenzene	ND	3300
Isophorone	ND	3300
bis(2-Chloroethoxy)methane	ND	3300
1,2,4-Trichlorobenzene	ND	3300
Naphthalene	ND	3300
4-Chloroaniline	ND	3300
Hexachlorobutadiene	ND	3300
2-Methylnaphthalene	ND	3300
Hexachlorocyclopentadiene	ND	3300
2-Chloronaphthalene	ND	3300
2-Nitroaniline	ND	17000
Dimethylphthalate	ND	3300
Acenaphthylene	ND	3300

Semivolatile Organics by GC/MS		
Field ID: SCI TP-9 @ 3.5	Sampled:	02/03/97
Lab ID: 128238-003	Received:	02/05/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	03/05/97
Units: ug/Kg		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	3300
3-Nitroaniline	ND	17000
Acenaphthene	ND	3300
Dibenzofuran	ND	3300
2,4-Dinitrotoluene	ND	3300
Diethylphthalate	ND	3300
4-Chlorophenyl-phenylether	ND	3300
Fluorene	ND	3300
4-Nitroaniline	ND	17000
N-Nitrosodiphenylamine	ND	3300
Azobenzene	ND	3300
4-Bromophenyl-phenylether	ND	3300
Hexachlorobenzene	ND	3300
Phenanthrene	ND	3300
Anthracene	ND	3300
Di-n-butylphthalate	ND	3300
Fluoranthene	ND	3300
Benzidine	ND	3300
Pyrene	ND	3300
Butylbenzylphthalate	ND	3300
3,3'-Dichlorobenzidine	ND	17000
Benzo(a)anthracene	ND	3300
Chrysene	ND	3300
bis(2-Ethylhexyl)phthalate	ND	3300
Di-n-octylphthalate	ND	3300
Benzo(b)fluoranthene	ND	3300
Benzo(k)fluoranthene	ND	3300
Benzo(a)pyrene	ND	3300
Indeno(1,2,3-cd)pyrene	ND	3300
Dibenz(a,h)anthracene	ND	3300
Benzo(g,h,i)perylene	ND	3300
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	86	25-121
Phenol-d5	85	24-113
2,4,6-Tribromophenol	67	19-122
Nitrobenzene-d5	106	23-120
2-Fluorobiphenyl	90	30-115
Terphenyl-d14	117	18-137



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-9 @ 6
Lab ID: 128238-004
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 02/28/97

Analyte	Result	Reporting Limit
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Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330

Semivolatile Organics by GC/MS		
Field ID: SCI TP-9 @ 6	Sampled:	02/03/97
Lab ID: 128238-004	Received:	02/05/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	02/28/97
Units: ug/Kg		
Diln Fac: 1		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	65	25-121
Phenol-d5	63	24-113
2,4,6-Tribromophenol	43	19-122
Nitrobenzene-d5	69	23-120
2-Fluorobiphenyl	64	30-115
Terphenyl-d14	72	18-137



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-11 @ 1.5
Lab ID: 128238-005
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 03/05/97

Analyte	Result	Reporting Limit
Phenol	ND	3300
2-Chlorophenol	ND	3300
Benzyl alcohol	ND	3300
2-Methylphenol	ND	3300
4-Methylphenol	ND	3300
2-Nitrophenol	ND	17000
2,4-Dimethylphenol	ND	3300
Benzoic acid	ND	17000
2,4-Dichlorophenol	ND	3300
4-Chloro-3-methylphenol	ND	3300
2,4,6-Trichlorophenol	ND	3300
2,4,5-Trichlorophenol	ND	17000
2,4-Dinitrophenol	ND	17000
4-Nitrophenol	ND	17000
4,6-Dinitro-2-methylphenol	ND	17000
Pentachlorophenol	ND	17000
N-Nitrosodimethylamine	ND	3300
Aniline	ND	3300
bis(2-Chloroethyl)ether	ND	3300
1,3-Dichlorobenzene	ND	3300
1,4-Dichlorobenzene	ND	3300
1,2-Dichlorobenzene	ND	3300
bis(2-Chloroisopropyl) ether	ND	3300
N-Nitroso-di-n-propylamine	ND	3300
Hexachloroethane	ND	3300
Nitrobenzene	ND	3300
Isophorone	ND	3300
bis(2-Chloroethoxy)methane	ND	3300
1,2,4-Trichlorobenzene	ND	3300
Naphthalene	ND	3300
4-Chloroaniline	ND	3300
Hexachlorobutadiene	ND	3300
2-Methylnaphthalene	ND	3300
Hexachlorocyclopentadiene	ND	3300
2-Chloronaphthalene	ND	3300
2-Nitroaniline	ND	17000
Dimethylphthalate	ND	3300
Acenaphthylene	ND	3300

Semivolatile Organics by GC/MS		
Field ID: SCI TP-11 @ 1.5	Sampled:	02/04/97
Lab ID: 128238-005	Received:	02/05/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	03/05/97
Units: ug/Kg		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	3300
3-Nitroaniline	ND	17000
Acenaphthene	ND	3300
Dibenzofuran	ND	3300
2,4-Dinitrotoluene	ND	3300
Diethylphthalate	ND	3300
4-Chlorophenyl-phenylether	ND	3300
Fluorene	ND	3300
4-Nitroaniline	ND	17000
N-Nitrosodiphenylamine	ND	3300
Azobenzene	ND	3300
4-Bromophenyl-phenylether	ND	3300
Hexachlorobenzene	ND	3300
Phenanthrene	ND	3300
Anthracene	ND	3300
Di-n-butylphthalate	ND	3300
Fluoranthene	ND	3300
Benzidine	ND	3300
Pyrene	ND	3300
Butylbenzylphthalate	ND	3300
3,3'-Dichlorobenzidine	ND	17000
Benzo(a)anthracene	ND	3300
Chrysene	ND	3300
bis(2-Ethylhexyl)phthalate	ND	3300
Di-n-octylphthalate	ND	3300
Benzo(b)fluoranthene	ND	3300
Benzo(k)fluoranthene	ND	3300
Benzo(a)pyrene	ND	3300
Indeno(1,2,3-cd)pyrene	ND	3300
Dibenz(a,h)anthracene	ND	3300
Benzo(g,h,i)perylene	ND	3300
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	84	25-121
Phenol-d5	83	24-113
2,4,6-Tribromophenol	70	19-122
Nitrobenzene-d5	88	23-120
2-Fluorobiphenyl	90	30-115
Terphenyl-d14	117	18-137



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-11 @ 4.5
Lab ID: 128238-006
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 5

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 03/11/97

Analyte	Result	Reporting Limit
Phenol	ND	1700
2-Chlorophenol	ND	1700
Benzyl alcohol	ND	1700
2-Methylphenol	ND	1700
4-Methylphenol	ND	1700
2-Nitrophenol	ND	8300
2,4-Dimethylphenol	ND	1700
Benzoic acid	ND	8300
2,4-Dichlorophenol	ND	1700
4-Chloro-3-methylphenol	ND	1700
2,4,6-Trichlorophenol	ND	1700
2,4,5-Trichlorophenol	ND	8300
2,4-Dinitrophenol	ND	8300
4-Nitrophenol	ND	8300
4,6-Dinitro-2-methylphenol	ND	8300
Pentachlorophenol	ND	8300
N-Nitrosodimethylamine	ND	1700
Aniline	ND	1700
bis(2-Chloroethyl)ether	ND	1700
1,3-Dichlorobenzene	ND	1700
1,4-Dichlorobenzene	ND	1700
1,2-Dichlorobenzene	ND	1700
bis(2-Chloroisopropyl) ether	ND	1700
N-Nitroso-di-n-propylamine	ND	1700
Hexachloroethane	ND	1700
Nitrobenzene	ND	1700
Isophorone	ND	1700
bis(2-Chloroethoxy)methane	ND	1700
1,2,4-Trichlorobenzene	ND	1700
Naphthalene	ND	1700
4-Chloroaniline	ND	1700
Hexachlorobutadiene	ND	1700
2-Methylnaphthalene	ND	1700
Hexachlorocyclopentadiene	ND	1700
2-Chloronaphthalene	ND	1700
2-Nitroaniline	ND	8300
Dimethylphthalate	ND	1700
Acenaphthylene	ND	1700

Semivolatile Organics by GC/MS

Field ID: SCI TP-11 @ 4.5	Sampled: 02/04/97
Lab ID: 128238-006	Received: 02/05/97
Matrix: Soil	Extracted: 02/11/97
Batch#: 32325	Analyzed: 03/11/97
Units: ug/Kg	
Diln Fac: 5	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	1700
3-Nitroaniline	ND	8300
Acenaphthene	ND	1700
Dibenzofuran	ND	1700
2,4-Dinitrotoluene	ND	1700
Diethylphthalate	ND	1700
4-Chlorophenyl-phenylether	ND	1700
Fluorene	ND	1700
4-Nitroaniline	ND	8300
N-Nitrosodiphenylamine	ND	1700
Azobenzene	ND	1700
4-Bromophenyl-phenylether	ND	1700
Hexachlorobenzene	ND	1700
Phenanthrene	ND	1700
Anthracene	ND	1700
Di-n-butylphthalate	ND	1700
Fluoranthene	ND	1700
Benzidine	ND	1700
Pyrene	ND	1700
Butylbenzylphthalate	ND	1700
3,3'-Dichlorobenzidine	ND	8300
Benzo(a)anthracene	ND	1700
Chrysene	ND	1700
bis(2-Ethylhexyl)phthalate	ND	1700
Di-n-octylphthalate	ND	1700
Benzo(b)fluoranthene	ND	1700
Benzo(k)fluoranthene	ND	1700
Benzo(a)pyrene	ND	1700
Indeno(1,2,3-cd)pyrene	ND	1700
Dibenz(a,h)anthracene	ND	1700
Benzo(g,h,i)perylene	ND	1700
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	70	25-121
Phenol-d5	70	24-113
2,4,6-Tribromophenol	59	19-122
Nitrobenzene-d5	108	23-120
2-Fluorobiphenyl	80	30-115
Terphenyl-d14	84	18-137



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-12 @ 4
Lab ID: 128238-007
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 03/10/97

Analyte	Result	Reporting Limit
Phenol	ND	20000
2-Chlorophenol	ND	20000
Benzyl alcohol	ND	20000
2-Methylphenol	ND	20000
4-Methylphenol	ND	20000
2-Nitrophenol	ND	100000
2,4-Dimethylphenol	ND	20000
Benzoic acid	ND	100000
2,4-Dichlorophenol	ND	20000
4-Chloro-3-methylphenol	ND	20000
2,4,6-Trichlorophenol	ND	20000
2,4,5-Trichlorophenol	ND	100000
2,4-Dinitrophenol	ND	100000
4-Nitrophenol	ND	100000
4,6-Dinitro-2-methylphenol	ND	100000
Pentachlorophenol	ND	100000
N-Nitrosodimethylamine	ND	20000
Aniline	ND	20000
bis(2-Chloroethyl)ether	ND	20000
1,3-Dichlorobenzene	ND	20000
1,4-Dichlorobenzene	ND	20000
1,2-Dichlorobenzene	ND	20000
bis(2-Chloroisopropyl) ether	ND	20000
N-Nitroso-di-n-propylamine	ND	20000
Hexachloroethane	ND	20000
Nitrobenzene	ND	20000
Isophorone	ND	20000
bis(2-Chloroethoxy)methane	ND	20000
1,2,4-Trichlorobenzene	ND	20000
Naphthalene	ND	20000
4-Chloroaniline	ND	20000
Hexachlorobutadiene	ND	20000
2-Methylnaphthalene	ND	20000
Hexachlorocyclopentadiene	ND	20000
2-Chloronaphthalene	ND	20000
2-Nitroaniline	ND	100000
Dimethylphthalate	ND	20000
Acenaphthylene	ND	20000

Semivolatile Organics by GC/MS		
Field ID: SCI TP-12 @ 4	Sampled:	02/04/97
Lab ID: 128238-007	Received:	02/05/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	03/10/97
Units: ug/Kg		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	20000
3-Nitroaniline	ND	100000
Acenaphthene	ND	20000
Dibenzofuran	ND	20000
2,4-Dinitrotoluene	ND	20000
Diethylphthalate	ND	20000
4-Chlorophenyl-phenylether	ND	20000
Fluorene	ND	20000
4-Nitroaniline	ND	100000
N-Nitrosodiphenylamine	ND	20000
Azobenzene	ND	20000
4-Bromophenyl-phenylether	ND	20000
Hexachlorobenzene	ND	20000
Phenanthrene	ND	20000
Anthracene	ND	20000
Di-n-butylphthalate	ND	20000
Fluoranthene	ND	20000
Benzidine	ND	20000
Pyrene	ND	20000
Butylbenzylphthalate	ND	20000
3,3'-Dichlorobenzidine	ND	100000
Benzo(a)anthracene	ND	20000
Chrysene	ND	20000
bis(2-Ethylhexyl)phthalate	ND	20000
Di-n-octylphthalate	ND	20000
Benzo(b)fluoranthene	ND	20000
Benzo(k)fluoranthene	ND	20000
Benzo(a)pyrene	ND	20000
Indeno(1,2,3-cd)pyrene	ND	20000
Dibenz(a,h)anthracene	ND	20000
Benzo(g,h,i)perylene	ND	20000
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	DO*	25-121
Phenol-d5	DO*	24-113
2,4,6-Tribromophenol	DO*	19-122
Nitrobenzene-d5	DO*	23-120
2-Fluorobiphenyl	DO*	30-115
Terphenyl-d14	DO*	18-137

* Values outside of QC limits
 DO: Surrogate diluted out



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-12 @ 5
Lab ID: 128238-008
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 03/05/97

Analyte	Result	Reporting Limit
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Phenol	ND	10000
2-Chlorophenol	ND	10000
Benzyl alcohol	ND	10000
2-Methylphenol	ND	10000
4-Methylphenol	ND	10000
2-Nitrophenol	ND	50000
2,4-Dimethylphenol	ND	10000
Benzoic acid	ND	50000
2,4-Dichlorophenol	ND	10000
4-Chloro-3-methylphenol	ND	10000
2,4,6-Trichlorophenol	ND	10000
2,4,5-Trichlorophenol	ND	50000
2,4-Dinitrophenol	ND	50000
4-Nitrophenol	ND	50000
4,6-Dinitro-2-methylphenol	ND	50000
Pentachlorophenol	ND	50000
N-Nitrosodimethylamine	ND	10000
Aniline	ND	10000
bis(2-Chloroethyl)ether	ND	10000
1,3-Dichlorobenzene	ND	10000
1,4-Dichlorobenzene	ND	10000
1,2-Dichlorobenzene	ND	10000
bis(2-Chloroisopropyl) ether	ND	10000
N-Nitroso-di-n-propylamine	ND	10000
Hexachloroethane	ND	10000
Nitrobenzene	ND	10000
Isophorone	ND	10000
bis(2-Chloroethoxy)methane	ND	10000
1,2,4-Trichlorobenzene	ND	10000
Naphthalene	ND	10000
4-Chloroaniline	ND	10000
Hexachlorobutadiene	ND	10000
2-Methylnaphthalene	ND	10000
Hexachlorocyclopentadiene	ND	10000
2-Chloronaphthalene	ND	10000
2-Nitroaniline	ND	50000
Dimethylphthalate	ND	10000
Acenaphthylene	ND	10000



Semivolatile Organics by GC/MS

Field ID: SCI TP-12 @ 5	Sampled: 02/04/97
Lab ID: 128238-008	Received: 02/05/97
Matrix: Soil	Extracted: 02/11/97
Batch#: 32325	Analyzed: 03/05/97
Units: ug/Kg	
Diln Fac: 10	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	10000
3-Nitroaniline	ND	50000
Acenaphthene	ND	10000
Dibenzofuran	ND	10000
2,4-Dinitrotoluene	ND	10000
Diethylphthalate	ND	10000
4-Chlorophenyl-phenylether	ND	10000
Fluorene	5200 J	10000
4-Nitroaniline	ND	50000
N-Nitrosodiphenylamine	ND	10000
Azobenzene	ND	10000
4-Bromophenyl-phenylether	ND	10000
Hexachlorobenzene	ND	10000
Phenanthrene	ND	10000
Anthracene	ND	10000
Di-n-butylphthalate	ND	10000
Fluoranthene	ND	10000
Benzidine	ND	10000
Pyrene	ND	10000
Butylbenzylphthalate	ND	10000
3,3'-Dichlorobenzidine	ND	50000
Benzo(a)anthracene	ND	10000
Chrysene	ND	10000
bis(2-Ethylhexyl)phthalate	ND	10000
Di-n-octylphthalate	ND	10000
Benzo(b)fluoranthene	ND	10000
Benzo(k)fluoranthene	ND	10000
Benzo(a)pyrene	ND	10000
Indeno(1,2,3-cd)pyrene	ND	10000
Dibenz(a,h)anthracene	ND	10000
Benzo(g,h,i)perylene	ND	10000
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	82	25-121
Phenol-d5	81	24-113
2,4,6-Tribromophenol	64	19-122
Nitrobenzene-d5	126*	23-120
2-Fluorobiphenyl	92	30-115
Terphenyl-d14	115	18-137

J: Estimated Value

* Values outside of QC limits



Lab #: 128238

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

METHOD BLANK

Matrix: Soil
 Batch#: 32325
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/11/97
 Analysis Date: 02/12/97

MB Lab ID: QC39902

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700



Lab #: 128238

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

METHOD BLANK

Matrix: Soil
 Batch#: 32325
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/11/97
 Analysis Date: 02/12/97

MB Lab ID: QC39902

Analyte	Result	Reporting Limit
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	81	25-121
Phenol-d5	77	24-113
2,4,6-Tribromophenol	48	19-122
Nitrobenzene-d5	87	23-120
2-Fluorobiphenyl	72	30-115
Terphenyl-d14	68	18-137



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32325
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/11/97
 Analysis Date: 02/12/97

LCS Lab ID: QC39903

Analyte	Result	Spike Added	%Rec #	Limits
Phenol	2600	3333	78	26-90
2-Chlorophenol	2461	3333	74	25-102
4-Chloro-3-methylphenol	2487	3333	75	26-103
4-Nitrophenol	2384	3333	72	11-114
Pentachlorophenol	932.6	3333	28	17-109
1,4-Dichlorobenzene	1006	1667	60	28-104
N-Nitroso-di-n-propylamine	1004	1667	60	41-126
1,2,4-Trichlorobenzene	999.9	1667	60	38-107
Acenaphthene	1027	1667	62	31-137
2,4-Dinitrotoluene	979.9	1667	59	28-89
Pyrene	1017	1667	61	35-142
Surrogate	%Rec	Limits		
2-Fluorophenol	76	25-121		
Phenol-d5	74	24-113		
2,4,6-Tribromophenol	58	19-122		
Nitrobenzene-d5	84	23-120		
2-Fluorobiphenyl	70	30-115		
Terphenyl-d14	70	18-137		

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

DO: Surrogate diluted out



Lab #: 128238

BATCH QC REPORT

Page 1 of 1

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128184-005
 Matrix: Soil
 Batch#: 32325
 Units: ug/Kg
 Diln Fac: 2

Sample Date: 01/29/97
 Received Date: 01/31/97
 Prep Date: 02/11/97
 Analysis Date: 02/13/97

MS Lab ID: QC39904

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Phenol	3333	<666.7	2826	85	26-90
2-Chlorophenol	3333	<666.7	2597	78	25-102
4-Chloro-3-methylphenol	3333	<666.7	2536	76	26-103
4-Nitrophenol	3333	<3333	2292	69	11-114
Pentachlorophenol	3333	6769	8292	46	17-109
1,4-Dichlorobenzene	1667	<666.7	716.4	43	28-104
N-Nitroso-di-n-propylamine	1667	<666.7	1050	63	41-126
1,2,4-Trichlorobenzene	1667	<666.7	895.1	54	38-107
Acenaphthene	1667	<666.7	1076	65	31-137
2,4-Dinitrotoluene	1667	<666.7	1022	61	28-89
Pyrene	1667	<666.7	1195	72	35-142
Surrogate	%Rec	Limits			
2-Fluorophenol	81	25-121			
Phenol-d5	80	24-113			
2,4,6-Tribromophenol	57	19-122			
Nitrobenzene-d5	90	23-120			
2-Fluorobiphenyl	78	30-115			
Terphenyl-d14	81	18-137			

MSD Lab ID: QC39905

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Phenol	3333	2759	83	26-90	2	35
2-Chlorophenol	3333	2568	77	25-102	1	50
4-Chloro-3-methylphenol	3333	2537	76	26-103	0	33
4-Nitrophenol	3333	2336	70	11-114	1	50
Pentachlorophenol	3333	9781	90	17-109	65 *	47
1,4-Dichlorobenzene	1667	633.4	38	28-104	12	27
N-Nitroso-di-n-propylamine	1667	1041	62	41-126	2	38
1,2,4-Trichlorobenzene	1667	857.7	51	38-107	6	23
Acenaphthene	1667	1099	66	31-137	2	19
2,4-Dinitrotoluene	1667	1044	63	28-89	3	47
Pyrene	1667	1155	69	35-142	4	36
Surrogate	%Rec	Limits				
2-Fluorophenol	80	25-121				
Phenol-d5	78	24-113				
2,4,6-Tribromophenol	59	19-122				
Nitrobenzene-d5	92	23-120				
2-Fluorobiphenyl	81	30-115				
Terphenyl-d14	80	18-137				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

DO: Surrogate diluted out



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128238
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 02/04/97
DATE RECEIVED: 02/06/97
DATE ANALYZED: 02/12/97
DATE REPORTED: 02/20/97

=====
ANALYSIS: IGNITABILITY
ANALYSIS METHOD: SW 846 CHAP 7
=====

LAB ID	SAMPLE ID	RESULT
128238-007	SCI TP-12 @ 4	Not Ignitable
128238-008	SCI TP-12 @ 5	Not Ignitable

CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE REPORTED: 02/20/97

Metals Analytical Report

Lead

Sample ID	Lab ID	Sample Date	Receive Date	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
SCI TP-8 @ 4.5	128238-001	02/03/97	02/05/97	12	0.15	1	32247	EPA 6010A	02/06/97
SCI TP-8 @ 6	128238-002	02/03/97	02/05/97	22	0.15	1	32247	EPA 6010A	02/06/97



Curtis & Tompkins, Ltd



Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 128238

DATE REPORTED: 02/20/97

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Lead	ND	0.15	mg/Kg	1	32247	EPA 6010A	02/06/97

ND = Not Detected at or above reporting limit



Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 128238

DATE REPORTED: 02/20/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Lead	25	22.9	23.8	mg/Kg	92	95	80-120	4	35	32247	EPA 6010A	02/06/97



Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 128238

DATE REPORTED: 02/20/97

**BATCH QC REPORT
SAMPLE DUPLICATE**

Compound	Sample	Sample Result	Duplicate Result	Units	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Lead	128237-006	3.578	3.603	mg/Kg	1	35	32247	EPA 6010A	02/06/97



Curtis & Tompkins, Ltd.

CLIENT: Subsurface Consultants
JOB NUMBER: 128238

DATE REPORTED: 02/20/97

**BATCH QC REPORT
SAMPLE SPIKE**

Compound	Spike Amount	Sample	Sample Result	Spike Result	Units	Percent Rec.	Rec. Limit	QC Batch	Method	Analysis Date
Lead	1225.25	128237-006	3.578	25.4	mg/Kg	88	65-135	32247	EPA 6010A	02/06/97

CHAIN OF CUSTODY FORM

128238

PROJECT NAME: KOT
 JOB NUMBER: 133005 LAB: CIT
 PROJECT CONTACT: Jerome LeBarré TURNAROUND: std
 SAMPLED BY: Solm wife / Dennis Alexandre REQUESTED BY: SD

ANALYSIS REQUESTED	
TEH (d+u)	X
TUN/BTEX	X
Lead	X
TUN	X
P240	X
P050	X
8270 or related list	X
Flash pt. Cignited	X

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES				
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME					
-1	SCITP-8045	X	X					X				X			02	03	97		X	X	X		
-2	SCITP-806	X	X					X				X			02	03	97		X	X	X		
-3	SCITP-903.5	X						X							02	03	97		X			X	X
-4	SCITP-906	X						X							02	03	97		X			X	X
-5	SCITP-1101.5														02	04	97		X			X	X
-6	SCITP-1104.5																		X			X	X
-7	SCITP-1204																		X			X	X
-8	SCITP-1205																		X			X	X

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES:
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
<i>[Signature]</i>	2/5/97 1300	<i>[Signature]</i>	2/5/97 13:00	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 21-FEB-97
Lab Job Number: 128252
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

Tracy B. B. R.

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128252-001	SCI-57	32296	02/04/97	02/10/97	02/10/97	
128252-002	SCI-59	32296	02/04/97	02/10/97	02/10/97	
128252-003	SCI-60	32296	02/04/97	02/10/97	02/10/97	
128252-004	SCI-61	32296	02/04/97	02/10/97	02/10/97	

Matrix: Water

Analyte	Units	128252-001	128252-002	128252-003	128252-004
Diln Fac:		1	1	1	1
Gasoline	ug/L	180 Y	10000 YZ	<50	<50
Surrogate					
Trifluorotoluene	%REC	92	0 *	93	91
Bromobenzene	%REC	94	110	90	84

Y: Sample exhibits fuel pattern which does not resemble standard

Z: Sample exhibits unknown single peak or peaks

GC05 RTX1 TVH Chromatogram

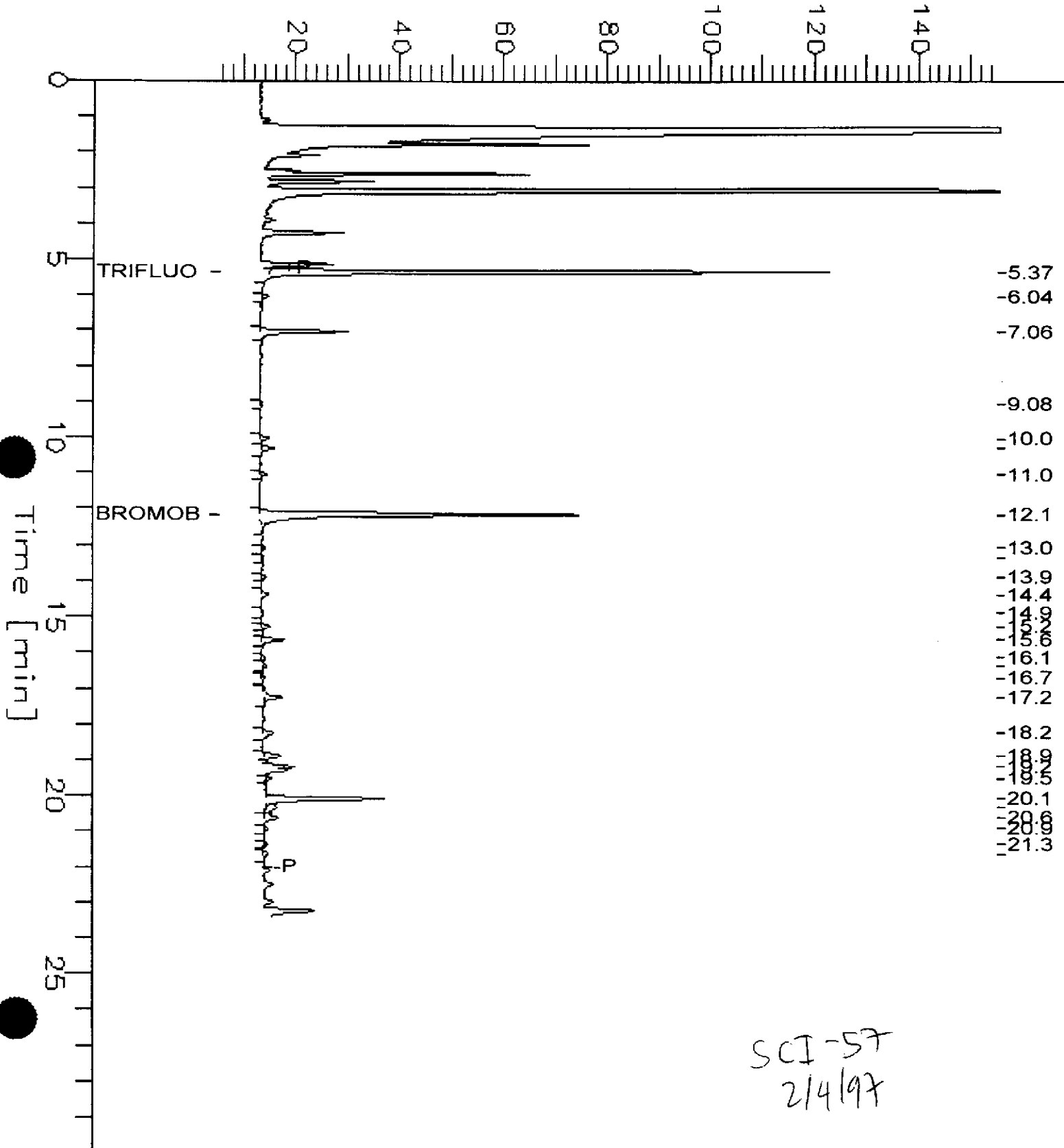
Sample Name : S_128252-001_32296
FileName : G:\GC05\DATA\041H025.raw
Method : TVHBTXE
Start Time : 0.00 min
Factor : -1.0

End Time : 30.00 min
Plot Offset : 6 mV

Sample # :
Date : 2/10/97 04:19 PM
Time of Injection : 2/10/97 03:55 PM
Low Point : 5.60 mV
High Point : 155.60 mV
Plot Scale : 150.0 mV

Page 1 of 1

Response [mV]



GC05 RTX1 TVH Chromatogram

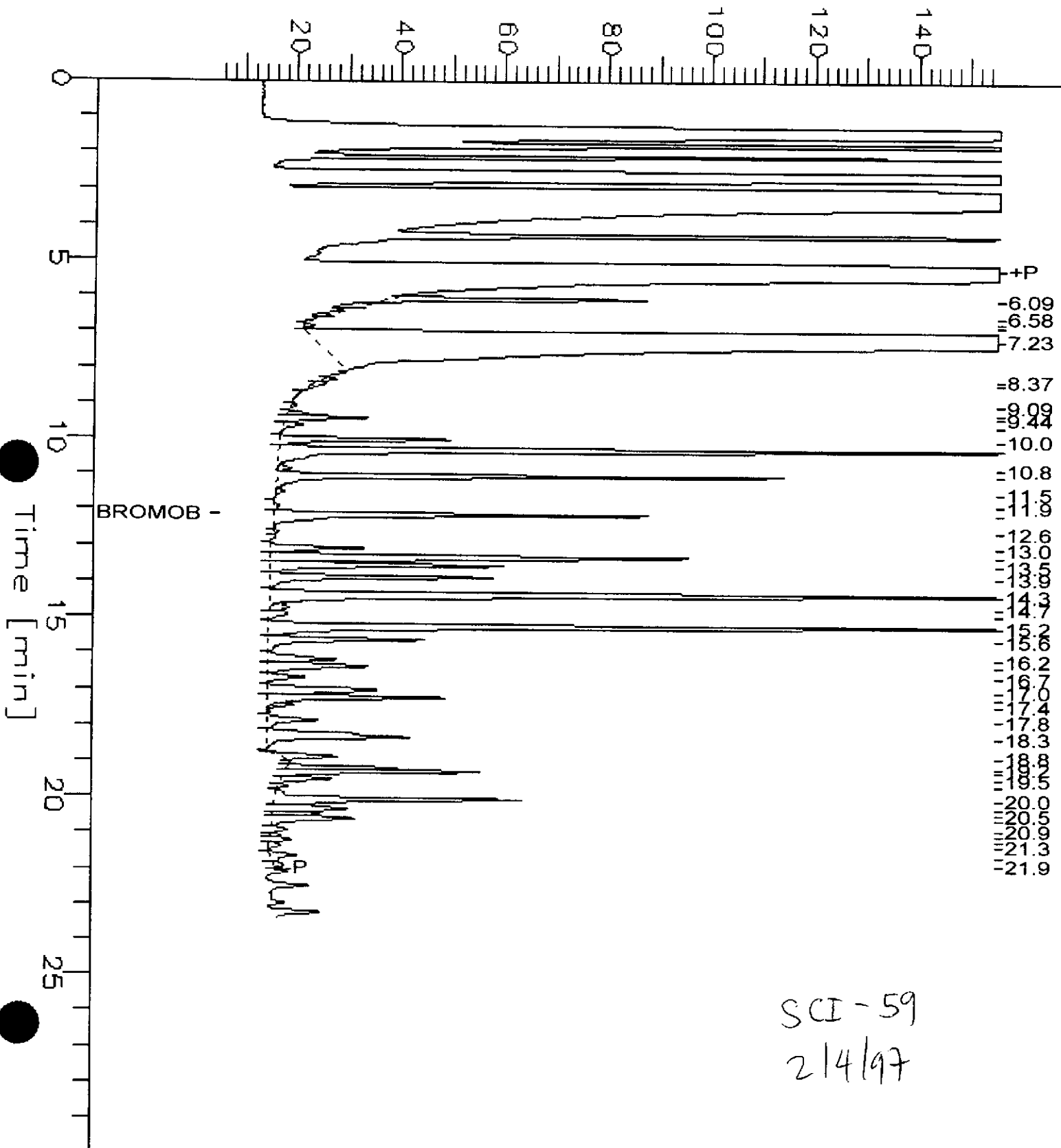
Sample Name : S_128252-002_32296,
FileName : G:\GC05\DATA\041H027.raw
Method : TVHBTXE
Start Time : 0.00 min
Factor : -1.0

End Time : 30.00 min
Plot Offset : 6 mV

Sample # :
Date : 2/10/97 05:31 PM
Time of Injection: 2/10/97 05:06 PM
Low Point : 5.60 mV
High Point : 155.60 mV
Plot Scale: 150.0 mV

Page 1 of 1

Response [mV]





TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128252-005	SCI TP-9	32296	02/03/97	02/10/97	02/10/97	
128252-006	SCI TP-11	32296	02/04/97	02/10/97	02/10/97	
128252-007	SCI TP-12	32296	02/04/97	02/10/97	02/10/97	

Matrix: Water

Analyte	Units	128252-005	128252-006	128252-007
Diln Fac:		1	1	1
Gasoline	ug/L	87 Y	8400 YH	3000 YH
Surrogate				
Trifluorotoluene	%REC	91	90	93
Bromobenzene	%REC	88	78	94

Y: Sample exhibits fuel pattern which does not resemble standard

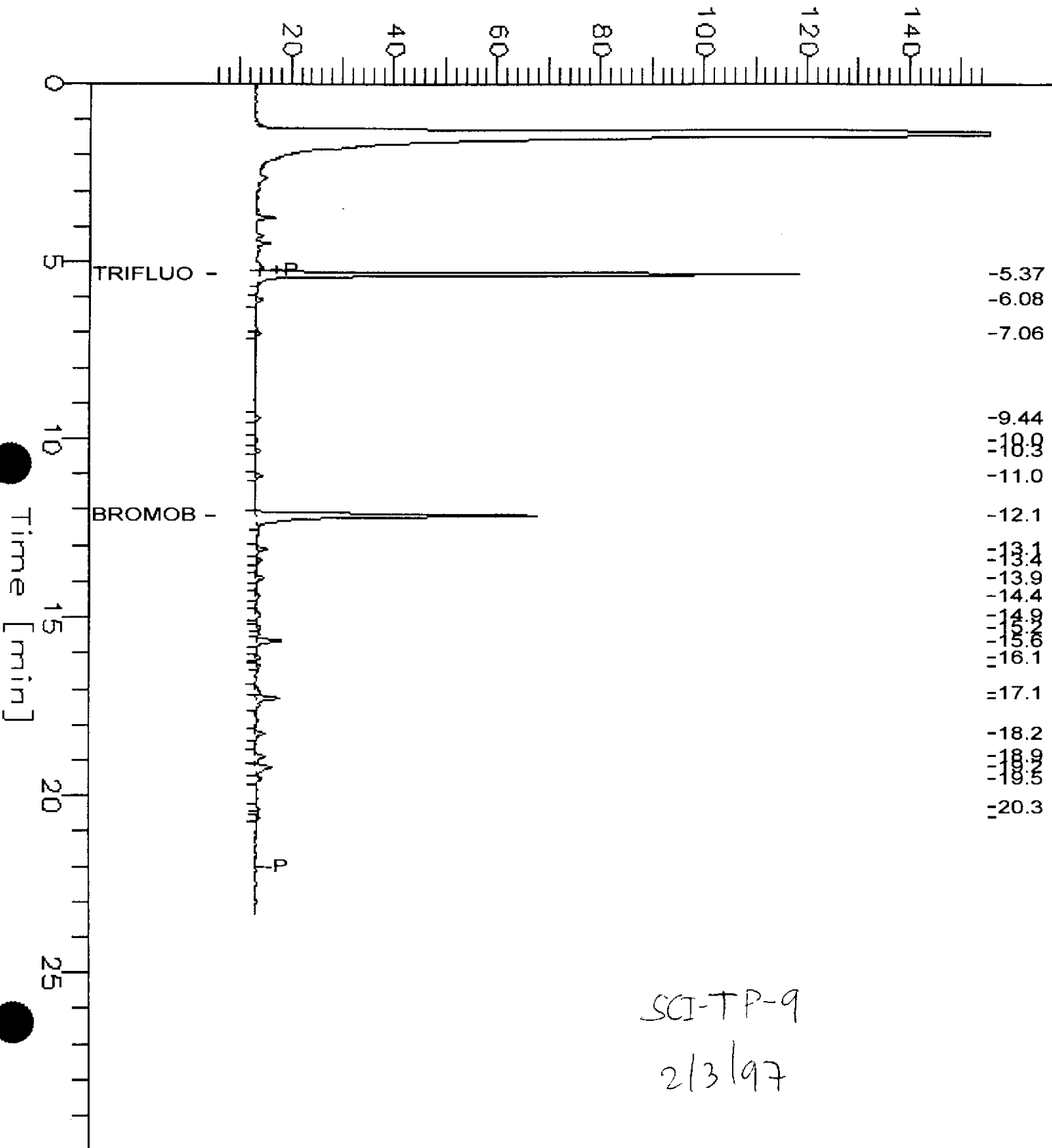
H: Heavier hydrocarbons than indicated standard

GC05 RTX1 TVH Chromatogram

Sample Name : S,128252-005,32296,
 FileName : G:\GC05\DATA\041H022.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Factor : -1.0

Sample # :
 Date : 2/10/97 02:33 PM
 Time of Injection: 2/10/97 02:08 PM
 Low Point : 5.55 mV
 Plot Scale: 150.0 mV
 Page 1 of 1
 End Time : 30.00 min
 Plot Offset: 6 mV
 High Point : 155.55 mV

Response [mV]



SCI-TP-9
2/3/97

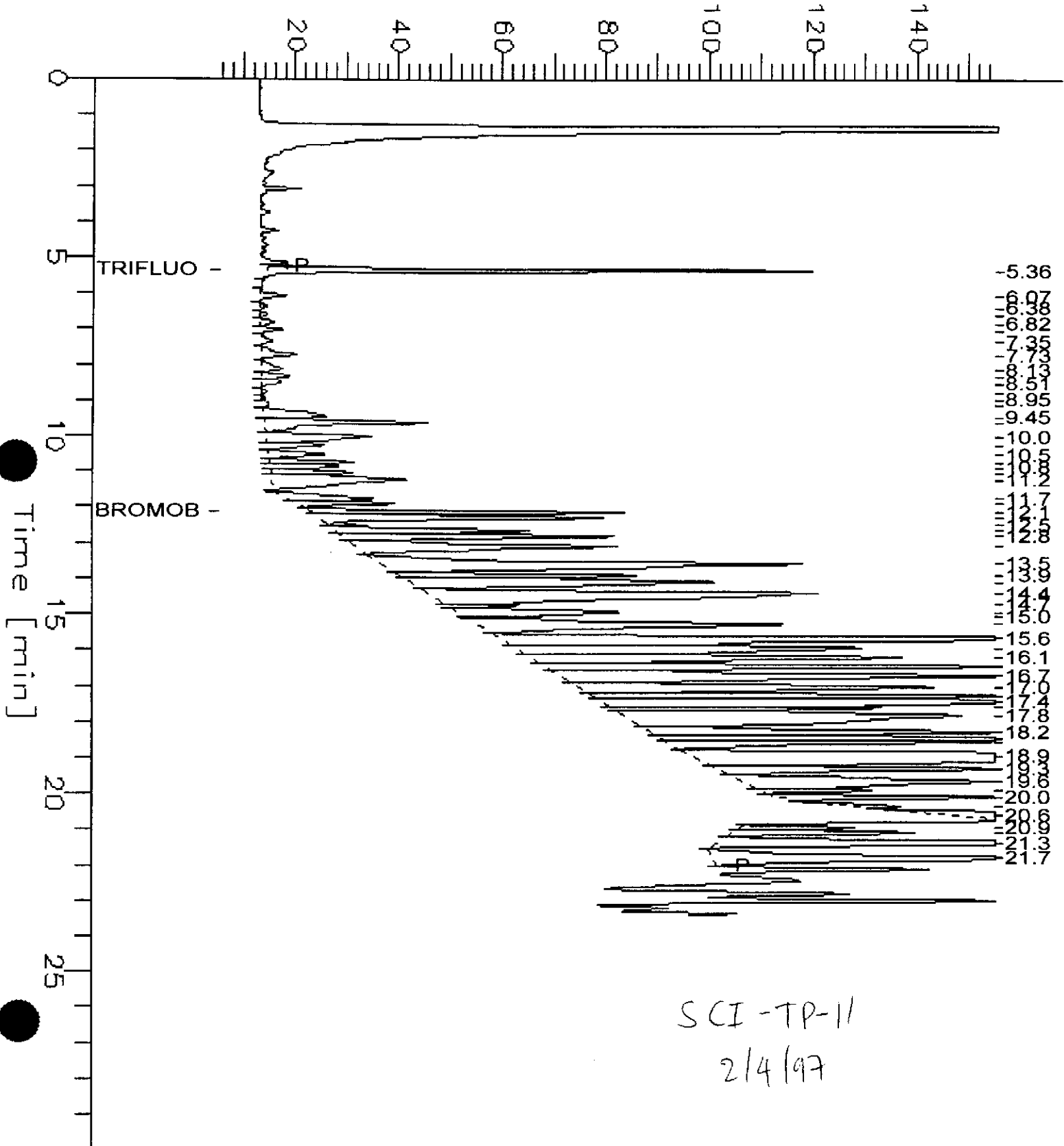
GC05 RTX1 TVH Chromatogram

Sample Name : S_128252-006_32296,
FileName : G:\GC05\DATA\041H029.raw
Method : TVHBTXE
Start Time : 0.00 min
Factor : -1.0

End Time : 30.00 min
Plot Offset: 6 mV

Sample #:
Date : 2/10/97 06:41 PM
Time of Injection: 2/10/97 06:17 PM
Low Point : 5.61 mV
Plot Scale: 150.0 mV
Page 1 of 1
High Point : 155.61 mV

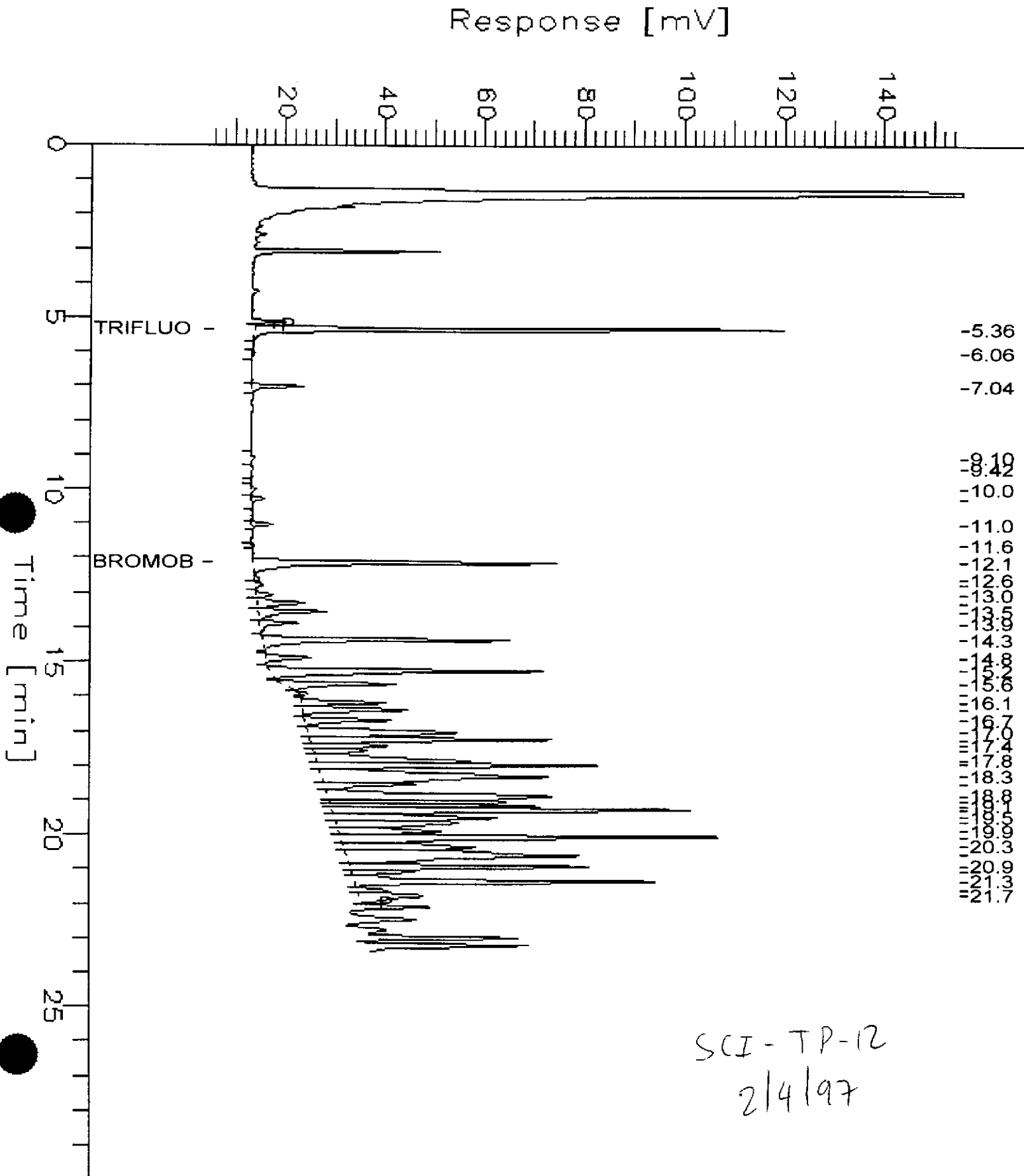
Response [mV]



GC05 RTX1 TVH Chromatogram

Sample Name : S,128252-007,32296,
 FileName : G:\GC05\DATA\041H028.raw
 Method : TVHBTXE
 Start Time : 0.00 min
 Scale Factor: -1.0

Sample #: Page 1 of 1
 Date : 2/10/97 06:06 PM
 Time of Injection: 2/10/97 05:41 PM
 Low Point : 5.68 mV High Point : 155.68 mV
 Plot Offset: 6 mV Plot Scale: 150.0 mV





Lab #: 128252

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
Batch#: 32296
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

LCS Lab ID: QC39797

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1754	2000	88	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	87	65-135		
Bromobenzene	83	65-135		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128252

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/06/97
Lab ID: 128257-003	Received Date: 02/06/97
Matrix: Water	Prep Date: 02/10/97
Batch#: 32296	Analysis Date: 02/10/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39800

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	2162	108	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	93	65-135			
Bromobenzene	94	65-135			

MSD Lab ID: QC39801

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	2106	105	75-125	3	35
Surrogate	%Rec	Limits				
Trifluorotoluene	92	65-135				
Bromobenzene	92	65-135				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128252-001	SCI-57	32292	02/04/97	02/07/97	02/12/97	
128252-002	SCI-59	32292	02/04/97	02/07/97	02/12/97	
128252-003	SCI-60	32292	02/04/97	02/07/97	02/12/97	
128252-004	SCI-61	32292	02/04/97	02/07/97	02/12/97	

Matrix: Water

Analyte	Units	128252-001	128252-002	128252-003	128252-004
Diln Fac:		1	10	1	1
Diesel C12-C22	ug/L	1800	34000 YL	1200 YH	180
Motor Oil C22-C50	ug/L	1300 YL	10000 YL	1200 YL	<250
Surrogate					
Hexacosane	%REC	110	DO	95	91

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

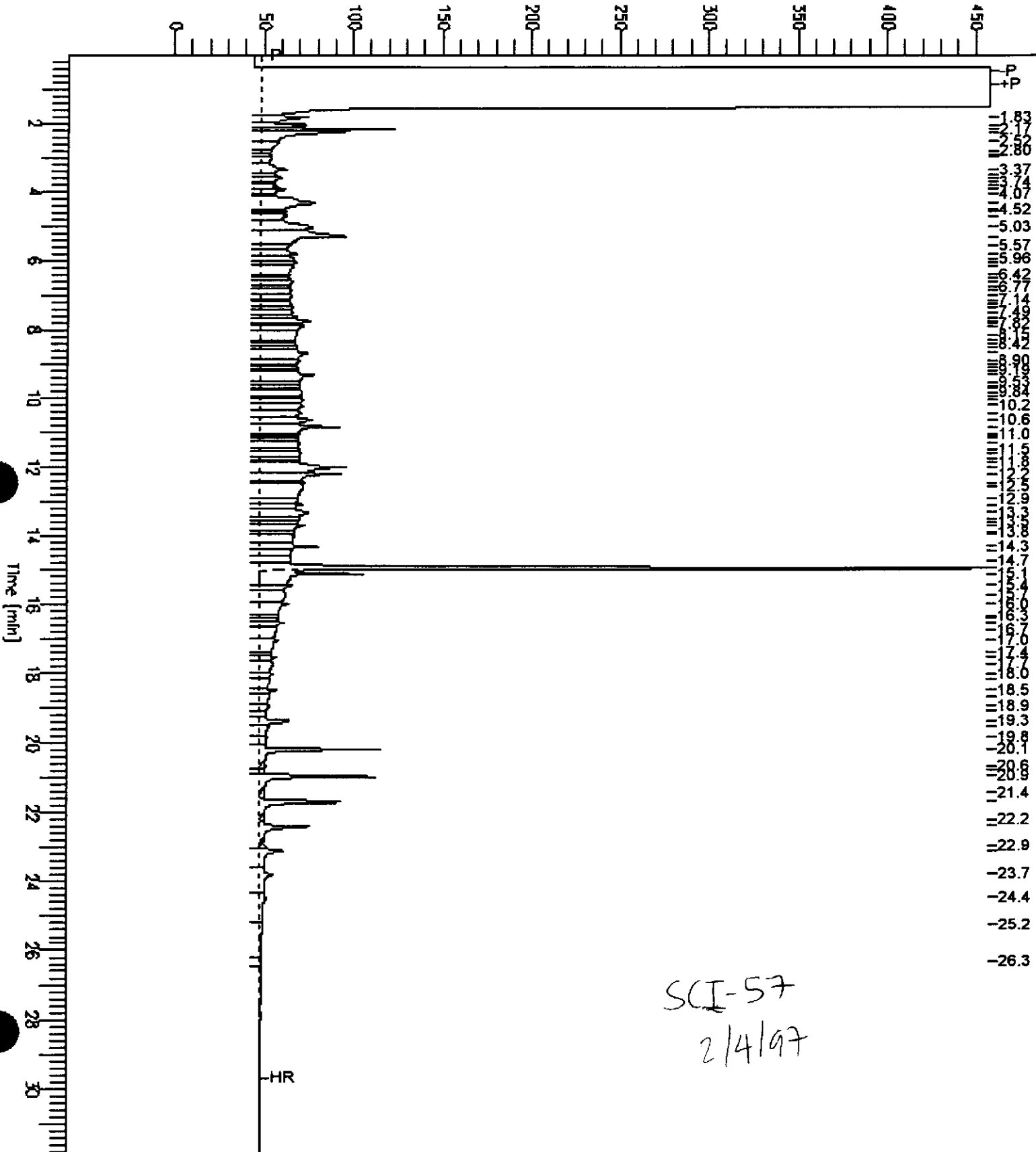
GC15 Channel B TEH

Sample Name : 128252-001,32292
FileName : G:\GC15\CHB\042B023.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Gain Factor: 0.0

End Time : 31.91 min
Plot Offset: -7 mV

Sample #: 32292
Date : 2/13/97 01:45 PM
Time of Injection: 2/12/97 05:27 AM
Low Point : -7.15 mV
Plot Scale: 465.5 mV
High Point : 458.30 mV

Response [mV]



SCI-57
2/4/97

GC15 Channel B TEH

Sample Name : 128252-002,32292

Sample #: 32292

Page 1 of 1

FileName : G:\GC15\CHB\042B024.RAW

Date : 2/13/97 01:46 PM

Method : B038TEH.MTH

Time of Injection: 2/12/97 06:10 AM

Start Time : 0.01 min

End Time : 31.91 min

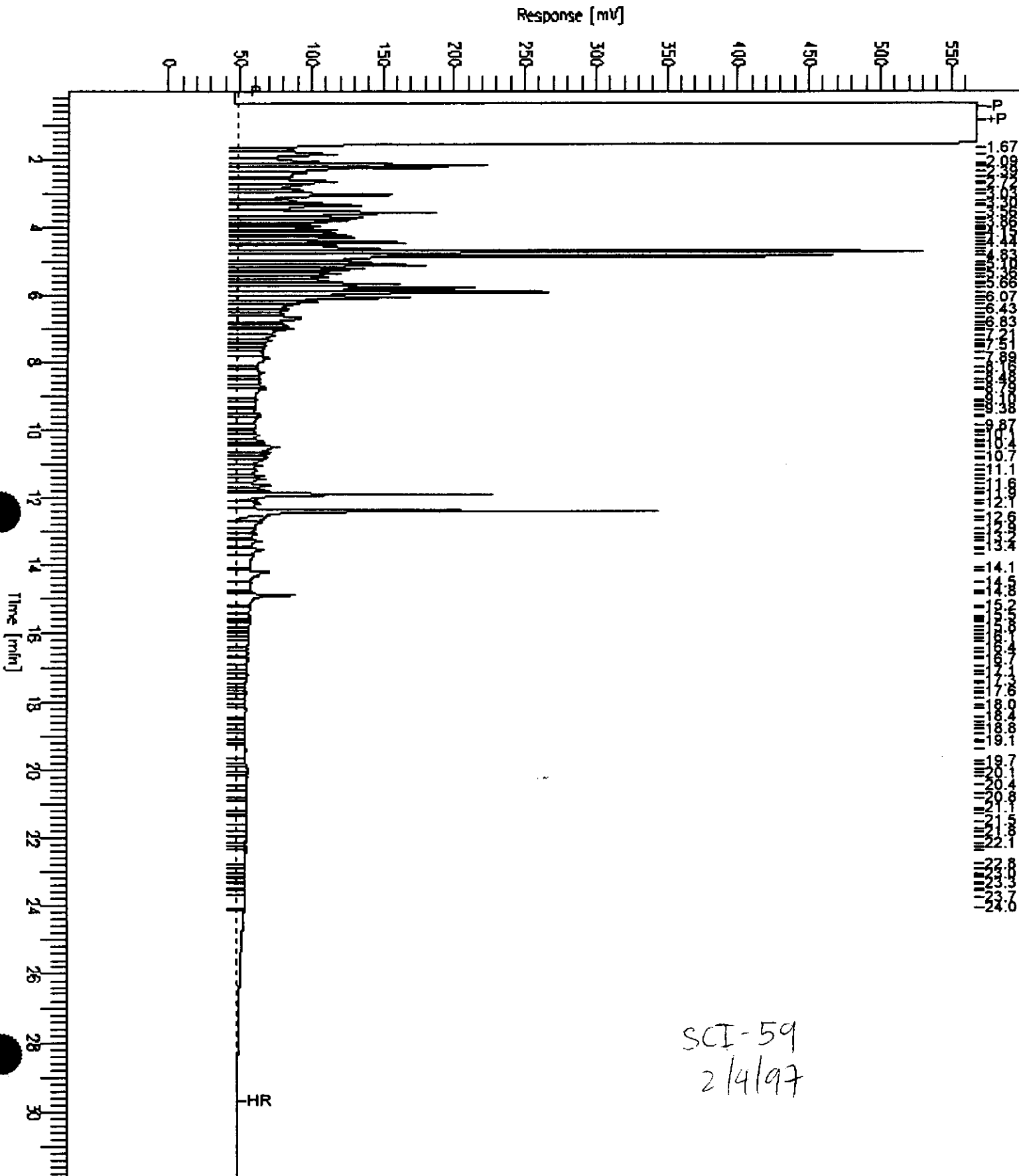
Low Point : -5.45 mV

High Point : 568.54 mV

File Factor: 0.0

Plot Offset: -5 mV

Plot Scale: 574.0 mV



SCI-59
2/4/97

GC15 Channel B TEH

Sample Name : 128252-003,32292

Sample #: 32292

Page 1 of 1

FileName : G:\GC15\CHB\042B025.RAW

Date : 2/13/97 01:47 PM

Method : B038TEH.MTH

Time of Injection: 2/12/97 06:53 AM

Start Time : 0.01 min

End Time : 31.91 min

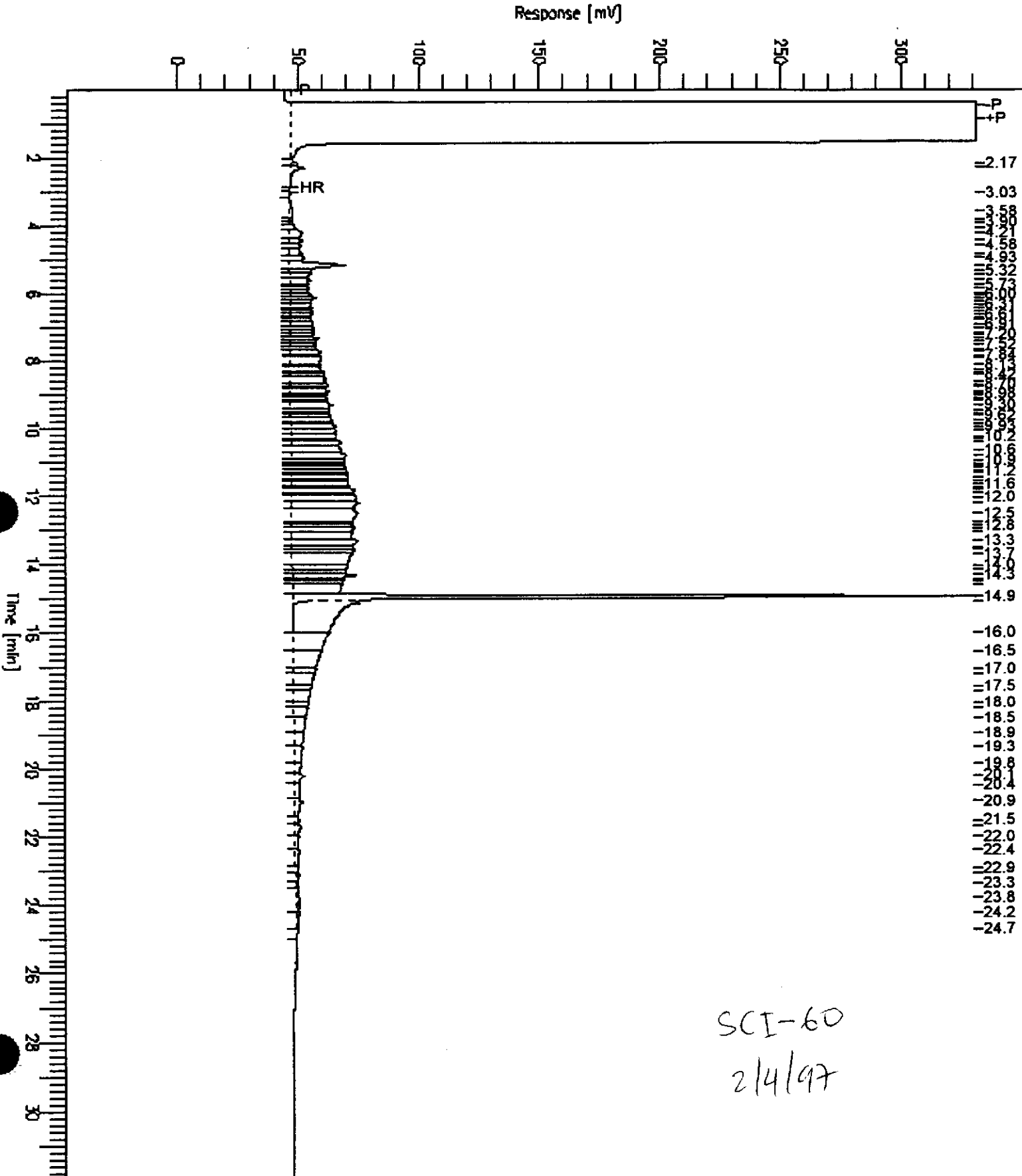
Low Point : -7.23 mV

High Point : 331.50 mV

Scale Factor: 0.0

Plot Offset: -7 mV

Plot Scale: 338.7 mV



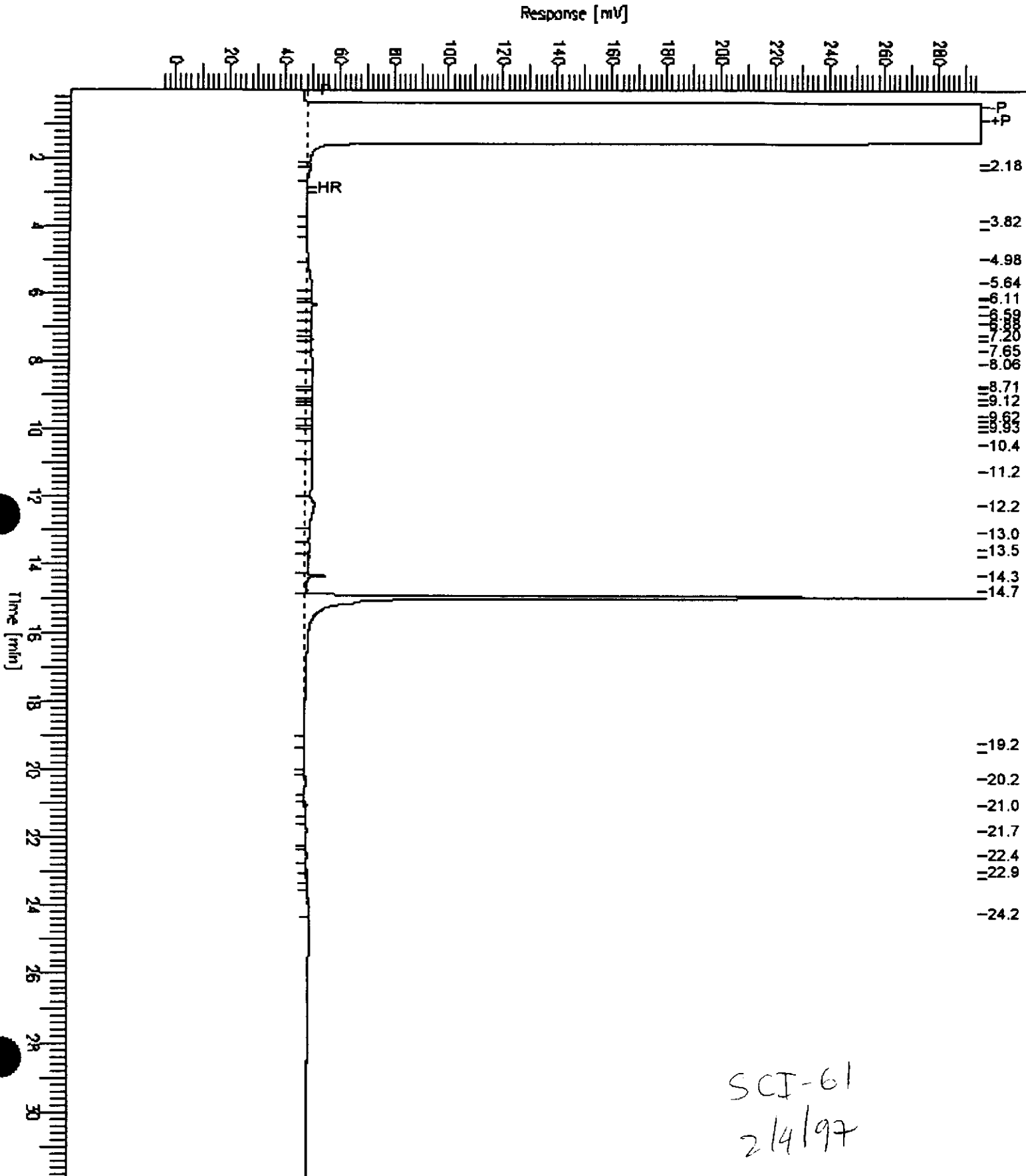
SCI-60
2/4/97

GC15 Channel B TEH

Sample Name : 128252-004,32292
FileName : G:\GC15\CHB\042B026.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset: -4 mV

Sample #: 32292
Date : 2/13/97 01:48 PM
Time of Injection: 2/12/97 07:36 AM
Low Point : -4.44 mV
High Point : 295.93 mV
Plot Scale: 300.4 mV



SCI-61
2/4/97



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128252-005	SCI TP-9	32292	02/03/97	02/07/97	02/12/97	
128252-006	SCI TP-11	32292	02/04/97	02/07/97	02/12/97	
128252-007	SCI TP-12	32317	02/04/97	02/10/97	02/12/97	

Matrix: Water

Analyte	Units	128252-005	128252-006	128252-007
Diln Fac:		1	200	10
Diesel C12-C22	ug/L	6000 YH	4000000 H	55000 H
Motor Oil C22-C50	ug/L	7800 YHL	1800000 L	26000 LH
Surrogate				
Hexacosane	%REC	85	DO	DO

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

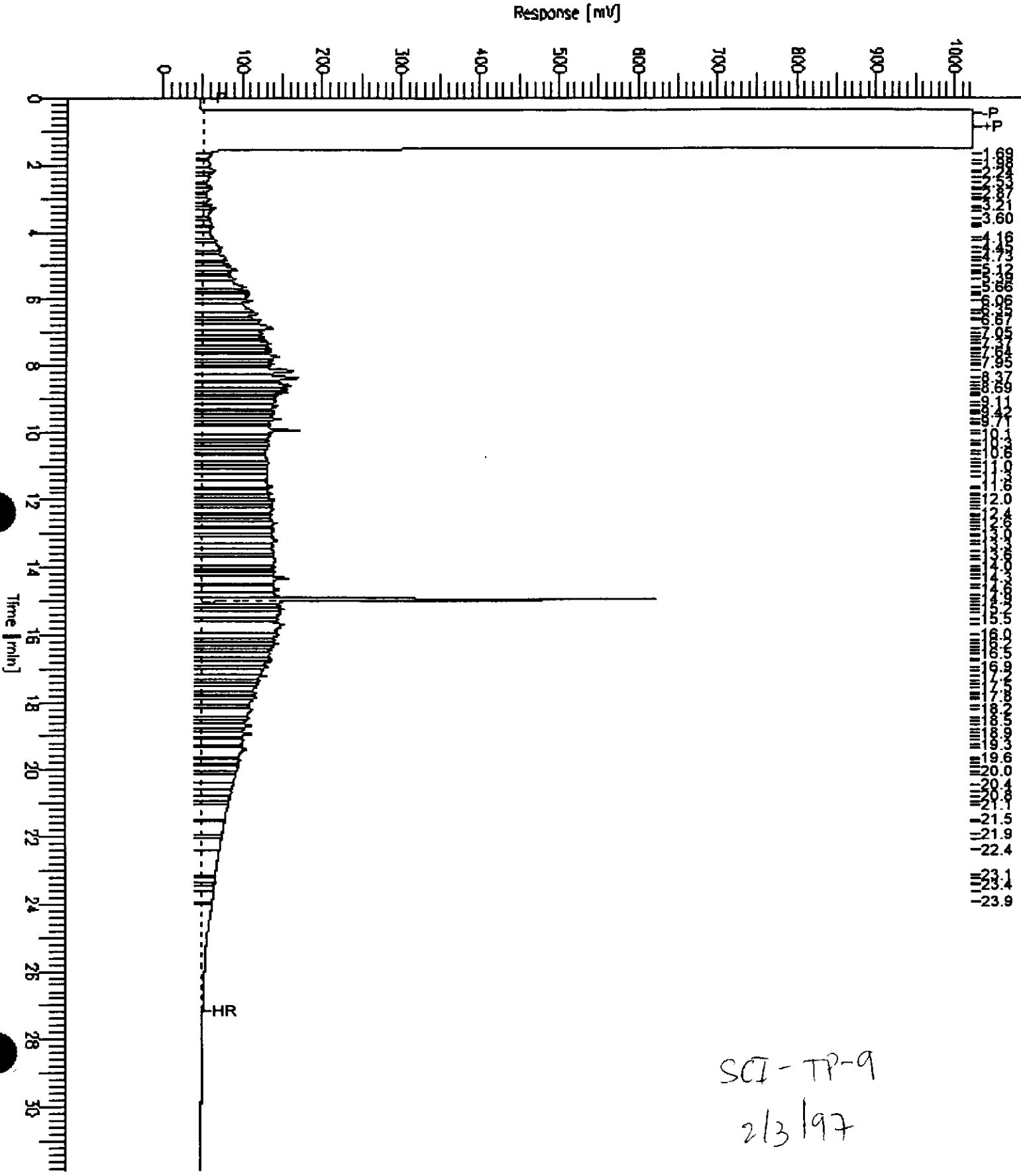
GC15 Channel B TEH

Sample Name : 128252-005,32292
FileName : G:\GC15\CHB\042B027.RAW
Method : B038TEH.MTH
Start Time : 0.00 min
Gain Factor: 0.0

End Time : 31.90 min
Plot Offset: -5 mV

Sample #: 32292
Date : 2/13/97 01:49 PM
Time of Injection: 2/12/97 08:19 AM
Low Point : -5.05 mV
Plot Scale: 1029.0 mV

Page 1 of 1

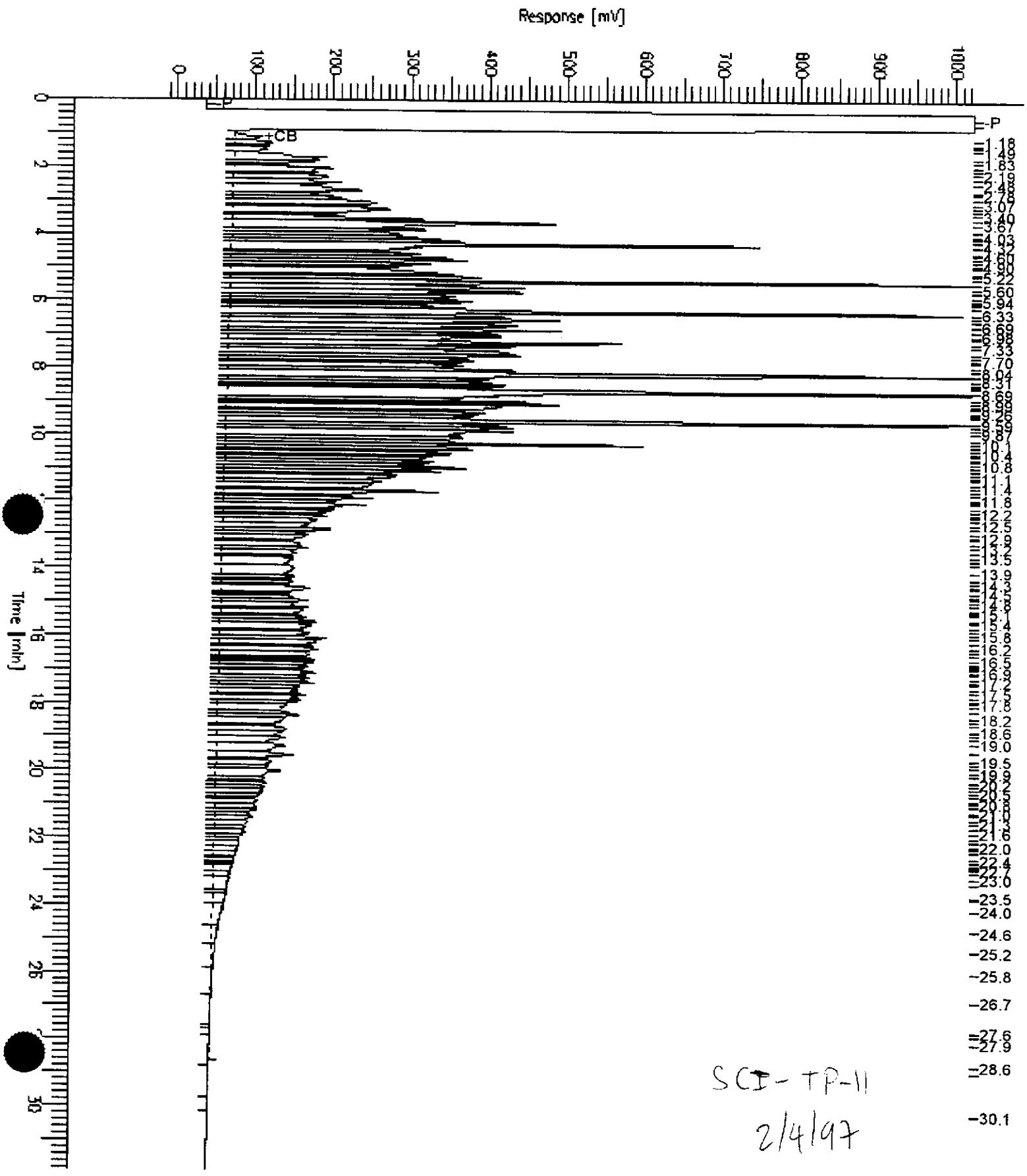


SCI-TP-9
2/3/97

Chromatogram

Sample Name : 128252-006,32292
FileName : G:\GC11\CHBA044B031.RAW
Method : BTEHC36.MTH
Start Time : 0.00 min
Factor : 0.0

Sample #: 32292
Date : 2/17/97 12:07 PM
Time of Injection: 2/14/97 12:25 PM
Low Point : -16.25 mV
High Point : 1024.00 mV
Plot Scale: 1040.2 mV



GC15 Channel B TEH

Sample Name : 128252-007, 32317

Sample #: 32317

Page 1 of 1

FileName : G:\GC15\CHB\042B011.RAW

Date : 2/13/97 01:26 PM

Method : B038TEH.MTH

Time of Injection: 2/11/97 08:49 PM

Start Time : 0.01 min

End Time : 31.91 min

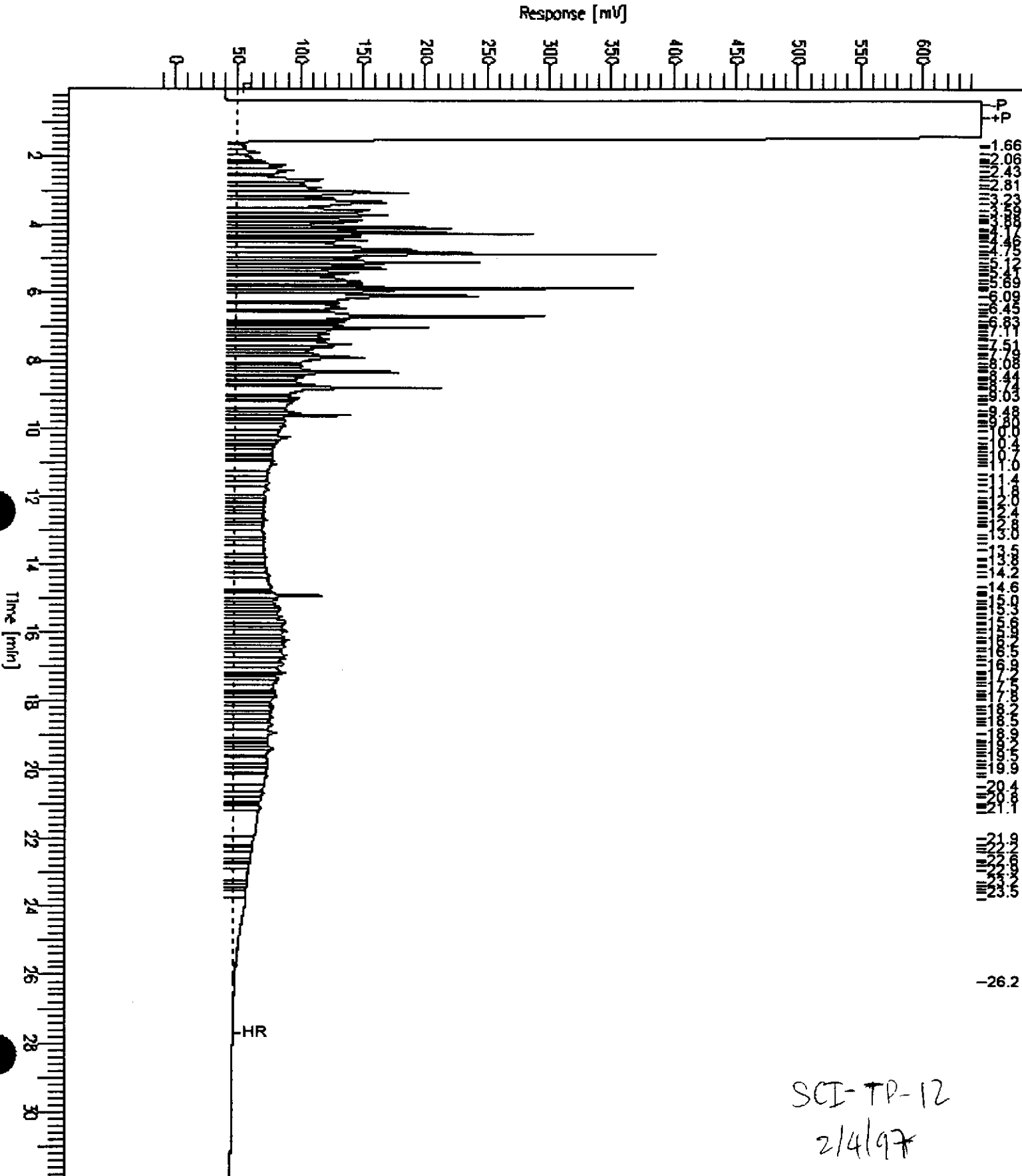
Low Point : -11.40 mV

High Point : 648.34 mV

Gain Factor: 0.0

Plot Offset: -11 mV

Plot Scale: 659.7 mV



SCI-TP-12
2/4/97

Chromatogram

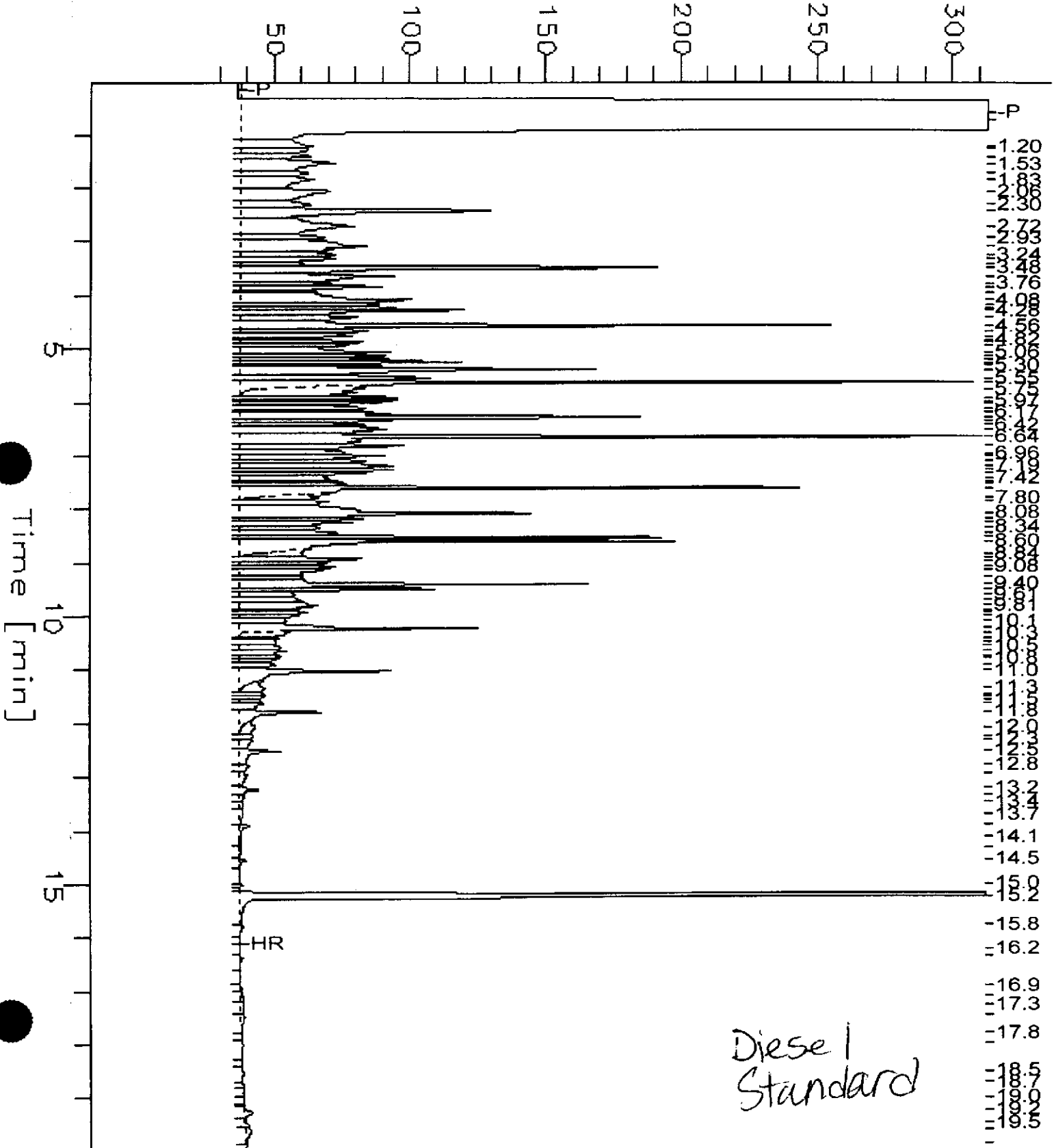
Sample Name : CCV, 97WS3659, DS
FileName : G:\GC11\CHB\044B007.RAW
Method : BTEH036.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 19.99 min
Plot Offset : 29 mV

Sample #: 500MG/L
Date : 2/18/97 02:25 PM
Time of Injection: 2/13/97 07:24 PM
Low Point : 28.98 mV
Plot Scale: 284.1 mV
High Point : 313.07 mV

Page 1 of 1

Response [mV]



Chromatogram

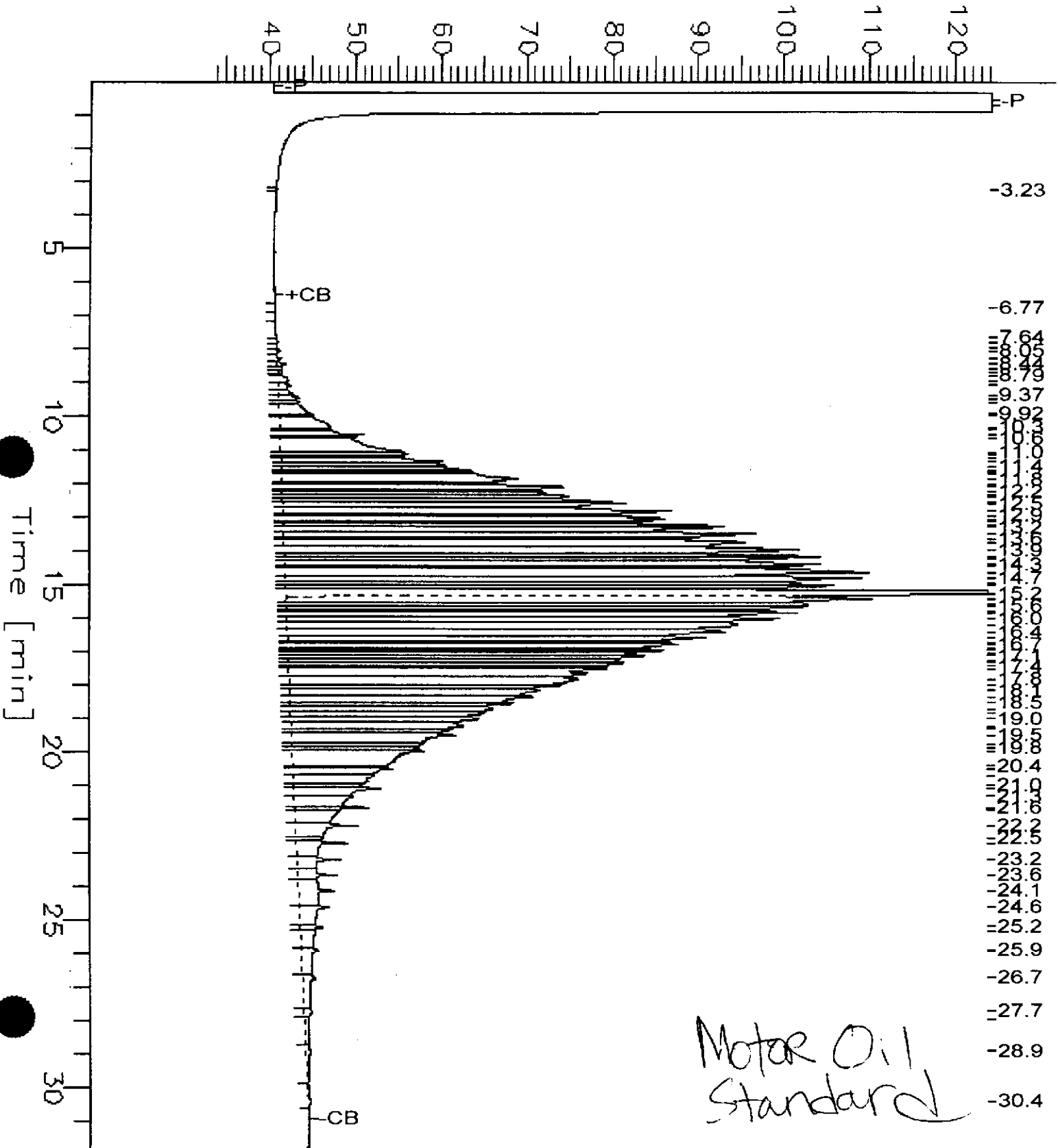
Sample Name : CCV,97WS3691,MO
FileName : G:\GC11\CHB\044B023.RAW
Method : BTEH036.MTH

Sample #: 500MG/L
Date : 2/18/97 02:32 PM
Time of Injection: 2/14/97 06:08 AM
Low Point : 33.95 mV
High Point : 124.13 mV
Plot Scale: 90.2 mV

Page 1 of 1

Time : 0.01 min
Factor: 0.0
End Time : 31.91 min
Plot Offset: 34 mV

Response [mV]





Lab #: 128252

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32292
Units: ug/L
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/12/97

MB Lab ID: QC39780

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	%Rec	Recovery Limits
Hexacosane	104	60-140



Lab #: 128252

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
 Batch#: 32292
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/13/97

BS Lab ID: QC39781

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1962	79	60-140
Surrogate	%Rec	Limits		
Hexacosane	95	60-140		

BSD Lab ID: QC39782

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1912	77	60-140	3	35
Surrogate	%Rec	Limits				
Hexacosane	91	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128252-004	SCI-61	32296	02/04/97	02/10/97	02/10/97	
128252-005	SCI TP-9	32296	02/03/97	02/10/97	02/10/97	
128252-006	SCI TP-11	32296	02/04/97	02/10/97	02/10/97	
128252-007	SCI TP-12	32296	02/04/97	02/10/97	02/10/97	

Matrix: Water

Analyte	Units	128252-004	128252-005	128252-006	128252-007
Diln Fac:		1	1	1	1
Benzene	ug/L	<0.5	0.95	1.7	0.55
Toluene	ug/L	1.3	<0.5	2.4	6.8
Ethylbenzene	ug/L	<0.5	<0.5	18	0.56
m,p-Xylenes	ug/L	<0.5	0.93	4.2	1.8
o-Xylene	ug/L	<0.5	1.2	<0.5	2.9
Surrogate					
Trifluorotoluene	%REC	91	92	88	89
Bromobenzene	%REC	90	92	89	92



Lab #: 128252

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32296
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

MB Lab ID: QC39799

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	77	65-135
Bromobenzene	77	65-135



Lab #: 128252

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
METHOD BLANK			
Matrix: Water	Prep Date: 02/10/97		
Batch#: 32296	Analysis Date: 02/10/97		
Units: ug/L			
Diln Fac: 1			

MB Lab ID: QC39799

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	76	58-130	
Bromobenzene	72	62-131	



Lab #: 128252

BATCH QC REPORT

BTXE	
Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
LABORATORY CONTROL SAMPLE	
Matrix: Water	Prep Date: 02/10/97
Batch#: 32296	Analysis Date: 02/10/97
Units: ug/Kg	
Diln Fac: 1	

LCS Lab ID: QC39798

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	17.16	20	86	80-120
Toluene	18.6	20	93	80-120
Ethylbenzene	16.83	20	84	80-120
m,p-Xylenes	36.05	40	90	80-120
o-Xylene	19.08	20	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	81	58-130		
Bromobenzene	82	62-131		

Column to be used to flag recovery and RPD values with an asterisk
: Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

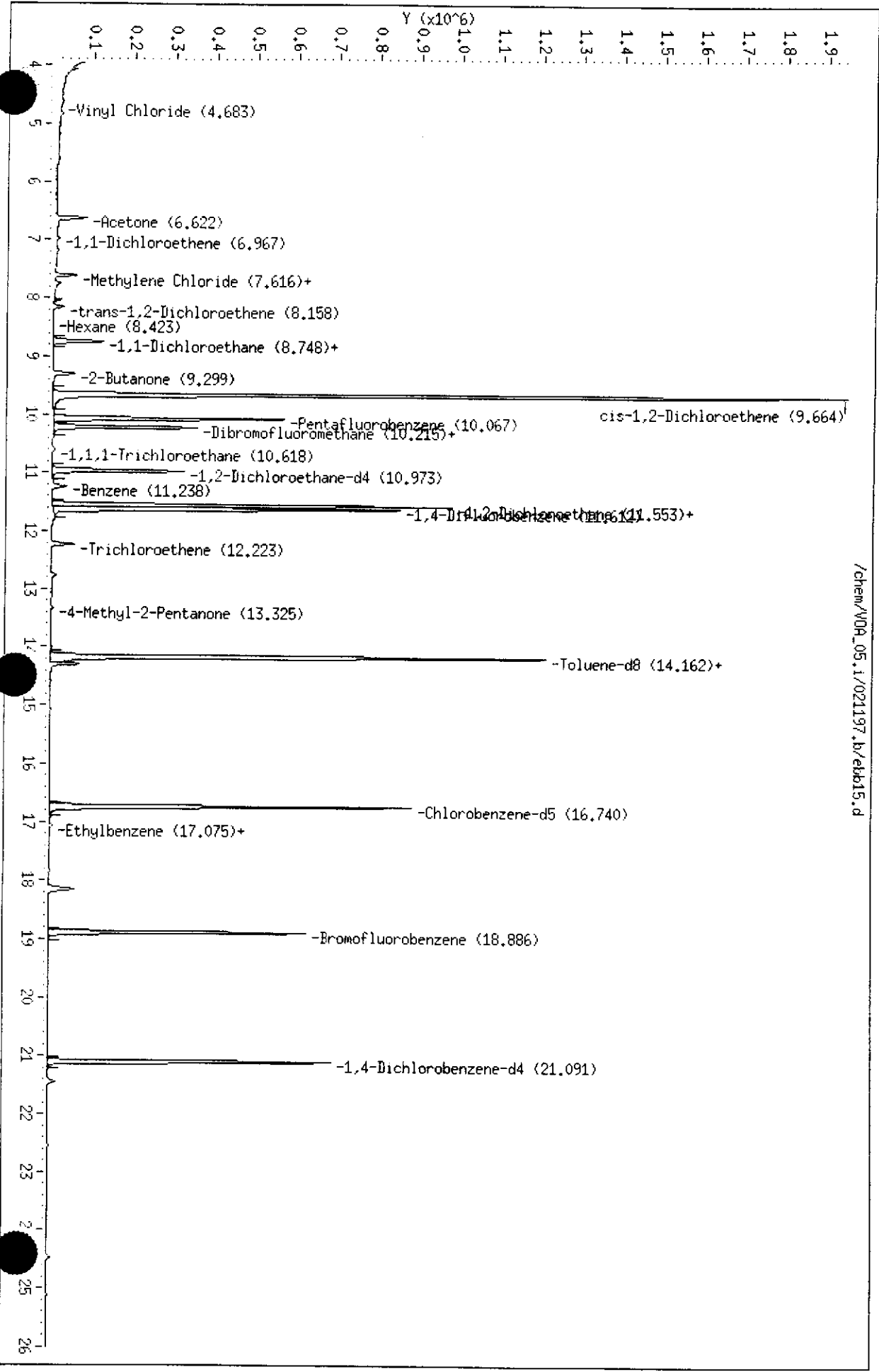
Field ID: SCI-57
Lab ID: 128252-001
Matrix: Water
Batch#: 32320
Units: ug/L
Diln Fac: 6.25

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	63
Bromomethane	ND	63
Vinyl Chloride	ND	63
Chloroethane	ND	63
Methylene Chloride	ND	130
Acetone	470	130
Carbon Disulfide	ND	31
Trichlorofluoromethane	ND	31
1,1-Dichloroethene	ND	31
1,1-Dichloroethane	100	31
trans-1,2-Dichloroethene	ND	31
cis-1,2-Dichloroethene	1100	31
Chloroform	ND	31
Freon 113	ND	31
1,2-Dichloroethane	ND	31
2-Butanone	180	63
1,1,1-Trichloroethane	ND	31
Carbon Tetrachloride	ND	31
Vinyl Acetate	ND	310
Bromodichloromethane	ND	31
1,2-Dichloropropane	ND	31
cis-1,3-Dichloropropene	ND	31
Trichloroethene	27 J	31
Dibromochloromethane	ND	31
1,1,2-Trichloroethane	ND	31
Benzene	ND	31
trans-1,3-Dichloropropene	ND	31
Bromoform	ND	31
2-Hexanone	ND	63
4-Methyl-2-Pentanone	ND	63
1,1,2,2-Tetrachloroethane	ND	31
Tetrachloroethene	ND	31
Toluene	ND	31
Chlorobenzene	ND	31
Ethylbenzene	ND	31
Styrene	ND	31
m,p-Xylenes	ND	31
o-Xylene	ND	31
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	114	79-122

J: Estimated Value

128252-001



Data File: /chem/V09_05.1/021197.b/ebb15.d
Date: 11-FEB-97 17:49
Client ID: DYNA P&I
Sample Info: S,128252-001
Purge Volume: 5.0
Column phase: RTX Volatiles

/chem/V09_05.1/021197.b/ebb15.d

Instrument: V09_05.i
Operator: DMH
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-59
 Lab ID: 128252-002
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 1666.67

Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

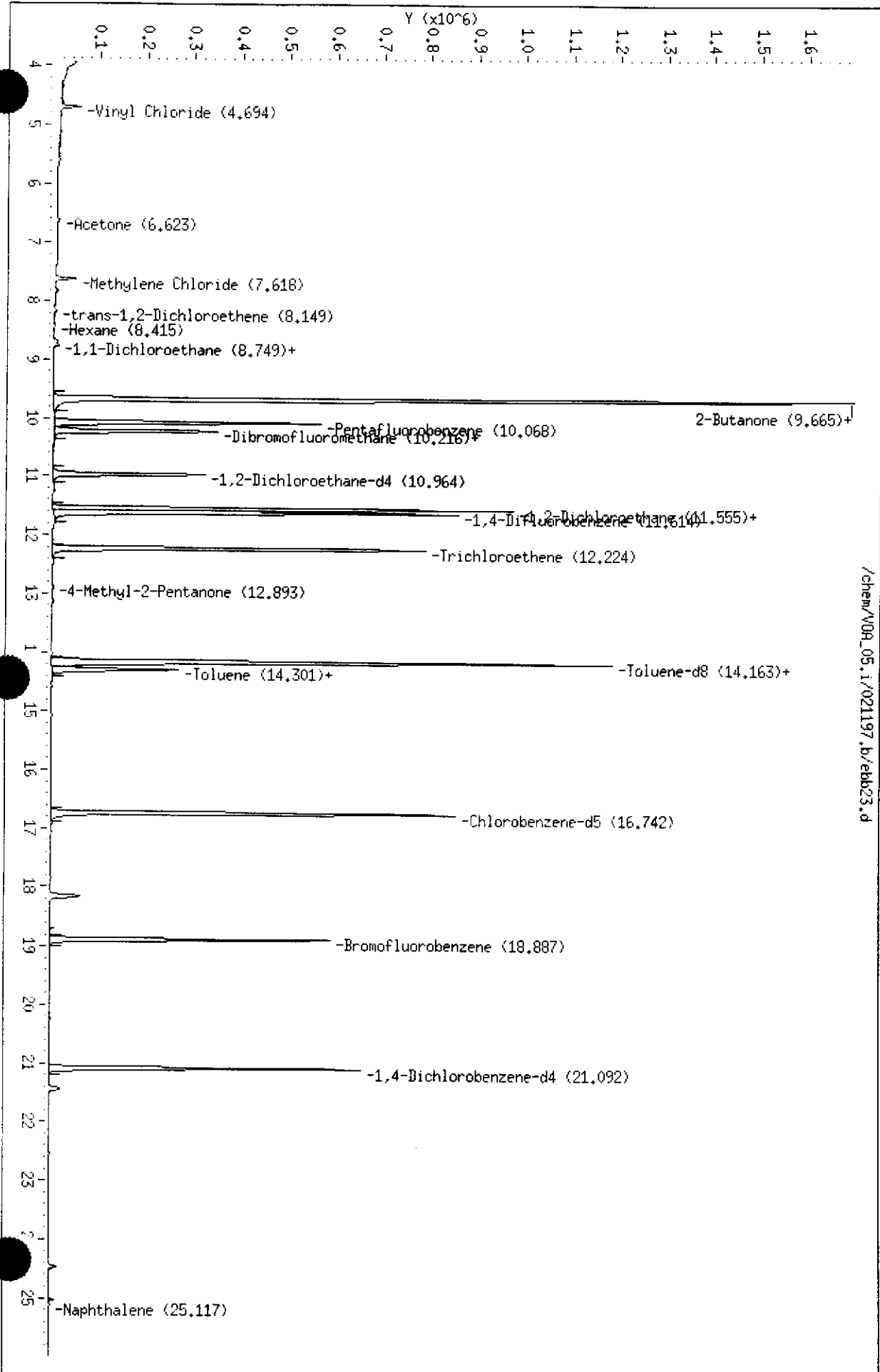
Analyte	Result	Reporting Limit
Chloromethane	ND	17000
Bromomethane	ND	17000
Vinyl Chloride	16000 J	17000
Chloroethane	ND	17000
Methylene Chloride	ND	33000
Acetone	ND	33000
Carbon Disulfide	ND	8300
Trichlorofluoromethane	ND	8300
1,1-Dichloroethene	ND	8300
1,1-Dichloroethane	ND	8300
trans-1,2-Dichloroethene	ND	8300
cis-1,2-Dichloroethene	260000	8300
Chloroform	ND	8300
Freon 113	ND	8300
1,2-Dichloroethane	ND	8300
2-Butanone	ND	17000
1,1,1-Trichloroethane	ND	8300
Carbon Tetrachloride	ND	8300
Vinyl Acetate	ND	83000
Bromodichloromethane	ND	8300
1,2-Dichloropropane	ND	8300
cis-1,3-Dichloropropene	ND	8300
Trichloroethene	110000	8300
Dibromochloromethane	ND	8300
1,1,2-Trichloroethane	ND	8300
Benzene	ND	8300
trans-1,3-Dichloropropene	ND	8300
Bromoform	ND	8300
2-Hexanone	ND	17000
4-Methyl-2-Pentanone	ND	17000
1,1,2,2-Tetrachloroethane	ND	8300
Tetrachloroethene	ND	8300
Toluene	17000	8300
Chlorobenzene	ND	8300
Ethylbenzene	ND	8300
Styrene	ND	8300
m,p-Xylenes	ND	8300
o-Xylene	ND	8300
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	114	79-122

J: Estimated Value

128252-002

Data File: /chem/V09_05.1/021197.b/ebb23.d
Date: 11-FEB-97 22:08
Client ID: DVM4 P&I
Sample Info: S.128252-002
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: JM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

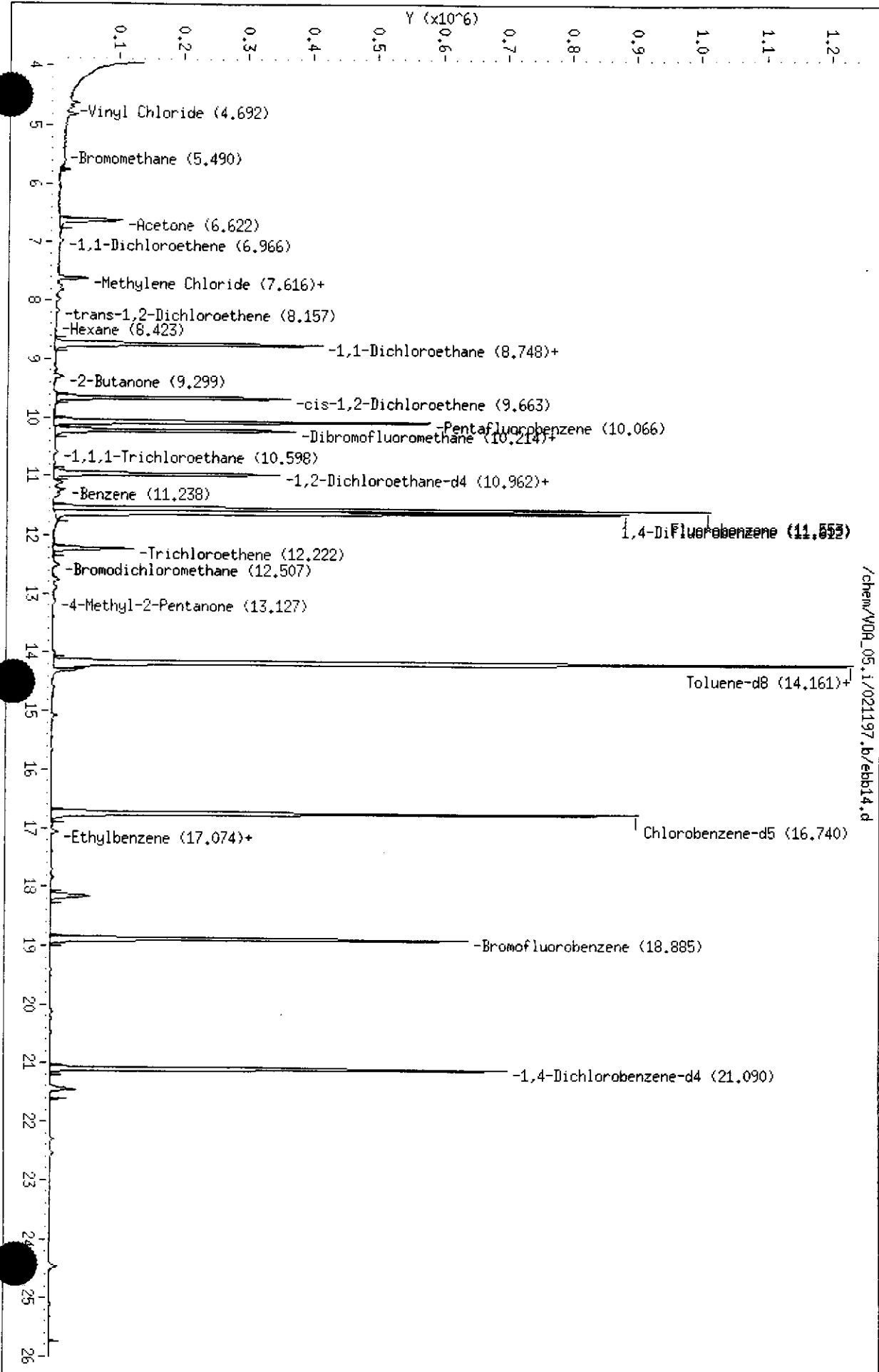
Field ID: SCI-60
Lab ID: 128252-003
Matrix: Water
Batch#: 32320
Units: ug/L
Diln Fac: 1

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	99	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	52	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	32	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	7.5 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	9.3	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	96	87-125
Bromofluorobenzene	115	79-122

J: Estimated Value

128252-003



Data File: /chem/VDQ_05.1/021197.b/ebh14.d
Date: 11-FEB-97 17:17
Client ID: DVNA P&I
Sample Info: S.128252-003
Purge Volume: 5.0
Column phase: RTX Volatiles

/chem/VDQ_05.1/021197.b/ebh14.d

Instrument: VDA_05.1
Operator: DM
Column diameter: 0.32



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI TP-9
Lab ID: 128252-005
Matrix: Water
Batch#: 32298
Units: ug/L
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/10/97
Analyzed: 02/10/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	106	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-11
 Lab ID: 128252-006
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 2.5

Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	50
Acetone	ND	50
Carbon Disulfide	ND	13
Trichlorofluoromethane	ND	13
1,1-Dichloroethene	ND	13
1,1-Dichloroethane	ND	13
trans-1,2-Dichloroethene	ND	13
cis-1,2-Dichloroethene	ND	13
Chloroform	ND	13
Freon 113	ND	13
1,2-Dichloroethane	ND	13
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	13
Carbon Tetrachloride	ND	13
Vinyl Acetate	ND	130
Bromodichloromethane	ND	13
1,2-Dichloropropane	ND	13
cis-1,3-Dichloropropene	ND	13
Trichloroethene	ND	13
Dibromochloromethane	ND	13
1,1,2-Trichloroethane	ND	13
Benzene	ND	13
trans-1,3-Dichloropropene	ND	13
Bromoform	ND	13
2-Hexanone	ND	25
4-Methyl-2-Pentanone	ND	25
1,1,2,2-Tetrachloroethane	ND	13
Tetrachloroethene	ND	13
Toluene	ND	13
Chlorobenzene	ND	13
Ethylbenzene	8.8 J	13
Styrene	ND	13
m,p-Xylenes	ND	13
o-Xylene	10 J	13
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	97	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	99	79-122

J: Estimated Value

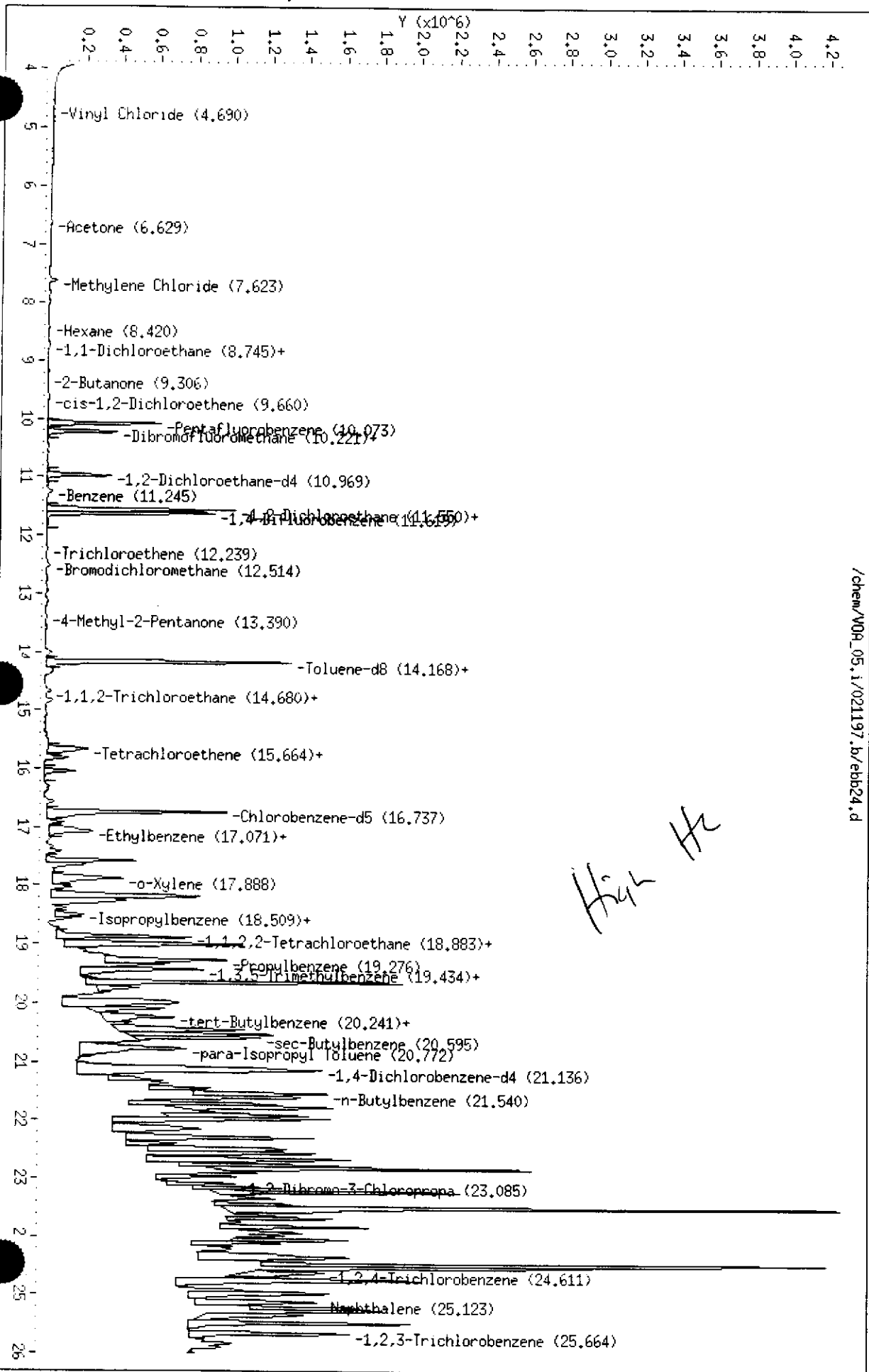
128252-006

Data File: /chem/W09_05.i/021197.b/ebb24.d
Date: 11-FEB-97 22:40
Client ID: DYNA P&I
Sample Info: S.128252-006
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: W09_05.1
Operator: DM
Column diameter: 0.32

/chem/W09_05.i/021197.b/ebb24.d

High Hz





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

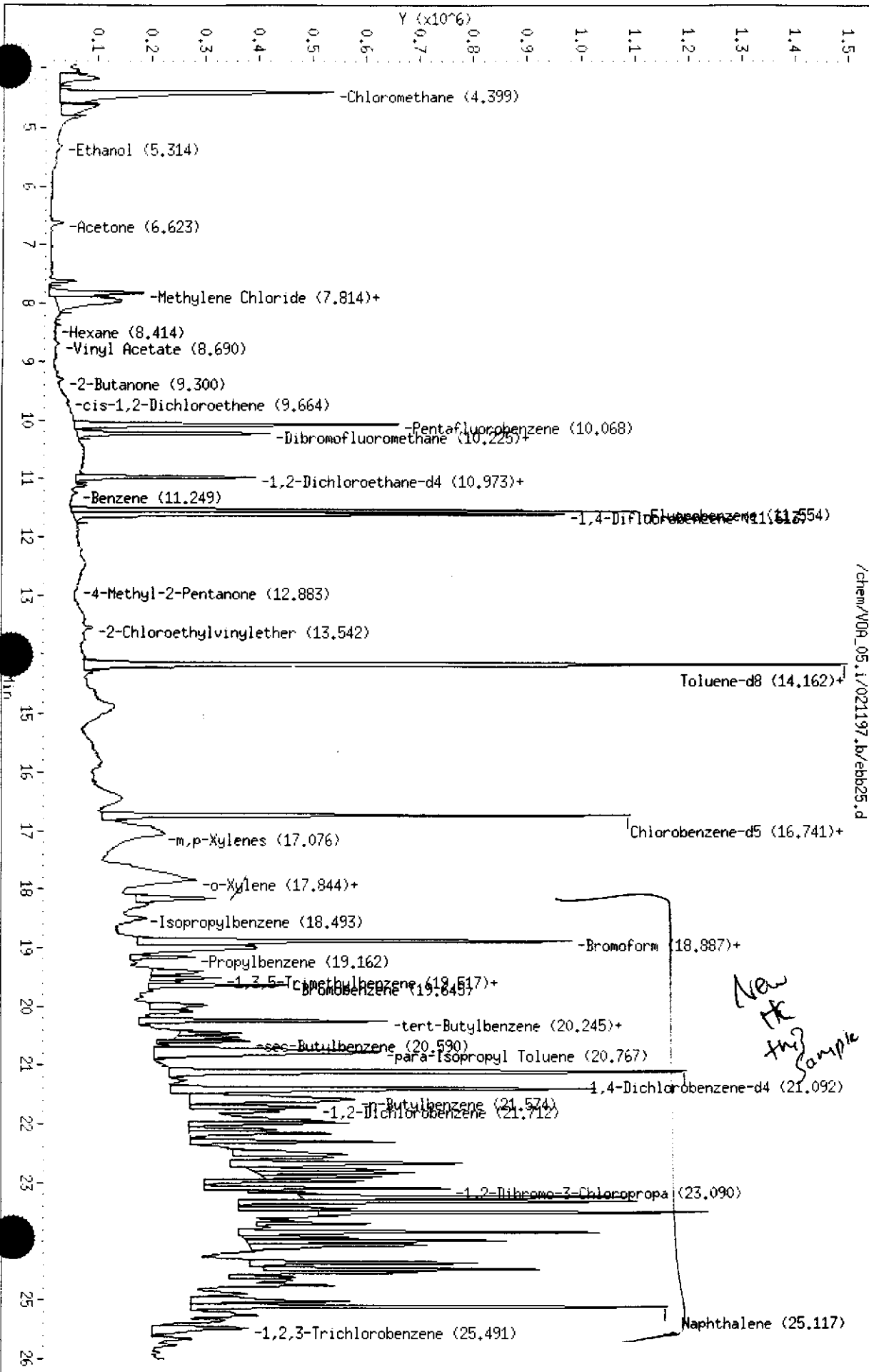
Field ID: SCI TP-12
 Lab ID: 128252-007
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 2.5

Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	25
Bromomethane	ND	25
Vinyl Chloride	ND	25
Chloroethane	ND	25
Methylene Chloride	ND	50
Acetone	57	50
Carbon Disulfide	170	13
Trichlorofluoromethane	ND	13
1,1-Dichloroethene	ND	13
1,1-Dichloroethane	ND	13
trans-1,2-Dichloroethene	ND	13
cis-1,2-Dichloroethene	ND	13
Chloroform	ND	13
Freon 113	ND	13
1,2-Dichloroethane	9.0 J	13
2-Butanone	ND	25
1,1,1-Trichloroethane	ND	13
Carbon Tetrachloride	ND	13
Vinyl Acetate	ND	130
Bromodichloromethane	ND	13
1,2-Dichloropropane	ND	13
cis-1,3-Dichloropropene	ND	13
Trichloroethene	ND	13
Dibromochloromethane	ND	13
1,1,2-Trichloroethane	ND	13
Benzene	ND	13
trans-1,3-Dichloropropene	ND	13
Bromoform	ND	13
2-Hexanone	ND	25
4-Methyl-2-Pentanone	ND	25
1,1,2,2-Tetrachloroethane	ND	13
Tetrachloroethene	ND	13
Toluene	ND	13
Chlorobenzene	ND	13
Ethylbenzene	ND	13
Styrene	ND	13
m,p-Xylenes	7.4 J	13
o-Xylene	ND	13
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	101	79-122

J: Estimated Value

128252-007



Data File: /chem/V09_05.1/021197.bv/ebb25.d
Date: 11-FEB-97 23:12
Client ID: DMK P&I
Sample Info: S.128252-007
Purge Volume: 5.0
Column phases: K1x Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32

New
PK
this
sample



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32298
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

MB Lab ID: QC39806

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	113	79-122

Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32298
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

MB Lab ID: QC39865

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	110	79-122

Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date:	02/11/97
Batch#: 32320	Analysis Date:	02/11/97
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39888

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	106	79-122



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/11/97
 Analysis Date: 02/11/97

MB Lab ID: QC39909

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	115	79-122



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32298
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

LCS Lab ID: QC39805

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	66.78	50	134	51-180
Trichloroethene	56.13	50	112	73-141
Benzene	52.9	50	106	78-142
Toluene	52.07	50	104	76-150
Chlorobenzene	55.53	50	111	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	103	68-126		
Toluene-d8	97	87-125		
Bromofluorobenzene	108	79-122		

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/11/97		
Batch#: 32320	Analysis Date: 02/11/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39887

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	60.59	50	121	51-180
Trichloroethene	55.84	50	112	73-141
Benzene	53.34	50	107	78-142
Toluene	51.43	50	103	76-150
Chlorobenzene	54.08	50	108	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	97	68-126		
Toluene-d8	96	87-125		
Bromofluorobenzene	103	79-122		

* Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
MATRIX SPIKE/MATRIX SPIKE DUPLICATE			
Field ID: ZZZZZZ	Sample Date:	02/03/97	
Lab ID: 128237-001	Received Date:	02/05/97	
Matrix: Soil	Prep Date:	02/10/97	
Batch#: 32298	Analysis Date:	02/10/97	
Units: ug/Kg			
Diln Fac: 25			

MS Lab ID: QC39839

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	1250	19.45	1471	117	51-180
Trichloroethene	1250	2195	3513	105	73-141
Benzene	1250	<125	1310	104	78-142
Toluene	1250	<125	1318	100	76-150
Chlorobenzene	1250	<125	1340	107	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	94	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	103	79-122			

MSD Lab ID: QC39840

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	1250	1398	111	51-180	5	14
Trichloroethene	1250	3369	94	73-141	4	14
Benzene	1250	1258	99	78-142	4	11
Toluene	1250	1270	96	76-150	4	13
Chlorobenzene	1250	1309	105	83-129	2	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	95	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	104	79-122				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 10 outside limits



Lab #: 128252

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128292-003
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 1

Sample Date: 02/10/97
 Received Date: 02/10/97
 Prep Date: 02/11/97
 Analysis Date: 02/11/97

MS Lab ID: QC39906

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	58.07	116	51-180
Trichloroethene	50	<5	54.34	109	73-141
Benzene	50	<5	51.79	103	78-142
Toluene	50	0.9395	51.17	100	76-150
Chlorobenzene	50	<5	52.14	104	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	97	68-126			
Toluene-d8	96	87-125			
Bromofluorobenzene	102	79-122			

MSD Lab ID: QC39907

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	56.18	112	51-180	3	14
Trichloroethene	50	52.6	105	73-141	3	14
Benzene	50	50.68	101	78-142	2	11
Toluene	50	50.19	99	76-150	2	13
Chlorobenzene	50	51.33	103	83-129	2	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	99	68-126				
Toluene-d8	97	87-125				
Bromofluorobenzene	101	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

Field ID: SCI TP-9	Sampled: 02/03/97
Lab ID: 128252-005	Received: 02/05/97
Matrix: Water	Extracted: 02/07/97
Batch#: 32290	Analyzed: 02/12/97
Units: ug/L	
Diln Fac: 20	

Analyte	Result	Reporting Limit
alpha-BHC	ND	0.9
beta-BHC	ND	0.9
gamma-BHC	ND	0.9
delta-BHC	ND	0.9
Heptachlor	ND	0.9
Aldrin	ND	0.9
Heptachlor epoxide B	ND	0.9
Heptachlor epoxide A	ND	0.9
Endosulfan I	ND	0.9
Dieldrin	ND	1.9
4,4'-DDE	ND	1.9
Endrin	ND	1.9
Endosulfan II	ND	1.9
Endosulfan sulfate	ND	1.9
4,4'-DDD	ND	1.9
Endrin aldehyde	ND	1.9
4,4'-DDT	ND	1.9
Chlordane	ND	9.4
Methoxychlor	ND	9.4
Toxaphene	ND	19
Aroclor-1016	ND	9.4
Aroclor-1221	ND	19
Aroclor-1232	ND	9.4
Aroclor-1242	ND	9.4
Aroclor-1248	ND	9.4
Aroclor-1254	ND	9.4
Aroclor-1260	ND	9.4

Surrogate	%Recovery	Recovery Limits
TCMX	DO*	34-128
Decachlorobiphenyl	DO*	50-150

* Values outside of QC limits
DO: Surrogate diluted out

Organochlorine Pesticides and PCBs		
Client: Subsurface Consultants	Analysis Method: EPA 8080	
Project#: 133.005	Prep Method: EPA 3520	
Location: KOT		
Field ID: SCI TP-11	Sampled:	02/04/97
Lab ID: 128252-006	Received:	02/05/97
Matrix: Water	Extracted:	02/07/97
Batch#: 32290	Analyzed:	02/13/97
Units: ug/L		
Diln Fac: 40		
Analyte	Result	Reporting Limit
alpha-BHC	ND	1.9
beta-BHC	ND	1.9
gamma-BHC	ND	1.9
delta-BHC	ND	1.9
Heptachlor	ND	1.9
Aldrin	ND	1.9
Heptachlor epoxide B	ND	1.9
Heptachlor epoxide A	ND	1.9
Endosulfan I	ND	1.9
Dieldrin	ND	3.8
4,4'-DDE	ND	3.8
Endrin	ND	3.8
Endosulfan II	ND	3.8
Endosulfan sulfate	ND	3.8
4,4'-DDD	ND	3.8
Endrin aldehyde	ND	3.8
4,4'-DDT	ND	3.8
Chlordane	ND	19
Methoxychlor	ND	19
Toxaphene	ND	38
Aroclor-1016	ND	19
Aroclor-1221	ND	38
Aroclor-1232	ND	19
Aroclor-1242	ND	19
Aroclor-1248	ND	19
Aroclor-1254	ND	19
Aroclor-1260	35	19
Surrogate	%Recovery	Recovery Limits
TCMX	DO*	34-128
Decachlorobiphenyl	DO*	50-150

* Values outside of QC limits
DO: Surrogate diluted out

Lab #: 128252

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32290
Units: ug/L
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/12/97

MB Lab ID: QC39773

Analyte	Result	Reporting Limit
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
gamma-BHC	ND	0.05
delta-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor epoxide B	ND	0.05
Heptachlor epoxide A	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.1
4,4'-DDE	ND	0.1
Endrin	ND	0.1
Endosulfan II	ND	0.1
Endosulfan sulfate	ND	0.1
4,4'-DDD	ND	0.1
Endrin aldehyde	ND	0.1
4,4'-DDT	ND	0.1
Chlordane	ND	0.5
Methoxychlor	ND	0.5
Toxaphene	ND	1.0
Aroclor-1016	ND	0.5
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.5
Aroclor-1242	ND	0.5
Aroclor-1248	ND	0.5
Aroclor-1254	ND	0.5
Aroclor-1260	ND	0.5
Surrogate	%Rec	Recovery Limits
TCMX	83	34-128
Decachlorobiphenyl	84	50-150



Lab #: 128252

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8080
 Prep Method: EPA 3520

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32290
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/12/97

BS Lab ID: QC39774

Analyte	Spike Added	BS	%Rec #	Limits
gamma-BHC	0.5	0.46	92	57-120
Heptachlor	0.5	0.42	84	51-109
Aldrin	0.5	0.42	84	57-105
Dieldrin	0.5	0.43	86	62-122
Endrin	0.5	0.46	92	70-128
4,4'-DDT	0.5	0.4	80	67-128
Surrogate			%Rec	Limits
TCMX			70	34-128
Decachlorobiphenyl			85	50-150

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 6 outside limits

Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI TP-9
Lab ID: 128252-005
Matrix: Water
Batch#: 32316
Units: ug/L
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/10/97
Analyzed: 02/28/97

Analyte	Result	Reporting Limit
Phenol	8.2 J	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	5.8 J	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	50
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl) ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10

Semivolatile Organics by GC/MS		
Field ID: SCI TP-9	Sampled:	02/03/97
Lab ID: 128252-005	Received:	02/05/97
Matrix: Water	Extracted:	02/10/97
Batch#: 32316	Analyzed:	02/28/97
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	65	21-110
Phenol-d5	65	10-110
2,4,6-Tribromophenol	85	10-123
Nitrobenzene-d5	80	35-114
2-Fluorobiphenyl	64	43-116
Terphenyl-d14	22*	33-141

J: Estimated Value

* Values outside of QC limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI TP-11
Lab ID: 128252-006
Matrix: Water
Batch#: 32316
Units: ug/L
Diln Fac: 10

Sampled: 02/04/97
Received: 02/05/97
Extracted: 02/10/97
Analyzed: 03/10/97

Analyte	Result	Reporting Limit
Phenol	ND	380
2-Chlorophenol	ND	380
Benzyl alcohol	ND	380
2-Methylphenol	ND	380
4-Methylphenol	ND	380
2-Nitrophenol	ND	1900
2,4-Dimethylphenol	ND	380
Benzoic acid	ND	1900
2,4-Dichlorophenol	ND	380
4-Chloro-3-methylphenol	ND	380
2,4,6-Trichlorophenol	ND	380
2,4,5-Trichlorophenol	ND	1900
2,4-Dinitrophenol	ND	1900
4-Nitrophenol	ND	1900
4,6-Dinitro-2-methylphenol	ND	1900
Pentachlorophenol	ND	1900
N-Nitrosodimethylamine	ND	380
Aniline	ND	380
bis(2-Chloroethyl)ether	ND	380
1,3-Dichlorobenzene	ND	380
1,4-Dichlorobenzene	ND	380
1,2-Dichlorobenzene	ND	380
bis(2-Chloroisopropyl) ether	ND	380
N-Nitroso-di-n-propylamine	ND	380
Hexachloroethane	ND	380
Nitrobenzene	ND	380
Isophorone	ND	380
bis(2-Chloroethoxy)methane	ND	380
1,2,4-Trichlorobenzene	ND	380
Naphthalene	ND	380
4-Chloroaniline	ND	380
Hexachlorobutadiene	ND	380
2-Methylnaphthalene	640	380
Hexachlorocyclopentadiene	ND	380
2-Chloronaphthalene	ND	380
2-Nitroaniline	ND	1900
Dimethylphthalate	ND	380
Acenaphthylene	ND	380

Semivolatile Organics by GC/MS		
Field ID: SCI TP-11	Sampled:	02/04/97
Lab ID: 128252-006	Received:	02/05/97
Matrix: Water	Extracted:	02/10/97
Batch#: 32316	Analyzed:	03/10/97
Units: ug/L		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	380
3-Nitroaniline	ND	1900
Acenaphthene	ND	380
Dibenzofuran	ND	380
2,4-Dinitrotoluene	ND	380
Diethylphthalate	ND	380
4-Chlorophenyl-phenylether	ND	380
Fluorene	320 J	380
4-Nitroaniline	ND	1900
N-Nitrosodiphenylamine	ND	380
Azobenzene	ND	380
4-Bromophenyl-phenylether	ND	380
Hexachlorobenzene	ND	380
Phenanthrene	390	380
Anthracene	ND	380
Di-n-butylphthalate	ND	380
Fluoranthene	ND	380
Pyrene	ND	380
Butylbenzylphthalate	ND	380
3,3'-Dichlorobenzidine	ND	1900
Benzo(a)anthracene	ND	380
Chrysene	ND	380
bis(2-Ethylhexyl)phthalate	ND	380
Di-n-octylphthalate	ND	380
Benzo(b)fluoranthene	ND	380
Benzo(k)fluoranthene	ND	380
Benzo(a)pyrene	ND	380
Indeno(1,2,3-cd)pyrene	ND	380
Dibenz(a,h)anthracene	ND	380
Benzo(g,h,i)perylene	ND	380
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	DO*	21-110
Phenol-d5	DO*	10-110
2,4,6-Tribromophenol	DO*	10-123
Nitrobenzene-d5	DO*	35-114
2-Fluorobiphenyl	DO*	43-116
Terphenyl-d14	DO*	33-141

J: Estimated Value

* Values outside of QC limits

DO: Surrogate diluted out



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

Field ID: SCI TP-12
 Lab ID: 128252-007
 Matrix: Water
 Batch#: 32316
 Units: ug/L
 Diln Fac: 10

Sampled: 02/04/97
 Received: 02/05/97
 Extracted: 02/10/97
 Analyzed: 03/04/97

Analyte	Result	Reporting Limit
---------	--------	-----------------

Phenol	ND	100
2-Chlorophenol	ND	100
Benzyl alcohol	ND	100
2-Methylphenol	ND	100
4-Methylphenol	ND	100
2-Nitrophenol	ND	500
2,4-Dimethylphenol	ND	100
Benzoic acid	ND	500
2,4-Dichlorophenol	ND	100
4-Chloro-3-methylphenol	ND	100
2,4,6-Trichlorophenol	ND	100
2,4,5-Trichlorophenol	ND	500
2,4-Dinitrophenol	ND	500
4-Nitrophenol	ND	500
4,6-Dinitro-2-methylphenol	ND	500
Pentachlorophenol	ND	500
N-Nitrosodimethylamine	ND	100
Aniline	ND	100
bis(2-Chloroethyl)ether	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene	ND	100
bis(2-Chloroisopropyl) ether	ND	100
N-Nitroso-di-n-propylamine	ND	100
Hexachloroethane	ND	100
Nitrobenzene	ND	100
Isophorone	ND	100
bis(2-Chloroethoxy)methane	ND	100
1,2,4-Trichlorobenzene	ND	100
Naphthalene	290	100
4-Chloroaniline	ND	100
Hexachlorobutadiene	ND	100
2-Methylnaphthalene	340	100
Hexachlorocyclopentadiene	ND	100
2-Chloronaphthalene	ND	100
2-Nitroaniline	ND	500
Dimethylphthalate	ND	100
Acenaphthylene	ND	100

Semivolatile Organics by GC/MS		
Field ID: SCI TP-12	Sampled:	02/04/97
Lab ID: 128252-007	Received:	02/05/97
Matrix: Water	Extracted:	02/10/97
Batch#: 32316	Analyzed:	03/04/97
Units: ug/L		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	100
3-Nitroaniline	ND	500
Acenaphthene	ND	100
Dibenzofuran	ND	100
2,4-Dinitrotoluene	ND	100
Diethylphthalate	ND	100
4-Chlorophenyl-phenylether	ND	100
Fluorene	ND	100
4-Nitroaniline	ND	500
N-Nitrosodiphenylamine	ND	100
Azobenzene	ND	100
4-Bromophenyl-phenylether	ND	100
Hexachlorobenzene	ND	100
Phenanthrene	ND	100
Anthracene	ND	100
Di-n-butylphthalate	ND	100
Fluoranthene	ND	100
Pyrene	ND	100
Butylbenzylphthalate	ND	100
3,3'-Dichlorobenzidine	ND	500
Benzo(a)anthracene	ND	100
Chrysene	ND	100
bis(2-Ethylhexyl)phthalate	ND	100
Di-n-octylphthalate	ND	100
Benzo(b)fluoranthene	ND	100
Benzo(k)fluoranthene	ND	100
Benzo(a)pyrene	ND	100
Indeno(1,2,3-cd)pyrene	ND	100
Dibenz(a,h)anthracene	ND	100
Benzo(g,h,i)perylene	ND	100
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	75	21-110
Phenol-d5	82	10-110
2,4,6-Tribromophenol	52	10-123
Nitrobenzene-d5	107	35-114
2-Fluorobiphenyl	48	43-116
Terphenyl-d14	0*	33-141

* Values outside of QC limits

Lab #: 128252

BATCH QC REPORT

Page 1 of 2

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8270
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 02/10/97
Batch#: 32316	Analysis Date: 02/13/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC39875

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50



Lab #: 128252

BATCH QC REPORT

Page 2 of 2

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
 Batch#: 32316
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/13/97

MB Lab ID: QC39875

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	76	21-110
Phenol-d5	76	10-110
2,4,6-Tribromophenol	65	10-123
Nitrobenzene-d5	93	35-114
2-Fluorobiphenyl	73	43-116
Terphenyl-d14	85	33-141

Lab #: 128252

BATCH QC REPORT

Page 1 of 1

EPA 8270 Semi-Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8270		
Project#: 133.005	Prep Method: EPA 3520		
Location: KOT			
BLANK SPIKE/BLANK SPIKE DUPLICATE			
Matrix: Water	Prep Date: 02/10/97		
Batch#: 32316	Analysis Date: 02/13/97		
Units: ug/L			
Diln Fac: 1			

BS Lab ID: QC39876

Analyte	Spike Added	BS	%Rec #	Limits
Phenol	100	77.85	78	12-110
2-Chlorophenol	100	74.72	75	27-123
4-Chloro-3-methylphenol	100	76.48	76	23-97
4-Nitrophenol	100	80.66	81 *	10-80
Pentachlorophenol	100	50.97	51	9-103
1,4-Dichlorobenzene	50	23.94	48	36-97
N-Nitroso-di-n-propylamine	50	31.94	64	41-116
1,2,4-Trichlorobenzene	50	25.43	51	39-98
Acenaphthene	50	33.74	67	46-118
2,4-Dinitrotoluene	50	33.35	67	24-96
Pyrene	50	37.44	75	26-127
Surrogate	%Rec	Limits		
2-Fluorophenol	72	21-110		
Phenol-d5	74	10-110		
2,4,6-Tribromophenol	74	10-123		
Nitrobenzene-d5	91	35-114		
2-Fluorobiphenyl	69	43-116		
Terphenyl-d14	87	33-141		

BSD Lab ID: QC39877

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Phenol	100	84.71	85	12-110	9	42
2-Chlorophenol	100	81.59	82	27-123	9	40
4-Chloro-3-methylphenol	100	81.14	81	23-97	6	42
4-Nitrophenol	100	85.99	86 *	10-80	6	50
Pentachlorophenol	100	58.59	59	9-103	15	50
1,4-Dichlorobenzene	50	25.15	50	36-97	4	28
N-Nitroso-di-n-propylamine	50	33.78	68	41-116	6	38
1,2,4-Trichlorobenzene	50	26.51	53	39-98	4	28
Acenaphthene	50	36.01	72	46-118	7	31
2,4-Dinitrotoluene	50	34.02	68	24-96	1	38
Pyrene	50	38.92	78	26-127	4	31
Surrogate	%Rec	Limits				
2-Fluorophenol	80	21-110				
Phenol-d5	79	10-110				
2,4,6-Tribromophenol	77	10-123				
Nitrobenzene-d5	97	35-114				
2-Fluorobiphenyl	75	43-116				
Terphenyl-d14	88	33-141				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits

SAMPLE ID: SCI-61
 LAB ID: 128252-004
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/05/97
 DATE REPORTED: 02/18/97

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI TP-9
 LAB ID: 128252-005
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/03/97
 DATE RECEIVED: 02/05/97
 DATE REPORTED: 02/18/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	14	5.0	1	32329	EPA 6010A	02/11/97
Barium	390	10	1	32329	EPA 6010A	02/11/97
Beryllium	ND	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32327	EPA 7470	02/11/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	1	32329	EPA 6010A	02/11/97
Selenium	15	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	ND	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI TP-11
 LAB ID: 128252-006
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/04/97
 DATE RECEIVED: 02/05/97
 DATE REPORTED: 02/18/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	25	5.0	1	32329	EPA 6010A	02/11/97
Barium	550	10	1	32329	EPA 6010A	02/11/97
Beryllium	ND	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	11	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32327	EPA 7470	02/11/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	1	32329	EPA 6010A	02/11/97
Selenium	68	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	ND	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128252

DATE REPORTED: 02/18/97

 BATCH QC REPORT
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Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	32329	EPA 6010A	02/11/97
Arsenic	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Barium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Beryllium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Copper	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Lead	ND	3	ug/L	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.2	ug/L	1	32327	EPA 7470	02/11/97
Molybdenum	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Selenium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Silver	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Thallium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Zinc	ND	20	ug/L	1	32329	EPA 6010A	02/11/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128252

DATE REPORTED: 02/18/97

 BATCH QC REPORT
 BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	477	520	ug/L	95	104	80-120	9	35	32329	EPA 6010A	02/11/97
Arsenic	2000	2030	2070	ug/L	102	104	80-120	2	35	32329	EPA 6010A	02/11/97
Barium	2000	2020	2020	ug/L	101	101	80-120	0	35	32329	EPA 6010A	02/11/97
Beryllium	50	52.4	52.9	ug/L	105	106	80-120	1	35	32329	EPA 6010A	02/11/97
Cadmium	50	53.4	52.7	ug/L	107	105	80-120	1	35	32329	EPA 6010A	02/11/97
Chromium (total)	200	206	208	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Cobalt	500	515	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Copper	250	242	240	ug/L	97	96	80-120	1	35	32329	EPA 6010A	02/11/97
Lead	500	513	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Mercury	5	4.684	4.912	ug/L	94	98	80-120	5	35	32327	EPA 7470	02/11/97
Molybdenum	400	405	411	ug/L	101	103	80-120	2	35	32329	EPA 6010A	02/11/97
Nickel	500	523	524	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Selenium	2000	2080	2150	ug/L	104	108	80-120	3	35	32329	EPA 6010A	02/11/97
Silver	100	105	105	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Thallium	2000	2000	2020	ug/L	100	101	80-120	1	35	32329	EPA 6010A	02/11/97
Vanadium	500	512	515	ug/L	102	103	80-120	1	35	32329	EPA 6010A	02/11/97
Zinc	500	509	512	ug/L	102	102	80-120	1	35	32329	EPA 6010A	02/11/97



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 04-MAR-97
Lab Job Number: 128255
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-001	SCI TP-13	32296	02/05/97	02/10/97	02/10/97	
128255-002	SCI TP-14	32318	02/05/97	02/12/97	02/12/97	

Matrix: Water

Analyte	Units	128255-001	128255-002
Diln Fac:		1	10
Gasoline	ug/L	8000 YH	18000 L
Surrogate			
Trifluorotoluene	%REC	90	123
Bromobenzene	%REC	112	109

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

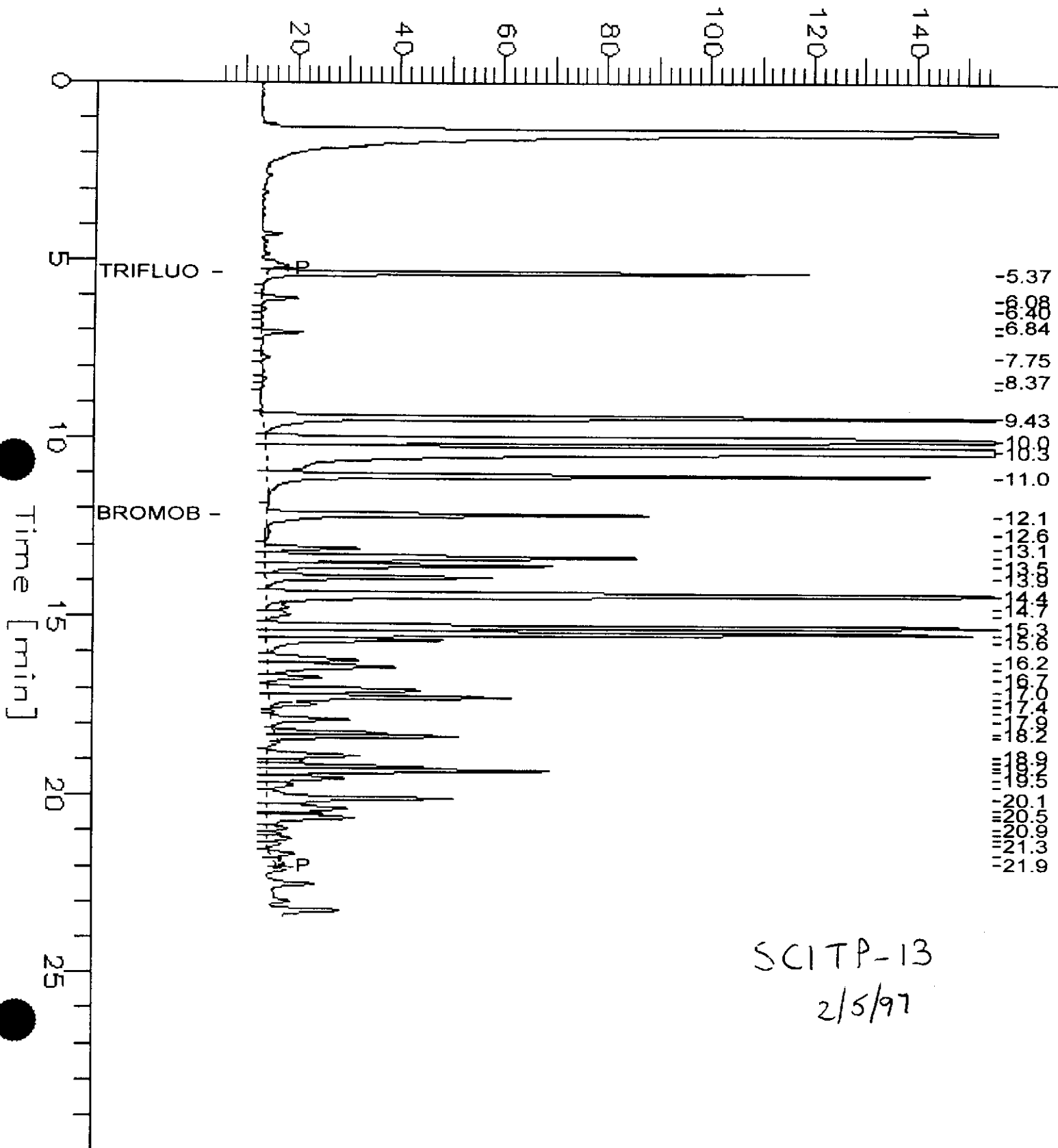
GC05 RTX1 TVH Chromatogram

Sample Name : S_128255-001_32296,
 FileName : G:\GC05\DATA\041H023.raw

Sample # :
 Date : 2/10/97 03:08 PM
 Time of Injection: 2/10/97 02:44 PM
 Low Point : 5.55 mV
 High Point : 155.55 mV
 Plot Scale: 150.0 mV

Start Time : 0.00 min
 End Time : 30.00 min
 Plot Offset: 6 mV

Response [mV]



SCITP-13

2/5/97

GC05 RTX1 TVH Chromatogram

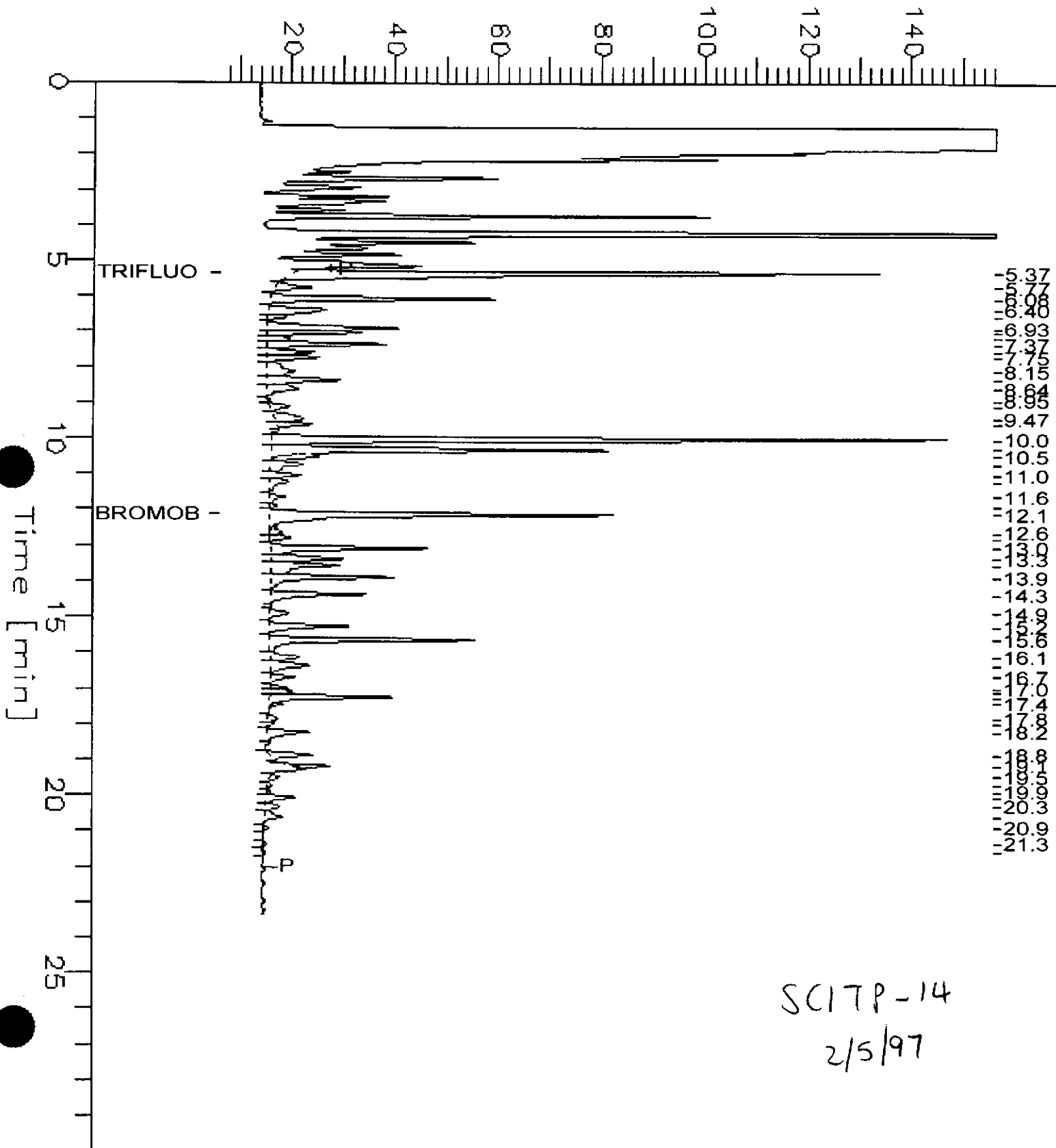
Sample Name : D,128255-002,32318,
FileName : G:\GC05\DATA\042H033.raw
Method : TVHBTXE
Time : 0.00 min
Factor: -1.0

End Time : 30.00 min
Plot Offset: 6 mV

Sample #:
Date : 2/12/97 05:23 AM
Time of Injection: 2/12/97 04:59 AM
Low Point : 6.35 mV
High Point : 156.35 mV
Plot Scale: 150.0 mV

Page 1 of 1

Response [mV]



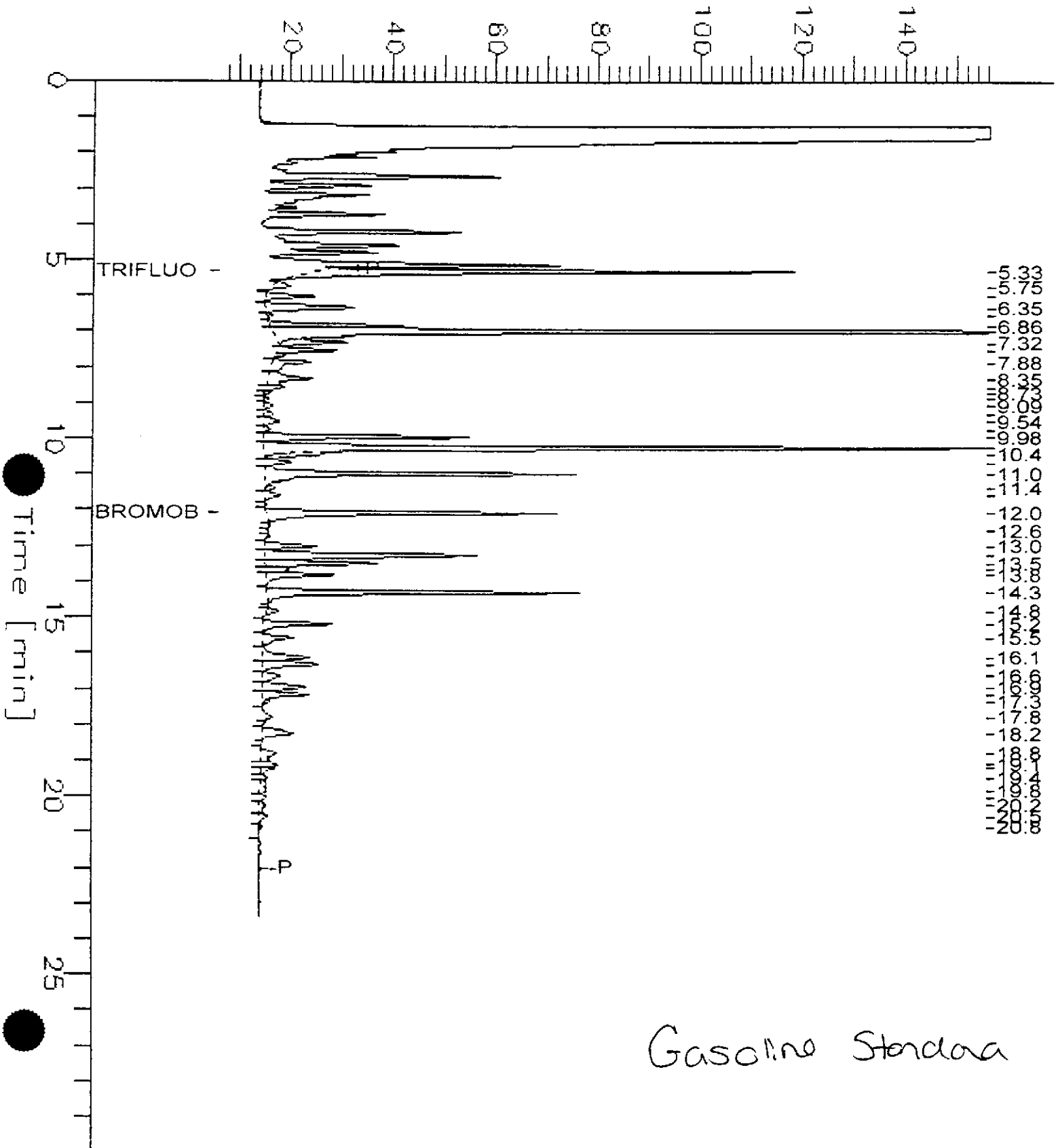
GC05 RTX1 TVH Chromatogram

Sample Name : CCV, 97WS3636, 32296,
FileName : G:\GC05\DATA\041H039.raw
Method : TVHBTXE
Start Time : 0.00 min
Scale Factor: -1.0

Sample #: GAS
Date : 2/11/97 12:36 AM
Time of Injection: 2/11/97 12:12 AM
Low Point : 6.31 mV
High Point : 156.31 mV
Plot Scale: 150.0 mV

Page 1 of 1

Response [mV]



Gasoline Standard

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-003	SCI TP-13 @ 4.2	32356	02/05/97	02/13/97	02/13/97	
128255-004	SCI TP-13 @ 5.7	32356	02/05/97	02/13/97	02/13/97	
128255-005	SCI TP-13 @ 10	32356	02/05/97	02/13/97	02/13/97	
128255-006	SCI TP-14 @ 4	32356	02/05/97	02/13/97	02/13/97	

Matrix: Soil

Analyte	Units	128255-003	128255-004	128255-005	128255-006
Diln Fac:		1	50	1	25
Gasoline	mg/Kg	23 YH	800 YH	<1	270
Surrogate					
Trifluorotoluene	%REC	92	102	68	111
Bromobenzene	%REC	172 *	157 *	92	207 *

* Values outside of QC limits

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

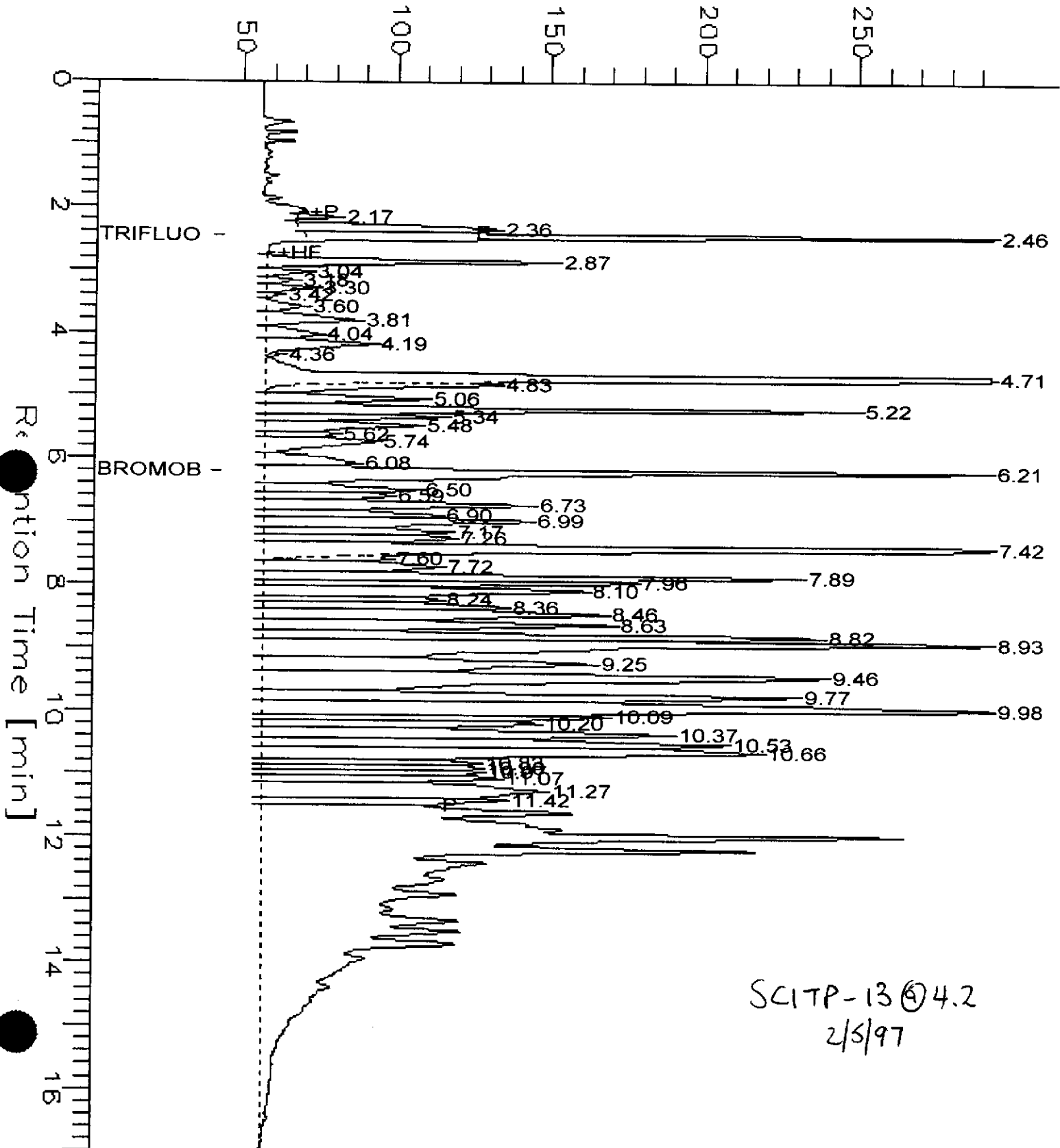
GC04 TVH 'J' File (Rtx1,FID)

Sample Name : S,128255-003,32356,1X,S
 FileName : G:\GC04\DATA\043J035.RAW
 Method :
 Start Time : 0.00 min
 Scale Factor: -1.0

End Time : 17.00 min
 Plot Offset: 44 mV

Sample #: Page 1 of 1
 Date : 2/13/97 06:56 PM
 Time of Injection: 2/13/97 09:06 AM
 Low Point : 43.61 mV High Point : 293.61 mV
 Plot Scale: 250.0 mV

Response [mV]



GC04 TVH 'J' File (Rtx1,FID)

Sample Name : D_128255-004_32356_50X,S

FileName : G:\GC04\DATA\043J024.RAW

Method :

Start Time : 0.00 min

End Time : 17.00 min

Gain Factor: -1.0

Plot Offset: 43 mV

Sample #:

Date : 2/13/97 06:54 PM

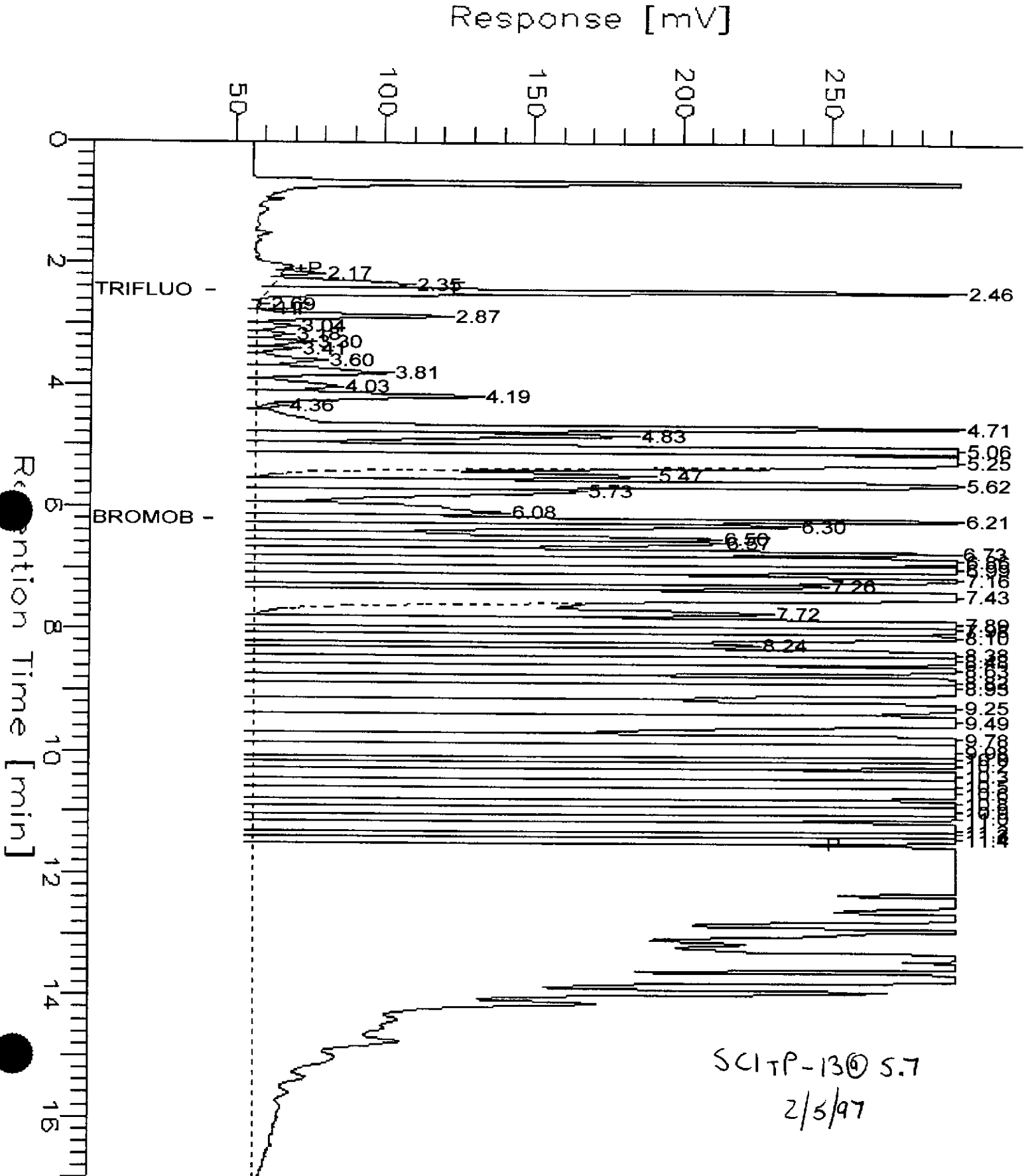
Page 1 of 1

Time of Injection: 2/13/97 03:55 AM

Low Point : 43.10 mV

High Point : 293.10 mV

Plot Scale: 250.0 mV

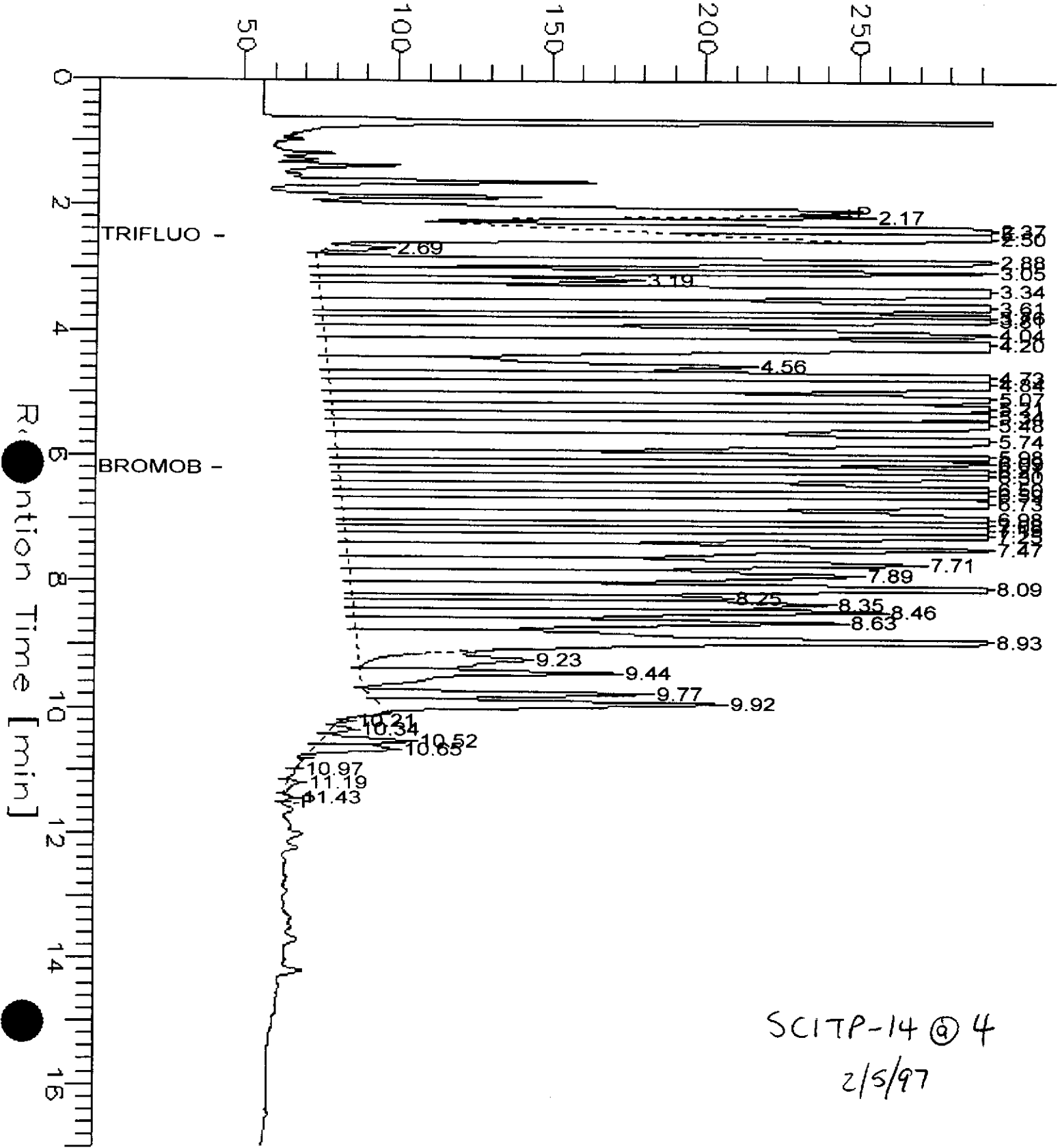


GC04 TVH 'J' File (Rtx1,FID)

Sample Name : D,128255-006,32356,25X,S
FileName : G:\GC04\DATA\043J026.raw
Method : TVHBTXE
Start Time : 0.00 min
End Time : 17.00 min
Factor : -1.0
Plot Offset: 43 mV

Sample #:
Date : 2/13/97 05:09 AM
Time of Injection: 2/13/97 04:52 AM
Low Point : 43.38 mV
High Point : 293.38 mV
Plot Scale: 250.0 mV

Response [mV]



Lab #: 128255

BATCH QC REPORT



Curtis & Tompkins, Ltd

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32296
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

MB Lab ID: QC39799

Analyte	Result		
Gasoline	<50		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	77	65-135	
Bromobenzene	77	65-135	

Lab #: 128255

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 02/11/97
Batch#: 32318	Analysis Date: 02/11/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC39883

Analyte	Result	
Gasoline	<50	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	87	65-135
Bromobenzene	75	65-135



Lab #: 128255

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32356
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/12/97
Analysis Date: 02/12/97

MB Lab ID: QC40027

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	82	52-127
Bromobenzene	95	45-140

Lab #: 128255

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date:	02/10/97	
Batch#: 32296	Analysis Date:	02/10/97	
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39797

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1754	2000	88	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	87	65-135		
Bromobenzene	83	65-135		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128255

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

LABORATORY CONTROL SAMPLE

Matrix: Water	Prep Date: 02/11/97
Batch#: 32318	Analysis Date: 02/11/97
Units: ug/L	
Diln Fac: 1	

LCS Lab ID: QC39881

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	1964	2000	98	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	94	65-135		
Bromobenzene	88	65-135		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128255

BATCH QC REPORT

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

LABORATORY CONTROL SAMPLE

Matrix: Soil	Prep Date: 02/12/97
Batch#: 32356	Analysis Date: 02/12/97
Units: mg/Kg	
Diln Fac: 1	

LCS Lab ID: QC40025

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.56	10	96	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	90	52-127		
Bromobenzene	114	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128255

BATCH QC REPORT



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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ	Sample Date: 02/06/97
Lab ID: 128257-003	Received Date: 02/06/97
Matrix: Water	Prep Date: 02/10/97
Batch#: 32296	Analysis Date: 02/10/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39800

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	<50	2162	108	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	93	65-135			
Bromobenzene	94	65-135			

MSD Lab ID: QC39801

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	2106	105	75-125	3	35
Surrogate	%Rec	Limits				
Trifluorotoluene	92	65-135				
Bromobenzene	92	65-135				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Lab #: 128255

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128179-003
 Matrix: Water
 Batch#: 32318
 Units: ug/L
 Diln Fac: 1

Sample Date: 01/29/97
 Received Date: 01/30/97
 Prep Date: 02/11/97
 Analysis Date: 02/11/97

MS Lab ID: QC39884

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	2000	236.4	3253	106	75-125
Surrogate	%Rec	Limits			
Trifluorotoluene	80	65-135			
Bromobenzene	119	65-135			

MSD Lab ID: QC39885

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	2427	110	75-125	3	35
Surrogate	%Rec	Limits				
Trifluorotoluene	81	65-135				
Bromobenzene	121	65-135				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-001	SCI TP-13	32433	02/05/97	02/14/97	02/25/97	
128255-002	SCI TP-14	32433	02/05/97	02/14/97	02/25/97	

Matrix: Water

Analyte	Units	128255-001	128255-002
Diln Fac:		5	5
Diesel C12-C22	ug/L	35000 YL	15000 YLH
Motor Oil C22-C50	ug/L	5800 YL	41000 L
Surrogate			
Hexacosane	%REC	105	89

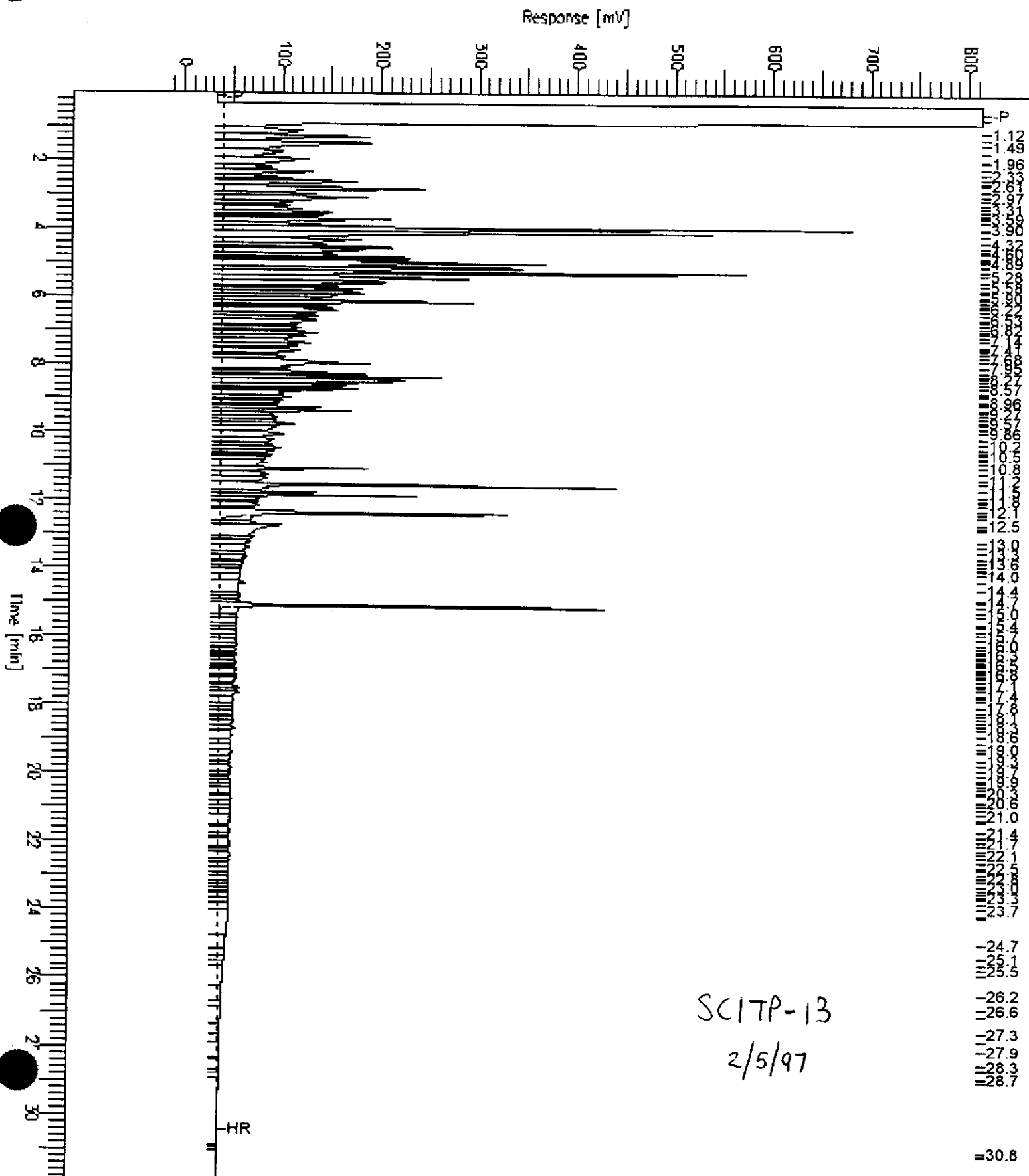
- Y: Sample exhibits fuel pattern which does not resemble standard
- H: Heavier hydrocarbons than indicated standard
- L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 128255-001,32433
FileName : G:\GC11\CHB\055B036.RAW
Method : BTEH052.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset: -20 mV

Sample #: 32433
Date : 2/27/97 02:34 PM
Time of Injection: 2/25/97 07:59 PM
Low Point : -19.72 mV
Plot Scale: 833.8 mV
High Point : 814.05 mV



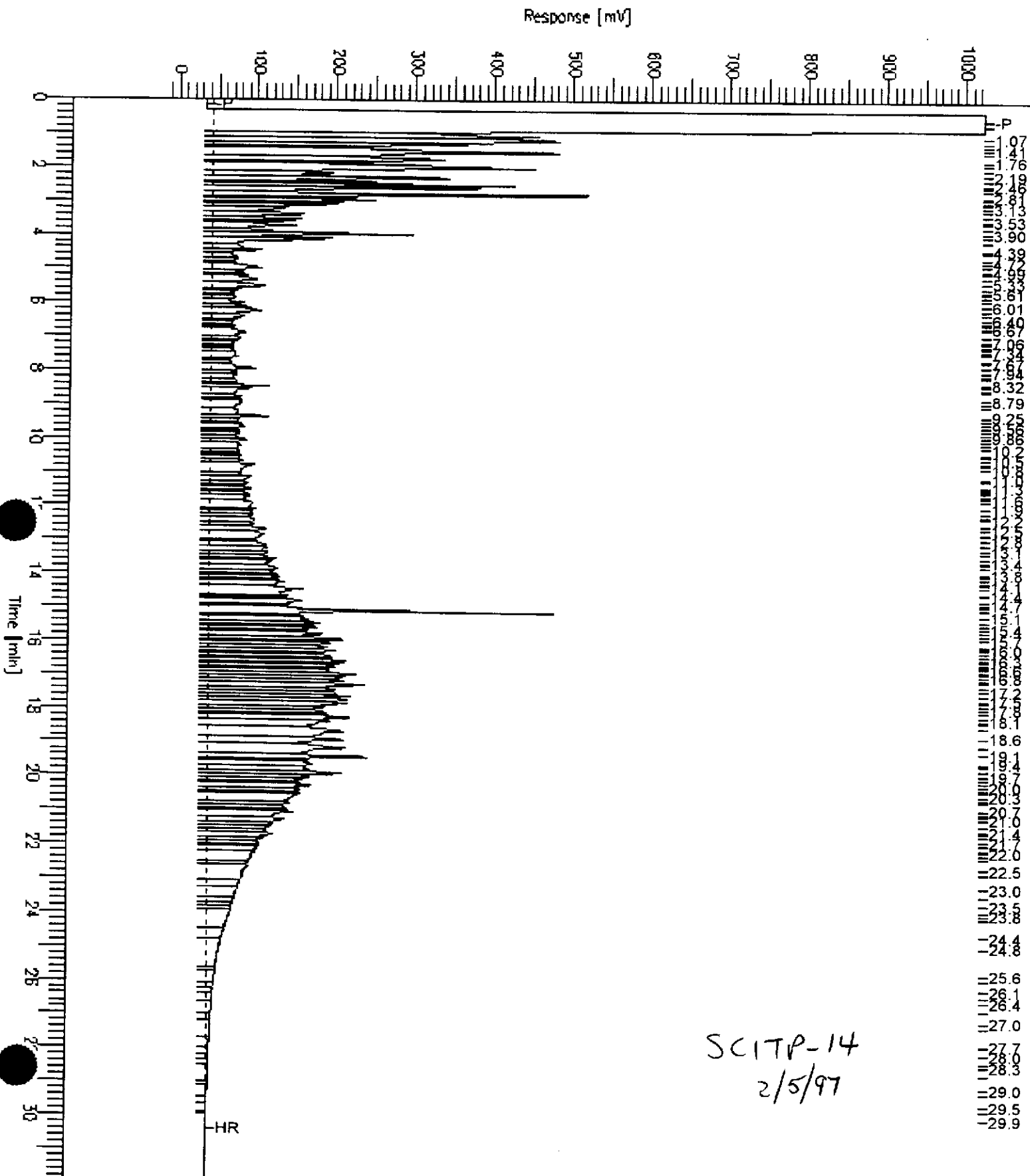
Chromatogram

Sample Name : 128255-002,32433
FileName : G:\GC11\CHB\055B037.RAW
Method : BTEH052.MTH
Start Time : 0.00 min
Factor : 0.0

End Time : 31.90 min
Plot Offset : -19 mV

Sample #: 32433
Date : 2/27/97 02:35 PM
Time of Injection: 2/25/97 08:42 PM
Low Point : -18.90 mV
High Point : 1024.00 mV
Plot Scale: 1042.9 mV

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TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-003	SCI TP-13 @ 4.2	32503	02/05/97	02/19/97	02/28/97	
128255-004	SCI TP-13 @ 5.7	32503	02/05/97	02/19/97	02/28/97	
128255-005	SCI TP-13 @ 10	32503	02/05/97	02/19/97	02/28/97	
128255-006	SCI TP-14 @ 4	32503	02/05/97	02/19/97	02/28/97	

Matrix: Soil

Analyte	Units	128255-003	128255-004	128255-005	128255-006
Diln Fac:		50	20	1	1
Diesel C12-C22	mg/Kg	9400 H	8000 H	74 YH	99 YLH
Motor Oil C22-C50	mg/Kg	8600 YH	2500 YH	110 YLH	420
Surrogate					
Hexacosane	%REC	DO	DO	124	132

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard

Chromatogram

Sample Name : 128255-003,32503

FileName : G:\GC13\CHA\058A024.RAW

Method : ATEH058.MTH

Start Time : 0.01 min

Factor : 0.0

Sample #: 32503

Date : 2/28/97 09:29 AM

Time of Injection: 2/28/97 05:02 AM

Low Point : -19.25 mV

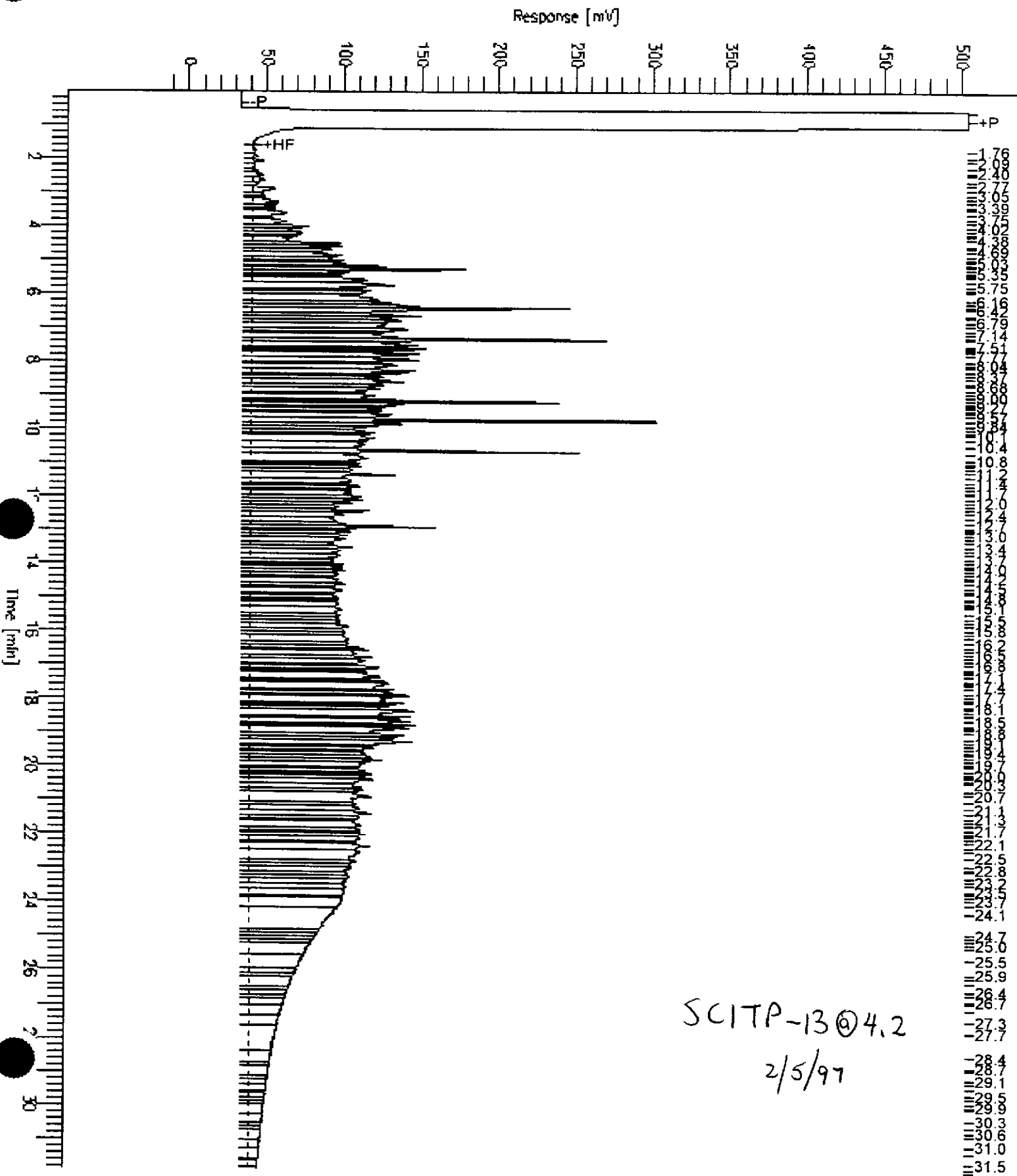
Plot Scale: 524.1 mV

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End Time : 31.91 min

Plot Offset: -19 mV

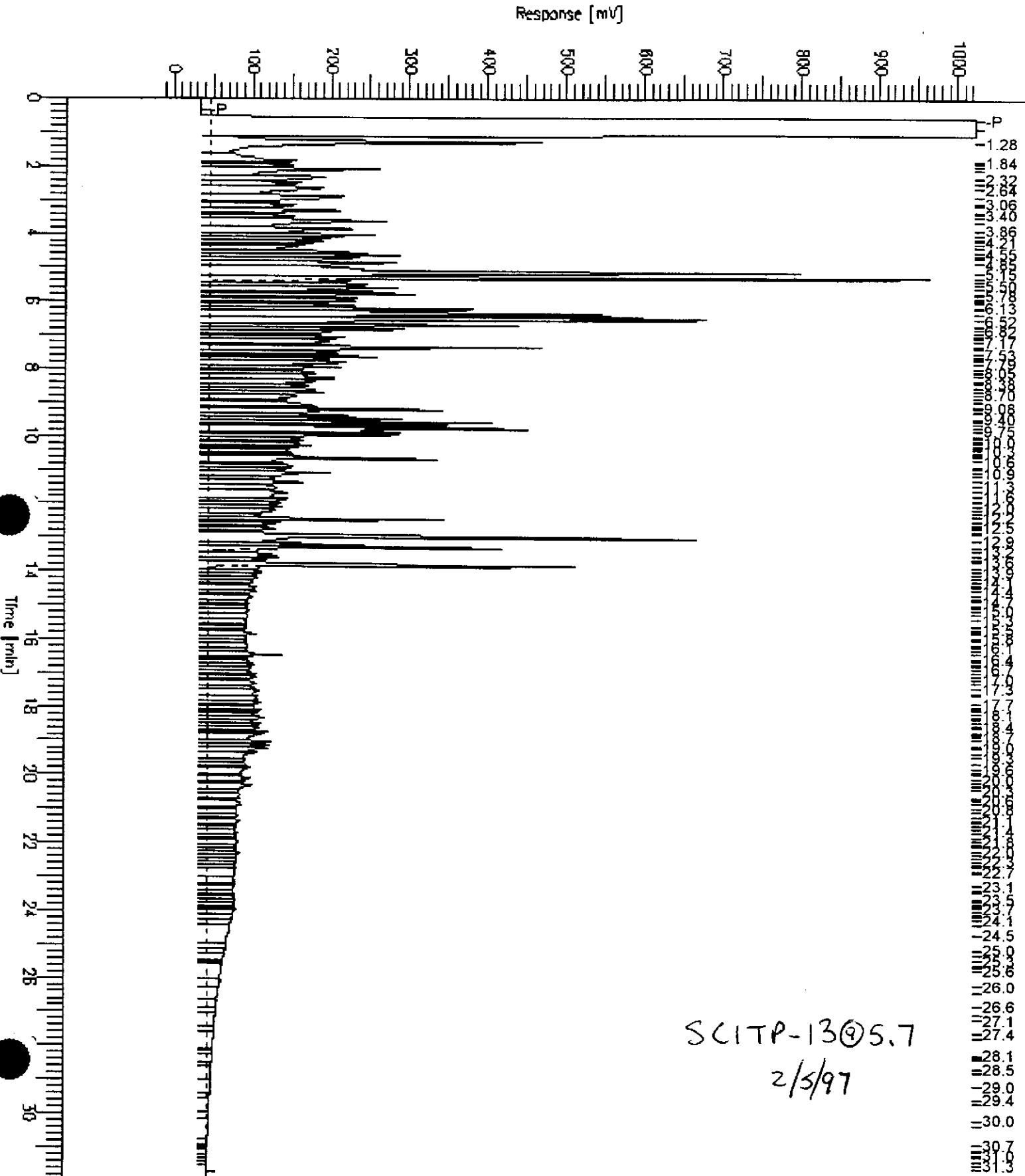
High Point : 504.82 mV



Chromatogram

Sample Name : 128255-004, 32503
FileName : G:\GC13\CHA\058A025.RAW
Method : ATEH058.MTH
Start Time : 0.00 min
Factor : 0.0

Sample #: 32503
Date : 2/28/97 10:06 AM
Time of Injection: 2/28/97 05:45 AM
End Time : 31.90 min
Low Point : -19.18 mV
High Point : 1024.00 mV
Plot Offset: -19 mV
Plot Scale: 1043.2 mV



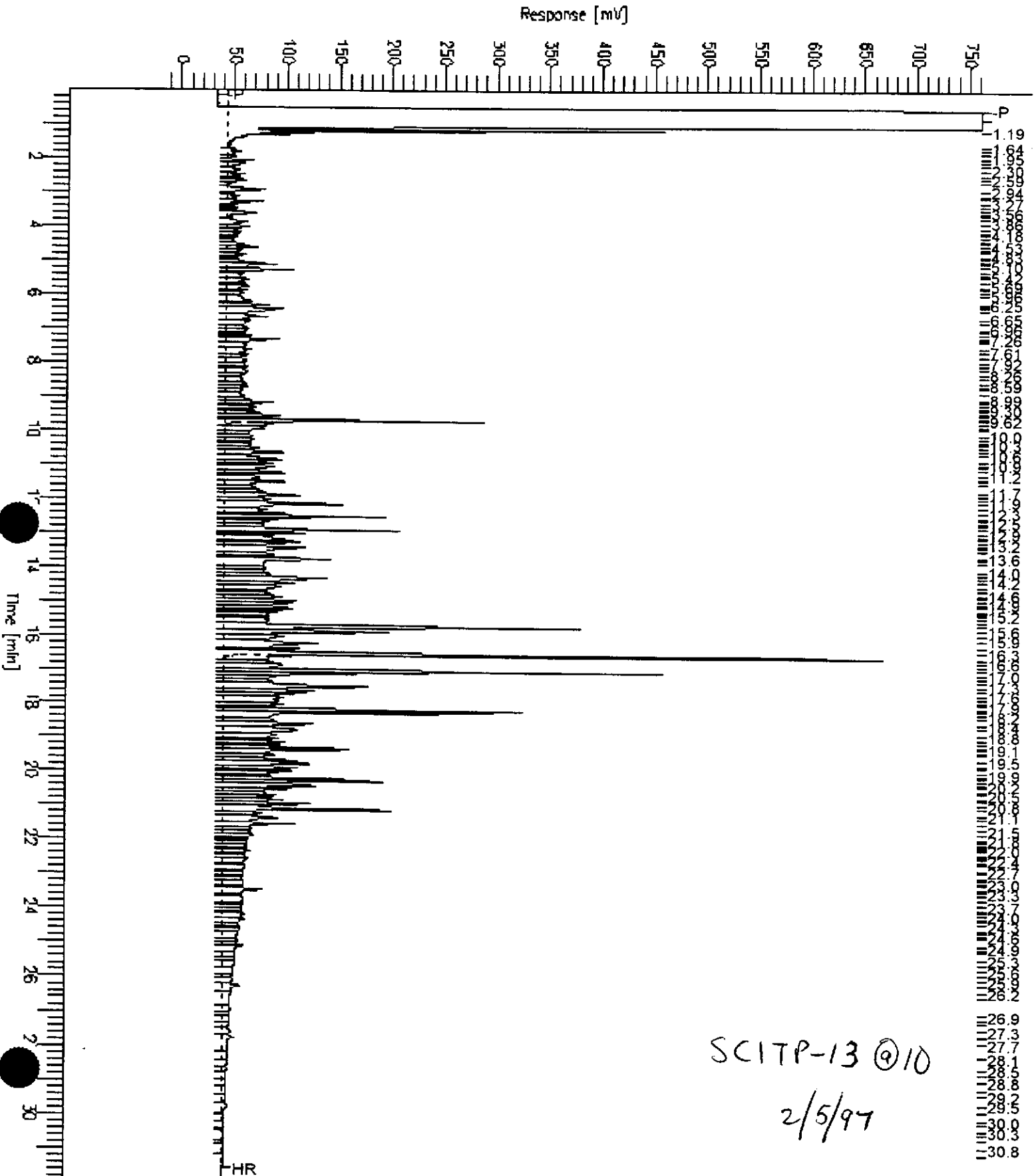
SCITP-13@5.7
2/5/97

Chromatogram

Sample Name : 128255-005,32503
FileName : G:\GC13\CHAY\058A026.RAW
Method : BTEH054.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -19 mV

Sample #: 32503
Date : 2/28/97 09:17 AM
Time of Injection: 2/28/97 06:26 AM
Low Point : -18.96 mV
High Point : 761.99 mV
Plot Scale : 781.0 mV

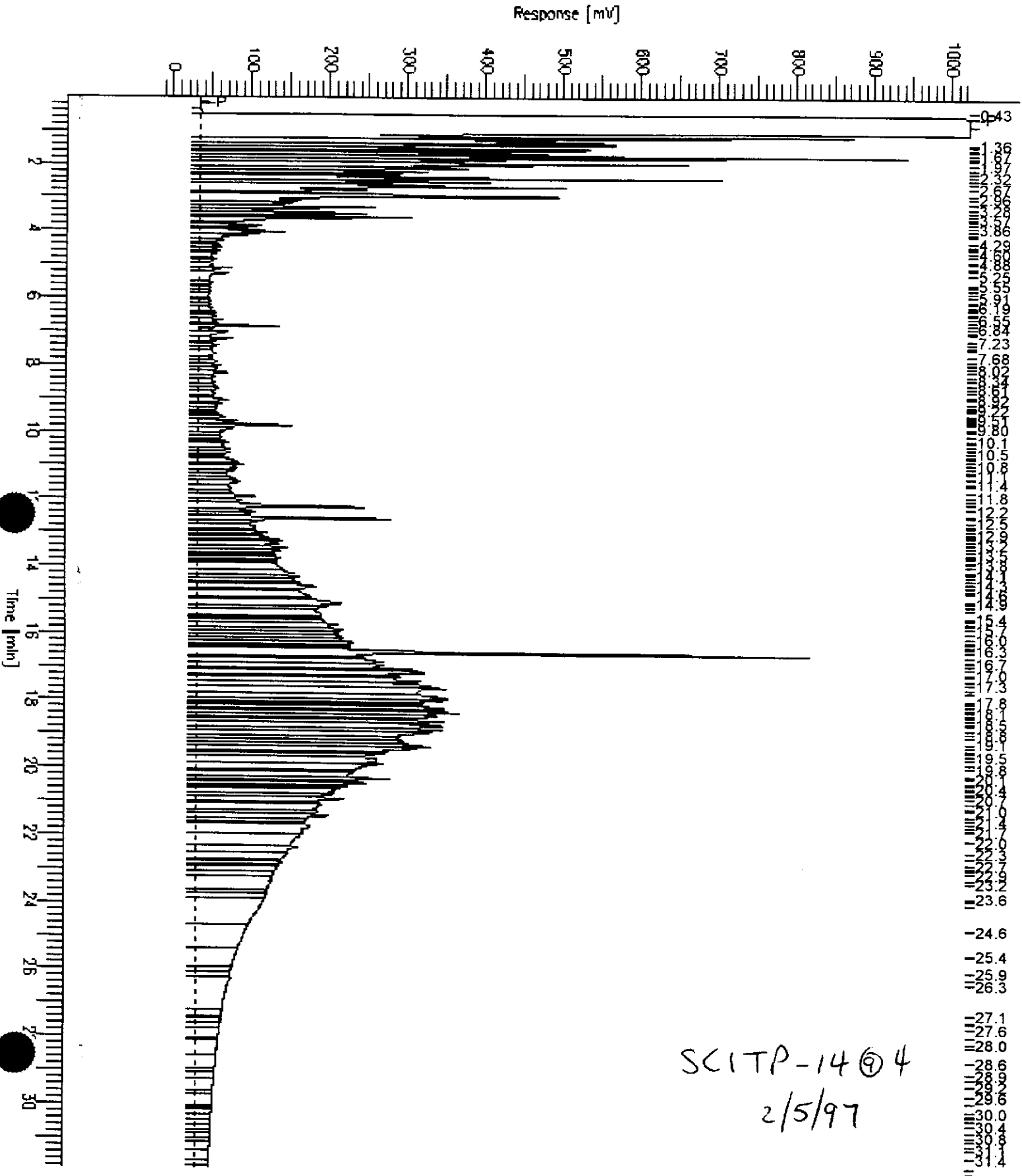


Chromatogram

Sample Name : 128255-006, 32503
FileName : G:\GC13\CHA\058A027.RAW
Method : BTEH054.MTH
Start Time : 0.01 min
Factor : 0.0

End Time : 31.91 min
Plot Offset : -19 mV

Sample #: 32503
Date : 2/28/97 09:18 AM
Page 1 of 1
Time of Injection: 2/28/97 07:11 AM
Low Point : -18.81 mV
High Point : 1024.00 mV
Plot Scale: 1042.8 mV

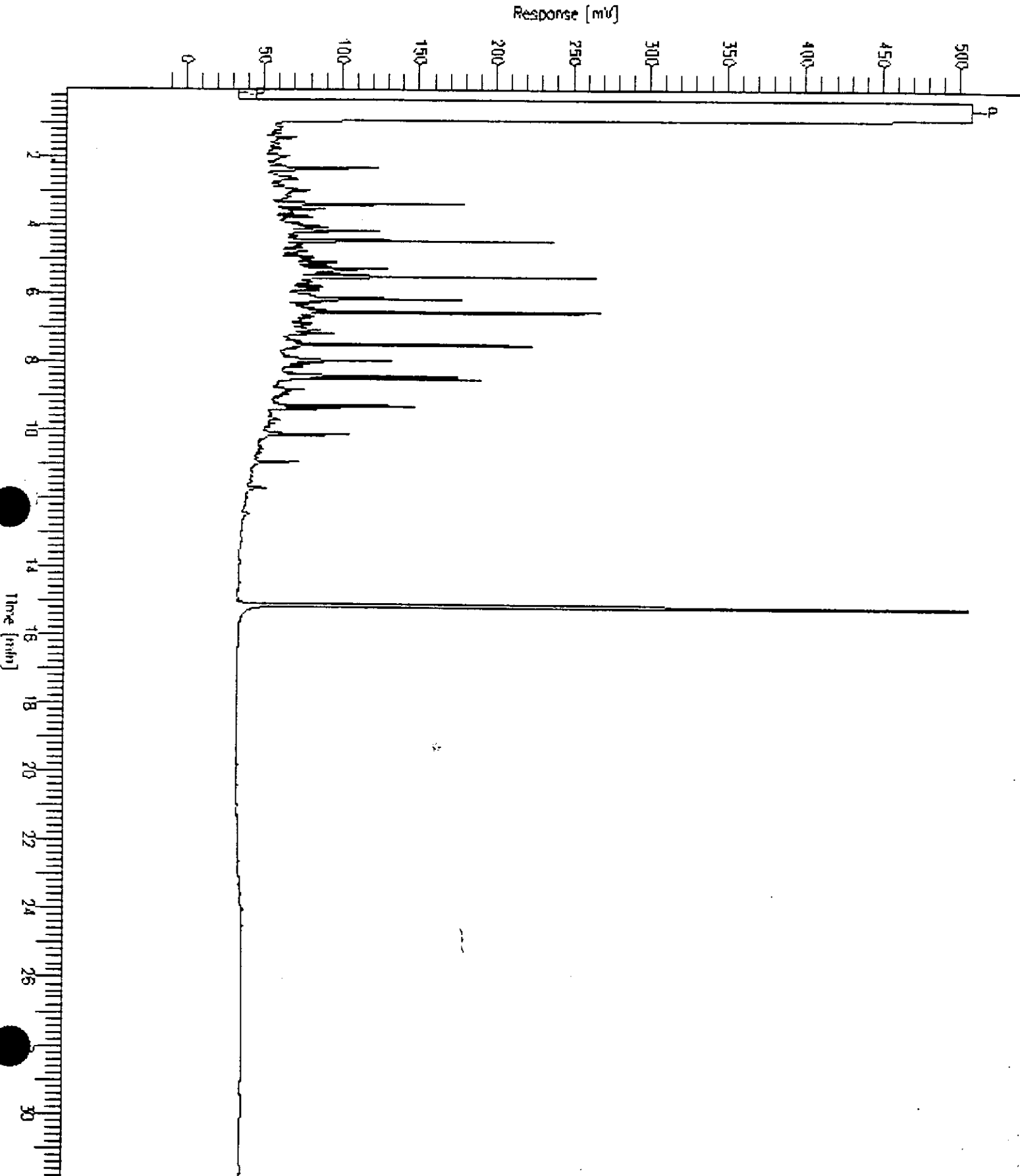


Chromatogram

Sample Name : CCV, 97WG3756, DS
FileName : G:\GC11\CHB\055B002.RAW
Method : BTEH052.MTH

Sample #: 500MG/L
Date : 2/25/97 02:32 PM
Time of Injection: 2/24/97 08:18 PM
Low Point : -18.48 mV
High Point : 507.33 mV
Plot Scale: 525.8 mV

Start Time : 0.01 min
End Time : 31.91 min
Factor: 0.10
Pist Offset: -18 mV



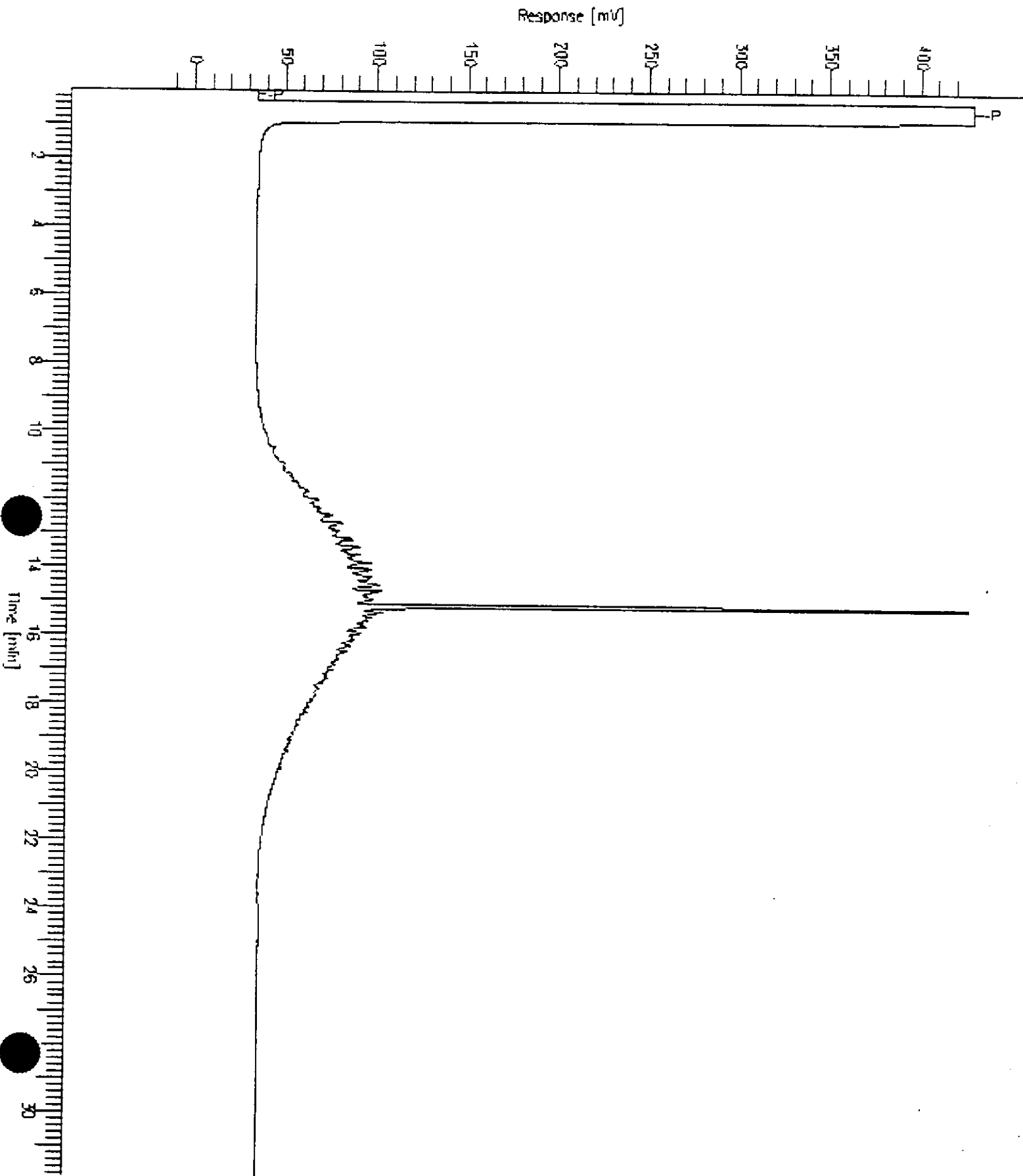
Chromatogram

Sample Name : CCV, 97WG3691, MO
File Name : G:\GC11\CHBN0558004.RAW
Method : BTEH052.MTH
Start Time : 0.01 min
Factor : 0.10

End Time : 31.91 min
Plot Offset: -18 mV

Sample #: 500MG/L
Date : 2/25/97 02:32 PM
Time of Injection: 2/24/97 09:44 PM
Low Point : -17.84 mV
High Point : 429.30 mV
Plot Scale: 447.1 mV

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Lab #: 128255

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32433
Units: ug/L
Diln Fac: 1

Prep Date: 02/14/97
Analysis Date: 02/24/97

MB Lab ID: QC40295

Analyte	Result		
Diesel C12-C22	<50		
Motor Oil C22-C50	<250		
Surrogate	%Rec		Recovery Limits
Hexacosane	110		60-140



Lab #: 128255

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32503
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/19/97
Analysis Date: 02/28/97

MB Lab ID: QC40533

Analyte	Result		
Diesel C12-C22	<1.0		
Motor Oil C22-C50	<5.0		
Surrogate	%Rec		Recovery Limits
Hexacosane	129		60-140

Lab #: 128255

BATCH QC REPORT



Curtis & Tompkins, Ltd
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TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
Batch#: 32433
Units: ug/L
Diln Fac: 1

Prep Date: 02/14/97
Analysis Date: 02/25/97

BS Lab ID: QC40296

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	4950	4347	88	60-140
Surrogate	%Rec	Limits		
Hexacosane	105	60-140		

BSD Lab ID: QC40297

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	4950	4661	94	60-140	7	35
Surrogate	%Rec	Limits				
Hexacosane	111	60-140				

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
RPD: 0 out of 1 outside limits
Spike Recovery: 0 out of 2 outside limits



Lab #: 128255

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: CA LUFT
Location: KOT	

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Soil	Prep Date: 02/19/97
Batch#: 32503	Analysis Date: 02/28/97
Units: mg/Kg dry weight	Moisture: 0%
Diln Fac: 1	

BS Lab ID: QC40534

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	49.5	45.4	92	60-140
Surrogate	%Rec	Limits		
Hexacosane	114	60-140		

BSD Lab ID: QC40535

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	49.5	48.8	92	60-140	7	30
Surrogate	%Rec	Limits				
Hexacosane	121	60-140				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 1 outside limits
 Spike Recovery: 0 out of 2 outside limits



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-002	SCI TP-14	32318	02/05/97	02/12/97	02/12/97	

Matrix: Water

Analyte	Units	128255-002
Diln Fac:		10
Benzene	ug/L	1700
Toluene	ug/L	110
Ethylbenzene	ug/L	1100
m,p-Xylenes	ug/L	650
o-Xylene	ug/L	40
Surrogate		
Trifluorotoluene	%REC	127
Bromobenzene	%REC	96

BTXE

Client: Subsurface Consultants	Analysis Method: EPA 8020
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128255-006	SCI TP-14 @ 4	32356	02/05/97	02/13/97	02/13/97	

Matrix: Soil

Analyte	Units	128255-006
Diln Fac:		25
Benzene	ug/Kg	<130
Toluene	ug/Kg	<130
Ethylbenzene	ug/Kg	<130
m,p-Xylenes	ug/Kg	2200
o-Xylene	ug/Kg	3000
Surrogate		
Trifluorotoluene	%REC	112
Bromobenzene	%REC	185 *

* Values outside of QC limits

Lab #: 128255

BATCH QC REPORT



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BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32318
Units: ug/L
Diln Fac: 1

Prep Date: 02/11/97
Analysis Date: 02/11/97

MB Lab ID: QC39883

Analyte	Result		
Benzene	<0.5		
Toluene	<0.5		
Ethylbenzene	<0.5		
m,p-Xylenes	<0.5		
o-Xylene	<0.5		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	85		58-130
Bromobenzene	79		62-131

Lab #: 128255

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/11/97		
Batch#: 32318	Analysis Date: 02/11/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39882

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	17.57	20	88	80-120
Toluene	18.18	20	91	80-120
Ethylbenzene	17.77	20	89	80-120
m,p-Xylenes	35.68	40	89	80-120
o-Xylene	18.04	20	90	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	88	58-130		
Bromobenzene	83	62-131		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits

Lab #: 128255

BATCH QC REPORT



Curtis & Tompkins, Ltd.

Page 1 of 1

BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32356
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/12/97
Analysis Date: 02/12/97

MB Lab ID: QC40027

Analyte	Result	
Benzene	<5.0	
Toluene	<5.0	
Ethylbenzene	<5.0	
m,p-Xylenes	<5.0	
o-Xylene	<5.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	97	52-127
Bromobenzene	117	45-140



Lab #: 128255

BATCH QC REPORT

BTXE

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8020
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32356
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/12/97
 Analysis Date: 02/12/97

LCS Lab ID: QC40026

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	97.69	100	98	80-120
Toluene	102	100	102	80-120
Ethylbenzene	102	100	102	80-120
m,p-Xylenes	199.8	200	100	80-120
o-Xylene	103.4	100	103	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	102	52-127		
Bromobenzene	126	45-140		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI TP-13
 Lab ID: 128255-001
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 5

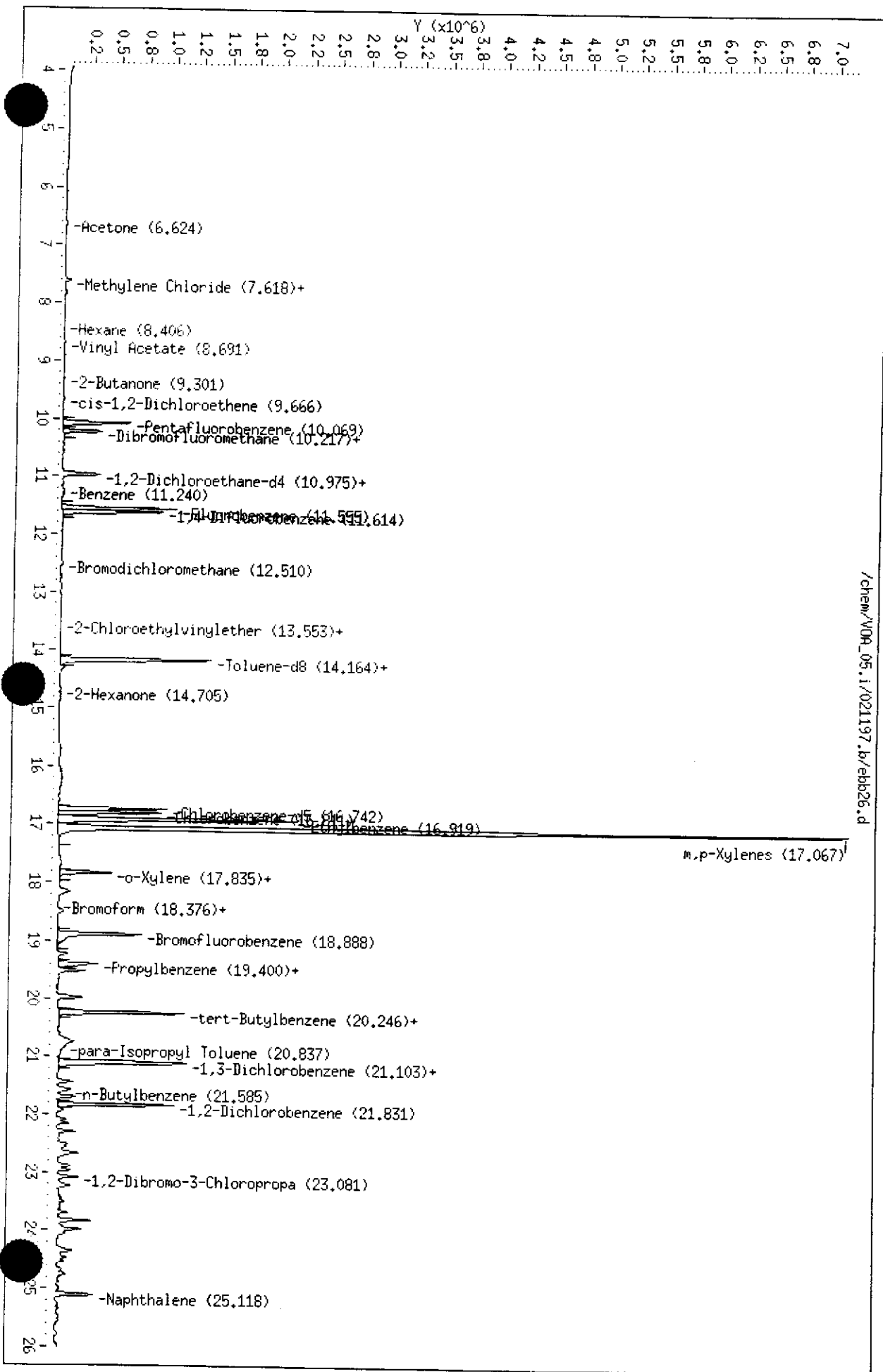
Sampled: 02/05/97
 Received: 02/06/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	100
Acetone	ND	100
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	ND	25
1,1-Dichloroethane	ND	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	ND	25
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
2-Butanone	ND	50
1,1,1-Trichloroethane	ND	25
Carbon Tetrachloride	ND	25
Vinyl Acetate	ND	250
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethene	ND	25
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	25
Benzene	ND	25
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	25
2-Hexanone	ND	50
4-Methyl-2-Pentanone	ND	50
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
Chlorobenzene	220	25
Ethylbenzene	410	25
Styrene	ND	25
m,p-Xylenes	1500	25
o-Xylene	100	25
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	101	79-122

Data File: /chem/VDH_05.1/021197.b/ebb26.d
Date: 11-FEB-97 23:44
Client ID: DYNA P&I
Sample Info: S,128255-001
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VDH_05.1
Operator: DM
Column diameter: 0.32

/chem/VDH_05.1/021197.b/ebb26.d





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

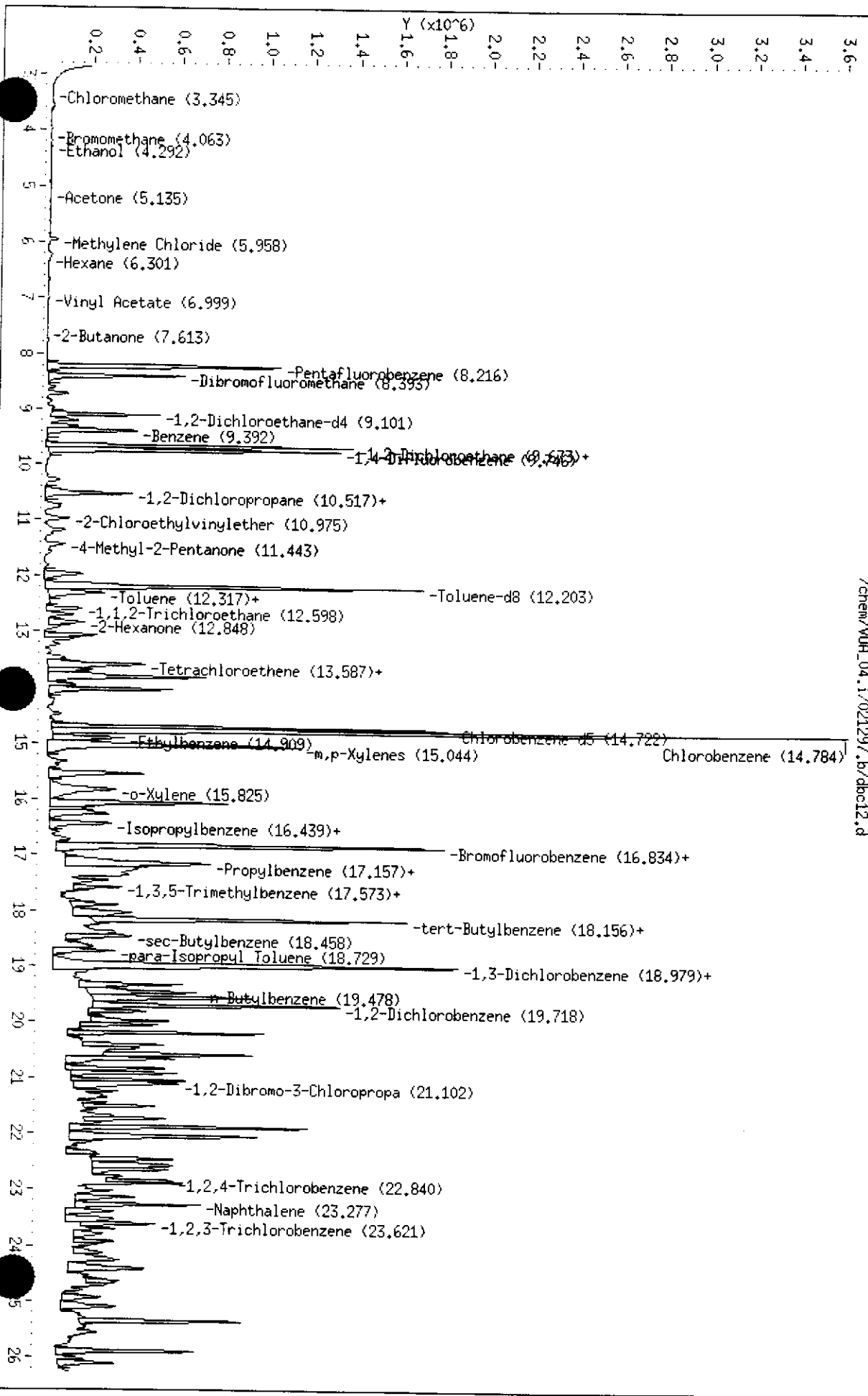
Field ID: SCI TP-13 @ 4.2
 Lab ID: 128255-003
 Matrix: Soil
 Batch#: 32351
 Units: ug/Kg
 Diln Fac: 62.5

Sampled: 02/05/97
 Received: 02/06/97
 Extracted: 02/12/97
 Analyzed: 02/12/97

Analyte	Result	Reporting Limit
Chloromethane	ND	630
Bromomethane	ND	630
Vinyl Chloride	ND	630
Chloroethane	ND	630
Methylene Chloride	ND	1300
Acetone	ND	1300
Carbon Disulfide	ND	310
Trichlorofluoromethane	ND	310
1,1-Dichloroethene	ND	310
1,1-Dichloroethane	ND	310
trans-1,2-Dichloroethene	ND	310
cis-1,2-Dichloroethene	ND	310
Chloroform	ND	310
Freon 113	ND	310
1,2-Dichloroethane	ND	310
2-Butanone	ND	630
1,1,1-Trichloroethane	ND	310
Carbon Tetrachloride	ND	310
Vinyl Acetate	ND	3100
Bromodichloromethane	ND	310
1,2-Dichloropropane	ND	310
cis-1,3-Dichloropropene	ND	310
Trichloroethene	ND	310
Dibromochloromethane	ND	310
1,1,2-Trichloroethane	ND	310
Benzene	ND	310
trans-1,3-Dichloropropene	ND	310
Bromoform	ND	310
2-Hexanone	ND	630
4-Methyl-2-Pentanone	ND	630
1,1,2,2-Tetrachloroethane	ND	310
Tetrachloroethene	ND	310
Toluene	ND	310
Chlorobenzene	7300	310
Ethylbenzene	380	310
Styrene	ND	310
m,p-Xylenes	2100	310
o-Xylene	ND	310
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	109	79-122

Data File: /chem/V09_04.1/021297.b/dlec12.d
 Date: 12-FEB-97 15:44
 Client ID: DYNR P&I
 Sample Info: S.128255-003
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V09_04.1
 Operator: LLH
 Column diameter: 0.32



/chem/V09_04.1/021297.b/dlec12.d



Volatile Organics by GC/MS

Client: Subsurface Consultants Analysis Method: EPA 8260
 Project#: 133.005 Prep Method: EPA 5030
 Location: KOT

Field ID: SCI TP-13 @ 5.7 Sampled: 02/05/97
 Lab ID: 128255-004 Received: 02/06/97
 Matrix: Soil Extracted: 02/12/97
 Batch#: 32351 Analyzed: 02/12/97
 Units: ug/Kg
 Diln Fac: 166.67

Analyte	Result	Reporting Limit
Chloromethane	ND	1700
Bromomethane	ND	1700
Vinyl Chloride	ND	1700
Chloroethane	ND	1700
Methylene Chloride	ND	3300
Acetone	ND	3300
Carbon Disulfide	ND	830
Trichlorofluoromethane	ND	830
1,1-Dichloroethene	ND	830
1,1-Dichloroethane	ND	830
trans-1,2-Dichloroethene	ND	830
cis-1,2-Dichloroethene	ND	830
Chloroform	ND	830
Freon 113	ND	830
1,2-Dichloroethane	ND	830
2-Butanone	ND	1700
1,1,1-Trichloroethane	ND	830
Carbon Tetrachloride	ND	830
Vinyl Acetate	ND	8300
Bromodichloromethane	ND	830
1,2-Dichloropropane	ND	830
cis-1,3-Dichloropropene	ND	830
Trichloroethene	ND	830
Dibromochloromethane	ND	830
1,1,2-Trichloroethane	ND	830
Benzene	ND	830
trans-1,3-Dichloropropene	ND	830
Bromoform	ND	830
2-Hexanone	ND	1700
4-Methyl-2-Pentanone	ND	1700
1,1,2,2-Tetrachloroethane	ND	830
Tetrachloroethene	ND	830
Toluene	ND	830
Chlorobenzene	4900	830
Ethylbenzene	16000	830
Styrene	ND	830
m,p-Xylenes	51000	830
o-Xylene	5100	830
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	103	87-125
Bromofluorobenzene	114	79-122

Data File: /chem/V09_04.i/021297.b/dhc11.d

Date: 12-FEB-97 15:11

Client ID: DYNH P&I

Sample Info: S,128255-004

Purge Volume: 5.0

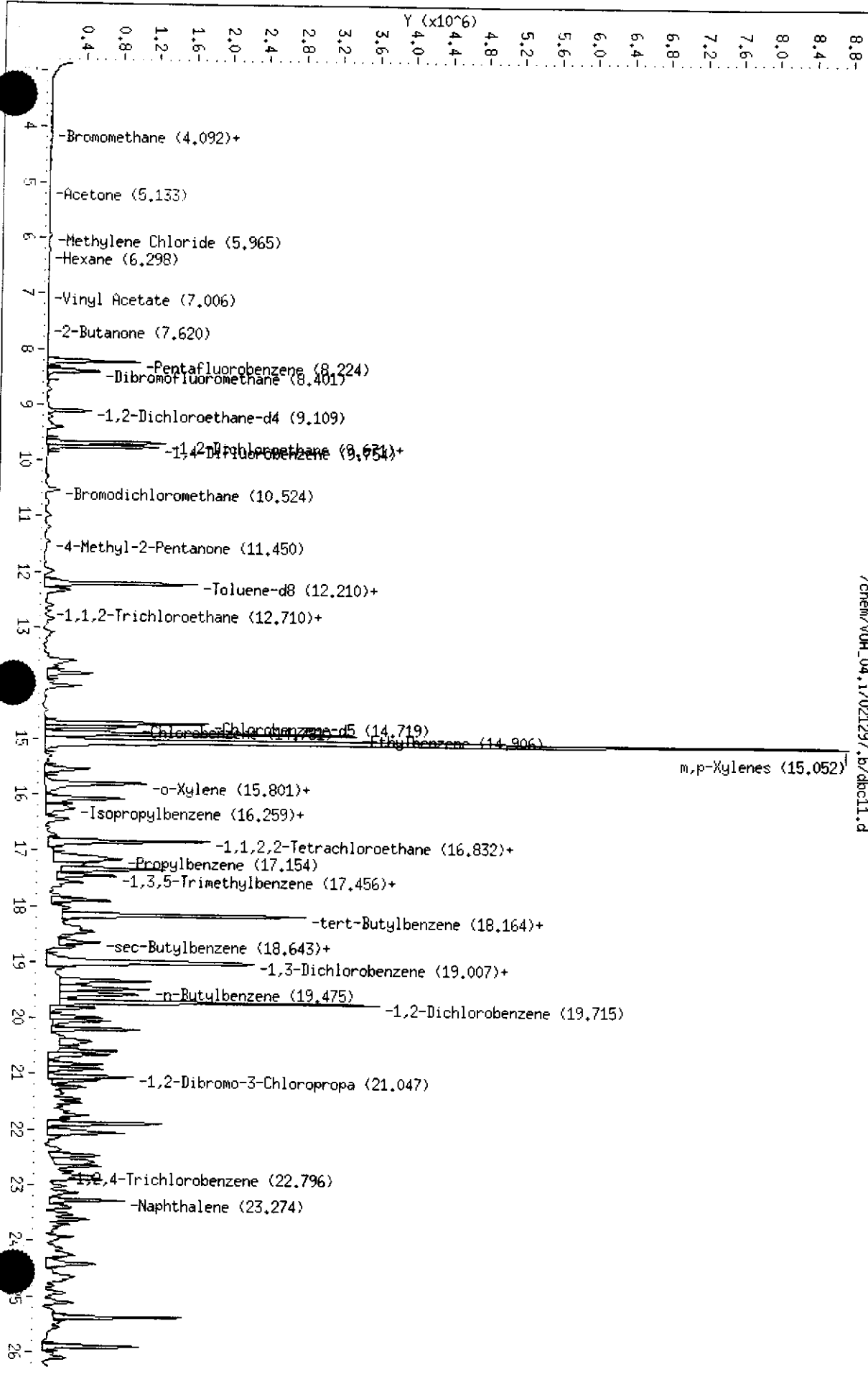
Column phase: RTX Volatiles

Instrument: V09_04.i

Operator: LLH

Column diameter: 0.32

/chem/V09_04.i/021297.b/dhc11.d



CLIENT: Subsurface Consultants
JOB NUMBER: 128197

DATE REPORTED: 02/12/97

BATCH QC REPORT
PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	32218	EPA 6010A	02/05/97
Arsenic	ND	5	ug/L	1	32218	EPA 6010A	02/05/97
Barium	ND	10	ug/L	1	32218	EPA 6010A	02/05/97
Beryllium	ND	2	ug/L	1	32218	EPA 6010A	02/05/97
Cadmium	ND	2	ug/L	1	32218	EPA 6010A	02/05/97
Chromium (total)	ND	10	ug/L	1	32218	EPA 6010A	02/05/97
Cobalt	ND	20	ug/L	1	32218	EPA 6010A	02/05/97
Copper	ND	10	ug/L	1	32218	EPA 6010A	02/05/97
Lead	ND	3	ug/L	1	32218	EPA 6010A	02/05/97
Mercury	ND	0.2	ug/L	1	32256	EPA 7470	02/06/97
Molybdenum	ND	20	ug/L	1	32218	EPA 6010A	02/05/97
Nickel	ND	20	ug/L	1	32218	EPA 6010A	02/05/97
Selenium	ND	5	ug/L	1	32218	EPA 6010A	02/05/97
Silver	ND	5	ug/L	1	32218	EPA 6010A	02/05/97
Thallium	ND	5	ug/L	1	32218	EPA 6010A	02/05/97
Vanadium	ND	10	ug/L	1	32218	EPA 6010A	02/05/97
Zinc	ND	20	ug/L	1	32218	EPA 6010A	02/05/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128197

DATE REPORTED: 02/12/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	447	501	ug/L	89	100	80-120	11	35	32218	EPA 6010A	02/05/97
Arsenic	2000	1920	1980	ug/L	96	99	80-120	3	35	32218	EPA 6010A	02/05/97
Barium	2000	2050	2060	ug/L	103	103	80-120	1	35	32218	EPA 6010A	02/05/97
Beryllium	50	49.7	51.3	ug/L	99	103	80-120	3	35	32218	EPA 6010A	02/05/97
Cadmium	50	51.2	52.9	ug/L	102	106	80-120	3	35	32218	EPA 6010A	02/05/97
Chromium (total)	200	199	205	ug/L	100	103	80-120	3	35	32218	EPA 6010A	02/05/97
Cobalt	500	491	509	ug/L	98	102	80-120	4	35	32218	EPA 6010A	02/05/97
Copper	250	259	259	ug/L	104	104	80-120	0	35	32218	EPA 6010A	02/05/97
Lead	500	490	505	ug/L	98	101	80-120	3	35	32218	EPA 6010A	02/05/97
Mercury	5	4.91	5.103	ug/L	98	102	80-120	4	35	32256	EPA 7470	02/06/97
Molybdenum	400	397	408	ug/L	99	102	80-120	3	35	32218	EPA 6010A	02/05/97
Nickel	500	500	513	ug/L	100	103	80-120	3	35	32218	EPA 6010A	02/05/97
Selenium	2000	1880	1940	ug/L	94	97	80-120	3	35	32218	EPA 6010A	02/05/97
Silver	100	101	102	ug/L	101	102	80-120	1	35	32218	EPA 6010A	02/05/97
Thallium	2000	1930	1960	ug/L	97	98	80-120	2	35	32218	EPA 6010A	02/05/97
Vanadium	500	500	510	ug/L	100	102	80-120	2	35	32218	EPA 6010A	02/05/97
Zinc	500	490	502	ug/L	98	100	80-120	2	35	32218	EPA 6010A	02/05/97



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710. Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 26-FEB-97
Lab Job Number: 128237
Project ID: 133.005
Location: KOT

Reviewed by: _____

Reviewed by: _____

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TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-001	SCI-57 @ 4	32293	02/03/97	02/09/97	02/09/97	
128237-002	SCI-57 @ 7	32293	02/03/97	02/09/97	02/09/97	
128237-003	SCI-57 @ 10	32293	02/03/97	02/09/97	02/09/97	
128237-004	SCI-57 @ 13	32293	02/03/97	02/09/97	02/09/97	

Matrix: Soil

Analyte	Units	128237-001	128237-002	128237-003	128237-004
Diln Fac:		1	1	1	1
Gasoline	mg/Kg	<1	3.4YZ	<1	<1
Surrogate					
Trifluorotoluene	%REC	86	92	93	94
Bromobenzene	%REC	81	90	86	88

Y: Sample exhibits fuel pattern which does not resemble standard

Z: Sample exhibits unknown single peak or peaks

GC05 RTX1 TVH Chromatogram

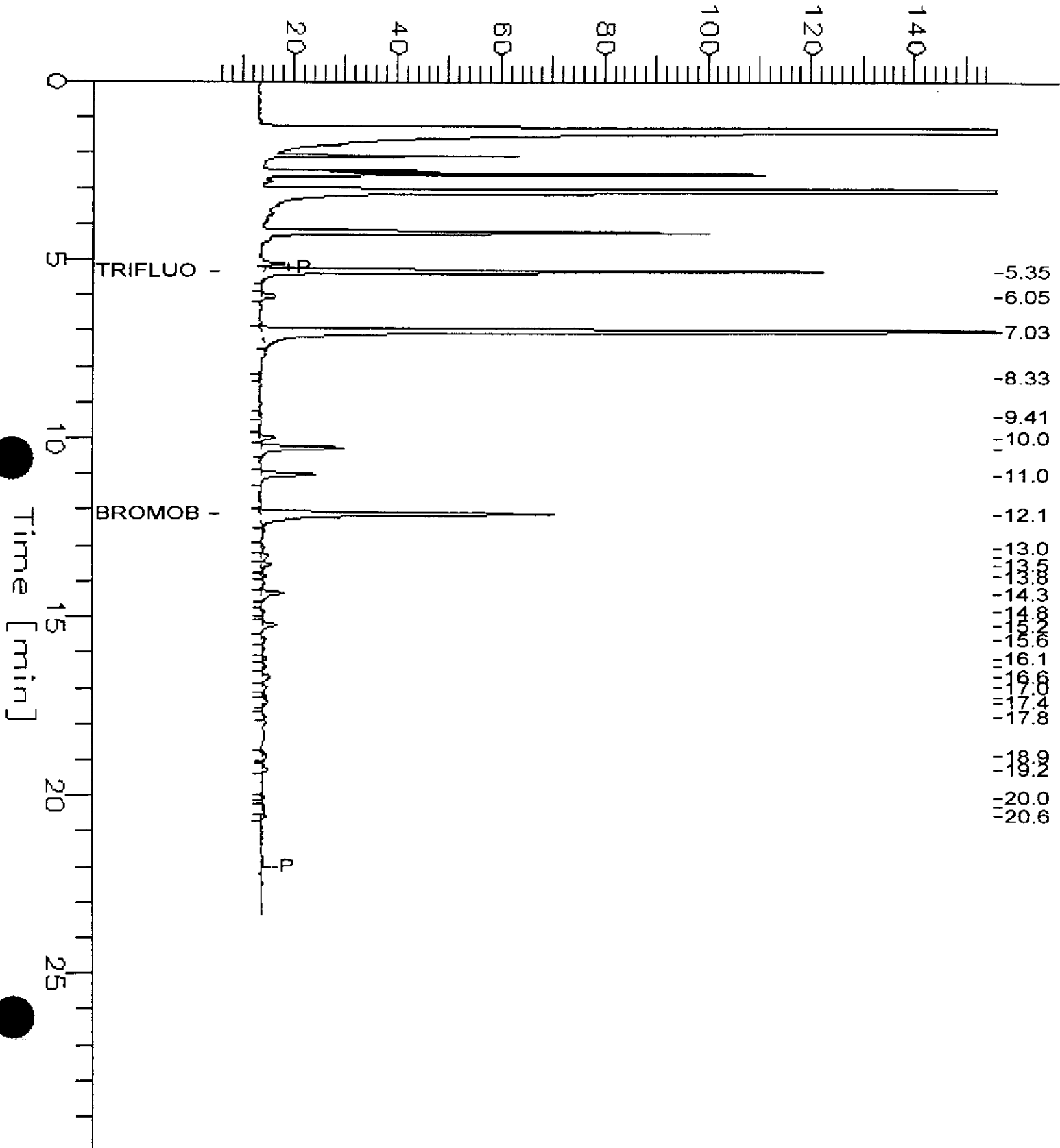
Sample Name : S,128237-002,32293,
FileName : G:\GC05\DATA\040H021.raw
Method : TVHBTXE
Start Time : 0.00 min
% Factor: -1.0

End Time : 30.00 min
Plot Offset: 6 mV

Sample #:
Date : 2/9/97 02:14 PM
Time of Injection: 2/9/97 01:49 PM
Low Point : 5.75 mV
High Point : 155.75 mV
Plot Scale: 150.0 mV

Page 1 of 1

Response [mV]



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-005	SCI-57 @ 22	32293	02/03/97	02/09/97	02/09/97	
128237-006	SCI-61 @ 4.5	32269	02/03/97	02/08/97	02/08/97	
128237-007	SCI-59 @ 6	32294	02/03/97	02/10/97	02/10/97	
128237-008	SCI-59 @ 10	32294	02/03/97	02/09/97	02/09/97	

Matrix: Soil

Analyte	Units	128237-005	128237-006	128237-007	128237-008
Diln Fac:		1	1	40	1
Gasoline	mg/Kg	<1	<1	330 YH	<1
Surrogate					
Trifluorotoluene	%REC	94	94	103	95
Bromobenzene	%REC	85	82	50	99

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard

GC04 TVH 'J' File (Rtx1,FID)

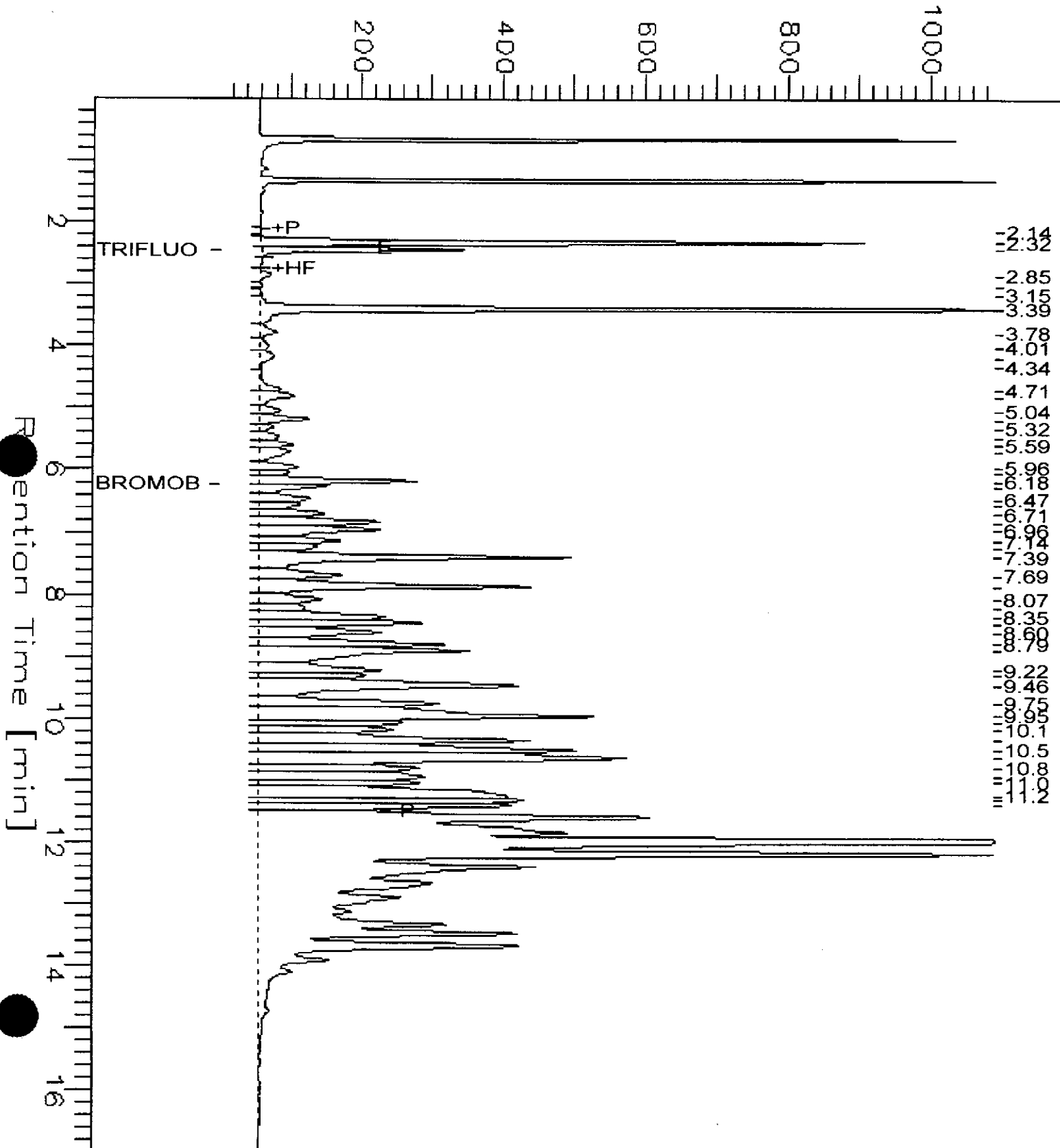
Sample Name : DL,128237-007,32294,
 FileName : G:\GC04\DATA\039J055.RAW
 Method :
 Start Time : 0.01 min
 Scale Factor: 0.0

End Time : 17.00 min
 Plot Offset: 2 mV

Sample #:
 Date : 2/11/97 09:39 PM
 Time of Injection: 2/10/97 03:19 AM
 Low Point : 2.27 mV
 Plot Scale: 1091.9 mV
 High Point : 1094.17 mV

Page 1 of 1

Response [mV]



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-009	SCI-59 @ 19	32294	02/03/97	02/09/97	02/09/97	
128237-010	SCI-60 @ 2	32294	02/03/97	02/09/97	02/09/97	
128237-011	SCI-60 @ 4	32294	02/03/97	02/09/97	02/09/97	
128237-012	SCI-60 @ 7	32294	02/03/97	02/09/97	02/09/97	

Matrix: Soil

Analyte	Units	128237-009	128237-010	128237-011	128237-012
Diln Fac:		1	1	1	1
Gasoline	mg/Kg	<1	<1	<1	<1
Surrogate					
Trifluorotoluene	%REC	96	91	86	95
Bromobenzene	%REC	108	95	98	106



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-013	SCI-60 @ 10	32294	02/03/97	02/09/97	02/09/97	
128237-014	SCI-60 @ 19	32294	02/03/97	02/09/97	02/09/97	
128237-015	SCI-56 @ 1	32294	02/03/97	02/09/97	02/09/97	

Matrix: Soil

Analyte	Units	128237-013	128237-014	128237-015
Diln Fac:		1	1	1
Gasoline	mg/Kg	<1	<1	<1
Surrogate				
Trifluorotoluene	%REC	96	93	88
Bromobenzene	%REC	108	99	92

GC05 RTX1 TVH Chromatogram

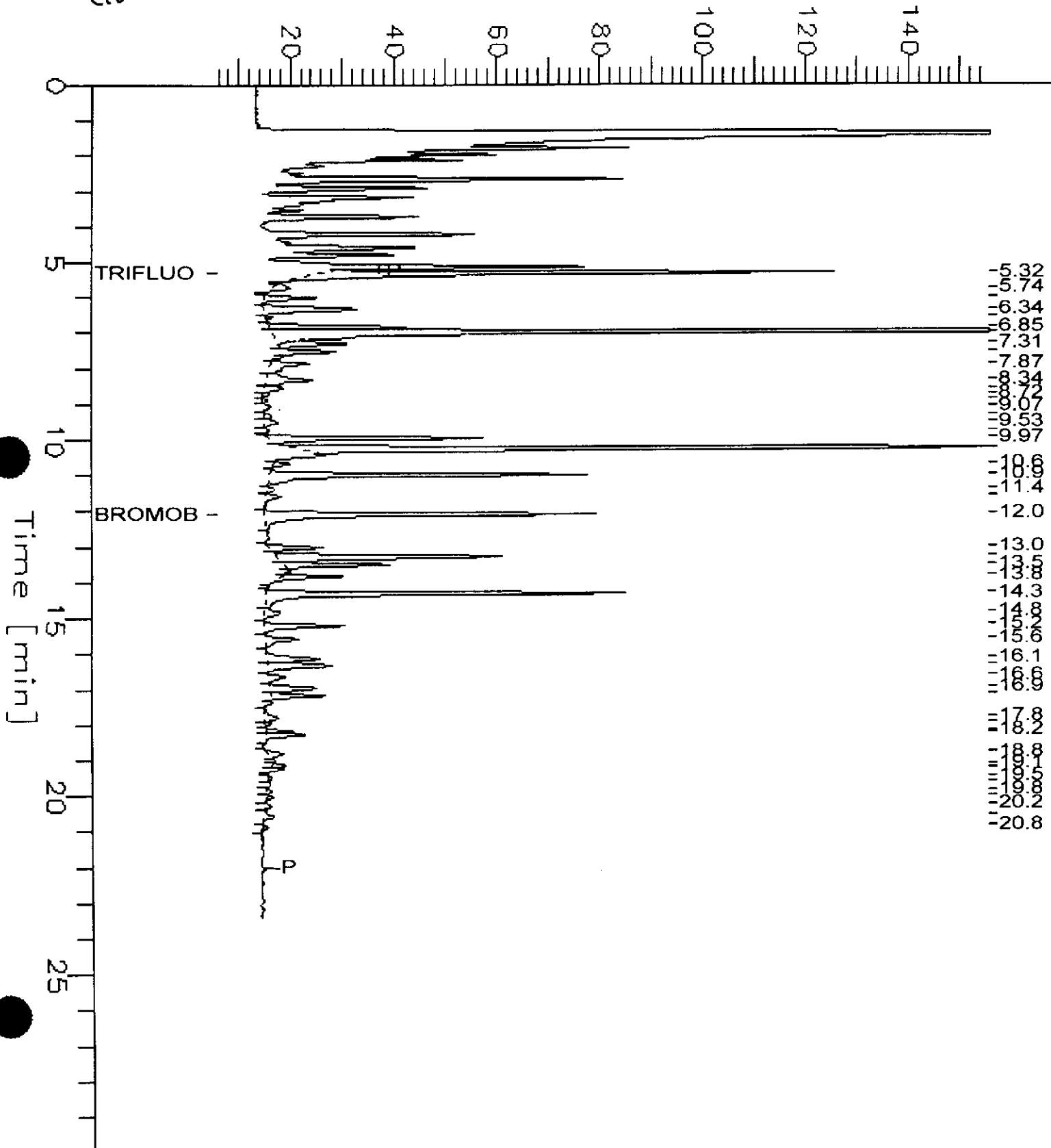
Sample Name : CCV,97WS3636,32269,
 FileName : G:\GC05\DATA\038H040.raw
 Method : TVHBTXE

Sample #: GAS
 Date : 2/9/97 12:16 AM
 Time of Injection: 2/8/97 11:52 PM
 Low Point : 5.87 mV
 High Point : 155.87 mV
 Plot Scale: 150.0 mV

Start Time : 0.00 min
 End Time : 30.00 min
 Plot Offset: 6 mV

Gasoline

Response [mV]





Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
Batch#: 32269
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/07/97

MB Lab ID: QC39700

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	88	52-127
Bromobenzene	81	45-140

Lab #: 128237

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons			
Client:	Subsurface Consultants	Analysis Method:	CA LUFT (EPA 8015M)
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/09/97
Batch#:	32293	Analysis Date:	02/09/97
Units:	mg/Kg		
Diln Fac:	1		

MB Lab ID: QC39785

Analyte	Result		
Gasoline	<1.0		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	91	52-127	
Bromobenzene	84	45-140	



Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
METHOD BLANK	
Matrix: Soil	Prep Date: 02/09/97
Batch#: 32294	Analysis Date: 02/09/97
Units: mg/Kg	
Diln Fac: 1	

MB Lab ID: QC39789

Analyte	Result	
Gasoline	<1.0	
Surrogate	%Rec	Recovery Limits
Trifluorotoluene	92	52-127
Bromobenzene	100	45-140



Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32269
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/07/97

LCS Lab ID: QC39698

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.74	10	97	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	94	52-127		
Bromobenzene	94	45-140		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 1 outside limits



Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date:	02/09/97	
Batch#: 32293	Analysis Date:	02/09/97	
Units: mg/Kg			
Diln Fac: 1			

LCS Lab ID: QC39783

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.53	10	95	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	93	52-127		
Bromobenzene	96	45-140		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 1 outside limits

Lab #: 128237

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
LABORATORY CONTROL SAMPLE	
Matrix: Soil	Prep Date: 02/09/97
Batch#: 32294	Analysis Date: 02/09/97
Units: mg/Kg	
Diln Fac: 1	

LCS Lab ID: QC39788

Analyte	Result	Spike Added	%Rec #	Limits
Gasoline	9.87	10	99	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	111	52-127		
Bromobenzene	109	45-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits

Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 01/29/97
Lab ID: 128185-021	Received Date: 01/30/97
Matrix: Soil	Prep Date: 02/09/97
Batch#: 32293	Analysis Date: 02/09/97
Units: mg/Kg dry weight	Moisture: 30%
Diln Fac: 1	

MS Lab ID: QC39786

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	14.29	<1.429	12.5	88	65-135
Surrogate	%Rec	Limits			
Trifluorotoluene	96	52-127			
Bromobenzene	101	45-140			

MSD Lab ID: QC39787

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	14.29	12.83	90	65-135	3	30
Surrogate	%Rec	Limits				
Trifluorotoluene	96	52-127				
Bromobenzene	100	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

Lab #: 128237

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: SCI-60 @ 2	Sample Date: 02/03/97
Lab ID: 128237-010	Received Date: 02/05/97
Matrix: Soil	Prep Date: 02/09/97
Batch#: 32294	Analysis Date: 02/09/97
Units: mg/Kg	
Diln Fac: 1	

MS Lab ID: QC39790

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Gasoline	10	<1	7.48	75	65-135
Surrogate	%Rec	Limits			
Trifluorotoluene	111	52-127			
Bromobenzene	121	45-140			

MSD Lab ID: QC39791

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Gasoline	10	7	70	65-135	7	30
Surrogate	%Rec	Limits				
Trifluorotoluene	110	52-127				
Bromobenzene	120	45-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: CA LUFT
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-001	SCI-57 @ 4	32342	02/03/97	02/11/97	02/22/97	
128237-002	SCI-57 @ 7	32342	02/03/97	02/11/97	02/25/97	
128237-003	SCI-57 @ 10	32342	02/03/97	02/11/97	02/22/97	
128237-004	SCI-57 @ 13	32342	02/03/97	02/11/97	02/25/97	

Matrix: Soil

Analyte	Units	128237-001	128237-002	128237-003	128237-004
Diln Fac:		20	3	1	1
Diesel C12-C22	mg/Kg	110 YH	87 YH	9.5YH	21 YH
Motor Oil C22-C50	mg/Kg	2200 YH	330 H	150 YLH	66 YH
Surrogate					
Hexacosane	%REC	DO	890 *	215.9451*	103

* Values outside of QC limits

DO: Surrogate diluted out

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

L: Lighter hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-005	SCI-57 @ 22	32342	02/03/97	02/11/97	02/22/97	
128237-006	SCI-61 @ 4.5	32342	02/03/97	02/11/97	02/22/97	
128237-007	SCI-59 @ 6	32342	02/03/97	02/11/97	02/22/97	
128237-008	SCI-59 @ 10	32342	02/03/97	02/11/97	02/22/97	

Matrix: Soil

Analyte	Units	128237-005	128237-006	128237-007	128237-008
Diln Fac:		1	1	1	1
Diesel C12-C22	mg/Kg	5.1YH	54 YH	61 YLH	4.5Y
Motor Oil C22-C50	mg/Kg	64 YH	200 LH	93 YLH	57 YH
Surrogate					
Hexacosane	%REC	105	94	97	101

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard
 L: Lighter hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-009	SCI-59 @ 19	32342	02/03/97	02/11/97	02/22/97	
128237-010	SCI-60 @ 2	32342	02/03/97	02/11/97	02/22/97	
128237-011	SCI-60 @ 4	32342	02/03/97	02/11/97	02/22/97	
128237-012	SCI-60 @ 7	32342	02/03/97	02/11/97	02/22/97	

Matrix: Soil

Analyte	Units	128237-009	128237-010	128237-011	128237-012
Diln Fac:		1	1	1	1
Diesel C12-C22	mg/Kg	8.8YH	1.6YH	3.2YH	<1
Motor Oil C22-C50	mg/Kg	71 YH	37 YH	28 YH	14 YH
Surrogate					
Hexacosane	%REC	95	85	86	79

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-013	SCI-60 @ 10	32342	02/03/97	02/11/97	02/22/97	
128237-014	SCI-60 @ 19	32342	02/03/97	02/11/97	02/22/97	
128237-015	SCI-56 @ 1	32342	02/03/97	02/11/97	02/22/97	
128237-016	SCI-56 @ 3	32342	02/03/97	02/11/97	02/22/97	

Matrix: Soil

Analyte	Units	128237-013	128237-014	128237-015	128237-016
Diln Fac:		1	1	1	1
Diesel C12-C22	mg/Kg	11 YH	10 YH	25 YH	5.2YH
Motor Oil C22-C50	mg/Kg	590 YH	76 YH	250 H	48 YH
Surrogate					
Hexacosane	%REC	96	97	88	88

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-017	SCI-56 @ 11	32342	02/03/97	02/11/97	02/22/97	
128237-018	SCI-58 @ SURFACE	32342	01/31/97	02/11/97	02/22/97	

Matrix: Soil

Analyte	Units	128237-017	128237-018
Diln Fac:		1	1
Diesel C12-C22	mg/Kg	20 YH	12 YH
Motor Oil C22-C50	mg/Kg	91 H	39 H
Surrogate			
Hexacosane	%REC	94	68

Y: Sample exhibits fuel pattern which does not resemble standard
 H: Heavier hydrocarbons than indicated standard

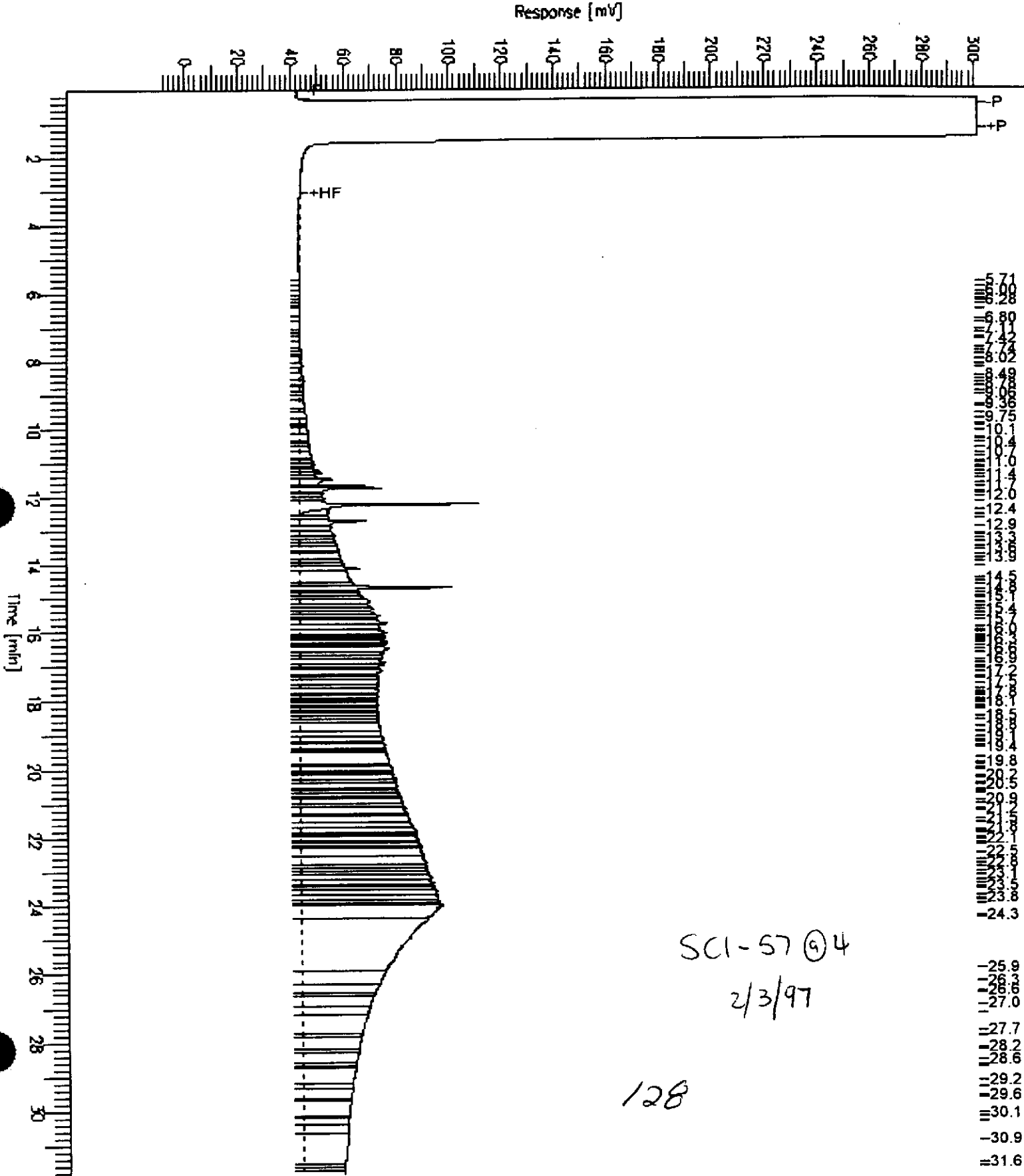
GC15 Channel B TEH

Sample Name : 128237-001,32342
 FileName : G:\GC15\CHB\051B043.RAW
 Method : B052TEH.MTH
 Start Time : 0.01 min
 Scale Factor: 0.0

End Time : 31.91 min
 Plot Offset: -9 mV

Sample #: 32342
 Date : 2/24/97 02:26 PM
 Time of Injection: 2/22/97 01:34 AM
 Low Point : -9.35 mV
 Plot Scale: 311.0 mV

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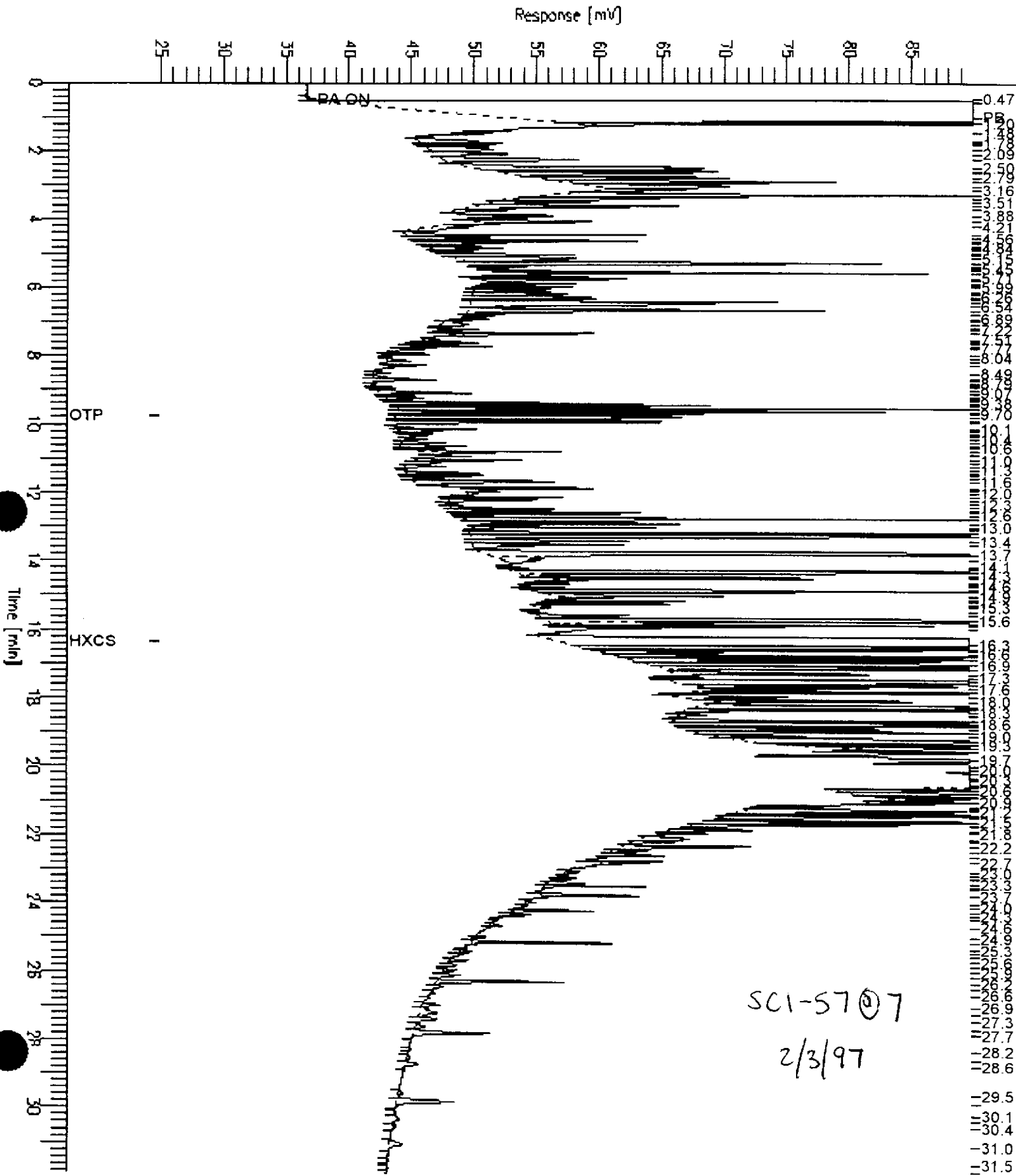


Chromatogram

Sample Name : 128237-002, 32342
FileName : G:\GC13\CHA\055A014.raw
Method : DUAL
Start Time : 0.00 min
Factor : 0.0

End Time : 31.90 min
Plot Offset : 25 mV

Sample #: 32342
Date : 2/25/97 12:41 AM
Time of Injection: 2/25/97 12:00 AM
Low Point : 25.00 mV
High Point : 90.00 mV
Plot Scale: 45.0 mV



GC15 Channel B Surrogate

Sample Name : 128237-003,32342

FileName : G:\GC15\CHB\051B048.raw

Method : SNGL

Start Time : 0.00 min

Gain Factor: 0.0

End Time : 31.90 min

Plot Offset: 32 mV

Sample #: 32342

Date : 2/22/97 05:39 AM

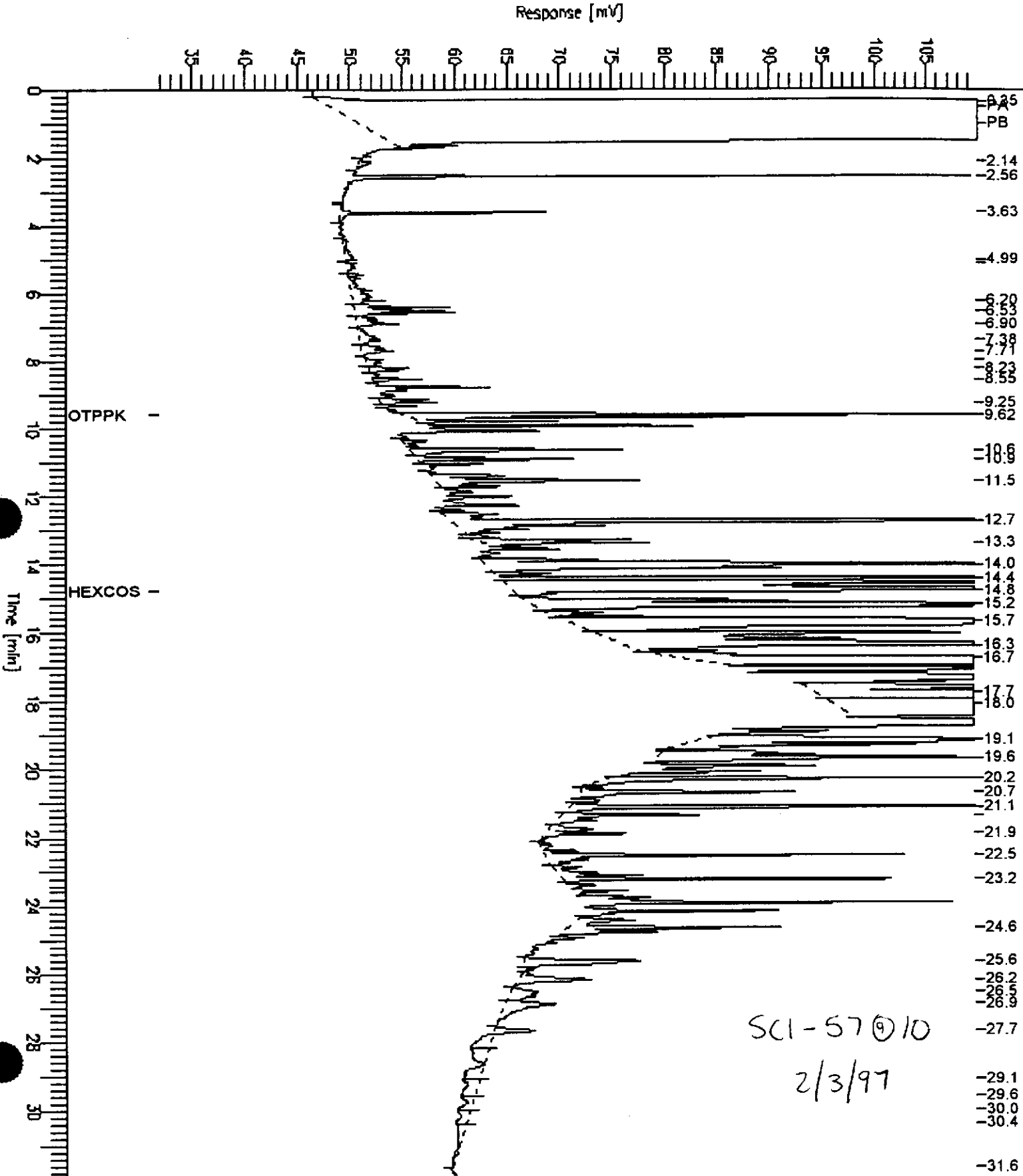
Time of Injection: 2/22/97 05:07 AM

Low Point : 32.00 mV

Plot Scale: 78.0 mV

Page 1 of 1

High Point : 110.00 mV



Chromatogram

Sample Name : 128237-004, 32342

FileName : G:\GC13\CHA\055A015.RAW

Method : ATEH053.MTH

Start Time : 0.01 min

Scale Factor: 0.0

End Time : 31.91 min

Plot Offset: -2 mV

Sample #: 32342

Date : 2/25/97 11:10 AM

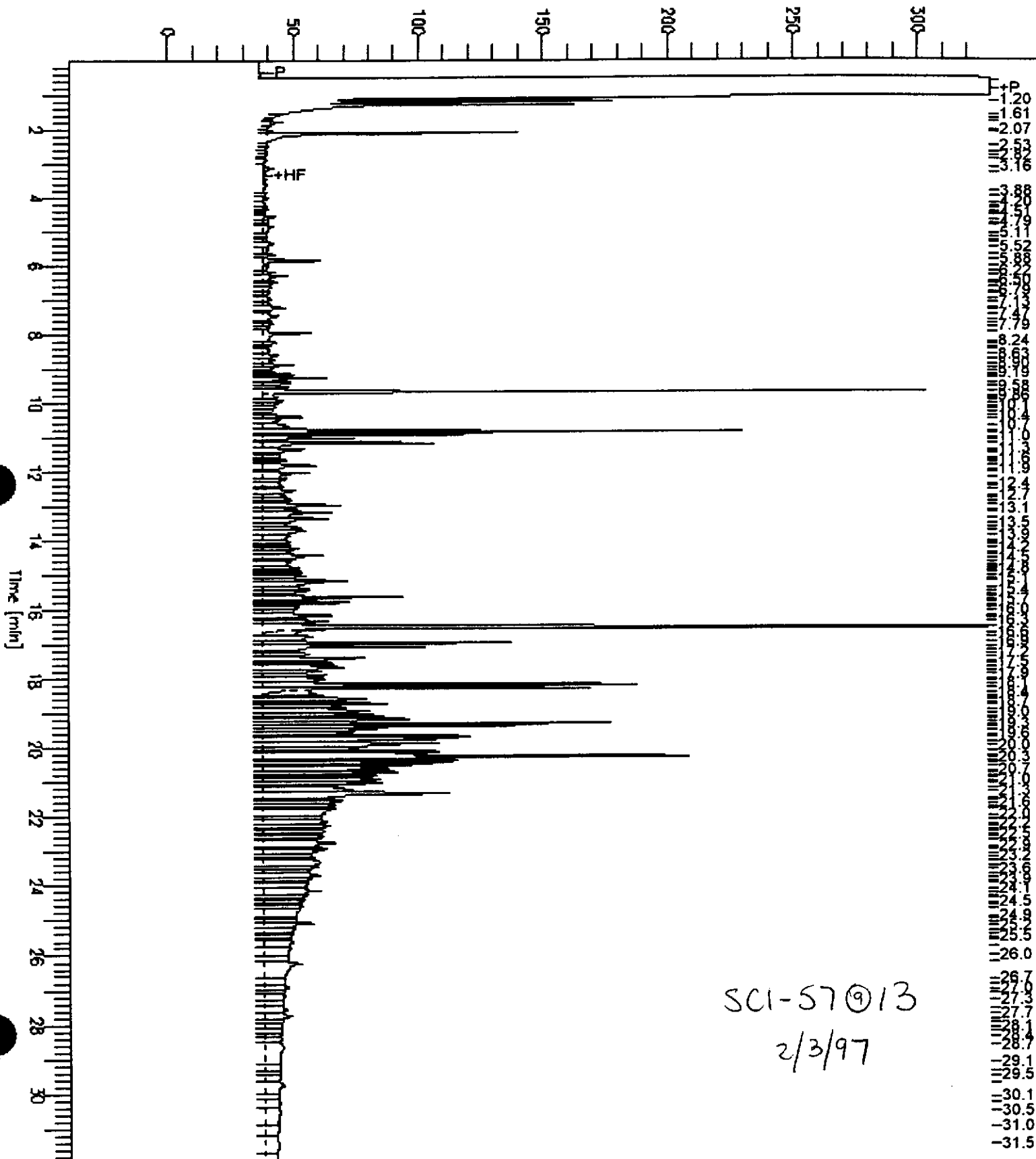
Time of Injection: 2/25/97 12:52 AM

Low Point : -1.62 mV

Plot Scale: 331.1 mV

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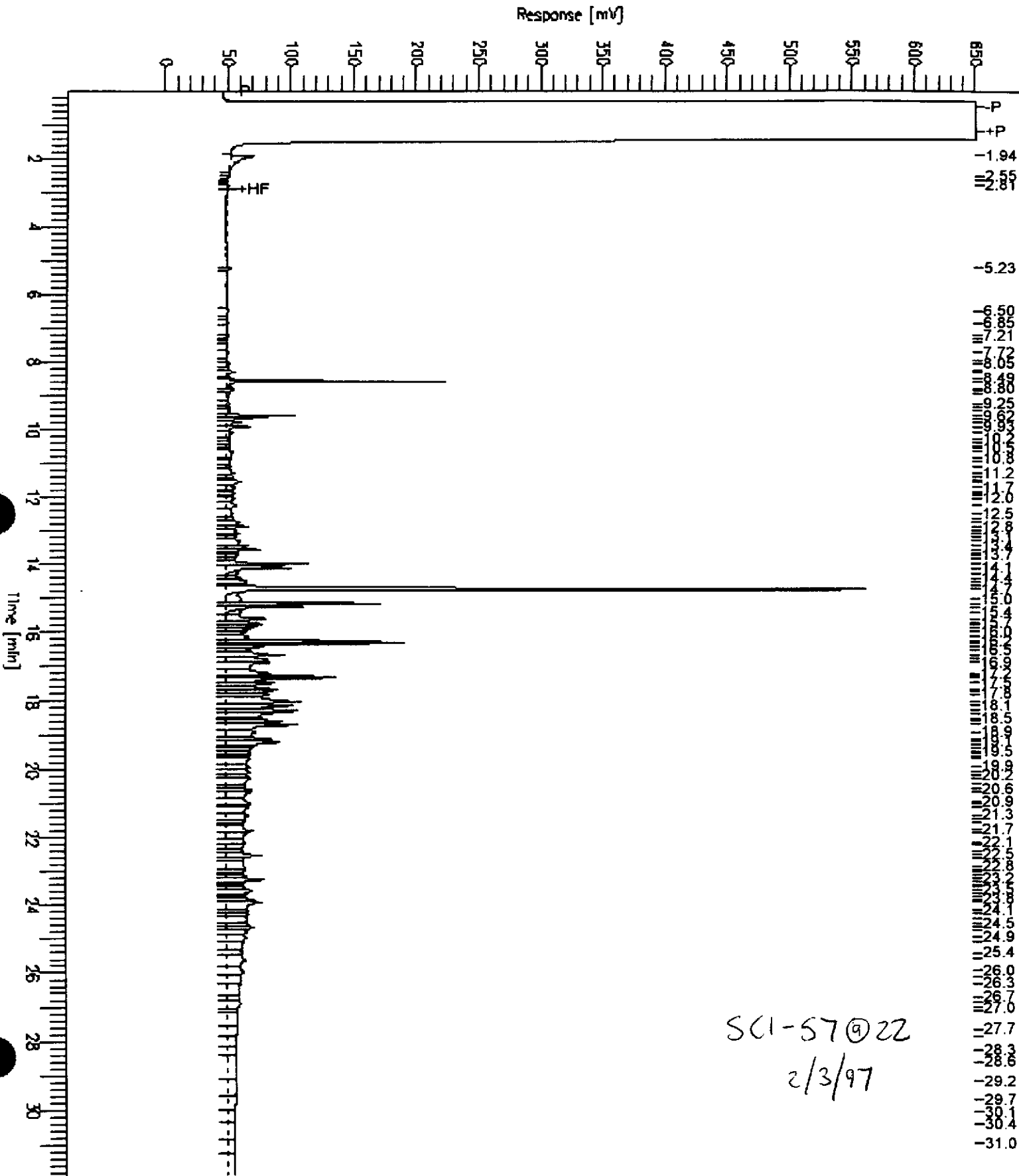
Response [mV]



GC15 Channel B TEH

Sample Name : 128237-005,32342
 FileName : G:\GC15\CHB\051B050.RAW
 Method : B052TEH.MTH
 Start Time : 0.01 min
 Gain Factor : 0.0

Sample #: 32342
 Date : 2/24/97 02:53 PM
 Time of Injection: 2/22/97 06:33 AM
 Low Point : -4.59 mV
 High Point : 650.83 mV
 Plot Scale: 655.4 mV
 End Time : 31.91 min
 Plot Offset: -5 mV



SCI-57@22
 2/3/97

GC15 Channel B TEH

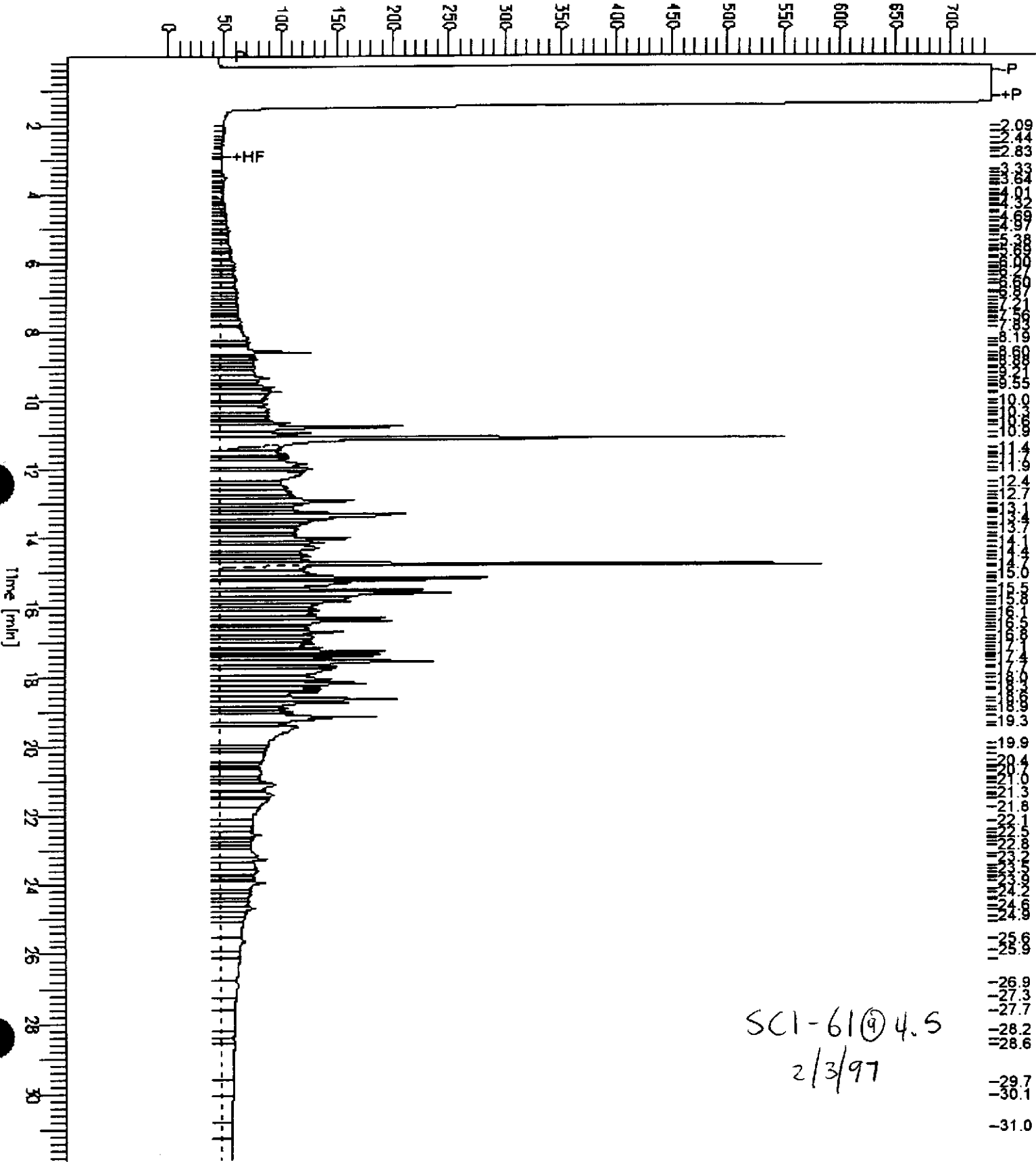
Sample Name : 128237-006, 32342
FileName : G:\GC15\CHB\0518051.RAW
Method : B052TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset : -7 mV

Sample #: 32342
Date : 2/24/97 02:54 PM
Time of Injection: 2/22/97 07:16 AM
Low Point : -6.61 mV
High Point : 736.68 mV
Plot Scale: 743.3 mV

Page 1 of 1

Response [mV]



GC15 Channel B TEH

Sample Name : 128237-007,32342

Sample #: 32342

Page 1 of 1

FileName : G:\GC15\CHB\051B052.RAW

Date : 2/24/97 01:33 PM

Method : B052TEH.MTH

Time of Injection: 2/22/97 07:59 AM

Start Time : 0.01 min

End Time : 31.91 min

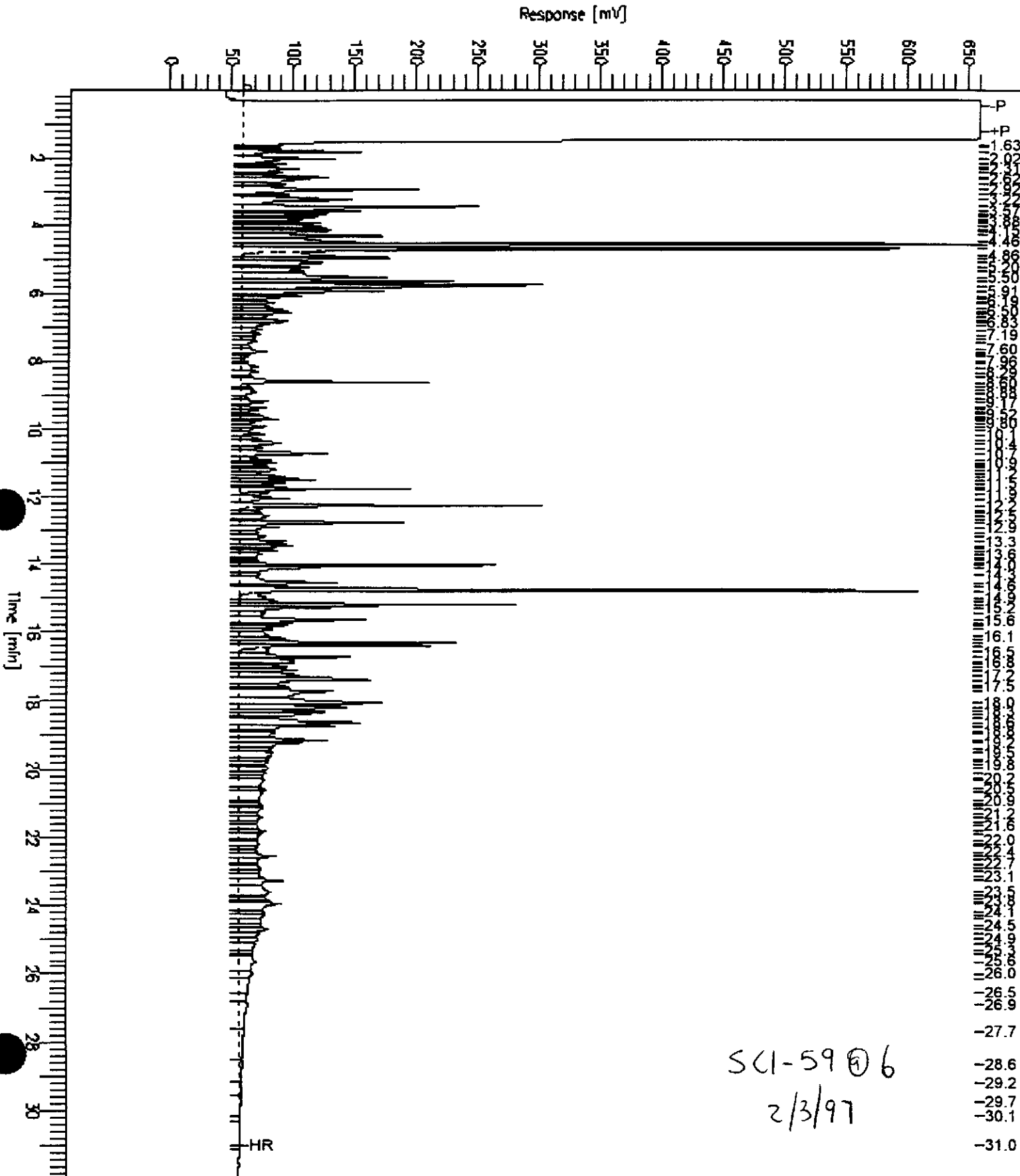
Low Point : -5.97 mV

High Point : 660.43 mV

Scale Factor: 0.0

Plot Offset: -6 mV

Plot Scale: 666.4 mV



GC15 Channel B TEH

Sample Name : 128237-008,32342
 FileName : G:\GC15\CHB\051B053.RAW
 Method : B052TEH.MTH

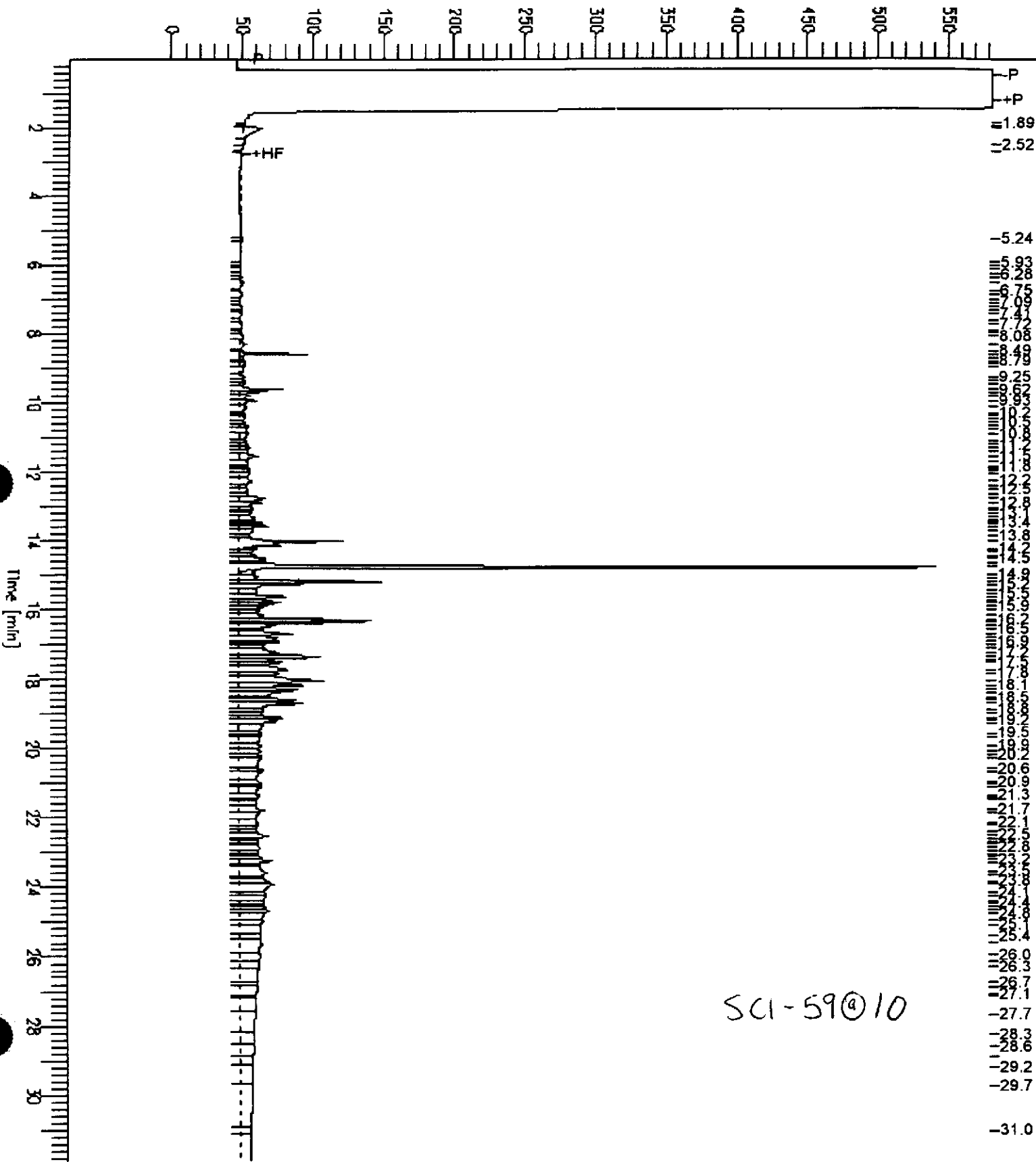
Sample #: 32342
 Date : 2/24/97 02:56 PM
 Time of Injection: 2/22/97 08:41 AM
 Low Point : -5.51 mV
 Plot Scale: 587.6 mV

Page 1 of 1

Start Time : 0.01 min
 End Time : 31.91 min
 Scale Factor: 0.0
 Plot Offset: -6 mV

High Point : 582.06 mV

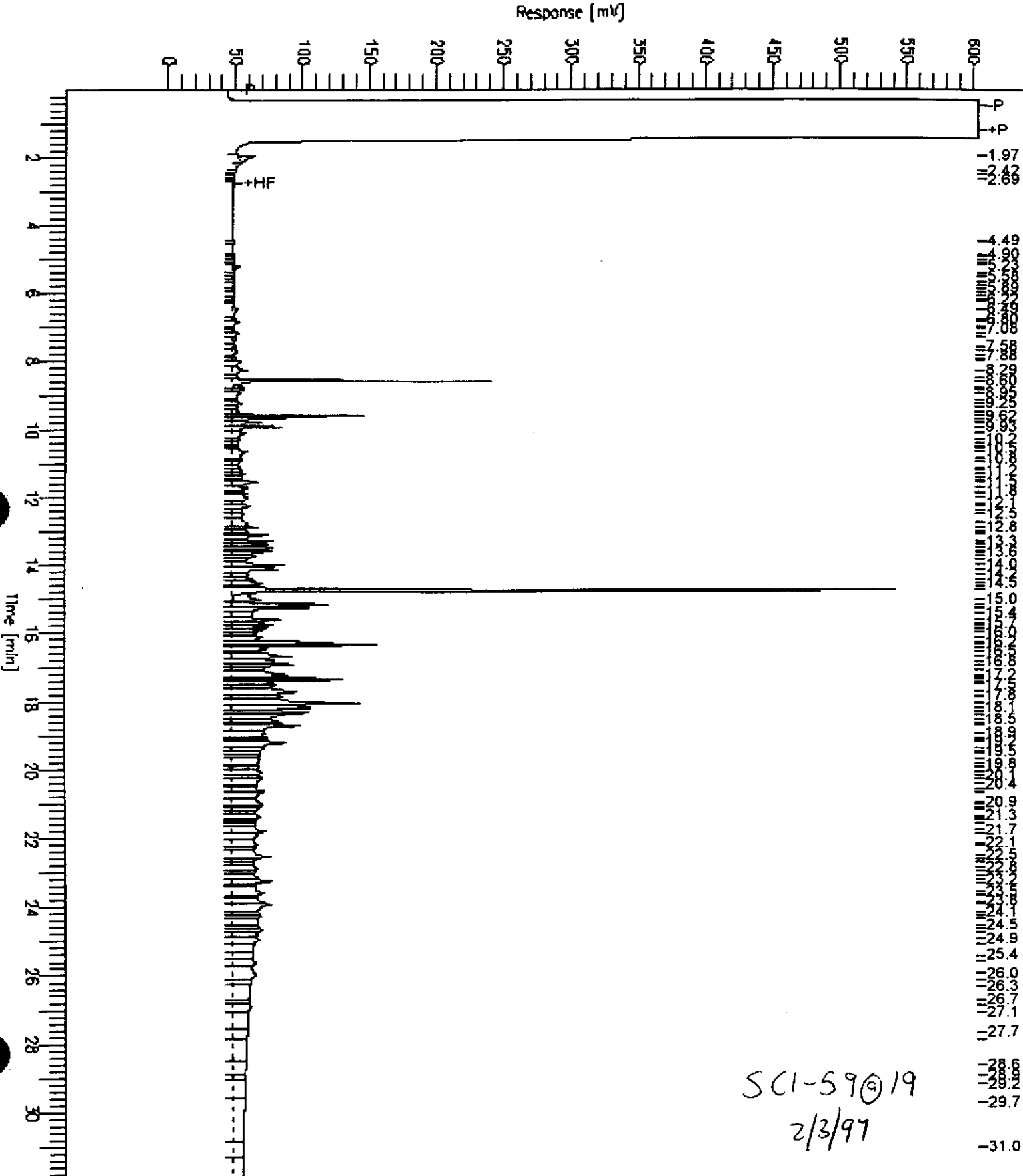
Response [mV]



GC15 Channel B TEH

Sample Name : 128237-009, 32342
 FileName : G:\GC15\CHB\051B054.RAW
 Method : B052TEH.MTH
 Start Time : 0.01 min
 Scale Factor : 0.0

Sample #: 32342
 Date : 2/24/97 02:57 PM
 Time of Injection: 2/22/97 09:24 AM
 Low Point : -6.63 mV
 High Point : 604.43 mV
 Plot Scale: 611.1 mV



SCI-59019
2/3/97

GC15 Channel B TEH

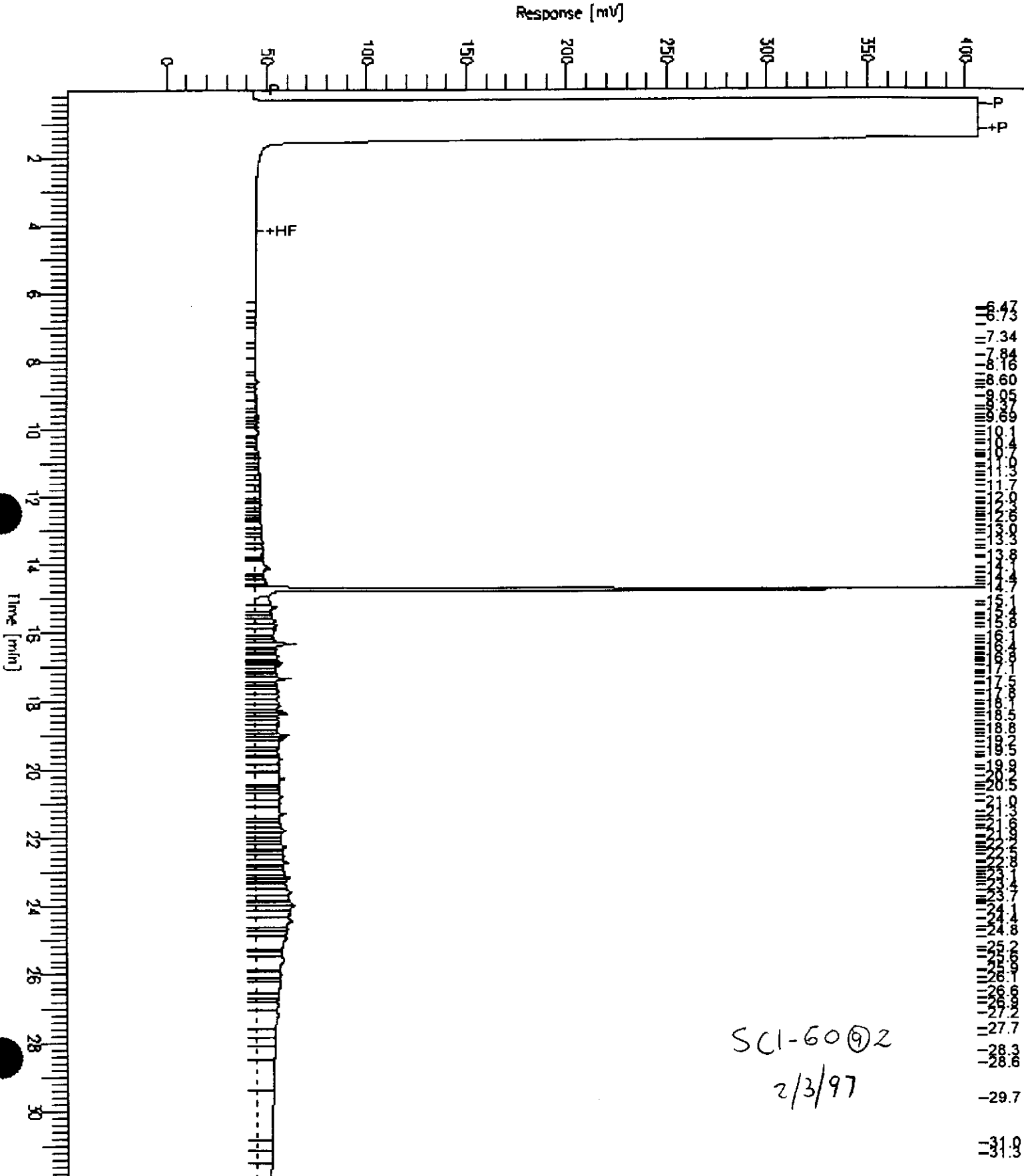
Sample Name : 128237-01032342
FileName : G:\GC15\CHB\051B055.RAW
Method : B052TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset : -3 mV

Sample #: 32342
Date : 2/24/97 02:58 PM
Time of Injection: 2/22/97 10:07 AM
Low Point : -3.11 mV
Plot Scale: 409.7 mV

Page 1 of 1

High Point : 406.58 mV



GC15 Channel B TEH

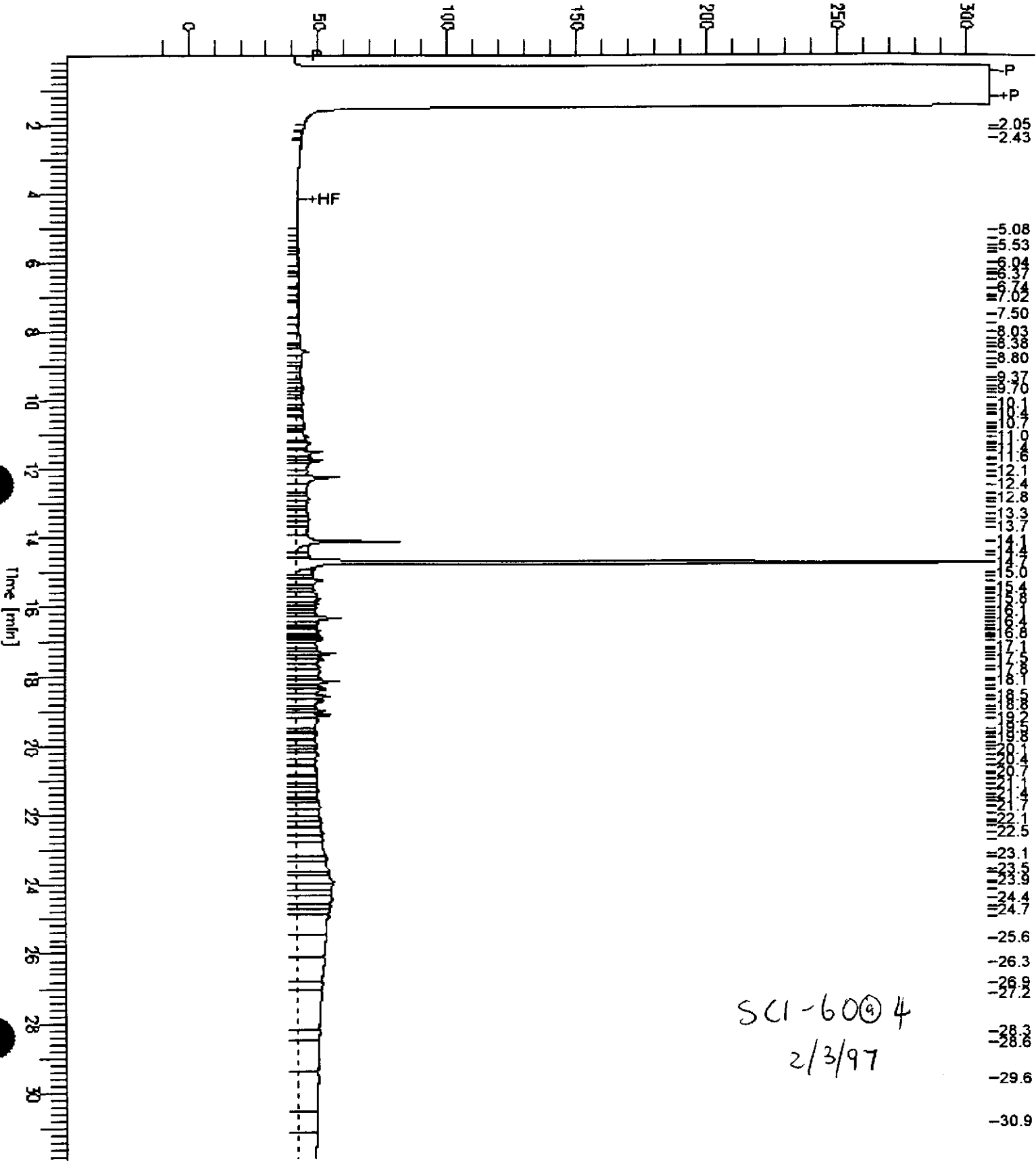
Sample Name : 128237-011, 32342
 FileName : G:\GC15\CHB\051B056.RAW
 Method : B050TEH.MTH
 Split Time : 0.01 min
 Split Factor : 0.0

Sample #: 32342
 Date : 2/24/97 02:59 PM
 Time of Injection: 2/22/97 10:50 AM
 Low Point : -10.48 mV
 Plot Offset: -10 mV

Page 1 of 1

High Point : 309.56 mV

Response [mV]



GC15 Channel B Surrogate

Sample Name : 128237-012, 32342

Sample #: 32342

Page 1 of 1

FileName : G:\GC15\CHB\051B057.raw

Date : 2/22/97 12:05 PM

Method : SNGL

Time of Injection: 2/22/97 11:33 AM

Start Time : 0.00 min

End Time : 31.90 min

Low Point : 32.00 mV

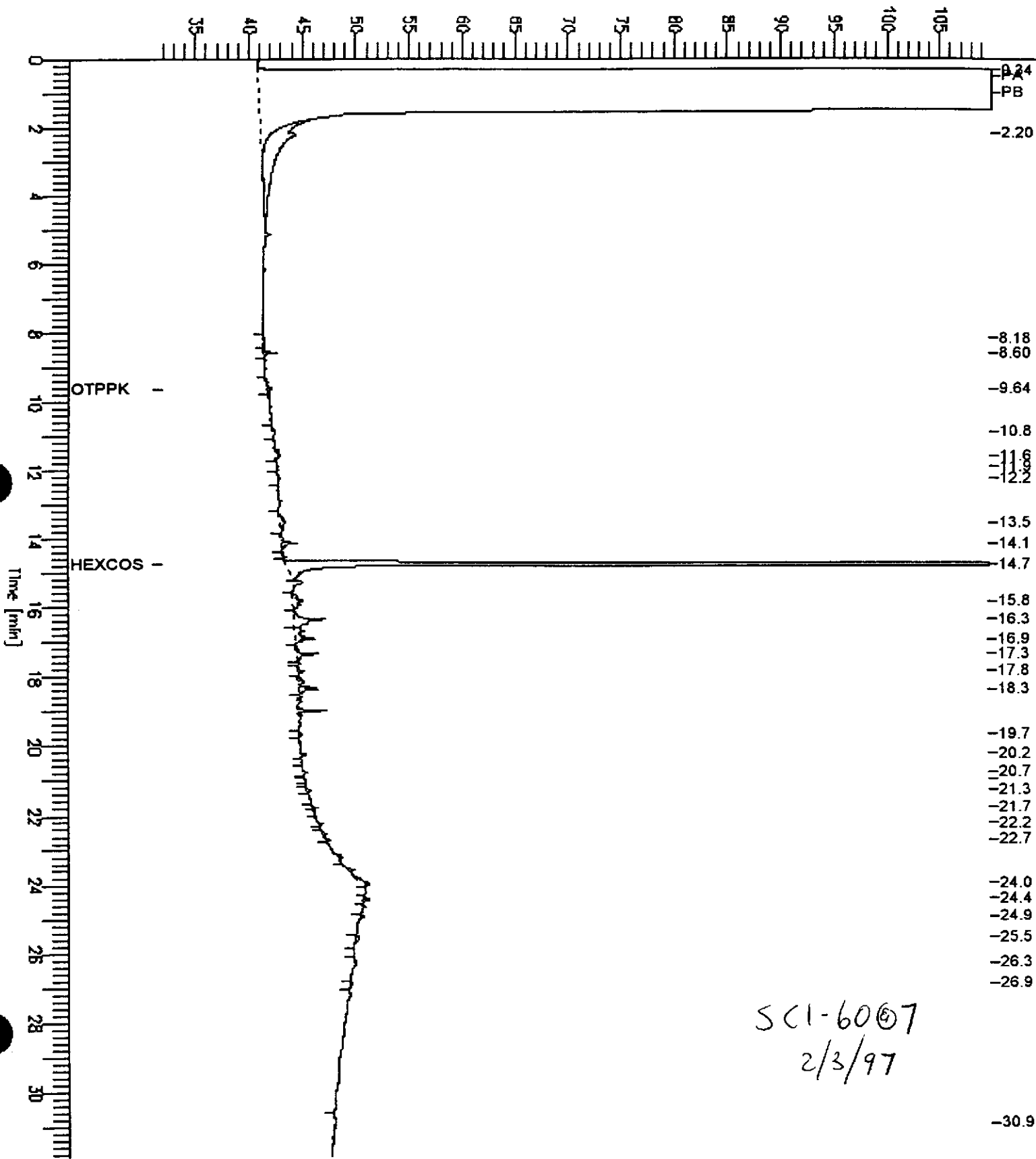
High Point : 110.00 mV

Gain Factor: 0.0

Plot Offset: 32 mV

Plot Scale: 78.0 mV

Response [mV]



SCI-6007
2/3/97

GC15 Channel B TEH

Sample Name : 128237-013,32342
File Name : G:\GC15\CHBA\051B061.RAW
Method : B052TEH.MTH
Start Time : 0.01 min
Scale Factor : 0.0

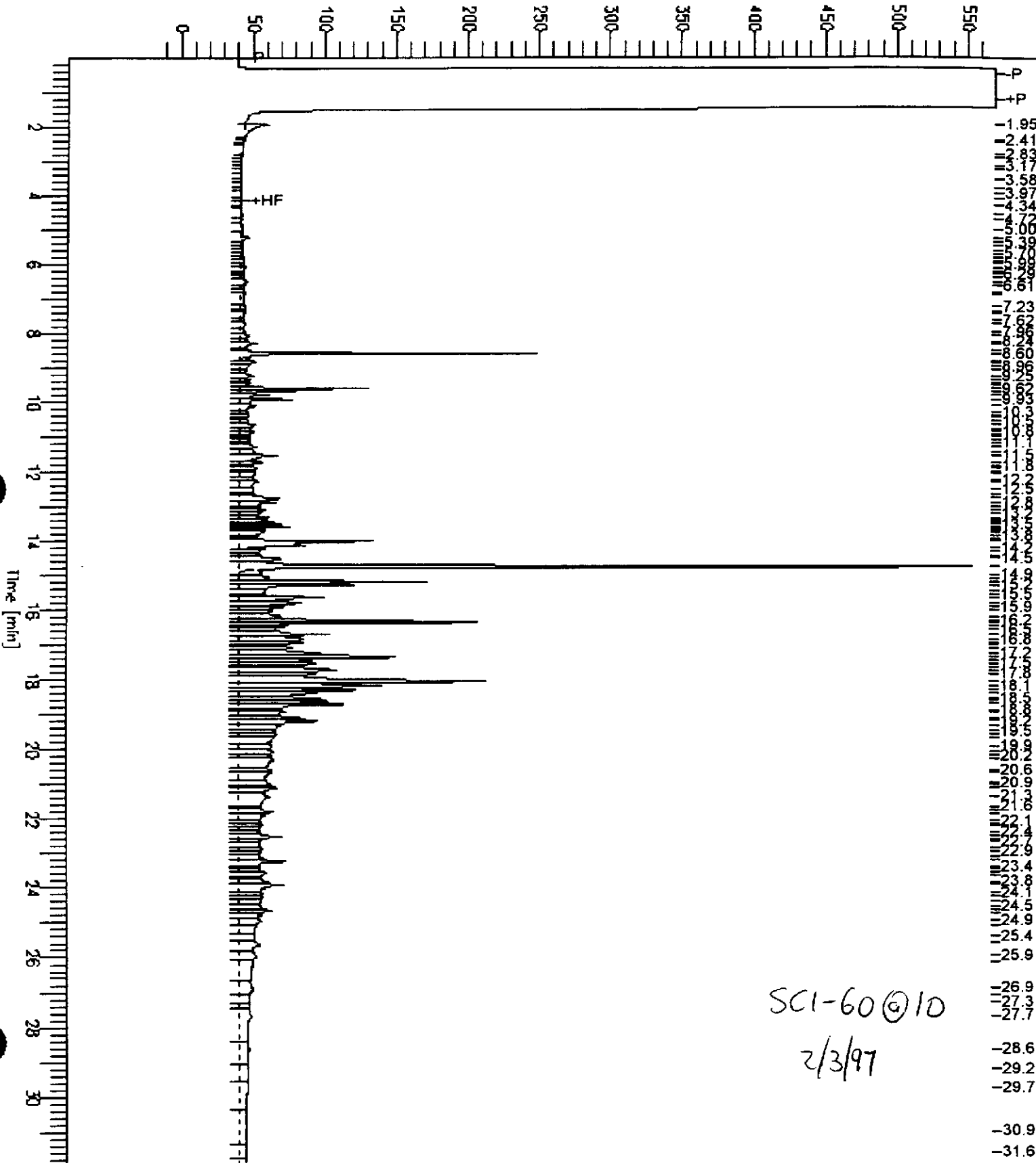
End Time : 31.91 min
Plot Offset : -13 mV

Sample #: 32342
Date : 2/24/97 03:01 PM
Time of Injection: 2/22/97 02:24 PM
Low Point : -13.00 mV
Plot Scale: 582.7 mV

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High Point : 569.66 mV

Response [mV]



SCI-60 @ 10

2/3/97

GC15 Channel B TEH

Sample Name : 128237-014,32342

Sample #: 32342

Page 1 of 1

FileName : G:\GC15\CHB\051B062.RAW

Date : 2/24/97 03:02 PM

Method : B052TEH.MTH

Time of Injection: 2/22/97 03:07 PM

Start Time : 0.01 min

End Time : 31.91 min

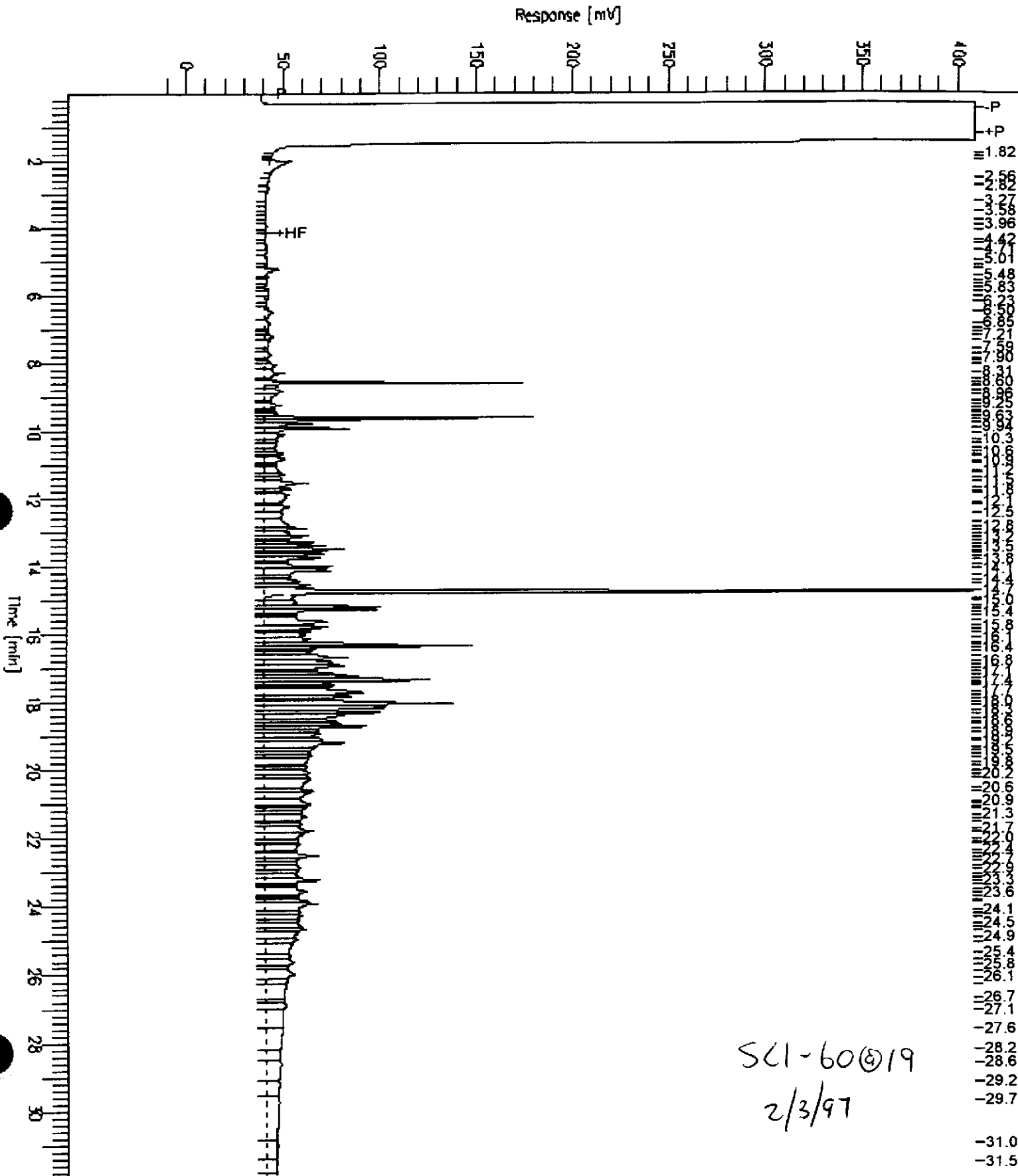
Low Point : -13.25 mV

High Point : 409.06 mV

Scale Factor: 0.0

Plot Offset: -13 mV

Plot Scale: 422.3 mV



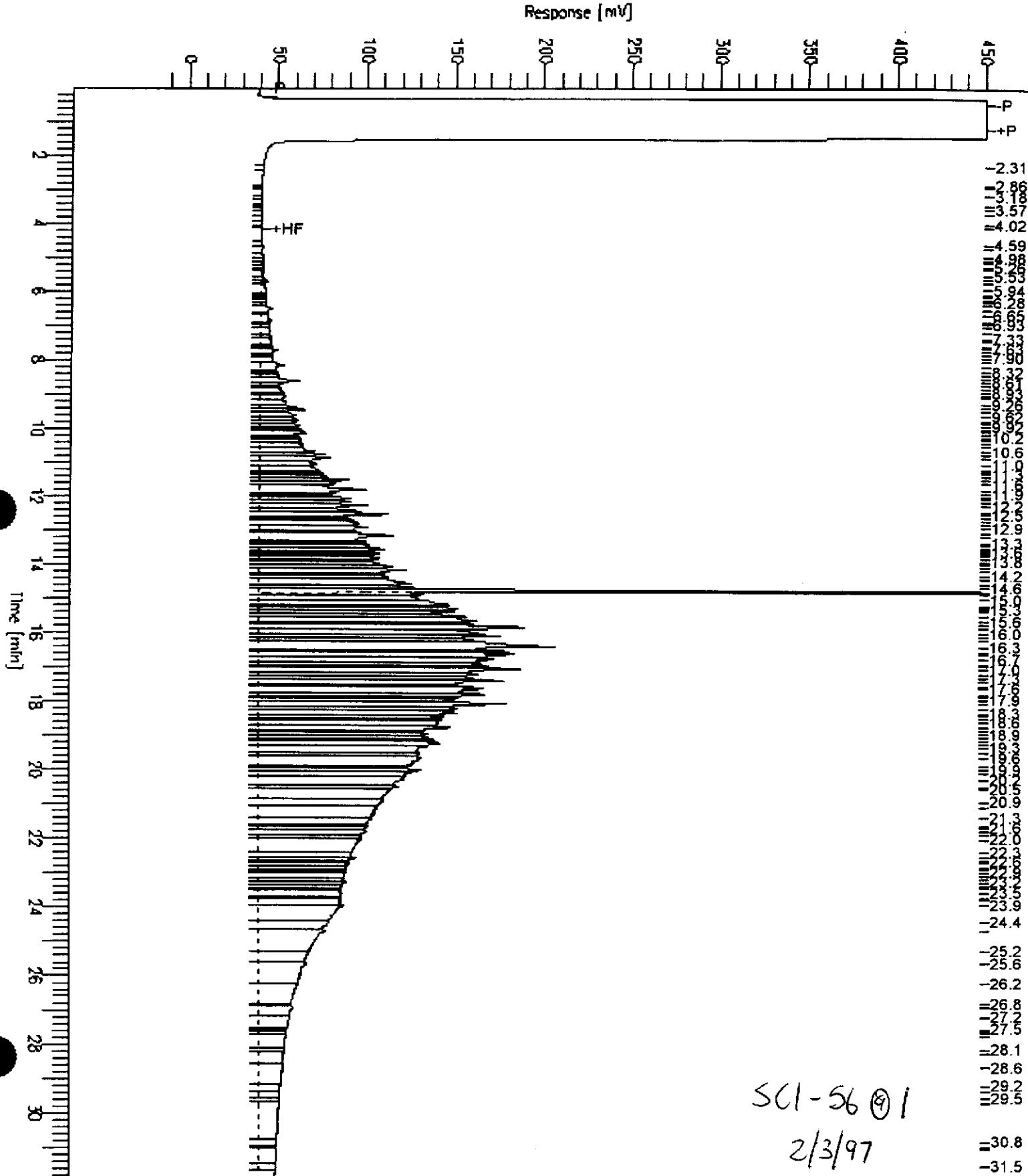
SC1-60@19
2/3/97

GC15 Channel B TEH

Sample Name : 128237-015, 32342
FileName : G:\GC15\CHB\051B063.RAW
Method : B052TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset : -13 mV

Sample #: 32342
Date : 2/24/97 03:02 PM
Time of Injection: 2/22/97 03:50 PM
Low Point : -13.22 mV
High Point : 450.29 mV
Plot Scale: 463.5 mV



SCI-56 (9) 1
2/3/97

GC15 Channel B TEH

Sample Name : 128237-016, 32342

Sample #: 32342

Page 1 of 1

FileName : G:\GC15\CHB\051B064.RAW

Date : 2/24/97 03:03 PM

Method : 8052TEH.MTH

Time of Injection: 2/22/97 04:33 PM

Start Time : 0.01 min

End Time : 31.91 min

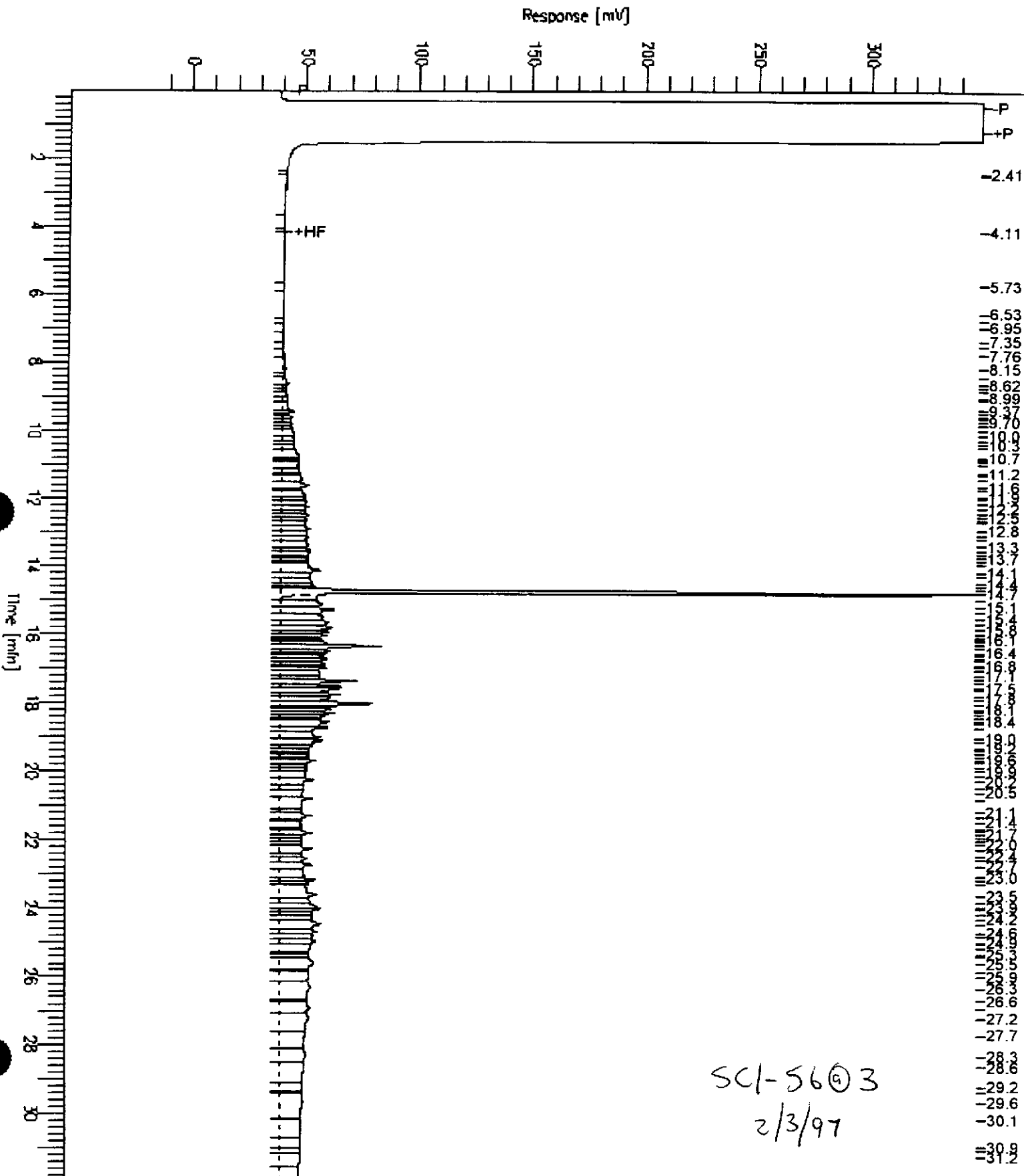
Low Point : -13.02 mV

High Point : 349.42 mV

Gain Factor: 0.0

Plot Offset: -13 mV

Plot Scale: 362.4 mV



SC1-5603
2/3/97

GC15 Channel B TEH

Sample Name : 128237-017, 32342

Sample #: 32342

Page 1 of 1

FileName : G:\GC15\CHB\051B065.RAW

Date : 2/24/97 03:04 PM

Method : B052TEH.MTH

Time of Injection: 2/22/97 05:15 PM

Start Time : 0.01 min

End Time : 31.91 min

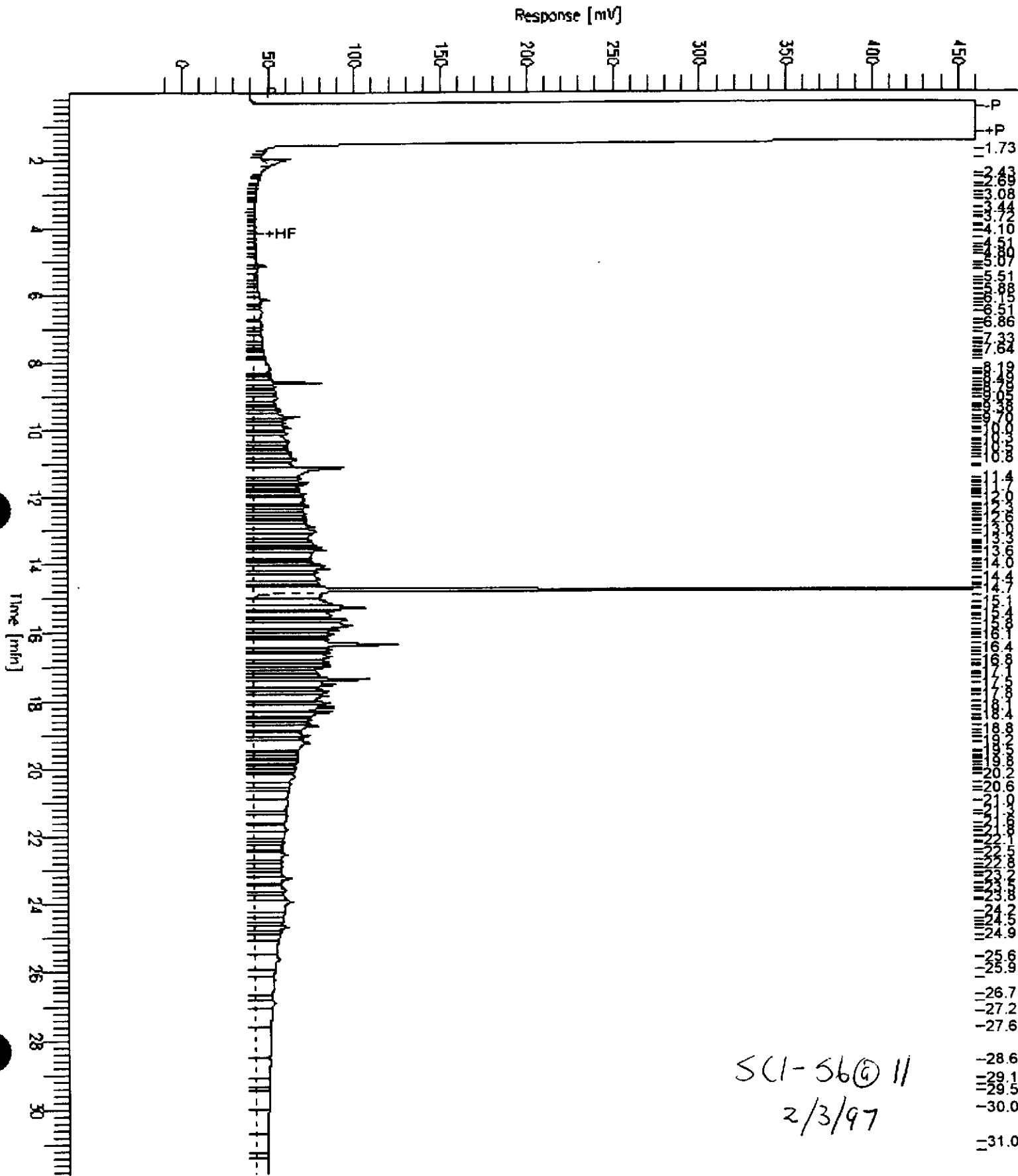
Low Point : -11.74 mV

High Point : 460.25 mV

Gain Factor: 0.0

Plot Offset: -12 mV

Plot Scale: 472.0 mV

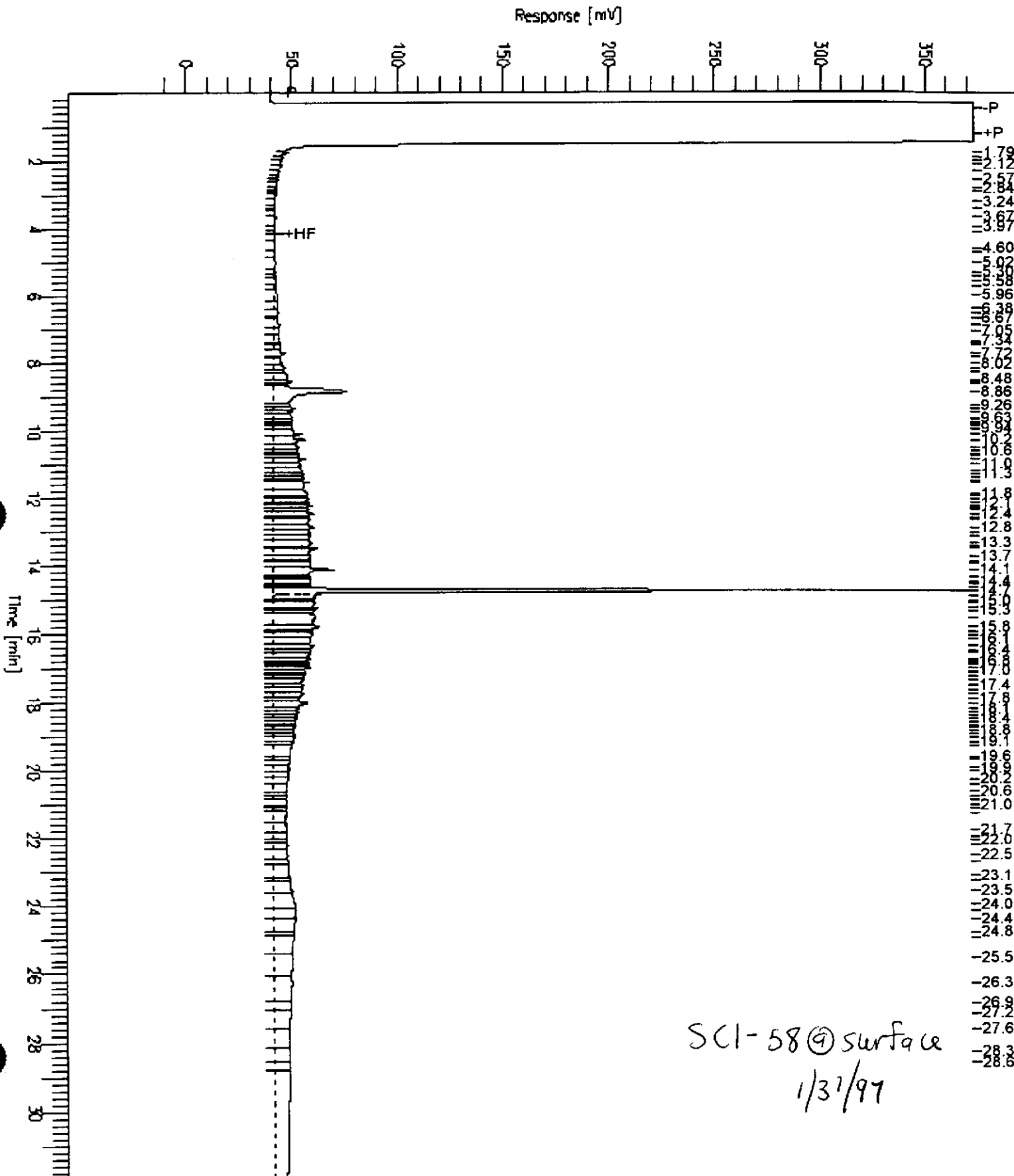


GC15 Channel B TEH

Sample Name : 128237-018,32342
 FileName : G:\GC15\CHBA051B066.RAW
 Method : B052TEH.MTH
 Start Time : 0.01 min
 Scale Factor : 0.0

End Time : 31.91 min
 Plot Offset : -12 mV

Sample #: 32342
 Date : 2/24/97 03:05 PM
 Time of Injection: 2/22/97 05:58 PM
 Low Point : -11.54 mV
 High Point : 373.42 mV
 Plot Scale : 385.0 mV



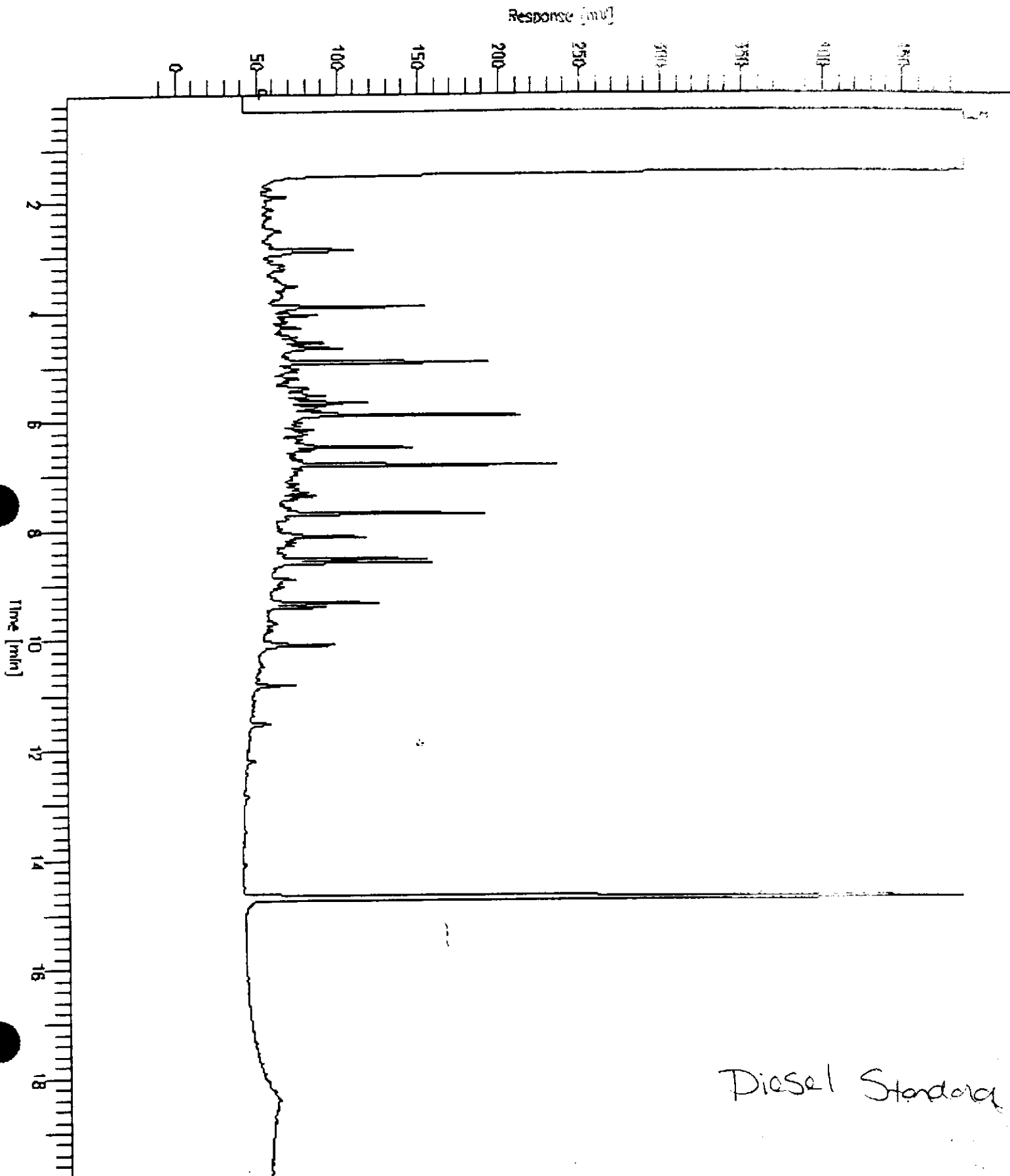
GC15 Channel B TEH

Sample Name : CCV, 97WS3659, DS
FileName : G:\GC15\CHB\0518030.RAW
Method : B052TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 19.80 min
Plot Offset : -10 mV

Sample #: 500MG/L
Date : 2/24/97 10:50 AM
Time of Injection: 2/21/97 02:16 PM
Low Point : -10.35 mV
High Point : 488.54 mV
Plot Scale: 498.9 mV

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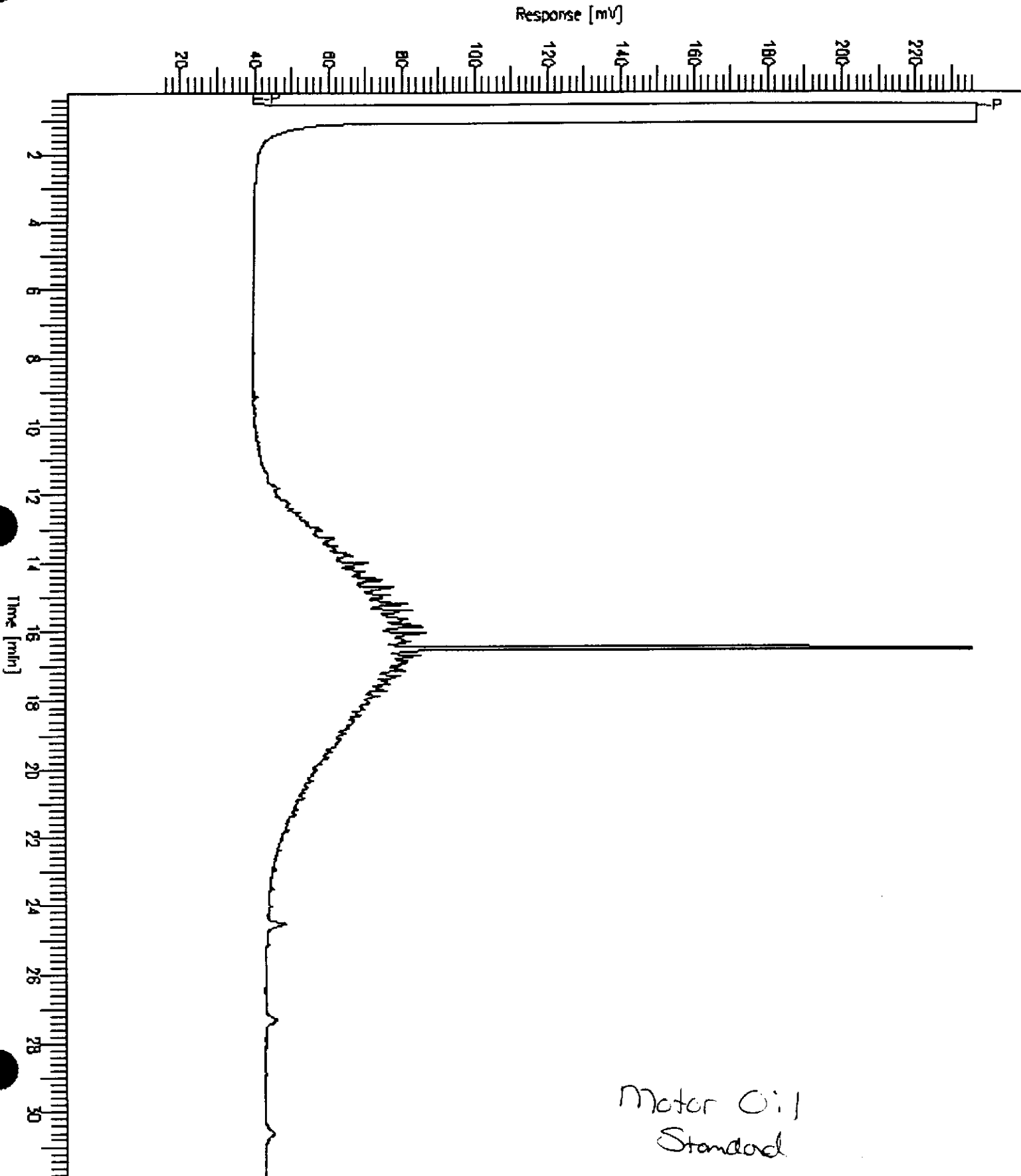
Chromatogram

Sample Name : CCV, 97WS3691, MO
FileName : G:\GC13\CHA\055A019.RAW
Method : ATEH053.MTH
Start Time : 0.21 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: 15 mV

Sample #: 500MG/L
Date : 2/25/97 11:14 AM
Time of Injection: 2/25/97 03:43 AM
Low Point : 14.61 mV
High Point : 237.22 mV
Plot Scale: 222.6 mV

Page 1 of 1





Lab #: 128237

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-59 @ 6
 Lab ID: 128237-007
 Matrix: Soil
 Batch#: 32342
 Units: mg/Kg
 Diln Fac: 1

Sample Date: 02/03/97
 Received Date: 02/05/97
 Prep Date: 02/11/97
 Analysis Date: 02/22/97

MS Lab ID: QC39977

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Diesel C12-C22	49.5	60.84	92.2	63	60-140
Surrogate	%Rec	Limits			
Hexacosane	119	60-140			

MSD Lab ID: QC39978

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	49.5	108.3	96	60-140	16	30
Surrogate	%Rec	Limits				
Hexacosane	110	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Lab #: 128237

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32342
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/11/97
Analysis Date: 02/22/97

LCS Lab ID: QC39976

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	36.7	49.5	74	60-140
Surrogate	%Rec	Limits		
Hexacosane	96	60-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Lab #: 128237

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32342
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/11/97
Analysis Date: 02/22/97

MB Lab ID: QC39975

Analyte	Result		
Diesel C12-C22	<1.0		
Motor Oil C22-C50	<5.0		
Surrogate	%Rec		Recovery Limits
Hexacosane	95		60-140



BTXE

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8020
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128237-006	SCI-61 @ 4.5	32269	02/03/97	02/08/97	02/08/97	

Matrix: Soil

Analyte	Units	128237-006
Diln Fac:		1
Benzene	ug/Kg	<5
Toluene	ug/Kg	<5
Ethylbenzene	ug/Kg	<5
m,p-Xylenes	ug/Kg	<5
o-Xylene	ug/Kg	<5
Surrogate		
Trifluorotoluene	%REC	92
Bromobenzene	%REC	86



Lab #: 128237

BATCH QC REPORT

BTXE			
Client:	Subsurface Consultants	Analysis Method:	EPA 8020
Project#:	133.005	Prep Method:	EPA 5030
Location:	KOT		
METHOD BLANK			
Matrix:	Soil	Prep Date:	02/07/97
Batch#:	32269	Analysis Date:	02/07/97
Units:	ug/Kg		
Diln Fac:	1		

MB Lab ID: QC39700

Analyte	Result		
Benzene	<5.0		
Toluene	<5.0		
Ethylbenzene	<5.0		
m,p-Xylenes	<5.0		
o-Xylene	<5.0		
Surrogate	%Rec		Recovery Limits
Trifluorotoluene	87		52-127
Bromobenzene	84		45-140



Lab #: 128237

BATCH QC REPORT

BTXE			
Client: Subsurface Consultants	Analysis Method: EPA 8020		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/07/97		
Batch#: 32269	Analysis Date: 02/07/97		
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39699

Analyte	Result	Spike Added	%Rec #	Limits
Benzene	84.31	100	84	80-120
Toluene	87.67	100	88	80-120
Ethylbenzene	86.06	100	86	80-120
m,p-Xylenes	173.2	200	87	80-120
o-Xylene	87.98	100	88	80-120
Surrogate	%Rec	Limits		
Trifluorotoluene	89	52-127		
Bromobenzene	87	45-140		

* Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-57 @ 4
 Lab ID: 128237-001
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 5

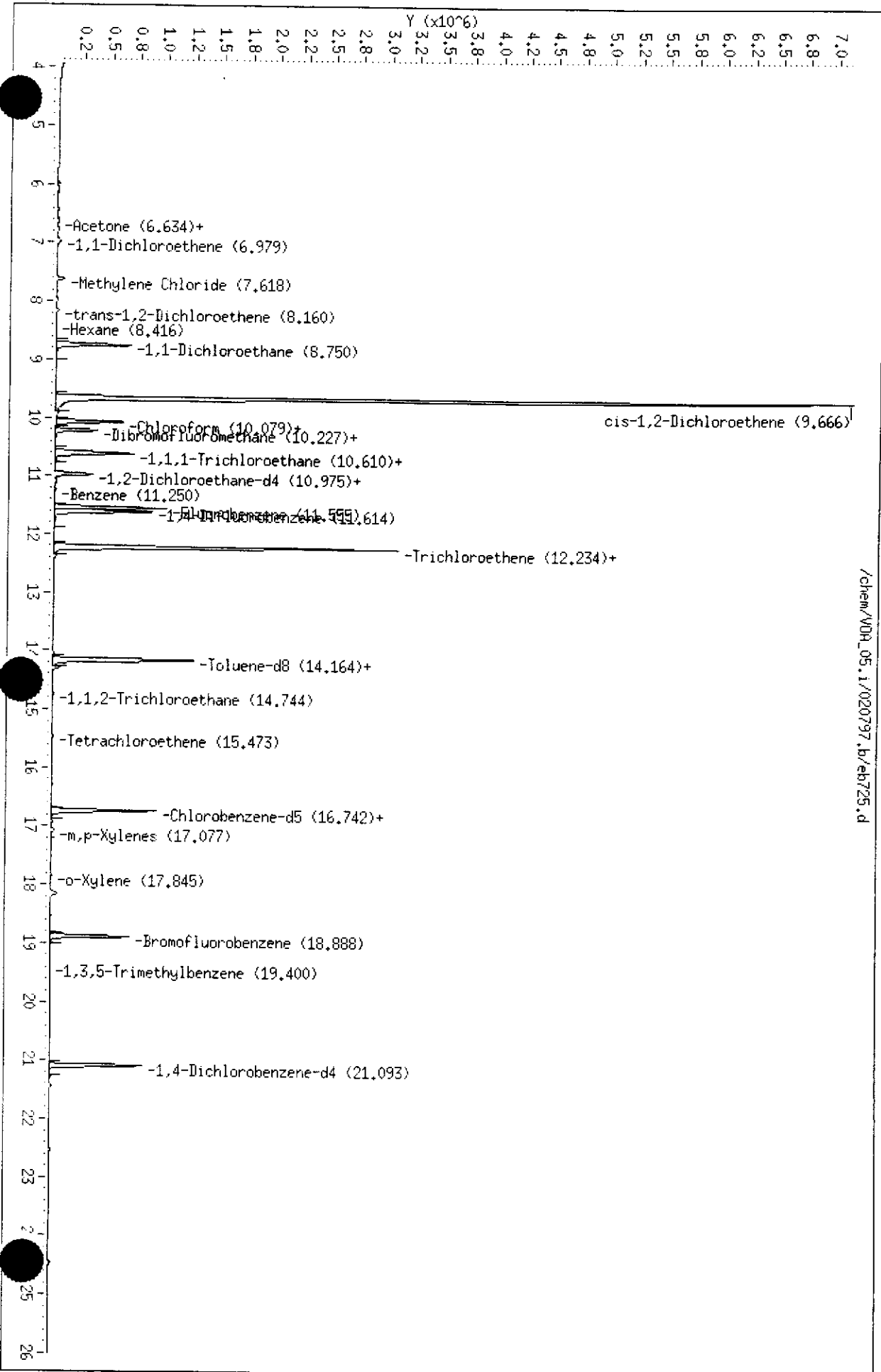
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/07/97
 Analyzed: 02/07/97

Analyte	Result	Reporting Limit
Chloromethane	ND	50
Bromomethane	ND	50
Vinyl Chloride	ND	50
Chloroethane	ND	50
Methylene Chloride	ND	100
Acetone	ND	100
Carbon Disulfide	ND	25
Trichlorofluoromethane	ND	25
1,1-Dichloroethene	19 J	25
1,1-Dichloroethane	420	25
trans-1,2-Dichloroethene	ND	25
cis-1,2-Dichloroethene	2600	130
Chloroform	ND	25
Freon 113	ND	25
1,2-Dichloroethane	ND	25
2-Butanone	ND	50
1,1,1-Trichloroethane	500	25
Carbon Tetrachloride	ND	25
Vinyl Acetate	ND	250
Bromodichloromethane	ND	25
1,2-Dichloropropane	ND	25
cis-1,3-Dichloropropene	ND	25
Trichloroethene	2200	130
Dibromochloromethane	ND	25
1,1,2-Trichloroethane	ND	25
Benzene	ND	25
trans-1,3-Dichloropropene	ND	25
Bromoform	ND	25
2-Hexanone	ND	50
4-Methyl-2-Pentanone	ND	50
1,1,2,2-Tetrachloroethane	ND	25
Tetrachloroethene	ND	25
Toluene	ND	25
Chlorobenzene	ND	25
Ethylbenzene	ND	25
Styrene	ND	25
m,p-Xylenes	ND	25
o-Xylene	ND	25
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	105	79-122

J: Estimated Value

Data File: /chem/MDA_05.1/020797.b/eb725.d
Date: 07-FEB-97 23:36
Client ID: DVMR P&T
Sample Info: S.128237-001
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: MDA_05.1
Operator: DM
Column diameter: 0.32



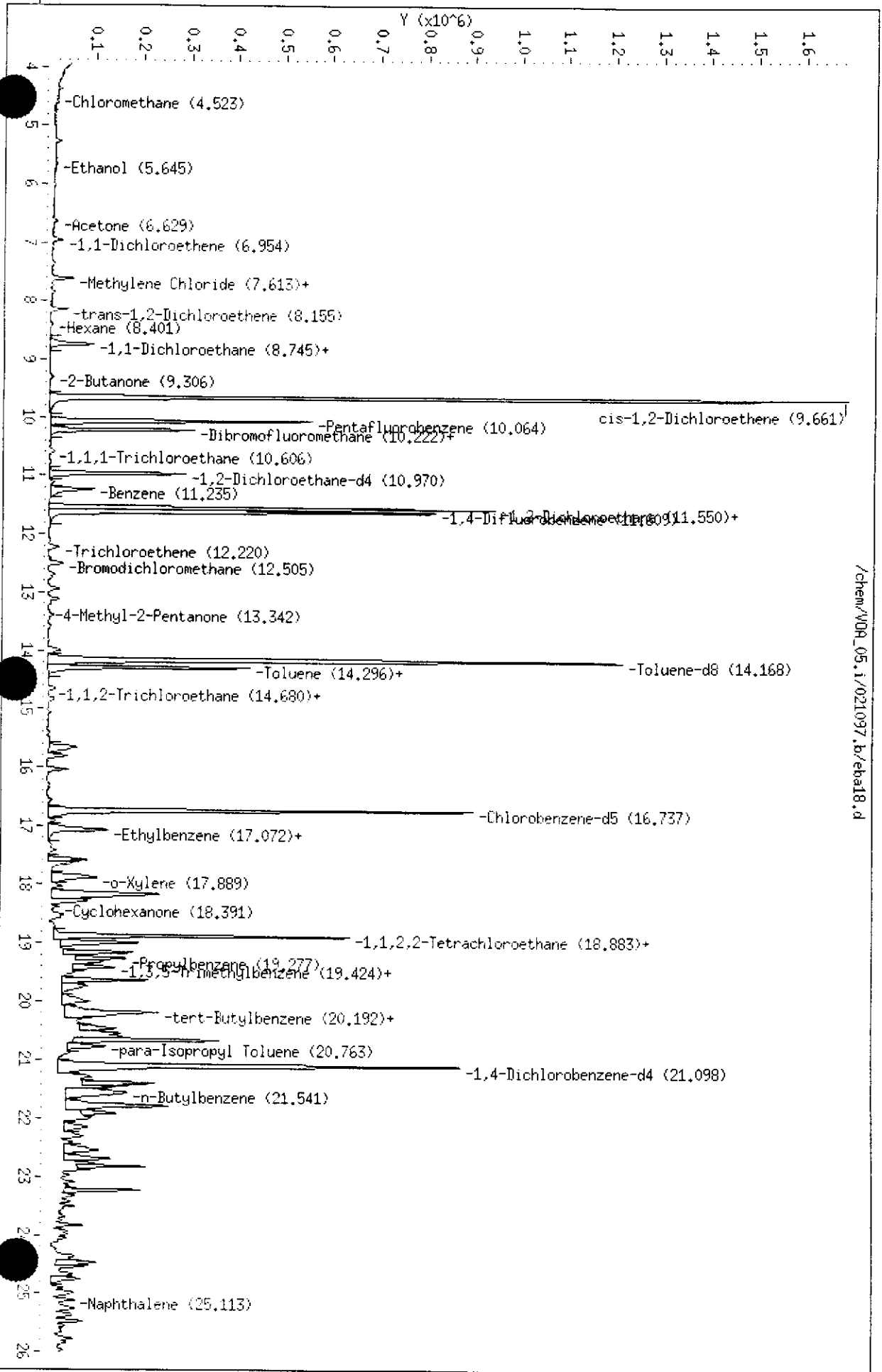


Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-57 @ 7	Sampled: 02/03/97	
Lab ID: 128237-002	Received: 02/05/97	
Matrix: Soil	Extracted: 02/10/97	
Batch#: 32298	Analyzed: 02/10/97	
Units: ug/Kg		
Diln Fac: 25		
Analyte	Result	Reporting Limit
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	500
Acetone	ND	500
Carbon Disulfide	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	67 J	130
1,1-Dichloroethane	310	130
trans-1,2-Dichloroethene	82 J	130
cis-1,2-Dichloroethene	4100	130
Chloroform	ND	130
Freon 113	ND	130
1,2-Dichloroethane	ND	130
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
Vinyl Acetate	ND	1300
Bromodichloromethane	ND	130
1,2-Dichloropropane	ND	130
cis-1,3-Dichloropropene	ND	130
Trichloroethene	ND	130
Dibromochloromethane	ND	130
1,1,2-Trichloroethane	ND	130
Benzene	95 J	130
trans-1,3-Dichloropropene	ND	130
Bromoform	ND	130
2-Hexanone	ND	250
4-Methyl-2-Pentanone	ND	250
1,1,2,2-Tetrachloroethane	ND	130
Tetrachloroethene	ND	130
Toluene	440	130
Chlorobenzene	ND	130
Ethylbenzene	ND	130
Styrene	ND	130
m,p-Xylenes	89 J	130
o-Xylene	ND	130
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	92	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	100	79-122

J: Estimated Value

Data File: /chem/V09_05.1/021097.b/eba18.d
 Date: 10-FEB-97 19:55
 Client ID: DYNA PaI
 Sample Info: S.129237-002
 Purge Volume: 5.0
 Column phase: RTX Volatiles

Instrument: V09_05.1
 Operator: DM
 Column diameter: 0.32



/chem/V09_05.1/021097.b/eba18.d



Volatile Organics by GC/MS

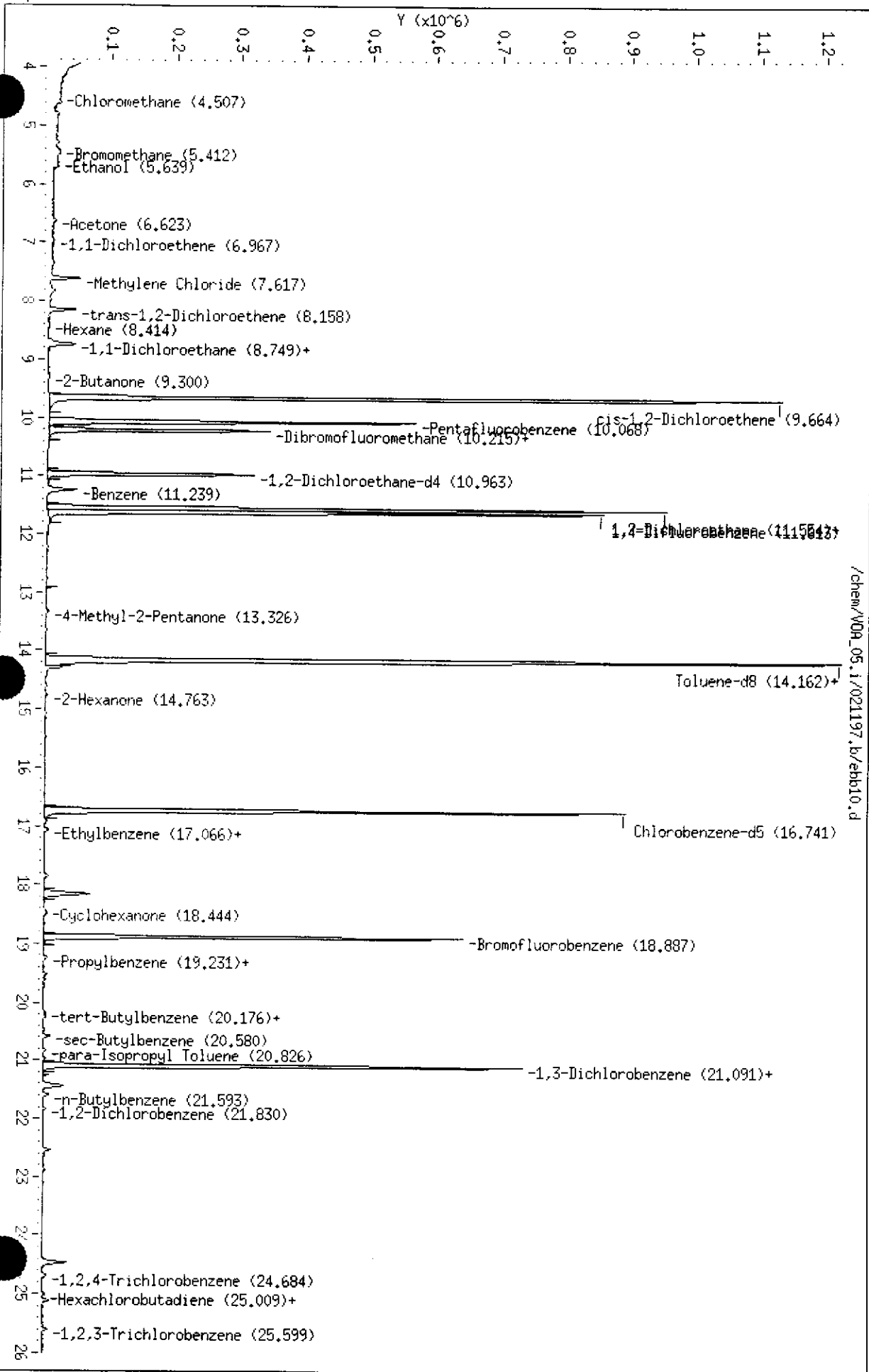
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
Field ID: SCI-57 @ 10	Sampled: 02/03/97
Lab ID: 128237-003	Received: 02/05/97
Matrix: Soil	Extracted: 02/11/97
Batch#: 32320	Analyzed: 02/11/97
Units: ug/Kg	
Diln Fac: 50	

Analyte	Result	Reporting Limit
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	500
Chloroethane	ND	500
Methylene Chloride	ND	1000
Acetone	ND	1000
Carbon Disulfide	ND	250
Trichlorofluoromethane	ND	250
1,1-Dichloroethene	ND	250
1,1-Dichloroethane	280	250
trans-1,2-Dichloroethene	190 J	250
cis-1,2-Dichloroethene	5400	250
Chloroform	ND	250
Freon 113	ND	250
1,2-Dichloroethane	ND	250
2-Butanone	ND	500
1,1,1-Trichloroethane	ND	250
Carbon Tetrachloride	ND	250
Vinyl Acetate	ND	2500
Bromodichloromethane	ND	250
1,2-Dichloropropane	ND	250
cis-1,3-Dichloropropene	ND	250
Trichloroethene	ND	250
Dibromochloromethane	ND	250
1,1,2-Trichloroethane	ND	250
Benzene	ND	250
trans-1,3-Dichloropropene	ND	250
Bromoform	ND	250
2-Hexanone	ND	500
4-Methyl-2-Pentanone	ND	500
1,1,2,2-Tetrachloroethane	ND	250
Tetrachloroethene	ND	250
Toluene	ND	250
Chlorobenzene	ND	250
Ethylbenzene	ND	250
Styrene	ND	250
m,p-Xylenes	ND	250
o-Xylene	ND	250
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	110	79-122

J: Estimated Value

Data File: /chem/VD9_05.1/021197.b/ebb10.d
 Date: 11-FEB-97 14:29
 Client ID: DYNH PaT
 Sample Info: S.128237-003
 Purge Volume: 5.0
 Column phase: Rtx Volatiles

Instrument: VDA_05.1
 Operator: DM
 Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

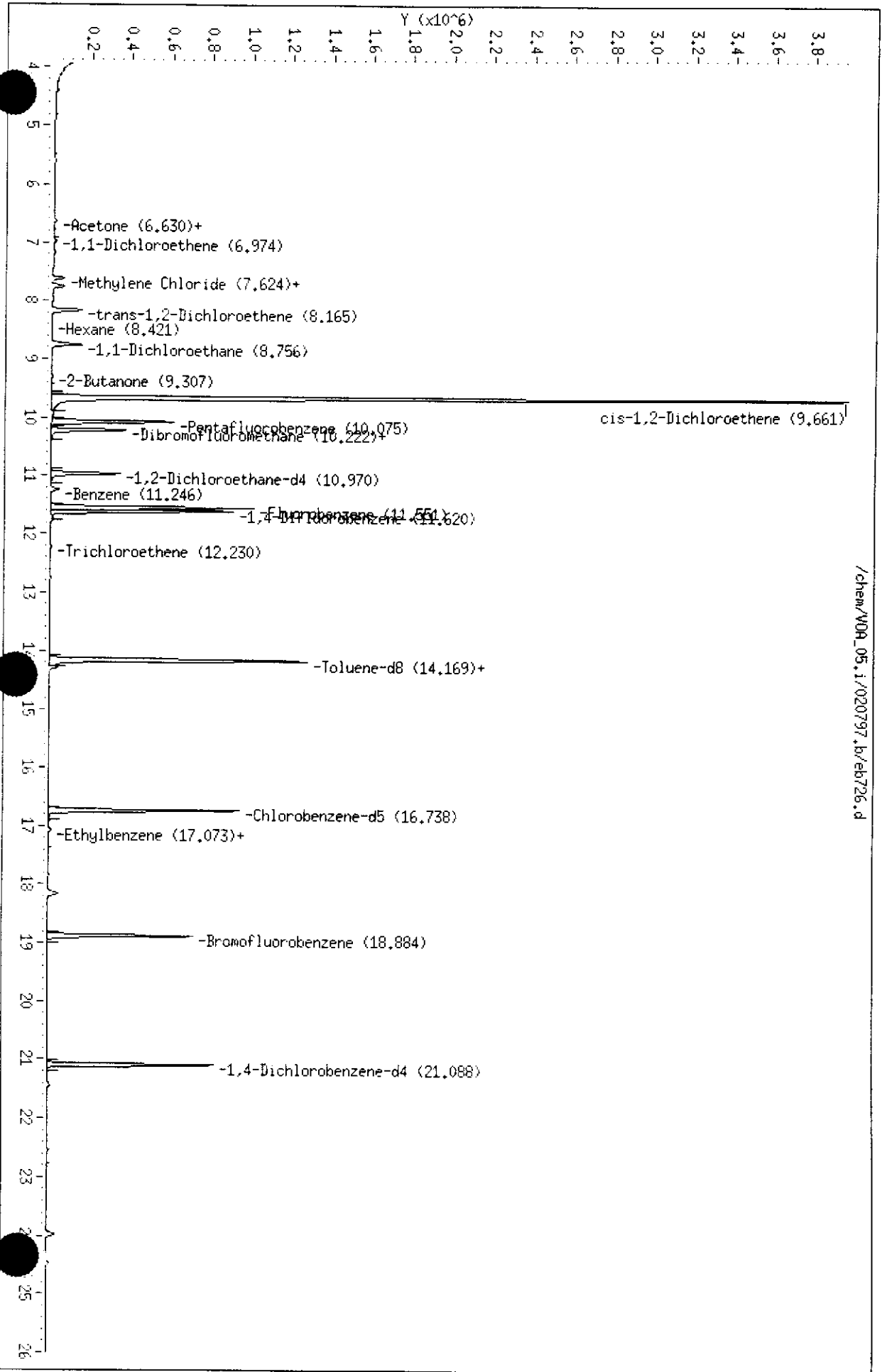
Field ID: SCI-57 @ 13
 Lab ID: 128237-004
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 3.33

Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/08/97
 Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	33
Bromomethane	ND	33
Vinyl Chloride	ND	33
Chloroethane	ND	33
Methylene Chloride	ND	67
Acetone	ND	67
Carbon Disulfide	18	17
Trichlorofluoromethane	ND	17
1,1-Dichloroethene	ND	17
1,1-Dichloroethane	61	17
trans-1,2-Dichloroethene	44	17
cis-1,2-Dichloroethene	620	130
Chloroform	ND	17
Freon 113	ND	17
1,2-Dichloroethane	ND	17
2-Butanone	ND	33
1,1,1-Trichloroethane	ND	17
Carbon Tetrachloride	ND	17
Vinyl Acetate	ND	170
Bromodichloromethane	ND	17
1,2-Dichloropropane	ND	17
cis-1,3-Dichloropropene	ND	17
Trichloroethene	ND	17
Dibromochloromethane	ND	17
1,1,2-Trichloroethane	ND	17
Benzene	ND	17
trans-1,3-Dichloropropene	ND	17
Bromoform	ND	17
2-Hexanone	ND	33
4-Methyl-2-Pentanone	ND	33
1,1,2,2-Tetrachloroethane	ND	17
Tetrachloroethene	ND	17
Toluene	ND	17
Chlorobenzene	ND	17
Ethylbenzene	ND	17
Styrene	ND	17
m,p-Xylenes	ND	17
o-Xylene	ND	17
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	105	79-122

Data File: /chem/VD09_05.1/020797.b/eb726.d
Date: 08-FEB-97 00:08
Client ID: DYNA P&I
Sample Info: S.128237-004
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VD09_05.1
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-57 @ 22
 Lab ID: 128237-005
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

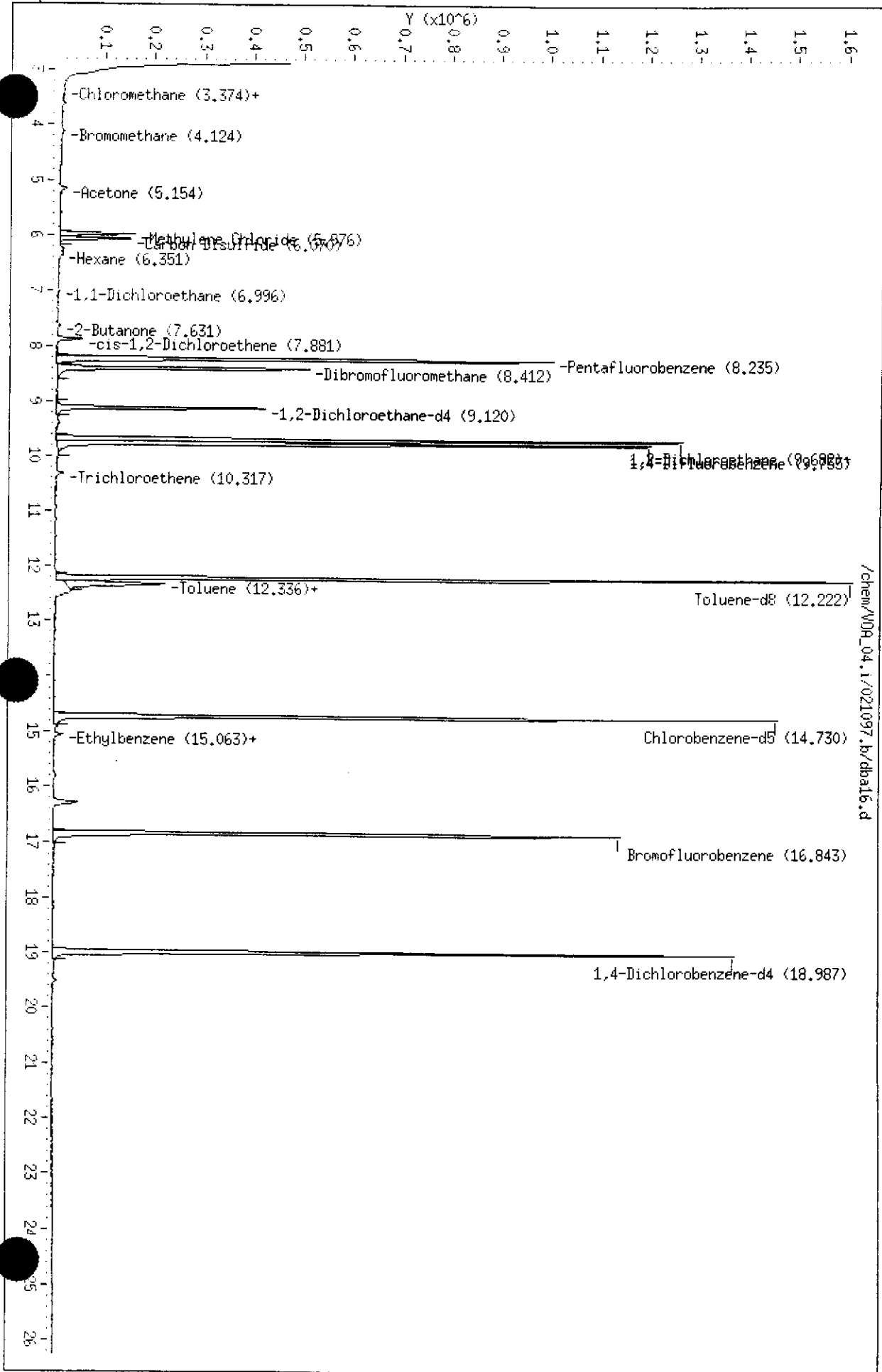
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	11	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	3.5 J	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	86	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	100	79-122

J: Estimated Value

Data File: /chem/VDH_04.1/021097.b/dhald6.d
Date: 11-FEB-97 00:29
Client ID: DINA P&I
Sample Info: MSS_128237-005
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VDA_04.1
Operator: LLH
Column diameter: 0.32



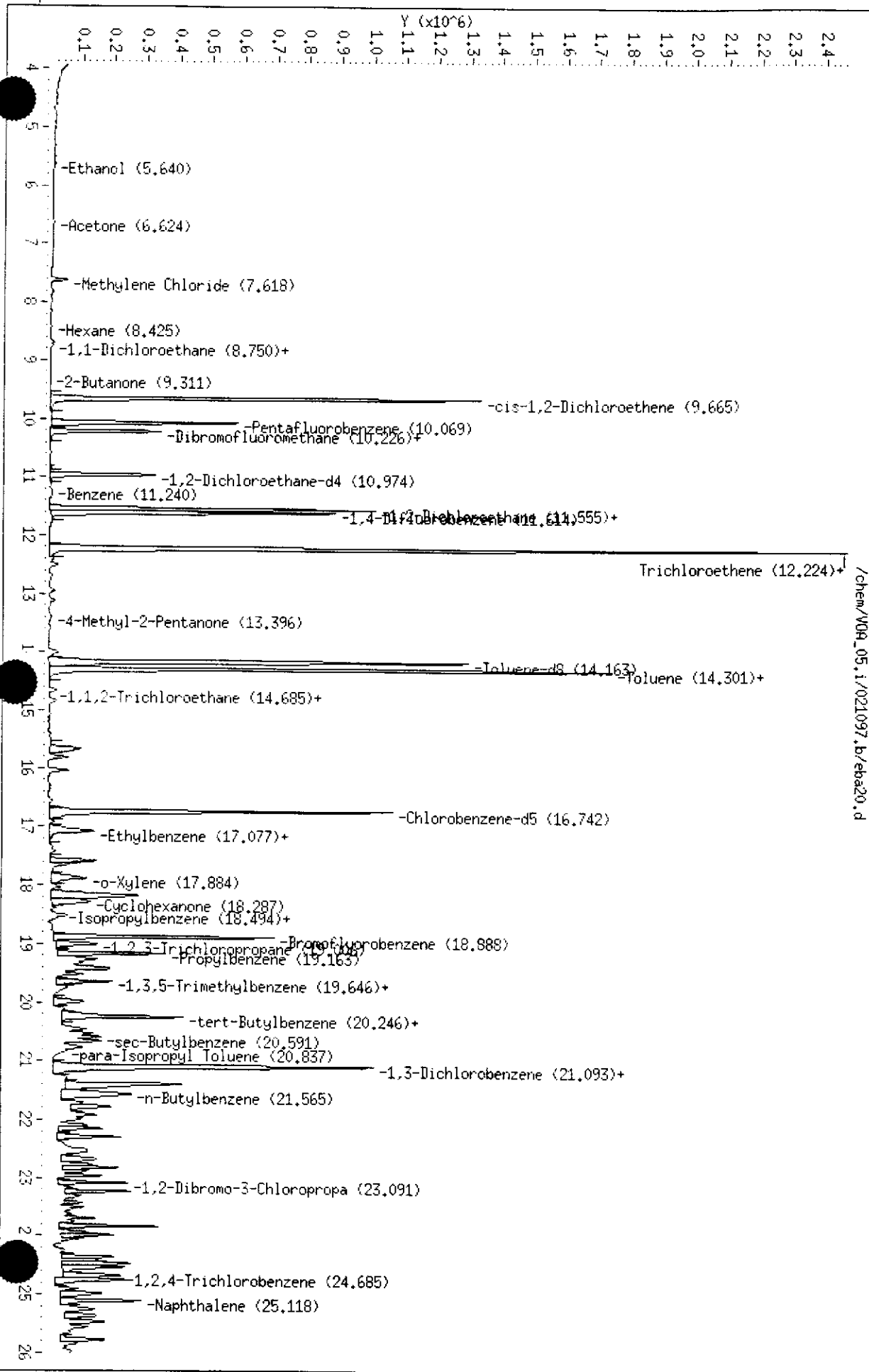


Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-59 @ 6	Sampled:	02/03/97
Lab ID: 128237-007	Received:	02/05/97
Matrix: Soil	Extracted:	02/10/97
Batch#: 32298	Analyzed:	02/10/97
Units: ug/Kg		
Diln Fac: 200		
Analyte	Result	Reporting Limit
Chloromethane	ND	2000
Bromomethane	ND	2000
Vinyl Chloride	ND	2000
Chloroethane	ND	2000
Methylene Chloride	ND	4000
Acetone	ND	4000
Carbon Disulfide	ND	1000
Trichlorofluoromethane	ND	1000
1,1-Dichloroethene	ND	1000
1,1-Dichloroethane	ND	1000
trans-1,2-Dichloroethene	ND	1000
cis-1,2-Dichloroethene	24000	1000
Chloroform	ND	1000
Freon 113	ND	1000
1,2-Dichloroethane	ND	1000
2-Butanone	ND	2000
1,1,1-Trichloroethane	ND	1000
Carbon Tetrachloride	ND	1000
Vinyl Acetate	ND	10000
Bromodichloromethane	ND	1000
1,2-Dichloropropane	ND	1000
cis-1,3-Dichloropropene	ND	1000
Trichloroethene	39000	1000
Dibromochloromethane	ND	1000
1,1,2-Trichloroethane	ND	1000
Benzene	ND	1000
trans-1,3-Dichloropropene	ND	1000
Bromoform	ND	1000
2-Hexanone	ND	2000
4-Methyl-2-Pentanone	ND	2000
1,1,2,2-Tetrachloroethane	ND	1000
Tetrachloroethene	ND	1000
Toluene	14000	1000
Chlorobenzene	ND	1000
Ethylbenzene	ND	1000
Styrene	ND	1000
m,p-Xylenes	610 J	1000
o-Xylene	ND	1000
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	98	79-122

J: Estimated Value

Data File: /chem/VDQ_05.1/021097.b/eba20.d
Date: 10-FEB-97 20:59
Client ID: DVNA P&I
Sample Info: S.128237-007
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VDA_05.1
Operator: JIM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-59 @ 10
 Lab ID: 128237-008
 Matrix: Soil
 Batch#: 32298
 Units: ug/Kg
 Diln Fac: 25

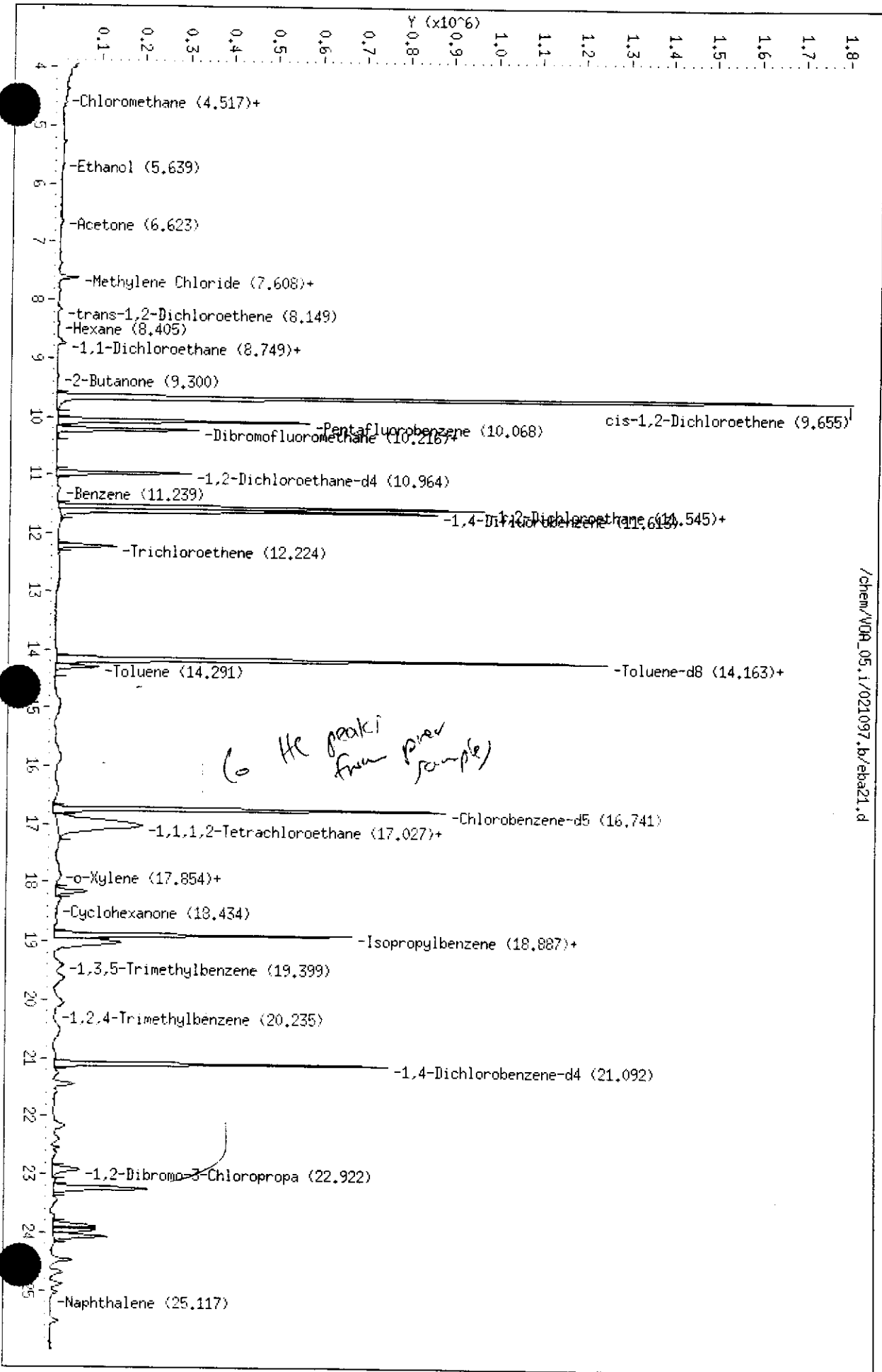
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/10/97
 Analyzed: 02/10/97

Analyte	Result	Reporting Limit
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	500
Acetone	ND	500
Carbon Disulfide	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
1,1-Dichloroethane	65 J	130
trans-1,2-Dichloroethene	ND	130
cis-1,2-Dichloroethene	4300	130
Chloroform	ND	130
Freon 113	ND	130
1,2-Dichloroethane	ND	130
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
Vinyl Acetate	ND	1300
Bromodichloromethane	ND	130
1,2-Dichloropropane	ND	130
cis-1,3-Dichloropropene	ND	130
Trichloroethene	270	130
Dibromochloromethane	ND	130
1,1,2-Trichloroethane	ND	130
Benzene	ND	130
trans-1,3-Dichloropropene	ND	130
Bromoform	ND	130
2-Hexanone	ND	250
4-Methyl-2-Pentanone	ND	250
1,1,2,2-Tetrachloroethane	ND	130
Tetrachloroethene	ND	130
Toluene	100 J	130
Chlorobenzene	ND	130
Ethylbenzene	ND	130
Styrene	ND	130
m,p-Xylenes	ND	130
o-Xylene	ND	130
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	109	79-122

J: Estimated Value

Data File: /chem/V09_05.1/021097.b/eba21.d
Date: 10-FEB-97 21:31
Client ID: DYNA P&I
Sample Info: S.128237-008
Purge Volume: 5.0
Column phases: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

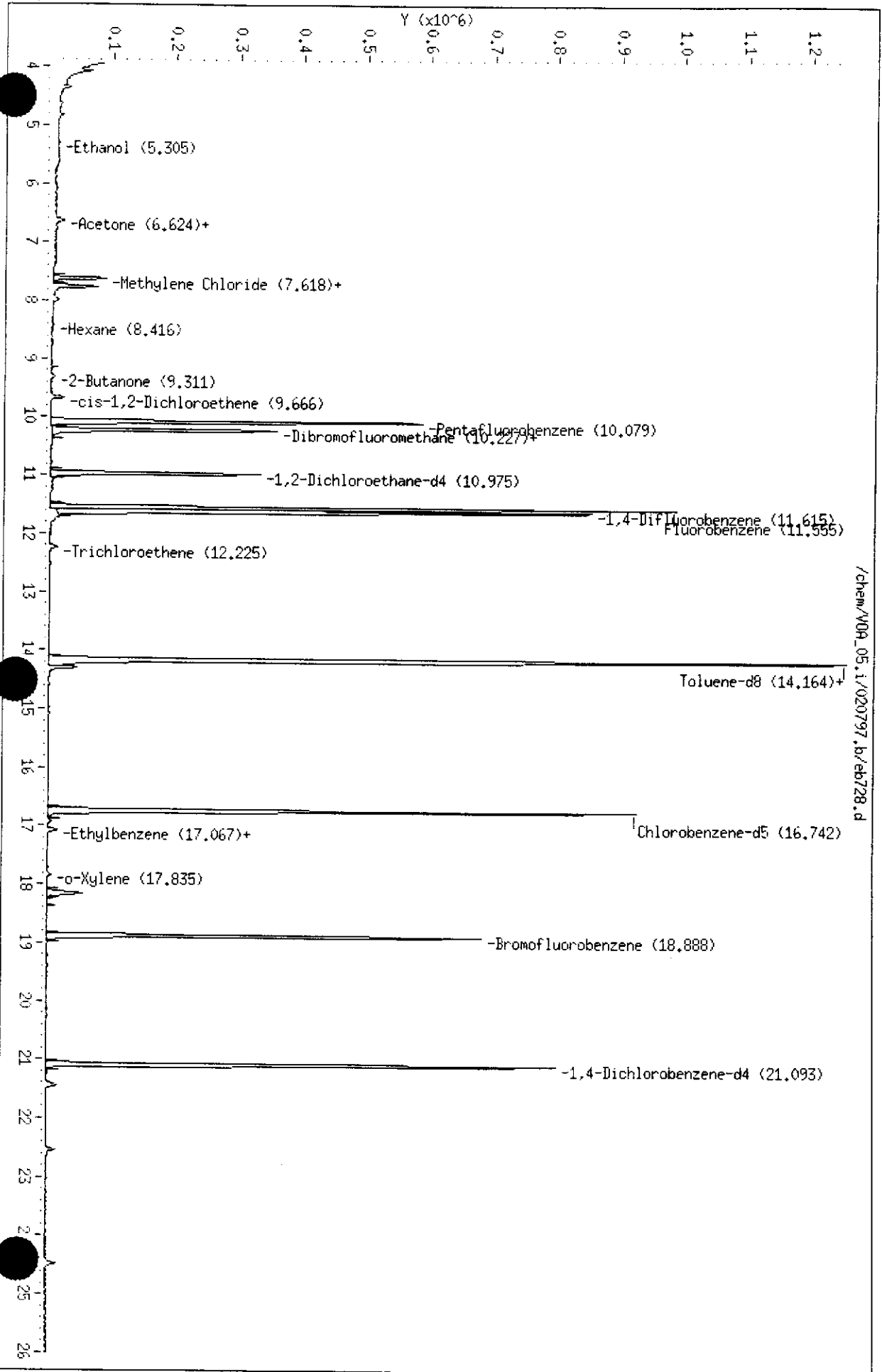
Field ID: SCI-59 @ 19
 Lab ID: 128237-009
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/08/97
 Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	6.7	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	105	79-122

Data File: /chem/VD9_05.1/020797.b/eb728.d
Date: 08-FEB-97 01:13
Client ID: DVMH P&I
Sample Info: S.128237-009
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: VD9_05.1
Operator: JM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

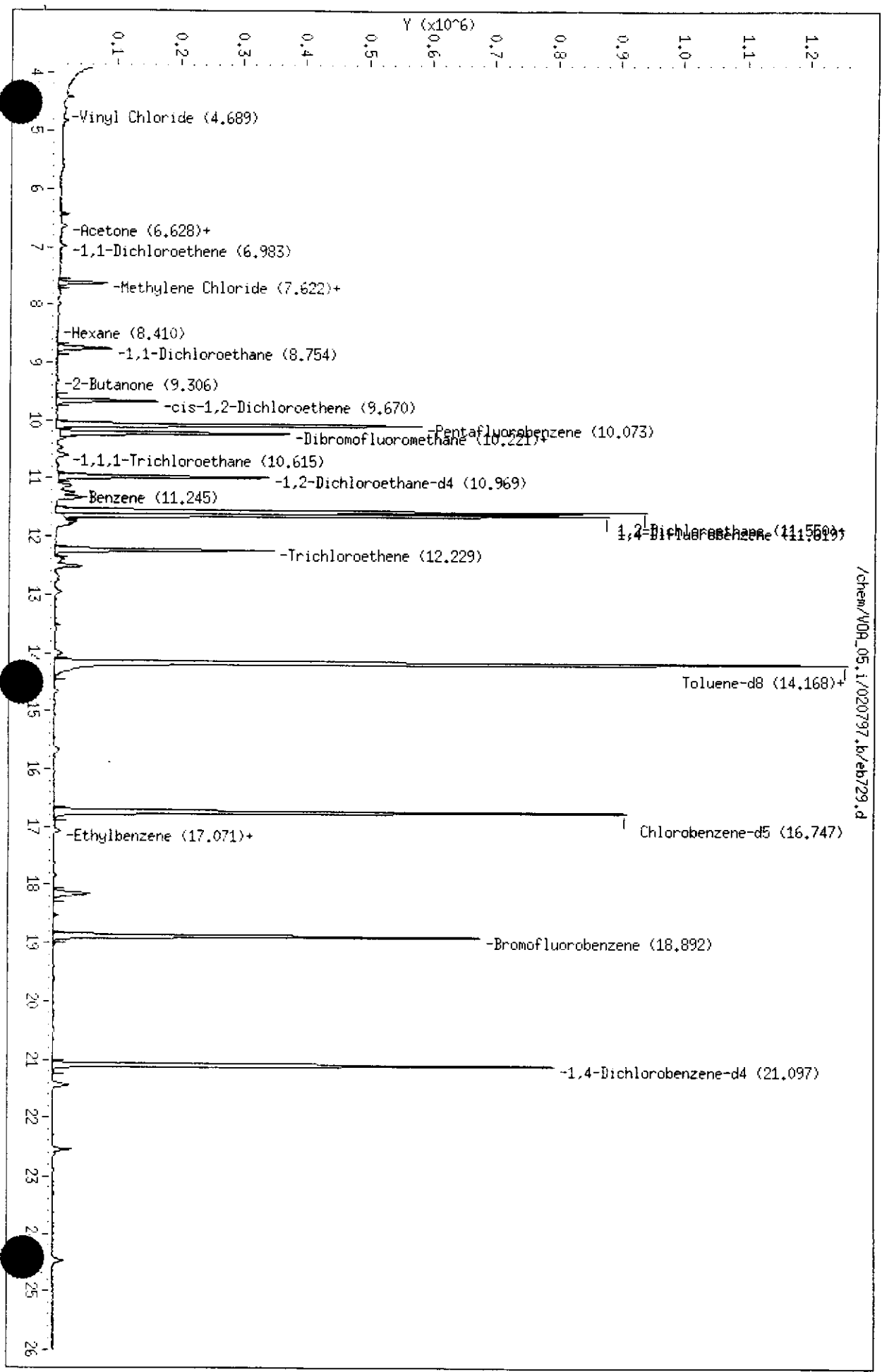
Field ID: SCI-60 @ 2
 Lab ID: 128237-010
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/08/97
 Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	11	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	15	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	27	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	105	79-122

Data File: /chem/V09_05.1/020797.b/eb729.d
Date : 08-FEB-97 01:45
Client ID: DYNH P&I
Sample Info: S.128237-010
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-60 @ 4
 Lab ID: 128237-011
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

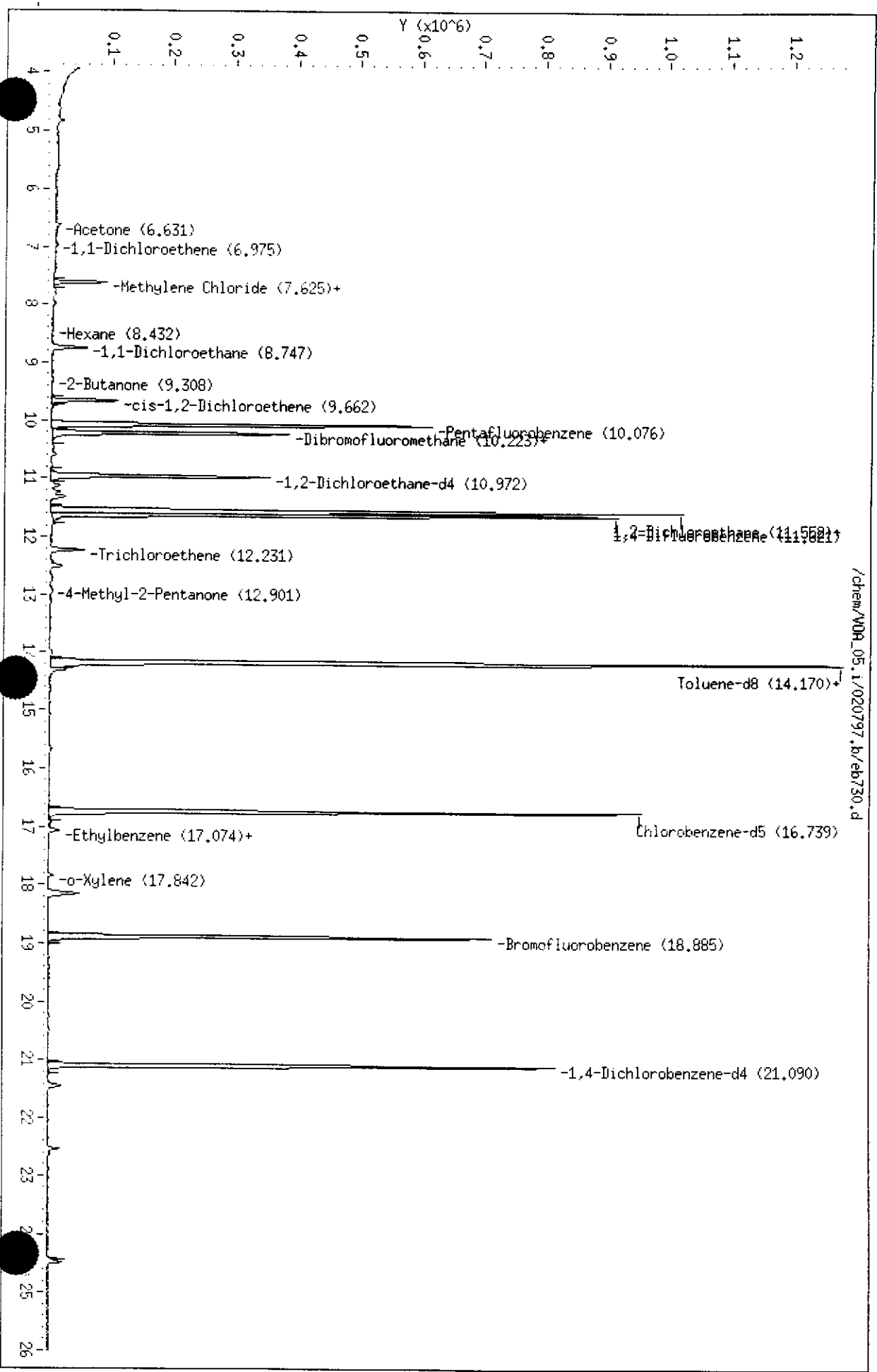
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/08/97
 Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	7.1	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	9.3	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	3.8 J	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	106	79-122

J: Estimated Value

Data File: /chem/MDA_05.1/020797.b/eb730.d
Date: 08-FEB-97 02:17
Client ID: DYMA P&I
Sample Info: S.128237-011
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: WDA_05.1
Operator: JH
Column diameter: 0.32



/chem/MDA_05.1/020797.b/eb730.d



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

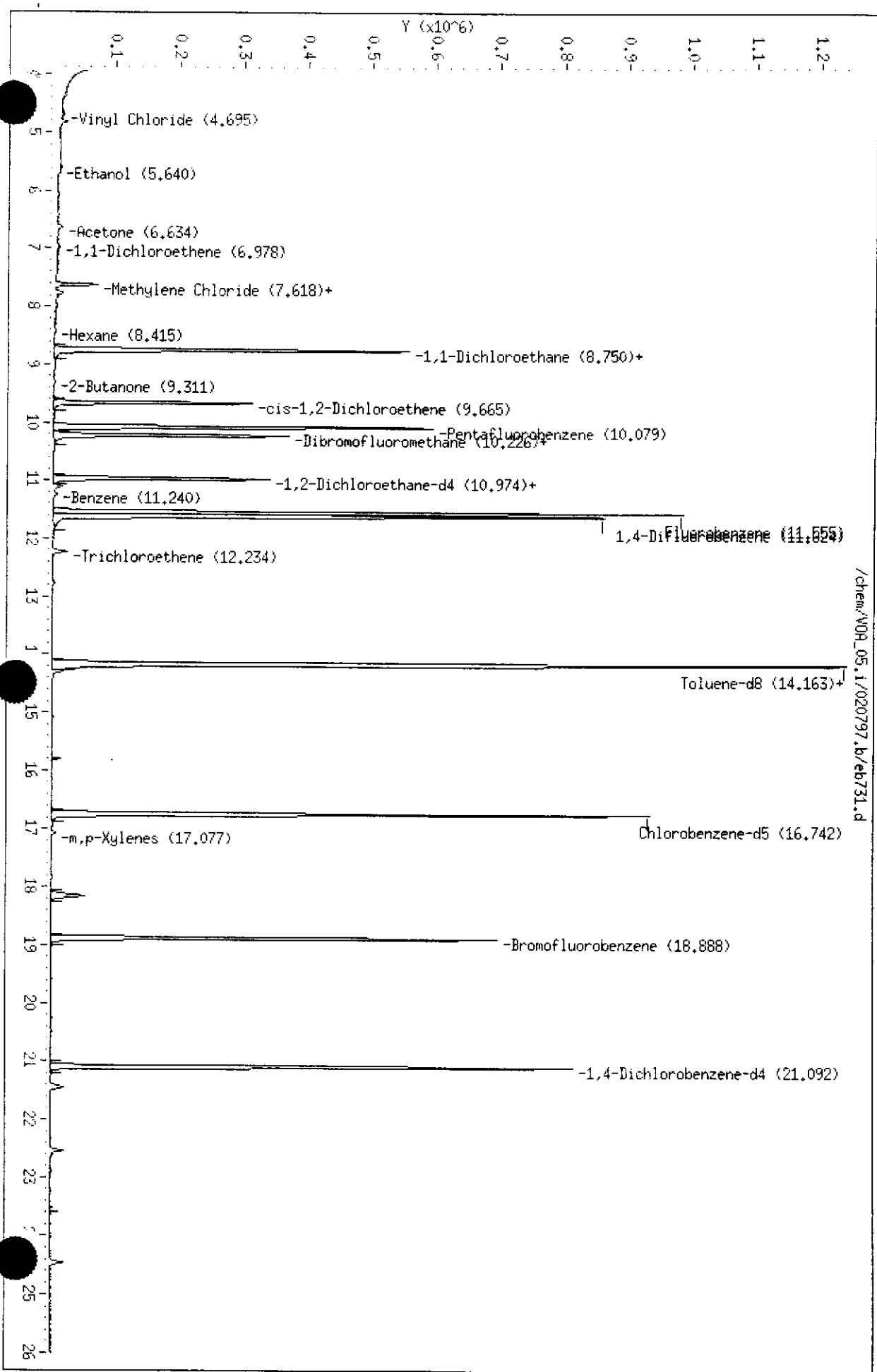
Field ID: SCI-60 @ 7
Lab ID: 128237-012
Matrix: Soil
Batch#: 32274
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/08/97
Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	71	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	27	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	105	79-122

Data File: /chem/V09_05.1/020797.b/eb731.d
Date: 08-FEB-97 02:49
Client ID: DYNA P&T
Sample Info: S,128237-012
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.1
Operator: DM
Column diameter: 0.32



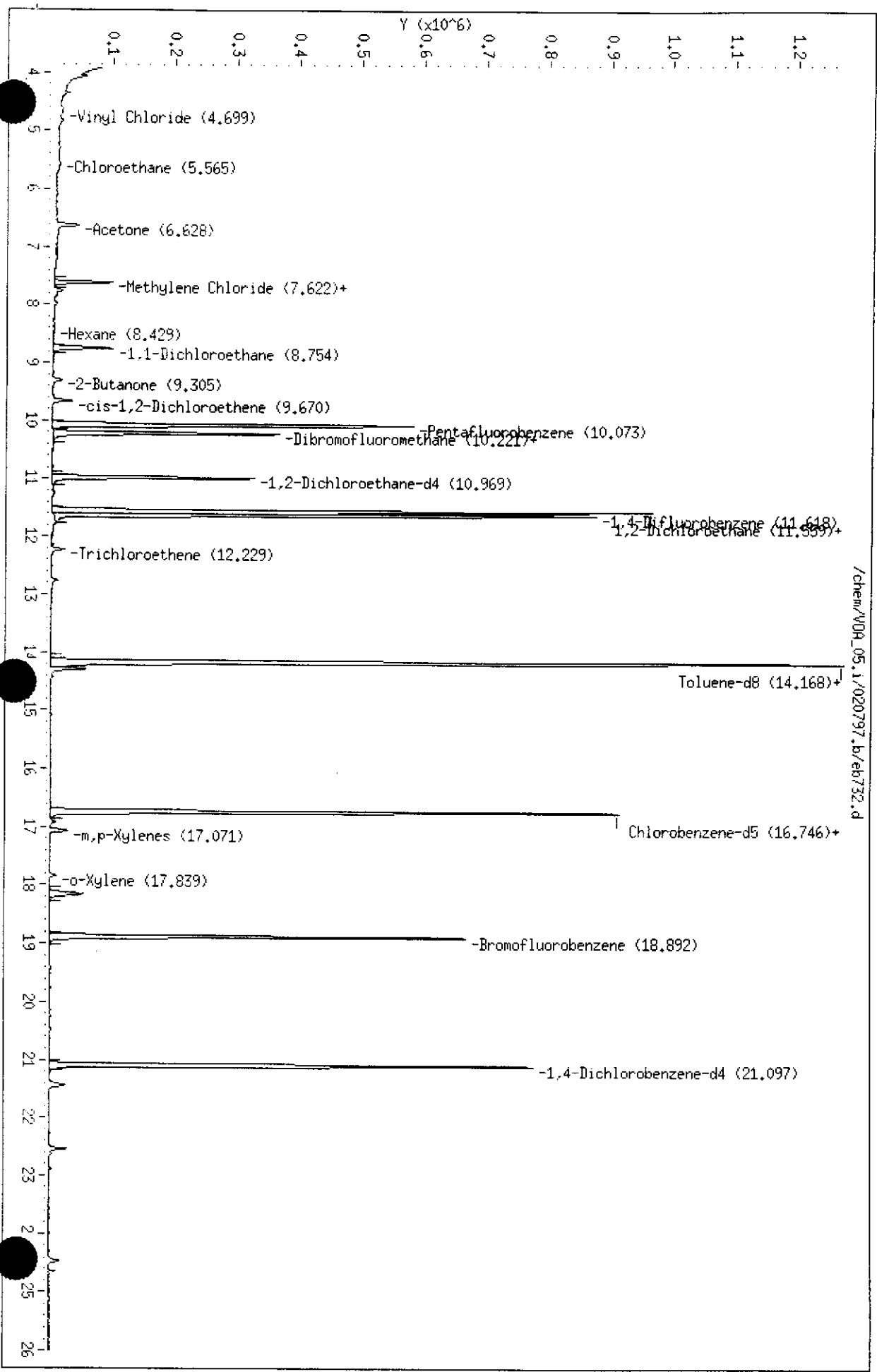


Volatile Organics by GC/MS		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-60 @ 10	Sampled:	02/03/97
Lab ID: 128237-013	Received:	02/05/97
Matrix: Soil	Extracted:	02/08/97
Batch#: 32274	Analyzed:	02/08/97
Units: ug/Kg		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	40	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	12	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	2.8 J	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	8.0 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	105	79-122

J: Estimated Value

Data File: /chem/V09_05.1/020797.b/eb732.d
Date : 08-FEB-97 03:21
Client ID: DYNA P&I
Sample Info: S.128237-013
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: V09_05.i
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-60 @ 19
 Lab ID: 128237-014
 Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

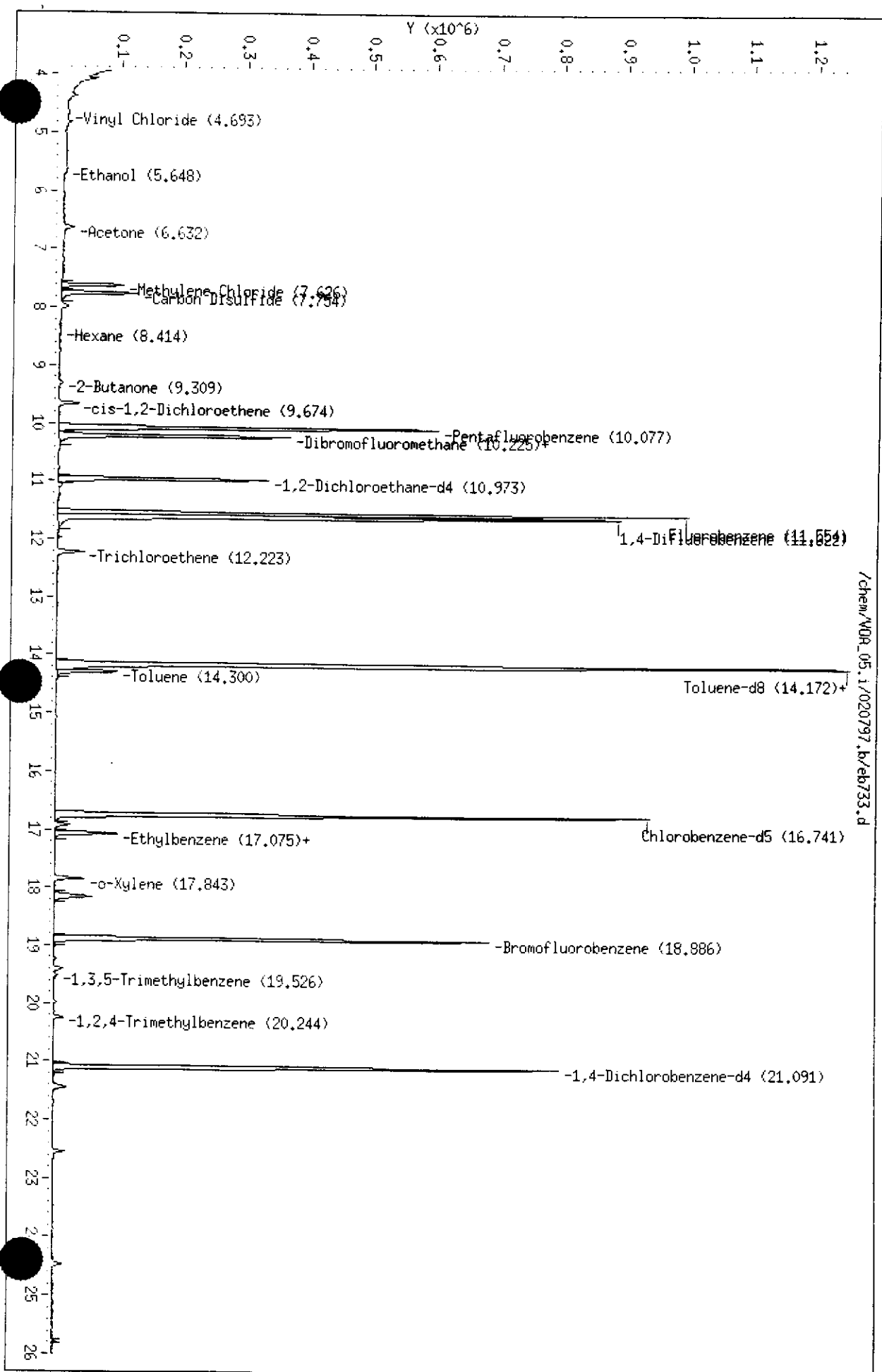
Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/08/97
 Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	11	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	2.9 J	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	3.2 J	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	3.7 J	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	4.0 J	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	106	79-122

J: Estimated Value

Data File: /chem/M09_05.1/020797.b/eb733.d
Date: 08-FEB-97 03:53
Client ID: DVMH PaT
Sample Info: S.128237-014
Purge Volume: 5.0
Column phase: RTX Volatiles

Instrument: M09_05.1
Operator: DM
Column diameter: 0.32





Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-56 @ 1
Lab ID: 128237-015
Matrix: Soil
Batch#: 32307
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/11/97
Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	91	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	101	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-56 @ 3
 Lab ID: 128237-016
 Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/03/97
 Received: 02/05/97
 Extracted: 02/11/97
 Analyzed: 02/11/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	92	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-56 @ 11
Lab ID: 128237-017
Matrix: Soil
Batch#: 32274
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/08/97
Analyzed: 02/08/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	104	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/07/97

MB Lab ID: QC39720

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropane	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	101	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/07/97

MB Lab ID: QC39728

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	103	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
 Batch#: 32298
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

MB Lab ID: QC39806

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	113	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/10/97	
Batch#: 32298	Analysis Date: 02/10/97	
Units: ug/L		
Diln Fac: 25		

MB Lab ID: QC39821

Analyte	Result	Reporting Limit
Chloromethane	ND	250
Bromomethane	ND	250
Vinyl Chloride	ND	250
Chloroethane	ND	250
Methylene Chloride	ND	500
Acetone	ND	500
Carbon Disulfide	ND	130
Trichlorofluoromethane	ND	130
1,1-Dichloroethene	ND	130
1,1-Dichloroethane	ND	130
trans-1,2-Dichloroethene	ND	130
cis-1,2-Dichloroethene	ND	130
Chloroform	ND	130
Freon 113	ND	130
1,2-Dichloroethane	ND	130
2-Butanone	ND	250
1,1,1-Trichloroethane	ND	130
Carbon Tetrachloride	ND	130
Vinyl Acetate	ND	1300
Bromodichloromethane	ND	130
1,2-Dichloropropane	ND	130
cis-1,3-Dichloropropene	ND	130
Trichloroethene	ND	130
Dibromochloromethane	ND	130
1,1,2-Trichloroethane	ND	130
Benzene	ND	130
trans-1,3-Dichloropropene	ND	130
Bromoform	ND	130
2-Hexanone	ND	250
4-Methyl-2-Pentanone	ND	250
1,1,2,2-Tetrachloroethane	ND	130
Tetrachloroethene	ND	130
Toluene	ND	130
Chlorobenzene	ND	130
Ethylbenzene	ND	130
Styrene	ND	130
m,p-Xylenes	ND	130
o-Xylene	ND	130
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	95	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	108	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date:	02/10/97
Batch#: 32298	Analysis Date:	02/10/97
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39865

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	94	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	110	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32307
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

MB Lab ID: QC39849

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	100	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32320
Units: ug/L
Diln Fac: 1

Prep Date: 02/11/97
Analysis Date: 02/11/97

MB Lab ID: QC39888

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	106	79-122



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32274
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/07/97
 Analysis Date: 02/07/97

LCS Lab ID: QC39719

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	53.03	50	106	51-180
Trichloroethene	47.71	50	95	73-141
Benzene	45.13	50	90	78-142
Toluene	43.23	50	86	76-150
Chlorobenzene	45.87	50	92	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	103	68-126		
Toluene-d8	96	87-125		
Bromofluorobenzene	103	79-122		

† Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32298
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/10/97

LCS Lab ID: QC39805

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	66.78	50	134	51-180
Trichloroethene	56.13	50	112	73-141
Benzene	52.9	50	106	78-142
Toluene	52.07	50	104	76-150
Chlorobenzene	55.53	50	111	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	103	68-126		
Toluene-d8	97	87-125		
Bromofluorobenzene	108	79-122		

† Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32307
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/10/97

LCS Lab ID: QC39848

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	45.46	50	91	51-180
Trichloroethene	48.86	50	98	73-141
Benzene	46.78	50	94	78-142
Toluene	49.27	50	99	76-150
Chlorobenzene	48.87	50	98	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	86	68-126		
Toluene-d8	102	87-125		
Bromofluorobenzene	101	79-122		

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/11/97
 Analysis Date: 02/11/97

LCS Lab ID: QC39887

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	60.59	50	121	51-180
Trichloroethene	55.84	50	112	73-141
Benzene	53.34	50	107	78-142
Toluene	51.43	50	103	76-150
Chlorobenzene	54.08	50	108	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	97	68-126		
Toluene-d8	96	87-125		
Bromofluorobenzene	103	79-122		

* Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/03/97
Lab ID: 128233-001	Received Date: 02/05/97
Matrix: Soil	Prep Date: 02/07/97
Batch#: 32274	Analysis Date: 02/07/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39725

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	52.66	105	51-180
Trichloroethene	50	<5	45.02	90	73-141
Benzene	50	<5	42.94	85	78-142
Toluene	50	<5	42.1	84	76-150
Chlorobenzene	50	<5	43.64	87	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	102	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	104	79-122			

MSD Lab ID: QC39726

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	51.15	102	51-180	3	22
Trichloroethene	50	43.7	87	73-141	3	24
Benzene	50	41.59	83	78-142	3	21
Toluene	50	41.59	83	76-150	1	21
Chlorobenzene	50	42.6	85	83-129	2	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	102	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	102	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-57 @ 4
Lab ID: 128237-001
Matrix: Soil
Batch#: 32298
Units: ug/Kg
Diln Fac: 25

Sample Date: 02/03/97
Received Date: 02/05/97
Prep Date: 02/10/97
Analysis Date: 02/10/97

MS Lab ID: QC39839

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	1250	19.45	1471	117	51-180
Trichloroethene	1250	2195	3513	105	73-141
Benzene	1250	<125	1310	104	78-142
Toluene	1250	<125	1318	100	76-150
Chlorobenzene	1250	<125	1340	107	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	94	68-126			
Toluene-d8	98	87-125			
Bromofluorobenzene	103	79-122			

MSD Lab ID: QC39840

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	1250	1398	111	51-180	5	22
Trichloroethene	1250	3369	94	73-141	4	24
Benzene	1250	1258	99	78-142	4	21
Toluene	1250	1270	96	76-150	4	21
Chlorobenzene	1250	1309	105	83-129	2	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	95	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	104	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: SCI-57 @ 22	Sample Date: 02/03/97
Lab ID: 128237-005	Received Date: 02/05/97
Matrix: Soil	Prep Date: 02/11/97
Batch#: 32307	Analysis Date: 02/11/97
Units: ug/Kg	
Diln Fac: 1	

MS Lab ID: QC39869

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	73.46	147	51-180
Trichloroethene	50	<5	57.85	114	73-141
Benzene	50	<5	54.57	109	78-142
Toluene	50	<5	55.53	109	76-150
Chlorobenzene	50	<5	55.76	112	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	83	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	98	79-122			

MSD Lab ID: QC39870

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	83.36	167	51-180	13	22
Trichloroethene	50	60.48	119	73-141	4	24
Benzene	50	57.81	116	78-142	6	21
Toluene	50	59.34	116	76-150	7	21
Chlorobenzene	50	58.75	118	83-129	5	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	86	68-126				
Toluene-d8	101	87-125				
Bromofluorobenzene	99	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/10/97
Lab ID: 128292-003	Received Date: 02/10/97
Matrix: Water	Prep Date: 02/11/97
Batch#: 32320	Analysis Date: 02/11/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC39906

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	58.07	116	51-180
Trichloroethene	50	<5	54.34	109	73-141
Benzene	50	<5	51.79	103	78-142
Toluene	50	0.9395	51.17	100	76-150
Chlorobenzene	50	<5	52.14	104	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	97	68-126			
Toluene-d8	96	87-125			
Bromofluorobenzene	102	79-122			

MSD Lab ID: QC39907

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	56.18	112	51-180	3	22
Trichloroethene	50	52.6	105	73-141	3	24
Benzene	50	50.68	101	78-142	2	21
Toluene	50	50.19	99	76-150	2	21
Chlorobenzene	50	51.33	103	83-129	2	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	99	68-126				
Toluene-d8	97	87-125				
Bromofluorobenzene	101	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

Field ID: SCI-56 @ 1
Lab ID: 128237-015
Matrix: Soil
Batch#: 32278
Units: ug/Kg
Diln Fac: 1

Sampled: 02/03/97
Received: 02/05/97
Extracted: 02/07/97
Analyzed: 02/12/97

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%Recovery	Recovery Limits
TCMX	102	29-108
Decachlorobiphenyl	79	30-125



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

Field ID: SCI-58 @ SURFACE
Lab ID: 128237-018
Matrix: Soil
Batch#: 32278
Units: ug/Kg
Diln Fac: 1

Sampled: 01/31/97
Received: 02/05/97
Extracted: 02/07/97
Analyzed: 02/12/97

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12

Surrogate	%Recovery	Recovery Limits
TCMX	59	29-108
Decachlorobiphenyl	75	30-125

Lab #: 128237

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

METHOD BLANK

Matrix: Soil
Batch#: 32278
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/07/97
Analysis Date: 02/11/97

MB Lab ID: QC39745

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Surrogate	%Rec	Recovery Limits
TCMX	87	29-108
Decachlorobiphenyl	84	30-125



Lab #: 128237

BATCH QC REPORT

EPA 8080 Pesticides & PCBs			
Client: Subsurface Consultants	Analysis Method: EPA 8080		
Project#: 133.005	Prep Method: EPA 3550		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/07/97		
Batch#: 32278	Analysis Date: 02/11/97		
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39746

Analyte	Result	Spike Added	%Rec #	Limits
gamma-BHC	15	17	90	49-115
Heptachlor	15.39	17	92	51-119
Aldrin	14.67	17	88	55-112
Dieldrin	14.83	17	89	54-123
Endrin	15.86	17	95	63-128
4,4'-DDT	14.68	17	88	57-131
Surrogate	%Rec	Limits		
TCMX	91	29-108		
Decachlorobiphenyl	86	30-125		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 6 outside limits



Lab #: 128237

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3550

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
Lab ID: 128245-002
Matrix: Soil
Batch#: 32278
Units: ug/Kg dry weight
Diln Fac: 1

Sample Date: 02/04/97
Received Date: 02/06/97
Prep Date: 02/07/97
Analysis Date: 02/12/97
Moisture: 18%

MS Lab ID: QC39747

Analyte	Spike Added	Sample	MS	%Rec #	Limits
gamma-BHC	20.73	<3.659	17.3	85	53-124
Heptachlor	20.73	<3.659	16.67	82	55-128
Aldrin	20.73	<3.659	15.94	78	49-128
Dieldrin	20.73	<7.317	16.5	81	54-128
Endrin	20.73	<7.317	17.77	87	69-131
4,4'-DDT	20.73	<7.317	15.29	75	53-144
Surrogate	%Rec	Limits			
TCMX	86	29-108			
Decachlorobiphenyl	78	30-125			

MSD Lab ID: QC39748

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	20.73	17.29	85	53-124	0	35
Heptachlor	20.73	16.39	81	55-128	2	35
Aldrin	20.73	16.15	79	49-128	1	35
Dieldrin	20.73	17	84	54-128	3	35
Endrin	20.73	18.48	91	69-131	4	35
4,4'-DDT	20.73	15.94	78	53-144	4	35
Surrogate	%Rec	Limits				
TCMX	85	29-108				
Decachlorobiphenyl	85	30-125				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 6 outside limits
 Spike Recovery: 0 out of 12 outside limits



Forensic Analytical
Analytical Report

San Francisco • 3777 Depot Road, Suite 409, Hayward, CA 94545 • Phone 510/887-8828 • Fax 510/887-4218
Los Angeles • 2959 Pacific Commerce Dr., Rancho Dominguez, CA 90221 • Phone 310/763-2374 • Fax 310/763-8684

Bulk Material Analysis
Method: 40 CFR 763, Subpart F, Appendix A (AHERA)

Client:
Curtis & Tompkins, Ltd.

2323 Fifth Street
Berkeley, CA 94710

Client ID: 1137
Report Number: 263943
Date Received: 02/06/97
Date Analyzed: 02/14/97

P.O. Num: 128237
Job ID: 128237
Site:

Sample Number	Lab Number	Total Asbestos	Total Fibrous Non-Asbestos	(Breakdown by type)
SCI-6002 Brown soil.	19707675	Non-Det.‡	Trace‡	Cellulose (Trace‡)

David Kahane, C.I.H., Laboratory Director, Hayward Laboratory

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Curtis & Tompkins, Ltd.
 Analytical Laboratories, Since 1878
 2323 Fifth Street
 Berkeley, CA 94710
 (510)486-0900 ph
 (510)486-0532 fx

Project Number: 128237

Subcontract Lab:

Forensic Analytical
 3777 Depot Road Suite 409
 Hayward, CA 94545
 (510) 887-8828

Please send report to: Tracy Babjar

Turnaround Time: 1 week

Sample ID	Date Sampled	Matrix	Analysis	C&T Lab #
SCI-60 @ 2	03-FEB-97	Soil	ASBESTOS-PLM	128237-010

***Please report using Sample ID instead of C&T Lab #.

Notes:	RELINQUISHED BY:	RECEIVED BY:
	<i>J. Quinn</i> ^{SP} 2/5/97	
	Date/Time	Date/Time
	Date/Time	Date/Time

Signature on this form constitutes a firm Purchase Order for the services requested above.

etc 2/6/97
 10304



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128237
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 02/03/97
DATE RECEIVED: 02/05/97
DATE ANALYZED: 02/10/97
DATE REPORTED: 02/12/97

=====

ANALYSIS: NITRATE/NITRITE NITROGEN
METHOD REFERENCE: EPA 353.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128237-010	SCI-60 @ 2'	3.0	mg/Kg	0.20
METHOD BLANK	N/A	ND	mg/Kg	0.20

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/MSD OF SAMPLE NO: 128237-010

LCS RECOVERY, %	93
RPD, %	10
MS/MSD RECOVERY, %	67

=====



Curtis & Tompkins, Ltd.

LABORATORY NUMBER: 128237
CLIENT: SUBSURFACE CONSULTANTS
PROJECT ID: 133.005
LOCATION: KOT

DATE SAMPLED: 02/03/9
DATE RECEIVED: 02/05/9
DATE ANALYZED: 02/07/9
DATE REPORTED: 02/12/9

=====

ANALYSIS: TOTAL PHOSPHORUS
METHOD REFERENCE: EPA 365.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING
128237-010	SCI-60 @ 2'	3.1	mg/Kg	0.3
METHOD BLANK	N/A	ND	mg/Kg	0.3

ND = Not detected at or above the reporting limit.

QA/QC SUMMARY: MS/SAMPLE DUPLICATE OF 128237-010

RPD, %	17
RECOVERY, %	82

=====



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

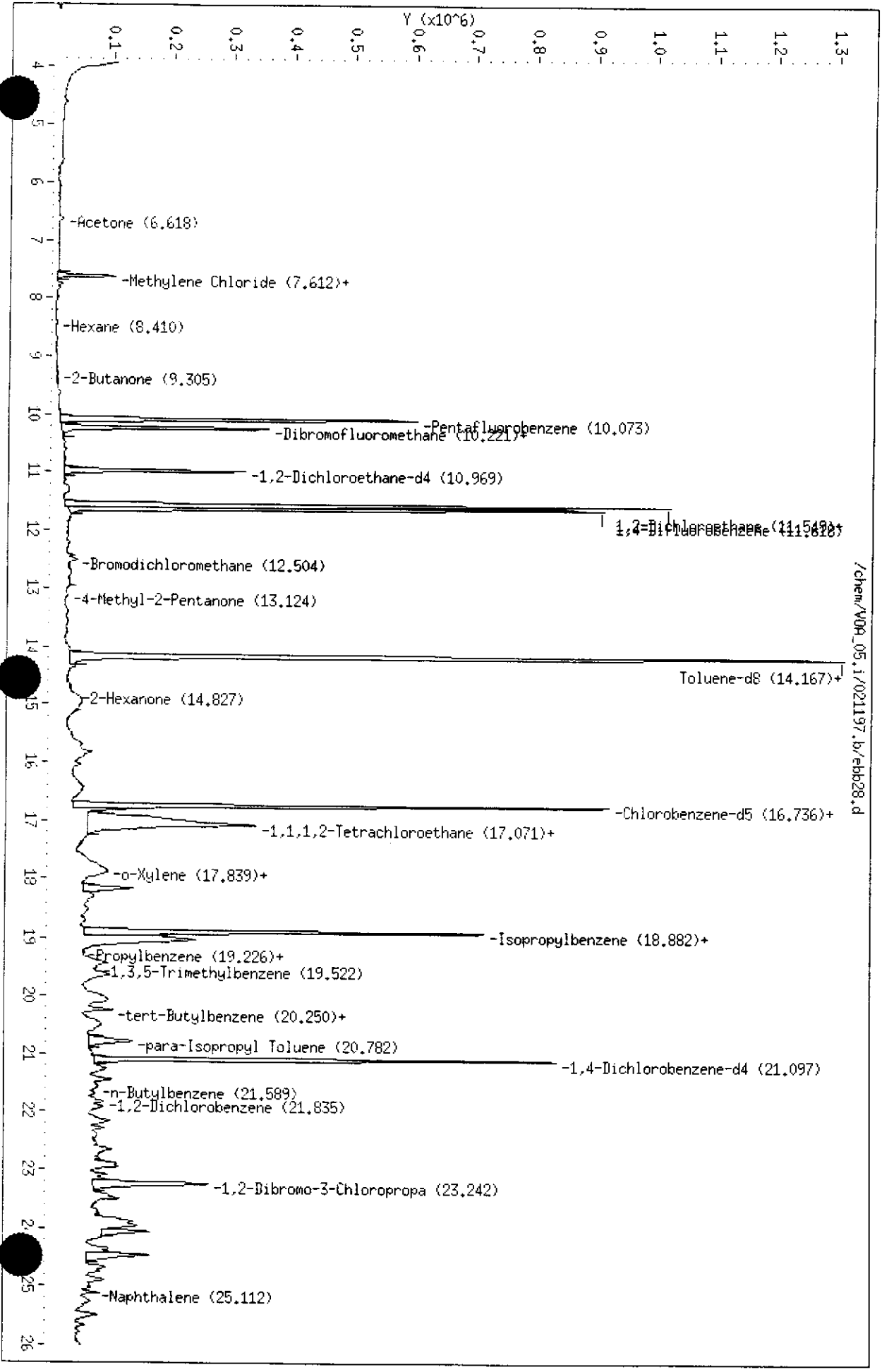
Field ID: SCI TP-13 @ 10
 Lab ID: 128255-005
 Matrix: Soil
 Batch#: 32341
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/05/97
 Received: 02/06/97
 Extracted: 02/12/97
 Analyzed: 02/12/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	6.1	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	98	87-125
Bromofluorobenzene	103	79-122

Data File: /chem/VOA_05.1/021197.b/ebb28.d
 Date: 12-FEB-97 00:47
 Client ID: DYNA P&I
 Sample Info: MSS.128255-005
 Purge Volume: 5.0
 Column phase: RIx Volatiles

Instrument: VOA_05.1
 Operator: DM
 Column diameter: 0.32





Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/11/97	
Batch#: 32320	Analysis Date: 02/11/97	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39888

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	101	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	106	79-122



Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/11/97	
Batch#: 32320	Analysis Date: 02/11/97	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC39909

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	100	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	115	79-122



Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Soil	Prep Date: 02/11/97	
Batch#: 32341	Analysis Date: 02/11/97	
Units: ug/Kg		
Diln Fac: 1		

MB Lab ID: QC39974

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	89	68-126
Toluene-d8	97	87-125
Bromofluorobenzene	114	79-122

Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 02/12/97
Batch#: 32351	Analysis Date: 02/12/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC40008

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	98	79-122

Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date:	02/12/97
Batch#: 32351	Analysis Date:	02/12/97
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC40062

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	93	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	98	79-122

Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics		
Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
METHOD BLANK		
Matrix: Water	Prep Date: 02/13/97	
Batch#: 32351	Analysis Date: 02/13/97	
Units: ug/L		
Diln Fac: 1		

MB Lab ID: QC40095

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122



Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128292-003
 Matrix: Water
 Batch#: 32320
 Units: ug/L
 Diln Fac: 1

Sample Date: 02/10/97
 Received Date: 02/10/97
 Prep Date: 02/11/97
 Analysis Date: 02/11/97

MS Lab ID: QC39906

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	58.07	116	51-180
Trichloroethene	50	<5	54.34	109	73-141
Benzene	50	<5	51.79	103	78-142
Toluene	50	0.9395	51.17	100	76-150
Chlorobenzene	50	<5	52.14	104	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	97	68-126			
Toluene-d8	96	87-125			
Bromofluorobenzene	102	79-122			

MSD Lab ID: QC39907

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	56.18	112	51-180	3	14
Trichloroethene	50	52.6	105	73-141	3	14
Benzene	50	50.68	101	78-142	2	11
Toluene	50	50.19	99	76-150	2	13
Chlorobenzene	50	51.33	103	83-129	2	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	99	68-126				
Toluene-d8	97	87-125				
Bromofluorobenzene	101	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
MATRIX SPIKE/MATRIX SPIKE DUPLICATE			
Field ID: SCI TP-13 @ 10	Sample Date:	02/05/97	
Lab ID: 128255-005	Received Date:	02/06/97	
Matrix: Soil	Prep Date:	02/12/97	
Batch#: 32341	Analysis Date:	02/12/97	
Units: ug/Kg			
Diln Fac: 1			

MS Lab ID: QC39982

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	50.65	101	51-180
Trichloroethene	50	<5	41.25	83	73-141
Benzene	50	<5	41.73	83	78-142
Toluene	50	<5	40.15	79	76-150
Chlorobenzene	50	<5	38.62	69 *	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	90	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	106	79-122			

MSD Lab ID: QC39983

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	48.81	98	51-180	4	22
Trichloroethene	50	40.53	81	73-141	2	24
Benzene	50	41.35	83	78-142	1	21
Toluene	50	39.36	78	76-150	2	21
Chlorobenzene	50	38.44	69 *	83-129	0	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	92	68-126				
Toluene-d8	98	87-125				
Bromofluorobenzene	109	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 2 out of 10 outside limits

Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics	
Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/09/97
Lab ID: 128281-002	Received Date: 02/10/97
Matrix: Water	Prep Date: 02/13/97
Batch#: 32351	Analysis Date: 02/13/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC40093

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	55.81	112	51-180
Trichloroethene	50	<5	44.17	88	73-141
Benzene	50	<5	43.63	87	78-142
Toluene	50	<5	44.65	86	76-150
Chlorobenzene	50	<5	45.61	91	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	101	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	101	79-122			

MSD Lab ID: QC40094

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	54.9	110	51-180	2	14
Trichloroethene	50	45.12	90	73-141	2	14
Benzene	50	44.25	89	78-142	1	11
Toluene	50	45.81	88	76-150	3	13
Chlorobenzene	50	46.1	92	83-129	1	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	105	68-126				
Toluene-d8	101	87-125				
Bromofluorobenzene	101	79-122				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 10 outside limits



Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date:	02/11/97	
Batch#: 32320	Analysis Date:	02/11/97	
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC39887

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	60.59	50	121	51-180
Trichloroethene	55.84	50	112	73-141
Benzene	53.34	50	107	78-142
Toluene	51.43	50	103	76-150
Chlorobenzene	54.08	50	108	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	97	68-126		
Toluene-d8	96	87-125		
Bromofluorobenzene	103	79-122		

* Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Lab #: 128255

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32341
Units: ug/Kg
Diln Fac: 1

Prep Date: 02/11/97
Analysis Date: 02/11/97

LCS Lab ID: QC39973

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	63.25	50	126	51-180
Trichloroethene	54.66	50	109	73-141
Benzene	51.16	50	102	78-142
Toluene	50.26	50	101	76-150
Chlorobenzene	53.03	50	106	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	89	68-126		
Toluene-d8	97	87-125		
Bromofluorobenzene	111	79-122		

Column to be used to flag recovery and RPD values with an asterisk
* Values outside of QC limits
Spike Recovery: 0 out of 5 outside limits

Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8240 Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8260		
Project#: 133.005	Prep Method: EPA 5030		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Water	Prep Date: 02/12/97		
Batch#: 32351	Analysis Date: 02/12/97		
Units: ug/L			
Diln Fac: 1			

LCS Lab ID: QC40061

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	66.56	50	133	51-180
Trichloroethene	50.46	50	101	73-141
Benzene	48.68	50	97	78-142
Toluene	49.48	50	99	76-150
Chlorobenzene	50.53	50	101	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	95	68-126		
Toluene-d8	101	87-125		
Bromofluorobenzene	96	79-122		

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Organochlorine Pesticides and PCBs

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8080
Prep Method: EPA 3520

Field ID: SCI TP-13
Lab ID: 128255-001
Matrix: Water
Batch#: 32290
Units: ug/L
Diln Fac: 400

Sampled: 02/05/97
Received: 02/06/97
Extracted: 02/07/97
Analyzed: 02/13/97

Analyte	Result	Reporting Limit
alpha-BHC	ND	19
beta-BHC	ND	19
gamma-BHC	ND	19
delta-BHC	ND	19
Heptachlor	ND	19
Aldrin	ND	19
Heptachlor epoxide B	ND	19
Heptachlor epoxide A	ND	19
Endosulfan I	ND	19
Dieldrin	ND	38
4,4'-DDE	58	38
Endrin	ND	38
Endosulfan II	ND	38
Endosulfan sulfate	ND	38
4,4'-DDD	270	38
Endrin aldehyde	ND	38
4,4'-DDT	ND	38
Chlordane	ND	190
Methoxychlor	ND	190
Toxaphene	ND	380
Aroclor-1016	ND	190
Aroclor-1221	ND	380
Aroclor-1232	ND	190
Aroclor-1242	ND	190
Aroclor-1248	ND	190
Aroclor-1254	ND	190
Aroclor-1260	ND	190

Surrogate	%Recovery	Recovery Limits
TCMX	DO*	34-128
Decachlorobiphenyl	DO*	50-150

* Values outside of QC limits
DO: Surrogate diluted out

Sample Name : 128255-001

Sample #: 32290

Page 1 of 1

FileName : G:\GC14\CHA\041A109.raw

Date : 2/13/97 12:36 PM

Method : PEST-CNT

Time of Injection: 2/13/97 10:42 AM

Start Time : 0.00 min

End Time : 32.35 min

Low Point : 39.66 mV

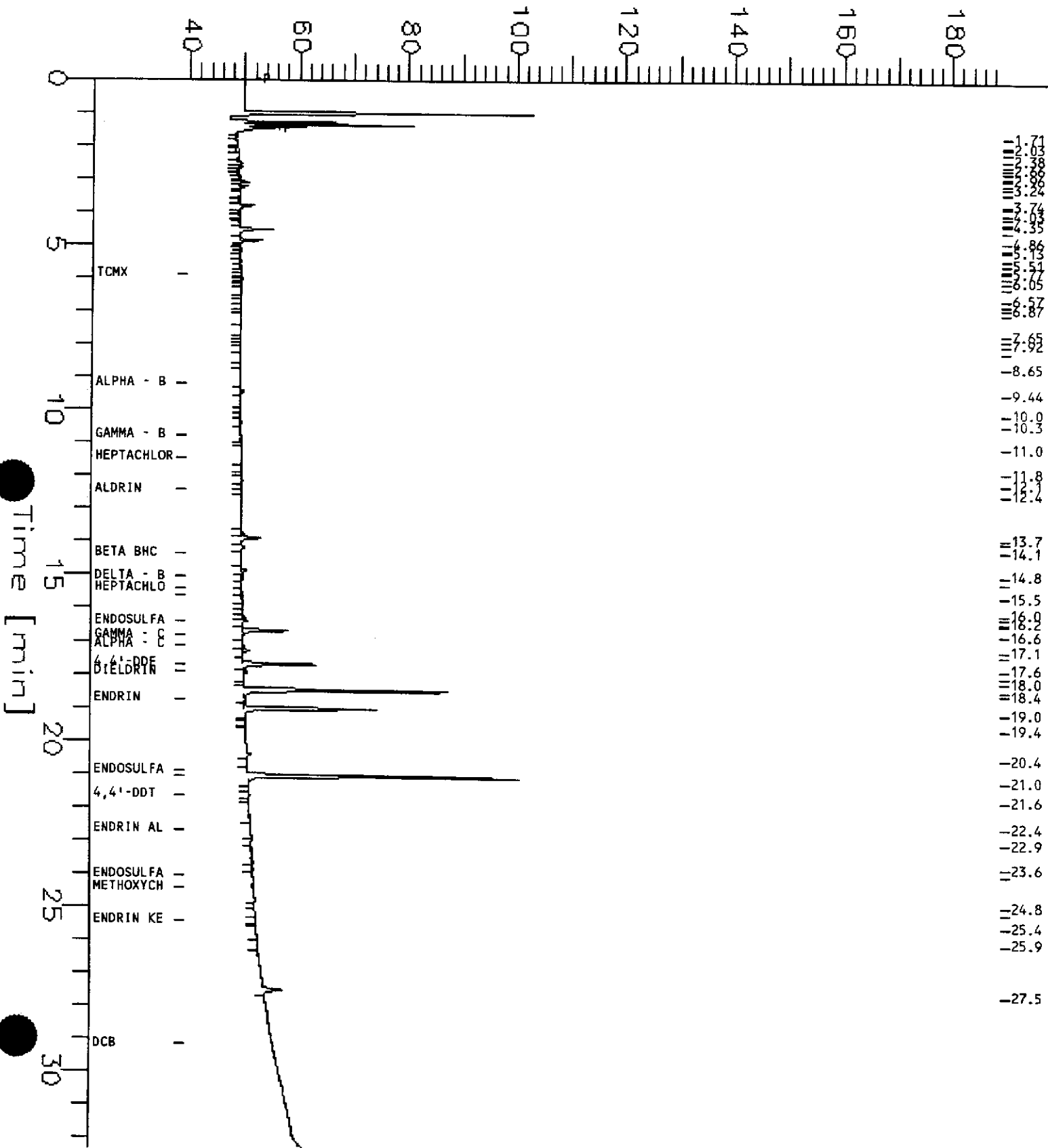
High Point : 189.66 mV

Scale Factor: -1.0

Plot Offset: 40 mV

Plot Scale: 150.0 mV

Response [mV]

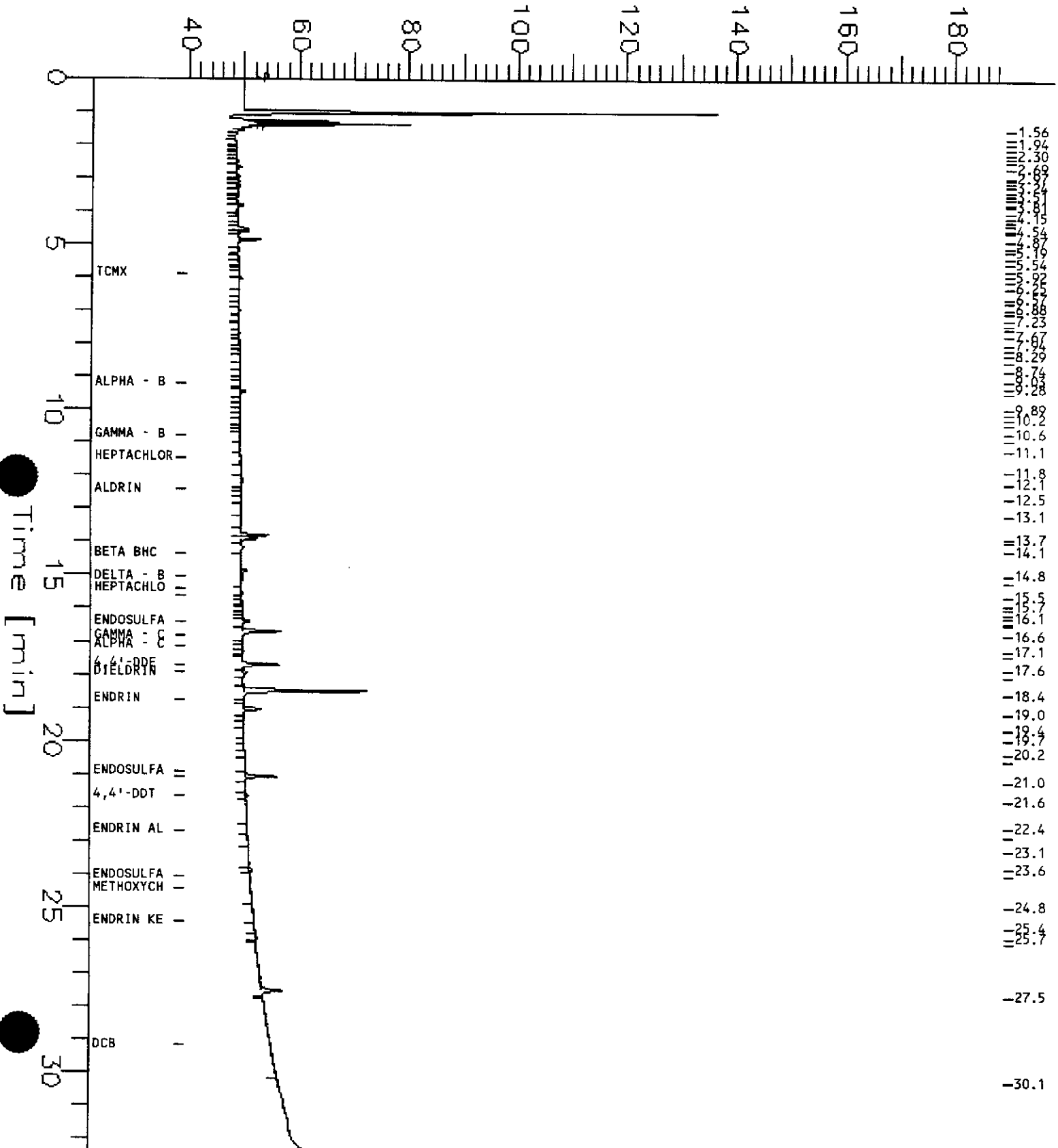


Sample Name : 128255-003
 FileName : g:\gc14\cha\041A111.raw
 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Scale Factor : -1.0

End Time : 32.35 min
 Plot Offset: 40 mV

Sample #: 32278
 Date : 2/13/97 12:31 PM
 Time of Injection: 2/13/97 11:58 AM
 Low Point : 39.65 mV
 High Point : 189.65 mV
 Plot Scale: 150.0 mV

Response [mV]

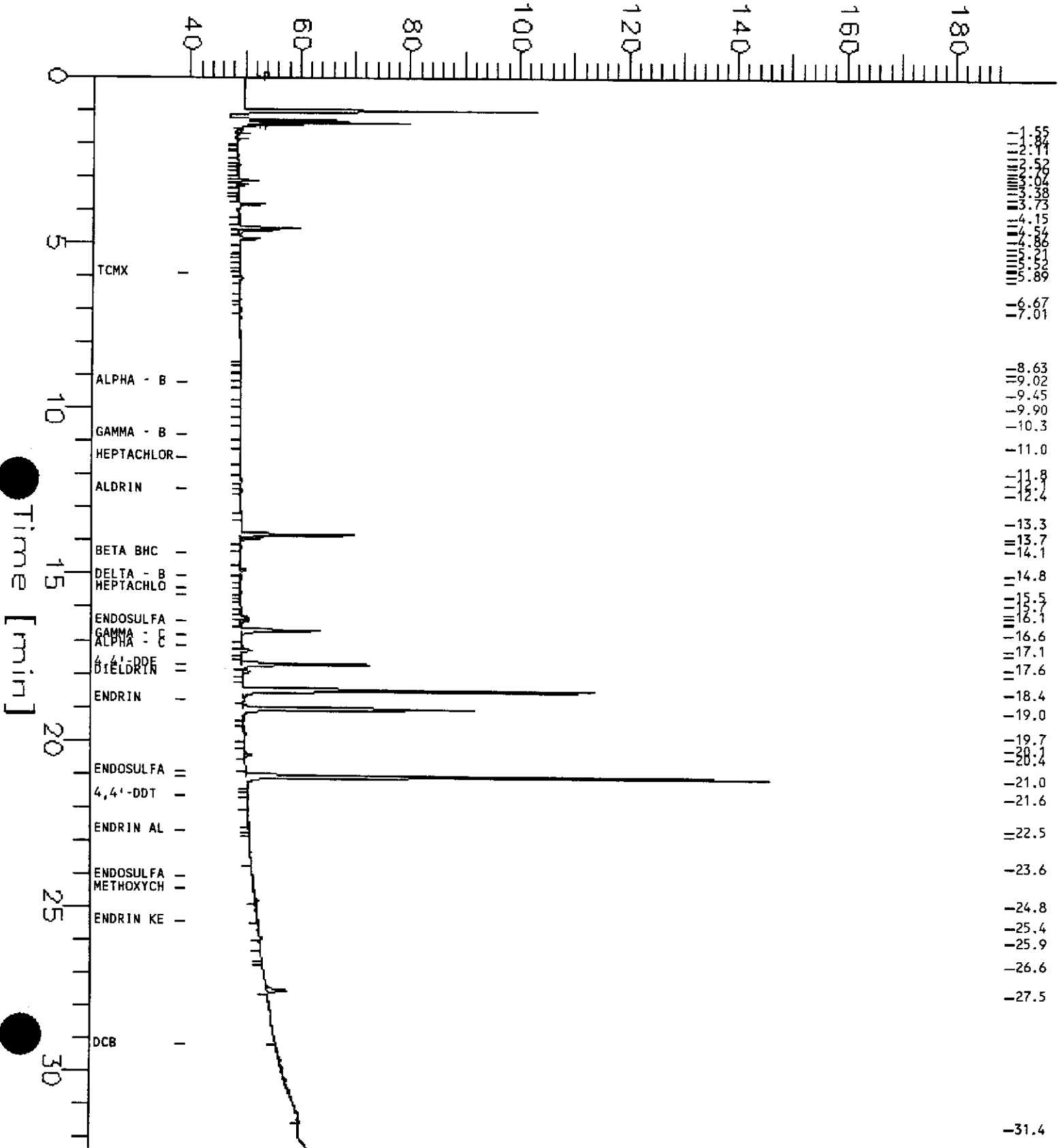


Sample Name : 128255-004
 FileName : g:\gc14\cha\041A110.raw
 Method : PEST-CNT.ins
 Start Time : 0.00 min
 Scale Factor : -1.0

End Time : 32.35 min
 Plot Offset: 40 mV

Sample #: 32278
 Date : 2/13/97 11:53 AM
 Time of Injection: 2/13/97 11:20 AM
 Low Point : 39.63 mV
 Plot Scale: 150.0 mV
 High Point : 189.63 mV

Response [mV]





Lab #: 128255

BATCH QC REPORT

EPA 8080 Pesticides & PCBs			
Client: Subsurface Consultants	Analysis Method: EPA 8080		
Project#: 133.005	Prep Method: EPA 3550		
Location: KOT			
METHOD BLANK			
Matrix: Soil	Prep Date: 02/07/97		
Batch#: 32278	Analysis Date: 02/11/97		
Units: ug/Kg			
Diln Fac: 1			

MB Lab ID: QC39745

Analyte	Result	Reporting Limit
alpha-BHC	ND	3.0
beta-BHC	ND	3.0
gamma-BHC	ND	3.0
delta-BHC	ND	3.0
Heptachlor	ND	3.0
Aldrin	ND	3.0
Heptachlor epoxide B	ND	3.0
Heptachlor epoxide A	ND	3.0
Endosulfan I	ND	3.0
Dieldrin	ND	6.0
4,4'-DDE	ND	6.0
Endrin	ND	6.0
Endosulfan II	ND	6.0
Endosulfan sulfate	ND	6.0
4,4'-DDD	ND	6.0
Endrin aldehyde	ND	6.0
4,4'-DDT	ND	6.0
Chlordane	ND	30
Methoxychlor	ND	30
Toxaphene	ND	60
Aroclor-1016	ND	12
Aroclor-1221	ND	24
Aroclor-1232	ND	12
Aroclor-1242	ND	12
Aroclor-1248	ND	12
Aroclor-1254	ND	12
Aroclor-1260	ND	12
Surrogate	%Rec	Recovery Limits
TCMX	87	29-108
Decachlorobiphenyl	84	30-125

Lab #: 128255

BATCH QC REPORT

EPA 8080 Pesticides & PCBs

 Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

 Analysis Method: EPA 8080
 Prep Method: EPA 3520

METHOD BLANK

 Matrix: Water
 Batch#: 32290
 Units: ug/L
 Diln Fac: 1

 Prep Date: 02/07/97
 Analysis Date: 02/12/97

MB Lab ID: QC39773

Analyte	Result	Reporting Limit
alpha-BHC	ND	0.05
beta-BHC	ND	0.05
gamma-BHC	ND	0.05
delta-BHC	ND	0.05
Heptachlor	ND	0.05
Aldrin	ND	0.05
Heptachlor epoxide B	ND	0.05
Heptachlor epoxide A	ND	0.05
Endosulfan I	ND	0.05
Dieldrin	ND	0.1
4,4'-DDE	ND	0.1
Endrin	ND	0.1
Endosulfan II	ND	0.1
Endosulfan sulfate	ND	0.1
4,4'-DDD	ND	0.1
Endrin aldehyde	ND	0.1
4,4'-DDT	ND	0.1
Chlordane	ND	0.5
Methoxychlor	ND	0.5
Toxaphene	ND	1.0
Aroclor-1016	ND	0.5
Aroclor-1221	ND	1.0
Aroclor-1232	ND	0.5
Aroclor-1242	ND	0.5
Aroclor-1248	ND	0.5
Aroclor-1254	ND	0.5
Aroclor-1260	ND	0.5
Surrogate	%Rec	Recovery Limits
TCMX	83	34-128
Decachlorobiphenyl	84	50-150



Lab #: 128255

BATCH QC REPORT

EPA 8080 Pesticides & PCBs	
Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	
BLANK SPIKE/BLANK SPIKE DUPLICATE	
Matrix: Water	Prep Date: 02/07/97
Batch#: 32290	Analysis Date: 02/12/97
Units: ug/L	
Diln Fac: 1	

BS Lab ID: QC39774

Analyte	Spike Added	BS	%Rec #	Limits
gamma-BHC	0.5	0.46	92	57-120
Heptachlor	0.5	0.42	84	51-109
Aldrin	0.5	0.42	84	57-105
Dieldrin	0.5	0.43	86	62-122
Endrin	0.5	0.46	92	70-128
4,4'-DDT	0.5	0.4	80	67-128
Surrogate	%Rec	Limits		
TCMX	70	34-128		
Decachlorobiphenyl	85	50-150		

BSD Lab ID: QC39775

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	0.5	0.33	66	57-120	33 *	20
Heptachlor	0.5	0.31	62	51-109	30 *	20
Aldrin	0.5	0.31	62	57-105	30 *	20
Dieldrin	0.5	0.32	64	62-122	29 *	20
Endrin	0.5	0.33	66 *	70-128	33 *	20
4,4'-DDT	0.5	0.29	58 *	67-128	32 *	20
Surrogate	%Rec	Limits				
TCMX	49	34-128				
Decachlorobiphenyl	62	50-150				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 6 out of 6 outside limits
 Spike Recovery: 2 out of 12 outside limits



Lab #: 128255

BATCH QC REPORT

EPA 8080 Pesticides & PCBs			
Client: Subsurface Consultants	Analysis Method: EPA 8080		
Project#: 133.005	Prep Method: EPA 3550		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date:	02/07/97	
Batch#: 32278	Analysis Date:	02/11/97	
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39746

Analyte	Result	Spike Added	%Rec #	Limits
gamma-BHC	15	17	90	49-115
Heptachlor	15.39	17	92	51-119
Aldrin	14.67	17	88	55-112
Dieldrin	14.83	17	89	54-123
Endrin	15.86	17	95	63-128
4,4'-DDT	14.68	17	88	57-131
Surrogate	%Rec	Limits		
TCMX	91	29-108		
Decachlorobiphenyl	86	30-125		

* Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 Spike Recovery: 0 out of 6 outside limits



Lab #: 128255

BATCH QC REPORT

EPA 8080 Pesticides & PCBs	
Client: Subsurface Consultants	Analysis Method: EPA 8080
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: ZZZZZZ	Sample Date: 02/04/97
Lab ID: 128245-002	Received Date: 02/06/97
Matrix: Soil	Prep Date: 02/07/97
Batch#: 32278	Analysis Date: 02/12/97
Units: ug/Kg dry weight	Moisture: 18%
Diln Fac: 1	

MS Lab ID: QC39747

Analyte	Spike Added	Sample	MS	%Rec #	Limits
gamma-BHC	20.73	<3.659	17.3	85	53-124
Heptachlor	20.73	<3.659	16.67	82	55-128
Aldrin	20.73	<3.659	15.94	78	49-128
Dieldrin	20.73	<7.317	16.5	81	54-128
Endrin	20.73	<7.317	17.77	87	69-131
4,4'-DDT	20.73	<7.317	15.29	75	53-144
Surrogate	%Rec	Limits			
TCMX	86	29-108			
Decachlorobiphenyl	78	30-125			

MSD Lab ID: QC39748

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
gamma-BHC	20.73	17.29	85	53-124	0	35
Heptachlor	20.73	16.39	81	55-128	2	35
Aldrin	20.73	16.15	79	49-128	1	35
Dieldrin	20.73	17	84	54-128	3	35
Endrin	20.73	18.48	91	69-131	4	35
4,4'-DDT	20.73	15.94	78	53-144	4	35
Surrogate	%Rec	Limits				
TCMX	85	29-108				
Decachlorobiphenyl	85	30-125				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 6 outside limits
 Spike Recovery: 0 out of 12 outside limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

Field ID: SCI TP-13
Lab ID: 128255-001
Matrix: Water
Batch#: 32316
Units: ug/L
Diln Fac: 5

Sampled: 02/05/97
Received: 02/06/97
Extracted: 02/10/97
Analyzed: 03/10/97

Analyte	Result	Reporting Limit
Phenol	ND	47
2-Chlorophenol	ND	47
Benzyl alcohol	ND	47
2-Methylphenol	ND	47
4-Methylphenol	ND	47
2-Nitrophenol	ND	240
2,4-Dimethylphenol	160	47
Benzoic acid	ND	240
2,4-Dichlorophenol	ND	47
4-Chloro-3-methylphenol	ND	47
2,4,6-Trichlorophenol	ND	47
2,4,5-Trichlorophenol	ND	240
2,4-Dinitrophenol	ND	240
4-Nitrophenol	ND	240
4,6-Dinitro-2-methylphenol	ND	240
Pentachlorophenol	ND	240
N-Nitrosodimethylamine	ND	47
Aniline	ND	47
bis(2-Chloroethyl) ether	ND	47
1,3-Dichlorobenzene	ND	47
1,4-Dichlorobenzene	ND	47
1,2-Dichlorobenzene	280	47
bis(2-Chloroisopropyl) ether	ND	47
N-Nitroso-di-n-propylamine	ND	47
Hexachloroethane	ND	47
Nitrobenzene	ND	47
Isophorone	ND	47
bis(2-Chloroethoxy) methane	ND	47
1,2,4-Trichlorobenzene	ND	47
Naphthalene	170	47
4-Chloroaniline	ND	47
Hexachlorobutadiene	ND	47
2-Methylnaphthalene	410	47
Hexachlorocyclopentadiene	ND	47
2-Chloronaphthalene	ND	47
2-Nitroaniline	ND	240
Dimethylphthalate	ND	47
Acenaphthylene	ND	47

Semivolatile Organics by GC/MS		
Field ID: SCI TP-13	Sampled:	02/05/97
Lab ID: 128255-001	Received:	02/06/97
Matrix: Water	Extracted:	02/10/97
Batch#: 32316	Analyzed:	03/10/97
Units: ug/L		
Diln Fac: 5		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	47
3-Nitroaniline	ND	240
Acenaphthene	ND	47
Dibenzofuran	ND	47
2,4-Dinitrotoluene	ND	47
Diethylphthalate	ND	47
4-Chlorophenyl-phenylether	ND	47
Fluorene	ND	47
4-Nitroaniline	ND	240
N-Nitrosodiphenylamine	ND	47
Azobenzene	ND	47
4-Bromophenyl-phenylether	ND	47
Hexachlorobenzene	ND	47
Phenanthrene	ND	47
Anthracene	ND	47
Di-n-butylphthalate	ND	47
Fluoranthene	ND	47
Pyrene	ND	47
Butylbenzylphthalate	ND	47
3,3'-Dichlorobenzidine	ND	240
Benzo(a)anthracene	ND	47
Chrysene	ND	47
bis(2-Ethylhexyl)phthalate	ND	47
Di-n-octylphthalate	ND	47
Benzo(b)fluoranthene	ND	47
Benzo(k)fluoranthene	ND	47
Benzo(a)pyrene	ND	47
Indeno(1,2,3-cd)pyrene	ND	47
Dibenz(a,h)anthracene	ND	47
Benzo(g,h,i)perylene	ND	47
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	70	21-110
Phenol-d5	78	10-110
2,4,6-Tribromophenol	66	10-123
Nitrobenzene-d5	99	35-114
2-Fluorobiphenyl	65	43-116
Terphenyl-d14	19*	33-141

* Values outside of QC limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-13 @ 4.2
Lab ID: 128255-003
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/05/97
Received: 02/06/97
Extracted: 02/11/97
Analyzed: 03/11/97

Analyte	Result	Reporting Limit
Phenol	ND	40000
2-Chlorophenol	ND	40000
Benzyl alcohol	ND	40000
2-Methylphenol	ND	40000
4-Methylphenol	ND	40000
2-Nitrophenol	ND	200000
2,4-Dimethylphenol	ND	40000
Benzoic acid	ND	200000
2,4-Dichlorophenol	ND	40000
4-Chloro-3-methylphenol	ND	40000
2,4,6-Trichlorophenol	ND	40000
2,4,5-Trichlorophenol	ND	200000
2,4-Dinitrophenol	ND	200000
4-Nitrophenol	ND	200000
4,6-Dinitro-2-methylphenol	ND	200000
Pentachlorophenol	ND	200000
N-Nitrosodimethylamine	ND	40000
Aniline	ND	40000
bis(2-Chloroethyl)ether	ND	40000
1,3-Dichlorobenzene	ND	40000
1,4-Dichlorobenzene	ND	40000
1,2-Dichlorobenzene	ND	40000
bis(2-Chloroisopropyl) ether	ND	40000
N-Nitroso-di-n-propylamine	ND	40000
Hexachloroethane	ND	40000
Nitrobenzene	ND	40000
Isophorone	ND	40000
bis(2-Chloroethoxy)methane	ND	40000
1,2,4-Trichlorobenzene	ND	40000
Naphthalene	ND	40000
4-Chloroaniline	ND	40000
Hexachlorobutadiene	ND	40000
2-Methylnaphthalene	22000 J	40000
Hexachlorocyclopentadiene	ND	40000
2-Chloronaphthalene	ND	40000
2-Nitroaniline	ND	200000
Dimethylphthalate	ND	40000
Acenaphthylene	ND	40000



Semivolatile Organics by GC/MS		
Field ID: SCI TP-13 @ 4.2	Sampled:	02/05/97
Lab ID: 128255-003	Received:	02/06/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	03/11/97
Units: ug/Kg		
Diln Fac: 10		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	40000
3-Nitroaniline	ND	200000
Acenaphthene	ND	40000
Dibenzofuran	ND	40000
2,4-Dinitrotoluene	ND	40000
Diethylphthalate	ND	40000
4-Chlorophenyl-phenylether	ND	40000
Fluorene	ND	40000
4-Nitroaniline	ND	200000
N-Nitrosodiphenylamine	ND	40000
Azobenzene	ND	40000
4-Bromophenyl-phenylether	ND	40000
Hexachlorobenzene	ND	40000
Phenanthrene	ND	40000
Anthracene	ND	40000
Di-n-butylphthalate	ND	40000
Fluoranthene	ND	40000
Benzidine	ND	40000
Pyrene	ND	40000
Butylbenzylphthalate	ND	40000
3,3'-Dichlorobenzidine	ND	200000
Benzo(a)anthracene	ND	40000
Chrysene	ND	40000
bis(2-Ethylhexyl)phthalate	ND	40000
Di-n-octylphthalate	ND	40000
Benzo(b)fluoranthene	ND	40000
Benzo(k)fluoranthene	ND	40000
Benzo(a)pyrene	ND	40000
Indeno(1,2,3-cd)pyrene	ND	40000
Dibenz(a,h)anthracene	ND	40000
Benzo(g,h,i)perylene	ND	40000
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	DO*	25-121
Phenol-d5	DO*	24-113
2,4,6-Tribromophenol	DO*	19-122
Nitrobenzene-d5	DO*	23-120
2-Fluorobiphenyl	DO*	30-115
Terphenyl-d14	DO*	18-137

J: Estimated Value

* Values outside of QC limits



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-13 @ 5.7
Lab ID: 128255-004
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 10

Sampled: 02/05/97
Received: 02/06/97
Extracted: 02/11/97
Analyzed: 03/04/97

Analyte	Result	Reporting Limit
Phenol	ND	3300
2-Chlorophenol	ND	3300
Benzyl alcohol	ND	3300
2-Methylphenol	ND	3300
4-Methylphenol	ND	3300
2-Nitrophenol	ND	17000
2,4-Dimethylphenol	ND	3300
Benzoic acid	ND	17000
2,4-Dichlorophenol	ND	3300
4-Chloro-3-methylphenol	ND	3300
2,4,6-Trichlorophenol	ND	3300
2,4,5-Trichlorophenol	ND	17000
2,4-Dinitrophenol	ND	17000
4-Nitrophenol	ND	17000
4,6-Dinitro-2-methylphenol	ND	17000
Pentachlorophenol	ND	17000
N-Nitrosodimethylamine	ND	3300
Aniline	ND	3300
bis(2-Chloroethyl)ether	ND	3300
1,3-Dichlorobenzene	ND	3300
1,4-Dichlorobenzene	ND	3300
1,2-Dichlorobenzene	13000	3300
bis(2-Chloroisopropyl) ether	ND	3300
N-Nitroso-di-n-propylamine	ND	3300
Hexachloroethane	ND	3300
Nitrobenzene	ND	3300
Isophorone	ND	3300
bis(2-Chloroethoxy)methane	ND	3300
1,2,4-Trichlorobenzene	ND	3300
Naphthalene	14000	3300
4-Chloroaniline	ND	3300
Hexachlorobutadiene	ND	3300
2-Methylnaphthalene	56000	3300
Hexachlorocyclopentadiene	ND	3300
2-Chloronaphthalene	ND	3300
2-Nitroaniline	ND	17000
Dimethylphthalate	ND	3300
Acenaphthylene	ND	3300



Semivolatile Organics by GC/MS

Field ID: SCI TP-13 @ 5.7	Sampled: 02/05/97
Lab ID: 128255-004	Received: 02/06/97
Matrix: Soil	Extracted: 02/11/97
Batch#: 32325	Analyzed: 03/04/97
Units: ug/Kg	
Diln Fac: 10	

Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	3300
3-Nitroaniline	ND	17000
Acenaphthene	ND	3300
Dibenzofuran	ND	3300
2,4-Dinitrotoluene	ND	3300
Diethylphthalate	ND	3300
4-Chlorophenyl-phenylether	ND	3300
Fluorene	ND	3300
4-Nitroaniline	ND	17000
N-Nitrosodiphenylamine	ND	3300
Azobenzene	ND	3300
4-Bromophenyl-phenylether	ND	3300
Hexachlorobenzene	ND	3300
Phenanthrene	2200 J	3300
Anthracene	ND	3300
Di-n-butylphthalate	ND	3300
Fluoranthene	ND	3300
Benzidine	ND	3300
Pyrene	ND	3300
Butylbenzylphthalate	ND	3300
3,3'-Dichlorobenzidine	ND	17000
Benzo(a)anthracene	ND	3300
Chrysene	ND	3300
bis(2-Ethylhexyl)phthalate	ND	3300
Di-n-octylphthalate	ND	3300
Benzo(b)fluoranthene	ND	3300
Benzo(k)fluoranthene	ND	3300
Benzo(a)pyrene	ND	3300
Indeno(1,2,3-cd)pyrene	ND	3300
Dibenz(a,h)anthracene	ND	3300
Benzo(g,h,i)perylene	ND	3300
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	84	25-121
Phenol-d5	89	24-113
2,4,6-Tribromophenol	80	19-122
Nitrobenzene-d5	115	23-120
2-Fluorobiphenyl	104	30-115
Terphenyl-d14	133	18-137

J: Estimated Value



Semivolatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3550

Field ID: SCI TP-13 @ 10
Lab ID: 128255-005
Matrix: Soil
Batch#: 32325
Units: ug/Kg
Diln Fac: 1

Sampled: 02/05/97
Received: 02/06/97
Extracted: 02/11/97
Analyzed: 03/10/97

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl) ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy) methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330

Semivolatile Organics by GC/MS		
Field ID: SCI TP-13 @ 10	Sampled:	02/05/97
Lab ID: 128255-005	Received:	02/06/97
Matrix: Soil	Extracted:	02/11/97
Batch#: 32325	Analyzed:	03/10/97
Units: ug/Kg		
Diln Fac: 1		
Analyte	Result	Reporting Limit
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	240 J	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	2900	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Recovery	Recovery Limits
2-Fluorophenol	67	25-121
Phenol-d5	69	24-113
2,4,6-Tribromophenol	63	19-122
Nitrobenzene-d5	82	23-120
2-Fluorobiphenyl	75	30-115
Terphenyl-d14	89	18-137

J: Estimated Value



Lab #: 128255

BATCH QC REPORT

Page 1 of 2

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8270
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32316
Units: ug/L
Diln Fac: 1

Prep Date: 02/10/97
Analysis Date: 02/13/97

MB Lab ID: QC39875

Analyte	Result	Reporting Limit
Phenol	ND	10
2-Chlorophenol	ND	10
Benzyl alcohol	ND	10
2-Methylphenol	ND	10
4-Methylphenol	ND	10
2-Nitrophenol	ND	50
2,4-Dimethylphenol	ND	10
Benzoic acid	ND	50
2,4-Dichlorophenol	ND	10
4-Chloro-3-methylphenol	ND	10
2,4,6-Trichlorophenol	ND	10
2,4,5-Trichlorophenol	ND	50
2,4-Dinitrophenol	ND	50
4-Nitrophenol	ND	50
4,6-Dinitro-2-methylphenol	ND	50
Pentachlorophenol	ND	10
N-Nitrosodimethylamine	ND	10
Aniline	ND	10
bis(2-Chloroethyl)ether	ND	10
1,3-Dichlorobenzene	ND	10
1,4-Dichlorobenzene	ND	10
1,2-Dichlorobenzene	ND	10
bis(2-Chloroisopropyl) ether	ND	10
N-Nitroso-di-n-propylamine	ND	10
Hexachloroethane	ND	10
Nitrobenzene	ND	10
Isophorone	ND	10
bis(2-Chloroethoxy)methane	ND	10
1,2,4-Trichlorobenzene	ND	10
Naphthalene	ND	10
4-Chloroaniline	ND	10
Hexachlorobutadiene	ND	10
2-Methylnaphthalene	ND	10
Hexachlorocyclopentadiene	ND	10
2-Chloronaphthalene	ND	10
2-Nitroaniline	ND	50
Dimethylphthalate	ND	10
Acenaphthylene	ND	10
2,6-Dinitrotoluene	ND	10
3-Nitroaniline	ND	50

Lab #: 128255

BATCH QC REPORT

Page 2 of 2

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8270
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

METHOD BLANK

Matrix: Water	Prep Date: 02/10/97
Batch#: 32316	Analysis Date: 02/13/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC39875

Analyte	Result	Reporting Limit
Acenaphthene	ND	10
Dibenzofuran	ND	10
2,4-Dinitrotoluene	ND	10
Diethylphthalate	ND	10
4-Chlorophenyl-phenylether	ND	10
Fluorene	ND	10
4-Nitroaniline	ND	50
N-Nitrosodiphenylamine	ND	10
Azobenzene	ND	10
4-Bromophenyl-phenylether	ND	10
Hexachlorobenzene	ND	10
Phenanthrene	ND	10
Anthracene	ND	10
Di-n-butylphthalate	ND	10
Fluoranthene	ND	10
Pyrene	ND	10
Butylbenzylphthalate	ND	10
3,3'-Dichlorobenzidine	ND	50
Benzo(a)anthracene	ND	10
Chrysene	ND	10
bis(2-Ethylhexyl)phthalate	ND	10
Di-n-octylphthalate	ND	10
Benzo(b)fluoranthene	ND	10
Benzo(k)fluoranthene	ND	10
Benzo(a)pyrene	ND	10
Indeno(1,2,3-cd)pyrene	ND	10
Dibenz(a,h)anthracene	ND	10
Benzo(g,h,i)perylene	ND	10
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	76	21-110
Phenol-d5	76	10-110
2,4,6-Tribromophenol	65	10-123
Nitrobenzene-d5	93	35-114
2-Fluorobiphenyl	73	43-116
Terphenyl-d14	85	33-141



Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
 Batch#: 32316
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/10/97
 Analysis Date: 02/13/97

BS Lab ID: QC39876

Analyte	Spike Added	BS	%Rec	#	Limits
Phenol	100	77.85	78		12-110
2-Chlorophenol	100	74.72	75		27-123
4-Chloro-3-methylphenol	100	76.48	76		23-97
4-Nitrophenol	100	80.66	81	*	10-80
Pentachlorophenol	100	50.97	51		9-103
1,4-Dichlorobenzene	50	23.94	48		36-97
N-Nitroso-di-n-propylamine	50	31.94	64		41-116
1,2,4-Trichlorobenzene	50	25.43	51		39-98
Acenaphthene	50	33.74	67		46-118
2,4-Dinitrotoluene	50	33.35	67		24-96
Pyrene	50	37.44	75		26-127
Surrogate	%Rec	Limits			
2-Fluorophenol	72	21-110			
Phenol-d5	74	10-110			
2,4,6-Tribromophenol	74	10-123			
Nitrobenzene-d5	91	35-114			
2-Fluorobiphenyl	69	43-116			
Terphenyl-d14	87	33-141			

BSD Lab ID: QC39877

Analyte	Spike Added	BSD	%Rec	#	Limits	RPD	#	Limit
Phenol	100	84.71	85		12-110	9		42
2-Chlorophenol	100	81.59	82		27-123	9		40
4-Chloro-3-methylphenol	100	81.14	81		23-97	6		42
4-Nitrophenol	100	85.99	86	*	10-80	6		50
Pentachlorophenol	100	58.59	59		9-103	15		50
1,4-Dichlorobenzene	50	25.15	50		36-97	4		28
N-Nitroso-di-n-propylamine	50	33.78	68		41-116	6		38
1,2,4-Trichlorobenzene	50	26.51	53		39-98	4		28
Acenaphthene	50	36.01	72		46-118	7		31
2,4-Dinitrotoluene	50	34.02	68		24-96	1		38
Pyrene	50	38.92	78		26-127	4		31
Surrogate	%Rec	Limits						
2-Fluorophenol	80	21-110						
Phenol-d5	79	10-110						
2,4,6-Tribromophenol	77	10-123						
Nitrobenzene-d5	97	35-114						
2-Fluorobiphenyl	75	43-116						
Terphenyl-d14	88	33-141						

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 11 outside limits

Spike Recovery: 2 out of 22 outside limits



Lab #: 128255

BATCH QC REPORT

Client: Subsurface Consultants	Analysis Method: EPA 8270
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	
METHOD BLANK	
Matrix: Soil	Prep Date: 02/11/97
Batch#: 32325	Analysis Date: 02/12/97
Units: ug/Kg	
Diln Fac: 1	

MB Lab ID: QC39902

Analyte	Result	Reporting Limit
Phenol	ND	330
2-Chlorophenol	ND	330
Benzyl alcohol	ND	330
2-Methylphenol	ND	330
4-Methylphenol	ND	330
2-Nitrophenol	ND	1700
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1700
2,4-Dichlorophenol	ND	330
4-Chloro-3-methylphenol	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	1700
2,4-Dinitrophenol	ND	1700
4-Nitrophenol	ND	1700
4,6-Dinitro-2-methylphenol	ND	1700
Pentachlorophenol	ND	1700
N-Nitrosodimethylamine	ND	330
Aniline	ND	330
bis(2-Chloroethyl)ether	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
1,2-Dichlorobenzene	ND	330
bis(2-Chloroisopropyl) ether	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
bis(2-Chloroethoxy)methane	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	330
Hexachlorobutadiene	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2-Chloronaphthalene	ND	330
2-Nitroaniline	ND	1700
Dimethylphthalate	ND	330
Acenaphthylene	ND	330
2,6-Dinitrotoluene	ND	330
3-Nitroaniline	ND	1700

Lab #: 128255

BATCH QC REPORT

Client: Subsurface Consultants	Analysis Method: EPA 8270
Project#: 133.005	Prep Method: EPA 3550
Location: KOT	
METHOD BLANK	
Matrix: Soil	Prep Date: 02/11/97
Batch#: 32325	Analysis Date: 02/12/97
Units: ug/Kg	
Diln Fac: 1	

MB Lab ID: QC39902

Analyte	Result	Reporting Limit
Acenaphthene	ND	330
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
Diethylphthalate	ND	330
4-Chlorophenyl-phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1700
N-Nitrosodiphenylamine	ND	330
Azobenzene	ND	330
4-Bromophenyl-phenylether	ND	330
Hexachlorobenzene	ND	330
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butylphthalate	ND	330
Fluoranthene	ND	330
Benzidine	ND	330
Pyrene	ND	330
Butylbenzylphthalate	ND	330
3,3'-Dichlorobenzidine	ND	1700
Benzo(a)anthracene	ND	330
Chrysene	ND	330
bis(2-Ethylhexyl)phthalate	ND	330
Di-n-octylphthalate	ND	330
Benzo(b)fluoranthene	ND	330
Benzo(k)fluoranthene	ND	330
Benzo(a)pyrene	ND	330
Indeno(1,2,3-cd)pyrene	ND	330
Dibenz(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330
Surrogate	%Rec	Recovery Limits
2-Fluorophenol	81	25-121
Phenol-d5	77	24-113
2,4,6-Tribromophenol	48	19-122
Nitrobenzene-d5	87	23-120
2-Fluorobiphenyl	72	30-115
Terphenyl-d14	68	18-137



Lab #: 128255

BATCH QC REPORT

EPA 8270 Semi-Volatile Organics			
Client: Subsurface Consultants	Analysis Method: EPA 8270		
Project#: 133.005	Prep Method: EPA 3550		
Location: KOT			
LABORATORY CONTROL SAMPLE			
Matrix: Soil	Prep Date: 02/11/97		
Batch#: 32325	Analysis Date: 02/12/97		
Units: ug/Kg			
Diln Fac: 1			

LCS Lab ID: QC39903

Analyte	Result	Spike Added	%Rec #	Limits
Phenol	2600	3333	78	26-90
2-Chlorophenol	2461	3333	74	25-102
4-Chloro-3-methylphenol	2487	3333	75	26-103
4-Nitrophenol	2384	3333	72	11-114
Pentachlorophenol	932.6	3333	28	17-109
1,4-Dichlorobenzene	1006	1667	60	28-104
N-Nitroso-di-n-propylamine	1004	1667	60	41-126
1,2,4-Trichlorobenzene	999.9	1667	60	38-107
Acenaphthene	1027	1667	62	31-137
2,4-Dinitrotoluene	979.9	1667	59	28-89
Pyrene	1017	1667	61	35-142
Surrogate	%Rec	Limits		
2-Fluorophenol	76	25-121		
Phenol-d5	74	24-113		
2,4,6-Tribromophenol	58	19-122		
Nitrobenzene-d5	84	23-120		
2-Fluorobiphenyl	70	30-115		
Terphenyl-d14	70	18-137		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 11 outside limits

DO: Surrogate diluted out



Lab #: 128255

BATCH QC REPORT

Page 1 of 1

EPA 8270 Semi-Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8270
 Prep Method: EPA 3550

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: ZZZZZZ
 Lab ID: 128184-005
 Matrix: Soil
 Batch#: 32325
 Units: ug/Kg
 Diln Fac: 2

Sample Date: 01/29/97
 Received Date: 01/31/97
 Prep Date: 02/11/97
 Analysis Date: 02/13/97

MS Lab ID: QC39904

Analyte	Spike Added	Sample	MS	%Rec #	Limits
Phenol	3333	<666.7	2826	85	26-90
2-Chlorophenol	3333	<666.7	2597	78	25-102
4-Chloro-3-methylphenol	3333	<666.7	2536	76	26-103
4-Nitrophenol	3333	<3333	2292	69	11-114
Pentachlorophenol	3333	6769	8292	46	17-109
1,4-Dichlorobenzene	1667	<666.7	716.4	43	28-104
N-Nitroso-di-n-propylamine	1667	<666.7	1050	63	41-126
1,2,4-Trichlorobenzene	1667	<666.7	895.1	54	38-107
Acenaphthene	1667	<666.7	1076	65	31-137
2,4-Dinitrotoluene	1667	<666.7	1022	61	28-89
Pyrene	1667	<666.7	1195	72	35-142
Surrogate	%Rec	Limits			
2-Fluorophenol	81	25-121			
Phenol-d5	80	24-113			
2,4,6-Tribromophenol	57	19-122			
Nitrobenzene-d5	90	23-120			
2-Fluorobiphenyl	78	30-115			
Terphenyl-d14	81	18-137			

MSD Lab ID: QC39905

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
Phenol	3333	2759	83	26-90	2	35
2-Chlorophenol	3333	2568	77	25-102	1	50
4-Chloro-3-methylphenol	3333	2537	76	26-103	0	33
4-Nitrophenol	3333	2336	70	11-114	1	50
Pentachlorophenol	3333	9781	90	17-109	65 *	47
1,4-Dichlorobenzene	1667	633.4	38	28-104	12	27
N-Nitroso-di-n-propylamine	1667	1041	62	41-126	2	38
1,2,4-Trichlorobenzene	1667	857.7	51	38-107	6	23
Acenaphthene	1667	1099	66	31-137	2	19
2,4-Dinitrotoluene	1667	1044	63	28-89	3	47
Pyrene	1667	1155	69	35-142	4	36
Surrogate	%Rec	Limits				
2-Fluorophenol	80	25-121				
Phenol-d5	78	24-113				
2,4,6-Tribromophenol	59	19-122				
Nitrobenzene-d5	92	23-120				
2-Fluorobiphenyl	81	30-115				
Terphenyl-d14	80	18-137				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 1 out of 11 outside limits

Spike Recovery: 0 out of 22 outside limits

DO: Surrogate diluted out



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI TP-13
LAB ID: 128255-001
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
DATE REPORTED: 02/20/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	16	5.0	1	32329	EPA 6010A	02/11/97
Barium	180	10	1	32329	EPA 6010A	02/11/97
Beryllium	ND	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	3.1	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32327	EPA 7470	02/11/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	1	32329	EPA 6010A	02/11/97
Selenium	18	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	ND	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI TP-13 @ 5.7
 LAB ID: 128255-004
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/05/97
 DATE RECEIVED: 02/06/97
 DATE REPORTED: 02/20/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32338	EPA 6010A	02/12/97
Arsenic	4.8	0.24	1	32338	EPA 6010A	02/12/97
Barium	30	0.49	1	32338	EPA 6010A	02/12/97
Beryllium	0.23	0.098	1	32338	EPA 6010A	02/12/97
Cadmium	0.47	0.098	1	32338	EPA 6010A	02/12/97
Chromium (total)	29	0.49	1	32338	EPA 6010A	02/12/97
Cobalt	6.1	0.98	1	32338	EPA 6010A	02/12/97
Copper	21	0.49	1	32338	EPA 6010A	02/12/97
Lead	56	0.15	1	32338	EPA 6010A	02/12/97
Mercury	0.18	0.091	1	32279	EPA 7471	02/07/97
Molybdenum	ND	0.98	1	32338	EPA 6010A	02/12/97
Nickel	31	0.98	1	32338	EPA 6010A	02/12/97
Selenium	1.3	0.24	1	32338	EPA 6010A	02/12/97
Silver	ND	0.49	1	32338	EPA 6010A	02/12/97
Thallium	0.65	0.24	1	32338	EPA 6010A	02/12/97
Vanadium	23	0.49	1	32338	EPA 6010A	02/12/97
Zinc	45	0.98	1	32338	EPA 6010A	02/12/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI TP-14
LAB ID: 128255-002
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Filtrate

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
DATE REPORTED: 02/20/97

Metals Analytical Report

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Lead	13	3.0	1	32329	EPA 6010A	02/11/97

SAMPLE ID: SCI TP-14 @ 4
LAB ID: 128255-006
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Soil

DATE SAMPLED: 02/05/97
DATE RECEIVED: 02/06/97
DATE REPORTED: 02/20/97

Metals Analytical Report

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Lead	57	0.14	1	32338	EPA 6010A	02/12/97



CLIENT: Subsurface Consultants
 JOB NUMBER: 128255

DATE REPORTED: 02/20/97

BATCH QC REPORT
 PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	32329	EPA 6010A	02/11/97
Antimony	ND	3	mg/Kg	1	32338	EPA 6010A	02/12/97
Arsenic	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Arsenic	ND	0.25	mg/Kg	1	32338	EPA 6010A	02/12/97
Barium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Barium	ND	0.5	mg/Kg	1	32338	EPA 6010A	02/12/97
Beryllium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Beryllium	ND	0.1	mg/Kg	1	32338	EPA 6010A	02/12/97
Cadmium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Cadmium	ND	0.1	mg/Kg	1	32338	EPA 6010A	02/12/97
Chromium (total)	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	0.5	mg/Kg	1	32338	EPA 6010A	02/12/97
Cobalt	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Cobalt	ND	1	mg/Kg	1	32338	EPA 6010A	02/12/97
Copper	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Copper	ND	0.5	mg/Kg	1	32338	EPA 6010A	02/12/97
Lead	ND	3	ug/L	1	32329	EPA 6010A	02/11/97
Lead	ND	0.15	mg/Kg	1	32338	EPA 6010A	02/12/97
Mercury	ND	0.1	mg/Kg	1	32279	EPA 7471	02/07/97
Mercury	ND	0.2	ug/L	1	32327	EPA 7470	02/11/97
Molybdenum	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Molybdenum	ND	1	mg/Kg	1	32338	EPA 6010A	02/12/97
Nickel	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Nickel	ND	1	mg/Kg	1	32338	EPA 6010A	02/12/97
Selenium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Selenium	ND	0.25	mg/Kg	1	32338	EPA 6010A	02/12/97
Silver	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Silver	ND	0.5	mg/Kg	1	32338	EPA 6010A	02/12/97
Thallium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Thallium	ND	0.25	mg/Kg	1	32338	EPA 6010A	02/12/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128255

DATE REPORTED: 02/20/97

 BATCH QC REPORT
 PREP BLANK

Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Vanadium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Vanadium	ND	0.5	mg/Kg	1	32338	EPA 6010A	02/12/97
Zinc	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Zinc	ND	1	mg/Kg	1	32338	EPA 6010A	02/12/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128255

DATE REPORTED: 02/20/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BSX Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	477	520	ug/L	95	104	80-120	9	35	32329	EPA 6010A	02/11/97
Antimony	25	26.75	27.15	mg/Kg	107	109	80-120	2	35	32338	EPA 6010A	02/12/97
Arsenic	2000	2030	2070	ug/L	102	104	80-120	2	35	32329	EPA 6010A	02/11/97
Arsenic	100	99.5	100.5	mg/Kg	100	101	80-120	1	35	32338	EPA 6010A	02/12/97
Barium	2000	2020	2020	ug/L	101	101	80-120	0	35	32329	EPA 6010A	02/11/97
Barium	100	99.5	99.5	mg/Kg	100	100	80-120	0	35	32338	EPA 6010A	02/12/97
Beryllium	50	52.4	52.9	ug/L	105	106	80-120	1	35	32329	EPA 6010A	02/11/97
Beryllium	2.5	2.55	2.585	mg/Kg	102	103	80-120	1	35	32338	EPA 6010A	02/12/97
Cadmium	50	53.4	52.7	ug/L	107	105	80-120	1	35	32329	EPA 6010A	02/12/97
Cadmium	2.5	2.4	2.485	mg/Kg	96	99	80-120	4	35	32338	EPA 6010A	02/12/97
Chromium (total)	200	206	208	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Chromium (total)	10	9.85	10	mg/Kg	99	100	80-120	2	35	32338	EPA 6010A	02/12/97
Cobalt	500	515	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Cobalt	25	24.5	25	mg/Kg	98	100	80-120	2	35	32338	EPA 6010A	02/12/97
Copper	250	242	240	ug/L	97	96	80-120	1	35	32329	EPA 6010A	02/11/97
Copper	12.5	12.7	12.7	mg/Kg	102	102	80-120	0	35	32338	EPA 6010A	02/12/97
Lead	500	513	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Lead	25	24.4	25.05	mg/Kg	98	100	80-120	3	35	32338	EPA 6010A	02/12/97
Mercury	5	4.187	4.812	ug/L	84	96	80-120	14	35	32279	EPA 7470	02/07/97
Mercury	5	4.684	4.912	ug/L	94	98	80-120	5	35	32327	EPA 7470	02/11/97
Molybdenum	400	405	411	ug/L	101	103	80-120	2	35	32329	EPA 6010A	02/11/97
Molybdenum	20	19.35	20.05	mg/Kg	97	100	80-120	4	35	32338	EPA 6010A	02/12/97
Nickel	500	523	524	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Nickel	25	25.05	26.4	mg/Kg	100	106	80-120	5	35	32338	EPA 6010A	02/12/97
Selenium	2000	2080	2150	ug/L	104	108	80-120	3	35	32329	EPA 6010A	02/11/97
Selenium	100	115	116	mg/Kg	115	116	80-120	1	35	32338	EPA 6010A	02/12/97
Silver	100	105	105	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Silver	5	5	5	mg/Kg	100	100	80-120	0	35	32338	EPA 6010A	02/12/97
Thallium	2000	2000	2020	ug/L	100	101	80-120	1	35	32329	EPA 6010A	02/11/97
Thallium	100	91	97	mg/Kg	91	97	80-120	6	35	32338	EPA 6010A	02/12/97
Vanadium	500	512	515	ug/L	102	103	80-120	1	35	32329	EPA 6010A	02/11/97
Vanadium	25	24.9	25.05	mg/Kg	100	100	80-120	1	35	32338	EPA 6010A	02/12/97
Zinc	500	509	512	ug/L	102	102	80-120	1	35	32329	EPA 6010A	02/11/97
Zinc	25	24	24.3	mg/Kg	96	97	80-120	1	35	32338	EPA 6010A	02/12/97

CHAIN OF CUSTODY FORM

128255

PROJECT NAME: KOT
 JOB NUMBER: 133.005 LAB: C&T
 PROJECT CONTACT: Jerome de Verrier TURNAROUND: stand
 SAMPLED BY: John Wolfe REQUESTED BY: Jerome de Verrier

ANALYSIS REQUESTED	
TUM	X
TUM/BTEX	X
TEM	X
8240	X
8270 w/extended list	X
8080	X
Heavy Metals	X
Lead	X

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES			
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ² SO ⁴	HNO ³	ICE	NONE	MONTH	DAY	YEAR	TIME				
-3	SCITP-1304.2		X					X					X		0	20	5	97	X			
-4	SCITP-1305.7														0	20	5	97	X			
-5	SCITP-13010														0	20	5	97	X			
-6	SCITP-1404														0	20	5	97	X			

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES:
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
<i>John Wolfe</i>	2/6/97 1420	<i>John Wolfe</i>	2/4/97 2:20pm	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 21-FEB-97
Lab Job Number: 128281
Project ID: 133.005
Location: KOT

Reviewed by:

Teresa K Morris

Reviewed by:

Troy B. Car

This package may be reproduced only in its entirety.

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128281-001	SCI-62	32406	02/09/97	02/13/97	02/17/97	
128281-002	SCI-63	32406	02/09/97	02/13/97	02/17/97	
128281-003	SCI-64	32406	02/09/97	02/13/97	02/17/97	
128281-004	SCI-65	32406	02/09/97	02/13/97	02/18/97	

Matrix: Water

Analyte	Units	128281-001	128281-002	128281-003	128281-004
Diln Fac:		1	1	1	1
Diesel C12-C22	ug/L	160 Y	<76	140 Y	79 Y
Motor Oil C22-C50	ug/L	<250	<380	<250	<250
Surrogate					
Hexacosane	%REC	86	86	86	63

Y: Sample exhibits fuel pattern which does not resemble standard

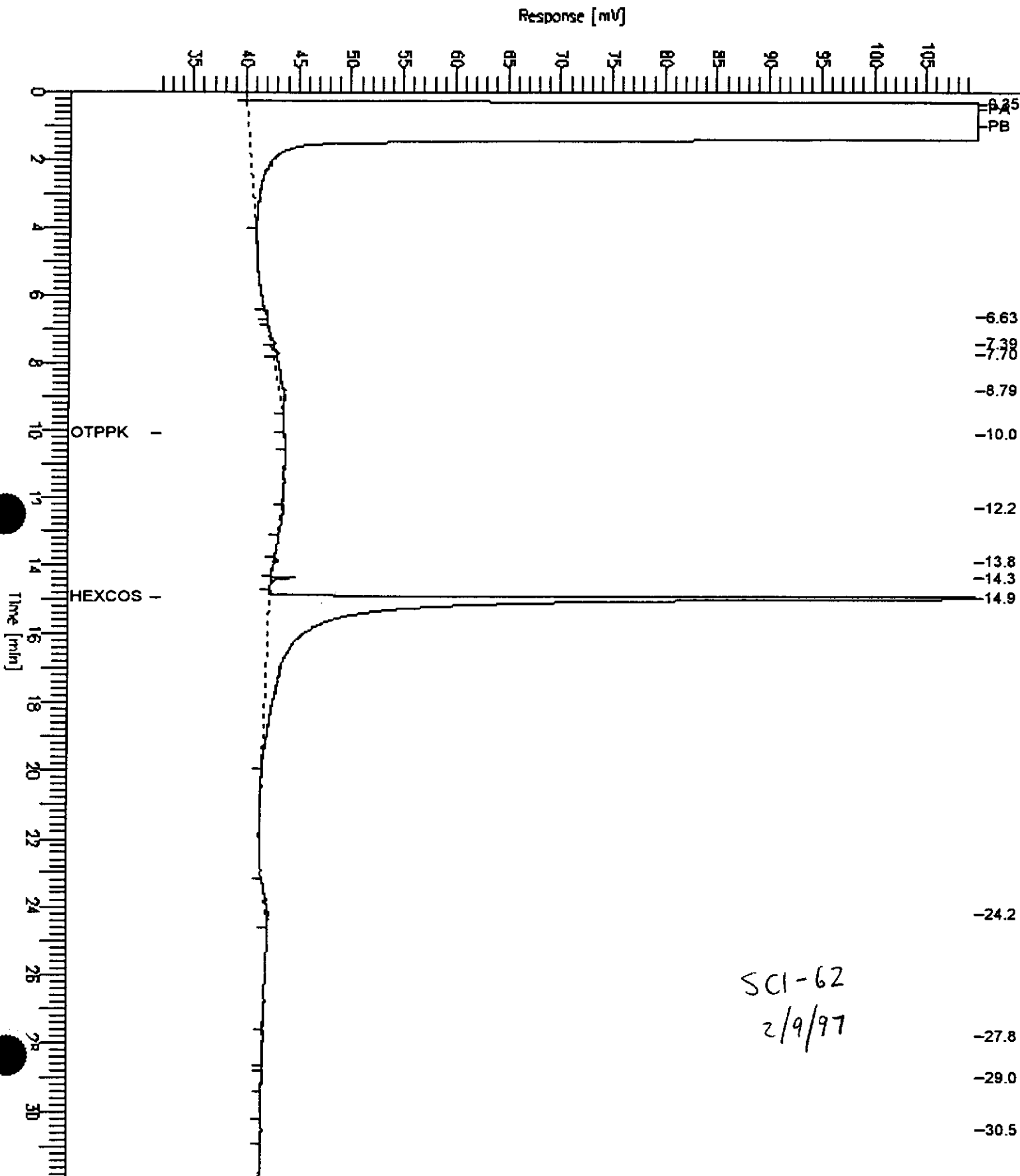
GC15 Channel B Surrogate

Sample Name : 128281-001,32406
FileName : G:\GC15\CHB\047B009.raw
Method : SNGL
rt Time : 0.00 min
ie Factor: 0.0

End Time : 31.90 min
Plot Offset: 32 mV

Sample #: 32406
Date : 2/17/97 10:28 PM
Time of Injection: 2/17/97 09:55 PM
Low Point : 32.00 mV
High Point : 110.00 mV
Plot Scale: 78.0 mV

Page 1 of 1



GC15 Channel B Surrogate

Sample Name : 128281-003,32406

Sample #: 32406

Page 1 of 1

FileName : G:\GC15\CHB\047B011.raw

Date : 2/17/97 11:54 PM

Method : SNGL

Time of Injection: 2/17/97 11:22 PM

rt Time : 0.00 min

End Time : 31.90 min

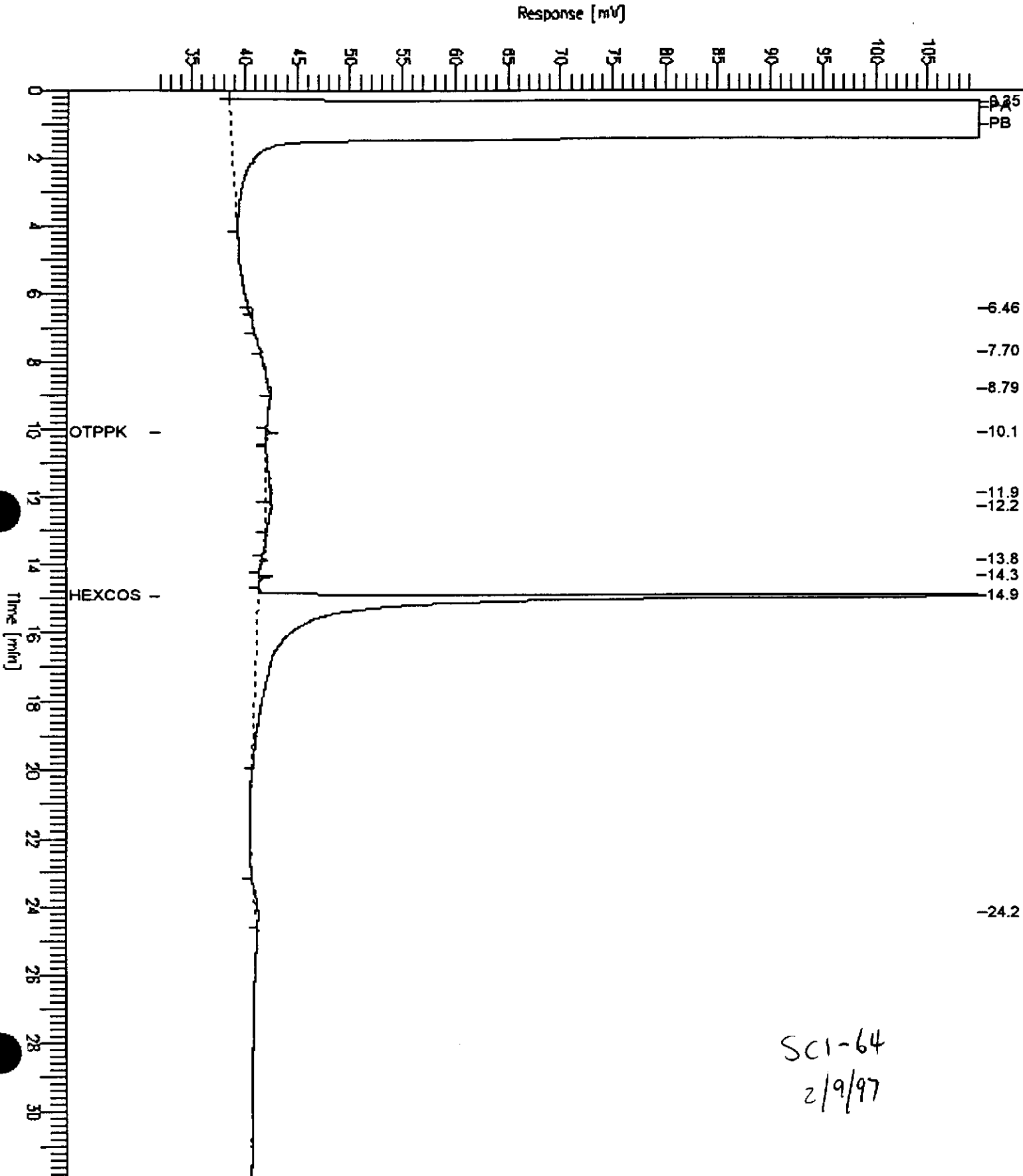
Low Point : 32.00 mV

High Point : 110.00 mV

Gain Factor: 0.0

Plot Offset: 32 mV

Plot Scale: 78.0 mV

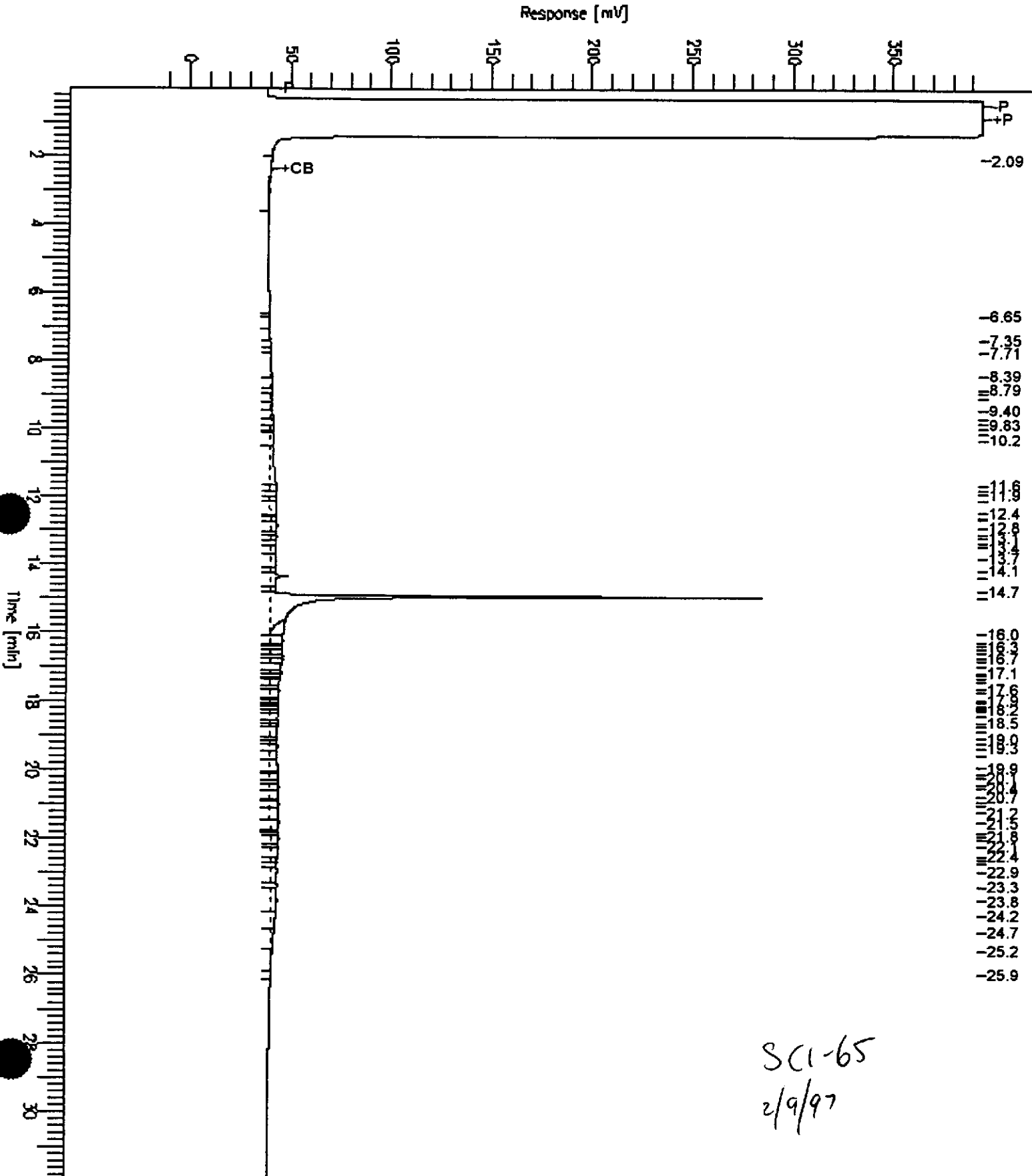


GC15 Channel B TEH

Sample Name : 128281-004,32406
 FileName : G:\GC15\CHB\047B012.RAW
 Method : B038TEH.MTH
 Start Time : 0.01 min
 File Factor: 0.0

End Time : 31.91 min
 Plot Offset: -14 mV

Sample #: 32406
 Date : 2/18/97 12:08 PM
 Time of Injection: 2/18/97 12:06 AM
 Low Point : -13.69 mV
 High Point : 394.95 mV
 Plot Scale: 408.6 mV



SCI-65
 2/9/97

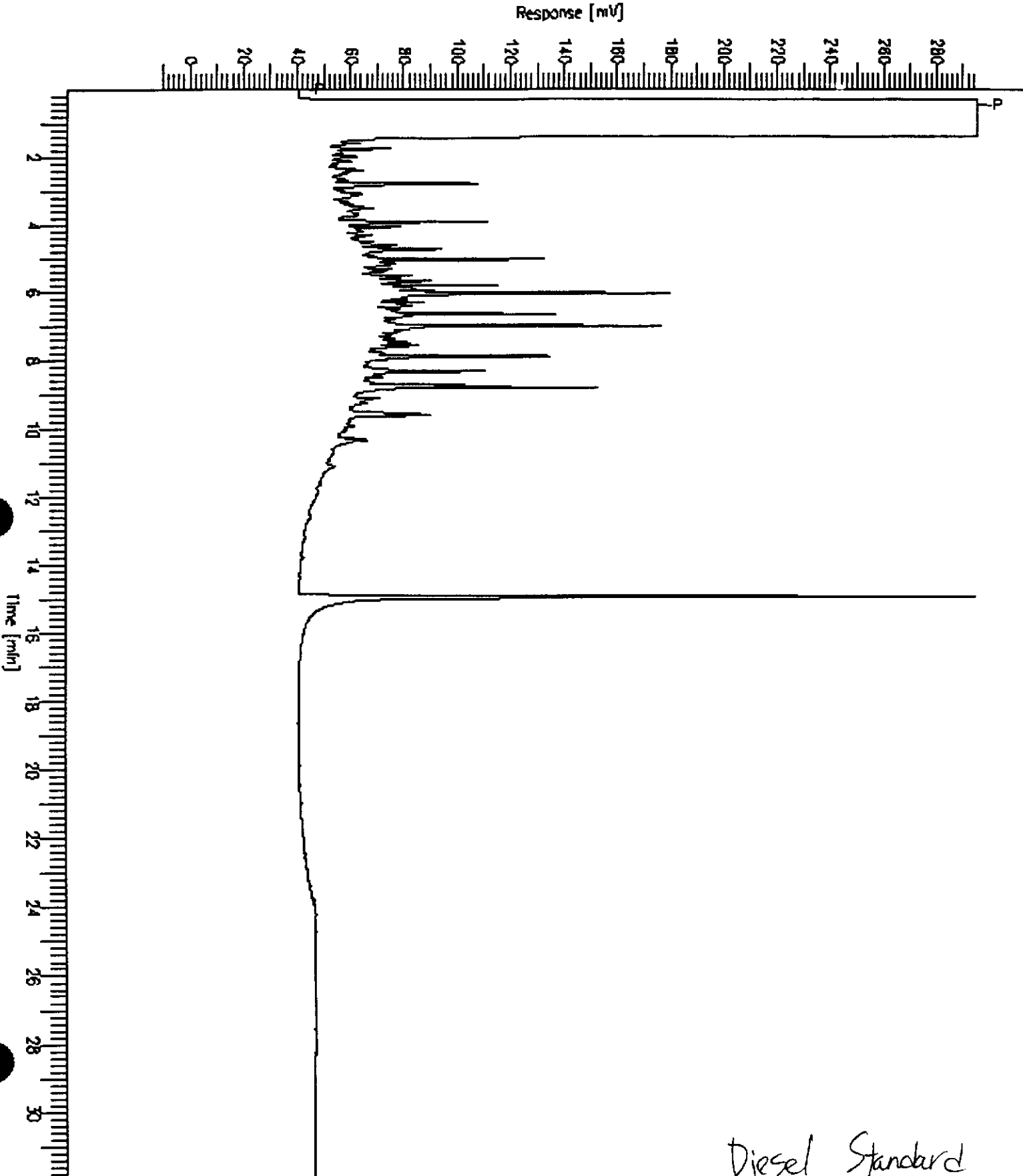
GC15 Channel B TEH

Sample Name : CCV, 97WS3611, DSL
FileName : G:\GC15\CHB\047B027.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Scale Factor: 0.0

End Time : 31.91 min
Plot Offset: -11 mV

Sample #: 500MG/L
Date : 2/18/97 01:03 PM
Time of Injection: 2/18/97 10:53 AM
Low Point : -11.33 mV
High Point : 295.58 mV
Plot Scale: 306.9 mV

Page 1 of 1



GC15 Channel B TEH

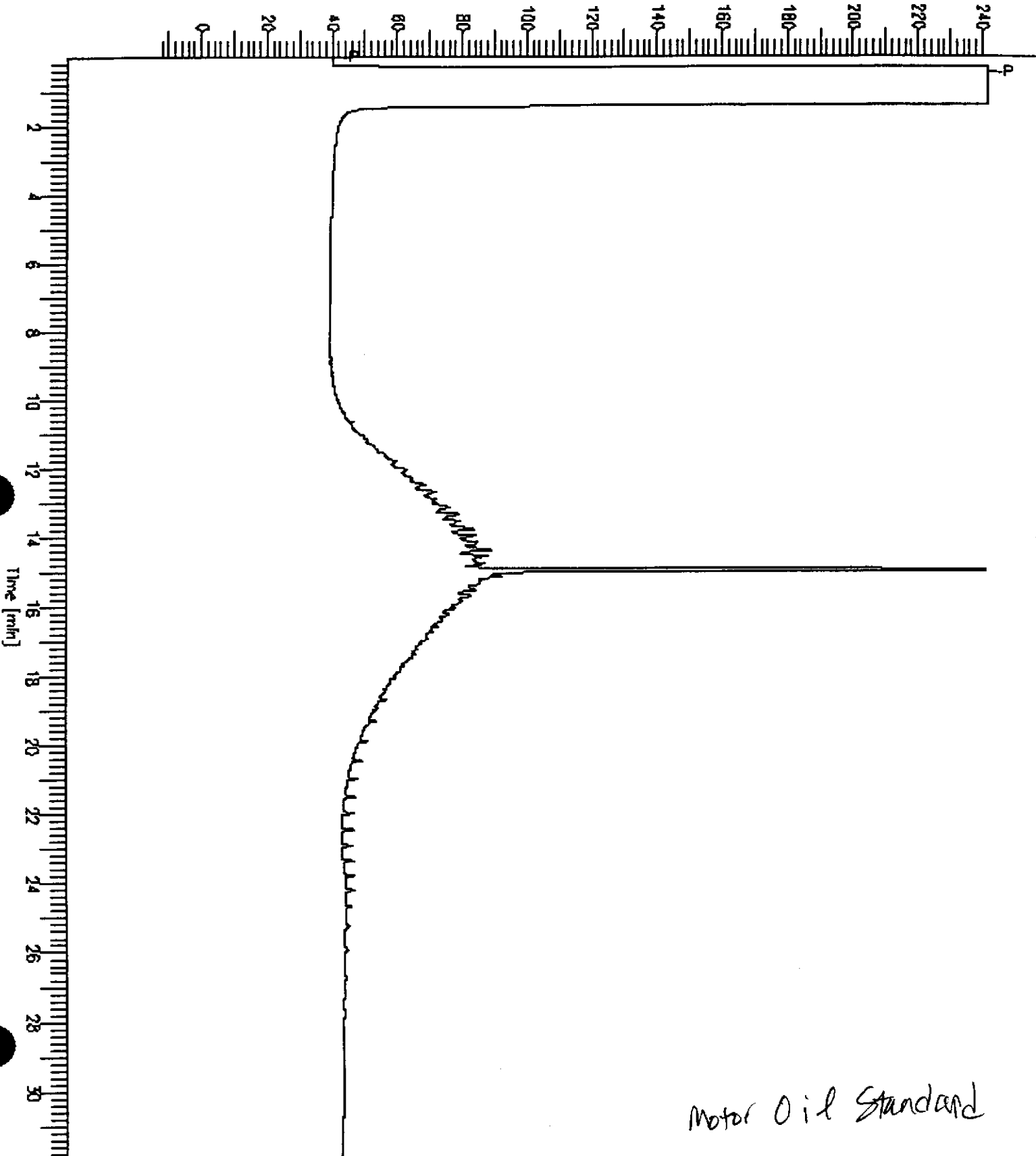
Sample Name : CCV, 97MS3691,MOIL
FileName : G:\GC15\CHB\047B029.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
Gain Factor: 0.0

End Time : 31.91 min
Plot Offset: -12 mV

Sample #: 500MG/L
Date : 2/18/97 01:02 PM
Time of Injection: 2/18/97 12:19 PM
Low Point : -12.36 mV
High Point : 241.67 mV
Plot Scale: 254.0 mV

Page 1 of 1

Response [mV]



Motor Oil Standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128281-005	SCI-62 @ 5	32386	02/09/97	02/13/97	02/14/97	
128281-006	SCI-63 @ 4.5	32386	02/09/97	02/13/97	02/18/97	
128281-007	SCI-64 @ 5	32386	02/09/97	02/13/97	02/15/97	
128281-008	SCI-65 @ 4.5	32386	02/09/97	02/13/97	02/15/97	

Matrix: Soil

Analyte	Units	128281-005	128281-006	128281-007	128281-008
Diln Fac:		1	1	1	1
Diesel C12-C22	mg/Kg	<1	2.4YH	1.6YH	<1
Motor Oil C22-C50	mg/Kg	<5	90 YH	17 YH	<5
Surrogate					
Hexacosane	%REC	74	75	60	62

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: CA LUFT

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128281-009	SCI-62 @ 8	32386	02/09/97	02/13/97	02/18/97	
128281-010	SCI-63 @ 7	32386	02/09/97	02/13/97	02/18/97	
128281-011	SCI-64 @ 7	32386	02/09/97	02/13/97	02/19/97	

Matrix: Soil

Analyte	Units	128281-009	128281-010	128281-011
Diln Fac:		5	1	5
Diesel C12-C22	mg/Kg	13 YH	<1	17
Motor Oil C22-C50	mg/Kg	560 YH	<5	140
Surrogate				
Hexacosane	%REC	90	67	87

Y: Sample exhibits fuel pattern which does not resemble standard

H: Heavier hydrocarbons than indicated standard

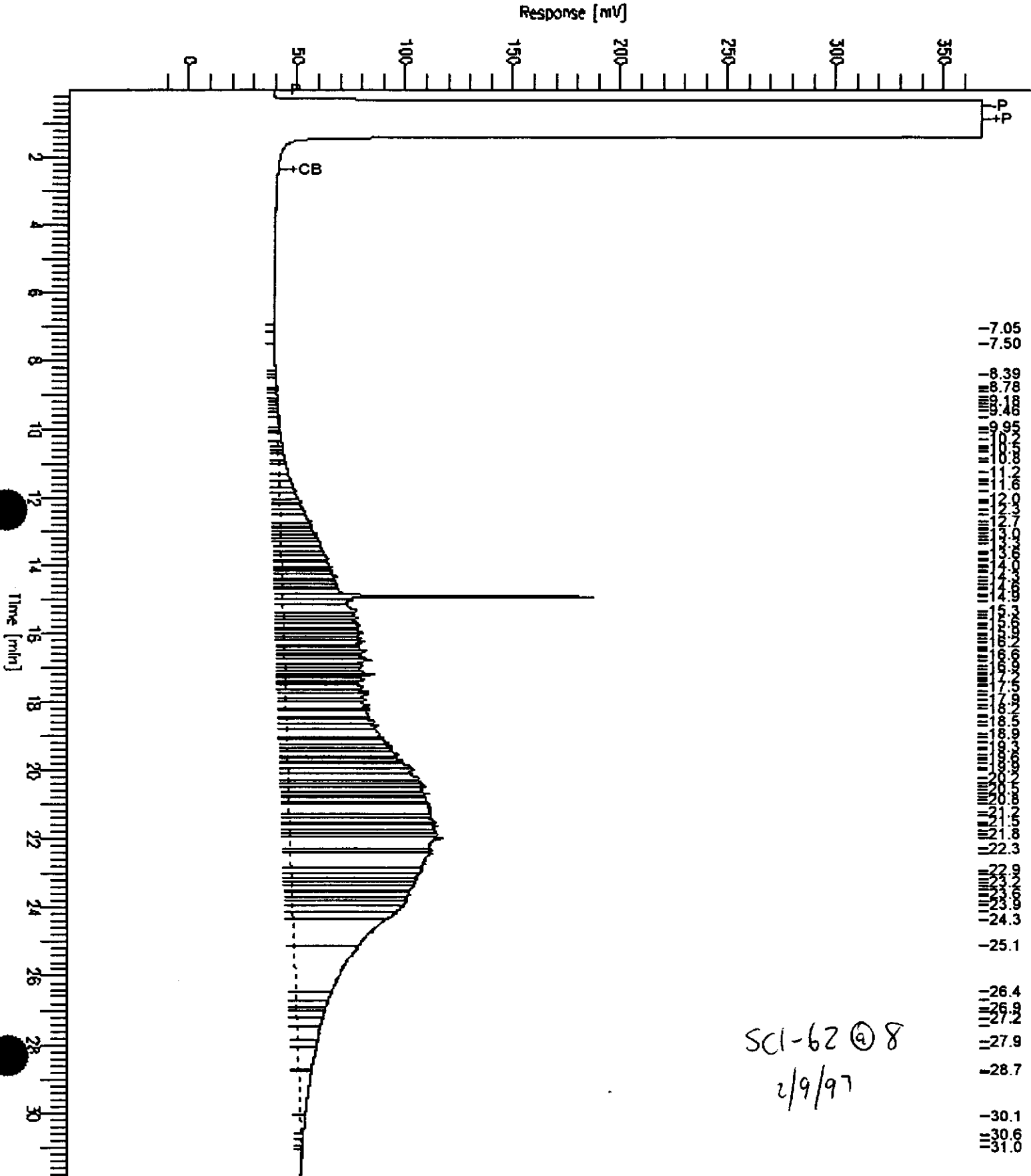
GC15 Channel B TEH

Sample Name : 128281-009,1:5
FileName : G:\GC15\CHB\047B025.RAW
Method : B038TEH.MTH
Start Time : 0.01 min
File Factor: 0.0

End Time : 31.91 min
Plot Offset: -12 mV

Sample #: 32386
Date : 2/18/97 12:12 PM
Time of Injection: 2/18/97 09:27 AM
Low Point : -12.39 mV
High Point : 368.17 mV
Plot Scale: 380.6 mV

Page 1 of 1

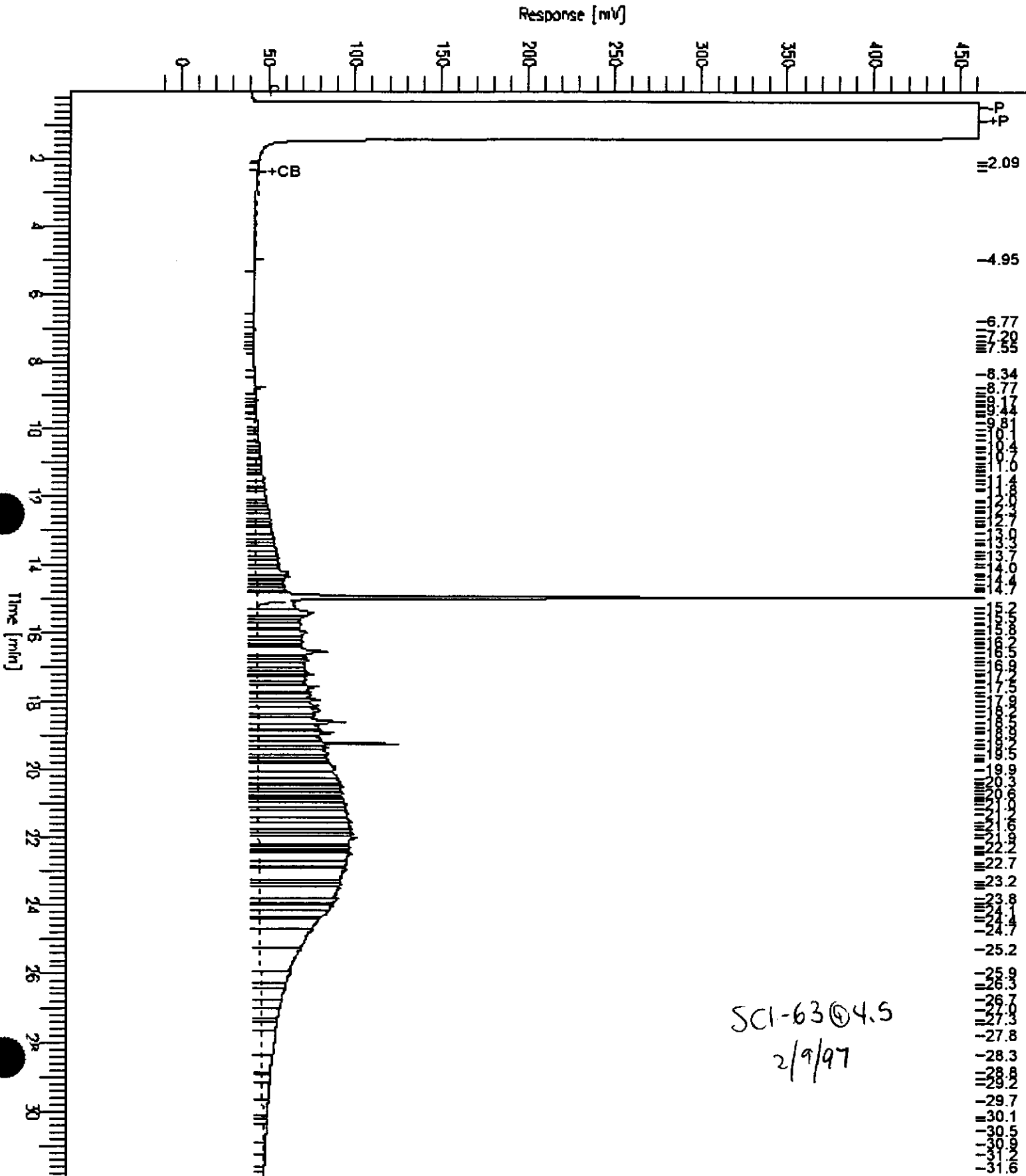


GC15 Channel B TEH

Sample Name : 128281-006
 FileName : G:\GC15\CHB\047B024.RAW
 Method : B038TEH.MTH
 Start Time : 0.01 min
 Gain Factor : 0.0

End Time : 31.91 min
 Plot Offset : -11 mV

Sample #: 32386
 Date : 2/18/97 12:12 PM
 Time of Injection: 2/18/97 08:43 AM
 Low Point : -10.73 mV
 Plot Scale: 471.7 mV
 High Point : 460.92 mV



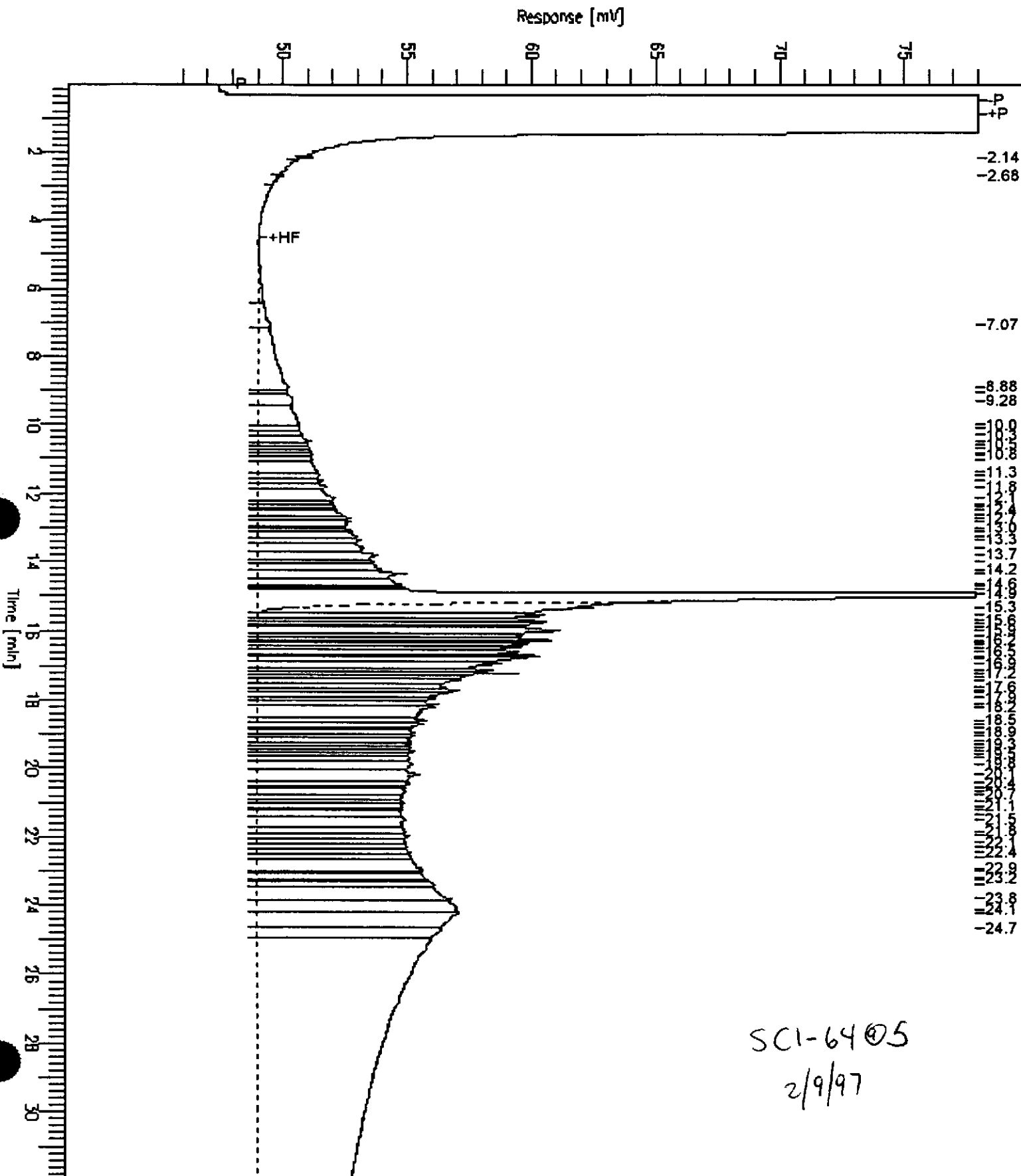
SCI-6304.5
 2/9/97

GC15 Channel B TEH

Sample Name : 128281-007,32386
 FileName : G:\GC15\CHB\045_020.RAW
 Method : B038TEH.MTH
 Start Time : 0.01 min
 Gain Factor : 0.0

End Time : 31.91 min
 Plot Offset: 45 mV

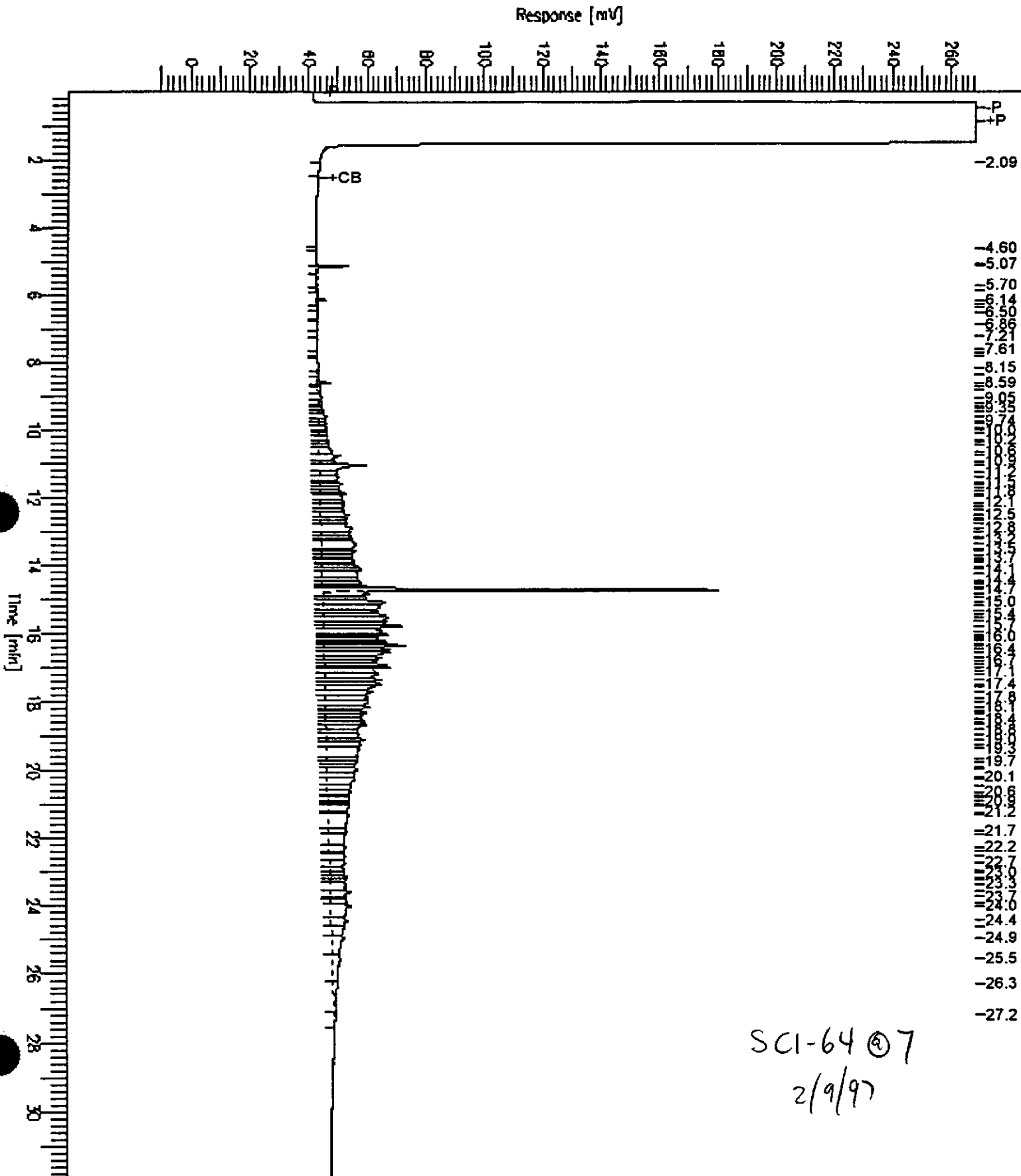
Sample #: 32386
 Date : 2/19/97 05:50 PM
 Time of Injection: 2/15/97 02:03 AM
 Low Point : 45.10 mV
 Plot Scale: 32.9 mV
 High Point : 78.00 mV



GC15 Channel B TEH

Sample Name : 128281-011,32386
 FileName : G:\GC15\CHB\049B027.RAW
 Method : B038TEH.MTH
 Start Time : 0.01 min
 Scale Factor : 0.0

Sample #: 32386
 Date : 2/19/97 12:44 PM
 Time of Injection: 2/19/97 10:46 AM
 Low Point : -10.32 mV
 Plot Scale: 279.1 mV
 End Time : 31.91 min
 Plot Offset: -10 mV
 High Point : 268.83 mV





Lab #: 128281

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

METHOD BLANK

Matrix: Water
Batch#: 32406
Units: ug/L
Diln Fac: 1

Prep Date: 02/13/97
Analysis Date: 02/17/97

MB Lab ID: QC40206

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	%Rec	Recovery Limits
Hexacosane	97	60-140



Lab #: 128281

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons			
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)		
Project#: 133.005	Prep Method: EPA 3520		
Location: KOT			
BLANK SPIKE/BLANK SPIKE DUPLICATE			
Matrix: Water	Prep Date: 02/13/97		
Batch#: 32406	Analysis Date: 02/17/97		
Units: ug/L			
Diln Fac: 1			

BS Lab ID: QC40207

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	1869	76	60-140
Surrogate	%Rec	Limits		
Hexacosane	88	60-140		

BSD Lab ID: QC40208

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	1859	75	60-140	1	35
Surrogate	%Rec	Limits				
Hexacosane	84	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits



Lab #: 128281

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

METHOD BLANK

Matrix: Soil
Batch#: 32386
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/13/97
Analysis Date: 02/16/97

MB Lab ID: QC40135

Analyte	Result		
Diesel C12-C22	<1.0		
Motor Oil C22-C50	<5.0		
Surrogate	%Rec		Recovery Limits
Hexacosane	114		60-140



Lab #: 128281

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: CA LUFT

LABORATORY CONTROL SAMPLE

Matrix: Soil
Batch#: 32386
Units: mg/Kg
Diln Fac: 1

Prep Date: 02/13/97
Analysis Date: 02/16/97

LCS Lab ID: QC40136

Analyte	Result	Spike Added	%Rec #	Limits
Diesel C12-C22	38.1	49.5	77	60-140
Surrogate	%Rec	Limits		
Hexacosane	86	60-140		

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

Spike Recovery: 0 out of 1 outside limits



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-62
Lab ID: 128281-001
Matrix: Water
Batch#: 32351
Units: ug/L
Diln Fac: 1

Sampled: 02/09/97
Received: 02/10/97
Extracted: 02/12/97
Analyzed: 02/12/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	41	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	12	5.0
2-Butanone	6.3 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	103	68-126
Toluene-d8	102	87-125
Bromofluorobenzene	98	79-122

J: Estimated Value



Volatile Organics by GC/MS

Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-63	Sampled: 02/09/97	
Lab ID: 128281-002	Received: 02/10/97	
Matrix: Water	Extracted: 02/12/97	
Batch#: 32351	Analyzed: 02/12/97	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	73	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	15	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	98	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants	Analysis Method: EPA 8260	
Project#: 133.005	Prep Method: EPA 5030	
Location: KOT		
Field ID: SCI-64	Sampled: 02/09/97	
Lab ID: 128281-003	Received: 02/10/97	
Matrix: Water	Extracted: 02/12/97	
Batch#: 32351	Analyzed: 02/12/97	
Units: ug/L		
Diln Fac: 1		
Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	5.2 J	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	100	79-122

J: Estimated Value



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-65
Lab ID: 128281-004
Matrix: Water
Batch#: 32351
Units: ug/L
Diln Fac: 1

Sampled: 02/09/97
Received: 02/10/97
Extracted: 02/12/97
Analyzed: 02/12/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	101	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-62 @ 5
 Lab ID: 128281-005
 Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/09/97
 Received: 02/10/97
 Extracted: 02/13/97
 Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	99	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-62 @ 8
 Lab ID: 128281-009
 Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/09/97
 Received: 02/10/97
 Extracted: 02/13/97
 Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	4.8 J	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	16	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	102	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	102	79-122

J: Estimated Value



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-63 @ 4.5
Lab ID: 128281-006
Matrix: Soil
Batch#: 32352
Units: ug/Kg
Diln Fac: 1

Sampled: 02/09/97
Received: 02/10/97
Extracted: 02/13/97
Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0

Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	99	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-63 @ 7
 Lab ID: 128281-010
 Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/09/97
 Received: 02/10/97
 Extracted: 02/13/97
 Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	99	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

Field ID: SCI-64 @ 5
 Lab ID: 128281-007
 Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Sampled: 02/09/97
 Received: 02/10/97
 Extracted: 02/13/97
 Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	96	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	100	79-122



Volatile Organics by GC/MS

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: EPA 8260
Prep Method: EPA 5030

Field ID: SCI-65 @ 4.5
Lab ID: 128281-008
Matrix: Soil
Batch#: 32352
Units: ug/Kg
Diln Fac: 1

Sampled: 02/09/97
Received: 02/10/97
Extracted: 02/13/97
Analyzed: 02/13/97

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Recovery	Recovery Limits
1,2-Dichloroethane-d4	98	68-126
Toluene-d8	99	87-125
Bromofluorobenzene	101	79-122



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
 Batch#: 32351
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/12/97
 Analysis Date: 02/12/97

MB Lab ID: QC40062

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	93	68-126
Toluene-d8	100	87-125
Bromofluorobenzene	98	79-122



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
 Batch#: 32351
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/13/97
 Analysis Date: 02/13/97

MB Lab ID: QC40095

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	99	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	101	79-122



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

METHOD BLANK

Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/12/97
 Analysis Date: 02/12/97

MB Lab ID: QC40012

Analyte	Result	Reporting Limit
Chloromethane	ND	10
Bromomethane	ND	10
Vinyl Chloride	ND	10
Chloroethane	ND	10
Methylene Chloride	ND	20
Acetone	ND	20
Carbon Disulfide	ND	5.0
Trichlorofluoromethane	ND	5.0
1,1-Dichloroethene	ND	5.0
1,1-Dichloroethane	ND	5.0
trans-1,2-Dichloroethene	ND	5.0
cis-1,2-Dichloroethene	ND	5.0
Chloroform	ND	5.0
Freon 113	ND	5.0
1,2-Dichloroethane	ND	5.0
2-Butanone	ND	10
1,1,1-Trichloroethane	ND	5.0
Carbon Tetrachloride	ND	5.0
Vinyl Acetate	ND	50
Bromodichloromethane	ND	5.0
1,2-Dichloropropane	ND	5.0
cis-1,3-Dichloropropene	ND	5.0
Trichloroethene	ND	5.0
Dibromochloromethane	ND	5.0
1,1,2-Trichloroethane	ND	5.0
Benzene	ND	5.0
trans-1,3-Dichloropropene	ND	5.0
Bromoform	ND	5.0
2-Hexanone	ND	10
4-Methyl-2-Pentanone	ND	10
1,1,2,2-Tetrachloroethane	ND	5.0
Tetrachloroethene	ND	5.0
Toluene	ND	5.0
Chlorobenzene	ND	5.0
Ethylbenzene	ND	5.0
Styrene	ND	5.0
m,p-Xylenes	ND	5.0
o-Xylene	ND	5.0
Surrogate	%Rec	Recovery Limits
1,2-Dichloroethane-d4	93	68-126
Toluene-d8	101	87-125
Bromofluorobenzene	98	79-122



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Water
 Batch#: 32351
 Units: ug/L
 Diln Fac: 1

Prep Date: 02/12/97
 Analysis Date: 02/12/97

LCS Lab ID: QC40061

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	66.56	50	133	51-180
Trichloroethene	50.46	50	101	73-141
Benzene	48.68	50	97	78-142
Toluene	49.48	50	99	76-150
Chlorobenzene	50.53	50	101	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	95	68-126		
Toluene-d8	101	87-125		
Bromofluorobenzene	96	79-122		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits
 Spike Recovery: 0 out of 5 outside limits



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

LABORATORY CONTROL SAMPLE

Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Prep Date: 02/12/97
 Analysis Date: 02/12/97

LCS Lab ID: QC40010

Analyte	Result	Spike Added	%Rec #	Limits
1,1-Dichloroethene	64.19	50	128	51-180
Trichloroethene	52.48	50	105	73-141
Benzene	50.82	50	102	78-142
Toluene	51.7	50	103	76-150
Chlorobenzene	52.83	50	106	83-129
Surrogate	%Rec	Limits		
1,2-Dichloroethane-d4	97	68-126		
Toluene-d8	100	87-125		
Bromofluorobenzene	97	79-122		

Column to be used to flag recovery and RPD values with an asterisk
 Values outside of QC limits

Spike Recovery: 0 out of 5 outside limits



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants	Analysis Method: EPA 8260
Project#: 133.005	Prep Method: EPA 5030
Location: KOT	
MATRIX SPIKE/MATRIX SPIKE DUPLICATE	
Field ID: SCI-63	Sample Date: 02/09/97
Lab ID: 128281-002	Received Date: 02/10/97
Matrix: Water	Prep Date: 02/13/97
Batch#: 32351	Analysis Date: 02/13/97
Units: ug/L	
Diln Fac: 1	

MS Lab ID: QC40093

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	55.81	112	51-180
Trichloroethene	50	<5	44.17	88	73-141
Benzene	50	<5	43.63	87	78-142
Toluene	50	<5	44.65	86	76-150
Chlorobenzene	50	<5	45.61	91	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	101	68-126			
Toluene-d8	99	87-125			
Bromofluorobenzene	101	79-122			

MSD Lab ID: QC40094

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	54.9	110	51-180	2	14
Trichloroethene	50	45.12	90	73-141	2	14
Benzene	50	44.25	89	78-142	1	11
Toluene	50	45.81	88	76-150	3	13
Chlorobenzene	50	46.1	92	83-129	1	13
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	105	68-126				
Toluene-d8	101	87-125				
Bromofluorobenzene	101	79-122				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 5 outside limits
 Spike Recovery: 0 out of 10 outside limits



Lab #: 128281

BATCH QC REPORT

EPA 8240 Volatile Organics

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: EPA 8260
 Prep Method: EPA 5030

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

Field ID: SCI-63 @ 7
 Lab ID: 128281-010
 Matrix: Soil
 Batch#: 32352
 Units: ug/Kg
 Diln Fac: 1

Sample Date: 02/09/97
 Received Date: 02/10/97
 Prep Date: 02/13/97
 Analysis Date: 02/13/97

MS Lab ID: QC40059

Analyte	Spike Added	Sample	MS	%Rec #	Limits
1,1-Dichloroethene	50	<5	59.82	120	51-180
Trichloroethene	50	<5	52.76	106	73-141
Benzene	50	<5	50.68	101	78-142
Toluene	50	<5	53.36	104	76-150
Chlorobenzene	50	<5	52.29	105	83-129
Surrogate	%Rec	Limits			
1,2-Dichloroethane-d4	88	68-126			
Toluene-d8	101	87-125			
Bromofluorobenzene	98	79-122			

MSD Lab ID: QC40060

Analyte	Spike Added	MSD	%Rec #	Limits	RPD #	Limit
1,1-Dichloroethene	50	62.42	125	51-180	4	22
Trichloroethene	50	54.37	109	73-141	3	24
Benzene	50	51.66	103	78-142	2	21
Toluene	50	53.57	104	76-150	0	21
Chlorobenzene	50	53.29	107	83-129	2	21
Surrogate	%Rec	Limits				
1,2-Dichloroethane-d4	87	68-126				
Toluene-d8	101	87-125				
Bromofluorobenzene	99	79-122				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 5 outside limits

Spike Recovery: 0 out of 10 outside limits

Client: Subsurface Consultants

Laboratory Login Number: 128281

 Project Name: KOT
 Project Number: 133.005

Report Date: 14 February 97

ANALYSIS: pH

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	Method	Analyst	QC Batch
128281-001	SCI-62	Water	09-FEB-97	10-FEB-97	10-FEB-97	6.8	SU	EPA 9040	HDD	32416
128281-002	SCI-63	Water	09-FEB-97	10-FEB-97	10-FEB-97	7.8	SU	EPA 9040	HDD	32416
128281-003	SCI-64	Water	09-FEB-97	10-FEB-97	10-FEB-97	6.8	SU	EPA 9040	HDD	32416
128281-004	SCI-65	Water	09-FEB-97	10-FEB-97	10-FEB-97	7.3	SU	EPA 9040	HDD	32416
128281-005	SCI-62 @ 5	Soil	09-FEB-97	10-FEB-97	13-FEB-97	7.8	SU *	EPA 9045	HDD	32393
128281-006	SCI-63 @ 4.5	Soil	09-FEB-97	10-FEB-97	13-FEB-97	8.9	SU *	EPA 9045	HDD	32393
128281-007	SCI-64 @ 5	Soil	09-FEB-97	10-FEB-97	13-FEB-97	8.3	SU *	EPA 9045	HDD	32393
128281-008	SCI-65 @ 4.5	Soil	09-FEB-97	10-FEB-97	13-FEB-97	8.9	SU *	EPA 9045	HDD	32393
128281-009	SCI-62 @ 8	Soil	09-FEB-97	10-FEB-97	13-FEB-97	7.9	SU *	EPA 9045	HDD	32393
128281-010	SCI-63 @ 7	Soil	09-FEB-97	10-FEB-97	13-FEB-97	9.0	SU *	EPA 9045	HDD	32393
128281-011	SCI-64 @ 7	Soil	09-FEB-97	10-FEB-97	13-FEB-97	8.8	SU *	EPA 9045	HDD	32393
128281-012	SCI-65 @ 7	Soil	09-FEB-97	10-FEB-97	13-FEB-97	9.3	SU *	EPA 9045	HDD	32393

* Soil pH measured as water

Q C B a t c h R e p o r t

 Client: Subsurface Consultants
 Project Name: KOT
 Project Number: 133.005

 Laboratory Login Number: 128281
 Report Date: 14 February 97

ANALYSIS: pH

QC Batch Number: 32393

Calibration Verification Results

Sample	Result	TV	Difference	Limit	Analyzed
ICV	7.01	7.00	.01	< 0.10	13-FEB-97
CCV	6.98	7.00	.02	< 0.10	13-FEB-97
CCV	7.03	7.00	.03	< 0.10	13-FEB-97

Sample Duplicate Results

Sample	Duplicate	RPD	Analyzed
7.47	7.49	.3%	13-FEB-97

Q C B a t c h R e p o r t

Client: Subsurface Consultants

Laboratory Login Number: 128281

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/13/97
 BATCH#: 15099

=====
 ANALYSIS: CHLORIDE
 ANALYSIS METHOD: EPA 325.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-001	SCI-62	9,200	mg/L	80
128281-002	SCI-63	7,300	mg/L	100
128281-003	SCI-64	12,000	mg/L	80
128281-004	SCI-65	1,400	mg/L	10
METHOD BLANK	N/A	ND	mg/L	0.50

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: MS/MSD OF 128281-003

=====
 RPD, % 1
 RECOVERY, % 89
 =====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/13/97
 BATCH#: 15100

=====
 ANALYSIS: CHLORIDE
 ANALYSIS METHOD: EPA 325.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-005	SCI-62 @5	1,200	mg/Kg	13
128281-006	SCI-63 @4.5	940	mg/Kg	5.0
128281-007	SCI-64 @5	130	mg/Kg	2.5
128281-008	SCI-65 @4.5	68	mg/Kg	2.5
128281-009	SCI-62 @8	520	mg/Kg	5.0
128281-010	SCI-63 @7	850	mg/Kg	1.0
128281-011	SCI-64 @7	500	mg/Kg	5.0
128281-012	SCI-65 @7	17	mg/Kg	2.5
METHOD BLANK	N/A	ND	mg/Kg	2.5

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

=====
 RPD, % 6
 RECOVERY, % 100
 =====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/12/97
 BATCH#: 32367

=====
 ANALYSIS: CYANIDE
 ANALYSIS METHOD: EPA 335.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-001	SCI-62	ND	ug/L	10
128281-002	SCI-63	ND	ug/L	20
128281-003	SCI-64	ND	ug/L	10
128281-004	SCI-65	1,400	ug/L	100
METHOD BLANK	N/A	ND	ug/L	10

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

=====
 RPD, % 4
 RECOVERY, % 97
 =====



LABORATORY NUMBER: 128281
CLIENT: SUBSURFACE CONSULTANTS
PROJECT#: 133.005
LOCATION: KOT

DATE SAMPLED: 02/09/97
DATE RECEIVED: 02/10/97
DATE ANALYZED: 02/12/97
BATCH#: 32369

=====

ANALYSIS: CYANIDE
ANALYSIS METHOD: EPA 335.2

=====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-005	SCI-62 @5	3.5	mg/Kg	1.0
128281-006	SCI-63 @4.5	ND	mg/Kg	1.0
128281-007	SCI-64 @5	1.3	mg/Kg	1.0
128281-008	SCI-65 @4.5	ND	mg/Kg	1.0
128281-009	SCI-62 @8	ND	mg/Kg	1.0
128281-010	SCI-63 @7	ND	mg/Kg	1.0
128281-011	SCI-64 @7	ND	mg/Kg	1.0
128281-012	SCI-65 @7	11	mg/Kg	1.0
METHOD BLANK	N/A	ND	mg/Kg	1.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: MS/MSD OF 128281-005

=====

RPD, %	2
RECOVERY, %	87

=====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/13/97
 BATCH#: 15106

=====
 ANALYSIS: SULFATE
 ANALYSIS METHOD: EPA 375.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-001	SCI-62	380	mg/L	50
128281-002	SCI-63	470	mg/L	75
128281-003	SCI-64	320	mg/L	40
128281-004	SCI-65	140	mg/L	20
METHOD BLANK	N/A	ND	mg/L	5.0

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BS/BSD

=====
 RPD, % 4
 RECOVERY, % 100
 =====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/13/97
 BATCH#: 15107

=====
 ANALYSIS: SULFATE
 ANALYSIS METHOD: EPA 375.2
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-005	SCI-62 @5	270	mg/Kg	50
128281-006	SCI-63 @4.5	640	mg/Kg	125
128281-007	SCI-64 @5	160	mg/Kg	25
128281-008	SCI-65 @4.5	ND	mg/Kg	25
128281-009	SCI-62 @8	230	mg/Kg	25
128281-010	SCI-63 @7	530	mg/Kg	75
128281-011	SCI-64 @7	200	mg/Kg	25
128281-012	SCI-65 @7	ND	mg/Kg	25
METHOD BLANK	N/A	ND	mg/Kg	25

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: MS/MSD OF 128281-012

=====
 RPD, % 6
 RECOVERY, % 103
 =====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/10/97

=====
 ANALYSIS: HEXAVALENT CHROMIUM
 ANALYSIS METHOD: EPA 7196
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-001	SCI-62	0.02	mg/L	0.01
128281-002	SCI-63	ND	mg/L	0.01
128281-003	SCI-64	ND	mg/L	0.01
128281-004	SCI-65	ND	mg/L	0.01
METHOD BLANK	N/A	ND	mg/L	0.01

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BLANK SPIKE

=====
 RECOVERY, % 95
 =====

LABORATORY NUMBER: 128281
 CLIENT: SUBSURFACE CONSULTANTS
 PROJECT#: 133.005
 LOCATION: KOT

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE ANALYZED: 02/13/97

=====
 ANALYSIS: HEXAVALENT CHROMIUM
 ANALYSIS METHOD: EPA 7196
 =====

LAB ID	SAMPLE ID	RESULT	UNITS	REPORTING LIMIT
128281-005	SCI-62 @5	ND	mg/Kg	0.05
128281-006	SCI-63 @4.5	0.05	mg/Kg	0.05
128281-007	SCI-64 @5	0.29	mg/Kg	0.05
128281-008	SCI-65 @4.5	0.10	mg/Kg	0.05
128281-009	SCI-62 @8	ND	mg/Kg	0.05
128281-010	SCI-63 @7	ND	mg/Kg	0.05
METHOD BLANK	N/A	ND	mg/Kg	0.05

ND = Not detected at or above reporting limit.

QA/QC SUMMARY: BLANK SPIKE AND SAMPLE DUPLICATE OF 128194-009

=====
 RPD, % 27
 RECOVERY, % 94
 =====

SAMPLE ID: SCI-62
 LAB ID: 128281-001
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	18	5.0	1	32329	EPA 6010A	02/11/97
Barium	160	10	1	32329	EPA 6010A	02/11/97
Beryllium	2.2	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	3.7	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32422	EPA 7470	02/14/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	1	32329	EPA 6010A	02/11/97
Selenium	28	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	24	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-63
 LAB ID: 128281-002
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	8.2	5.0	1	32329	EPA 6010A	02/11/97
Barium	420	10	1	32329	EPA 6010A	02/11/97
Beryllium	2.5	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32422	EPA 7470	02/14/97
Molybdenum	22	20	1	32329	EPA 6010A	02/11/97
Nickel	26	20	1	32329	EPA 6010A	02/11/97
Selenium	15	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	40	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-64
 LAB ID: 128281-003
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	16	5.0	1	32329	EPA 6010A	02/11/97
Barium	520	10	1	32329	EPA 6010A	02/11/97
Beryllium	2.9	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	ND	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32422	EPA 7470	02/14/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	ND	20	1	32329	EPA 6010A	02/11/97
Selenium	35	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	14	10	1	32329	EPA 6010A	02/11/97
Zinc	22	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-65
 LAB ID: 128281-004
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Filtrate

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (ug/L)	Reporting Limit (ug/L)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	1	32329	EPA 6010A	02/11/97
Arsenic	ND	5.0	1	32329	EPA 6010A	02/11/97
Barium	420	10	1	32329	EPA 6010A	02/11/97
Beryllium	ND	2.0	1	32329	EPA 6010A	02/11/97
Cadmium	ND	2.0	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	10	1	32329	EPA 6010A	02/11/97
Cobalt	54	20	1	32329	EPA 6010A	02/11/97
Copper	ND	10	1	32329	EPA 6010A	02/11/97
Lead	ND	3.0	1	32329	EPA 6010A	02/11/97
Mercury	ND	0.20	1	32422	EPA 7470	02/14/97
Molybdenum	ND	20	1	32329	EPA 6010A	02/11/97
Nickel	32	20	1	32329	EPA 6010A	02/11/97
Selenium	12	5.0	1	32329	EPA 6010A	02/11/97
Silver	ND	5.0	1	32329	EPA 6010A	02/11/97
Thallium	ND	5.0	1	32329	EPA 6010A	02/11/97
Vanadium	ND	10	1	32329	EPA 6010A	02/11/97
Zinc	160	20	1	32329	EPA 6010A	02/11/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-62 @ 5
 LAB ID: 128281-005
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3.0	1	32337	EPA 6010A	02/13/97
Arsenic	2.1	0.25	1	32337	EPA 6010A	02/13/97
Barium	110	0.50	1	32337	EPA 6010A	02/13/97
Beryllium	0.50	0.10	1	32337	EPA 6010A	02/13/97
Cadmium	0.56	0.10	1	32337	EPA 6010A	02/13/97
Chromium (total)	48	0.50	1	32337	EPA 6010A	02/13/97
Cobalt	13	1.0	1	32337	EPA 6010A	02/13/97
Copper	16	0.50	1	32337	EPA 6010A	02/13/97
Lead	6.9	0.15	1	32337	EPA 6010A	02/13/97
Mercury	ND	0.095	1	32358	EPA 7471	02/12/97
Molybdenum	ND	1.0	1	32337	EPA 6010A	02/13/97
Nickel	58	1.0	1	32337	EPA 6010A	02/13/97
Selenium	1.4	0.25	1	32337	EPA 6010A	02/13/97
Silver	ND	0.50	1	32337	EPA 6010A	02/13/97
Thallium	0.28	0.25	1	32337	EPA 6010A	02/13/97
Vanadium	25	0.50	1	32337	EPA 6010A	02/13/97
Zinc	44	1.0	1	32337	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit



Curtis & Tompkins, Ltd.

SAMPLE ID: SCI-62 @ 8
LAB ID: 128281-009
CLIENT: Subsurface Consultants
PROJECT ID: 133.005
LOCATION: KOT
MATRIX: Soil

DATE SAMPLED: 02/09/97
DATE RECEIVED: 02/10/97
DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	3.0	1	32337	EPA 6010A	02/13/97
Arsenic	4.1	0.25	1	32337	EPA 6010A	02/13/97
Barium	130	0.50	1	32337	EPA 6010A	02/13/97
Beryllium	0.44	0.10	1	32337	EPA 6010A	02/13/97
Cadmium	0.57	0.10	1	32337	EPA 6010A	02/13/97
Chromium (total)	47	0.50	1	32337	EPA 6010A	02/13/97
Cobalt	12	1.0	1	32337	EPA 6010A	02/13/97
Copper	16	0.50	1	32337	EPA 6010A	02/13/97
Lead	8.6	0.15	1	32337	EPA 6010A	02/13/97
Mercury	0.099	0.091	1	32358	EPA 7471	02/12/97
Molybdenum	ND	1.0	1	32337	EPA 6010A	02/13/97
Nickel	59	1.0	1	32337	EPA 6010A	02/13/97
Selenium	1.2	0.25	1	32337	EPA 6010A	02/13/97
Silver	ND	0.50	1	32337	EPA 6010A	02/13/97
Thallium	0.78	0.25	1	32337	EPA 6010A	02/13/97
Vanadium	35	0.50	1	32337	EPA 6010A	02/13/97
Zinc	44	1.0	1	32337	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-63 @ 4.5
 LAB ID: 128281-006
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32337	EPA 6010A	02/13/97
Arsenic	2.2	0.24	1	32337	EPA 6010A	02/13/97
Barium	91	0.49	1	32337	EPA 6010A	02/13/97
Beryllium	0.32	0.098	1	32337	EPA 6010A	02/13/97
Cadmium	0.49	0.098	1	32337	EPA 6010A	02/13/97
Chromium (total)	46	0.49	1	32337	EPA 6010A	02/13/97
Cobalt	8.3	0.98	1	32337	EPA 6010A	02/13/97
Copper	10	0.49	1	32337	EPA 6010A	02/13/97
Lead	4.9	0.15	1	32337	EPA 6010A	02/13/97
Mercury	ND	0.10	1	32358	EPA 7471	02/12/97
Molybdenum	ND	0.98	1	32337	EPA 6010A	02/13/97
Nickel	44	0.98	1	32337	EPA 6010A	02/13/97
Selenium	0.79	0.24	1	32337	EPA 6010A	02/13/97
Silver	ND	0.49	1	32337	EPA 6010A	02/13/97
Thallium	0.62	0.24	1	32337	EPA 6010A	02/13/97
Vanadium	28	0.49	1	32337	EPA 6010A	02/13/97
Zinc	30	0.98	1	32337	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-63 @ 7
 LAB ID: 128281-010
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.8	1	32371	EPA 6010A	02/13/97
Arsenic	2.8	0.24	1	32371	EPA 6010A	02/13/97
Barium	130	0.47	1	32371	EPA 6010A	02/13/97
Beryllium	0.41	0.094	1	32371	EPA 6010A	02/13/97
Cadmium	0.51	0.094	1	32371	EPA 6010A	02/13/97
Chromium (total)	51	0.47	1	32371	EPA 6010A	02/13/97
Cobalt	14	0.94	1	32371	EPA 6010A	02/13/97
Copper	10	0.47	1	32371	EPA 6010A	02/13/97
Lead	5.0	0.14	1	32371	EPA 6010A	02/13/97
Mercury	0.10	0.10	1	32358	EPA 7471	02/12/97
Molybdenum	ND	0.94	1	32371	EPA 6010A	02/13/97
Nickel	63	0.94	1	32371	EPA 6010A	02/13/97
Selenium	1.4	0.24	1	32371	EPA 6010A	02/13/97
Silver	ND	0.47	1	32371	EPA 6010A	02/13/97
Thallium	0.32	0.24	1	32371	EPA 6010A	02/13/97
Vanadium	29	0.47	1	32371	EPA 6010A	02/13/97
Zinc	34	0.94	1	32371	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-64 @ 5
 LAB ID: 128281-007
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.9	1	32337	EPA 6010A	02/13/97
Arsenic	2.8	0.25	1	32337	EPA 6010A	02/13/97
Barium	97	0.49	1	32337	EPA 6010A	02/13/97
Beryllium	0.51	0.098	1	32337	EPA 6010A	02/13/97
Cadmium	0.47	0.098	1	32337	EPA 6010A	02/13/97
Chromium (total)	24	0.49	1	32337	EPA 6010A	02/13/97
Cobalt	10	0.98	1	32337	EPA 6010A	02/13/97
Copper	11	0.49	1	32337	EPA 6010A	02/13/97
Lead	9.3	0.15	1	32337	EPA 6010A	02/13/97
Mercury	ND	0.095	1	32358	EPA 7471	02/12/97
Molybdenum	ND	0.98	1	32337	EPA 6010A	02/13/97
Nickel	30	0.98	1	32337	EPA 6010A	02/13/97
Selenium	1.1	0.25	1	32337	EPA 6010A	02/13/97
Silver	ND	0.49	1	32337	EPA 6010A	02/13/97
Thallium	1.2	0.25	1	32337	EPA 6010A	02/13/97
Vanadium	24	0.49	1	32337	EPA 6010A	02/13/97
Zinc	35	0.98	1	32337	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit

SAMPLE ID: SCI-65 @ 4.5
 LAB ID: 128281-008
 CLIENT: Subsurface Consultants
 PROJECT ID: 133.005
 LOCATION: KOT
 MATRIX: Soil

DATE SAMPLED: 02/09/97
 DATE RECEIVED: 02/10/97
 DATE REPORTED: 02/14/97

California TITLE 26 Metals

Compound	Result (mg/Kg)	Reporting Limit (mg/Kg)	IDF	QC Batch	Method	Analysis Date
Antimony	ND	2.8	1	32337	EPA 6010A	02/13/97
Arsenic	1.7	0.24	1	32337	EPA 6010A	02/13/97
Barium	170	0.47	1	32337	EPA 6010A	02/13/97
Beryllium	0.44	0.094	1	32337	EPA 6010A	02/13/97
Cadmium	0.46	0.094	1	32337	EPA 6010A	02/13/97
Chromium (total)	41	0.47	1	32337	EPA 6010A	02/13/97
Cobalt	9.3	0.94	1	32337	EPA 6010A	02/13/97
Copper	16	0.47	1	32337	EPA 6010A	02/13/97
Lead	5.2	0.14	1	32337	EPA 6010A	02/13/97
Mercury	ND	0.095	1	32358	EPA 7471	02/12/97
Molybdenum	ND	0.94	1	32337	EPA 6010A	02/13/97
Nickel	52	0.94	1	32337	EPA 6010A	02/13/97
Selenium	1.1	0.24	1	32337	EPA 6010A	02/13/97
Silver	ND	0.47	1	32337	EPA 6010A	02/13/97
Thallium	ND	0.24	1	32337	EPA 6010A	02/13/97
Vanadium	17	0.47	1	32337	EPA 6010A	02/13/97
Zinc	38	0.94	1	32337	EPA 6010A	02/13/97

ND = Not detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128281

DATE REPORTED: 02/14/97

**BATCH QC REPORT
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Compound	Result	Reporting Limit	Units	IDF	QC Batch	Method	Analysis Date
Antimony	ND	60	ug/L	1	32329	EPA 6010A	02/11/97
Antimony	ND	3	mg/Kg	1	32337	EPA 6010A	02/13/97
Antimony	ND	3	mg/Kg	1	32371	EPA 6010A	02/14/97
Arsenic	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Arsenic	ND	0.25	mg/Kg	1	32337	EPA 6010A	02/13/97
Arsenic	ND	0.25	mg/Kg	1	32371	EPA 6010A	02/14/97
Barium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Barium	ND	0.5	mg/Kg	1	32337	EPA 6010A	02/13/97
Barium	ND	0.5	mg/Kg	1	32371	EPA 6010A	02/14/97
Beryllium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Beryllium	ND	0.1	mg/Kg	1	32337	EPA 6010A	02/13/97
Beryllium	ND	0.1	mg/Kg	1	32371	EPA 6010A	02/14/97
Cadmium	ND	2	ug/L	1	32329	EPA 6010A	02/11/97
Cadmium	ND	0.1	mg/Kg	1	32337	EPA 6010A	02/13/97
Cadmium	ND	0.1	mg/Kg	1	32371	EPA 6010A	02/14/97
Chromium (total)	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Chromium (total)	ND	0.5	mg/Kg	1	32337	EPA 6010A	02/13/97
Chromium (total)	ND	0.5	mg/Kg	1	32371	EPA 6010A	02/14/97
Cobalt	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Cobalt	ND	1	mg/Kg	1	32337	EPA 6010A	02/13/97
Cobalt	ND	1	mg/Kg	1	32371	EPA 6010A	02/14/97
Copper	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Copper	ND	0.5	mg/Kg	1	32337	EPA 6010A	02/13/97
Copper	ND	0.5	mg/Kg	1	32371	EPA 6010A	02/14/97
Lead	ND	3	ug/L	1	32329	EPA 6010A	02/11/97
Lead	ND	0.15	mg/Kg	1	32337	EPA 6010A	02/13/97
Lead	ND	0.15	mg/Kg	1	32371	EPA 6010A	02/14/97
Mercury	ND	0.1	mg/Kg	1	32358	EPA 7471	02/12/97
Mercury	ND	0.2	ug/L	1	32422	EPA 7470	02/14/97
Molybdenum	ND	20	ug/L	1	32329	EPA 6010A	02/11/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128281

DATE REPORTED: 02/14/97

**BATCH QC REPORT
 PREP BLANK**

Compound	Result	Reporting Units Limit	IDF	QC Batch	Method	Analysis Date	
Molybdenum	ND	1	mg/Kg	1	32337	EPA 6010A	02/13/97
Molybdenum	ND	1	mg/Kg	1	32371	EPA 6010A	02/14/97
Nickel	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Nickel	ND	1	mg/Kg	1	32337	EPA 6010A	02/13/97
Nickel	ND	1	mg/Kg	1	32371	EPA 6010A	02/14/97
Selenium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Selenium	ND	0.25	mg/Kg	1	32337	EPA 6010A	02/13/97
Selenium	ND	0.25	mg/Kg	1	32371	EPA 6010A	02/14/97
Silver	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Silver	ND	0.5	mg/Kg	1	32337	EPA 6010A	02/13/97
Silver	ND	0.5	mg/Kg	1	32371	EPA 6010A	02/14/97
Thallium	ND	5	ug/L	1	32329	EPA 6010A	02/11/97
Thallium	ND	0.25	mg/Kg	1	32337	EPA 6010A	02/13/97
Thallium	ND	0.25	mg/Kg	1	32371	EPA 6010A	02/14/97
Vanadium	ND	10	ug/L	1	32329	EPA 6010A	02/11/97
Vanadium	ND	0.5	mg/Kg	1	32337	EPA 6010A	02/13/97
Vanadium	ND	0.5	mg/Kg	1	32371	EPA 6010A	02/14/97
Zinc	ND	20	ug/L	1	32329	EPA 6010A	02/11/97
Zinc	ND	1	mg/Kg	1	32337	EPA 6010A	02/13/97
Zinc	ND	1	mg/Kg	1	32371	EPA 6010A	02/14/97

ND = Not Detected at or above reporting limit

CLIENT: Subsurface Consultants
 JOB NUMBER: 128281

DATE REPORTED: 02/14/97

**BATCH QC REPORT
 LABORATORY CONTROL SAMPLE**

Compound	Spike Amt	Result	Units	% Rec.	QC Batch	Method	Analysis Date
Antimony	25	24.7	mg/Kg	99	32371	EPA 6010A	02/14/97
Arsenic	100	87	mg/Kg	87	32371	EPA 6010A	02/14/97
Barium	100	92	mg/Kg	92	32371	EPA 6010A	02/14/97
Beryllium	2.5	2.41	mg/Kg	96	32371	EPA 6010A	02/14/97
Cadmium	2.5	2.365	mg/Kg	95	32371	EPA 6010A	02/14/97
Chromium (total)	10	9.45	mg/Kg	95	32371	EPA 6010A	02/14/97
Cobalt	25	23.45	mg/Kg	94	32371	EPA 6010A	02/14/97
Copper	12.5	12.55	mg/Kg	100	32371	EPA 6010A	02/14/97
Lead	25	23	mg/Kg	92	32371	EPA 6010A	02/14/97
Molybdenum	20	18.8	mg/Kg	94	32371	EPA 6010A	02/14/97
Nickel	25	23.85	mg/Kg	95	32371	EPA 6010A	02/14/97
Selenium	100	84.5	mg/Kg	85	32371	EPA 6010A	02/14/97
Silver	5	4.805	mg/Kg	96	32371	EPA 6010A	02/14/97
Thallium	100	90.5	mg/Kg	91	32371	EPA 6010A	02/14/97
Vanadium	25	23.4	mg/Kg	94	32371	EPA 6010A	02/14/97
Zinc	25	23.05	mg/Kg	92	32371	EPA 6010A	02/14/97

CLIENT: Subsurface Consultants
 JOB NUMBER: 128281

DATE REPORTED: 02/14/97

BATCH QC REPORT
BLANK SPIKE / BLANK SPIKE DUPLICATE

Compound	Spike Amount	BS Result	BSD Result	Units	BS% Rec.	BSD% Rec.	Rec. Limits	RPD %	RPD Limit	QC Batch	Method	Analysis Date
Antimony	500	477	520	ug/L	95	104	80-120	9	35	32329	EPA 6010A	02/11/97
Antimony	25	26.3	23.9	mg/Kg	105	96	80-120	10	35	32337	EPA 6010A	02/13/97
Arsenic	2000	2030	2070	ug/L	102	104	80-120	2	35	32329	EPA 6010A	02/11/97
Arsenic	100	86.5	87	mg/Kg	87	87	80-120	1	35	32337	EPA 6010A	02/13/97
Barium	2000	2020	2020	ug/L	101	101	80-120	0	35	32329	EPA 6010A	02/11/97
Barium	100	95.5	92	mg/Kg	96	92	80-120	4	35	32337	EPA 6010A	02/13/97
Beryllium	50	52.4	52.9	ug/L	105	106	80-120	1	35	32329	EPA 6010A	02/11/97
Beryllium	2.5	2.385	2.385	mg/Kg	95	95	80-120	0	35	32337	EPA 6010A	02/13/97
Cadmium	50	53.4	52.7	ug/L	107	105	80-120	1	35	32329	EPA 6010A	02/11/97
Cadmium	2.5	2.33	2.345	mg/Kg	93	94	80-120	1	35	32337	EPA 6010A	02/13/97
Chromium (total)	200	206	208	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Chromium (total)	10	9.45	9.35	mg/Kg	95	94	80-120	1	35	32337	EPA 6010A	02/13/97
Cobalt	500	515	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Cobalt	25	23.05	23.05	mg/Kg	92	92	80-120	0	35	32337	EPA 6010A	02/13/97
Copper	250	242	240	ug/L	97	96	80-120	1	35	32329	EPA 6010A	02/11/97
Copper	12.5	13.1	12.5	mg/Kg	105	100	80-120	5	35	32337	EPA 6010A	02/13/97
Lead	500	513	518	ug/L	103	104	80-120	1	35	32329	EPA 6010A	02/11/97
Lead	25	22.95	22.65	mg/Kg	92	91	80-120	1	35	32337	EPA 6010A	02/13/97
Mercury	5	4.653	4.769	ug/L	93	95	80-120	3	35	32358	EPA 7470	02/12/97
Mercury	5	4.481	4.817	ug/L	90	96	80-120	7	35	32422	EPA 7470	02/14/97
Molybdenum	400	405	411	ug/L	101	103	80-120	2	35	32329	EPA 6010A	02/11/97
Molybdenum	20	18.9	18.5	mg/Kg	95	93	80-120	2	35	32337	EPA 6010A	02/13/97
Nickel	500	523	524	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Nickel	25	23.8	23.5	mg/Kg	95	94	80-120	1	35	32337	EPA 6010A	02/13/97
Selenium	2000	2080	2150	ug/L	104	108	80-120	3	35	32329	EPA 6010A	02/11/97
Selenium	100	83.5	84	mg/Kg	84	84	80-120	1	35	32337	EPA 6010A	02/13/97
Silver	100	105	105	ug/L	105	105	80-120	0	35	32329	EPA 6010A	02/11/97
Silver	5	4.955	4.93	mg/Kg	99	99	80-120	1	35	32337	EPA 6010A	02/13/97
Thallium	2000	2000	2020	ug/L	100	101	80-120	1	35	32329	EPA 6010A	02/11/97
Thallium	100	90	89.5	mg/Kg	90	90	80-120	1	35	32337	EPA 6010A	02/13/97
Vanadium	500	512	515	ug/L	102	103	80-120	1	35	32329	EPA 6010A	02/11/97
Vanadium	25	23.75	23.4	mg/Kg	95	94	80-120	2	35	32337	EPA 6010A	02/13/97
Zinc	500	509	512	ug/L	102	102	80-120	1	35	32329	EPA 6010A	02/11/97
Zinc	25	22.6	22.4	mg/Kg	90	90	80-120	1	35	32337	EPA 6010A	02/13/97

CHAIN OF CUSTODY FORM

128281

PROJECT NAME: KOT
 JOB NUMBER: 133-005 LAB: ct
 PROJECT CONTACT: Denise de Verrier TURNAROUND: 5-day
 SAMPLED BY: Susan Wolfe REQUESTED BY: Denise de Verrier

ANALYSIS REQUESTED	
TEM (ASTM)	X
9240	X
Heavy Metals (EPA)	X
Asbestos	X
PM	X
Sulfate	X
Chloride	X
Cyanide	X

LABORATORY I.D. NUMBER	SCI SAMPLE NUMBER	MATRIX				CONTAINERS				METHOD PRESERVED					SAMPLING DATE				NOTES	
		WATER	SOIL	WASTE	AIR	VOA	LITER	PINT	TUBE	HCL	H ₂ SO ₄	HNO ₃	ICE	NONE	MONTH	DAY	YEAR	TIME		
1	SCI-62	X				5				X			X		02	09	97	1200	X	
	SCI-62						1						X					1200		
	SCI-62						1	1					X	X				1200	X	X X X X X X
	SCI-63					3				X			X					1400	X	X
2	SCI-63						1						X	X				1400	X	X X X X X X
	SCI-63						1						X	X				1400	X	X X X X X X
3	SCI-64					3				X			X					1430	X	X
	SCI-64						1	1					X	X				1430	X	X X X X X X
4	SCI-65					3				X			X					1500	X	X
	SCI-65						1						X	X				1500	X	X X X X X X
	SCI-65						1	1					X	X				1500	X	X X X X X X

CHAIN OF CUSTODY RECORD				COMMENTS & NOTES: * Samples may foam
RELEASED BY: (Signature) <i>[Signature]</i>	DATE / TIME 2/10/97 9:20	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature)	DATE / TIME	
RELEASED BY: (Signature)	DATE / TIME	RECEIVED BY: (Signature) <i>T. Wong</i>	DATE / TIME 2/10/97 9:20	

Subsurface Consultants, Inc.
 171 12TH STREET, SUITE 201, OAKLAND, CALIFORNIA 94607
 (510) 268-0461 • FAX: 510-268-0137



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

A N A L Y T I C A L R E P O R T

Prepared for:

Subsurface Consultants
3736 Mt. Diablo Blvd.
Suite 200
Layfayette, CA 94549

Date: 19-MAR-97
Lab Job Number: 128597
Project ID: 133.005
Location: KOT

Reviewed by: Tracy B. B...

Reviewed by: [Signature]

This package may be reproduced only in its entirety.

Client: Subsurface Consultants

Laboratory Login Number: 128597

 Project Name: KOT
 Project Number: 133.005

Report Date: 19 March 97

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric) METHOD: SMWW 17:5520BF

Lab ID	Sample ID	Matrix	Sampled	Received	Analyzed	Result	Units	RL	Analyst	QC Batch
128597-001	TP-6(DRUM)	Water	12-MAR-97	12-MAR-97	13-MAR-97	ND	mg/L	5	DLP	32861

ND = Not Detected at or above Reporting Limit (RL).

Q C B a t c h R e p o r t

Client: Subsurface Consultants
 Project Name: KOT
 Project Number: 133.005

Laboratory Login Number: 128597
 Report Date: 19 March 97

ANALYSIS: Hydrocarbon Oil & Grease (Gravimetric)

QC Batch Number: 32861

Blank Results

Sample ID	Result	MDL	Units	Method	Date Analyzed
MB	ND	5	mg/L	SMWW 17:5520BF	13-MAR-97

Spike/Duplicate Results

Sample ID	Recovery	Method	Date Analyzed
BS	95%	SMWW 17:5520BF	13-MAR-97
BSD	116%	SMWW 17:5520BF	13-MAR-97

		Control Limits
Average Spike Recovery	105%	80% - 120%
Relative Percent Difference	19.8%	< 20%



TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128597-001	TP-6(DRUM)	32927	03/12/97	03/18/97	03/18/97	

Matrix: Water

Analyte	Units	128597-001
Diln Fac:		1
Gasoline	ug/L	<50
Surrogate		
Trifluorotoluene	%REC	80
Bromobenzene	%REC	83



Lab #: 128597

BATCH QC REPORT

Page 1 of 1

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 5030

METHOD BLANK

Matrix: Water
Batch#: 32927
Units: ug/L
Diln Fac: 1

Prep Date: 03/17/97
Analysis Date: 03/17/97

MB Lab ID: QC42069

Analyte	Result		
Gasoline	<50		
Surrogate	%Rec	Recovery Limits	
Trifluorotoluene	80	65-135	
Bromobenzene	81	65-135	



Lab #: 128597

BATCH QC REPORT

TVH-Total Volatile Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 5030

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
 Batch#: 32927
 Units: ug/L
 Diln Fac: 1

Prep Date: 03/18/97
 Analysis Date: 03/18/97

BS Lab ID: QC42070

Analyte	Spike Added	BS	%Rec #	Limits
Gasoline	2000	1926	96	75-125
Surrogate	%Rec	Limits		
Trifluorotoluene	82	65-135		
Bromobenzene	93	65-135		

BSD Lab ID: QC42071

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Gasoline	2000	1982	99	75-125	3	35
Surrogate	%Rec	Limits				
Trifluorotoluene	82	65-135				
Bromobenzene	90	65-135				

Column to be used to flag recovery and RPD values with an asterisk
 * Values outside of QC limits
 RPD: 0 out of 1 outside limits
 Spike Recovery: 0 out of 2 outside limits



TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
Project#: 133.005
Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
Prep Method: EPA 3520

Sample #	Client ID	Batch #	Sampled	Extracted	Analyzed	Moisture
128597-001	TP-6(DRUM)	32896	03/12/97	03/14/97	03/17/97	

Matrix: Water

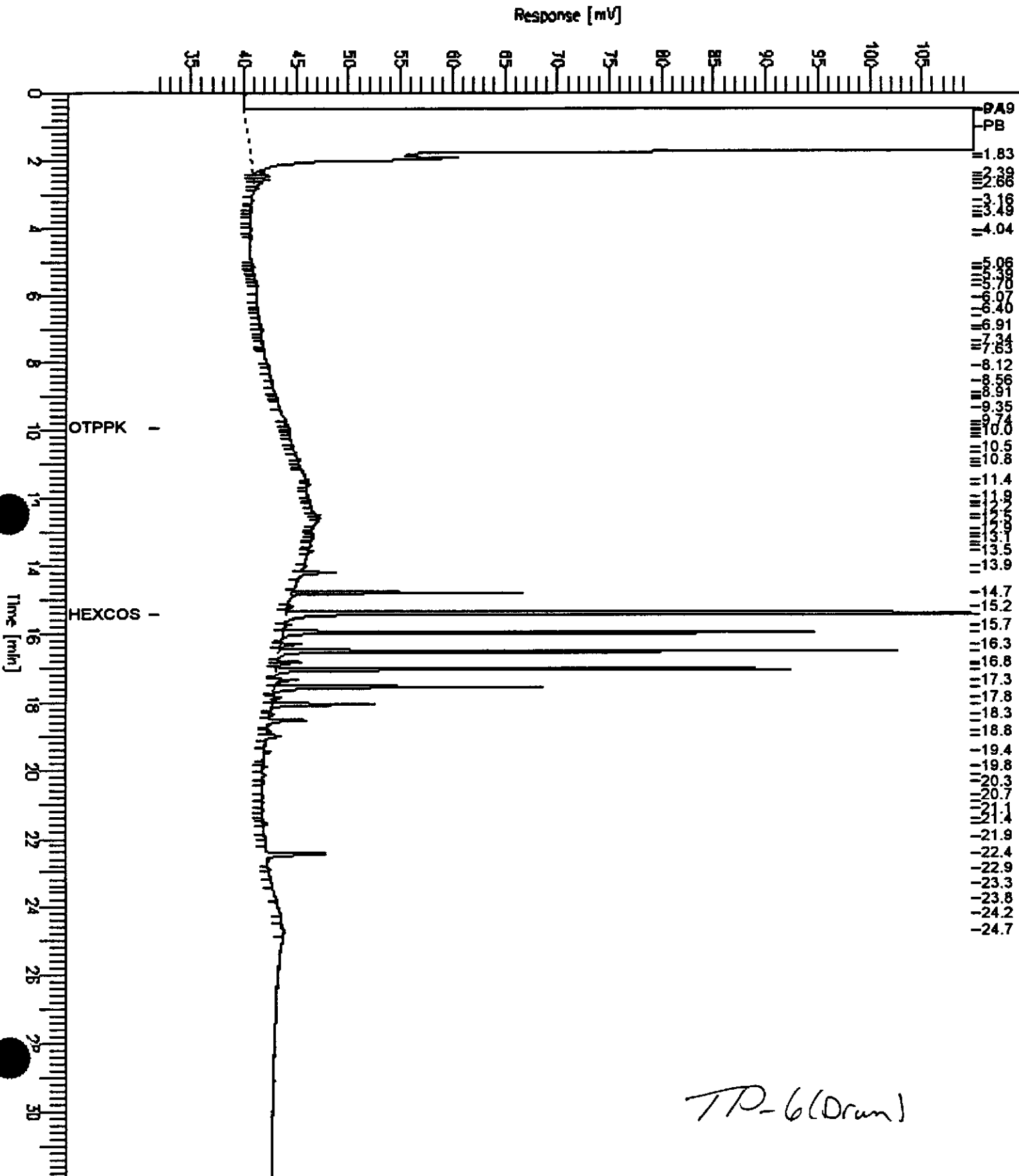
Analyte	Units	128597-001
Diln Fac:		1
Diesel C12-C22	ug/L	200 YH
Motor Oil C22-C50	ug/L	360 YL
Surrogate		
Hexacosane	%REC	107

Y: Sample exhibits fuel pattern which does not resemble standard
H: Heavier hydrocarbons than indicated standard
L: Lighter hydrocarbons than indicated standard

GC15 Channel B Surrogate

Sample Name : 128597-001,32896
 FileName : G:\GC15\CHB\076B012.raw
 Method : SNGL
 Start Time : 0.00 min
 End Time : 31.90 min
 Plot Offset: 32 mV
 Scale Factor: 0.0

Sample #: 32896
 Date : 3/17/97 08:31 PM
 Time of Injection: 3/17/97 07:59 PM
 Low Point : 32.00 mV
 High Point : 110.00 mV
 Plot Scale: 78.0 mV

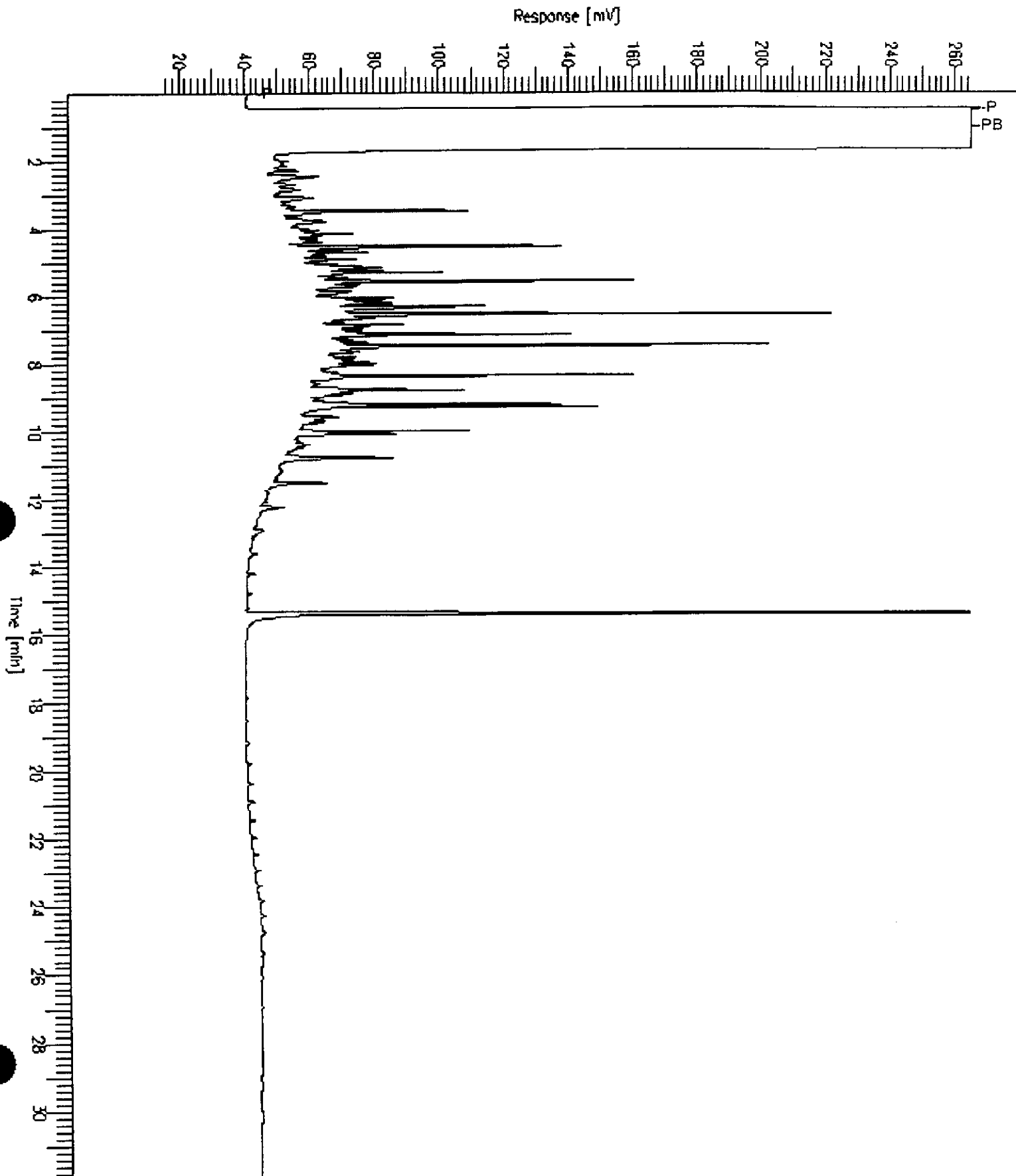


GC15 Channel B TEH

Sample Name : CCV, 97WS3756, DS
FileName : G:\GC15\CHB\076B002.RAW
Method : B073TEH.MTH
Start Time : 0.01 min
Multiplier Factor : 0.0

End Time : 31.91 min
Plot Offset : 14 mV

Sample #: 500MG/L
Date : 3/18/97 03:14 PM
Time of Injection: 3/17/97 09:45 AM
Low Point : 14.36 mV
High Point : 260.30 mV
Plot Scale: 250.9 mV

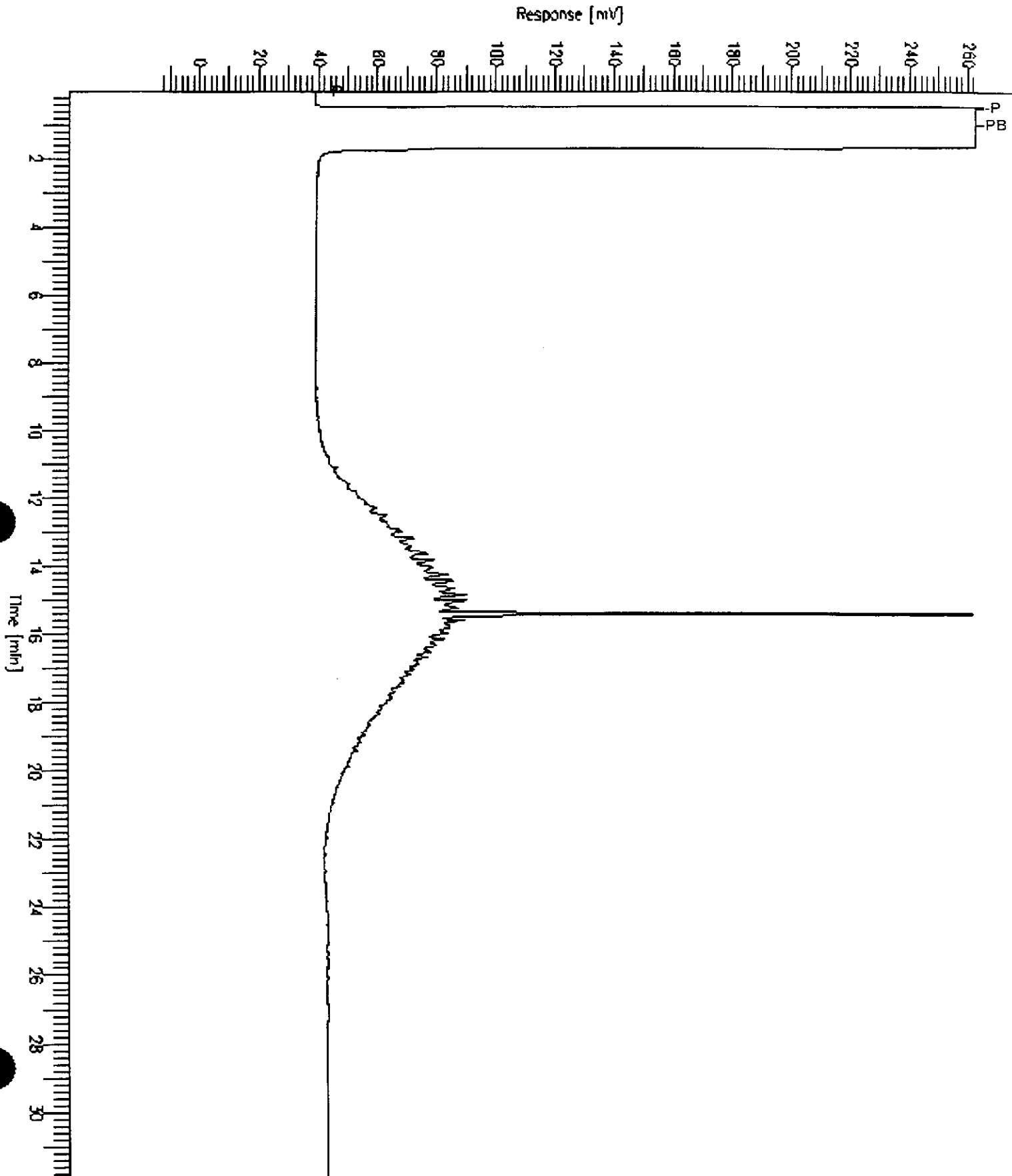


GC15 Channel B TEH

Sample Name : CCV, 97WS3691, MO
FileName : G:\GC15\CHB\076B003.RAW
Method : B073TEH.MTH
Start Time : 0.01 min
Gain Factor : 0.0

End Time : 31.91 min
Plot Offset : -13 mV

Sample #: 500MG/L
Date : 3/18/97 03:14 PM
Time of Injection: 3/17/97 10:31 AM
Low Point : -12.73 mV
High Point : 262.93 mV
Plot Scale: 275.3 mV



Lab #: 128597

BATCH QC REPORT

TEH-Tot Ext Hydrocarbons	
Client: Subsurface Consultants	Analysis Method: CA LUFT (EPA 8015M)
Project#: 133.005	Prep Method: EPA 3520
Location: KOT	
METHOD BLANK	
Matrix: Water	Prep Date: 03/14/97
Batch#: 32896	Analysis Date: 03/17/97
Units: ug/L	
Diln Fac: 1	

MB Lab ID: QC41964

Analyte	Result	
Diesel C12-C22	<50	
Motor Oil C22-C50	<250	
Surrogate	%Rec	Recovery Limits
Hexacosane	100	60-140



Lab #: 128597

BATCH QC REPORT

Page 1 of 1

TEH-Tot Ext Hydrocarbons

Client: Subsurface Consultants
 Project#: 133.005
 Location: KOT

Analysis Method: CA LUFT (EPA 8015M)
 Prep Method: EPA 3520

BLANK SPIKE/BLANK SPIKE DUPLICATE

Matrix: Water
 Batch#: 32896
 Units: ug/L
 Diln Fac: 1

Prep Date: 03/14/97
 Analysis Date: 03/18/97

BS Lab ID: QC41965

Analyte	Spike Added	BS	%Rec #	Limits
Diesel C12-C22	2475	2260	91	60-140
Surrogate	%Rec	Limits		
Hexacosane	105	60-140		

BSD Lab ID: QC41966

Analyte	Spike Added	BSD	%Rec #	Limits	RPD #	Limit
Diesel C12-C22	2475	2268	92	60-140	0	35
Surrogate	%Rec	Limits				
Hexacosane	101	60-140				

Column to be used to flag recovery and RPD values with an asterisk

* Values outside of QC limits

RPD: 0 out of 1 outside limits

Spike Recovery: 0 out of 2 outside limits

**APPENDIX F - ANALYTICAL TEST REPORTS, CHROMATOGRAPHS, AND
CHAIN-OF-CUSTODY FORMS FOR SCI'S
JANUARY/FEBRUARY 1997 DATA GAP STUDY (PART 2)**