



ENVIRONMENTAL PROTECTION  
95 MAY 10 PM 12:50

Ms. Juliet Shin  
Senior Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Department of Environmental Health  
Hazardous Materials Division  
1131 Harbor Bay Parkway, 2nd Floor  
Alameda, California 94502-6577

May 07, 1996

RE: Third consecutive quarter (2nd Quarter, 1996) groundwater monitoring: 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, California.

Dear Ms. Shin;

This letter report provides the results of the third consecutive quarter (Second Quarter, 1996) sampling of the monitoring wells at 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, California (Figure 1).

Depth to water in each monitoring well was measured to +/- 0.01 feet using a Solinst Model 101 water level meter on April 10, 1996. The depth to water was converted to potentiometric surface elevation by subtracting the measured depths to water from the casing top elevation. This information is presented below.

WELL AND GROUNDWATER ELEVATIONS  
APRIL 10, 1996

Well Number	Top of Casing Elevation (feet, msl)	Time of Depth measurement	Depth to Water (feet)	Groundwater Surface Elevation (feet, msl)
MW-4	8.58	12:18	5.92	2.66
MW-K	8.43	12:09	5.08	3.35
MW-L	7.64	12:16	4.92	2.72
MW-N	8.96	12:13	5.23	3.73

The groundwater flow direction (more precisely direction of groundwater gradient, since the horizontal hydraulic conductivity anisotropy is unknown) for the triangle with a well at each apex is S 5.0° E at a gradient of 0.0113. Figure 2 is a potentiometric surface map showing well locations and groundwater surface contours as measured on April 10, 1996. Historic water level information follows.

MW-4	10/17/95	09:49	6.57	2.01
	01/11/96	12:46	8.58	2.14
	04/10/96	12:18	5.92	2.66
MW-K	10/17/95	10:01	5.74	2.69
	01/11/96	12:36	8.43	2.91
	04/10/96	12:09	5.08	3.35
MW-L	10/17/95	09:53	5.78	1.86
	01/11/96	12:45	7.64	2.59
	04/10/96	12:16	4.92	2.72
MW-N	10/17/95	09:56	6.02	2.94
	01/11/96	12:41	8.96	3.29
	04/10/96	12:13	5.23	3.73

#### GROUNDWATER FLOW DIRECTION AND GRADIENT

10/17/95 S 16.4° W at a gradient of 0.0053  
 01/11/96 S 19.1° E at a gradient of 0.0104  
 04/10/96 S 5.0° E at a gradient of 0.0113

AVERAGE S 2.6° E at a gradient of 0.009

Following water level measurements the groundwater surface at each monitoring well was checked for free product, observation of sheen, and odor. No free product, sheen, or hydrocarbon odor was noted.

The monitoring wells were purged by pumping with an "ES-60" submersible pump marketed for monitoring well purging by Enviro-Tech Services Co. of Martinez, California. Field measured water quality parameters were measured using a Cambridge Scientific Industries Hydac™ Conductivity Temperature pH Tester. Well purging activities and the field measured water quality parameters are documented in Attachment A. For each well, purging continued until specific conductance stabilized to +/- 5% on consecutive readings.

Groundwater samples were collected directly from the end of the pump discharge tubing with the pump discharging at a rate of less than one liter per minute. Groundwater samples for TPH-D analysis were collected in one liter amber glass bottles. Groundwater samples for TPH-G plus BTEX were collected in 40-mL glass vials with Teflon™ septum lids.

Groundwater sample bottles were labeled and placed in an ice chest with 2 Liter plastic bottles containing ice. Chain-of-Custody forms were filled out and were delivered with the ice chest to Chromalab, Inc. of Pleasanton, California, a state certified laboratory.

Groundwater samples from both monitoring wells MW-4 and MW-L were found not to contain detectable concentrations of petroleum hydrocarbons. Monitoring well MW-4 was found to contain 630 micrograms per liter ( $\mu\text{g/L}$ ) of hydrocarbons in the Diesel range that do not match the laboratory diesel standard. As detailed in the December 22, 1995 letter these are attributed to hydrocarbons derived from decayed vegetation encountered in the monitoring well borehole. The laboratory report, including chromatograms, and Chain-of-Custody documentation is contained in Attachment B. The historic groundwater sample analytical results are summarized below.

*really?  
 What  
 witness?*

All concentrations are expressed in micrograms per liter ( $\mu\text{g/L}$ ).

Well	TPH-D	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes
<b>MW-4</b>						
10/17/95	440*	<50	<0.5	<0.5	<0.5	<0.5
* Superior Analytical reports all compounds from C10-C25 as Diesel.						
01/11/96	<50	<50	<0.5	<0.5	<0.5	<0.5
Chromalab reported 460 $\mu\text{g/L}$ unknown hydrocarbons in the diesel range.						
04/10/96	630	<50	<0.5	<0.5	<0.5	<0.5
Chromalab reported 630 $\mu\text{g/L}$ , but not matching their diesel standard. See also the attached April 4, 1996 letter.						
<b>MW-L</b>						
10/17/95	180*	<50	1.3	<0.5	0.6	0.5
* Superior Analytical reports all compounds from C10-C25 as Diesel.						
01/11/96	<50	<50	<0.5	<0.5	<0.5	<0.5
04/10/96	<50	<50	<0.5	<0.5	<0.5	<0.5
<b>California*Primary MCL's</b>						
	na	na	1	na	680	1,750
<b>US E.P.A.*Primary MCL's</b>						
	na	na	5	1,000	700	10,000

na - not available

Marshack, Jon B., D. Env. 1991, A Compilation of Water Quality Goals, Central Valley Regional Water Quality Control Board.

Juliet Shin  
May 07, 1996  
Page 4

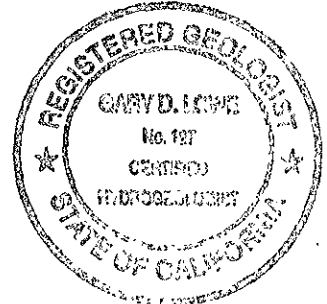
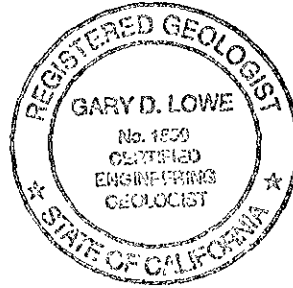
The fourth consecutive quarter (Third Quarter, 1996) sampling event at 1081-1085 Eastshore Highway (formerly 1077 Eastshore Frontage Road), Albany, California is scheduled for the week of July 08, 1996.

Please do not hesitate to call me at (510) 373-9211 should you have any questions.

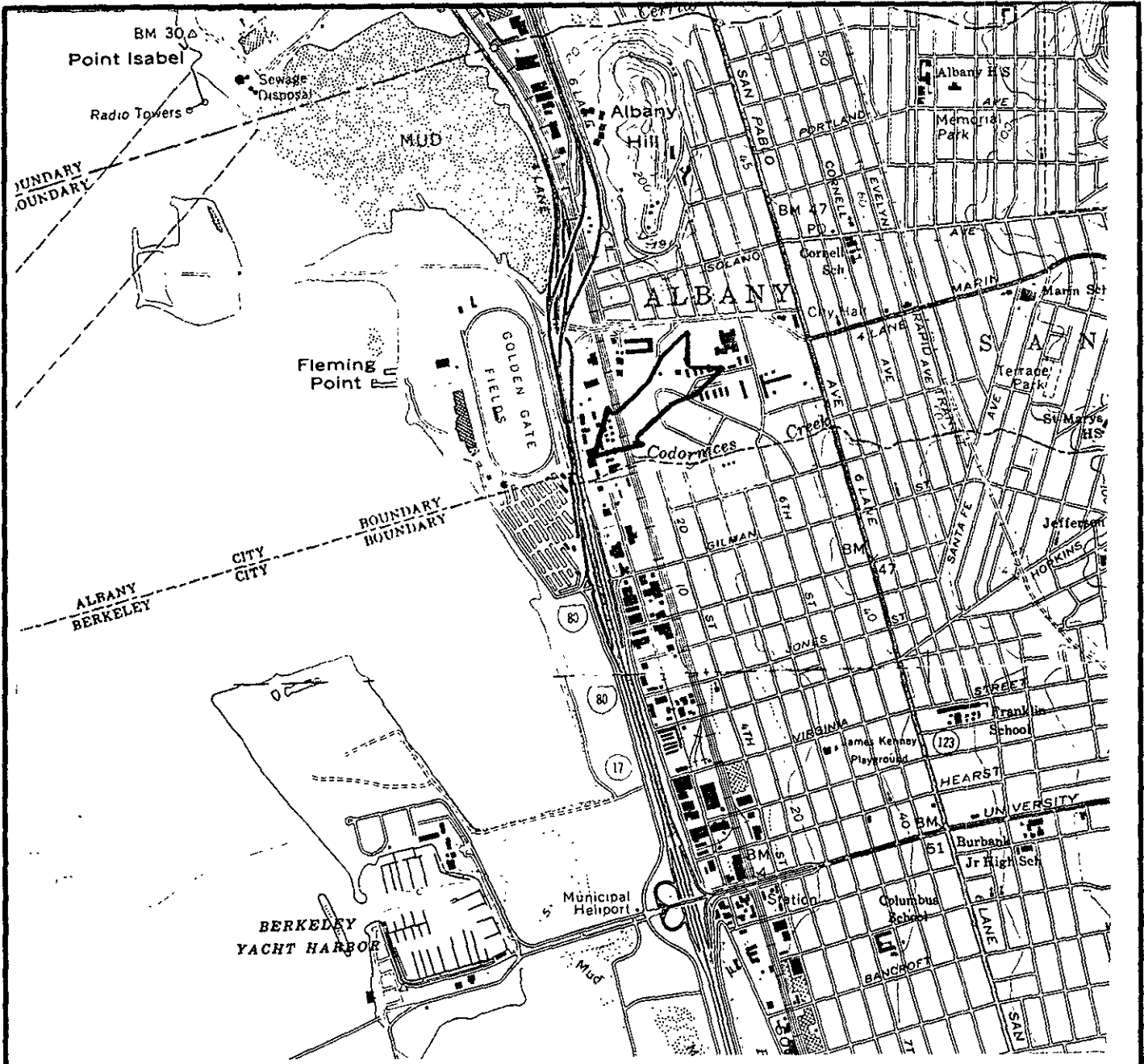
Sincerely,



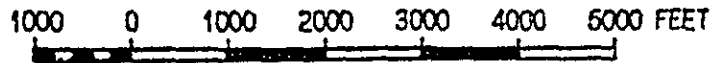
Gary D. Lowe, R.G., C.E.G., C.H.  
Principal, Hydrogeologist  
Sole Proprietor



xc: Mr. John Piggott, Wilanco, Inc., P.O. Box 8117, Berkeley, CA,  
94563



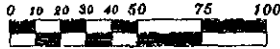
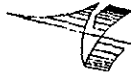
Base from U.S. Geological Survey Richmond and Oakland West 7.5 Minute Series Topographic Maps



**H<sub>2</sub>OGEOL**  
A GROUND WATER CONSULTANCY

**SITE LOCATION MAP**  
**1081-1085 EASTSHORE HIGHWAY**  
**ALBANY, CALIFORNIA**

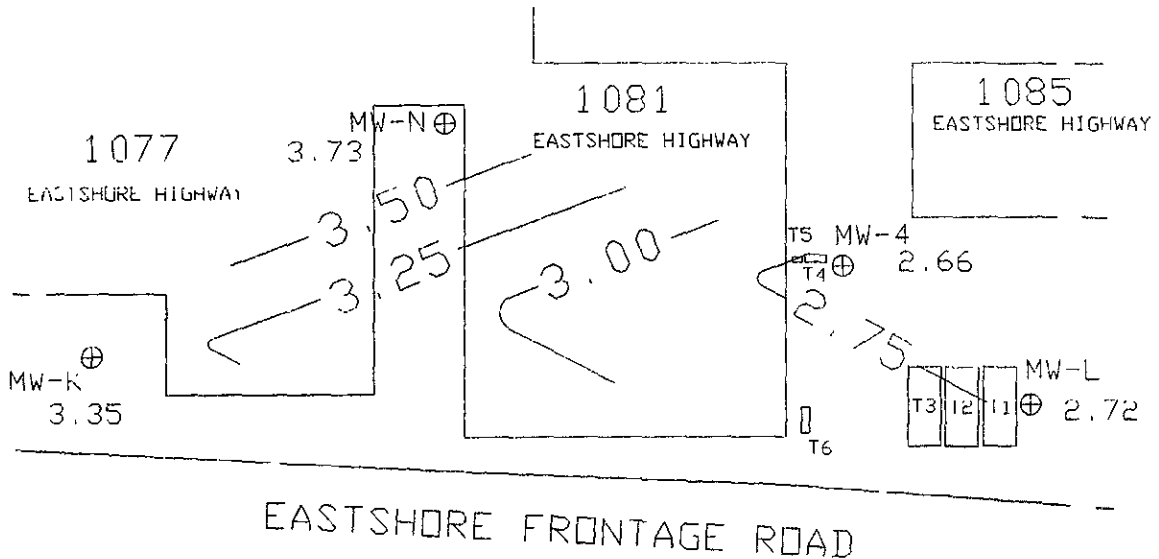
**FIGURE**  
**1**



MW-N Monitoring Well name/Number  
 ⊕ Monitoring Well Location  
 Groundwater Surface Elevation at monitoring well

T1, T2, & T3 Diesel  
 T4, T5, & T6 Gasoline  
 Information from ENSR, June 17, 1993.  
 Winaco Tank Removal Report

Potentiometric Surface Contour and Contour Elevation



GRADIENT = 0.0113 Feet/Foot

DIRECTION OF GRADIENT = S 5.0° E

(Approximate groundwater flow direction, uncorrected for hydraulic conductivity anisotropy).

Tank locations and dimensions are approximate after ENSR, 1993, Figure 1.



POTENTIOMETRIC SURFACE MAP  
 APRIL 10, 1996  
 1077-1085 EASTSHORE HIGHWAY  
 ALBANY, CALIFORNIA

FIGURE  
**2**



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-373-9211

**ATTACHMENT A**

**FIELD DATA SHEET  
LOG OF WELL SAMPLING ACTIVITIES**

# LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW- L      Project Name: 1081-1085 Eastshore Highway, Albany, CA      Date: 04/10/96

Sampled by: G. Lowe & R. Vorst      Weather Conditions: clear, breezy, 67°F

Well Location: \_\_\_\_\_ Well Casing Diameter: 2-inch      Depth of Well Casing: 14.20

Measuring Point: Top of PVC Casing      Initial Depth to Water: 4.92      Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.5 / 4.5      Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump  
Grundfos Submersible Pump  
Centrifugal Pump/ES-60 Submersible  
ES-60 Submersible Pump      X

Sampling Method: Peristaltic Pump  
Grundfos Submersible Pump  
ES-60 Sub. Pump <1L/min.      X  
Teflon Bailor

Purging Rate: See below      Total Discharge: 6.8      Casing Volumes Purged: 4.6

Comments: \_\_\_\_\_

Waste Water Disposal: To property site drum.

Starting Time: 13:02

Time Pump on: 13:05

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (µS/cm)	Color
04/10/96	13:09	4.2	6.79	67.8	14420	x 2	14	Colorless
"	13:13	5.6	7.01	68.0	14330	x 2		"
"	13:16	5.9 / complete	7.11	68.2	<del>14350</del>	x	9,350	"
"	13:19	6.2 / complete	7.13	68.2	<del>9520</del>	x	9,520	"
"	13:21	6.5 / complete	7.09	67.9		x	9,210	"
"	13:24	6.8 / complete	7.15	68.1		x	9,290	"
	:					x		
	:					x		
	:					x		
	:					x		
	:					x		

Sample Identification: 1081-85/MW- L      Sample Time: 13:25

### TURBIDITY ANALYSIS

Finishing Time: 13:50      Time Analyzed: \_\_\_\_\_      NTU Value: \_\_\_\_\_



# LOG OF WELL SAMPLING ACTIVITIES

Well Identification: MW-4 Project Name: 1081-1085 Eastshore Highway, Albany, CA Date: 04/10/96

Sampled by: G. Lowe & R. Vorst Weather Conditions: clear, breezy, 67°F

Well Location: \_\_\_\_\_ Well Casing Diameter: 2-inch Depth of Well Casing: 14.21

Measuring Point: Top of PVC Casing Initial Depth to Water: 5.92 Final Depth to Water: Not measured

Casing Volume (1 vol./ 3 vol): 1.3/ 4.0 Well Borehole Volume: \_\_\_\_\_

Purging Method: Centrifugal Pump/Peristaltic Pump  
Grundfos Submersible Pump  
Centrifugal Pump/ES-60 Submersible  
ES-60 Submersible Pump X

Sampling Method: Peristaltic Pump  
Grundfos Submersible Pump  
ES-60 Sub. Pump <1L/min. X  
Teflon Bailer

Purging Rate: See below Total Discharge: 5.5 Casing Volumes Purged: 4.1

Comments: \_\_\_\_\_

Waste Water Disposal: To property site drum.

Starting Time: 12:23

Time Pump on: 12:33

Date	Time	Gal. Purged	pH	T deg. F	Diluted S.C.	Dil. Factor	S.C. (µS/cm)	Color
04/10/96	12:40	2.8	6.78	70.2		x	= 7,530	Gray
"	12:43	3.2	6.79	67.9		x	= 7,400	"
"	12:45	3.6	6.78	67.4		x	= 6,470	"
"	12:48	4.1	6.91	67.7		x	= 4,780	"
"	12:50	4.5	6.82	67.9		x	= 4,960	"
"	12:52	5.0	6.79	67.7		x	= 5,110	"
"	12:54	5.5	6.81	67.8		x	= 5,020	"
	:					x	=	
	:					x	=	
	:					x	=	
	:					x	=	

Sample Identification: 1081-85/MW-4 Sample Time: 12:55

### TURBIDITY ANALYSIS

Finishing Time: 13:02 Time Analyzed: \_\_\_\_\_ NTU Value: \_\_\_\_\_



P.O.Box 2165 ■ Livermore, California 94551 ■ 510-373-9211

## **ATTACHMENT B**

**LABORATORY ANALYTICAL RESULTS  
AND CHAIN-OF-CUSTODY DOCUMENTATION**

# CHROMALAB, INC.

Environmental Services (SDB)

April 16, 1996

Submission #: 9604589

H2O GEOL

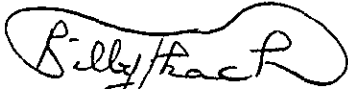
Atten: Gary Lowe

Project: WILANCO, INC  
Received: April 10, 1996

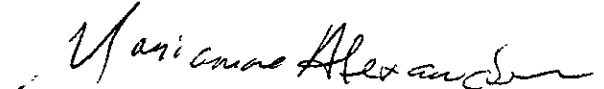
re: 2 samples for Gasoline and BTEX compounds analysis.  
Method: EPA 5030/8015M/8020

Matrix: WATER  
Sampled: April 10, 1996      Run#: 1073      Analyzed: April 15, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
82220	1081-85/MW-4	N.D.	N.D.	N.D.	N.D.	N.D.
82221	1081-85/MW-L	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits		50	0.50	0.50	0.50	0.50
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		116	107	110	113	116



Billy Thach  
Chemist



Marianne Alexander  
Gas/BTEX Supervisor

# CHROMALAB, INC.

Environmental Services (SDB)

April 24, 1996

Submission #: 9604589

H2O GEOL

Atten: Gary Lowe

Project: WILANCO, INC

Received: April 10, 1996

re: 2 samples for TPH - Diesel analysis.

Method: EPA 3510/8015M

Sampled: April 10, 1996

Matrix: WATER

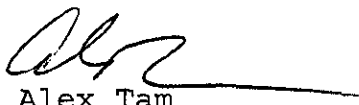
Run#: 1045

Extracted: April 11, 1996

Analyzed: April 12, 1996

Spl#	CLIENT SPL ID	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
82220	1081-85/MW-4	630	50	N.D.	93.4	1.0
Note: HYDROCARBON REPORTED DOES NOT MATCH CHROMALAB'S DIESEL STANDARD.						
82221	1081-85/MW-L	N.D.	50	N.D.	93.4	1.0

  
Dennis Mayugba  
Chemist

  
Alex Tam  
Semivolatiles Supervisor



Software Version: 4.0<00C4A>  
 Sample Name : 4389/MW-L1081-95  
 Sample Number: 82221  
 Operator :

Time : 4/12/96 13:00  
 Study :

Instrument : GD6000  
 Autosampler :  
 Reck/Vial : 0/0

Channel : A A/D mV Range : 10000

Interface Serial # : 2303570742 Data Acquisition Time: 4/12/96 12:25  
 Delay Time : 0.00 min.  
 End Time : 35.00 min.  
 Sampling Rate : 5.0000 pts/sec

Raw Data File : D:\GLYCOL60\G411031.RAW  
 Result File : D:\GLYCOL60\G411031.RST  
 Inst Method : C:\TC4\DEFG60 from D:\GLYCOL60\G411031.RST  
 Proc Method : C:\TC4\DEFG60  
 Calib Method : C:\TC4\DEFG60  
 Sequence File : C:\TC4\DATA\GD041196.SEO

Sample Volume : 1 ul Area Reject : 0.000000  
 Sample Amount : 1.0000 Dilution Factor : 1.00

### G6000 DIESEL REPORT

Peak #	Time [min]	Area [µV*s]	HL	Raw Amount	Component Name	Diesel ppm
1	6.841	63996.69	*BV	0.3814		0.3814
2	7.913	34523.31	*VB	0.2057		0.2057
3	8.329	7478.20	*BV	0.0446		0.0446
4	8.609	11690.27	*VV	0.0697		0.0697
5	8.911	3299.68	*VV	0.0197		0.0197
6	9.004	4995.02	*VV	0.0298		0.0298
7	9.330	4744.76	*VV	0.0283		0.0283
8	9.566	3847.64	*VV	0.0229		0.0229
9	9.771	4113.43	*VB	0.0245		0.0245
10	10.405	4749.67	*BV	0.0283		0.0283
11	10.543	5217.60	*VV	0.0311		0.0311
12	10.709	2826.72	*VB	0.0168		0.0168
13	10.927	13892.59	*BV	0.0828		0.0828
14	11.228	13463.18	*VB	0.0802		0.0802
15	11.345	3704.00	*BV	0.0221		0.0221
16	11.660	5038.68	*VV	0.0300		0.0300
17	11.869	2469.81	*VV	0.0147		0.0147
18	11.975	4701.92	*VV	0.0280		0.0280
19	12.335	25633.60	*VV	0.1528		0.1528
20	12.513	12699.54	*VV	0.0757		0.0757
21	12.783	3968.17	*VV	0.0236		0.0236
22	12.857	4923.62	*VV	0.0293		0.0293
23	13.033	3426.90	*VB	0.0204		0.0204
24	13.237	2755.38	*BV	0.0164		0.0164
25	13.552	17965.26	*VV	0.1071		0.1071
26	13.953	2174.48	*VV	0.0130		0.0130
27	14.037	18500.51	*VV	0.1103		0.1103
28	14.476	6980.92	*VV	0.0416		0.0416
29	14.590	8826.07	*VV	0.0526		0.0526
30	14.709	2738.41	*VV	0.0163		0.0163
31	14.789	6260.33	*VV	0.0373		0.0373
32	14.871	2478.70	*VV	0.0148		0.0148
33	15.070	4877.07	*VV	0.0291		0.0291
34	15.234	23831.06	*VV	0.1420		0.1420
35	15.366	5530.99	*VV	0.0330		0.0330
36	15.460	11300.48	*VV	0.0673		0.0673
37	15.554	8943.24	*VV	0.0533		0.0533
38	15.772	14544.36	*VV	0.0867		0.0867
39	15.880	5252.95	*VV	0.0313		0.0313
40	15.972	7991.19	*VV	0.0476		0.0476
41	16.161	8402.73	*VV	0.0501		0.0501
42	16.278	9591.67	*VV	0.0572		0.0572
43	16.364	20614.72	*VV	0.1229		0.1229
44	16.549	7736.79	*VV	0.0461		0.0461
45	16.762	19507.68	*VV	0.0805		0.0805
46	16.870	2540.71	*VV	0.0151		0.0151
47	16.959	6770.17	*VV	0.0403		0.0403
48	17.080	5031.01	*VV	0.0300		0.0300
49	17.237	8757.40	*VV	0.0522		0.0522
50	17.357	4967803.53	*VB	25.4348	OTF	25.4348

*Handwritten notes:*  
 4/24/96  
 127.1740  
 RL  
 4/24/96  
 CAH

Peak #	Time [min]	Area [ $\mu$ V*s]	BL	Raw Amount	Component Name	Diesel ppm
51	17.959	11878.00	*BV	0.0708		0.0708
52	18.053	35743.92	*VV	0.2130		0.2130
53	18.323	21989.50	*VV	0.1310		0.1310
54	18.576	7931.01	*VB	0.0473		0.0473
55	18.875	1934.80	*BV	0.0115		0.0115
56	19.017	4339.48	*VV	0.0259		0.0259
57	19.279	43931.20	*VV	0.2618		0.2618
58	19.551	10213.92	*VV	0.0609		0.0609
59	19.873	67783.81	*VV	0.4040		0.4040
60	20.191	18655.57	*VV	0.1112		0.1112
61	20.506	11682.17	*VV	0.0696		0.0696
62	20.835	12794.89	*VV	0.0763		0.0763
63	21.070	7279.17	*VV	0.0434		0.0434
64	21.212	10390.64	*VV	0.0619		0.0619
65	21.366	7085.41	*VV	0.0422		0.0422
66	21.796	47217.50	*VV	0.2814		0.2814
67	21.945	26259.06	*VV	0.1565		0.1565
68	22.226	117516.97	*VV	0.7003		0.7003
69	22.501	13385.29	*VV	0.0798		0.0798
70	22.605	13296.39	*VV	0.0792		0.0792
71	22.784	45883.44	*VV	0.2734		0.2734
72	23.010	14565.16	*VV	0.0868		0.0868
73	23.196	104441.67	*VB	0.6224		0.6224
74	23.482	10222.00	*BV	0.0609		0.0609
75	23.560	31047.76	*VV	0.1850		0.1850
76	24.003	41106.97	*VV	0.2450		0.2450
77	24.095	26795.70	*VV	0.1597		0.1597
78	24.208	24127.53	*VV	0.1438		0.1438
79	24.329	16850.60	*VV	0.1004		0.1004
80	24.522	39824.59	*VV	0.2022		0.2022
81	24.601	40950.36	*VB	0.2440		0.2440
82	24.885	2572.00	*BB	0.0153		0.0153
		6330909.29		33.5582		33.5582

## Missing Component Report

Component Expected Retention (Calibration File)

All components were found

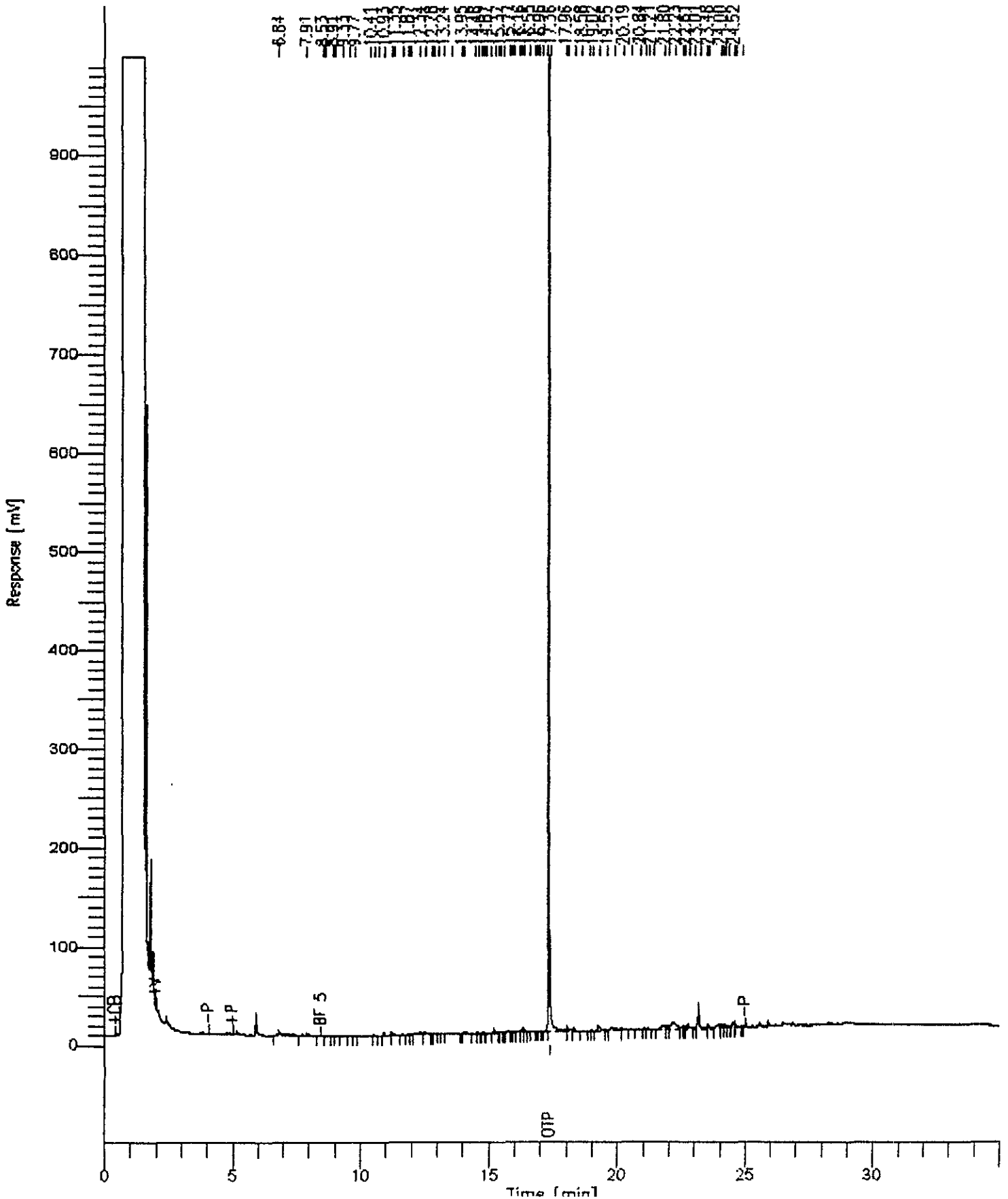
# diesel analysis

Sample Name : 4389/MW-11081-85  
FileName : D:\GLXCHE60\411031.raw  
Method : DEF860  
Start Time : 0.00 min  
Scale Factor: 0.0

End Time : 35.00 min  
Plot Offset: 0 mV

Sample #: 82231  
Date : 4/12/96 13:00  
Time of Injection: 4/12/96 12:23  
Low Point : 0.00 mV  
High Point : 1000.00 mV  
Plot Scale: 1000.0 mV

Page 1 of 1





# CHROMALAB, INC.

Environmental Services (SDB)

April 4, 1996

Dear ChromaLab customer:

ChromaLab is changing the way we report hydrocarbons using EPA method 8015. In the past, when we encountered hydrocarbons that do not match the pattern of our hydrocarbon standards, we reported them in this way:

Diesel N.D.:

*Note: Hydrocarbons in the Diesel range do not match our hydrocarbon standard profiles. Quantified using our diesel standard, amount is xx mg/Kg.*

We polled a group of our clients and checked with regulatory agencies. We thank them (that is, we thank you) for their time and their thoughts. ChromaLab will now be reporting the amount of hydrocarbon found in the range requested, and will comment if it doesn't match the pattern of the hydrocarbon requested, in this way:

Diesel XX mg/Kg

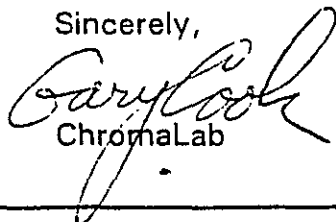
*Note: Hydrocarbon reported does not match the pattern of our Diesel standard.*

In addition, we will be providing more information to you about the hydrocarbon. If appropriate, we will note:

- *Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard.*
- *Hydrocarbon reported is in the late Diesel range, and does not match our Diesel standard.*
- *Hydrocarbon reported has characteristics of weathered/aged Diesel.*
- *Compounds reported are in the Diesel range. They do not have a pattern characteristic of hydrocarbons.*

We at ChromaLab hope this new format will give you better information for your projects. Please let us know if we can help further.

Sincerely,



ChromaLab