

NATX/ETC

Mid-Pacific Environmental Laboratory, Inc.
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STIP 3928

March 11, 1993

Ms. Anita Yan
Woodward Clyde Consultants
500 12th Street, Suite 100
Oakland, CA 94607-4014

Dear Ms. Yan:

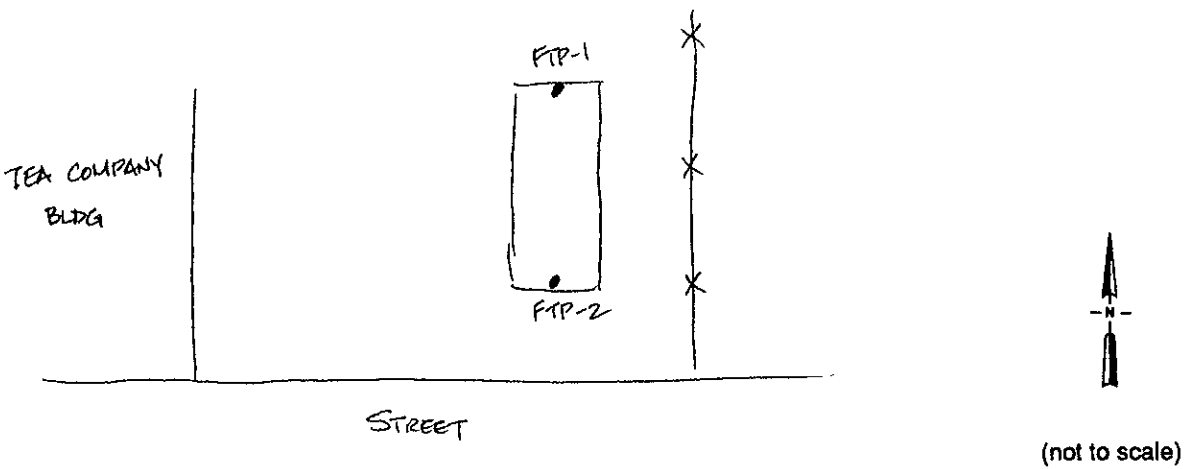
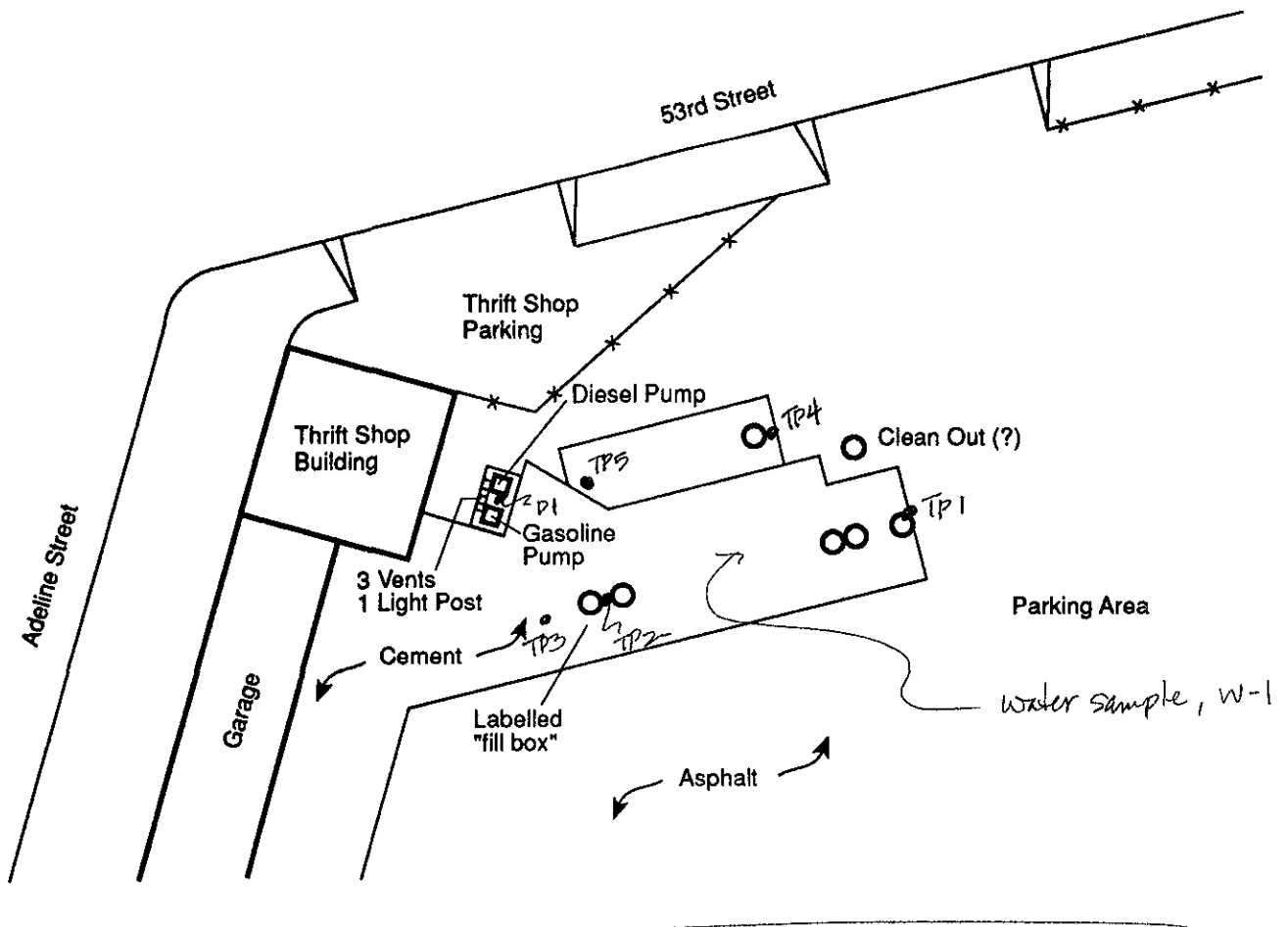
Enclosed is a revised report for MPELI Order# 92-12-144, your work ID 92CB040/0000, originally issued on January 15, 1993.

Per the request of Anita Quesada, the narrative portion has been revised to include a more detailed explanation of the "unknown hydrocarbons" reported. Copies of standard and sample chromatograms are included.

If you should have any further questions, please do not hesitate to contact me at (415) 964-0844.



Donald Magarian
Project Manager

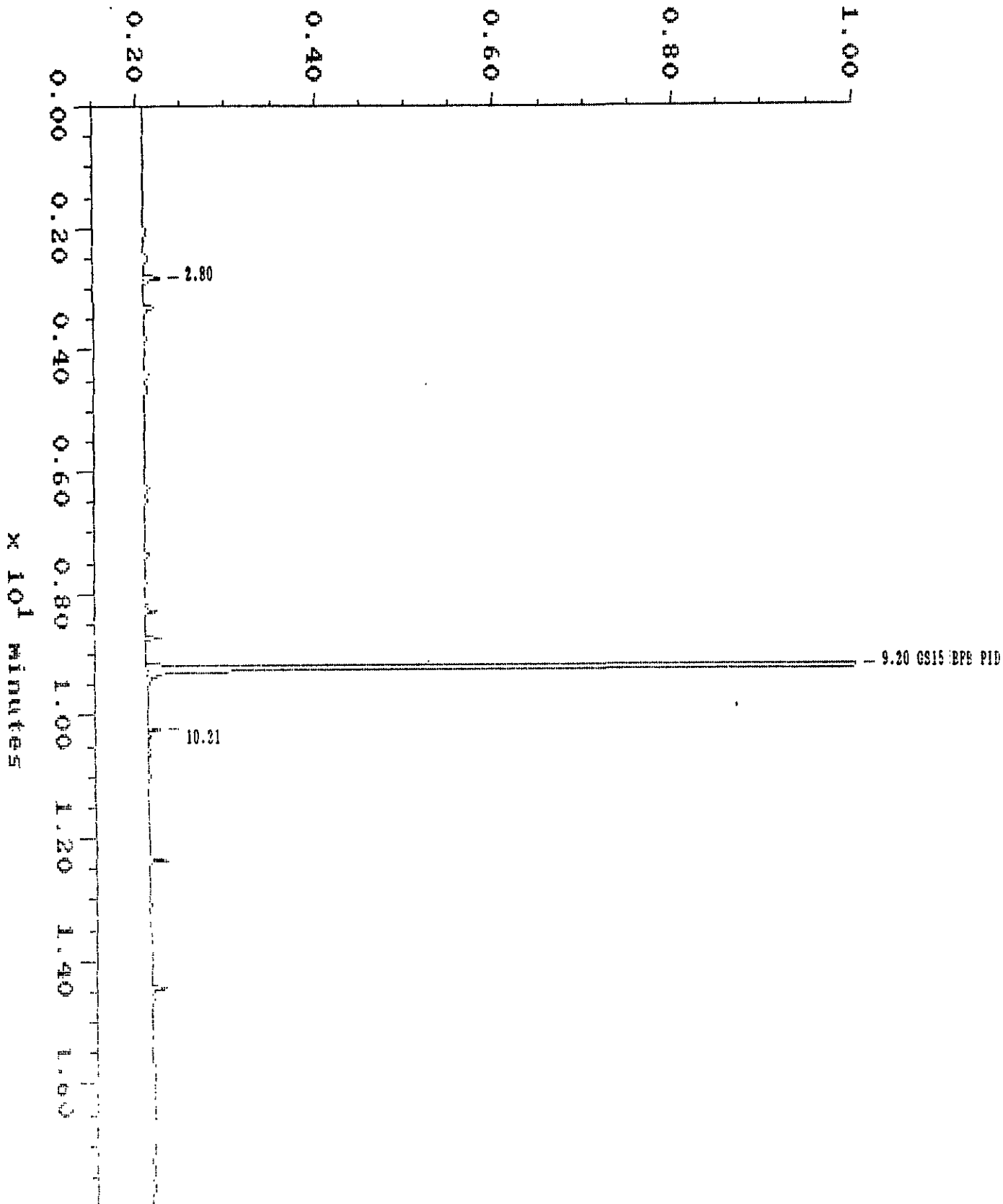


Project No. 92CB040	Continental Baking Company 1010 46th Street Emeryville, California	UNDERGROUND STORAGE TANK LOCATIONS	Figure 3
Woodward-Clyde Consultants			

Sample: 2121405A, S089A Channel: PID-D
Acquired: 30-DEC-92 17:44 Method: C:\MAX\3700D\DEC92\GBTX1230
Dilution: 1 : 1.000 Amount: 20.000
Comments: 3700D DB5 30 METER 0.52 NM PRIMARY GBTEX INSTRUMENT

Filename: 1230D14
Operator: CS
Inj Vol: 200.00

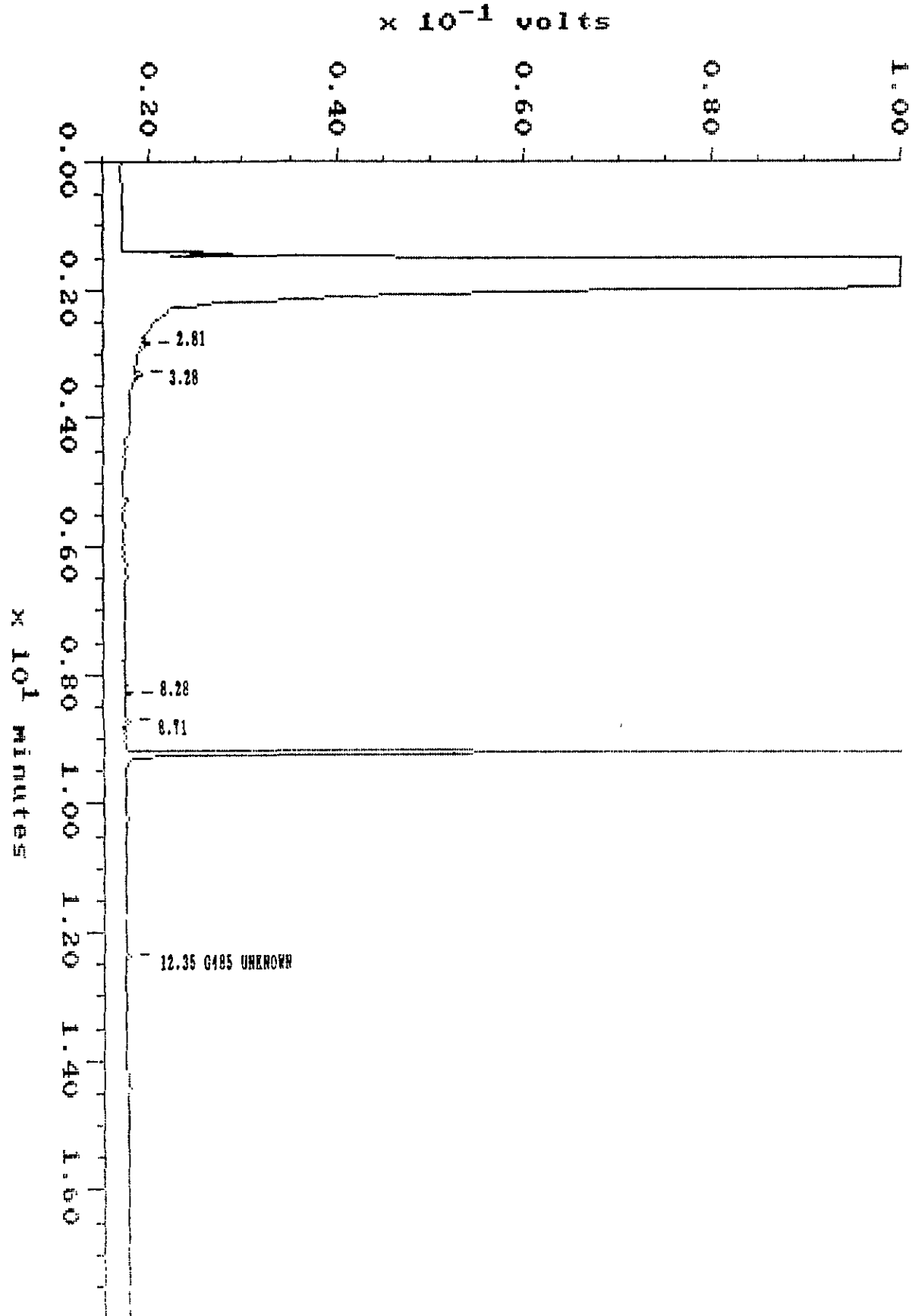
$\times 10^{-1}$ volts



TP-3 (TPH-Gas/BTEX PID)

Sample: 21214405A,8089A Channel: FID-D
Acquired: 30-DEC-92 17:44 Method: C:\MAX\3700D\DEC92\GBTX1230
Dilution: 1 : 1.000 Amount: 20.000
Comments: 3700D DB5 30 METER 0.52 MM PRIMARY GBTEX INSTRUMENT

Filename: 1230D14
Operator: CS
Inj Vol: 200.00

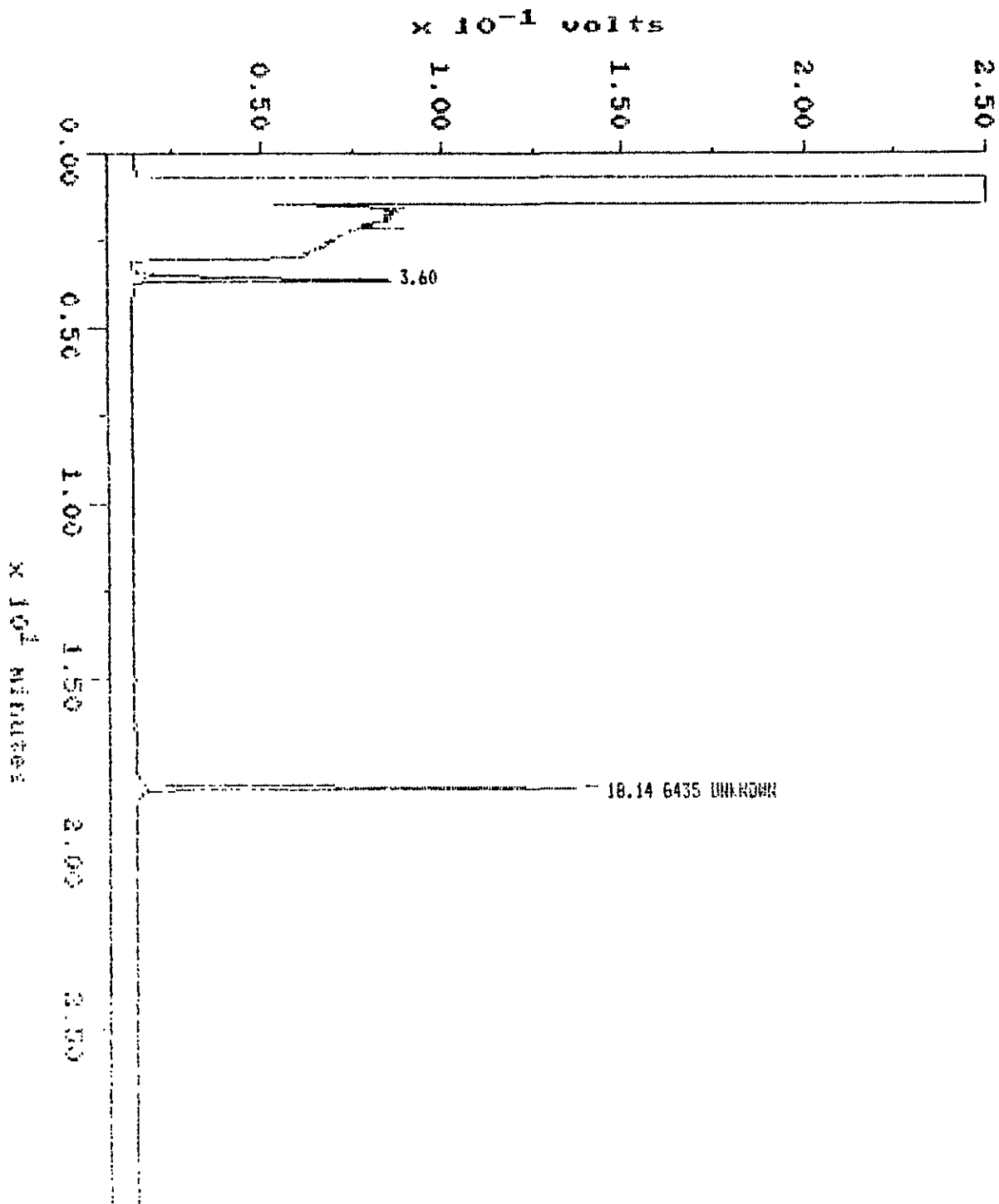


TP-3 (TPH-Gas/BTEX FID)

Sample: 21214405B,0124A
Acquired: 05-JAN-93 1:38
Inj Vol: 1.00
Comments: GC-E FUELS

Channel: FID-E
Method: C:\MAX\DATAE\JAN93\B0150104

Filename: 0104E20
Operator: KV



TP-3
(TPH - Diesel)

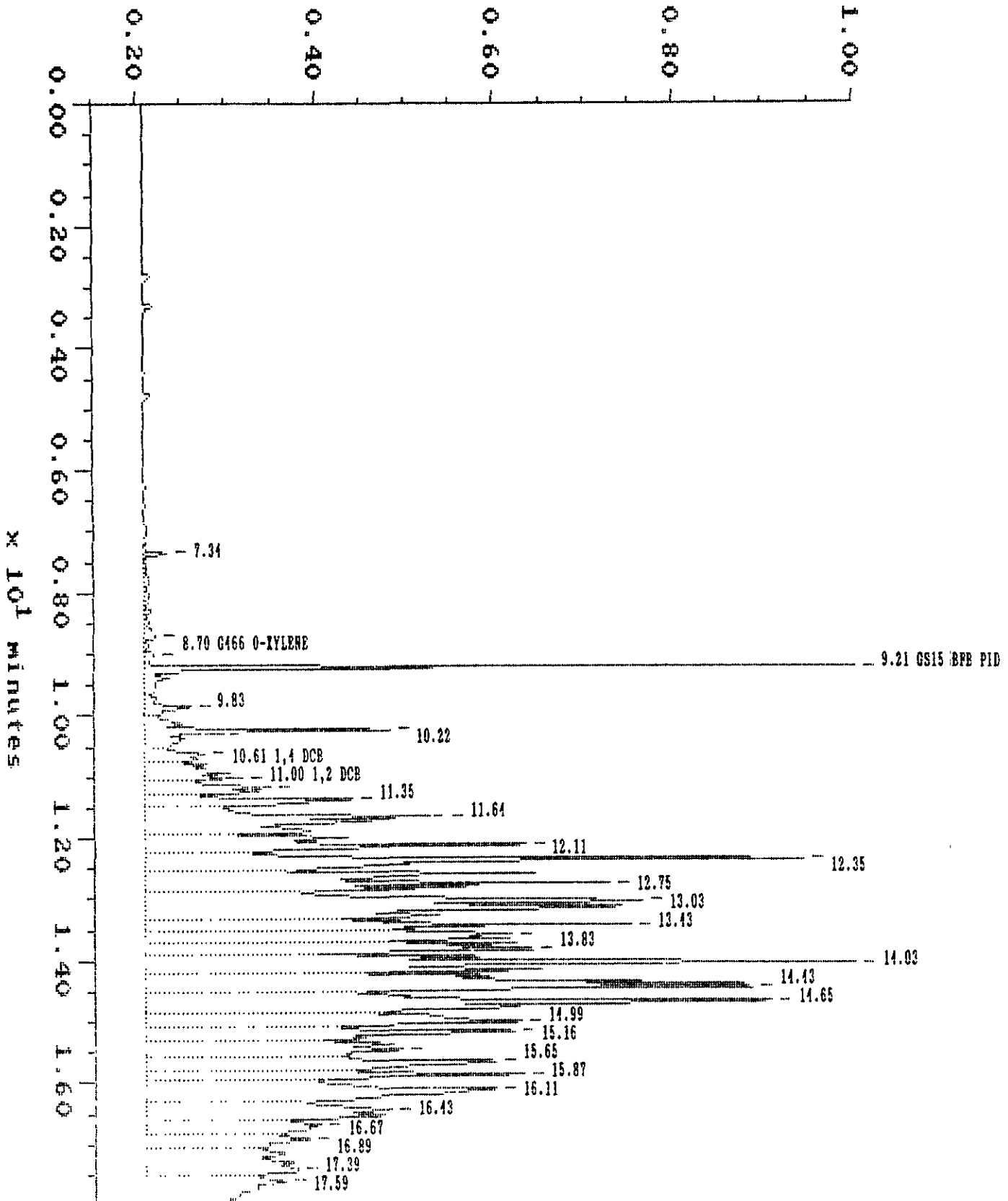
Sample: 21214408A, S089A
Acquired: 30-DEC-92 18:20
Dilution: 1:1.000

Channel: PID-D
Method: C:\MAX\3700D\DEC92\GBT11230
Amount: 20.000

Filename: 1230D15
Operator: GS
Inj Vol: 50.00

Comments: 3700D DB5 30 METER 0.52 MM PRIMARY GBTX INSTRUMENT

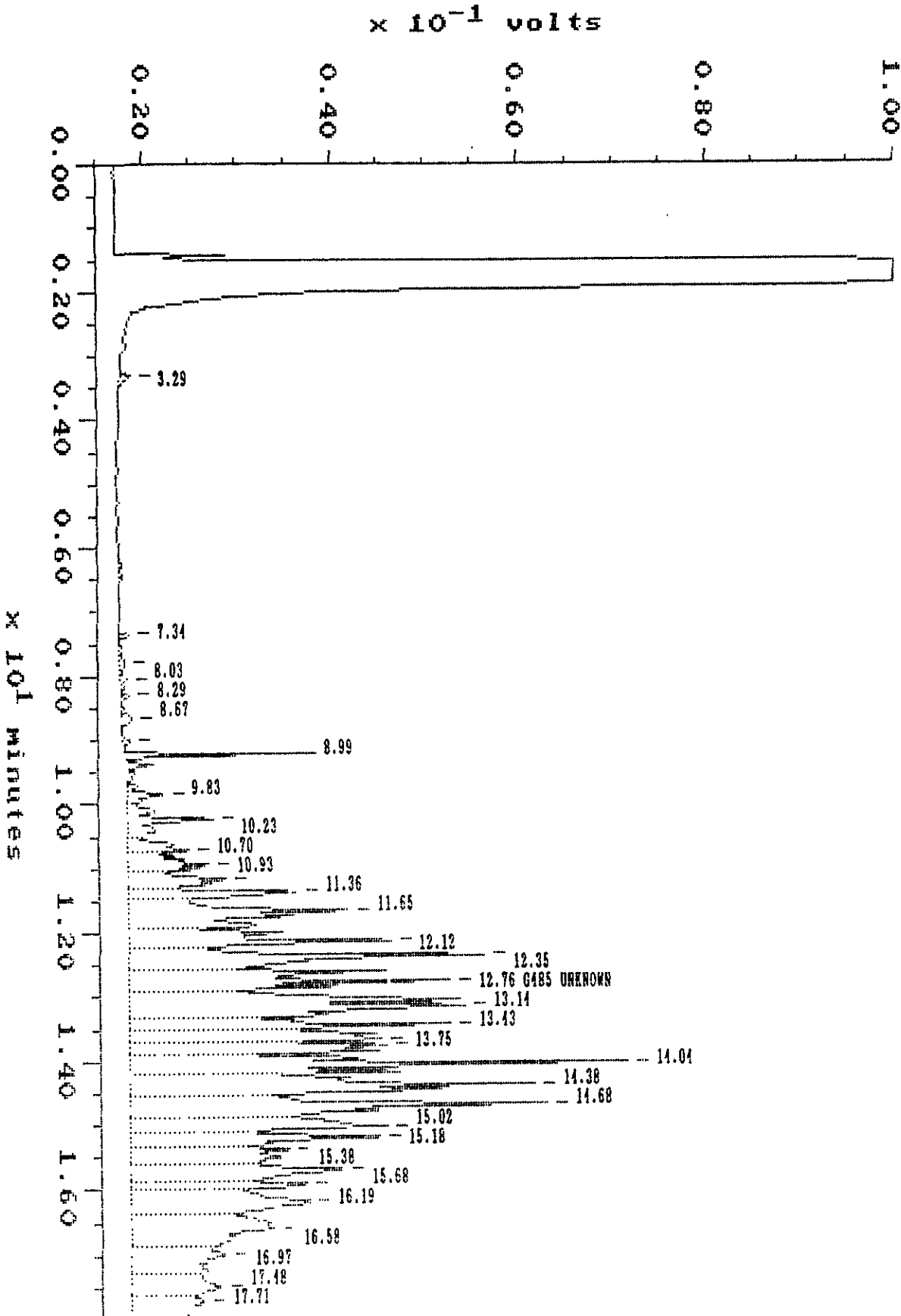
$\times 10^{-1}$ volts



D-1 (TPH-Gas/BTEX PID)

Sample: 21214408A, S089A Channel: PID-D
Acquired: 30-DEC-92 18:20 Method: C:\MAX\3700D\DEC92\GBTX1230
Dilution: 1 : 1.000 Amount: 20.000
Comments: 3700D DB5 30 METER 0.52 MM PRIMARY GBTX INSTRUMENT

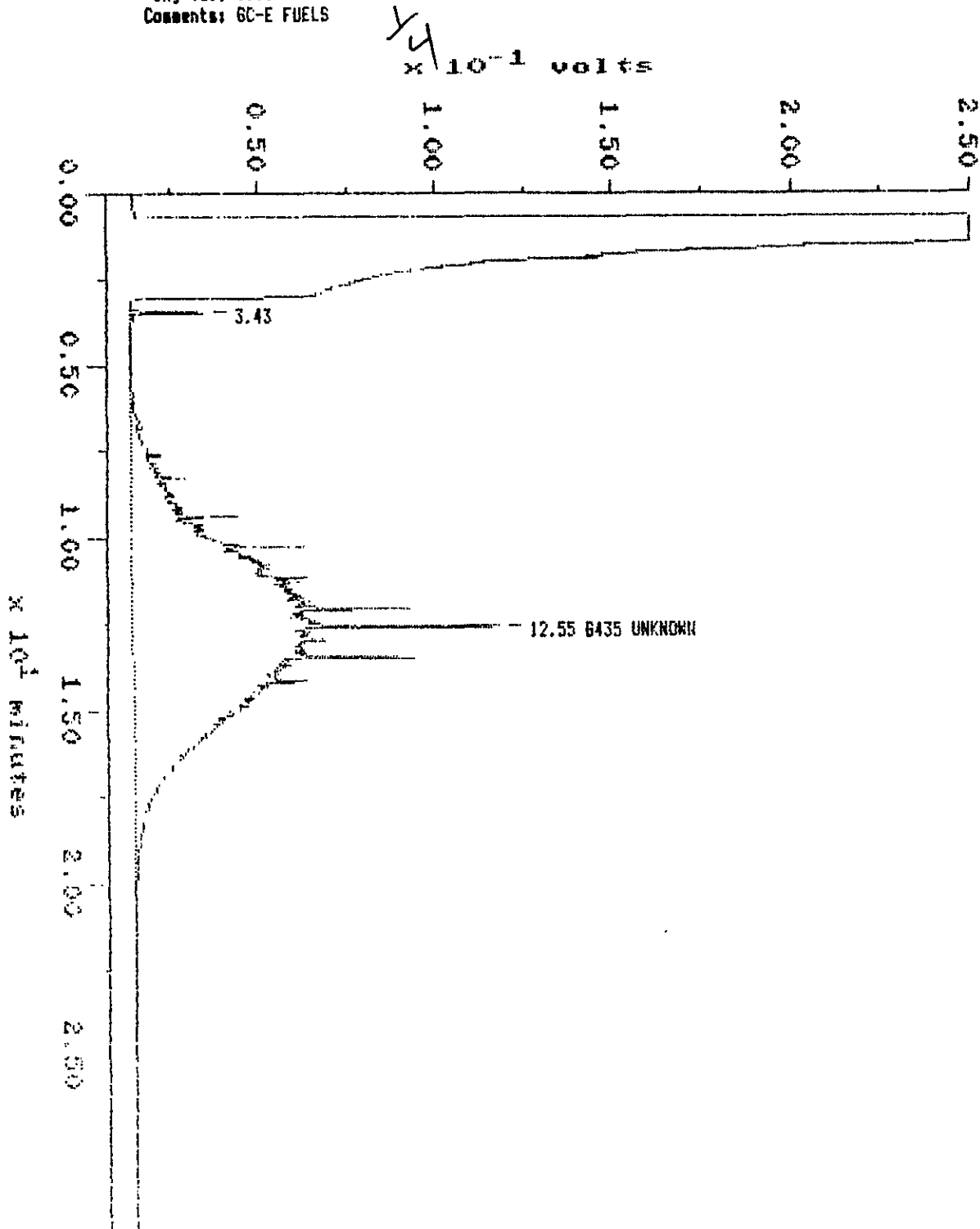
Filename: 1230D15
Operator: CS
Inj Vol: 50.00



D-1 (TPH-Gas/BTEX FID)

Sample: 212144088,0124A Channel: FID-E
Acquired: 06-JAN-93 2:32 Method: C:\MAX\DATAE\JAN93\80150105
Inj Vol: 1.00
Comments: GC-E FUELS

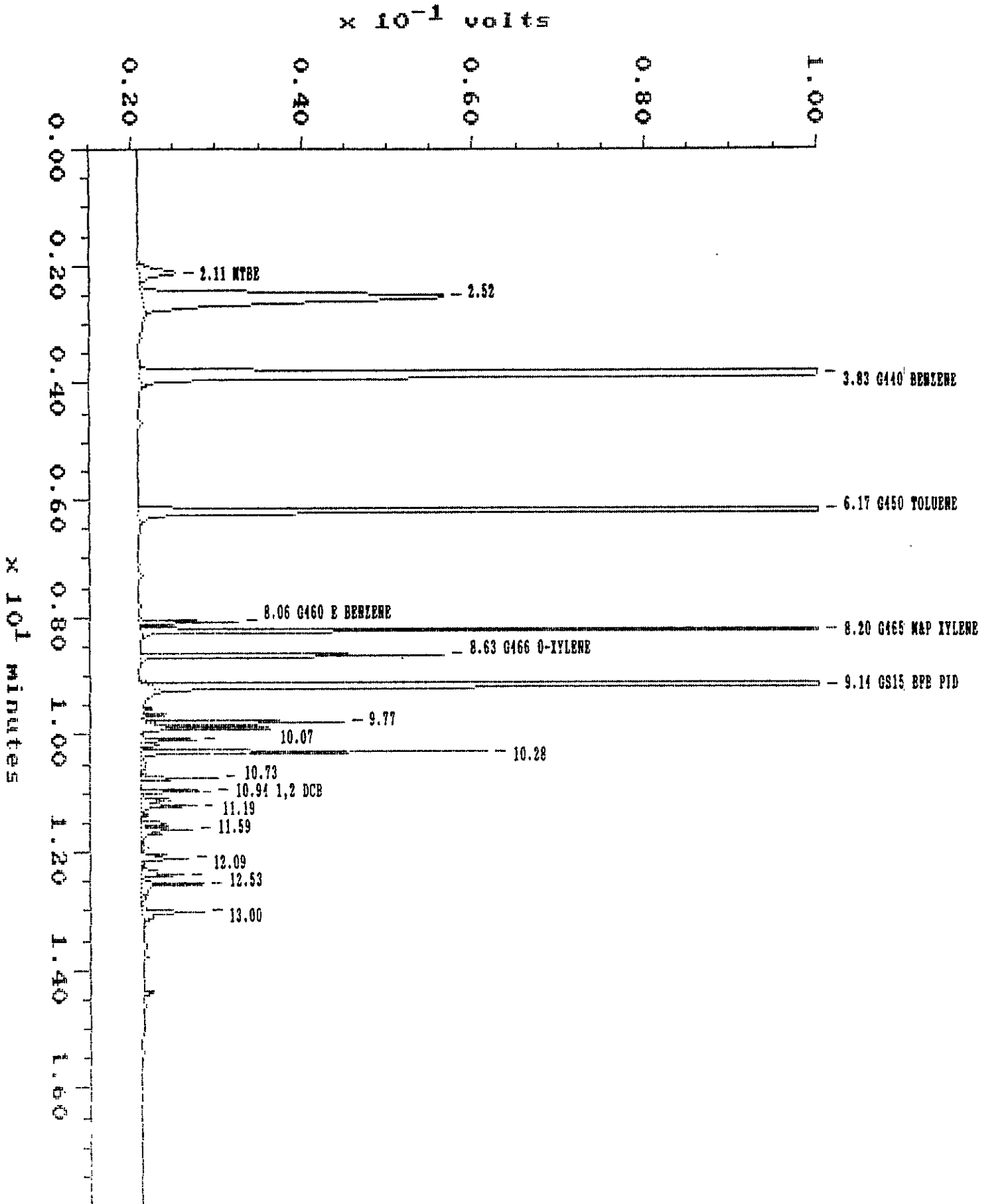
Filename: 0105E27
Operator: KV



D-1 (TPH-Diesel)

Sample: 21214409A, D195A Channel: PID-D
Acquired: 29-DEC-92 17:53 Method: C:\MAX\3700D\DEC92\GBT11229
Dilution: 1 : 10.000 Inj Vol: 1.00
Comments: 3700D DB5 30 METER 0.52 MM PRIMARY GBTX INSTRUMENT

Filename: 1229D12
Operator: CS

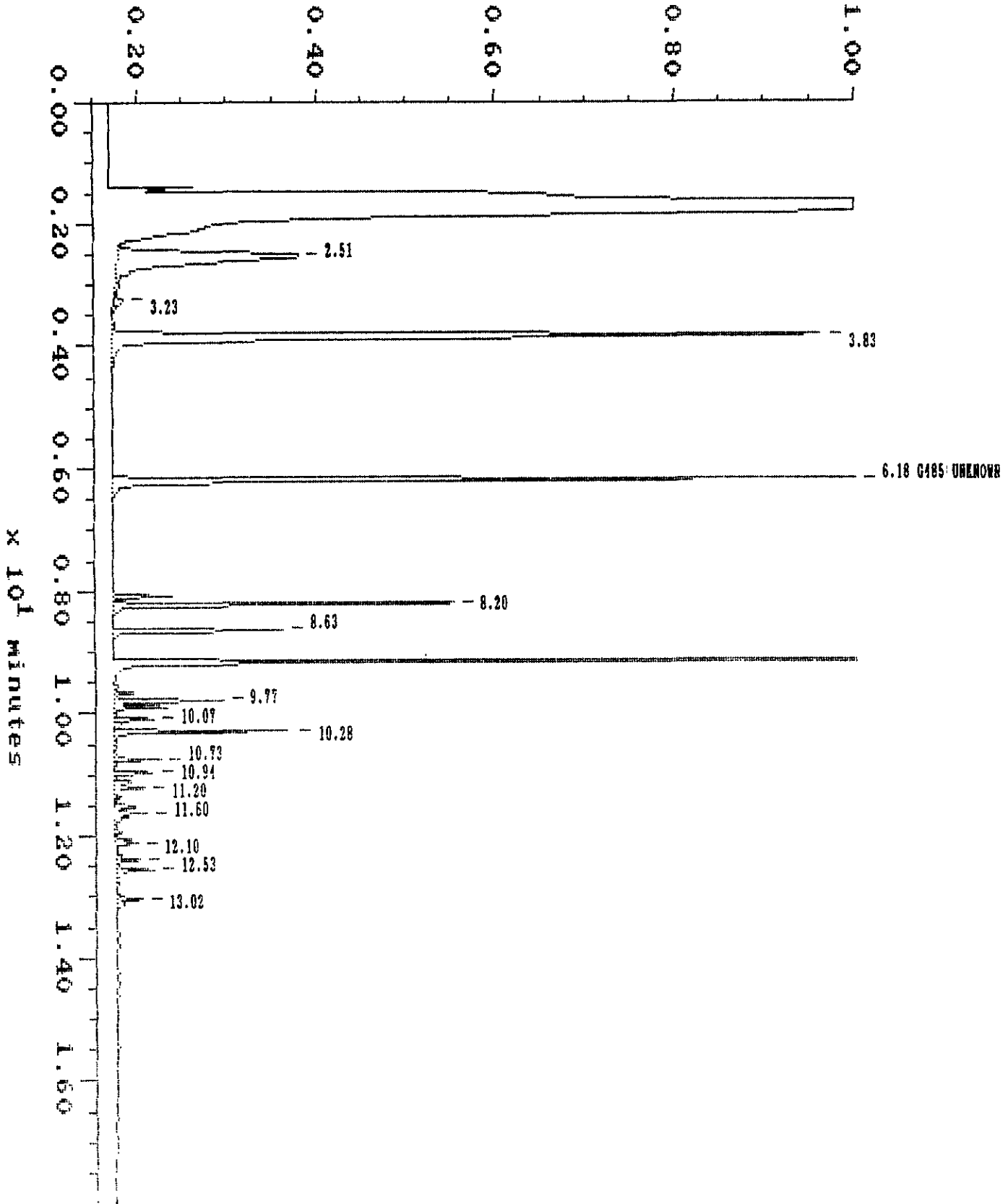


W-1 (TPH - Gas / BTEX PID)

Sample: 21214409A, D195A Channel: FID-D
Acquired: 29-DEC-92 17:53 Method: C:\MAX\3700D\DEC92\GBTX1229
Dilution: 1 : 10.000 Inj Vol: 1.00
Comments: 3700D DB5 30 METER 0.52 MM PRIMARY GBTEX INSTRUMENT

Filename: 1229012
Operator: CS

$\times 10^{-1}$ volts

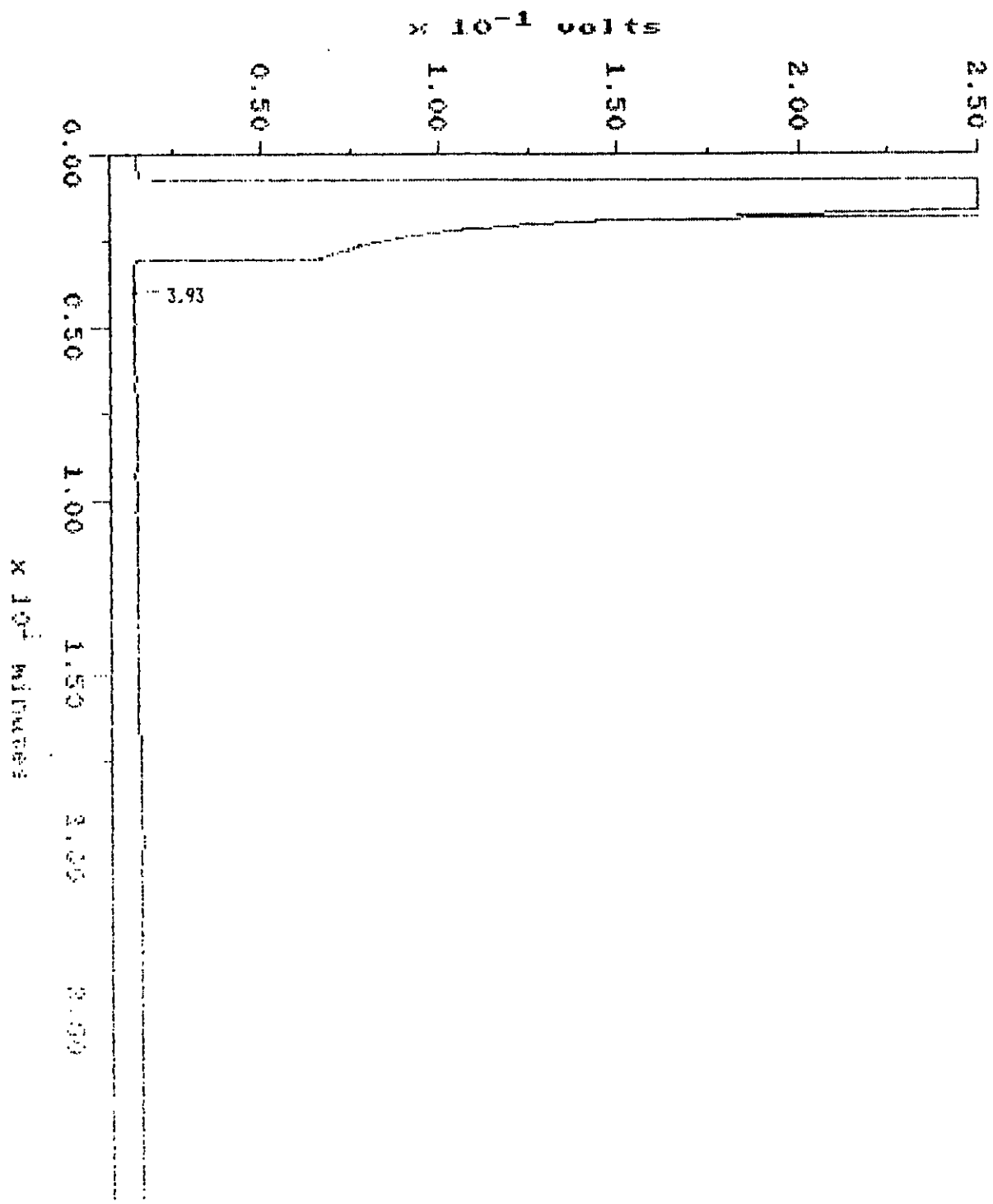


W-1 (TPH - Gas/BTEX FID)

Sample: 21214409B,0132A
Acquired: 05-JAN-93 2:16
Inj Vol: 1.00
Comments: GC-E FUELS

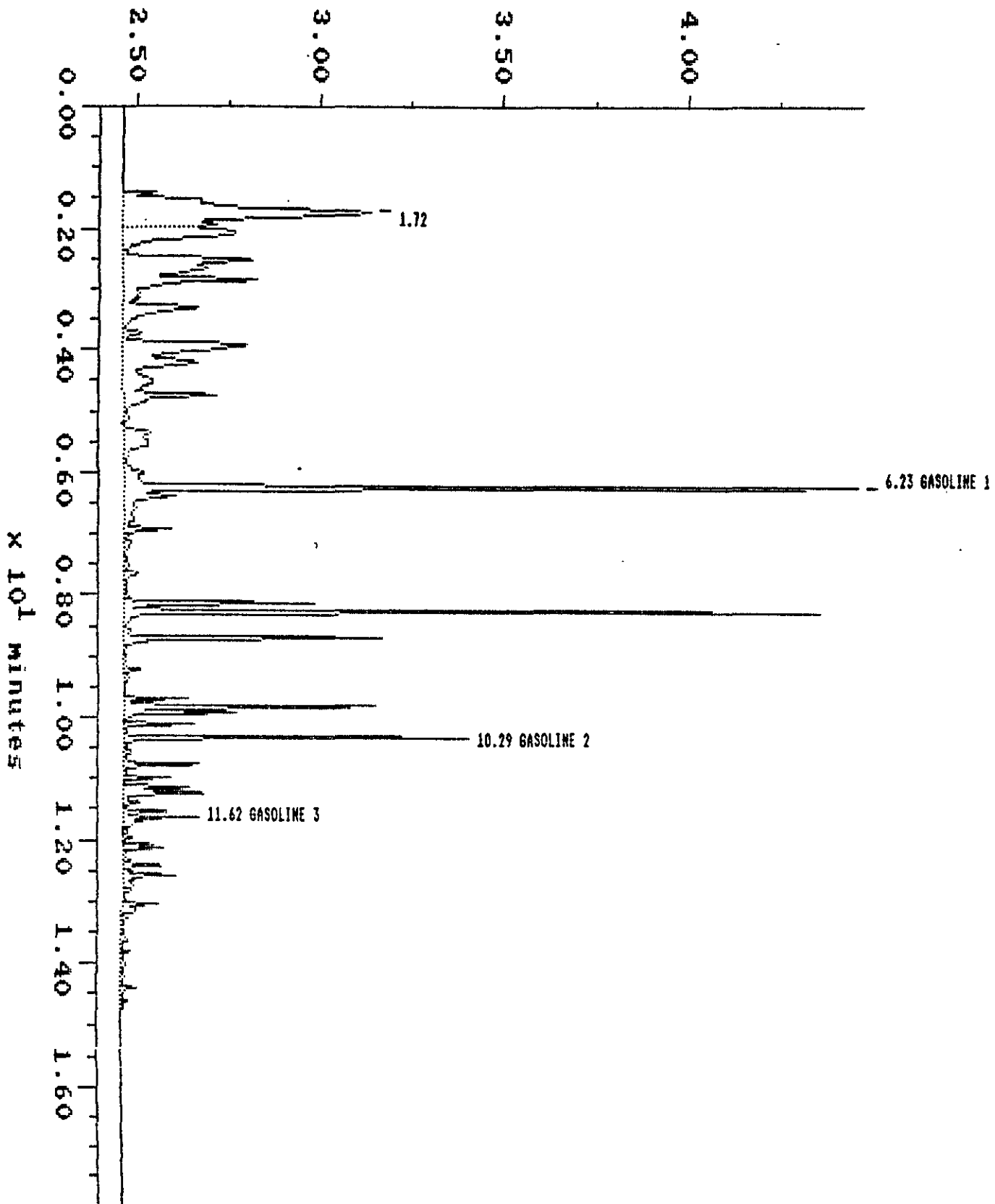
Channel: FID-E
Method: C:\MAX\DATAE\JAN93\B0150104

Filename: 0104E21
Operator: KV



201 3/11/93
D-1
W-1
(TPA-Diesel)

$\times 10^{-1}$ volts

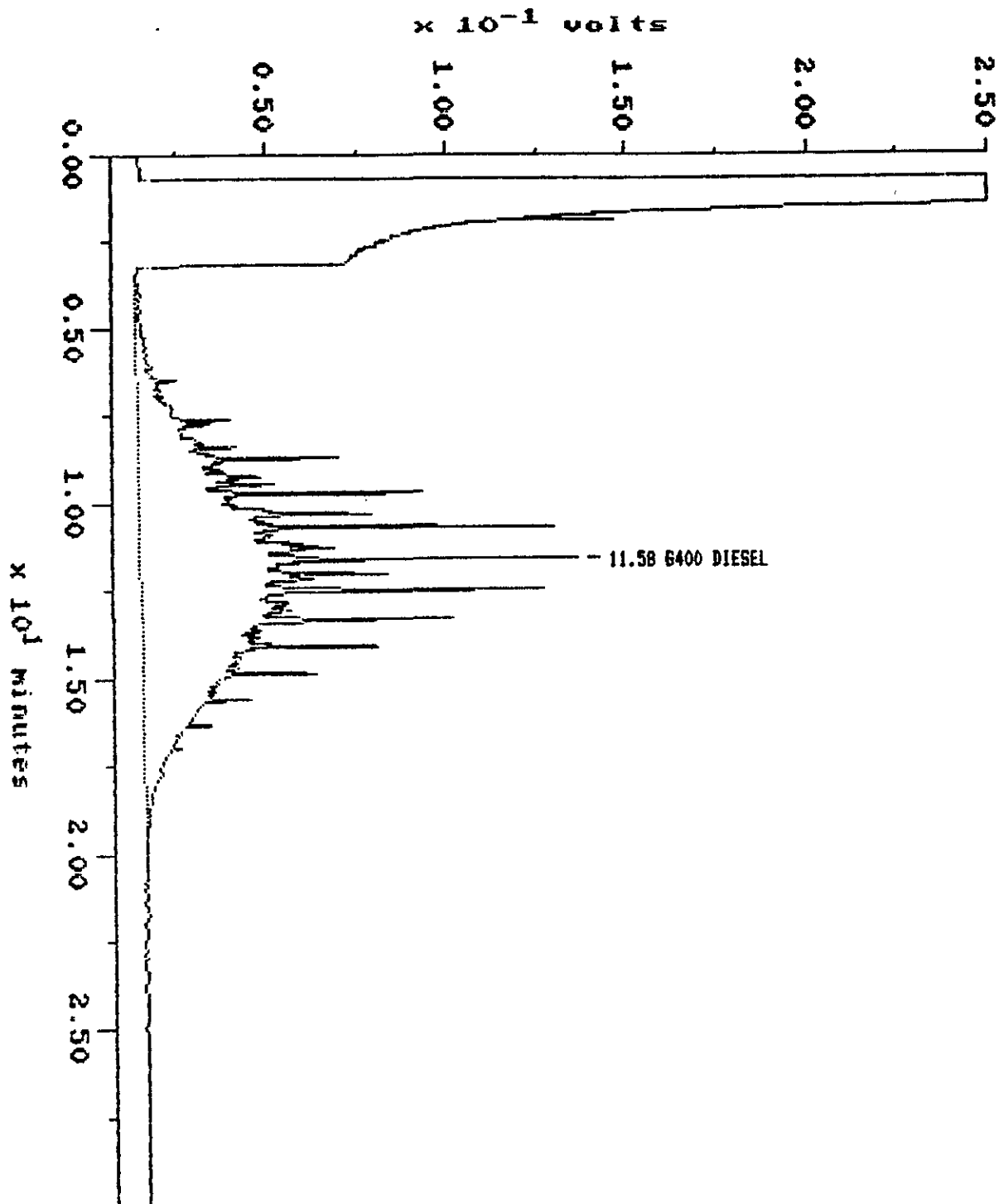


Gasoline Standard

Sample: IDESL-0216D
Acquired: 16-FEB-93 9:31
Inj Vol: 1.00
Comments: GC-E FUELS

Channel: FID-E
Method: C:\MAX\DATA\E\FEB93\80150216

Filename: 0216E02
Operator: KV



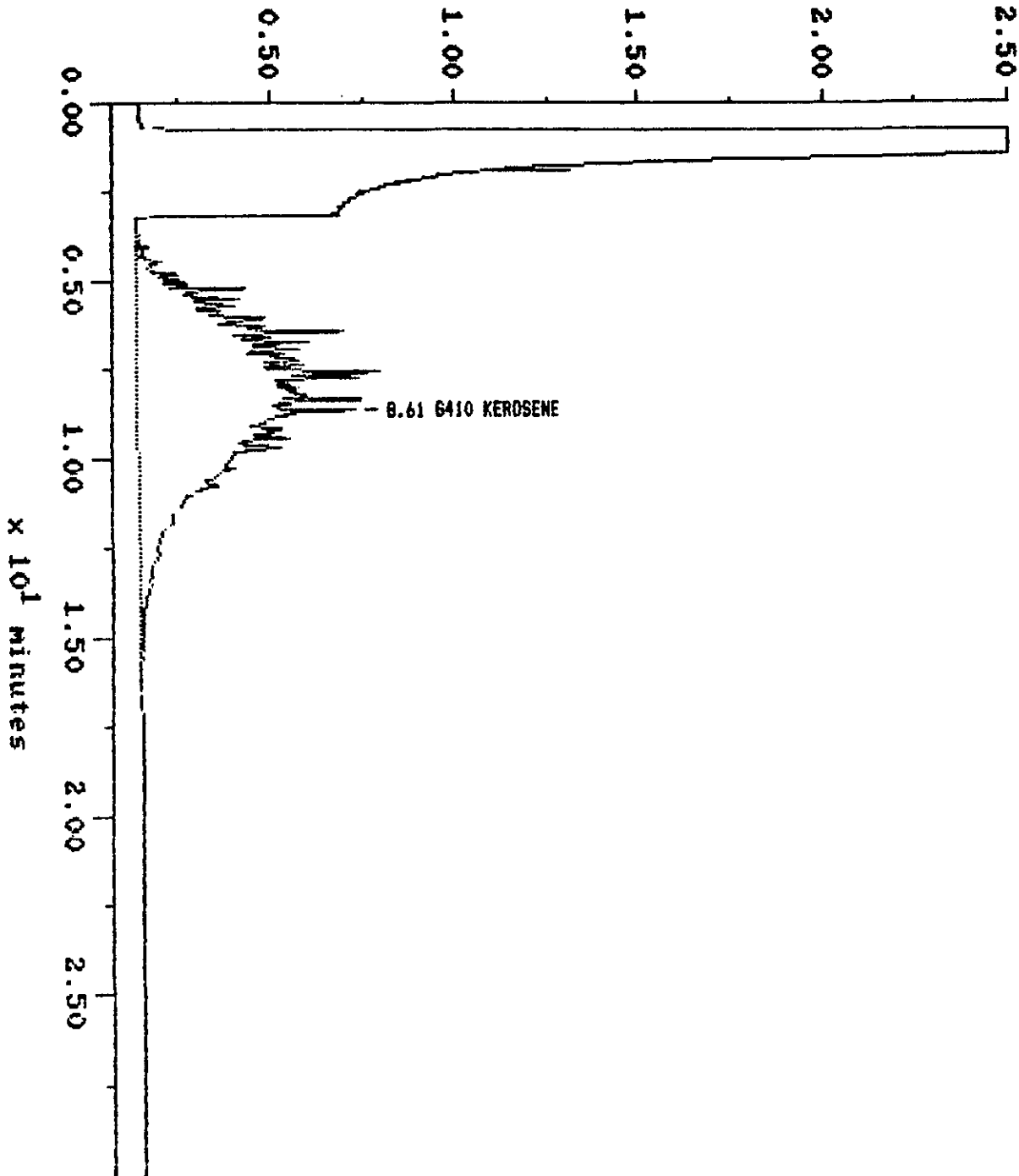
Diesel Standard

Sample: IKERD-0216D
Acquired: 16-FEB-93 10:09
Inj Vol: 1.00
Comments: GC-E FUELS

Channel: FID-E
Method: C:\MAX\DATAE\FEB93\80150216

Filename: 0216E03
Operator: KV

$\times 10^{-1}$ volts

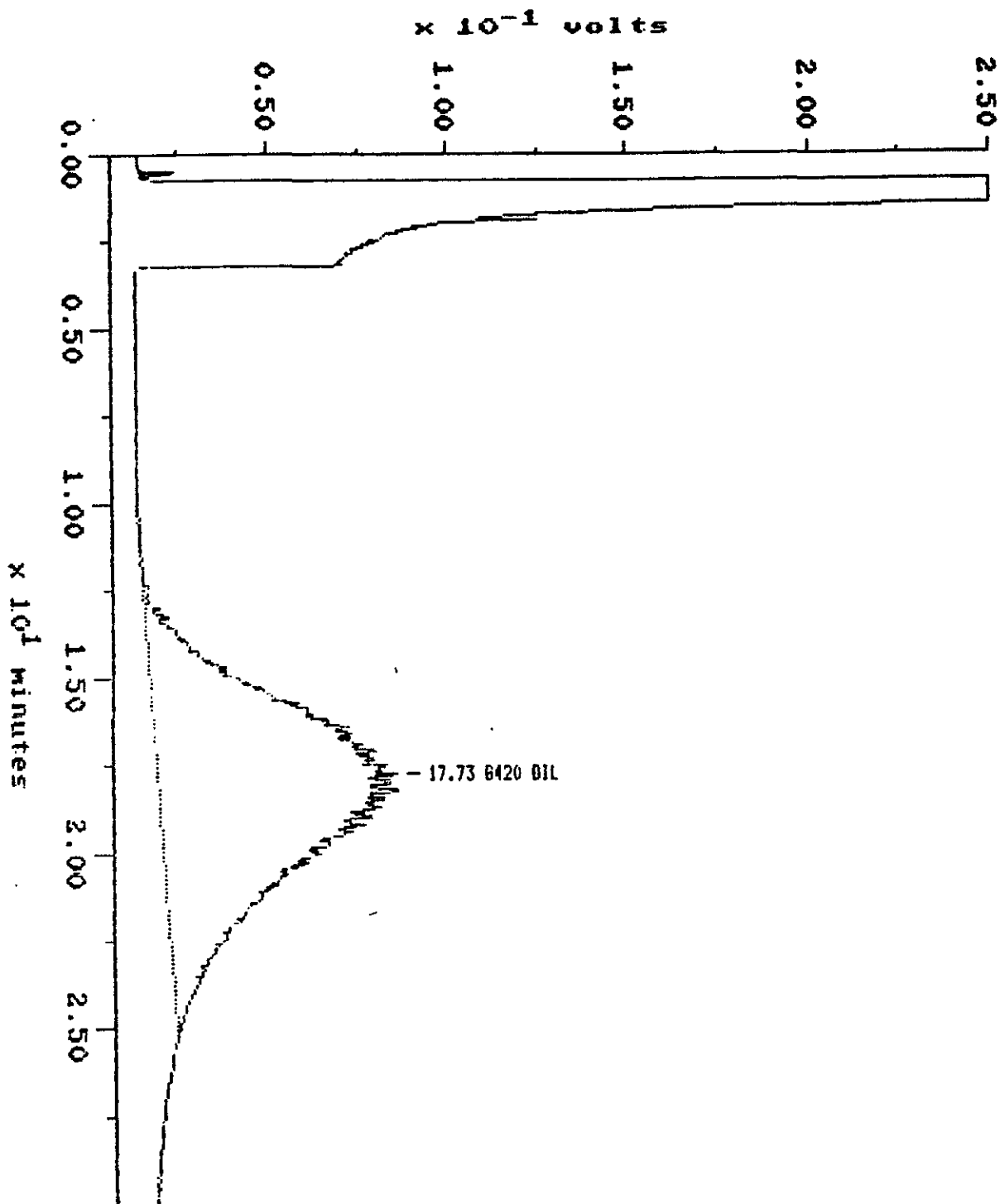


Kerosene Standard

Sample: 1HOIL-0216D
Acquired: 16-FEB-93 19:56
Inj Vol: 1.00
Comments: GC-E FUELS

Channel: FID-E
Method: C:\MAX\DATAE\FEB93\80150216

Filename: 0216E16
Operator: KV

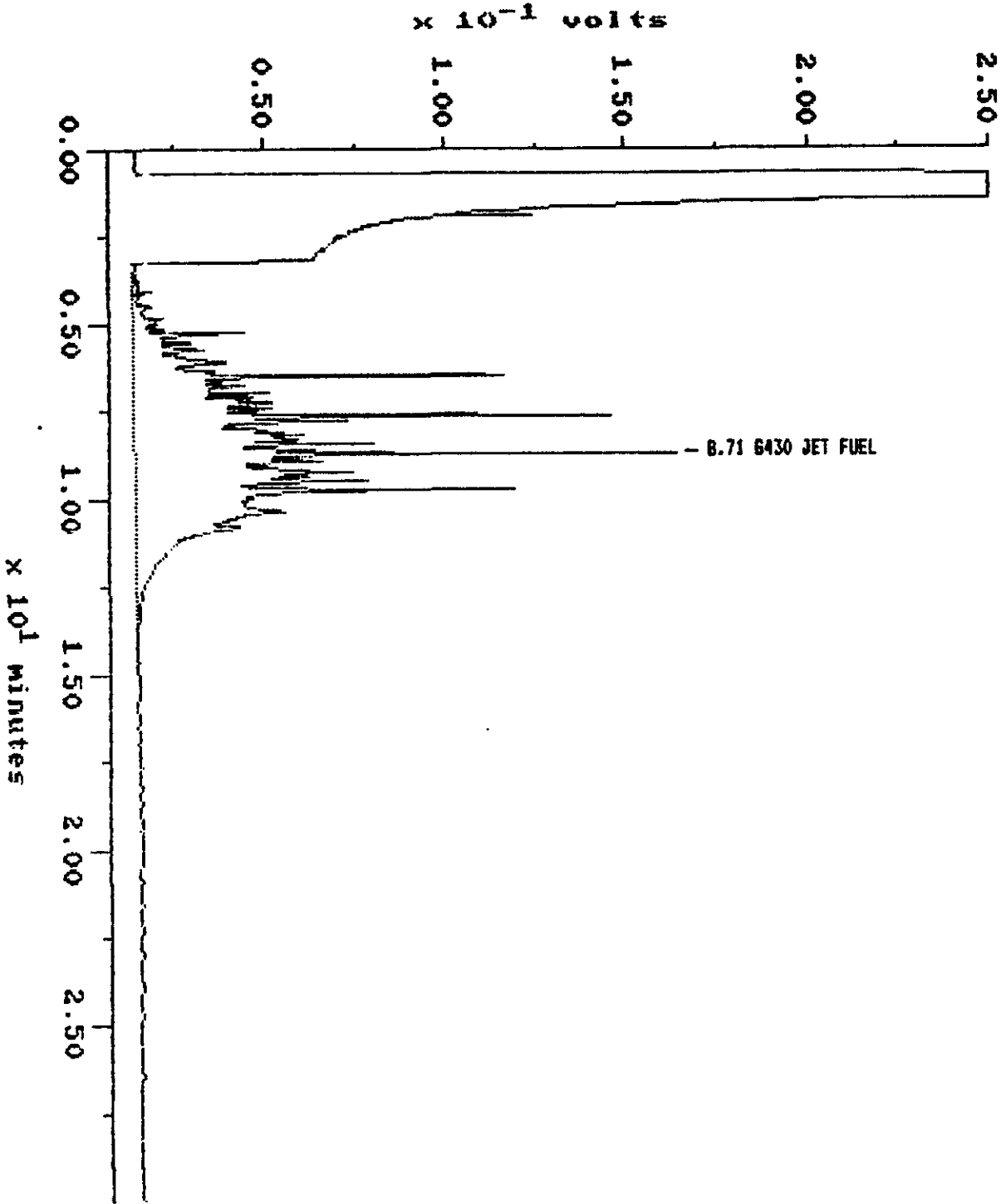


Oil Standard

Sample: IJP 5-02160
Acquired: 16-FEB-93 11:26
Inj Vol: 1.00
Comments: GC-E FUELS

Channel: FID-E
Method: C:\MAX\DATAE\FEB93\80150216

Filename: 0216E05
Operator: KV



Jet Fuel Standard

NAT /ETC

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REVISED

Woodward Clyde Consultants
500 12th Street Suite 100
Oakland, CA 94607-4014

March 11, 1993
MPELI Order#: 92-12-144
Date Received: 12/23/92

Attn: Anita Yan

Subject: Analysis of 1 Water, 8 Soil Samples

Work ID: 92CB040/0000

P.O. #: none given

Pages in report: 35

Analysis of soil samples for purgeable halogenated organic compounds was performed according to USEPA Method 8010 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Analysis of soil samples for higher boiling petroleum hydrocarbons (diesel, kerosene, & oil) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Analysis of water samples for higher boiling petroleum hydrocarbons (diesel, kerosene, & oil) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Analysis of soil samples for purgeable aromatic organic compounds was performed according to USEPA Method 8020 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Analysis of soil samples for semivolatile organic compounds was performed according to USEPA Method 8270 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Preparation of soil samples for metals analysis by Graphite Furnace Atomic Absorption were performed by following USEPA Method 3050 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986). The specific analytical method employed is listed alongside the test description in the report table.

Preparation and analysis of soil samples for metals by Inductively Coupled Argon Plasma Spectroscopy (ICAP) or Flame Atomic Absorption (FAA) were performed by following Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986). The specific test method number is listed next to the analyte in the report.

Analysis of soil samples for lower boiling petroleum hydrocarbons (benzene, toluene, ethylbenzene, xylenes, and gasoline) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Analysis of water samples for lower boiling petroleum hydrocarbons (benzene, toluene, ethylbenzene, xylenes, and gasoline) was performed according to guidelines established in the Regional Water Quality Control Board (RWQCB) Leaking Underground Fuel Tank (LUFT) manual. This is also known as the modified 8015 protocol based on USEPA Method 8015 (Test Methods for Evaluating Solid Waste -- SW846, 3rd Ed., 1986).

Solid samples were analyzed for total petroleum hydrocarbons by SM 5520 (Standard Methods for the Examination of Water and Wastewater - 17th Ed. 1989).

NOTES

Sample TP-3: In the analysis for TPH-Diesel, a single peak constituent appears in the chromatogram at the end of where diesel would elute. The TPH-Gas/BTEX scan shows no identifiable or unidentifiable peaks. The peak is semi-quantitated using the Diesel standard and reported as an "unknown hydrocarbon".

Sample D-1: In both of the analyses for TPH-Diesel and TPH-Gasoline/BTEX, chromatographic patterns are observed that do not match the pattern of any of our in-house standards for these methods. These components are semi-quantitated by comparison with the diesel standard and gasoline standard respectively and reported as "unknown hydrocarbons". The unknown appears in the TPH-Diesel scan as a pattern similar to that of Diesel. In the TPH-Gasoline/BTEX scan the pattern elutes late in the gasoline elution profile which is consistent with the findings in the TPH-Diesel scan.

Sample W-1: In the analysis for TPH-Gasoline/BTEX, a chromatographic pattern appeared which did not match the in-house standard for gasoline. This component is semi-quantitated using the gasoline standard and reported as an "unknown hydrocarbon". The TPH-Diesel scan is negative.

Method 8020, Volatiles by GC: Surrogate recovery TP-5 was outside of QC limits due to matrix interferences.

Method 8010, Volatiles by GC: The method blank was positive for dichlorofluoromethane. Sample TP-3 showed contamination at the same level, therefore, the detection limit for this compound has been raised in this sample.

All analyses have been conducted in batches of 20 samples or less. Each QC batch consists of a method blank, a Matrix Spike, a Matrix Spike Duplicate and a Laboratory Control Sample. The QC information is in a separate QC Report at the end of the regular report. To find the associated QC data, identify the batch number for the analysis of interest and look for that number in the QC Report for that test. Occasionally a sample will be associated with a sub-batch, which will end in a letter other than "A". The main batch will include the original blank, MS, MSD, and LCS. The sub-batch will contain the additional blank associated with the sample and LCS.

All analytes reported above detection limits on gas chromatography analyses have been confirmed by a second dissimilar column.

Samples were diluted when one or both of the following situations existed:

- 1) one or more analytes was present at a level above the linear calibration range of the instrument; or
- 2) compounds were present at levels that could damage the instrument.

The following flags and abbreviations are used in this report:

ND - Not detected above the detection limit stated.

** - See other dilution.

Freon 113 - 1,1,2-Trichloro-1,2,2-trifluoroethane. Not an 8010 compound.

MS(D) - Matrix spike (Duplicate)

LCS(D) - Laboratory Control Sample (Duplicate)

RPD - Relative percent difference

N/A - Not applicable

If you should have any technical questions, please contact the undersigned at (415) 964-0844.

Approved by:


Client Services

These results were obtained by following standard laboratory procedures; the liability of Mid-Pacific Environmental Laboratory, Inc. shall not exceed the amount paid for this report. In no event shall Mid-Pacific be liable for special or consequential damages.

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: FTP-1
MPELI ID: 9212144-01B
Matrix: SOIL
QC Batch: 0124A

Collected: 12/22/92
Received: 12/23/92
Extracted: 12/29/92
Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	ND	10.0

Woodward Clyde Consultants
Analytical Results - 8020 Volatiles by GC /soil

Client ID: FTP-1

Collected: 12/22/92

MPELI ID: 9212144-01A

Received: 12/23/92

Matrix: SOIL

Analyzed: 12/31/93

QC Batch: S023A

Dilution factor: 1.00

Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	6.2
Toluene	ND	6.2
Chlorobenzene	ND	6.2
Ethylbenzene	ND	6.2
Total Xylenes	ND	6.2
1,3-Dichlorobenzene	ND	6.2
1,4-Dichlorobenzene	ND	6.2
1,2-Dichlorobenzene	ND	6.2
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	124	58-136

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: FTP-2
MPELI ID: 9212144-02B
Matrix: SOIL
QC Batch: 0124A

Collected: 12/22/92
Received: 12/23/92
Extracted: 12/29/92
Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	ND	10.0

Woodward Clyde Consultants
 Analytical Results - 8020 Volatiles by GC /soil

Client ID: FTP-2
 MPELI ID: 9212144-02A
 Matrix: SOIL
 QC Batch: S023A

Collected: 12/22/92
 Received: 12/23/92
 Analyzed: 12/31/93
 Dilution factor: 1.00

<u>Concentration, ug/kg</u>		
<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	6.2
Toluene	ND	6.2
Chlorobenzene	ND	6.2
Ethylbenzene	ND	6.2
Total Xylenes	ND	6.2
1,3-Dichlorobenzene	ND	6.2
1,4-Dichlorobenzene	ND	6.2
1,2-Dichlorobenzene	ND	6.2
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	115	58-136

Woodward Clyde Consultants
Analytical Results - TPH as Gas, BTEX by GC/soil

Client ID: <u>TP-1</u>	Collected: 12/22/92
MPELI ID: <u>9212144-03A</u>	Received: 12/23/92
Matrix: SOIL	Analyzed: 12/30/92
QC Batch: S089A	Dilution factor: 1.00

Concentration, ug/Kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Total Xylenes	ND	5.0
Gasoline	ND	1000

<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	66	42-137

Woodward Clyde Consultants
Analytical Results - TPH as Gas, BTEX by GC/soil

Client ID: TP-2
MPELI ID: 9212144-04A
Matrix: SOIL
QC Batch: S089A

Collected: 12/22/92
Received: 12/23/92
Analyzed: 12/30/92
Dilution factor: 1.00

	<u>Concentration, ug/Kg</u>	
<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Total Xylenes	ND	5.0
Gasoline	ND	1000
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	68	42-137

Woodward Clyde Consultants
Analytical Results - 8010 Volatiles by GC /soil

Client ID: TP-3
MPELI ID: 9212144-05A
Matrix: SOIL
QC Batch: S023A

Collected: 12/22/92
Received: 12/23/92
Analyzed: 12/31/93
Dilution factor: 1.00

Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Dichlorodifluoromethane	34	6.2
Chloromethane	ND	6.2
Vinyl Chloride	ND	6.2
Bromomethane	ND	6.2
Chloroethane	ND	6.2
Trichlorofluoromethane	ND	6.2
1,1-Dichloroethene	ND	6.2
Methylene Chloride	ND	6.2
trans-1,2-Dichloroethene	ND	6.2
1,1-Dichloroethane	ND	6.2
cis-1,2-Dichloroethene	ND	6.2
Chloroform	ND	6.2
1,1,1-Trichloroethane	ND	6.2
Carbon Tetrachloride	ND	6.2
1,2-Dichloroethane	ND	6.2
Trichloroethene	ND	6.2
1,2-Dichloropropane	ND	6.2
Bromodichloromethane	ND	6.2
2-Chloroethylvinyl ether	ND	6.2
trans-1,3-Dichloropropene	ND	6.2
1,1,2-Trichloroethane	ND	6.2
Tetrachloroethene	ND	6.2
Dibromochloromethane	ND	6.2
Chlorobenzene	ND	6.2
Bromoform	ND	6.2
1,1,2,2-Tetrachloroethane	ND	6.2
1,3-Dichlorobenzene	ND	6.2
1,4-Dichlorobenzene	ND	6.2
1,2-Dichlorobenzene	ND	6.2
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromochloromethane	89	66-126

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: TP-3 Collected: 12/22/92
MPELI ID: 9212144-05B Received: 12/23/92
Matrix: SOIL Extracted: 12/29/92
QC Batch: 0124A Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	ND	10.0
Unknown Hydrocarbon	4.5	1.00

Woodward Clyde Consultants
Analytical Results - 8270 SVOA by GCMS/soil

Client ID: TP-3
MPELI ID: 9212144-05E

Collected: 12/22/92

Received: 12/23/92

Extracted: 12/29/92

Analyzed: 01/09/93

Matrix: SOIL

QC Batch: 0154A

Dilution factor: 1.00

Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Phenol	ND	330
Bis(2-chloroethyl)ether	ND	330
2-Chlorophenol	ND	330
1,3-Dichlorobenzene	ND	330
1,4-Dichlorobenzene	ND	330
Benzyl alcohol	ND	660
1,2-Dichlorobenzene	ND	330
2-Methylphenol	ND	330
Bis(2-chloroisopropyl) ether	ND	330
4-Methylphenol	ND	330
N-Nitroso-di-n-propylamine	ND	330
Hexachloroethane	ND	330
Nitrobenzene	ND	330
Isophorone	ND	330
2-Nitrophenol	ND	330
2,4-Dimethylphenol	ND	330
Benzoic acid	ND	1600
Bis(2-chloroethoxy)methane	ND	330
2,4-Dichlorophenol	ND	330
1,2,4-Trichlorobenzene	ND	330
Naphthalene	ND	330
4-Chloroaniline	ND	660
Hexachlorobutadiene	ND	330
4-Chloro-3-methylphenol	ND	330
2-Methylnaphthalene	ND	330
Hexachlorocyclopentadiene	ND	330
2,4,6-Trichlorophenol	ND	330
2,4,5-Trichlorophenol	ND	330
2-Chloronaphthalene	ND	1600
2-Nitroaniline	ND	1600
Dimethyl phthalate	ND	330
Acenaphthylene	ND	330
3-Nitroaniline	ND	1600
Acenaphthene	ND	330
2,4-Dinitrophenol	ND	1600
4-Nitrophenol	ND	1600
Dibenzofuran	ND	330
2,4-Dinitrotoluene	ND	330
2,6-Dinitrotoluene	ND	330
Diethyl phthalate	ND	330
4-Chlorophenyl phenylether	ND	330
Fluorene	ND	330
4-Nitroaniline	ND	1600
4,6-Dinitro-2-methylphenol	ND	1600
N-Nitrosodiphenylamine	ND	330
4-Bromophenyl phenylether	ND	330

Woodward Clyde Consultants
Analytical Results - 8270 SVOA by GCMS/soil

Client ID: TP-3

Collected: 12/22/92

MPELI ID: 9212144-05E

Received: 12/23/92

Extracted: 12/29/92

Matrix: SOIL

Analyzed: 01/09/93

QC Batch: 0154A

Dilution factor: 1.00

Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Hexachlorobenzene	ND	330
Pentachlorophenol	ND	1600
Phenanthrene	ND	330
Anthracene	ND	330
Di-n-butyl phthalate	ND	330
Fluoranthene	ND	330
Pyrene	ND	330
Butyl benzyl phthalate	ND	330
3,3'-Dichlorobenzidine	ND	660
Benzo(a) anthracene	ND	330
Bis(2-ethylhexyl)phthalate	ND	330
Chrysene	ND	330
Di-n-octyl phthalate	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
Dibenzo(a,h)anthracene	ND	330
Benzo(g,h,i)perylene	ND	330

<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
2-Fluorophenol	48	25-121
Phenol-d5	67	24-113
Nitrobenzene-d5	61	23-120
2-Fluorobiphenyl	63	30-115
2,4,6-Tribromophenol	52	19-122
p-Terphenyl-d14	85	18-137

Woodward Clyde Consultants
 Analytical Results - TPH as Gas, BTEX by GC/soil

Client ID: TP-3 Collected: 12/22/92
 MPELI ID: 9212144-05A Received: 12/23/92
 Matrix: SOIL Analyzed: 12/30/92
 QC Batch: S089A Dilution factor: 1.00

Concentration, ug/Kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	5.0
Toluene	ND	5.0
Ethylbenzene	ND	5.0
Total Xylenes	ND	5.0
Gasoline	ND	1000
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	61	42-137

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: TP-4 Collected: 12/22/92
MPELI ID: 9212144-06B Received: 12/23/92
Matrix: SOIL Extracted: 12/29/92
QC Batch: 0124A Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	1.00
Kerosene	ND	1.00
Motor Oil	ND	10.0

Woodward Clyde Consultants
Analytical Results - 8020 Volatiles by GC /soilClient ID: TP-4
MPELI ID: 9212144-06A
Matrix: SOIL
QC Batch: S023ACollected: 12/22/92
Received: 12/23/92
Analyzed: 12/31/93
Dilution factor: 1.00Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	6.2
Toluene	ND	6.2
Chlorobenzene	ND	6.2
Ethylbenzene	ND	6.2
Total Xylenes	ND	6.2
1,3-Dichlorobenzene	ND	6.2
1,4-Dichlorobenzene	ND	6.2
1,2-Dichlorobenzene	ND	6.2
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	114	58-136

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: TP-5 Collected: 12/22/92
NPELI ID: 9212144-07B Received: 12/23/92
Matrix: SOIL Extracted: 12/29/92
QC Batch: 0124A Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	1.00
Kerosene	120	1.00
Motor Oil	58	10.0

Woodward Clyde Consultants
Analytical Results - 8020 Volatiles by GC /soil

Client ID: <u>TP-5</u>	Collected: 12/22/92
MPELI ID: <u>9212144-07A</u>	Received: 12/23/92
Matrix: SOIL	Analyzed: 12/31/93
QC Batch: S023A	Dilution factor: 1.00

Concentration, ug/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	6.2
Toluene	14	6.2
Chlorobenzene	ND	6.2
Ethylbenzene	92	6.2
Total Xylenes	34	6.2
1,3-Dichlorobenzene	ND	6.2
1,4-Dichlorobenzene	ND	6.2
1,2-Dichlorobenzene	ND	6.2
<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	141	58-136

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /soil

Client ID: D-1
MPELI ID: 9212144-08B
Matrix: SOIL
QC Batch: 0124A

Collected: 12/22/92
Received: 12/23/92
Extracted: 12/29/92
Analyzed: 01/05/93
Dilution factor: 4.00

Concentration, mg/kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	4.0
Kerosene	ND	4.0
Motor Oil	ND	40
Unknown Hydrocarbon	790	4.0

Woodward Clyde Consultants
Analytical Results - TPH as Gas, BTEX by GC/soil

Client ID: D-1 Collected: 12/22/92
NPELI ID: 9212144-08A Received: 12/23/92
Matrix: SOIL Analyzed: 12/30/92
QC Batch: S089A Dilution factor: 1.00

Concentration, ug/Kg

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	ND	20
Toluene	ND	20
Ethylbenzene	ND	20
Total Xylenes	ND	20
Gasoline	ND	4000
Unknown	70000	4000

<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	62	42-137

Woodward Clyde Consultants
Analytical Results - TPH as Diesel by GC /H2O

Client ID: W-1
MPELI ID: 9212144-09B
Matrix: WATER
QC Batch: 0132A

Collected: 12/22/92
Received: 12/23/92
Extracted: 12/30/92
Analyzed: 01/05/93
Dilution factor: 1.00

Concentration, ug/L

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Diesel	ND	50
Kerosene	ND	50
Motor Oil	ND	500

Woodward Clyde Consultants
Analytical Results - TPH as Gas, BTEX by GC /H2O

Client ID: W-1 Collected: 12/22/92
MPELI ID: 9212144-09A Received: 12/23/92
Matrix: WATER Analyzed: 12/29/92
QC Batch: D195A Dilution factor: 10.0

Concentration, ug/L

<u>PARAMETER</u>	<u>RESULT</u>	<u>LIMIT</u>
Benzene	540	5.0
Toluene	420	5.0
Ethylbenzene	20	5.0
Total Xylenes	220	5.0
Gasoline	ND	500
Unknown	2900	500

<u>SURROGATE</u>	<u>%RECOVERY</u>	<u>LIMITS</u>
Bromofluorobenzene	90	58-127

Woodward Clyde Consultants

Client ID: TP-1
MPELI ID: 9212144 - 03B
Matrix: SOIL

Date collected: 12/22/92
Date received: 12/23/92

Test description	Method	Result	Report Limit Units	Prep Date	Run Date	QC Batch
Lead by GFAA	EPA 7421	4.8	0.20 mg/kg	01/04	01/13	0935A

Woodward Clyde Consultants

Client ID: TP-2
MPCLI ID: 9212144 - 04B
Matrix: SOIL

Date collected: 12/22/92
Date received: 12/23/92

Test description	Method	Result	Report Limit Units	Prep Date	Run Date	QC Batch
Lead by GFAA	EPA 7421	5.1	0.20 mg/kg	01/04	01/13	0935A

Woodward Clyde Consultants

Client ID: TP-3MPELI ID: 9212144 - 05C

Matrix: SOIL

Date collected: 12/22/92

Date received: 12/23/92

Test description	Method	Result	Report Limit Units	Prep Date	Run Date	QC Batch
Cadmium by ICAP	EPA 6010	ND	1.0 mg/kg	01/04	01/13	0934A
Chromium by ICAP	EPA 6010	31	2.0 mg/kg	01/04	01/13	0934A
Nickel by ICAP	EPA 6010	25	4.0 mg/kg	01/04	01/13	0934A
Lead by GFAA	EPA 7421	5.0	0.20 mg/kg	01/04	01/13	0935A
Zinc by ICAP	EPA 6010	97	2.0 mg/kg	01/04	01/13	0934A

Client ID: TP-3MPELI ID: 9212144 - 05D

Matrix: SOIL

Date collected: 12/22/92

Date received: 12/23/92

Test description	Method	Result	Report Limit Units	Prep Date	Run Date	QC Batch
TRPH by IR	EPA 418.1	ND	34 mg/kg	12/29	12/30	0040A

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8010 Volatiles in Soil

QC Batch#: S023A

Units: ug/kg

Prep Date: N/A

Analysis Dates

Blank: 12/31/92

MS: 12/31/92

MSD: 12/31/92

LCS: 12/31/92

<u>Analytes</u>	Blank		Spike <u>level</u>	%Recovery		LCS	QC	RPD
	<u>Result</u>	<u>Limit</u>		MS	MSD		LIMITS	
Dichlorodifluoromethane	39.7	6.2						
Chloromethane	ND	6.2						
Vinyl Chloride	ND	6.2						
Bromomethane	3.4	6.2						
Chloroethane	ND	6.2						
Trichlorofluoromethane	ND	6.2						
1,1-Dichloroethene	ND	6.2	250	52	48	83		8.0
Methylene Chloride	ND	6.2						
trans-1,2-Dichloroethene	ND	6.2						
1,1-Dichloroethane	ND	6.2						
cis-1,2-Dichloroethene	ND	6.2						
Chloroform	ND	6.2	250	89	86	106		3.4
1,1,1-Trichloroethane	ND	6.2						
Carbon Tetrachloride	ND	6.2	250	90	84	110		6.9
1,2-Dichloroethane	ND	6.2	250	82	87	94		5.9
Trichloroethene	ND	6.2	250	97	96	113		1.0
1,2-Dichloropropane	ND	6.2						
Bromodichloromethane	ND	6.2						
2-Chloroethylvinyl ether	ND	6.2						
trans-1,3-Dichloropropene	ND	6.2						
1,1,2-Trichloroethane	ND	6.2						
Tetrachloroethene	ND	6.2	250	100	91	108		9.4
Dibromochloromethane	ND	6.2						
Chlorobenzene	ND	6.2	250	102	94	102		8.2
Bromoform	ND	6.2						
1,1,2,2-Tetrachloroethane	ND	6.2						
1,3-Dichlorobenzene	ND	6.2						
1,4-Dichlorobenzene	ND	6.2	250	88	82	94		7.1
1,2-Dichlorobenzene	ND	6.2						
Freon 113	ND	6.2						
Bromochloromethane (surr)	82%			99	97	91	66-126	

Woodward Clyde Consultants

Tot. Pet. Hydrocarbon/soil

QC Batch#: 0124A
Units: mg/kg
Prep Date: 12/29/93

Analysis Dates
Blank: 01/04/93
MS: 01/04/93
MSD: 01/04/93
LCS: 01/04/93

<u>Analytes</u>	Blank		Spike <u>level</u>	%Recovery		<u>LCS</u>	QC	<u>RPD</u>
	<u>Result</u>	<u>Limit</u>		<u>MS</u>	<u>MSD</u>		<u>LIMITS</u>	
Diesel	ND	1	2000	74	79	85		6.5
Kerosene	ND	1						
Motor Oil	ND	10						

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Tot. Pet. Hydrocarbon/H2O

QC Batch#: 0132A

Units: ug/L

Prep Date: 12/30/93

Analysis Dates

Blank: 01/04/93

MS:

MSD:

LCS: 01/04/93

<u>Analytes</u>	Blank		Spike	%Recovery		<u>LCS</u>	QC	<u>RPD</u>
	<u>Result</u>	<u>Limit</u>	<u>level</u>	<u>MS</u>	<u>MSD</u>		<u>LIMITS</u>	
Diesel	ND	50	2000			96		
Kerosene	ND	50						
Motor Oil	ND	500						

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8020 Volatiles in Soil

QC Batch#: 8023A
 Units: ug/kg
 Prep Date: N/A

Analysis Dates
 Blank: 12/31/92
 MS: 12/31/92
 MSD: 12/31/92
 LCS: 12/31/92

<u>Analytes</u>	Blank		Spike <u>level</u>	%Recovery			QC	
	<u>Result</u>	<u>Limit</u>		<u>MS</u>	<u>MSD</u>	<u>LCS</u>	<u>LIMITS</u>	<u>RPD</u>
Benzene	ND	6.2	250	94	82	87		14
Toluene	ND	6.2						
Chlorobenzene	ND	6.2	250	109	98	113		11
Ethylbenzene	ND	6.2						
Total xylenes	ND	6.2						
1,3-Dichlorobenzene	ND	6.2						
1,4-Dichlorobenzene	ND	6.2	250	92	88	100		4.4
1,2-Dichlorobenzene	ND	6.2						
Acetone	ND	380						
Bromofluorobenzene (surr)	133%			130	120	119	58-136	

Woodward Clyde Consultants

8270 SVOA by GCMS /soil

QC Batch#: Q154A
 Units: ug/kg
 Prep Date: 12/29/92

Analysis Dates
 Blank: 01/09/93
 LCS: 01/09/93
 LCSD: 01/09/93

Analytes	Blank		Spike level	%Recovery		QC	
	Result	Limit		LCS	LCSD	LIMITS	RPD
Phenol	ND	330	150	63	65		3.1
Bis(2-chloroethyl)ether	ND	330					
2-Chlorophenol	ND	330	150	52	60		14
1,3-Dichlorobenzene	ND	330					
1,4-Dichlorobenzene	ND	330	100	67	63		6.2
Benzyl alcohol	ND	670					
1,2-Dichlorobenzene	ND	330					
2-Methylphenol	ND	330					
Bis(2-chloroisopropyl)ether	ND	330					
4-Methylphenol	ND	330					
N-nitroso-di-n-propylamine	ND	330	100	84	84		0
Hexachloroethane	ND	330					
Nitrobenzene	ND	330					
Isophorone	ND	330					
2-Nitrophenol	ND	330					
2,4-Dimethylphenol	ND	330					
Benzoic acid	ND	330					
Bis(2-chloroethoxy)methane	ND	330					
2,4-Dichlorophenol	ND	330					
1,2,4-Trichlorobenzene	ND	330	100	78	77		1.3
Naphthalene	ND	330					
4-Chloroaniline	ND	670					
Hexachlorobutadiene	ND	330					
4-Chloro-3-methylphenol	ND	330	150	61	70		14
2-Methylnaphthalene	ND	330					
Hexachlorocyclopentadiene	ND	330					
2,4,6-Trichlorophenol	ND	330					
2,4,5-Trichlorophenol	ND	330					
2-Chloronaphthalene	ND	330					
2-Nitroaniline	ND	1700					
Dimethyl phthalate	ND	330					
Acenaphthylene	ND	330					
3-Nitroaniline	ND	1700					
Acenaphthene	ND	330	100	79	77		2.6
2,4-Dinitrophenol	ND	1700					
4-Nitrophenol	ND	1700	150	84	85		1.2
Dibenzofuran	ND	330					
2,4-Dinitrotoluene	ND	330	100	81	81		0
2,6-Dinitrotoluene	ND	330					
Diethyl phthalate	ND	330					
4-Chlorophenyl phenylether	ND	330					
Fluorene	ND	330					
4-Nitroaniline	ND	1700					
4,6-Dinitro-2-methylphenol	ND	1700					
N-Nitrosodiphenylamine	ND	330					

Woodward Clyde Consultants

8270 SVOA by GCMS /soil

QC Batch#: 0154A

Units: ug/kg

Prep Date: 12/29/92

Analysis Dates

Blank: 01/09/93

LCS: 01/09/93

LCSD: 01/09/93

<u>Analytes</u>	<u>Blank</u>		<u>Spike</u> <u>level</u>	<u>%Recovery</u>		<u>QC</u>	
	<u>Result</u>	<u>Limit</u>		<u>LCS</u>	<u>LCSD</u>	<u>LIMITS</u>	<u>RPD</u>
4-Bromophenyl phenylether	ND	330					
Hexachlorobenzene	ND	330					
Pentachlorophenol	ND	1700	150	84	89		5.8
Phenanthrene	ND	330					
Anthracene	ND	330					
Di-n-butyl phthalate	ND	330					
Fluoranthene	ND	330					
Pyrene	ND	330	100	81	79		2.5
Butyl benzyl phthalate	ND	330					
3,3'-Dichlorobenzidine	ND	670					
Benzo(a)anthracene	ND	330					
Bis(2-ethylhexyl) phthalate	ND	330					
Chrysene	ND	330					
Di-n-octyl phthalate	ND	330					
Benzo(b)fluoranthene	ND	330					
Benzo(k)fluoranthene	ND	330					
Benzo(a)pyrene	ND	330					
Indeno(1,2,3-c,d)pyrene	ND	330					
Dibenzo(a,h)anthracene	ND	330					
Benzo(g,h,i)perylene	ND	330					
2-Fluorophenol (surr)	46 %		150	51	54	25-121	
Phenol-d5 (surr)	66 %		150	73	72	24-113	
Nitrobenzene-d5 (surr)	67 %		100	72	68	23-120	
2-Fluorobiphenyl (surr)	66 %		100	71	70	30-115	
2,4,6-Tribromophenol (surr)	43 %		150	34	55	19-122	
Terphenyl-d14 (surr)	86 %		100	92	86	18-137	

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Gas BTEX in soil

QC Batch#: 8089A
 Units: ug/kg
 Prep Date: 12/30/92

Analysis Dates
 Blank: 12/30/92
 MS: 12/30/92
 MSD: 12/30/92
 LCS: 12/30/92

<u>Analytes</u>	Blank		Spike	%Recovery			QC	<u>RPD</u>
	<u>Result</u>	<u>Limit</u>	<u>level</u>	<u>MS</u>	<u>MSD</u>	<u>LCS</u>	<u>LIMITS</u>	
Benzene	ND	5	125	55	54	76		1.8
Toluene	ND	5	125	58	56	78		3.5
Ethylbenzene	ND	5	125	61	60	82		1.7
Total Xylenes	ND	5	125	62	61	82		1.6
Gasoline	ND	1000						
Bromofluorobenzene (surr)	103%		1250	72	70	96	42-137	

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Gas BTEX in Water

QC Batch#: D195A

Units: ug/L

Prep Date: N/A

Analysis Dates

Blank: 12/29/92

MS: 12/29/92

MSD: 12/29/92

LCS: 12/29/92

<u>Analytes</u>	Blank		Spike <u>level</u>	%Recovery		LCS	QC	
	<u>Result</u>	<u>Limit</u>		<u>MS</u>	<u>MSD</u>		<u>LIMITS</u>	<u>RPD</u>
Benzene	ND	.5	10	95	85	90		11
Toluene	ND	.5	10	88	91	90		3.4
Ethylbenzene	ND	.5	10	92	95	92		3.2
Total Xylenes	ND	.5	20	96	92	92		4.3
Gasoline	ND	50						
Bromofluorobenzene (surr)	90%			97	95	98	58-127	

Woodward Clyde Consultants

Instrument Type: Furnace Atomic Absorption

QC Batch #: 0935A

Units: mg/kg

Matrix: SOIL

Prep date: 01/04/93

<u>Test Description</u>	<u>Method</u>	Blank		Spike	%Recovery			Date	
		<u>Result</u>	<u>Limit</u>	<u>Amt</u>	<u>MS</u>	<u>MSD</u>	<u>LCS</u>	<u>RPD</u>	<u>Run</u>
Lead by GFAA	EPA 7421	ND	0.20	4.0	98	99	98	1.0	01/13

Instrument Type: Inductively Coupled Argon Plasma

QC Batch #: 0934A

Units: mg/kg

Matrix: SOIL

Prep date: 01/04/93

<u>Test Description</u>	<u>Method</u>	Blank		Spike	%Recovery			Date	
		<u>Result</u>	<u>Limit</u>	<u>Amt</u>	<u>MS</u>	<u>MSD</u>	<u>LCS</u>	<u>RPD</u>	<u>Run</u>
Cadmium by ICAP	EPA 6010	ND	1.0	10	115	110	103	4.5	01/13
Chromium by ICAP	EPA 6010	ND	2.0	40	82	87	97	6.0	01/13
Nickel by ICAP	EPA 6010	ND	4.0	100	102	103	98	0.9	01/13
Zinc by ICAP	EPA 6010	3.2	2.0	100	88	93	98	5.6	01/13

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Batch #: 0040A

Units: mg/kg

Test Description	Method	Blank	Spike	%Recovery				Date Run	
		Result	Lmt	Level	MS	MSD	LCS		RPD
TRPH by IR	EPA 418.1	<25	25	2.0	106	104	104	1.9	12/30