

TRANSMITTAL

Date: MAY 15, 2001

To: SUSAN HUGO
ALAMEDA COUNTY
ENVIRONMENTAL HEALTH

From: JIM GRIBI
Phone: (707)748-7743
Fax: (707)748-7763

MAY 18 2001

Number of pages, including this transmittal page: _____

Susan,

Enclosed please find: (1) A report, dated May 5, 2001, summarizing one year of quarterly monitoring of two wells at California Syrup & Extract; and (2) A report, dated September 30, 1999, documenting shallow soil sampling conducted within the California Syrup & Extract building. The soil boring investigation was conducted at the request of the site architect to assess soil conditions prior to construction (the building front was retained, and a new building was constructed behind the building front).

It is our understanding that the City of Emeryville requires a letter from Alameda County to assure them that there is no risk associated for commercial occupancy of the building. The building has been renamed "Pickle Werks" and is being used as office space. It is our understanding that the City has issued a temporary occupancy permit, thus, your timely help with this review would be most appreciated!

Although there are some residual gasoline impacts beneath the project site sidewalk, there are no indications that these hydrocarbons extend beneath the building itself. This is confirmed somewhat by the shallow boring investigation (September 30, 1999).

Please give me a call to discuss, or if you have questions or need additional information.

Thanks!

JIM

May 4, 2001

UST Local Oversight Program
Alameda County Health Agency
Department of Environmental Health
1131 Harbor Bay Parkway, 2nd Floor
Alameda, CA 94502-6577

Attention: Ms. Susan Hugo

Subject: Report of Four Quarters of Groundwater Monitoring
California Syrup & Extract UST Site
1355 55th Street, Emeryville, California
GA Project No.: 167-01-02

Ladies and Gentlemen:

Gribi Associates is pleased to submit this groundwater monitoring report on behalf of California Syrup & Extract for the subject site in Emeryville, California (see Figure 1 and Figure 2). This letter report documents monitoring of two groundwater monitoring wells at the site on December 29, 1999, March 23, 2000, June 28, 2000, and October 4, 2000.

DESCRIPTION OF SAMPLING ACTIVITIES

On the above-referenced sampling dates, a Gribi Associates scientist conducted groundwater monitoring activities for the two site wells, MW-1 and MW-2. Groundwater monitoring for each event was conducted in accordance with California LUFT Field Manual guidelines as follows:

- After unlocking and opening both of the monitoring wells, the water levels were measured to the nearest 0.01 foot with an electronic probe.
- Using a disposable PVC bailer, a single bail of groundwater was taken from each well to check for the presence or absence of floating free product.
- Each well was purged of approximately three well volumes. During the first, third, and fourth sampling events, the wells were purged using a clean disposable PVC bailer. During the second sampling event, the wells were purged using a peristaltic pump. During purging, temperature, pH, conductivity, and turbidity of the well water were periodically monitored and recorded until they stabilized. All purged water was stored onsite in a sealed container. Groundwater sampling data sheets for the four sampling events are contained in Appendix A.

- After purging the required volume of water, groundwater was poured directly from the bailer or pump outlet into laboratory-supplied containers. Each container was then tightly sealed with teflon-lined septa, making sure that no air bubbles were present in the containers. Each container was then labeled and placed in cold storage for transport to the analytical laboratory under formal chain-of-custody.

RESULTS OF GROUNDWATER MONITORING

Hydrologic Conditions

Groundwater was encountered in the two wells at depths ranging from about six feet in December 1999 and March 2000 to about eight feet in June 2000 and October 2000. Purged groundwater from MW-1 exhibited no hydrocarbon odors or sheens during any of the four sampling events. Purged groundwater from MW-2 exhibited strong hydrocarbon odors and sheens during the December 1999 monitoring event, moderate hydrocarbon odors with no sheens during the March 2000 monitoring event, and slight hydrocarbon odors with no sheens during the June 2000 and October 2000 monitoring events.

Laboratory Analytical Results

Groundwater samples from the two wells were analyzed for the following parameters with standard method turn around time on results.

USEPA 8015M Total Petroleum Hydrocarbons as Gasoline (TPH-G)
USEPA 8020/602 Benzene, Toluene, Ethylbenzene, Xylenes (BTEX)
USEPA 8020/602 Methyl-t-butyl Ether (MTBE)
USEPA 8015M Total Petroleum Hydrocarbons as Diesel/ Motor Oil (TPH-D/MO)

In addition, groundwater samples from the two wells were analyzed for the following parameter during the December 1999 and March 2000 sampling events.

USEPA 350.2 Total Ammonia

Groundwater samples were analyzed by Acculabs, a California-licensed analytical laboratory. Groundwater analytical results are summarized in Table 1. Laboratory data reports for both monitoring events are contained in Appendix B.

Table 1 SUMMARY OF GROUNDWATER ANALYTICAL RESULTS California Syrup & Extract UST Site											
Well Number	Sample Date	Water Depth	Constituent (ppm)								
			TPH-D	TPH-MO	TPH-G	B	T	E	X	MTBE	AMM
MW-1	09/24/94	8.01 ft	<0.050	<0.50	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	--
<23.95>	12/29/99	5.77 ft	<0.050	<0.100	0.120	<0.0005	<0.0005	<0.0005	0.00084	<0.050	<0.050
	03/23/00	4.79 ft	<0.050	<0.100	0.097	0.00058	<0.0005	<0.0005	0.0021	<0.005	<0.050
	06/28/00	8.90 ft	<0.050	<0.100	0.110	0.028	0.0022	0.0087	0.017	<0.005	--
	10/04/00	8.36 ft	<0.050	<0.100	<0.0050	<0.0005	<0.0005	<0.0005	0.0015	<0.005	--
MW-2	09/24/94	7.88 ft	0.630 ¹	<0.50	0.970	0.057	0.0034	0.0036	0.0030	--	<0.050
<23.41>	12/29/99	7.29 ft	<0.050	<0.100	8.80	0.430	0.037	0.250	0.410	<0.250	0.55
	03/23/00	6.03 ft	<0.050	<0.100	10.0	0.590	0.090	0.210	0.640	<0.250	<0.050
	06/28/00	7.11 ft	<0.050	<0.100	3.60	0.310	0.019	0.094	0.100	0.120	--
	10/04/00	7.64 ft	<0.050	<0.100	4.10	0.280	0.015	0.058	0.081	0.100	--

TPH-D = Total Petroleum Hydrocarbons as Diesel.
 TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
 TPH-G = Total Petroleum Hydrocarbons as Gasoline.
 B = Benzene
 T = Toluene
 E = Ethylbenzene
 X = Xylenes

MTBE = Methyl-t-Butyl Ether
 AMM = Total Ammonia
 <0.050 = Not detected above the expressed value
 -- = Not analyzed for this analyte.
 <23.95> = Top of casing mean sea level elevation (City of Emeryville datum).
 1 = Lab report states: "Does not match typical diesel pattern - lighter hydrocarbon present."

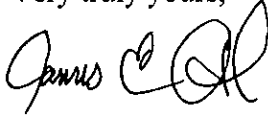
CONCLUSIONS

Although the concentrations of TPH-G are relatively high in groundwater in downgradient well MW-2, the relative concentrations of BTEX constituents are low, suggesting significant natural degradation of the gasoline. Note that the low levels of MTBE detected in groundwater samples in MW-2 during June 2000 and October 2000 are probably erroneous, given that the former gasoline UST adjacent to MW-2 (tank number 5 on Figure 2) was not used after about 1965. EPA Method 8020 is known to show false positive detections for MTBE, particularly when the sample contains other gasoline-range hydrocarbons.

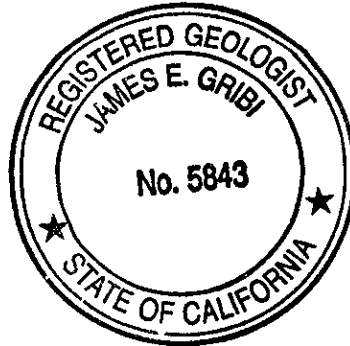
UST Local Oversight Program
Alameda County Health Agency
May 4, 2001
Page 4

We appreciate this opportunity to provide this report for your review. Please contact us if there are questions or if additional information is required.

Very truly yours,



James E. Gribi
Registered Geologist
California No. 5843

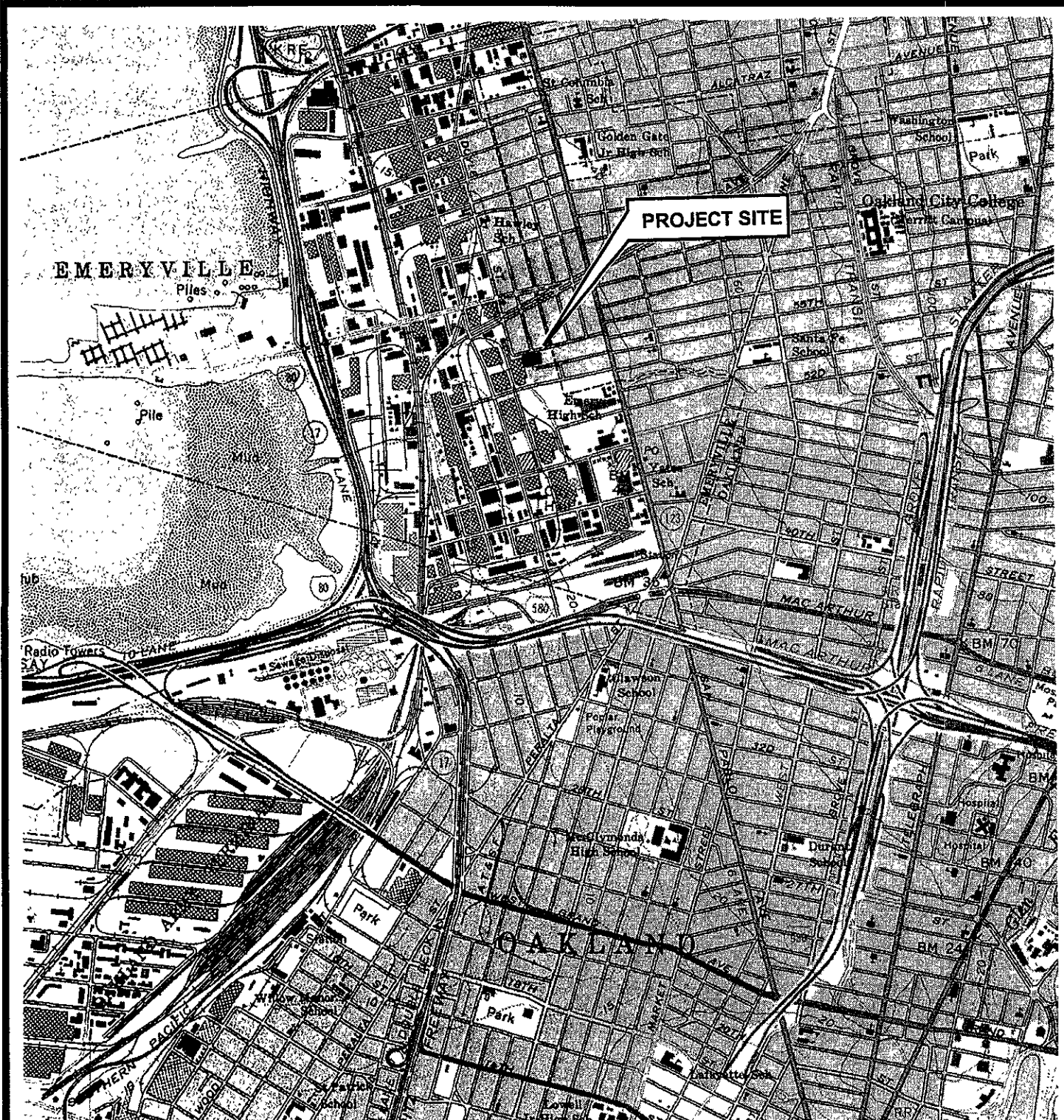


JEG:ct
Enclosure

c Mr. Ron Mooney, California Syrup & Extract

C:\My Documents\My Files\Reports\cse-qm4 rp1 wpd

FIGURES

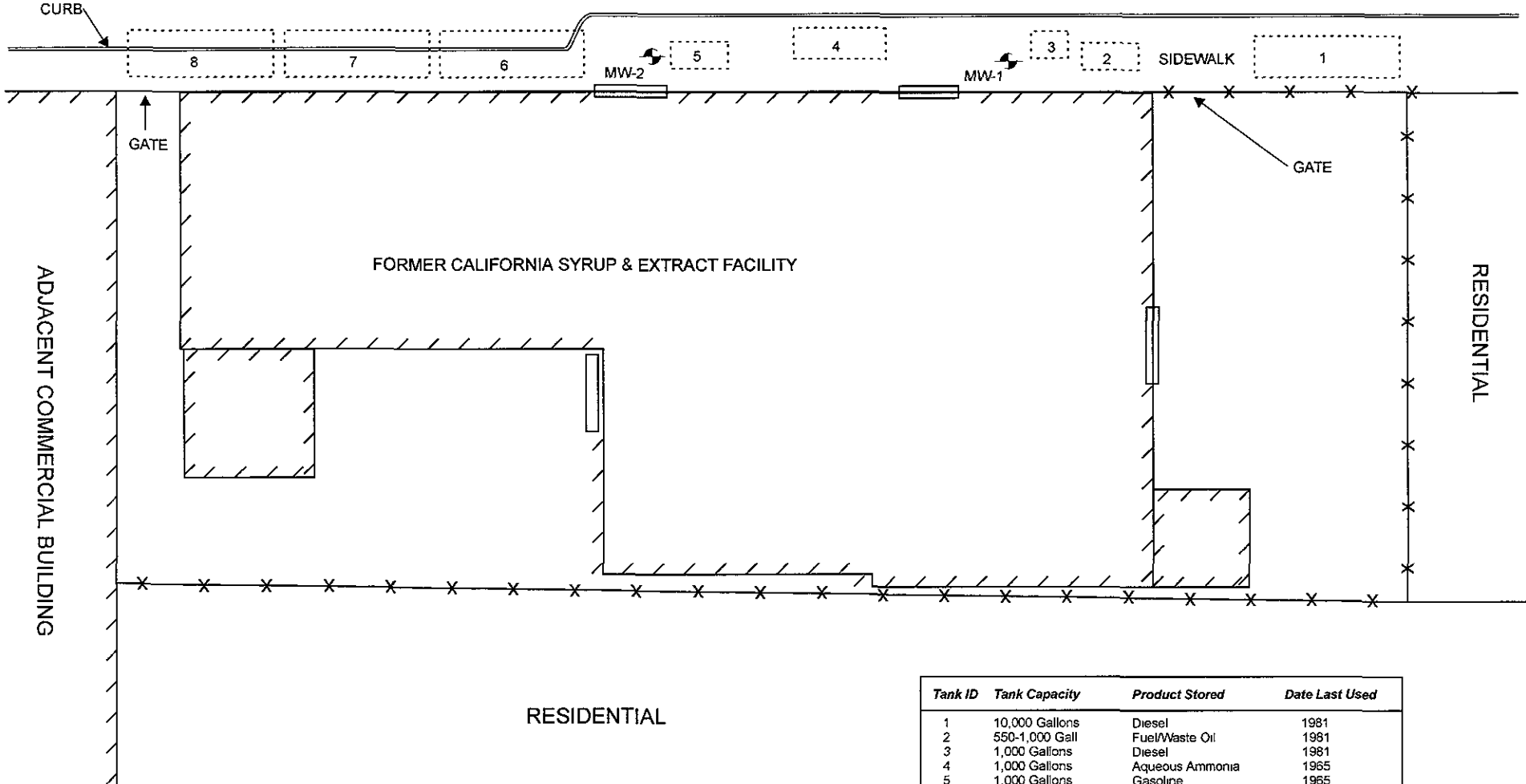


TOPOGRAPHY FROM USGS OAKLAND, WEST
7.5-MINUTE QUADRANGLE MAP, (TOPOI 1997)



DESIGNED BY:	CHECKED BY: JG	SITE VICINITY MAP CALIFORNIA SUGER EXTRACTS 1375 55TH STREET EMERYVILLE, CALIFORNIA	DATE: 09/30/99	FIGURE: 1
DRAWN BY: SS	SCALE: 1:24,000		GRIBI Associates	
PROJECT NO: 167-01-01				

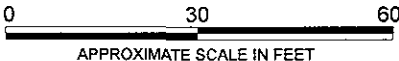
55TH STREET



Tank ID	Tank Capacity	Product Stored	Date Last Used
1	10,000 Gallons	Diesel	1981
2	550-1,000 Gall	Fuel/Waste Oil	1981
3	1,000 Gallons	Diesel	1981
4	1,000 Gallons	Aqueous Ammonia	1985
5	1,000 Gallons	Gasoline	1985
6	6,000-10,300 Gall	Denatured Alcohol	1985
7	10,000 Gallons	Denatured Alcohol	1985
8	10,000 Gallons	Denatured Alcohol	1985

NOTE: ALL PRODUCT REMOVED & TANKS CLOSED IN-PLACE IN 1994.

⊕ - GROUNDWATER MONITORING WELL



DESIGNED BY:	CHECKED BY:
DRAWN BY JEG	SCALE:
PROJECT NO: 167-01-02	

SITE PLAN
 CALIFORNIA SYRUP & EXTRACT
 1355 55TH ST., EMERYVILLE, CALIFORNIA

DATE: 05/04/01 FIGURE: 2
GRIBI Associates

APPENDIX A
GROUNDWATER MONITORING
FIELD DATA RECORDS

GROUNDWATER SAMPLING RECORD

GRIBI Associates

Well No. MW-1	Well Loc.
Project Name CSE	Project No.
Date 12/29/09 Time	TOC Elevation GW Elevation
Depth to Water 5.77	Well Depth Well Diameter
Purge Water, 2": Wtr Column X 0.163 X 3 = 8.9	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method Bailer	Lab Analyses
Weather Conditions	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
	0	64.9	3.33	16.16	Clear, No HCO ₃ or SO ₄
	2	67.4	3.03	16.15	SL Milk, Gray, No HCO ₃ or SO ₄
	4	68.9	3.81	16.27	" " " "
	7	70.1	3.89	16.01	" " " "

Remarks
 Lost Bailor in well

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. MW-2	Well Loc.		
Project Name CSE	Project No.		
Date 12/29/99 Time	TOC Elevation	GW Elevation	
Depth to Water 7.29	Well Depth	Well Diameter	
Purge Water, 2": Wtr Column X 0.163 X 3 = 6.2	Purge Water, 4": Wtr Column X 0.653 X 3 =		
Purge/Sample Method Bail ✓	Lab Analyses		
Weather Conditions	Laboratory		

Time	Volume Purged	Temp.	Cond.	pH	Visual
	0	58.6	1.62	9.52	Clear, Strong HCO, SL SH
	2	62.1	1.68	8.87	Clear, Strong HC, Heavy SH
	4	63.5	1.80	8.86	" " " "
	7	62.6	1.99	10.56	SL Murky Gray, " " "

Remarks

CSE 36 VONs and 26 1/2 and 26 1/2 Ammonia

GROUNDWATER SAMPLING RECORD

GRIBI Associates

Well No. <u>MW-1</u>	Well Loc.
Project Name <u>CSE</u>	Project No.
Date <u>3/23/00</u> Time	TOC Elevation GW Elevation
Depth to Water <u>4.79'</u>	Well Depth Well Diameter
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method <u>Pump</u>	Lab Analyses
Weather Conditions <u>Overcast ~65°</u>	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
<u>0830</u>	<u>0</u>	<u>58.3</u>	<u>8.19</u>	<u>5.28</u>	<u>SL yellow, no HC o/sH</u>
	<u>1</u>	<u>58.2</u>	<u>6.18</u>	<u>5.14</u>	<u>" "</u>
	<u>2</u>	<u>59.0</u>	<u>6.22</u>	<u>5.08</u>	<u>" "</u>
<u>0915</u>	<u>3</u>	<u>59.5</u>	<u>5.02</u>	<u>5.04</u>	<u>" "</u>

Remarks no free product

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. MW-2	Well Loc.		
Project Name LSE	Project No.		
Date 3/23/00 Time	TOC Elevation	GW Elevation	
Depth to Water 6.03'	Well Depth	Well Diameter	
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =		
Purge/Sample Method Pump	Lab Analyses		
Weather Conditions Overcast ~ 65°	Laboratory		

Time	Volume Purged	Temp.	Cond.	pH	Visual
0930	0	59.5	3.18	5.82	Clear, MOD HC 0.1405H
	1	60.0	2.79	5.93	" " "
	2	58.8	3.10	7.23	" " "
1015	3	58.1	3.43	8.19	" " "
Remarks no free product					

GROUNDWATER SAMPLING RECORD

GRIBI Associates

Well No. MW1	Well Loc.
Project Name CSE	Project No.
Date 6/28/00 Time	TOC Elevation GW Elevation
Depth to Water 8.90	Well Depth Well Diameter
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method 12" / Pump	Lab Analyses
Weather Conditions Overcast	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
745	0	65.4	5.92	4.05	Clear, No H ₂ O/S#
	1	65.2	5.45	3.94	" " "
	2	64.7	5.54	3.96	" " "
815	3	65.2	6.02	4.10	" " "

Remarks
 Slow Recharge!

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. MW-2	Well Loc.		
Project Name CSE	Project No.		
Date 6/28/00 Time	TOC Elevation	GW Elevation	
Depth to Water 7.11	Well Depth	Well Diameter	
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =		
Purge/Sample Method 12 V pump	Lab Analyses		
Weather Conditions Overcast	Laboratory		

Time	Volume Purged	Temp.	Cond.	pH	Visual
0830	0	63.6	5.26	4.60	Clear, SLHC 0/No SH
	1	64.3	4.22	4.92	" " "
	2	64.2	3.88	5.02	" " "
0900	3	63.9	3.58	5.26	" " "

Remarks

GROUNDWATER SAMPLING RECORD

GRIBI Associates

Well No. <u>MW-1 (EAST)</u>	Well Loc.
Project Name <u>CSE/emeryville</u>	Project No.
Date <u>10/4/00</u> Time	TOC Elevation GW Elevation
Depth to Water <u>8.36</u>	Well Depth <u>20</u> Well Diameter <u>2"</u>
Purge Water, 2": Wtr Column X 0.163 X 3 =	Purge Water, 4": Wtr Column X 0.653 X 3 =
Purge/Sample Method	Lab Analyses
Weather Conditions	Laboratory

Time	Volume Purged	Temp.	Cond.	pH	Visual
	<u>0</u>	<u>70.0</u>	<u>3.13</u>	<u>4.83</u>	<u>Clear No H₂O/S</u>
	<u>1</u>	<u>68.5</u>	<u>4.61</u>	<u>4.90</u>	
	<u>2</u>	<u>67.4</u>	<u>4.65</u>	<u>4.72</u>	
	<u>4.5</u>	<u>66.0</u>	<u>4.33</u>	<u>4.74</u>	<u>Dry</u>

Remarks

GROUNDWATER SAMPLING RECORD		GRIBI Associates	
Well No. <u>FRW-2</u>	Well Loc.		
Project Name		Project No.	
Date	Time	TOC Elevation	GW Elevation
Depth to Water <u>7.64</u>	Well Depth		Well Diameter
Purge Water, 2": Wtr Column X 0.163 X 3 =		Purge Water, 4": Wtr Column X 0.653 X 3 =	
Purge/Sample Method		Lab Analyses	
Weather Conditions		Laboratory	

Time	Volume Purged	Temp.	Cond.	pH	Visual
	1	65.1	2.80	12.17	Clr & H ₂ O
	1	65.2	3.00	12.26	Clr & H ₂ O
	2	65.2	3.4	12.32	
	3	65.4	3.63	12.27	
Remarks					

APPENDIX B

**LABORATORY DATA REPORTS AND
CHAIN-OF-CUSTODY RECORDS**



Sample Log 20939
January 12, 2000

Jim Gribi
Gribi Associates
1350 Hayes Street, #C-14
Benicia, CA 94510

Subject : 2 Water samples
Project Name : CSE-55th
Project Number : 167-01-01

Dear Mr. Gribi,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada. If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

Tom Kwoka



Acculabs Inc.

Davis

Sample Log 20939

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : CSE-55th (Proj. # 167-01-01)


Sampled : 12/29/99

Received : 12/30/99

Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
MW-1	01/10/00	(5.0)	<5.0
MW-2	01/10/00	(250)	<250

Approved By:



Tom Kwoka
Lab Director



Acculabs Inc.

Davis

Sample Log 20939

20939-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

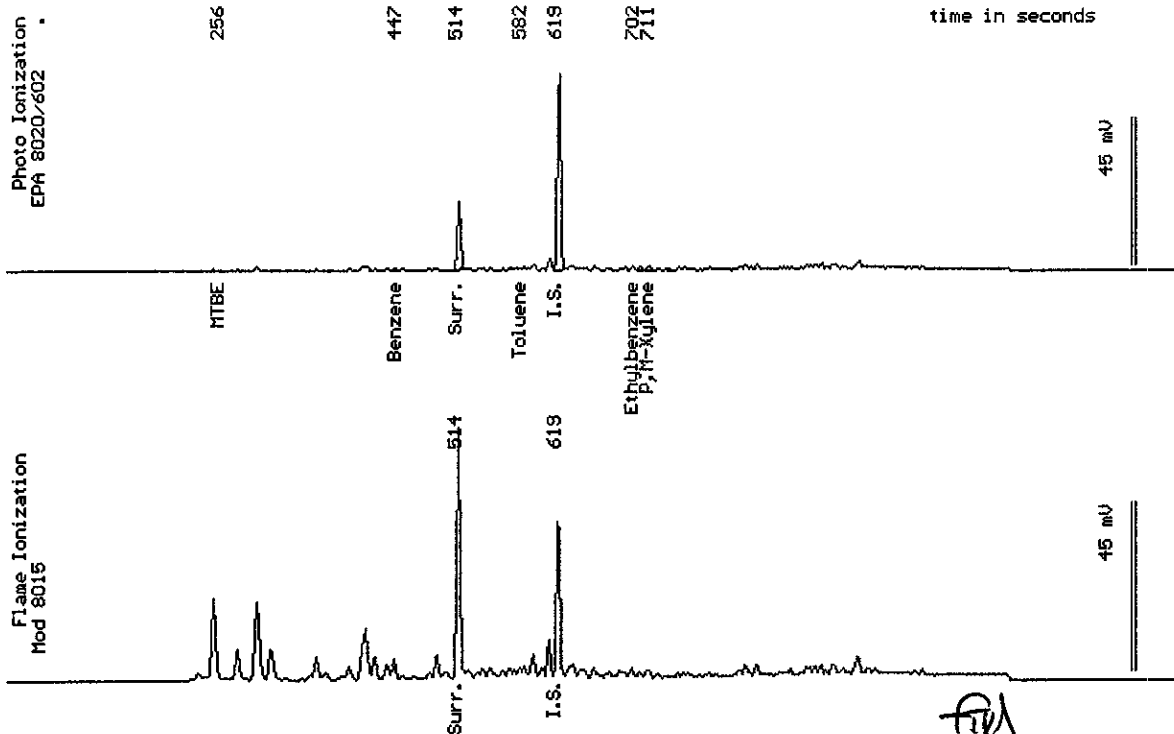
Sampled : 12/29/99

Dilution : 1:1

Run Log : 2186W

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	.84
TPH as Gasoline	(50)	120
Surrogate Recovery		100 %



Date Analyzed: 01-10-00
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky
Senior Chemist



Acculabs Inc.

Davis

Sample Log 20939

20939-02

Sample: MW-2

From : CSE-55th (Proj. # 167-01-01)

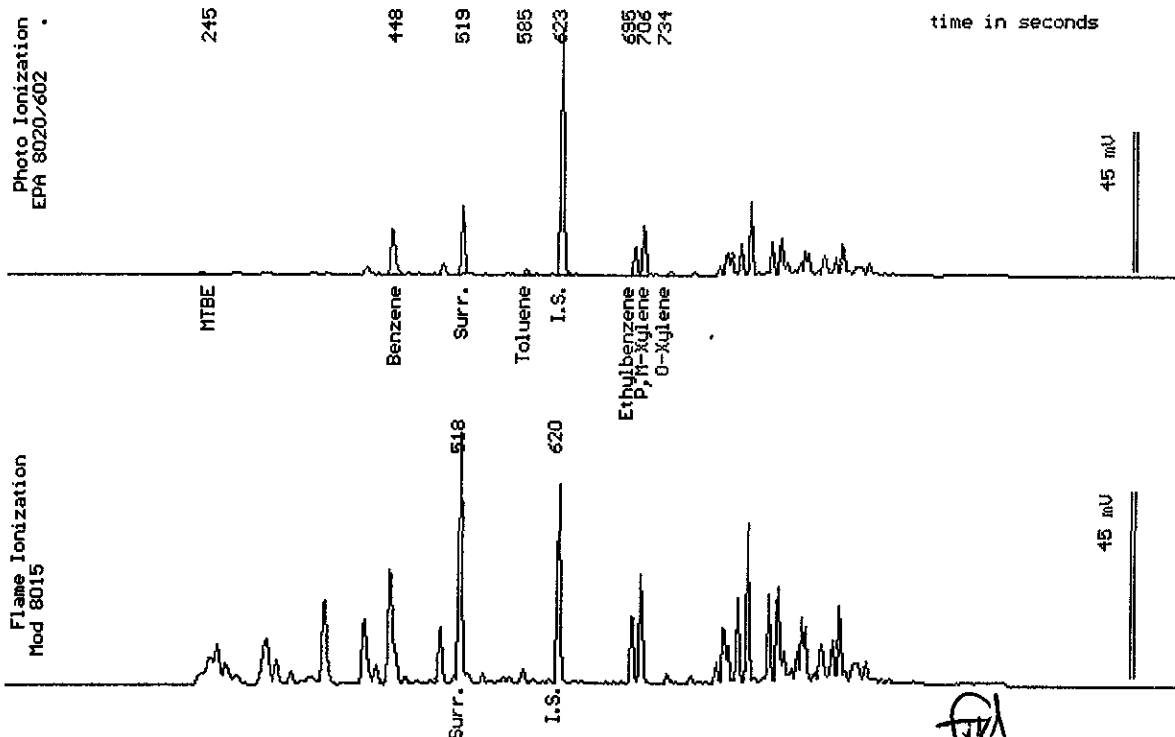
Sampled : 12/29/99

Dilution : 1:50

Run Log : 2186W

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	430
Toluene	(25)	37
Ethylbenzene	(25)	250
Total Xylenes	(25)	410
TPH as Gasoline	(2500)	8800
Surrogate Recovery		96 %



Date Analyzed: 01-10-00
Column : 0.53mm X 60m Restek Rtx-1301

Stewart Podolsky
Senior Chemist

Acculabs Inc.

January 11, 2000
Sample Log 20939

QC Report for EPA 602 & Modified EPA 8015
Run Log : 2186V
From : CSE-55th (Proj. # 167-01-01)
Sample(s) Received : 12/30/99

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	132	126	5
Ethylbenzene	124	125	1

No gasoline spike recovery due to high gas in spiked sample.

* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	104
Ethylbenzene	106
Gasoline	100

Parameter	Method Blank
Benzene	<0.50 ug/L
Toluene	<0.50 ug/L
Ethylbenzene	<0.50 ug/L
Total Xylenes	<0.50 ug/L
TPH as Gasoline	<50 ug/L


Tom Kwoka
Lab Director



Acculabs Inc.

Davis

Sample Log 20939

20939-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

Sampled : 12/29/99

Extracted: 01/04/00

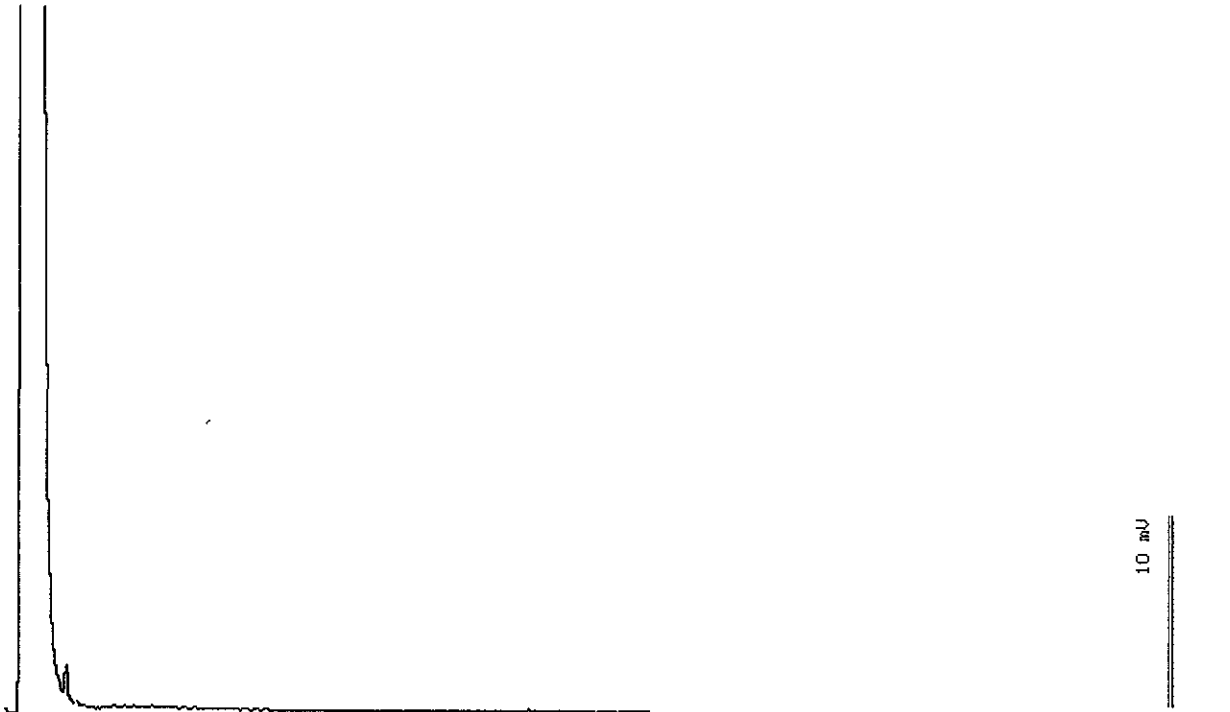
Dilution : 1:1

Matrix : Water

QC Batch : DW991203

Run Log : 7458C

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



EPA Mod 8015

Date: 01-04-80 Time: 14:31:32
Column : 0.53mm ID X 15m DB1 (J&W Scientific)


Stewart Rodolsky
Senior Chemist



Acculabs Inc.

Davis

Sample Log 20939

20939-02

Sample: **MW-2**

From : CSE-55th (Proj. # 167-01-01)

Sampled : 12/29/99

Extracted: 01/04/00

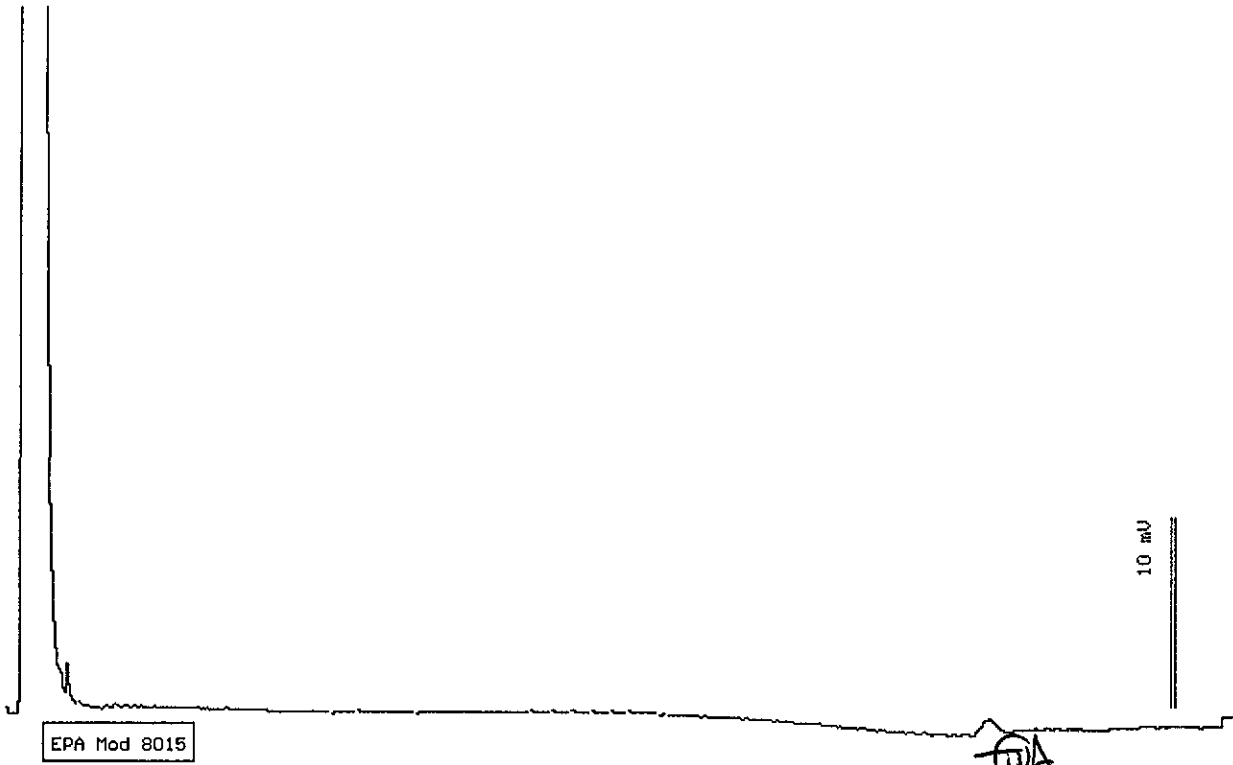
Dilution : 1:1

Matrix : Water

QC Batch : DW991203

Run Log : 7458C

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 01-04-80 Time: 15:04:57
Column : 0.53mm ID X 15m DB1 (J&W Scientific)


Stewart Godolsky
Senior Chemist

Acculabs Inc.

January 06, 2000

QC Report
TPH Diesel by 8015 Mod

QC Batch DW991203

Matrix: Water

Spike and Spike Duplicate Results

Parameter	Matrix Spike (%Rec)	Matrix Spike Dup. (%Rec)	RPD %
TPH as Diesel	Not enough sample for spiking. See duplicate LCS Data.		

Laboratory Control Spike

Parameter	Laboratory Control Spike (%Rec)	Laboratory Control Spike Dup. (%Rec)	RPD %
TPH as Diesel	95	92	3

Method Blank

Parameter	MDL(ug/L)	Measured Value(ug/L)
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100


Tom Kwoka
Lab Director



Laboratory Report


Acculabs Inc.
1046 Olive Dr. #2
Davis, CA 95616
Attn: Troy Turpen

ELAP Lab ID: 2326
Received: 01/04/00
Lab Sample ID: 5-001-004
Reported: 01/12/00

Phone: 530 757-0920 Fax: 753-6091

Project Name/ Number: CSE-55th / 167-01-01
Date Collected: 12/29/99
Sampled By: Client

Parameter	Method	Results	Units	Analyzed
20939-01 MW-1 Ammonia Nitrogen	350.3	<0.050	mg/L	01/11/00
20939-02 MW-2 Ammonia Nitrogen	350.3	<0.050	mg/L	01/11/00


Michelle Kramer, Lab Manager

Acculabs - Davis/Sacramento

Subcontracted Tests Form

Project Name : CSE-55th
 Project Number : 167-01-01
 Project Manager: Troy Turpen

Laboratory Name Sparkes

Mail Results and Invoices To 1046 Olive Drive, Suite 2, Davis, CA 95616

Fax Results To 530-753-6091

Call 530-757-0920 with questions

Use this number as a Purchase Order No.: **20939**

Number	Name	Mx.	Date Sampled	Tests
20939-01	MW-1	WA	12/29/99	NH3(EPA 350.2),

Location:

No. of Containers: 2 w/H₂SO₄

20939-02	MW-2	WA	12/29/99	NH3(EPA 350.2),
----------	------	----	----------	-----------------

Location:

No. of Containers: 2 w/H₂SO₄

Remarks:

Relinquished by:	Received by:	Date	Time
<u>Troy Turpen</u>	<u>via FedEx</u>	<u>1-3-99</u>	<u>1730</u>
<u>FedEx</u>	<u>Cassie Sarti</u>	<u>1/4/00</u>	<u>09:00</u>

Due Date/Time : 1-7-99 / 1700

Subcontract Lab Reference # : 5-001-004

Fax this form to 530-753-6091 when reference number has been assigned to samples and written in space above.

Please fax results prior to mailing.

Acculabs Inc.

[] 3902 E. University Dr. Phoenix AZ 85034
[] 710 E. Evans Blvd. Tucson AZ 85713
[] 2020 W. Lone Cactus Dr. Phoenix AZ 85027
[] 4663 Table Mountain Dr. Golden CO 80403
[] 992 Spice Islands Dr. Sparks NV 89431
[] 1046 Olive Drive #2 Davis CA 95616

602-437-0979 Fax 437-0826
520-884-5811 Fax 884-5812
602-780-4800 Fax 780-7695
303-277-9514 Fax 277-9512
702-355-0202 Fax 355-0817
530-757-0920 Fax 753-6091

Lab Number

20939

Report
Due Date:

Client		Gribi Associates	PUBLIC WATER SUPPLY INFORMATION	
Address		1350 Hayes Street, Ste C-14	System Name	
City, State & Zip		Benicia, CA 94510	PWS No.	Report to State/EPA Y N
Contact		Jim Gribi	POE No.	DWR No.
Phone	707/748-7743	Project Name	CSE-55th	Collection Point
Fax	707/748-7763	Project Number	167-01-01	Collector's Name
P.O. Number		Fax Results	<input checked="" type="radio"/> Y <input type="radio"/> N	Page 1 of 1
		Location (City)		

SAMPLE TYPE CODES

DW = drinking water	TB = travel blank	Compliance Monitoring Y N
WW = waste water	SD = solid	
MW = monitoring well	SO = soil	
HW = hazardous waste	SL = sludge	

TURNAROUND TIME REQUESTED

<input checked="" type="radio"/> Standard	Lab Director Approval
<input type="radio"/> RUSH	
<input type="radio"/> Special	

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Analyses
Requested

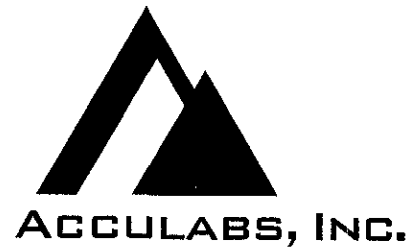
TPH-GIBTEXMTBE
TPH-DIMO
TOTAL AMONNIA

CLIENT'S SAMPLE ID/LOCATION	Date	Time	W	X	X	X						Spl. No.
MW - 1	12/29/99		W	7	X	X	X					01
MW - 2	12/29/99		W	7	X	X	X					02

SAMPLE RECEIPT			Date	Time	Samples Relinquished By	Samples Received By
Received Cold	Y	N	12/30/99	1520	<i>[Signature]</i>	<i>[Signature]</i>
Custody Seals	Y	N				
Seals Intact	Y	N				
No. of Containers						

Acculabs terms are Net 40 (Payment must be received by the date shown on the invoice or any discount is void)

Sample Log 21176
April 03, 2000



Jim Gribi
Gribi Associates
1350 Hayes Street, #C-14
Benicia, CA 94510

Subject : 2 Water samples
Project Name : CSE-55th
Project Number : 167-01-01

Dear Mr. Gribi,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada. If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

A handwritten signature in black ink that reads "Tom Kwoka". The signature is written in a cursive, flowing style.

Tom Kwoka



Sample Log 21176

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : CSE-55th (Proj. # 167-01-01)


Sampled : 03/23/00

Received : 03/24/00

Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
MW-1	03/31/00	(5.0)	<5.0
MW-2	04/03/00	(250)	<250

Approved By:



Tom Kwoka
Lab Director

Sample Log 21176
21176-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

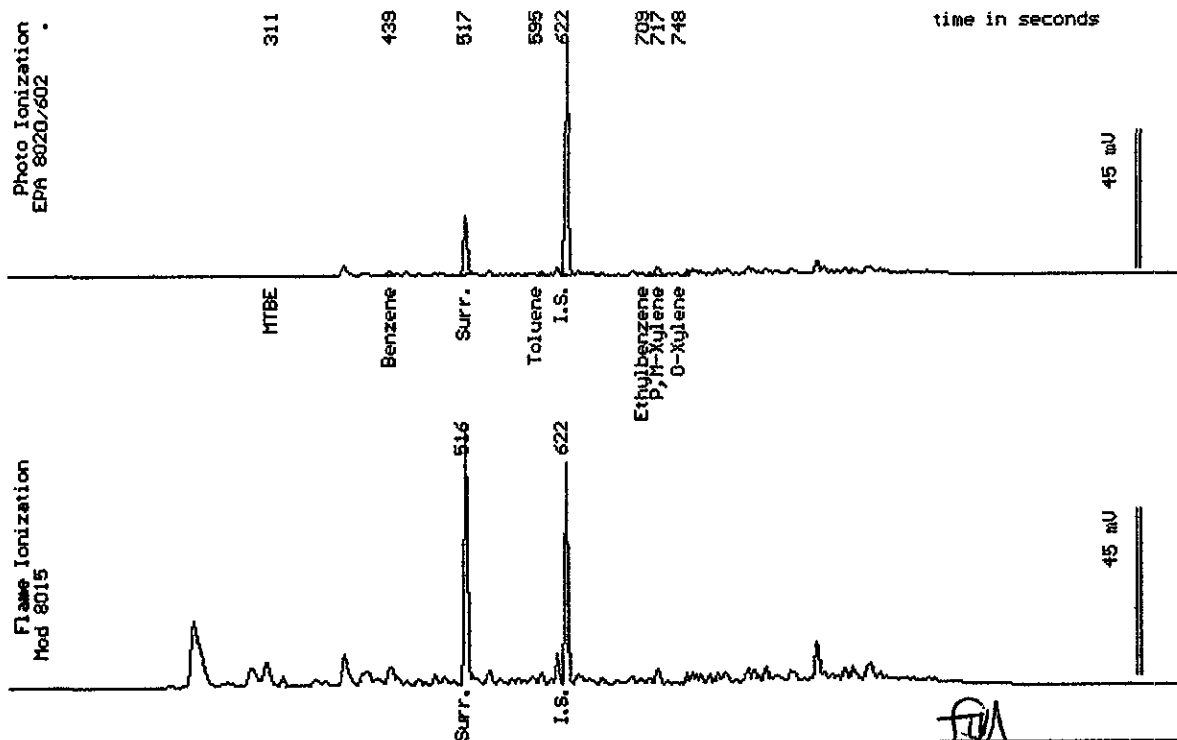
Sampled : 03/23/00

Dilution : 1:1

Run Log : 2188U

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	.58
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	2.1
TPH as Gasoline	(50)	97
Surrogate Recovery		100 %



Date Analyzed: 03-31-00
Column : 0.83mm X 60m Restek Rtx-1301

Stewart Podolsky
Stewart Podolsky
Senior Chemist

Sample Log 21176
21176-02

Sample: MW-2

From : CSE-55th (Proj. # 167-01-01)

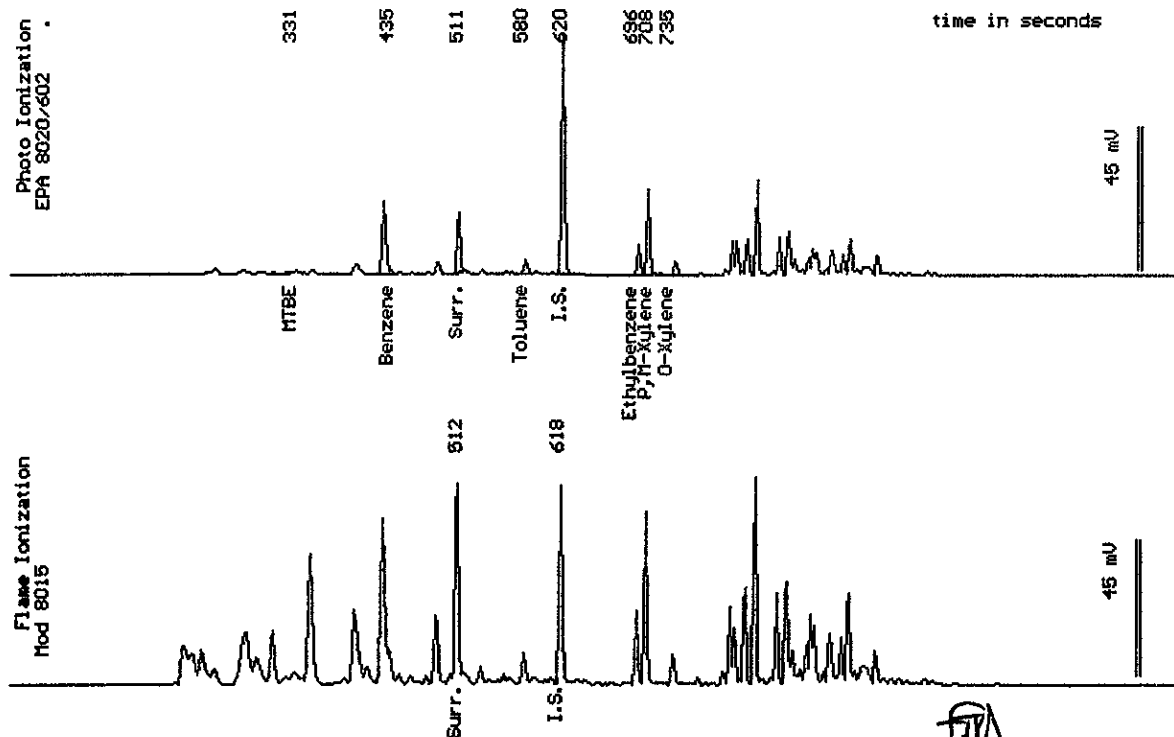
Sampled : 03/23/00

Dilution : 1:50

Run Log : 2188V

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(25)	590
Toluene	(25)	90
Ethylbenzene	(25)	210
Total Xylenes	(25)	640
TPH as Gasoline	(2500)	10000
Surrogate Recovery		100 %



Date Analyzed: 04-03-00
Column : 0.83mm X 60m Restek Rtx-1301


Stewart Podolsky
Senior Chemist



Acculabs Inc.

April 3, 2000
Sample Log 21176

QC Report for EPA 602 & Modified EPA 8015
Run Log : 2188U
From : CSE-55th (Proj. # 167-01-01)
Sample(s) Received : 03/24/00

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	110	108	2
Ethylbenzene	102	105	3
TPH as Gasoline	102	103	1

* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	104
Ethylbenzene	104
Gasoline	110

Parameter	Method Blank
Benzene	<0.50 ug/L
Toluene	<0.50 ug/L
Ethylbenzene	<0.50 ug/L
Total Xylenes	<0.50 ug/L
TPH as Gasoline	<50 ug/L


Tom Knick
Lab Director

Sample Log 21176

21176-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

Sampled : 03/23/00

Extracted: 03/28/00

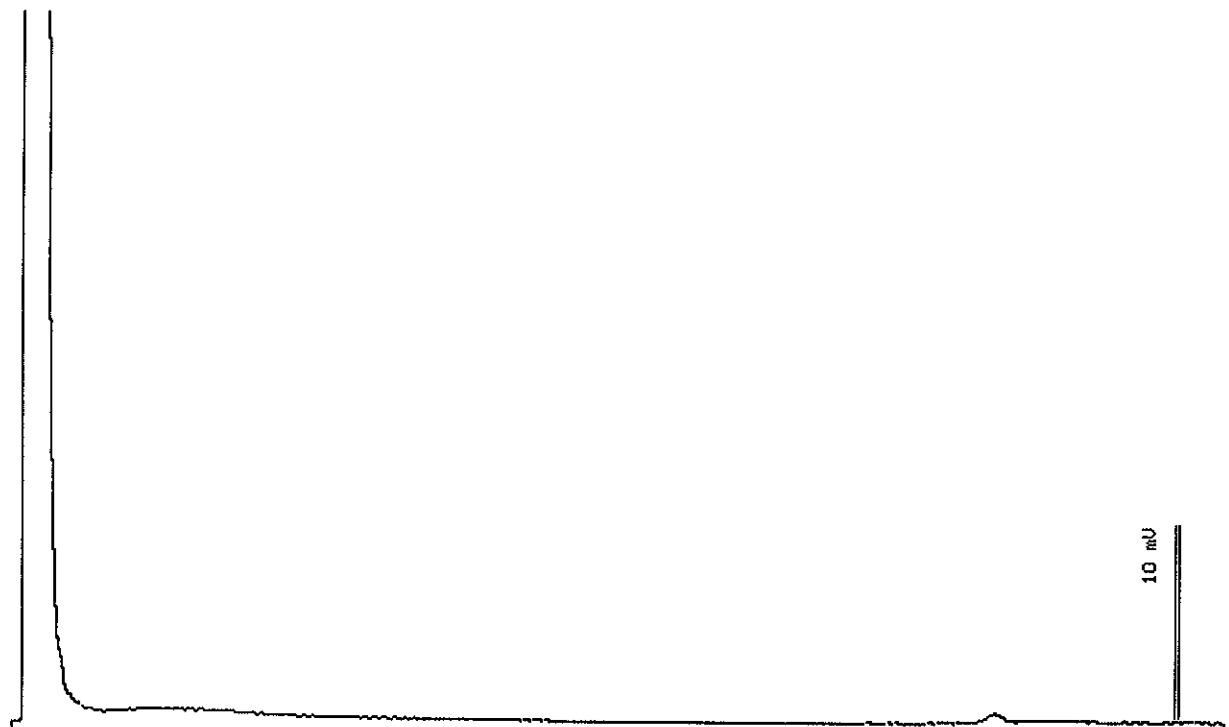
Dilution : 1:1

Matrix : Water

QC Batch : DW000304

Run Log : 7463H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



EPA Mod 8015

Date: 03-28-00 Time: 17:20:52
Column : 0.53mm ID X 15m DB1 (J&W Scientific)


Stewart Podolsky
Senior Chemist

Sample Log 21176

21176-02

Sample: MW-2

From : CSE-55th (Proj. # 167-01-01)

Sampled : 03/23/00

Extracted: 03/28/00

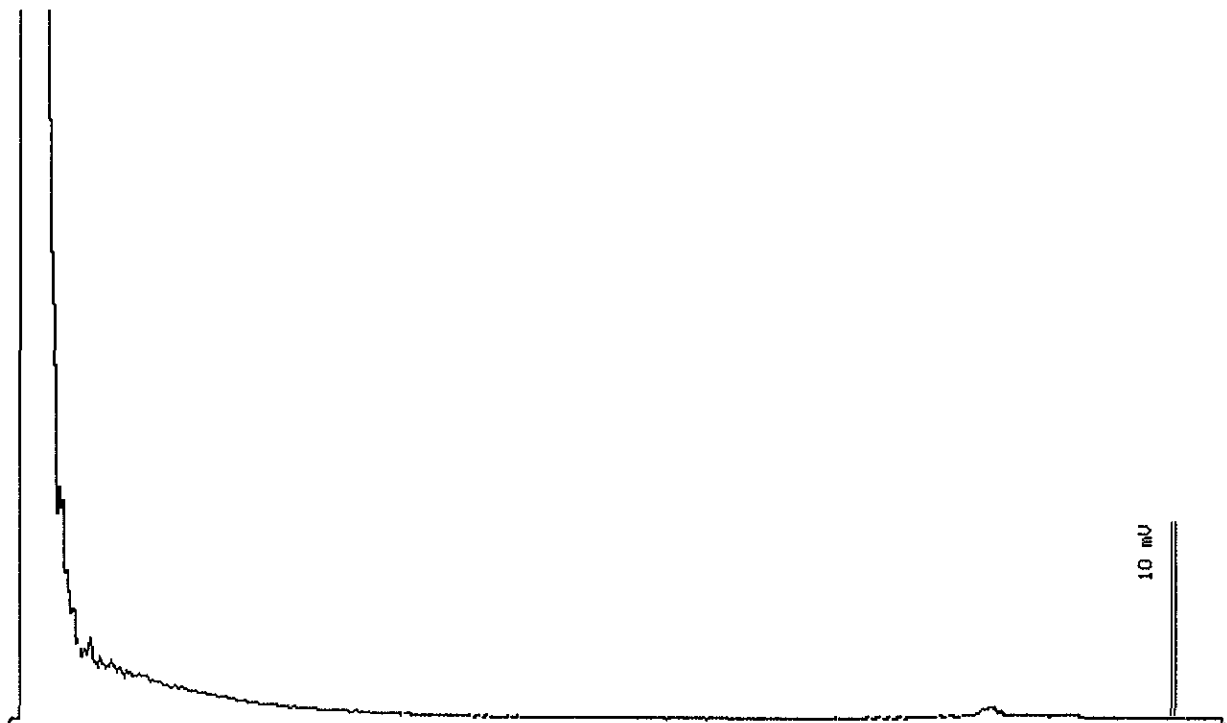
Dilution : 1:1

Matrix : Water

QC Batch : DW000304

Run Log : 7463H

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



EPA Mod 8015

Date: 03-28-00 Time: 17:54:37
 Column : 0.53mm ID X 15m DB1 (J&W Scientific)


 Stewart Rodolsky
 Senior Chemist



Acculabs Inc.

March 28, 2000

QC Report
TPH Diesel by 8015 Mod

QC Batch DW000304

Matrix: Water

Spike and Spike Duplicate Results

Parameter	Matrix Spike (%Rec)	Matrix Spike Dup. (%Rec)	RPD %
TPH as Diesel	Not enough sample for spiking. See duplicate LCS Data.		

Laboratory Control Spike

Parameter	Laboratory Control Spike (%Rec)	Laboratory Control Spike Dup. (%Rec)	RPD %
TPH as Diesel	95	102	7

Method Blank

Parameter	MDL(ug/L)	Measured Value(ug/L)
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100


Tom Kwoka
Lab Director

Laboratory Report



ACCULABS, INC.

Acculabs Inc.
1046 Olive Drive #2
Davis, CA 95616
Attn: Troy Turpin

ELAP No.: 2326
Received: 03/29/00
Lab Sample ID: 5-003-117
Reported: 03/30/00

Phone: 530-753-0920 Fax: 530 753-6091

Project name/ Number: CSE-55th / 167-01-01
Client Sample ID: see below
Date/Time Collected: 03/23/00
Sampled By: Client

Parameter	Method	Results	Units	Analyzed
21176-01 / MW-1				
Ammonia Nitrogen	350.3	<0.050	uS/cm	03/29/00
21176-01 / MW-2				
Ammonia Nitrogen	350.3	<0.050	uS/cm	03/29/00

Michelle Kramer, Lab Manager

Acculabs Inc.

[] 3902 E University Dr. Phoenix AZ 85034
 [] 710 E. Evans Blvd. Tucson AZ 85713
 [] 2020 W. Lone Cactus Dr. Phoenix AZ 85027
 [] 4663 Table Mountain Dr. Golden CO 80403
 [] 992 Spice Islands Dr Sparks NV 89431
 [] 1046 Olive Drive #2 Davis CA 95616

602-437-0979 Fax 437-0826
 520-884-5811 Fax 884-5812
 602-780-4800 Fax 780-7695
 303-277-9514 Fax 277-9512
 702-355-0202 Fax 355-0817
 530-757-0920 Fax 753-6091

Lab Number

21176

Report
 Due Date:

Client Gribi Associates		PUBLIC WATER SUPPLY INFORMATION	
Address 1350 Hayes Street, Ste C-14		System Name	
City, State & Zip Benicia, CA 94510		PWS No.	Report to State/EPA Y N
Contact Jim Gribi		POE No.	DWR No.
Phone 707/748-7743	Project Name CSE-55th	Collection Point	
Fax 707/748-7763	Project Number 167-01-01	Collector's Name	

P.O. Number _____ Fax Results Y N Page 1 of 1 Location (City) _____

SAMPLE TYPE CODES		Compliance Monitoring Y N	S a m p l e T y p e	C o n t a i n e r s	Analyses Requested
DW = drinking water	TB = travel blank				
WW = waste water	SD = solid				
MW = monitoring well	SO = soil				
HW = hazardous waste	SL = sludge				
TURNAROUND TIME REQUESTED					
<input checked="" type="radio"/> Standard	Lab Director Approval				
<input type="radio"/> RUSH					
<input type="radio"/> Special					

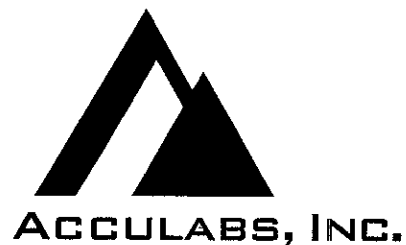
CLIENT'S SAMPLE ID/LOCATION	Date	Time	W	6	X	X	X											Spl. No.
MW - 1	3/23/00		W	6	X	X	X											01
MW - 2	3/23/00		W	6	X	X	X											02

Instructions/Comments/Special Requirements:

SAMPLE RECEIPT			Date	Time	Samples Relinquished By	Samples Received By
Received Cold	Y	N	3-24-00	0930	<i>Stephen A. ...</i>	<i>Jerry A. ...</i>
Custody Seals	Y	N				
Seals Intact	Y	N				
No. of Containers						

Acculabs' terms are: Net 40 (Payment must be received by the date shown on the invoice or any discount is void)

Sample Log 21482
July 12, 2000



Jim Gribi
Gribi Associates
1350 Hayes Street, #C-14
Benicia, CA 94510

Subject : 2 Water samples
Project Name : CSE-55th
Project Number : 167-01-01

Dear Mr. Gribi,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada. If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,



Tom Kwoka

Sample Log 21482

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : CSE-55th (Proj. # 167-01-01)


Sampled : 06/28/00

Received : 06/29/00

Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
MW-1	07/06/00	(5.0)	<5.0
MW-2	07/11/00	(50)	120

Approved By:



Tom Kwoka
Lab Director

Sample Log 21482

21482-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

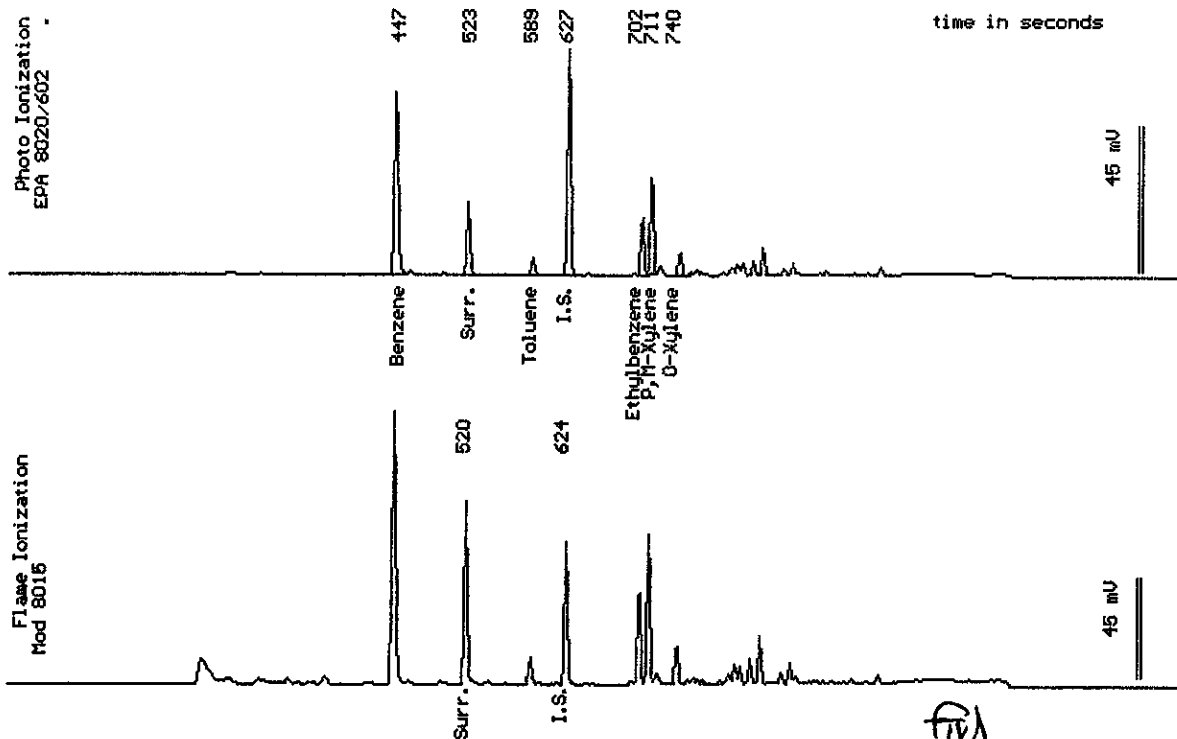
Sampled : 06/28/00

Dilution : 1:1


Matrix : Water

Run Log : 2192Q

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(.50)	28
Toluene	(.50)	2.2
Ethylbenzene	(.50)	8.7
Total Xylenes	(.50)	17
TPH as Gasoline	(50)	110
Surrogate Recovery		109 %



Date Analyzed: 07-06-00
Column : 0.83mm X 60m Restek Rtx-1301


Steven Podolsky
Senior Chemist

Sample Log 21482

21482-02

Sample: MW-2

From : CSE-55th (Proj. # 167-01-01)

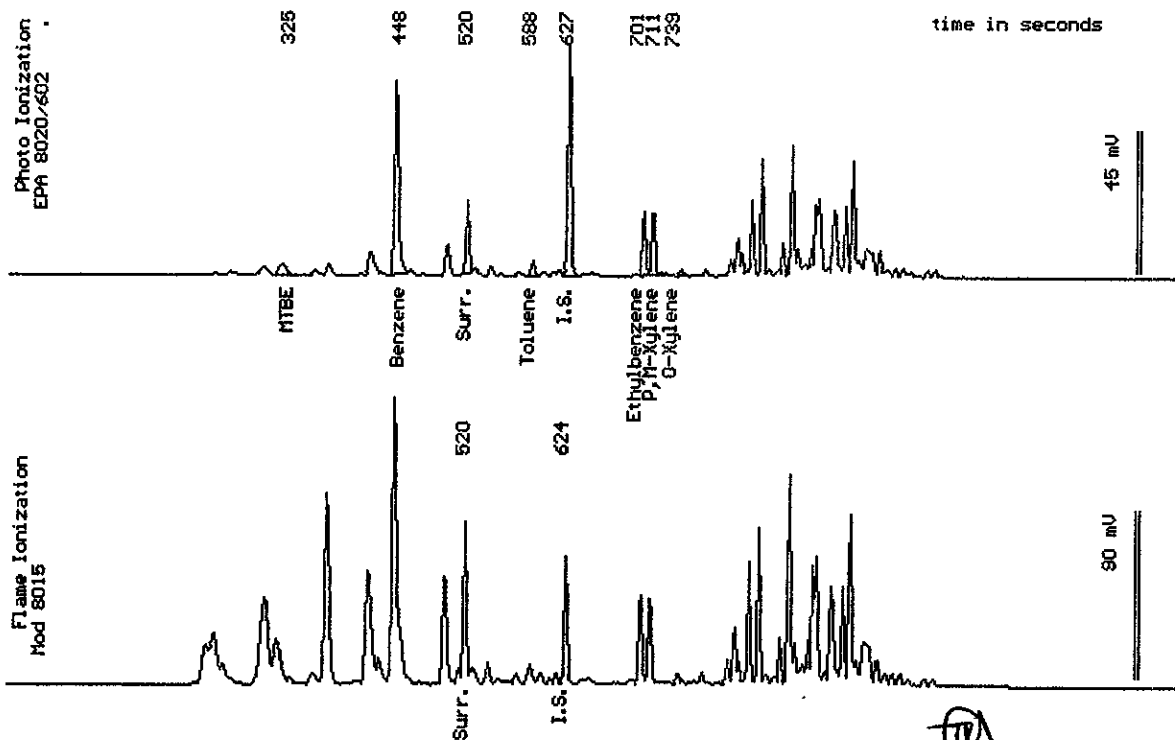
Sampled : 06/28/00

Dilution : 1:10

Run Log : 2192U

Matrix : Water

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	310
Toluene	(5.0)	19
Ethylbenzene	(5.0)	94
Total Xylenes	(5.0)	100
TPH as Gasoline	(500)	3600
Surrogate Recovery		99 %



Date Analyzed: 07-11-00
Column : 0.83mm X 60m Restek Rtx-1301


Stewart Podolsky
Senior Chemist

July 11, 2000
 Sample Log 21482

QC Report for EPA 602 & Modified EPA 8015
 Run Log : 2192Q
 From : CSE-55th (Proj. # 167-01-01)
 Sample(s) Received : 06/29/00

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
-----------	----------------------------	---	-------

Spiked sample too contaminated for spike recovery. See LCS data.

* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
-----------	---

Benzene	99
Ethylbenzene	103
Gasoline	113

Parameter	Method Blank
-----------	--------------

Benzene	<0.50 ug/L
Toluene	<0.50 ug/L
Ethylbenzene	<0.50 ug/L
Total Xylenes	<0.50 ug/L
TPH as Gasoline	<50 ug/L


 Tom Kwana
 Lab Director

Sample Log 21482

21482-01

Sample: MW-1

From : CSE-55th (Proj. # 167-01-01)

Sampled : 06/28/00

Extracted: 07/03/00

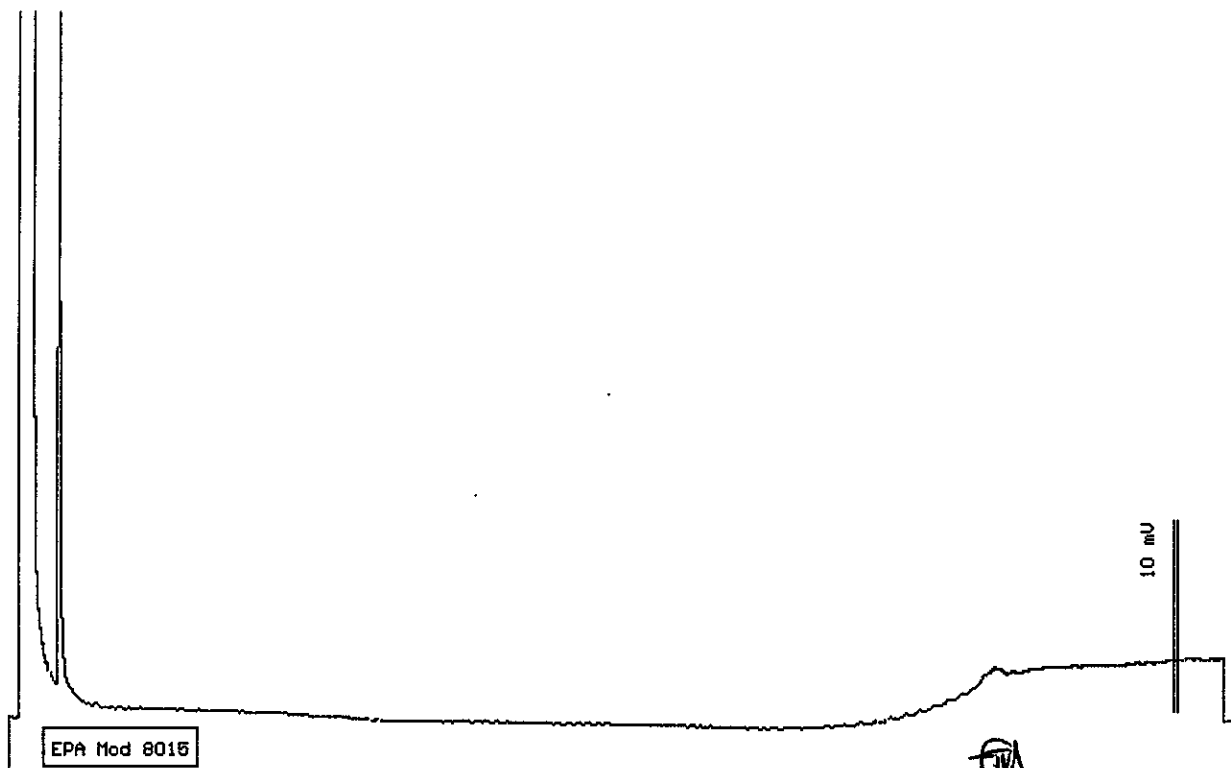
Dilution : 1:1

Matrix : Water


QC Batch : DW000701

Run Log : 7470K

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 07-03-00 Time: 19:59:20
 Column : 0.53mm ID X 15m DB1 (J&W Scientific)


 Stewart Podolsky
 Senior Chemist

Sample Log 21482
21482-02

Sample: MW-2

From : CSE-55th (Proj. # 167-01-01)

Sampled : 06/28/00

Extracted: 07/03/00

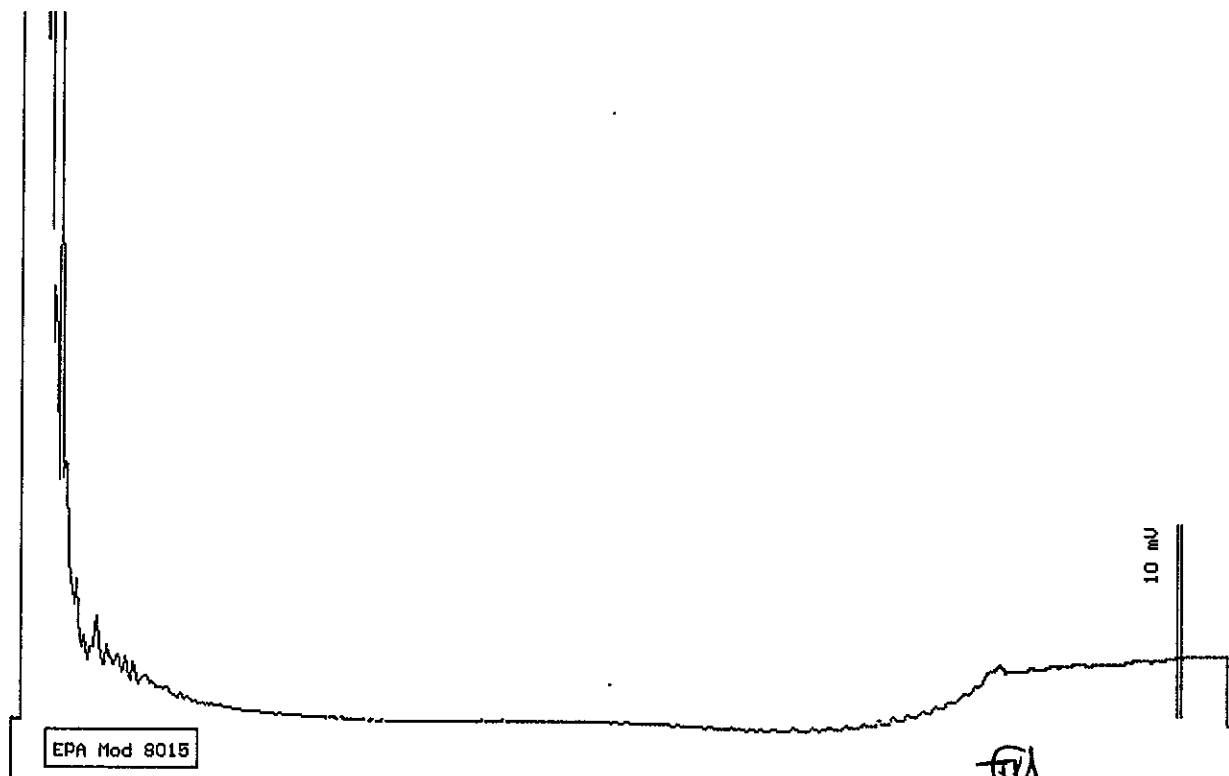
Dilution : 1:1

Matrix : Water

QC Batch : DW000701

Run Log : 7470K

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 07-03-00 Time: 20:34:31
Column : 0.53mm ID X 15m DB1 (J&W Scientific)


Stewart Podolsky
Senior Chemist



Acculabs Inc. - Davis

TPH Diesel by 8015 Mod QC Report

Matrix: Water

Date Extracted: 7/3/00

QC Batch: DW000701


Date Analyzed: 7/3/00

QC Limits Set: 8/18/99

Parameter	Spike Conc	LCS	LCSD	RPD
	ug/L	% Rec	% Rec	
TPH as Diesel	1000	94	90	4.3

Control Chart Limits	
Lower	Upper
70	130

	MDL	Measured value
	ug/L	ug/L
Method Blank	(50)	<50
TPH as Diesel	(100)	<100



Tom Kwoka
Laboratory Director

Acculabs Inc.

[] 3902 E. University Dr. Phoenix AZ 85034
 [] 710 E. Evans Blvd. Tucson AZ 85713
 [] 2020 W. Lone Cactus Dr. Phoenix AZ 85027
 [] 4663 Table Mountain Dr. Golden CO 80403
 [] 992 Spice Islands Dr. Sparks NV 89431
 [] 1046 Olive Drive #2 Davis CA 95616

602-437-0979 Fax 437-0826
 520-884-5811 Fax 884-5812
 602-780-4800 Fax 780-7695
 303-277-9514 Fax 277-9512
 702-355-0202 Fax 355-0817
 530-757-0920 Fax 753-6091

Lab Number

21482

Report
 Due Date:

Client Gribi Associates		PUBLIC WATER SUPPLY INFORMATION	
Address 1350 Hayes Street, Ste C-14		System Name	
City, State & Zip Benicia, CA 94510		PWS No.	Report to State/EPA Y N
Contact Jim Gribi		POE No.	DWR No.
Phone 707/748-7743	Project Name CSE-55th	Collection Point	
Fax 707/748-7763	Project Number 167-01-01	Collector's Name	
P O. Number	Fax Results <input checked="" type="radio"/> Y <input type="radio"/> N	Page 1 of 1	Location (City)

SAMPLE TYPE CODES		Compliance Monitoring Y N	S a m p l e T y p e	C o n t a i n e r s	Analyses Requested
DW = drinking water	TB = travel blank				
WW = waste water	SD = solid				TPH-GBTEXMTBE TPH-DMO
MW = monitoring well	SO = soil				
HW = hazardous waste	SL = sludge				
TURNAROUND TIME REQUESTED					
Standard	Lab Director Approval				
RUSH					
Special					

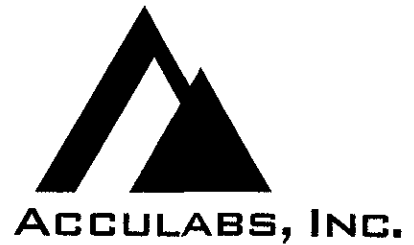
CLIENT'S SAMPLE ID/LOCATION	Date	Time	W	5	X	X											Spl. No.
MW - 1	6/28/00		W	5	X	X											01
MW - 2	6/28/00		W	5	X	X											02

Instructions/Comments/Special Requirements:

SAMPLE RECEIPT	Date	Time	Samples Relinquished By	Samples Received By
Received Cold <input checked="" type="radio"/> Y <input type="radio"/> N	6/28/00	15:30	<i>[Signature]</i>	<i>[Signature]</i>
Custody Seals <input type="radio"/> Y <input type="radio"/> N	6/29/00	14:40	<i>[Signature]</i>	<i>[Signature]</i>
Seals Intact <input type="radio"/> Y <input type="radio"/> N	6-29-00	14:41		
No. of Containers				

Acculabs' terms are: Net 40 (Payment must be received by the date shown on the invoice or any discount is void)

Sample Log 21865
October 16, 2000



Jim Gribi
Gribi Associates
1350 Hayes Street, #C-14
Benicia, CA 94510

Subject : 2 Water Samples
Project Name : CSE-55th
Project Number : 167-01-01

Dear Mr. Gribi,

Chemical analysis on the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. USEPA protocols for sample storage and preservation were followed.

Acculabs - Davis is certified by the State of California (# 2330), the State of Arizona (AZ0583) and the State of Nevada (CA00039-2000-32). If you have any questions regarding procedures or results, please call me at 530-757-0920.

Sincerely,

A handwritten signature in black ink that reads "Tom Kwoka". The signature is written in a cursive, slightly slanted style.

Tom Kwoka



Sample Log 21865

MTBE (Methyl-t-butyl ether) By EPA Method 8020/602

From : CSE-55th (Proj. # 167-01-01)


Sampled : 10/04/00

Received : 10/05/00

Matrix : Water

SAMPLE	Date Analyzed	(MRL) ug/L	Measured Value ug/L
MW - 1 (E)	10/12/00	(5.0)	<5.0
MW - 2 (W)	10/13/00	(50)	100

Approved By:



Tom Kwoka
Lab Director

Sample Log 21865
21865-01

Sample: MW - 1 (E)

From : CSE-55th (Proj. # 167-01-01)

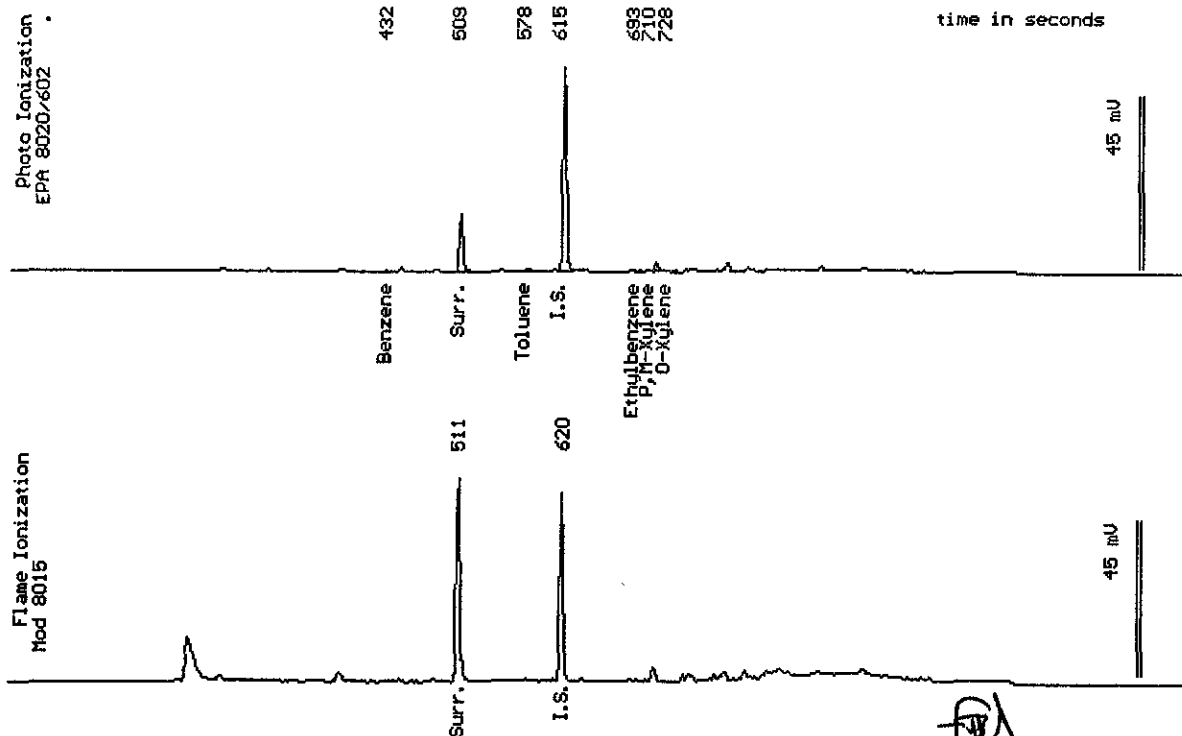
Sampled : 10/04/00

Dilution : 1:1

Matrix : Water

Run Log : 2196M

Parameter	(MRL) $\mu\text{g/L}$	Measured Value $\mu\text{g/L}$
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	1.5
TPH as Gasoline	(50)	<50
Surrogate Recovery		101 %



Date Analyzed: 10-12-00
Column : 0.53mm X 60m Restek Rtx-1301


Stewart Rodolsky
Senior Chemist

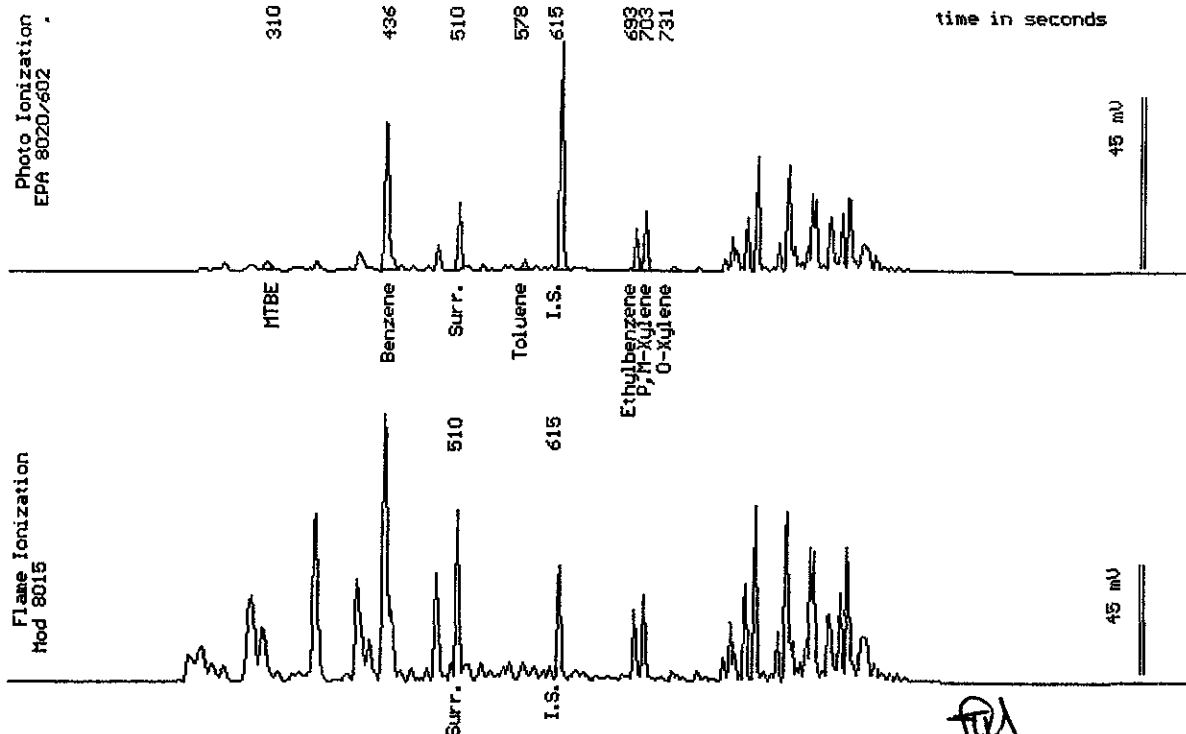
Sample Log 21865
21865-02

Sample: MW - 2 (W)

From : CSE-55th (Proj. # 167-01-01)
Sampled : 10/04/00
Dilution : 1:10
Matrix : Water

Run Log : 21960

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(5.0)	280
Toluene	(5.0)	15
Ethylbenzene	(5.0)	58
Total Xylenes	(5.0)	81
TPH as Gasoline	(500)	4100
Surrogate Recovery		97 %



Date Analyzed: 10-13-00
Column : 0.53mm X 60m Restek Rtx-1301


Stewart Rodolsky
Senior Chemist



October 16, 2000
Sample Log 21865

QC Report for EPA 8020 & Modified EPA 8015
Run Log : 2196L
From : CSE-55th (Proj. # 167-01-01)
Sample(s) Received : 10/05/00

Parameter	Matrix Spike % Recovery	Matrix Spike Duplicate % Recovery	RPD *
Benzene	115	119	3
Ethylbenzene	111	116	4
TPH as Gasoline	125	125	0

* RPD = Relative Percent Difference

Parameter	Laboratory Control Sample % Recovery
Benzene	110
Ethylbenzene	106
Gasoline	116

Parameter	Method Blank
Benzene	<0.50 ug/L
Toluene	<0.50 ug/L
Ethylbenzene	<0.50 ug/L
Total Xylenes	<0.50 ug/L
TPH as Gasoline	<50 ug/L


Tom Kwoka
Lab Director



Sample Log 21865
21865-01

Sample: MW - 1 (E)

From : CSE-55th (Proj. # 167-01-01)

Sampled : 10/04/00

Extracted: 10/06/00

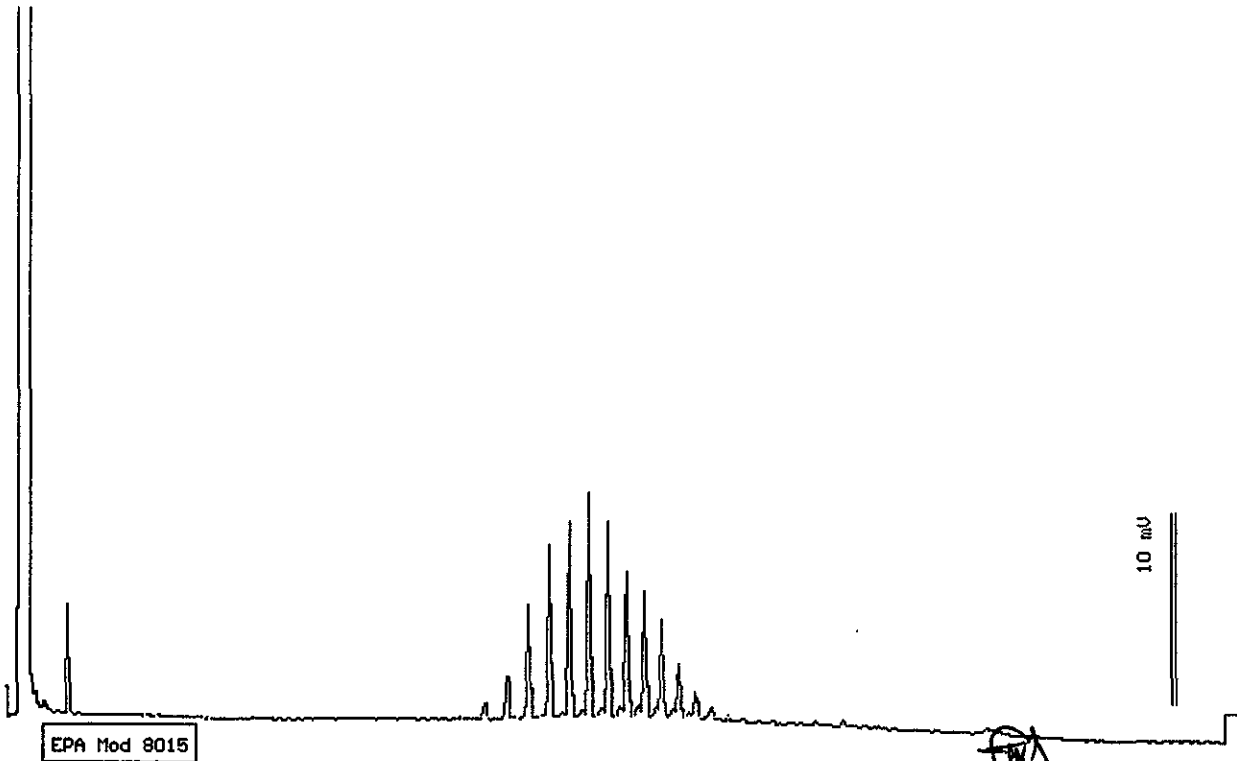
Dilution : 1:1

Matrix : Water

QC Batch : DW001001

Run Log : 7477M

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 10-06-00 Time: 12:39:24
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

[Signature]
Stewart Podolsky
Senior Chemist

Sample Log 21865
21865-02

Sample: MW - 2 (W)

From : CSE-55th (Proj. # 167-01-01)

Sampled : 10/04/00

Extracted: 10/06/00

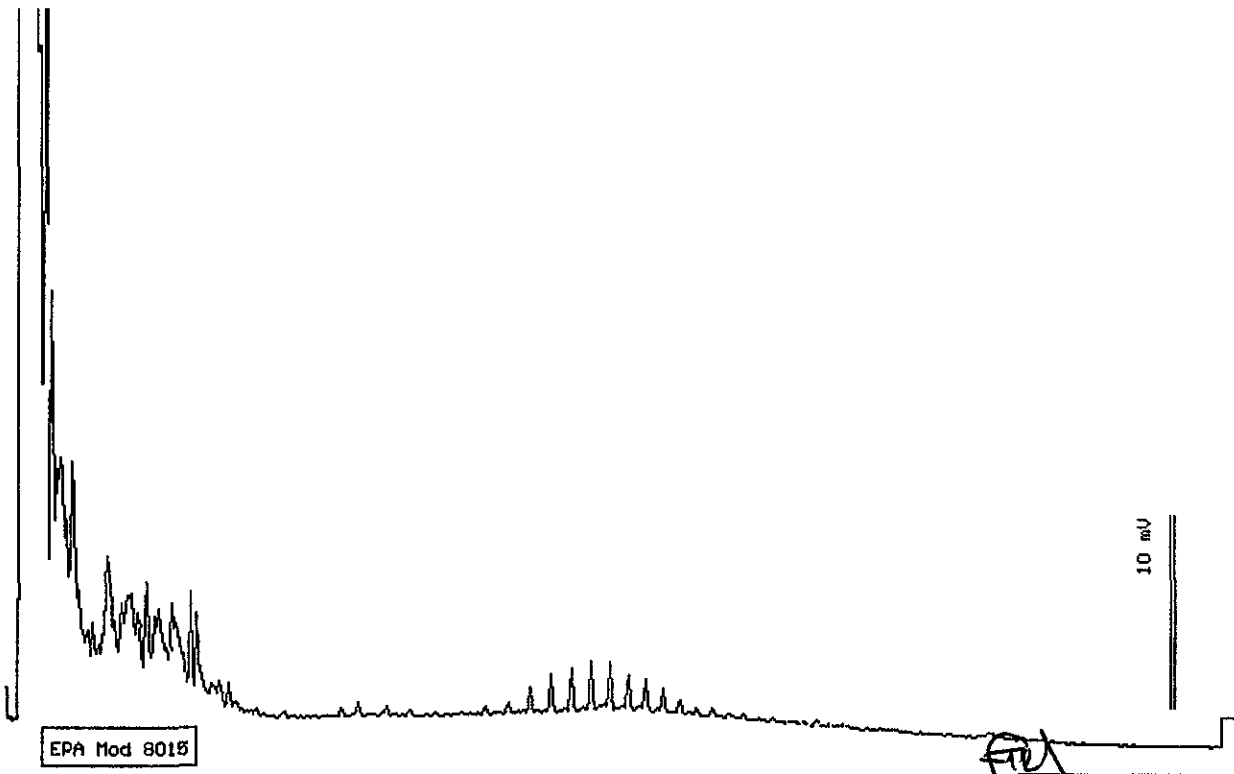
Dilution : 1:1

Matrix : Water

QC Batch : DW001001

Run Log : 7477M

Parameter	(MRL) ug/L	Measured Value ug/L
TPH as Diesel	(50)	<50
TPH as Motor Oil	(100)	<100



Date: 10-06-00 Time: 19:13:32
Column : 0.53mm ID X 15m DB1 (J&W Scientific)

STW
Stewart Rodolsky
Senior Chemist