

American Environmental Network

Certificate of Analysis

DOHS Certification: 1172

AIHA Accreditation: 11134

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GEOMATRIX CONSULTANTS
100 PINE ST., 10TH FLOOR
SAN FRANCISCO, CA 94111

ATTN: CHERI PAGE

CLIENT PROJ. ID: 2530
C.O.C. NO: 5786

REPORT DATE: 02/01/94

DATE SAMPLED: 01/20/94

DATE RECEIVED: 01/21/94

AEN JOB NO: 9401204

PROJECT SUMMARY:

On January 21, 1994, this laboratory received eight (8) soil samples.

Client requested samples be composited into two (2) samples and be analyzed for organic parameters. Sample chromatograms are included with this report. Sample identification, methodologies, results and dates analyzed are summarized on the following pages.

All laboratory quality control parameters were found to be within established limits. Batch QC data is included at the end of this report.

If you have any questions, please contact Client Services at (510) 930-9090.



Larry Klein
General Manager

GEOMATRIX CONSULTANTS

SAMPLE ID: P1-2.5,P3-2,B1-2,B2-2
 AEN LAB NO: 9401204-09
 AEN WORK ORDER: 9401204
 CLIENT PROJ. ID: 2530

DATE SAMPLED: 01/20/94
 DATE RECEIVED: 01/21/94
 REPORT DATE: 02/01/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	01/25/94
Toluene	108-88-3	ND	5	ug/kg	01/25/94
Ethylbenzene	100-41-4	ND	5	ug/kg	01/25/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	01/25/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	01/25/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	01/24/94
TPH as Diesel	GC-FID	ND	10	mg/kg	01/28/94
TPH as Oil	GC-FID	610 *	5	mg/kg	01/28/94

ND = Not detected

* = Indicates value above reporting limit

GEOMATRIX CONSULTANTS

SAMPLE ID: P1-6,P3-4.5,B1-6,B2-6
 AEN LAB NO: 9401204-10
 AEN WORK ORDER: 9401204
 CLIENT PROJ. ID: 2530

DATE SAMPLED: 01/20/94
 DATE RECEIVED: 01/21/94
 REPORT DATE: 02/01/94

ANALYTE	METHOD/ CAS#	RESULT	REPORTING LIMIT	UNITS	DATE ANALYZED
BTEX & Gasoline HCs	EPA 8020				
Benzene	71-43-2	ND	5	ug/kg	01/25/94
Toluene	108-88-3	ND	5	ug/kg	01/25/94
Ethylbenzene	100-41-4	ND	5	ug/kg	01/25/94
Xylenes, Total	1330-20-7	ND	5	ug/kg	01/25/94
Purgeable HCs as Gasoline	5030/GCFID	ND	0.2	mg/kg	01/25/94
#Extraction for Diesel/Oil	EPA 3550	-		Extrn Date	01/24/94
TPH as Diesel	GC-FID	5 *	1	mg/kg	01/25/94
TPH as Oil	GC-FID	20 *	5	mg/kg	01/25/94

ND = Not detected

* = Indicates value above reporting limit

QUALITY CONTROL DATA

DATE EXTRACTED: 01/21/94
DATE ANALYZED: 01/22/94
CLIENT PROJ. ID: 2530

AEN JOB NO: 9401204
SAMPLE SPIKED: LCS
INSTRUMENT: C

LABORATORY CONTROL SAMPLE
TPH EXTRACTABLE SOILS
METHOD: EPA 3550 GCFID

ANALYTE	Spike Added (mg/kg)	Percent Recovery
Diesel	40.4	98

CURRENT QC LIMITS

<u>Analyte</u>	<u>Percent Recovery</u>
Diesel	(44-105)

Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

QUALITY CONTROL DATA

CLIENT PROJ. ID: 2530

AEN JOB NO: 9401204

INSTRUMENT: H

SURROGATE STANDARD RECOVERY SUMMARY
METHOD: EPA 8020, 5030 GCFID
(SOIL MATRIX)

Date Analyzed	SAMPLE IDENTIFICATION	SURROGATE RECOVERY (PERCENT)	
	Client Id.	Lab Id.	Fluorobenzene
01/25/94	P1-2.5,P3-2.0,B1-2.0,B2-2.0	01	107
01/25/94	P1-6.0,P3-4.5,B1-6.0,B2-6.0	02	110

CURRENT QC LIMITS

<u>ANALYTE</u>	<u>PERCENT RECOVERY</u>
Fluorobenzene	(70-115)

QUALITY CONTROL DATA

DATE ANALYZED: 01/25/94
 SAMPLE SPIKED: 9401242-03
 CLIENT PROJ. ID: 2530

AEN JOB NO: 9401204
 INSTRUMENT: H

MATRIX SPIKE RECOVERY SUMMARY
 METHOD: EPA 8020, 5030 GCFID
 (SOIL MATRIX)

ANALYTE	Spike Added (ug/kg)	Average Percent Recovery	RPD
Benzene	19.1	95	9
Toluene	60.1	113	7
Hydrocarbons as Gasoline	1000	79	10

CURRENT QC LIMITS

Analyte	Percent Recovery	RPD
Benzene	(79-125)	10
Toluene	(84-117)	10
Gasoline	(54-124)	15

RPD = Relative Percent Difference

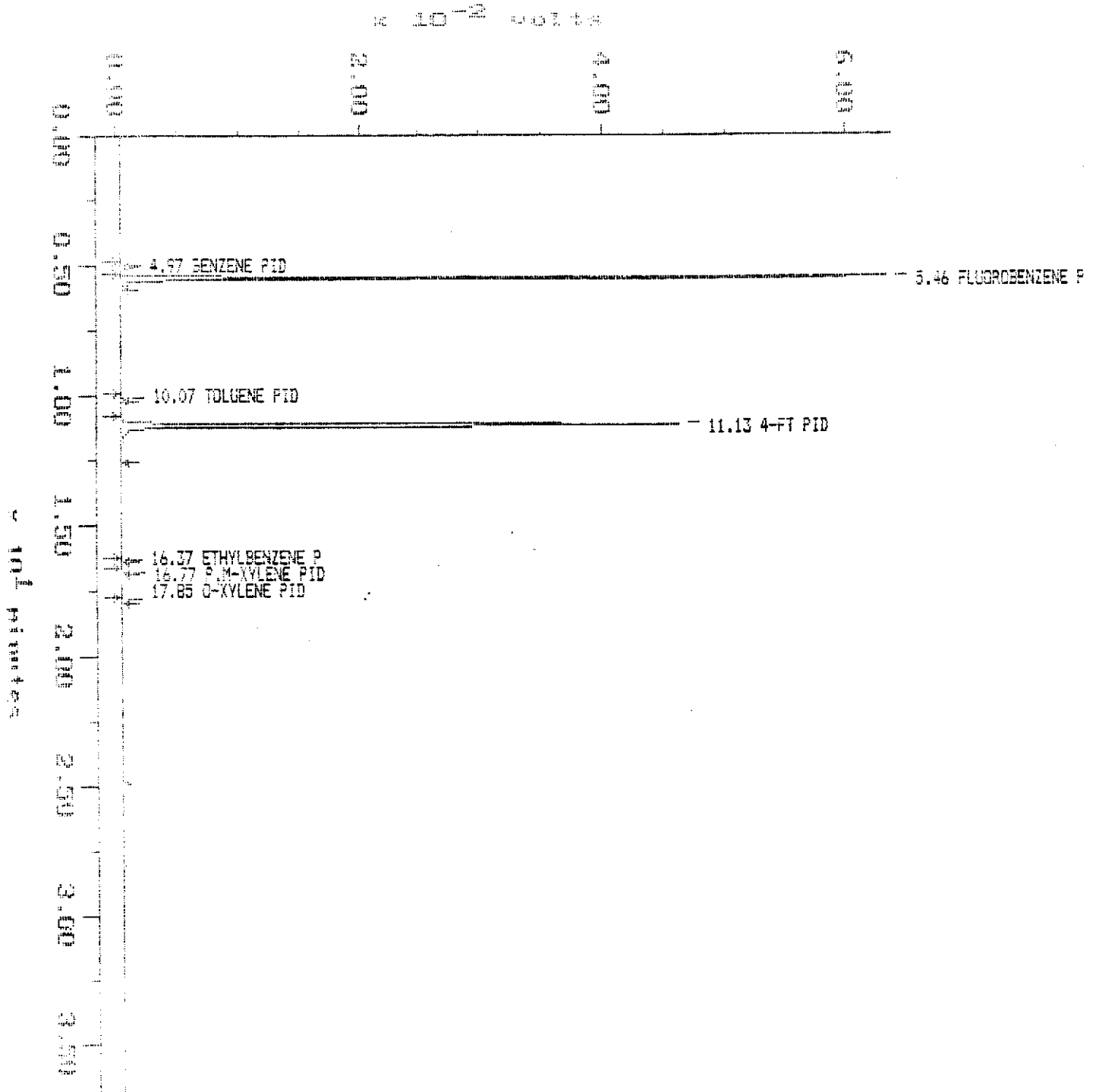
Daily method blanks for all associated analytical runs showed no contamination over the reporting limit.

*** END OF REPORT ***

Sample: 01204-9A 5gm
Acquired: 25-JAN-94 11:07

Channel: PID DS-3
Method: C:\MAX\DATA\PIDEMAX_5

Filename: H01253
Operator: ML

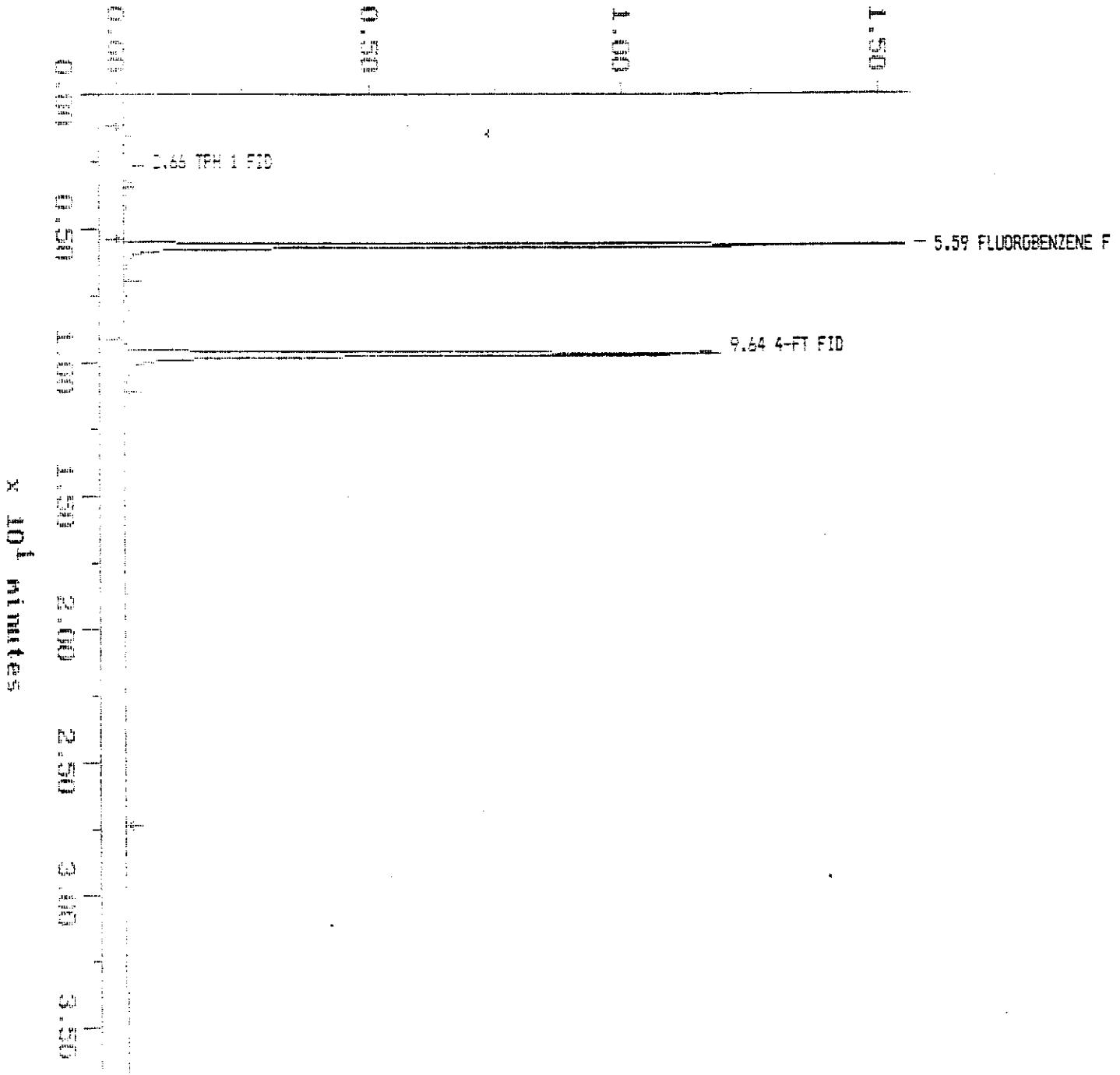


Sample: 01204-9A 5cm
Acquired: 25-JAN-94 11:39

Channel: FID DE-MAX
Method: D:\MAX\DATA\94\OBWAX_6

Filename: H01253
Operator: ML

x 10⁻¹ volts

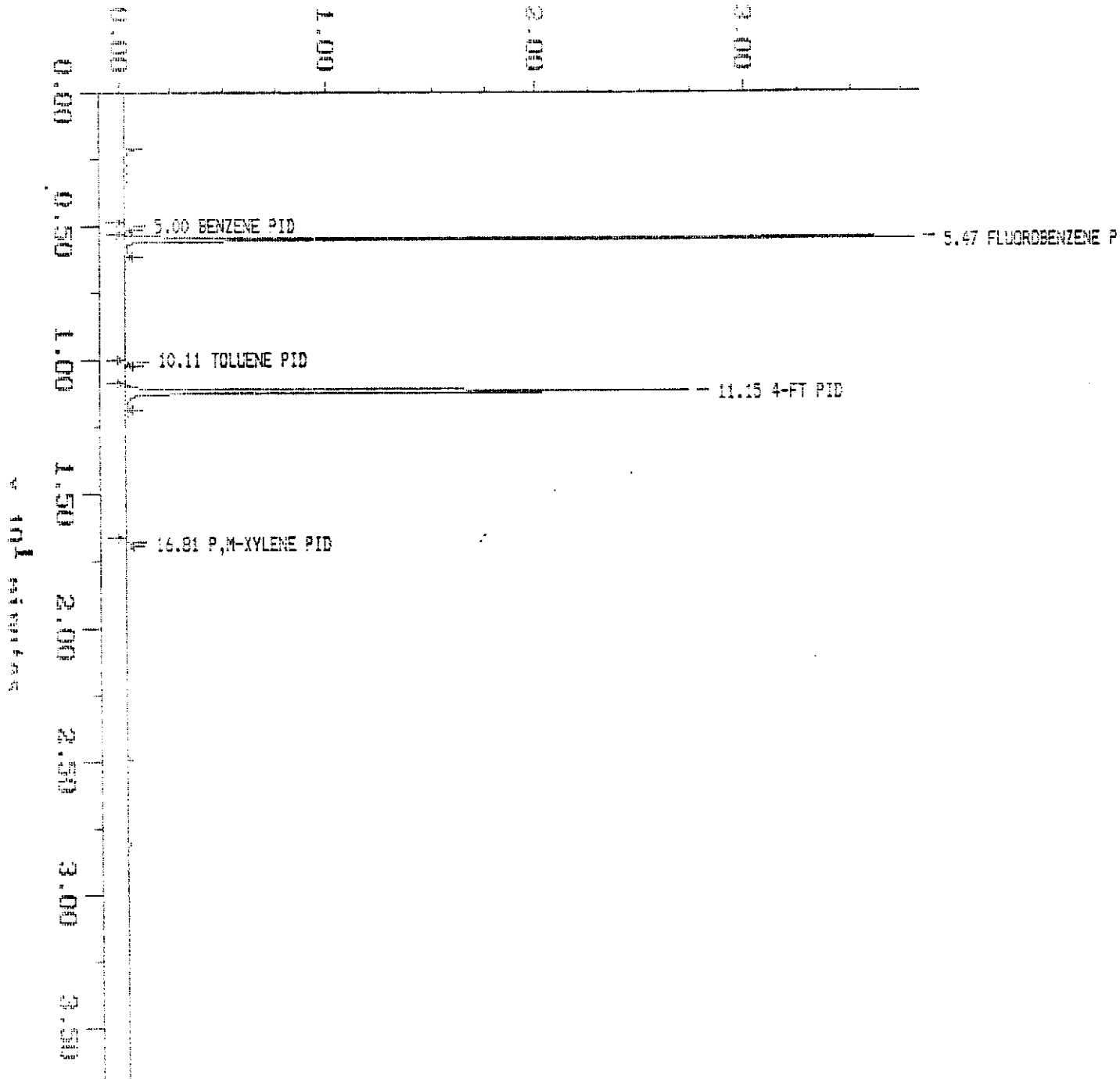


Sample: 01204-109 5gm
Acquired: 03-JAN-94 12:25

Channel: PID CB-5
Method: C:\MAX\DATA\CEMAX_5

Filename: 010394
Operator: ML

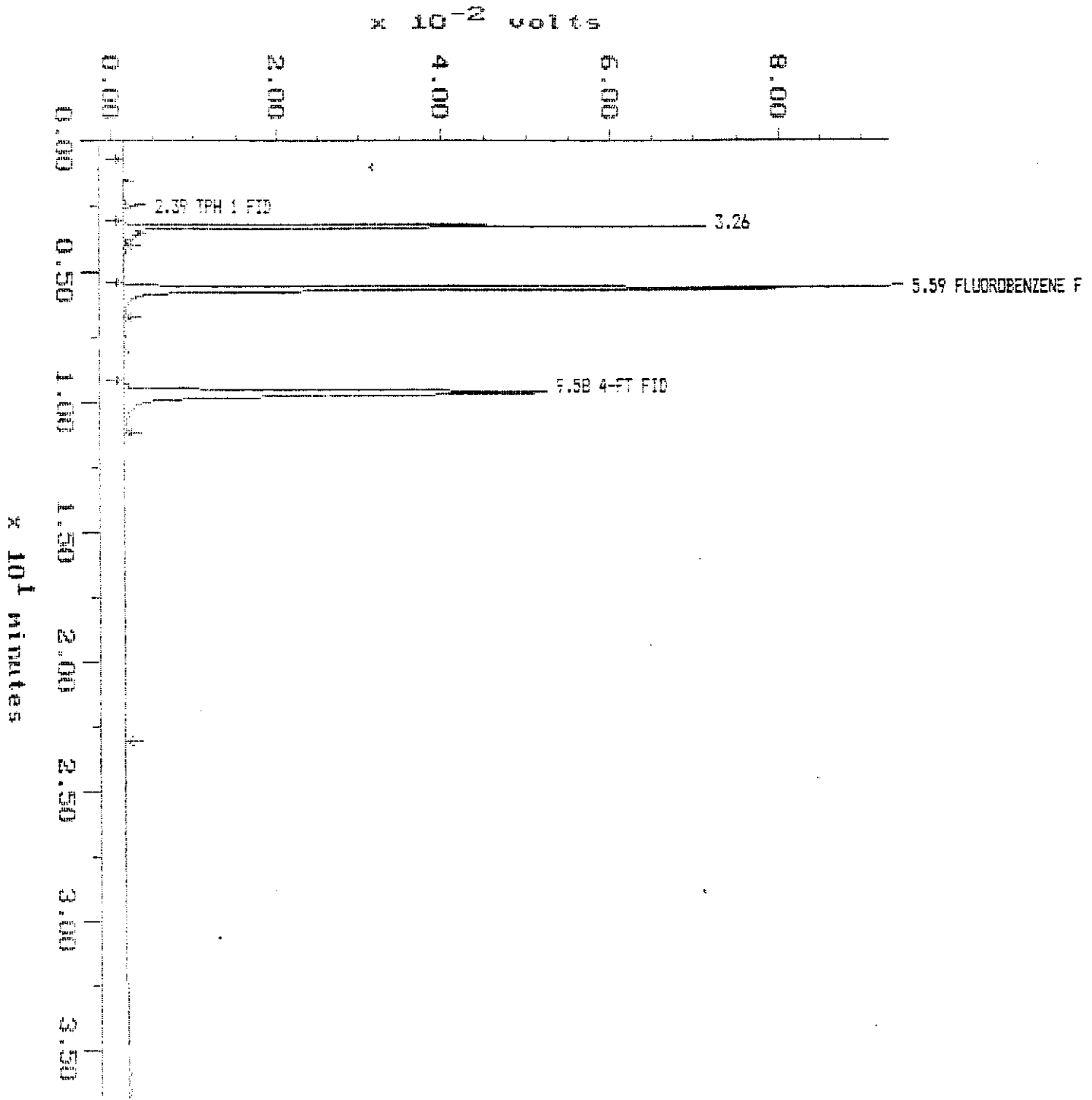
$\times 10^{-2}$ Volts



Sample: 01204-10A 5gm
Acquired: 25-JAN-94 12:25

Channel: FID DB-WAX
Method: C:\MAX\DATA9\DBWAX_5

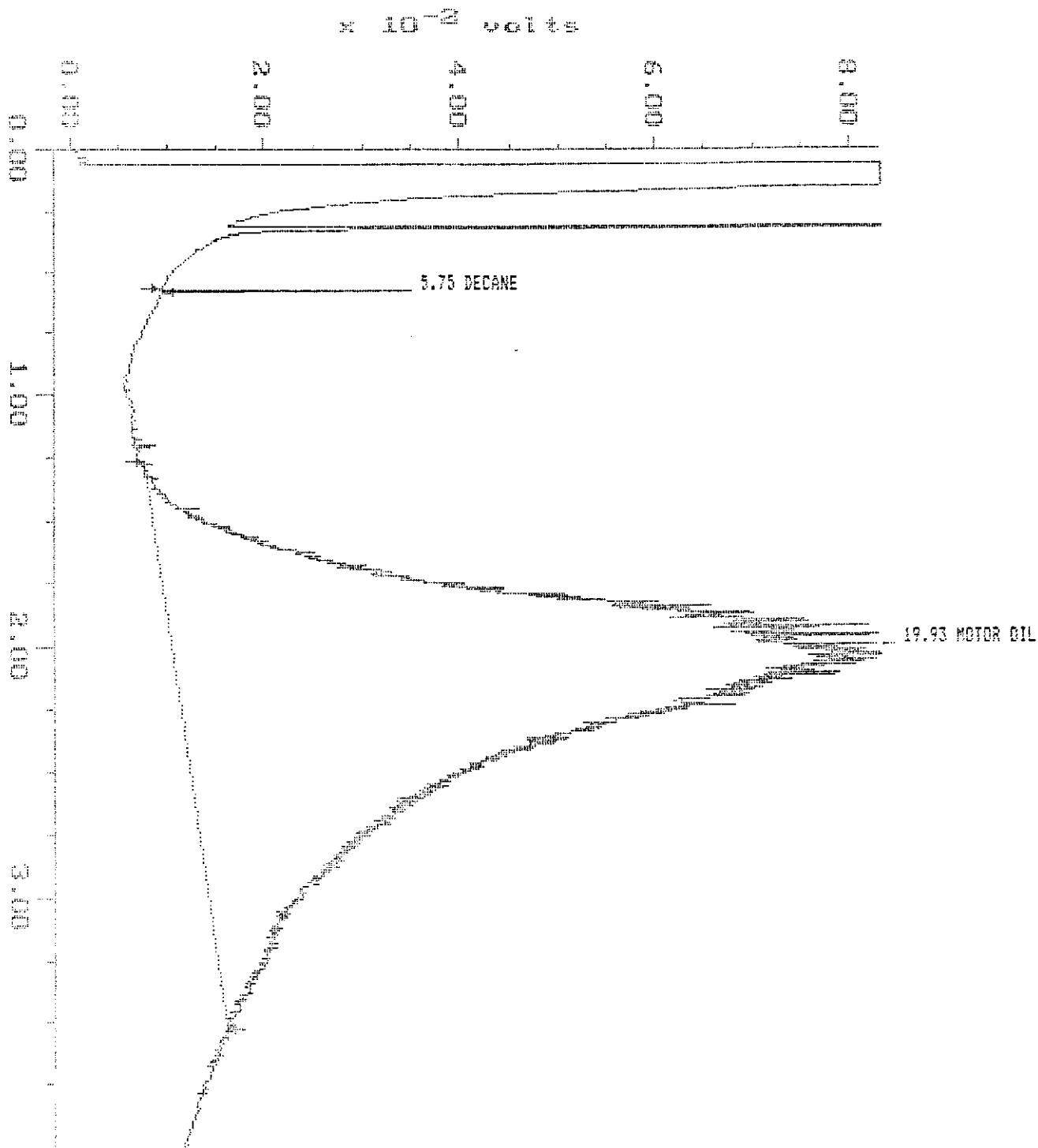
Filename: H01254
Operator: ML



Sample: 01204-9A 1/5
Acquired: 28-JAN-94 11:12
Dilution: 1 : 25.000

Channel: FID 1 INST CA
Method: C:\MAX\DATA\CA\DI1E2
Amount: 50.000

Filename: DA012636
Operator:

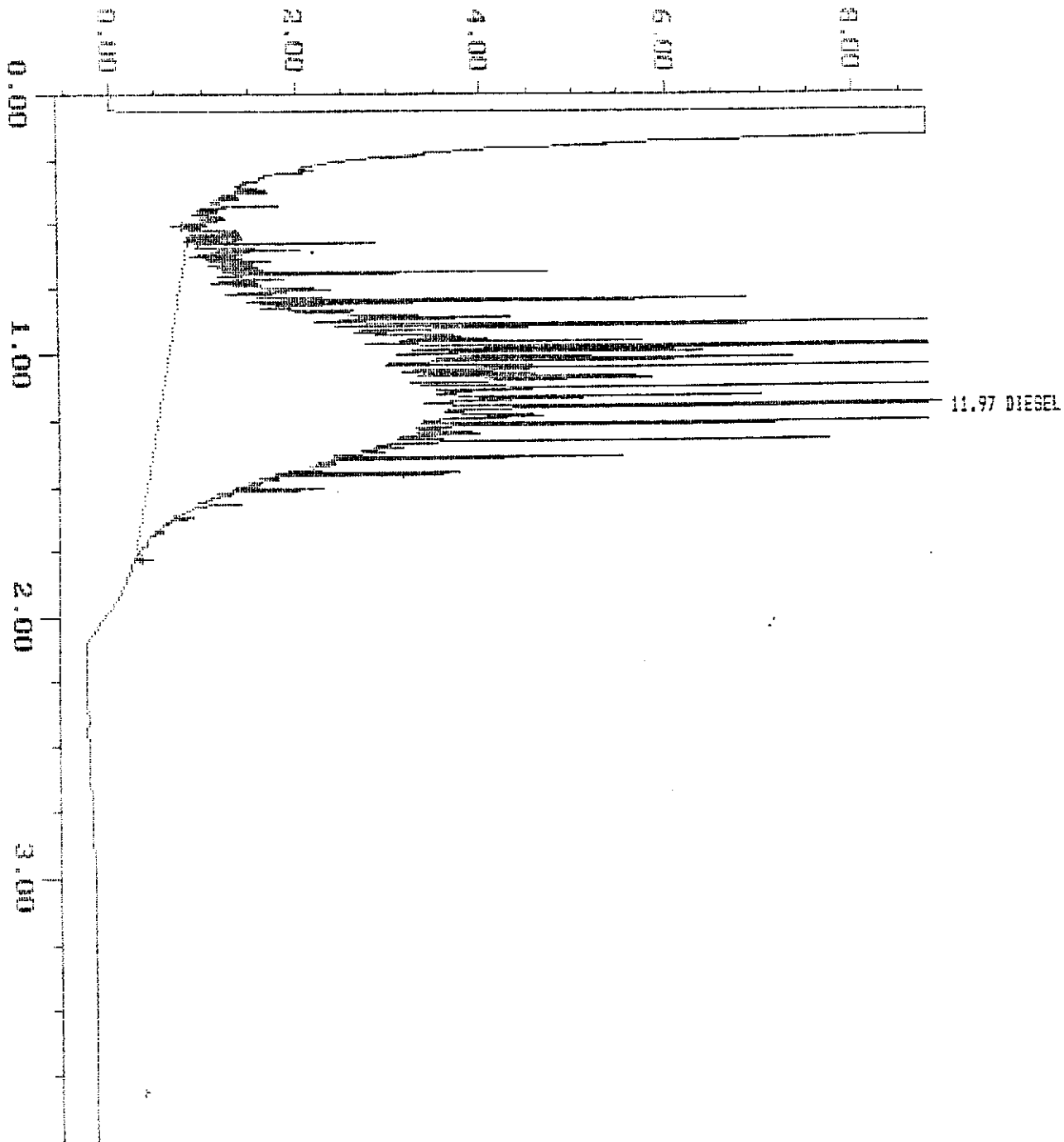


Sample: 500PPM DIE
Acquired: 25-JAN-94 16:22
Dilution: 1 : 100.000

Channel: FID 1 INST EA
Method: C:\MAX\DATA3A\DIE
Amount: 500.000

Filename: CR012422
Operator:

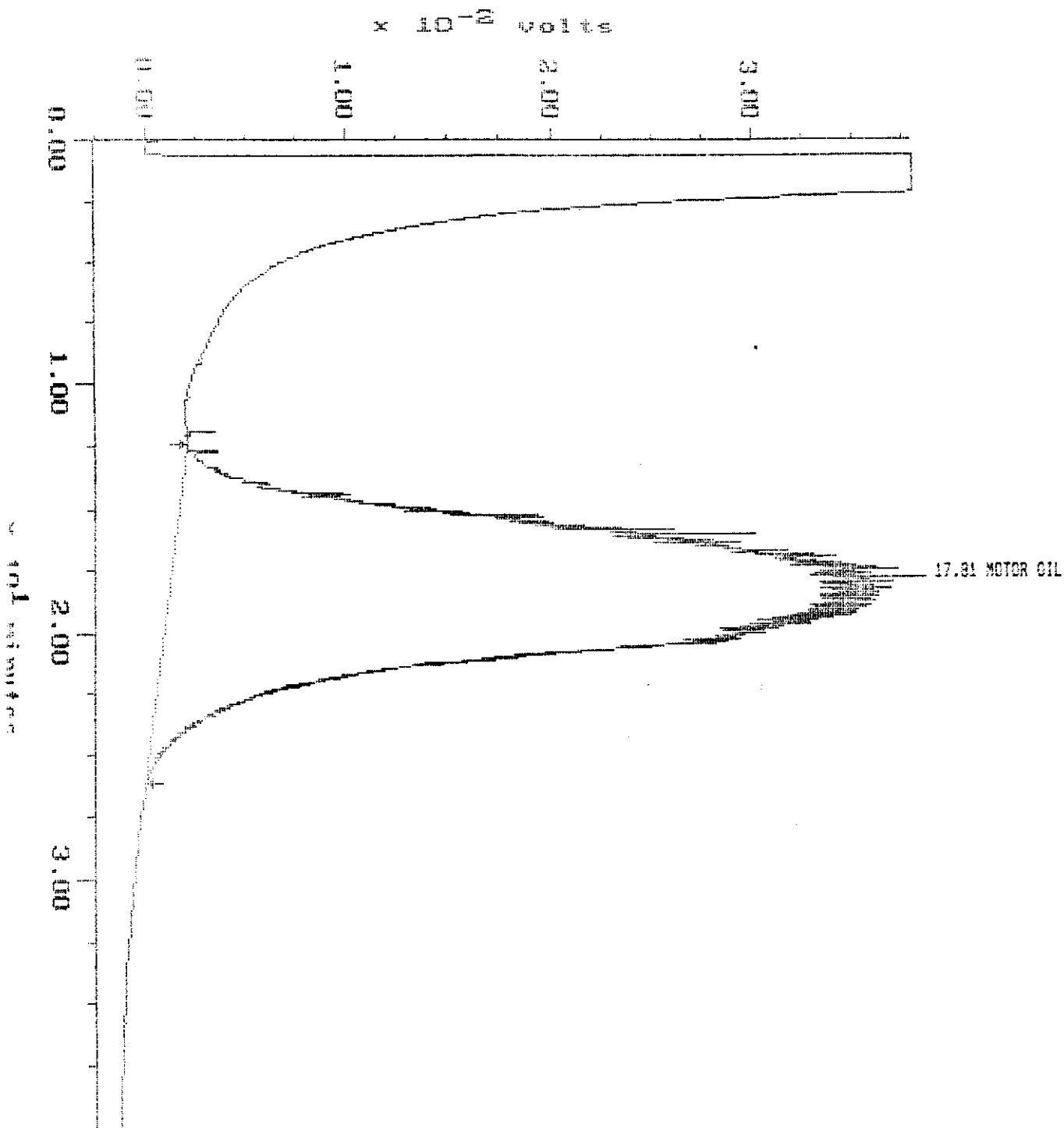
$\times 10^{-2}$ volts



Sample: 500PPM OIL
Acquired: 25-JAN-94 15:27
Dilution: 1 : 100.000

Channel: FID 1 INST CA
Method: C:\MAX\DATA3\A\DI
Amount: 500.000

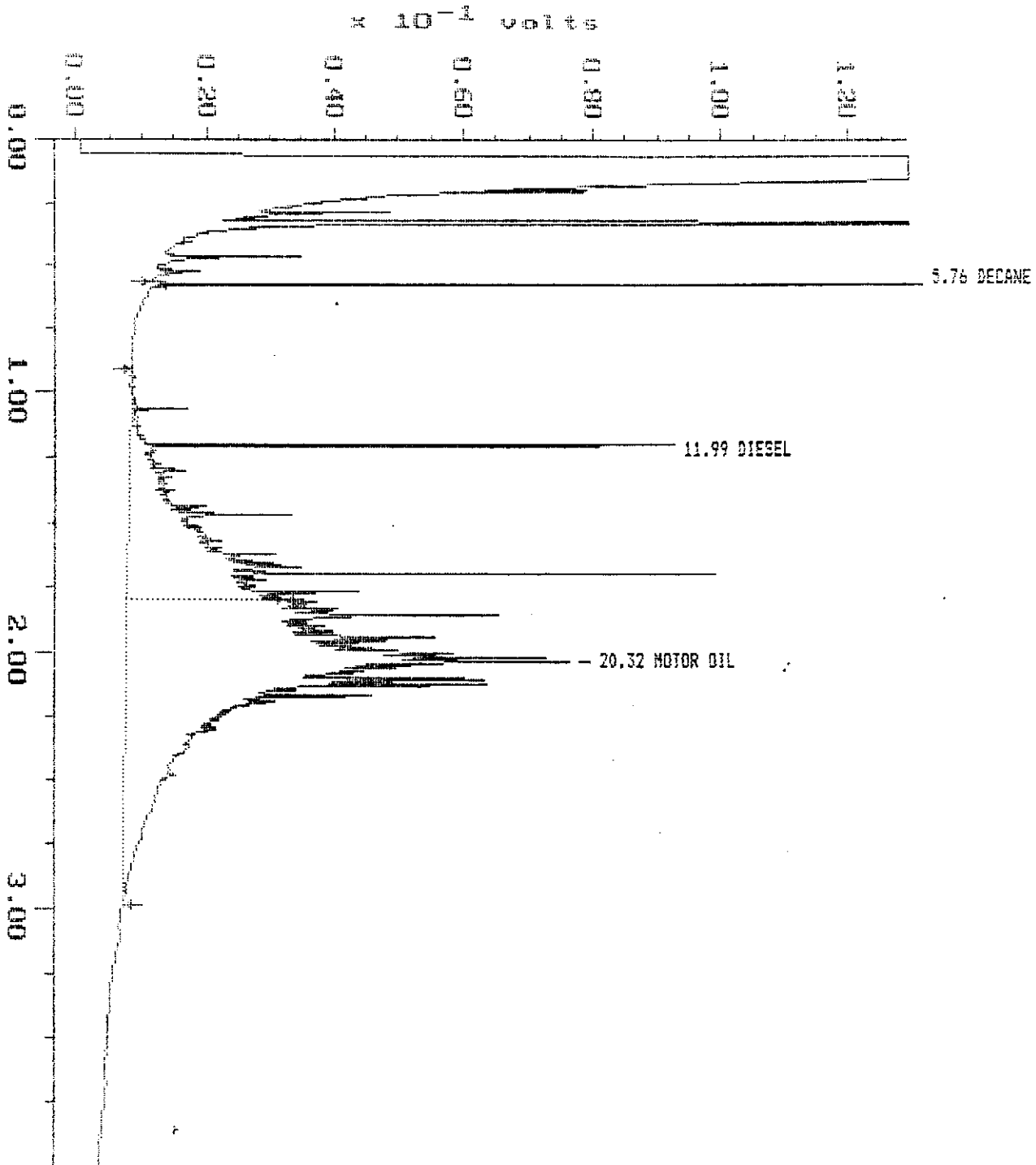
Filename: CA012421
Operator:



Sample: 1204-10A
Acquired: 25-JAN-94 23:26
Dilution: 1 : 2.000

Channel: FID 1 INST DA
Method: E:\MAX\DATA\3\BIE
Amount: 50.000

Filename: DA012427
Operator:



R-51S-G

9401204

Chain-of-Custody Record	No 5786	Date: 1/21/94	Page 1 of 1
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Project No. 2530			ANALYSES												REMARKS				
			EPA Method 8010	EPA Method 8020	EPA Method 8240	EPA Method 8270	TPH as gasoline	TPH as diesel	TPH as BTEX	Gas (8015)	diesel (8015)	Motor Oil (8015)	BTEX (8015)	Cooled	Soil (S) or water (W)	Acidified	Number of containers	Additional comments	
Date	Time	Sample Number																	
01A	1/20	1015 P1-2.5							X	X	X	X	X	X	X	X	X	1	Composite equal portions of samples 1 through 4 and run one analysis
02A	1/20	1330 P3-2.0						X	X	X	X	X	X	X	X	X	1		
03A	1/20	1600 B1-2.0						X	X	X	X	X	X	X	X	X	1		
04A	1/20	1700 B2-2.0						X	X	X	X	X	X	X	X	X	1		
05A	1/20	1015 P1-6.0						X	X	X	X	X	X	X	X	X	1	Composite equal portions of samples 5 through 8 and run one analysis	
06A	1/20	1330 P3-4.5						X	X	X	X	X	X	X	X	X	1		
07A	1/20	1600 B1-6.0						X	X	X	X	X	X	X	X	X	1		
08A	1/20	1700 B2-6.0						X	X	X	X	X	X	X	X	X	1		


Call Cheri Page if there are any questions

Composite equal portions of samples 1 through 4 and run one analysis

Composite equal portions of samples 5 through 8 and run one analysis

SAVE REMAINING PORTION OF EACH INDIVIDUAL SAMPLE

Turnaround time: 7 working 1 week day	Results to: Cheri Page	Total No. of containers: 8
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Relinquished by: Signature: <i>Charlie Crocker</i> Printed name: Charlie Crocker Company: Geomatrix	Date: 1/21/94	Relinquished by: Signature: <i>Ron Stallings</i> Printed name: Ron Stallings Company: AEN	Date: 1/21/94	Relinquished by: Signature: Printed name: Company:	Date:	Method of shipment: pick up Laboratory comments and Log No.: 9401204
Received by: Signature: <i>Ron Stallings</i> Printed name: Ron Stallings Company: AEN	Time: 1815	Received by: Signature: <i>Denise Harrington</i> Printed name: DENISE HARRINGTON Company: AEN	Time: 1900	Received by: Signature: Printed name: Company:	Time:	 Geomatrix Consultants 100 Pine St. 10th Floor San Francisco, CA 94111 (415) 434-9400