




MEMORANDUM

TO: Julie Menack

FROM: Shakoora S. Azimi, 
Laboratory Operations Manager

DATE: March 12, 1990

As per your request to Dr. Slater, original sample chromatograms for the project Market Place, (i.e., Lab ID# 37629 (LP# 2823), Lab ID# 37631 (LP# 2823) Lab ID# 37580 (LP# 2816), Lab ID# 37581 (LP# 2816) Lab ID# 37582 (Lab ID# 2816)) have been copied and reviewed (see attached).

Analytical results from one of the five samples showed a response below the 0.5 detection limit for diesel. Sample # 37582 (LP# 2816) showed diesel at 0.32 ppm.

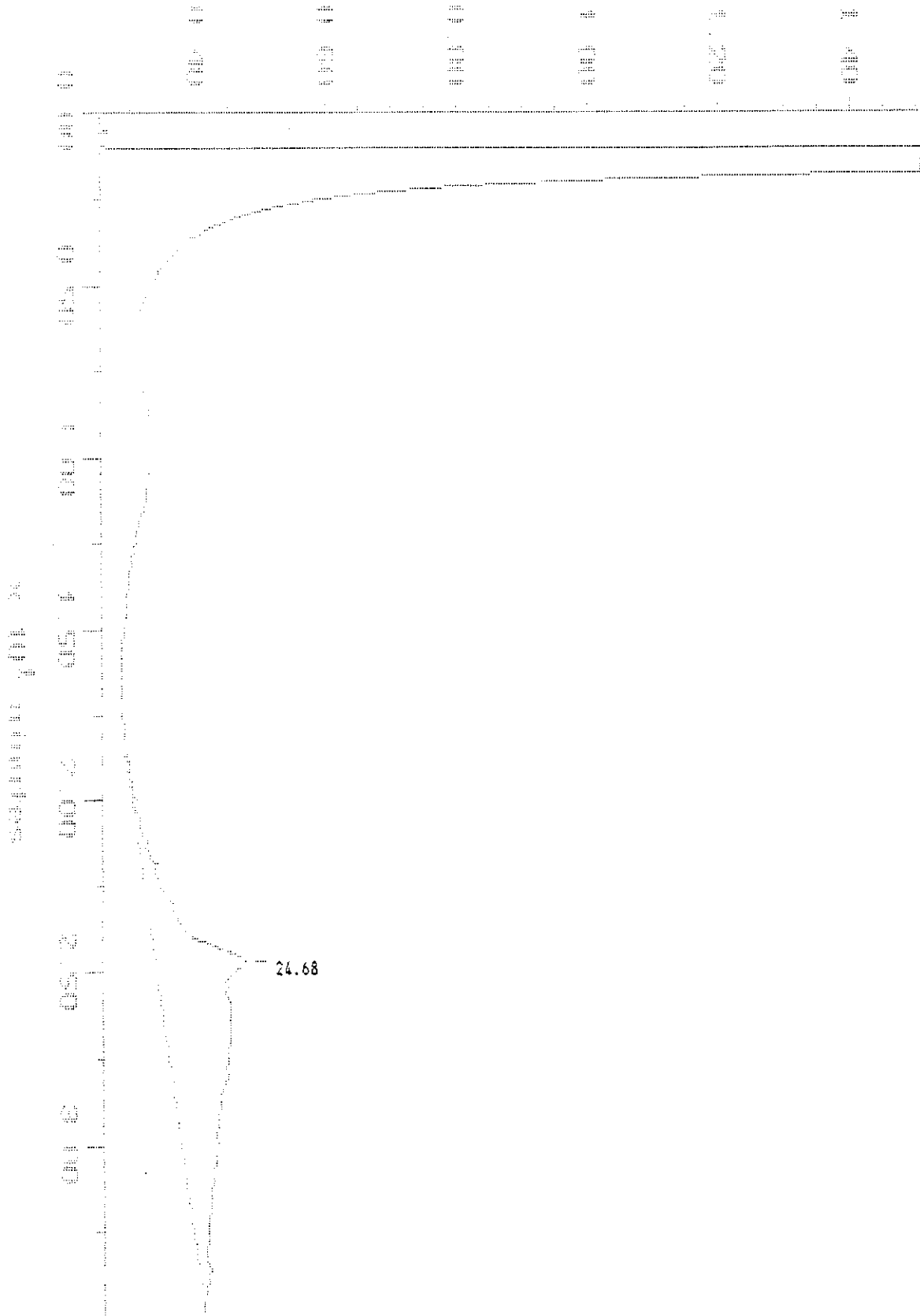
The diesel concentration below the detection limit was estimated based on instrument response to the 50 ppm diesel standard, and our commonly achievable minimum resolution of 0.25 ppm.

Sample: 37580
Acquired: 02-MAR-90 7:53

Channel: FID
Method: C:\MAX\DATA3\PGC2FID

Filename: U301P225
Operator: jh

Volts



ND

MAXIMA 820 CUSTOM REPORT

Printed: 4-MAR-1990 11:13:25

SAMPLE: 37580

#25 in Method: TPH-D PGC 2 dup
Acquired: 2-MAR-1990 7:53
Rate: 2.0 points/sec
Duration: 35.000 minutes
Operator: jh

Type: UNKN
Instrument: pgc 2
Filename: U301P225
Index: Disk

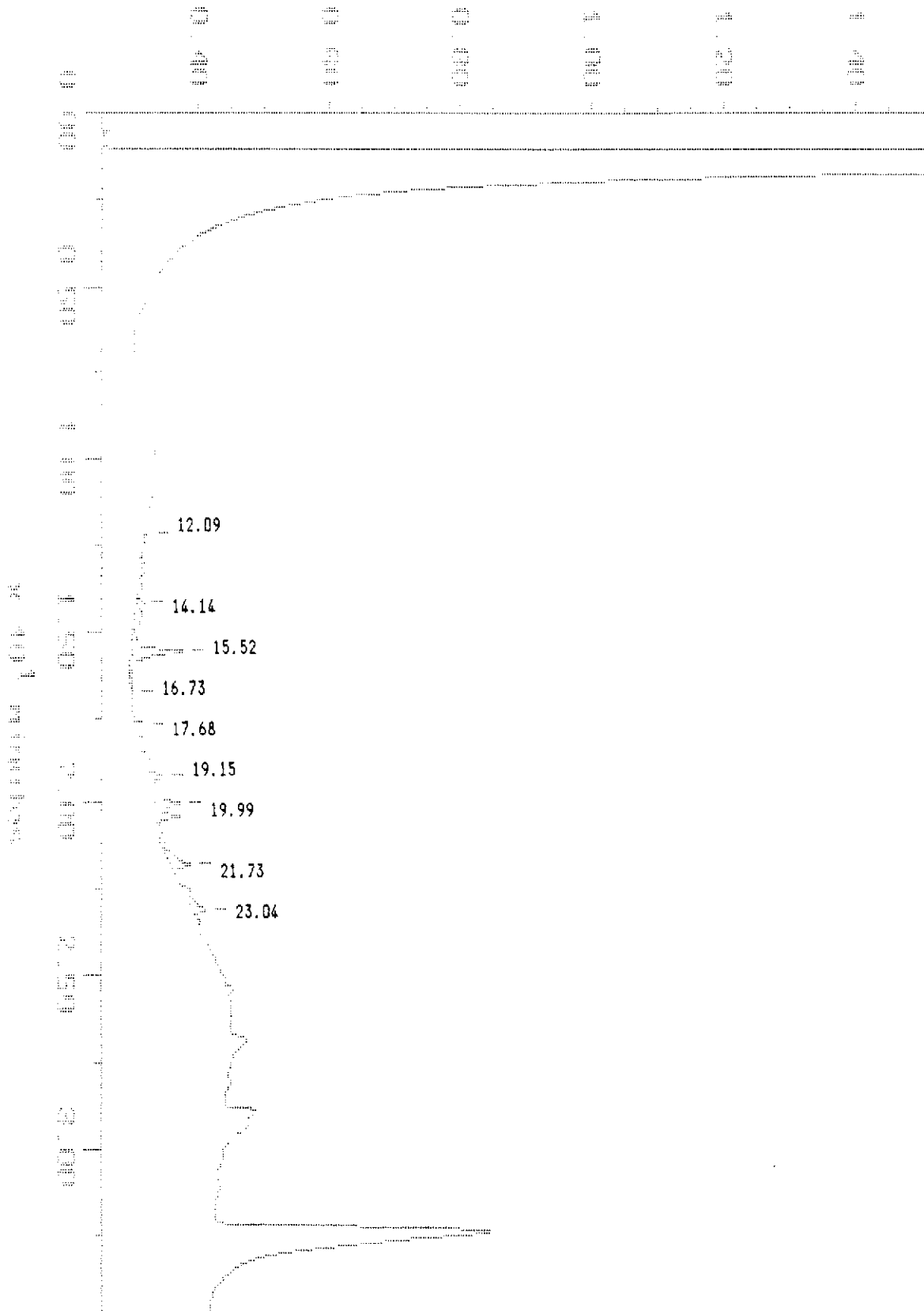
DETECTOR: FID

PK#	Retention Time (minutes)	Peak Start (minutes)	Component Name	Solution Conc	Peak Area	Area Percent	Base	Response Factor	Relative Time
1	24.683	18.425			45700123	100.00			1.000
TOTAL				0.00	45700123				

Sample: 37582 Channel: FID
Acquired: 02-MAR-90 7:11 Method: C:\MAX\DATA3\PGC2FID

Filename: U301P224
Operator: jh

Volts



ED

MAXIMA 820 CUSTOM REPORT

Printed: 4-MAR-1990 11:12:57

SAMPLE: 37582

#24 in Method: TPH-D PGC 2 dup
 Acquired: 2-MAR-1990 7:11
 Rate: 2.0 points/sec
 Duration: 35.000 minutes
 Operator: jh

Type: UNKN
 Instrument: pgc 2
 Filename: U301P224
 Index: Disk

DETECTOR: FID

PK#	Retention Time (minutes)	Peak Start (minutes)	Component Name	Solution Conc	Peak Area	Area Percent	Base Response Factor	Relative Time
1	12.092	11.742	D-2		18949	0.42		0.525
2	14.142	12.858			506386	11.20		0.614
3	15.517	15.050			1177826	26.04		0.673
4	16.725	16.192			54109	1.20		0.726
5	17.683	17.267			122571	2.71		0.767
6	19.150	18.500			477926	10.57		0.831
7	19.992	19.525			1005524	22.23		0.868
8	21.733	20.967			592620	13.10		0.943
9	23.042	22.058			566648	12.53		1.000
TOTAL				0.00	4522358			

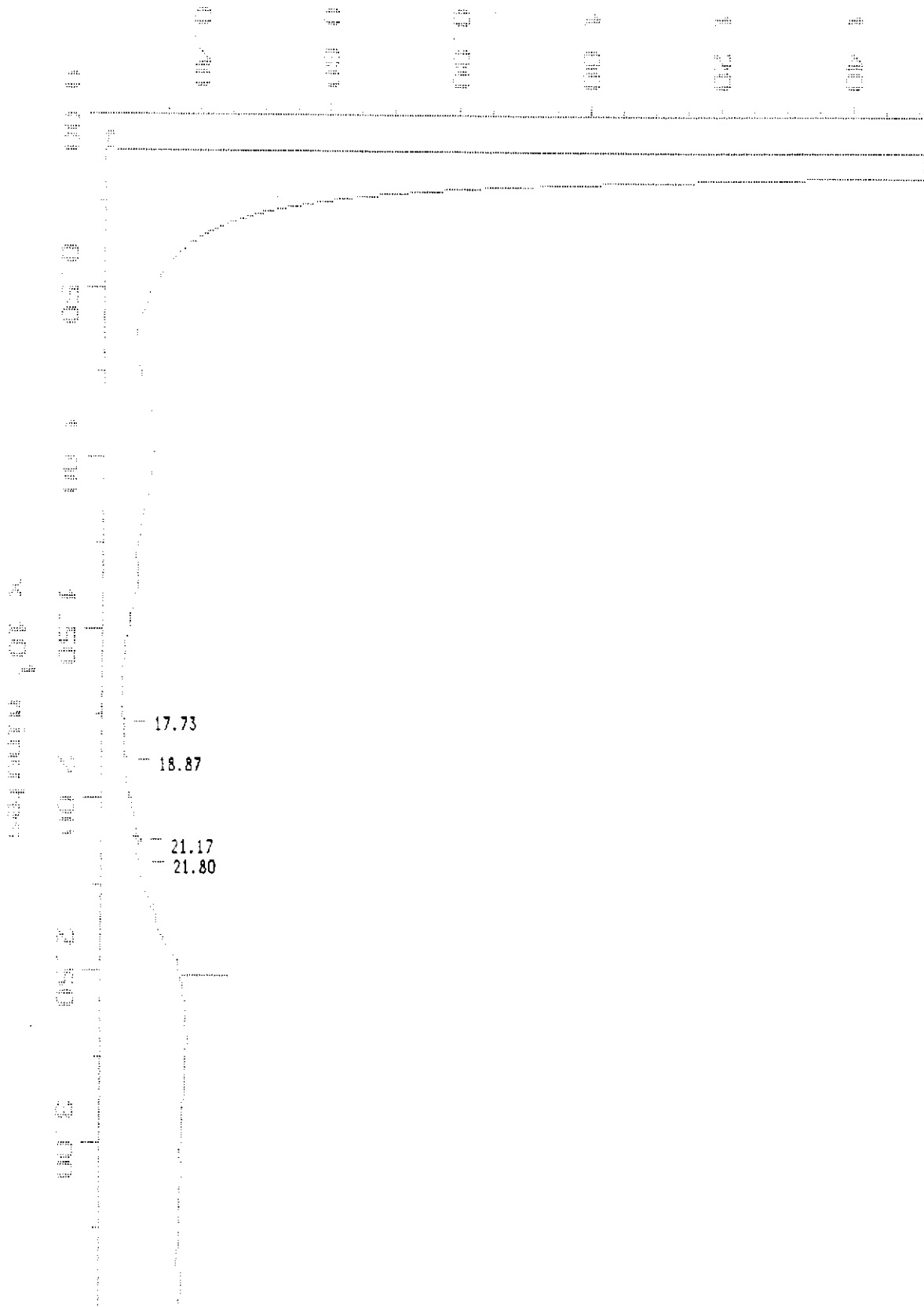
$$D-2 : \frac{50}{3582000} = \frac{x}{4522000}$$

$$x = 63.97 \div 200 = \underline{\underline{0.32 \text{ ppm}}} = 7 \text{ ND}$$

Sample: 37581 Channel: FID
Acquired: 02-MAR-90 6:28 Method: C:\MAX\DATA3\PGC2FID

Filename: U301P223
Operator: jh

1.000000



41
ED

MAXIMA 820 CUSTOM REPORT

Printed: 4-MAR-1990 11:12:29

SAMPLE: 37581

#23 in Method: TPH-D PGC 2 dup
 Acquired: 2-MAR-1990 6:28
 Rate: 2.0 points/sec
 Duration: 35.000 minutes
 Operator: jh

Type: UNKN
 Instrument: pgc 2
 Filename: U301P223
 Index: Disk

DETECTOR: FID

PK#	Retention Time (minutes)	Peak Start (minutes)	Component Name	Solution Conc	Peak Area	Area Percent	Base	Response Factor	Relative Time
1	17.733	17.517			51929	22.06			0.813
2	18.867	18.450			22238	9.45			0.865
3	21.167	19.400			-61185	25.99			0.971
4	21.800	21.450			100029	42.50			1.000
TOTAL				0.00	235382				

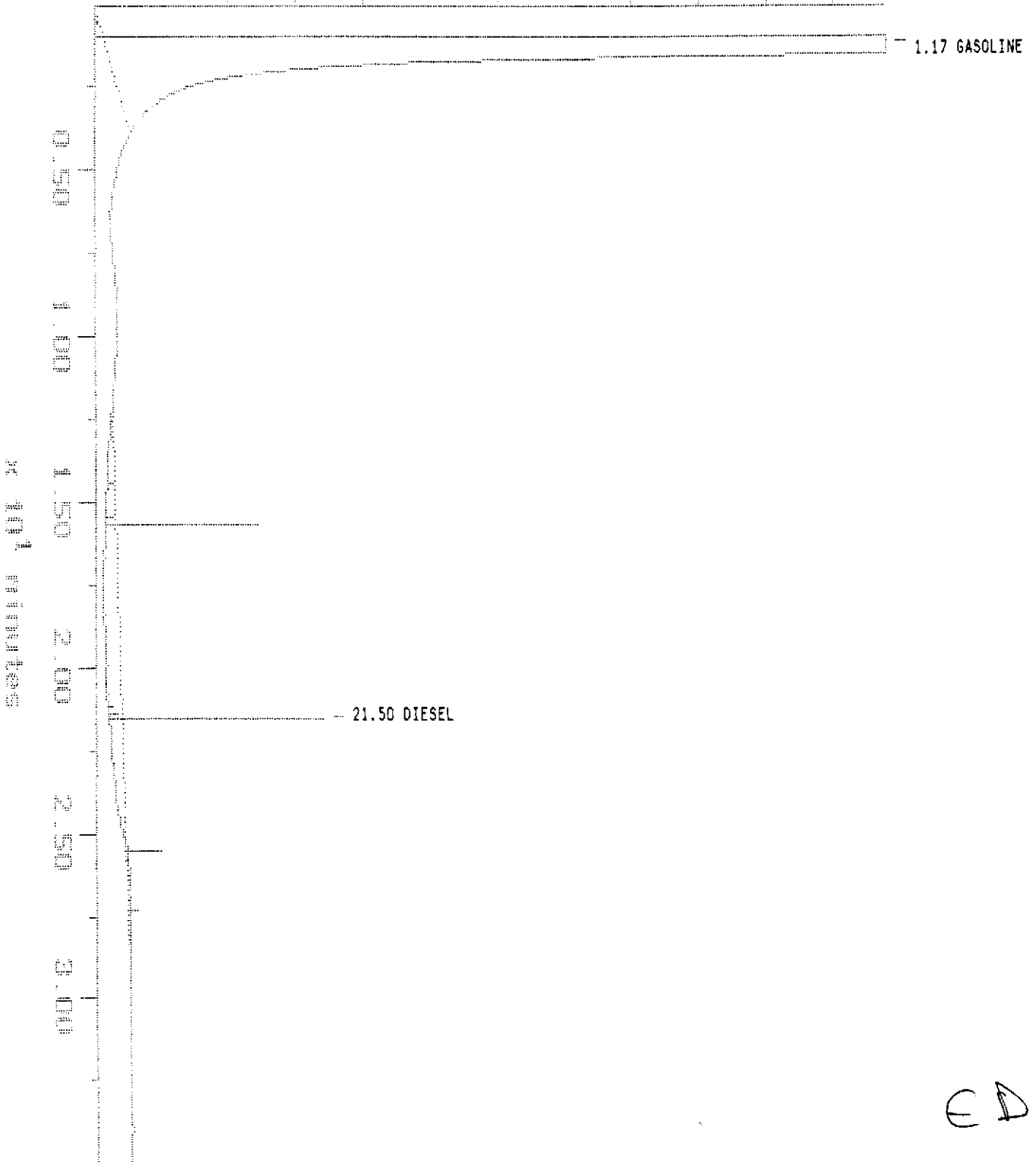
Sample: 37629
Acquired: 06-MAR-90 4:03

Channel: FID
Method: C:\MAX\DATA3\PGC2FID

Filename: U305P217
Operator: jh

1.17

0 10 20 30 40 50 60



ED

MAXIMA 820 CUSTOM REPORT

Printed: 6-MAR-1990 12:31:22

SAMPLE: 37629

#17 in Method: TPH-D PGC 2 DUP
 Acquired: 6-MAR-1990 4:03
 Rate: 2.0 points/sec
 Duration: 35.000 minutes
 Operator: jh

Type: UNKN
 Instrument: pgc 2
 Filename: U305P217
 Index: Disk

DETECTOR: FID

PK#	Retention Time (minutes)	Peak Start (minutes)	Component Name	Solution Conc	Peak Area	Area Percent	Base Area	Response Factor	Relative Time
1	1.167	0.108	GASOLINE		1304974563	OFF SCALE	AREA	10.000	0.054
2	21.500	11.992	DIESEL	Invalid	-28735001	100.00	AREA	0.000	1.000
TOTAL				0.00	28735001				
TOTALS BY GROUP									
1				0.00	0	0.00			
2				0.00	28735001	100.00			

Sample: 37631
Acquired: 06-MAR-90 4:46

Channel: FID
Method: C:\MAX\DATA3\PGC2FID

Filename: U305P218
Operator: jh

Volts



ED

MAXIMA 820 CUSTOM REPORT

Printed: 6-MAR-1990 12:31:52

SAMPLE: 37631

#18 in Method: TPH-D PGC 2 DUP
Acquired: 6-MAR-1990 4:46
Rate: 2.0 points/sec
Duration: 35.000 minutes
Operator: jh

Type: UNKN
Instrument: pgc 2
Filename: U305P218
Index: Disk

DETECTOR: FID

PK#	Retention Time (minutes)	Peak Start (minutes)	Component Name	Solution Conc	Peak Area	Area Percent	Base Response Factor	Relative Time
1	18.275	17.358			71259	1.67		0.554
2	18.867	18.458			77728	1.83		0.572
3	20.408	19.600			428288	10.07		0.619
4	21.875	20.883			95797	2.25		0.664
5	32.967	32.342			3581785	84.18		1.000
TOTAL				0.00	4254858			

TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2823
Sample Location: W-16 Lab ID
Number: 37628
Sample Number: 122860-62 Date
Received: 03/02/90
Date Sampled: 02/28/90 Date
Analyzed: 03/05/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> ug/ml (ppm)	<u>REPORTING LIMIT</u> ug/ml (ppm)
Diesel Range	22.	5.0

Comments: 1:10 dilution used in analysis.

Approved By: E. Danek Date: 03/06/90
E. Danek



**TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)**

Project: <u>Market Place - Emeryville</u>	Lab Project Number: <u>2823</u>
Sample Location: <u>W-13</u>	Lab ID Number: <u>37629</u>
Sample Number: <u>122863-65</u>	Date Received: <u>03/02/90</u>
Date Sampled: <u>02/28/90</u>	Date Analyzed: <u>03/05/90</u>

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> ug/ml (ppm)	<u>REPORTING LIMIT</u> ug/ml (ppm)
Diesel Range	BRL	0.5

Comments:

Approved By: E. Danek Date: 03/06/90
E. Danek



TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2823
Sample Location: W-8 Lab ID
Number: 37630
Sample Number: 122866-68 Date
Received: 03/02/90
Date Sampled: 03/01/90 Date
Analyzed: 03/05/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> ug/ml (ppm)	<u>REPORTING LIMIT</u> ug/ml (ppm)
Diesel Range	4.5	0.5

Comments:

Approved By: E. Danek Date: 03/06/90



TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2823
Sample Location: W-4 Lab ID
Number: 37631
Sample Number: 122869-71 Date
Received: 03/02/90
Date Sampled: 03/01/90 Date
Analyzed: 03/05/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> ug/ml (ppm)	<u>REPORTING LIMIT</u> ug/ml (ppm)
Diesel Range	BRL	0.5

Comments:

Approved By: E. Danek Date: 03/06/90





McLaren Environmental Engineering

Date: March 5, 1990
LP #: 2816

Julie Menack
McLaren
980 Atlantic Avenue
Alameda, CA

Dear Ms. Menack:

Enclosed are the laboratory results for the three sample(s) submitted by you to the McLaren Analytical Laboratory on March 1, 1990, for the project *Market Place-Emeryville*.

The analyses you requested are:

TPH/D (3 - Water)

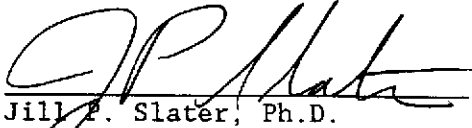
The report consists of the following sections:

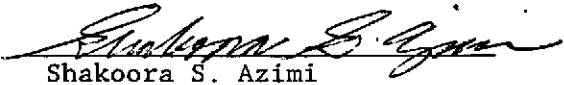
1. A copy of the chain of custody
2. Sample description (chain of custody summary form)
3. Quality Control Report
4. Comments
5. Analytical results

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing McLaren Analytical Laboratory. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,


Jill P. Slater, Ph.D.
Laboratory Director


Shakoora S. Azimi
Quality Assurance Officer



002384

CHAIN OF CUSTODY RECORD

Sampler: Louie Malixi Date Shipped: 2/28/90 Carrier: Fed. X

Telephone: (415) 521-5200 Airbill Number: _____ Cooler: _____

SHIP TO:

McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696

SEND RESULTS TO:

Client Name: Jacobs Petroleum
Company: McLaren
Address: Alameda
Phone: (415) 521-5200

PROJECT NAME: MKT: PI - Emergency PROJECT #: _____

LABORATORY PROJECT (LP) #: 2816 P.O. #: _____

Relinquished by: (Signature) [Signature] Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received at lab by: (Signature) [Signature] Date: 3-1-90 Time: 11:00 AM

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time	Analysis Requested	T.A.T.	Type of Container	Number of Containers	Lab ID
<u>122851</u> <u>122852</u>	<u>W-1</u>	<u>2/25/90</u> <u>1315</u>	<u>TPH / D</u>	<u>2</u>	<u>1 Lt Amber</u>	<u>3</u>	<u>37580</u>
<u>122855</u> <u>122856</u>	<u>W-14</u>	<u>2/28/90</u> <u>1600</u>				<u>2</u>	<u>37581</u>
<u>122857</u> <u>122858</u> <u>122859</u>	<u>W-7</u>	<u>1700</u>				<u>3</u>	<u>37582</u>

Special Instructions/Comments: W-1 + W-14 are low producing wells, only able to get 2 liters of sample

Sample Condition Upon Receipt:

Expected Analytical Turn-Around Times:

- 1 = Immediate Attention: 24 hours
- 2 = Rush: 48 hours
- 3 = Standard: 1 week
- 4 = Standard: 2 weeks

Laboratory Disposition:
Storage Refrigerator ID 4- Secured: Yes No
Storage Freezer ID _____

McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696

Client: Julie Menack
McLaren
Alameda, CA 94501

L.P. #:	2816	Project Name:	Market Place Emeryville
Date Rec'd:	3/1/90	Project #:	
Date Due:	3/5/90	Contact:	Julie Menack
Section:	GC	Phone:	415-521-5200

Samples received on 3/1/90 @ 11:00 under Chain(s) of Custody 002384. Chain(s) of Custody agree(s) with sample container(s). Samples received included:

- 3 sample(s) in 1 liter ambers for TPH/D analysis(es).

Correction(s) made and/or Problem(s): None



QUALITY CONTROL REPORT

METHOD BLANK RESULTS: A method blank (MB) is a laboratory generated sample free of any contamination. The method blank assesses the degree to which the laboratory operations and procedures cause false-positive analytical results for your samples. The method blank results associated with your samples are attached.

LABORATORY CONTROL SPIKES

The LCS Program:

The laboratory control spike is a well characterized matrix (organic pure type II water for water samples and contamination free sand for soil samples) which is spiked with certain target parameters and analyzed in duplicate at approximately 10% of the sample load in order to assure the accuracy and precision of the analytical method. The results of the laboratory control spike associated with your samples are attached.

Accuracy is measured using percent recovery, i.e.:

$$\text{Percent Recovery} = \frac{\text{(measured concentration)}}{\text{(actual concentration)}} \times 100$$

Precision is measured using the relative percent difference (RPD) from duplicate tests, i.e.:

$$\text{RPD} = \frac{\% \text{ Recovery of Spike}_{(1)} - \% \text{ Recovery of Spike}_{(2)}}{(\% \text{ Recovery of Spike}_{(1)} + \% \text{ Recovery of Spike}_{(2)})/2} \times 100$$

Control limits for accuracy and precision are different for different methods. They may also vary with the different sample matrices. They are based on laboratory average historical data and EPA limits which are approved by the Quality Assurance Department. McLaren Analytical Laboratory reanalyzes samples if the precision or accuracy is out of acceptance control limits.



(DC3-CN2816)

QUALITY CONTROL REPORT

METHOD BLANK

Method: TPH-D by LUFT
Units: ug/ml (ppm)

COMPOUNDS	REPORTING LIMIT	RESULTS OF THE MB
Total Petroleum Hydrocarbons		
Diesel	0.5	BRL

LABORATORY CONTROL SPIKE

Method: TPH-D by LUFT
Units: ug/ml (ppm)

COMPOUNDS	CONCENTRATION		ACCURACY	PRECISION
	SPIKED	MEASURED	% RECOVERY	RPD
Diesel Range	2.5	2.1	85	0



COMMENTS

The samples in this project were analyzed by the methods requested on the chain of custody with no deviations in procedure.

ANALYTICAL RESULTS

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content. Results are corrected for concentrations of analytes which may be found in the blanks.

ABBREVIATIONS USED IN THIS REPORT:

BRL	Below reporting limit
MB	Method Blank
MS	Matrix Spike
MSD	Matrix Spike Duplicate
LCS	Laboratory Control Spike
LCSD	Laboratory Control Spike Duplicate
RPD	Relative Percent Difference

Results are on the attached data sheets.



TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2816
Sample
Location: W-1 Lab ID
Number: 37580
Sample
Number: 122851-52 Date
Received: 03/01/90
Date
Sampled: 02/28/90 Date
Analyzed: 03/02/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u>	<u>REPORTING LIMIT</u>
	ug/ml (ppm)	ug/ml (ppm)
Diesel Range	BRL	0.5

Comments:

Approved By: E. Danek Date: 03/05/90
E. Danek



TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2816
Sample Location: W-14 Lab ID
Number: 37581
Sample Number: 122855-56 Date
Received: 03/01/90
Date Sampled: 02/28/90 Date
Analyzed: 03/02/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u>	<u>REPORTING LIMIT</u>
	ug/ml (ppm)	ug/ml (ppm)
Diesel Range	BRL	0.5

Comments:

Approved By: E. Danek Date: 03/05/90
E. Danek



TOTAL PETROLEUM HYDROCARBONS
DIESEL (by LUFT Method)

Project: Market Place - Emeryville Lab Project
Number: 2816
Sample Location: W-7 Lab ID
Number: 37582
Sample Number: 122857-59 Date
Received: 03/01/90
Date Sampled: 02/28/90 Date
Analyzed: 03/02/90

<u>PETROLEUM HYDROCARBONS</u>	<u>CONCENTRATION</u> ug/ml (ppm)	<u>REPORTING LIMIT</u> ug/ml (ppm)
Diesel Range	BRL	0.5

Comments:

Approved By: E. Danek Date: 03/05/90





McLaren Environmental Engineering

Date: March 7, 1990
LP #: 2823

Julie Menack
McLaren
980 Atlantic Avenue
Alameda, CA

Dear Ms. Menack:

Enclosed are the laboratory results for the four sample(s) submitted by you to the McLaren Analytical Laboratory on March 2, 1990, for the project *Market Place - Emeryville*.

The analyses you requested are:

TPH-D (4 - Water)

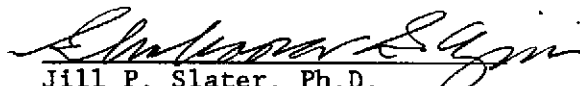
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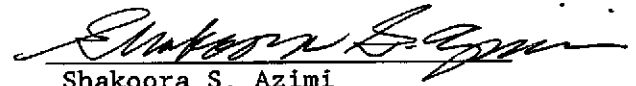
1. A copy of the chain of custody
2. Sample description (chain of custody summary form)
3. Quality Control Report
4. Comments
5. Analytical results

Unless otherwise instructed by you, samples will be disposed of two weeks from the date of this letter.

Thank you for choosing McLaren Analytical Laboratory. We are looking forward to serving you in the future. Should you have any questions concerning this analytical report or the analytical methods employed, please do not hesitate to call.

Sincerely,


Jill P. Slater, Ph.D.
Laboratory Director


Shakoora S. Azimi
Quality Assurance Officer



002370

CHAIN OF CUSTODY RECORD

Sampler: Louise Malin Date Shipped: 3/1/90 Carrier: Fed. X.

Telephone: (415) 521-5200 Airbill Number: _____ Cooler: _____

SHIP TO:

McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696

SEND RESULTS TO:

Client Name: Julie Monack
Company: McLaren
Address: Alameda
Phone: (415) 521-5200

MARKET PLACE - EMERYVILLE

PROJECT NAME: MUT DL - Emery PROJECT #: _____

LABORATORY PROJECT (LP) #: 2823 P.O. #: _____

Relinquished by: (Signature) [Signature] Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received at lab by: (Signature) [Signature] Date: 3-2-90 Time: 9:00

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time	Analysis Requested	T.A.T.	Type of Container	Number of Containers	Lab ID
<u>122860</u> <u>122861</u> <u>122862</u>	<u>W-16</u>	<u>2/27/90</u> <u>1755</u>	<u>TPH/D</u>	<u>2</u>	<u>1st</u> <u>Am.</u>	<u>3</u>	<u>37628</u>
<u>122863</u> <u>122864</u> <u>122865</u>	<u>W-13</u>	<u>2/28/90</u> <u>1830</u>	<u>TPH/D</u>	<u>2</u>	<u>1st</u> <u>Am.</u>	<u>3</u>	<u>37629</u>
<u>122866</u> <u>122867</u> <u>122868</u>	<u>W-8</u>	<u>3/1/90</u> <u>0930</u>	<u>TPH/D</u>	<u>2</u>	<u>1st</u>		

Special Instructions/Comments:

Sample Condition Upon Receipt:

Expected Analytical Turn-Around Times:

- 1 = Immediate Attention: 24 hours
- 2 = Rush: 48 hours
- 3 = Standard: 1 week
- 4 = Standard: 2 weeks

Laboratory Disposition: _____
Storage Refrigerator ID: 4-3
Storage Freezer ID: _____
Secured: Yes No



002372

CHAIN OF CUSTODY RECORD

Sampler: Louie Malixi Date Shipped: 3/1/90 Carrier: Fed. X

Telephone: (415) 521-5200 Airbill Number: _____ Cooler: _____

SHIP TO:
McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696

SEND RESULTS TO:
Client Name: Julia Menach
Company: McLaren
Address: Alameda
Phone: (415) 521-5200

PROJECT NAME: MKT P1. Emeryville **PROJECT #:** _____

LABORATORY PROJECT (LP) #: 2823 **P.O. #:** _____

Relinquished by: (Signature) [Signature] Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received by: (Signature) _____ Date: _____ Time: _____

Relinquished by: (Signature) _____ Received at lab by: (Signature) Agnes Buxton Date: 3-2-90 Time: 9:00

ANALYSIS REQUEST

Sample ID Number	Sample Description	Date/Time	Analysis Requested	T.A.T.	Type of Container	Number of Containers	Lab ID
<u>122866</u> <u>122867</u> <u>122868</u>	<u>W-8</u>	<u>3/1/90</u> <u>0930</u>	<u>TPH/D</u>	<u>2</u>	<u>1ct.</u> <u>Am.</u>	<u>3</u>	<u>37630</u>
<u>122869</u> <u>122870</u> <u>122871</u>	<u>W-4</u>	<u>3/1/90</u> <u>1100</u>	<u>TPH/D</u>	<u>2</u>	<u>1ct.</u> <u>Am.</u>	<u>3</u>	<u>37631</u>

Special Instructions/Comments:

Sample Condition Upon Receipt:

Expected Analytical Turn-Around Times:

- 1 = Immediate Attention: 24 hours
- 2 = Rush: 48 hours
- 3 = Standard: 1 week
- 4 = Standard: 2 weeks

Laboratory Disposition: 4-3 Secured: Yes No
Storage Refrigerator ID _____
Storage Freezer ID _____

McLaren Analytical Laboratory
11101 White Rock Road
Rancho Cordova, CA 95670
(916) 638-3696

Client: Julie Menack
McLaren
Alameda, CA 94501

L.P. #:	2823	Project Name:	Market Place-Emeryville
Date Rec'd:	3/2/90	Project #:	
Date Due:	3/6/90	Contact:	Julie Menack
Section:	GC	Phone:	415-521-5200

Samples received on 3/2/90 @ 9:00 under Chain(s) of Custody 002370 and 002372.
Chain(s) of Custody agree(s) with sample container(s). Samples received
included:

- 4 sample(s) in 1 liter ambers for TPH/D analysis(es).

Correction(s) made and/or Problem(s): None



QUALITY CONTROL REPORT

METHOD BLANK RESULTS: A method blank (MB) is a laboratory generated sample free of any contamination. The method blank assesses the degree to which the laboratory operations and procedures cause false-positive analytical results for your samples. The method blank results associated with your samples are attached.

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Accuracy is measured using percent recovery, i.e.:

$$\text{Percent Recovery} = \frac{\text{(measured concentration)}}{\text{(actual concentration)}} \times 100$$

Precision is measured using the relative percent difference (RPD) from duplicate tests, i.e.:

$$\text{RPD} = \frac{\% \text{ Recovery of Spike}_{(1)} - \% \text{ Recovery of Spike}_{(2)}}{(\% \text{ Recovery of Spike}_{(1)} + \% \text{ Recovery of Spike}_{(2)})/2} \times 100$$

Control limits for accuracy and precision are different for different methods. They may also vary with the different sample matrices. They are based on laboratory average historical data and EPA limits which are approved by the Quality Assurance Department. McLaren Analytical Laboratory reanalyzes samples if the precision or accuracy is out of acceptance control limits.



QUALITY CONTROL REPORT

METHOD BLANK

Method: TPH-D by LUFT
Units: ug/ml (ppm)

COMPOUNDS	REPORTING LIMIT	RESULTS OF THE MB
Total Petroleum Hydrocarbons		
Diesel	0.5	BRL

LABORATORY CONTROL SPIKE

Method: TPH-D by LUFT
Units: ug/ml (ppm)

COMPOUNDS	CONCENTRATION		ACCURACY % RECOVERY	PRECISION RPD
	SPIKED	MEASURED		
Diesel Range	2.5	2.5	100	4



COMMENTS

The samples in this project were analyzed by the methods requested on the chain of custody with no deviations in procedure.

ANALYTICAL RESULTS

Test methods may include minor modifications of published EPA methods (e.g., reporting limits or parameter lists). Reporting limits are adjusted to reflect dilution of the sample when appropriate. Solids and waste are analyzed with no correction made for moisture content. Results are corrected for concentrations of analytes which may be found in the blanks.

ABBREVIATIONS USED IN THIS REPORT:

BRL	Below reporting limit
MB	Method Blank
MS	Matrix Spike
MSD	Matrix Spike Duplicate
LCS	Laboratory Control Spike
LCSD	Laboratory Control Spike Duplicate
RPD	Relative Percent Difference

Results are on the attached data sheets.



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