



July 31, 2000

ENVIRONMENTAL  
PROTECTION  
DC JUL 03 PM 3:58

QUARTERLY GROUNDWATER MONITORING REPORT  
JULY 2000 GROUNDWATER SAMPLING  
ASE JOB NO. 3406  
at  
Former Olympic Service Station  
1436 Grant Avenue  
San Lorenzo, California

Submitted by:  
AQUA SCIENCE ENGINEERS, INC.  
208 West El Pintado Road  
Danville, CA 94526  
(925) 820-9391

## 1.0 INTRODUCTION

The following is a report detailing the results of the July 2000 quarterly groundwater sampling at the Former Olympic Service Station located at 1436 Grant Avenue, San Lorenzo, California (Figures 1 and 2).

## 2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On July 19, 2000, ASE associate geologist Ian Reed measured the depth to water in each site monitoring well using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating product or sheen. No free-floating product or sheen was observed in any of the site monitoring wells. Groundwater elevation data is presented in Table One, and groundwater elevation (potentiometric surface) contours are plotted on Figure 2. The groundwater flow is to the west at a gradient of 0.004-feet/foot, which is consistent with previous findings. The water table has dropped approximately 0.6-feet this quarter.

**TABLE ONE**  
Groundwater Elevation Data

Well I.D.	Date of Measurement	Top of Casing Elevation (relative to project datum)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	10/06/99	15.00	8.35	6.65
	01/13/00		7.90	7.10
	04/12/00		7.08	7.92
	<b>07/19/00</b>		<b>7.66</b>	<b>7.34</b>
MW-2	10/06/99	14.46	7.87	6.59
	01/13/00		7.46	7.00
	04/12/00		6.67	7.79
	<b>07/19/00</b>		<b>7.23</b>	<b>7.23</b>
MW-3	10/06/99	14.41	7.90	6.51
	01/13/00		7.50	6.91
	04/12/00		6.61	7.80
	<b>07/19/00</b>		<b>7.24</b>	<b>7.17</b>

### 3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

On July 19, 2000, ASE associate geologist Ian Reed collected groundwater samples from all three site monitoring wells for analysis. Prior to sampling, the wells were purged of four well casing volumes of groundwater. The pH, temperature and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. A slight hydrocarbon odor was present in water purged from monitoring well MW-3. Samples were collected from each well using dedicated polyethylene bailers. The groundwater samples to be analyzed for non-volatile compounds were decanted from the bailers into 1-liter amber glass bottles. The samples to be analyzed for volatile compounds were contained in 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, and sealed without headspace. All the samples were labeled, placed in protective foam sleeves, and stored on ice for transport to Chromalab, Inc. of Pleasanton, California under chain of custody. Well sampling purge water was contained in sealed and labeled 55-gallon steel drums. See Appendix A for a copy of the Field Logs.

The groundwater samples were analyzed by Chromalab for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 5030/8015, total petroleum hydrocarbons as diesel (TPH-D) by modified EPA Method 3510/8015, and benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020. Groundwater samples collected from monitoring well MW-2, located near the former waste-oil underground storage tank (UST), were also analyzed for total petroleum hydrocarbons as motor oil (TPH-MO) by modified EPA Method 3510/8015, and oil and grease (O&G) by Standard Method 5520. The analytical results are tabulated in Tables Two and Three, and copies of the certified analytical report and chain of custody form are included in Appendix B.

**TABLE TWO**  
**Summary of Chemical Analysis of GROUNDWATER Samples**  
**TPH-G, TPH-D, TPH-MO, BTEX, MTBE and O&G**  
**All results are in parts per billion**

Well ID & Date Sampled	TPH Gasoline	TPH Diesel	TPH Motor Oil	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	Oil & Grease
<u>MW-1</u>									
10/06/99	3,900*	84**	---	< 25	< 25	< 25	< 25	<b>3,500</b>	---
1/13/00	< 1,300	< 50	---	18	< 13	< 13	< 13	<b>1,700</b>	---
4/12/00	< 1,000	56**	---	66	< 10	< 10	< 10	<b>1,600</b>	---
<b>7/19/00</b>	<b>&lt; 1,000</b>	<b>52**</b>	---	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>1,200</b>	---
<u>MW-2</u>									
10/06/99	70*	< 50	< 500	< 0.5	< 0.5	< 0.5	< 0.5	11	< 1,000
1/13/00	< 50	< 50	< 500	< 0.5	< 0.5	< 0.5	< 0.5	6.2	< 1,000
4/12/00	< 50	< 50	< 500	< 0.5	< 0.5	< 0.5	< 0.5	39	1,100
<b>7/19/00</b>	<b>&lt; 1,000</b>	<b>&lt; 50</b>	<b>&lt; 500</b>	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>&lt; 10</b>	<b>990</b>	<b>1,300</b>
<u>MW-3</u>									
10/06/99	3,900	300**	---	<b>900</b>	89	160	560	790	---
1/13/00	740	210	---	<b>110</b>	4.8	35	18	290	---
4/12/00	2,200	640**	---	<b>650</b>	9.7	180	24	140	---
<b>7/19/00</b>	<b>2,700*</b>	<b>270**</b>	---	<b>420</b>	<b>&lt; 2.5</b>	<b>160</b>	<b>&lt; 2.5</b>	<b>99</b>	---
MCL	NE	NE	NE	1.0	150	700	1,750	13	NE

Notes:

Most recent concentrations are in **bold**.

Non-detectable concentrations are noted by the less than symbol (<) followed by the detection limit.

MCL is the California Department of Health Services maximum contaminant level for drinking water.

NE = MCL is not established.

\* = Hydrocarbons not typical of gasoline pattern.

\*\* = Hydrocarbons not typical of diesel pattern.

--- = Not analyzed

**TABLE THREE**  
 Summary of Chemical Analysis of **GROUNDWATER** Samples  
 Monitoring Well MW-2  
 VOCs and SVOCs  
 All results are in **parts per billion**

<u>Date Sampled</u>	<u>VOCs</u>	<u>SVOCs</u>
10/06/99	ND	ND
01/13/00	ND	ND
04/12/00	NA	NA
7/19/00	NA	NA

Notes:

ND = No compounds detected at various detection limits.

NA = Samples were not analyzed for VOCs and SVOCs.

#### 4.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater samples collected from monitoring well MW-1 contained 52 parts per billion (ppb) TPH-D and 1,200 ppb MTBE. No BTEX was detected in groundwater samples collected from monitoring well MW-1 this quarter. Overall, there appears to be a slight decreasing trend in hydrocarbon concentrations in groundwater samples collected from monitoring well MW-1.

The only hydrocarbon concentrations detected in groundwater samples collected from monitoring well MW-2 were 1,300 ppb O&G and 990 ppb MTBE. These results show an increasing trend in MTBE concentrations in groundwater samples collected from monitoring well MW-2.

Groundwater samples collected from monitoring well MW-3 contained 2,700 ppb TPH-G, 270 ppb TPH-D, 420 ppb benzene, 160 ppb ethyl benzene, and 99 ppb MTBE. In general, results for this well show a slight decreasing trend in BTEX and MTBE concentrations, although there is no obvious pattern in TPH-G and TPH-D concentrations.

The MTBE concentrations in groundwater samples collected from all three wells exceeded the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. The benzene concentration detected in groundwater samples collected from monitoring well MW-3 also exceeded the DHS MCL for drinking.

Since the monitoring wells have now been sampled quarterly for one year, our client, Mr. George Jaber, requests that the Alameda County Health

Care Services Agency (ACHCSA) review this case for closure at this time. ASE requests that the ACHCSA respond to this request in writing during the next quarter.

## 5.0 REPORT LIMITATIONS


The results of this assessment represent conditions at the time of the groundwater sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory.

It does not fully characterize the site for contamination resulting from unknown sources, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of an independent CAL-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391. **A 203**

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Robert E. Kitay, R.G., R.E.A.  
Senior Geologist

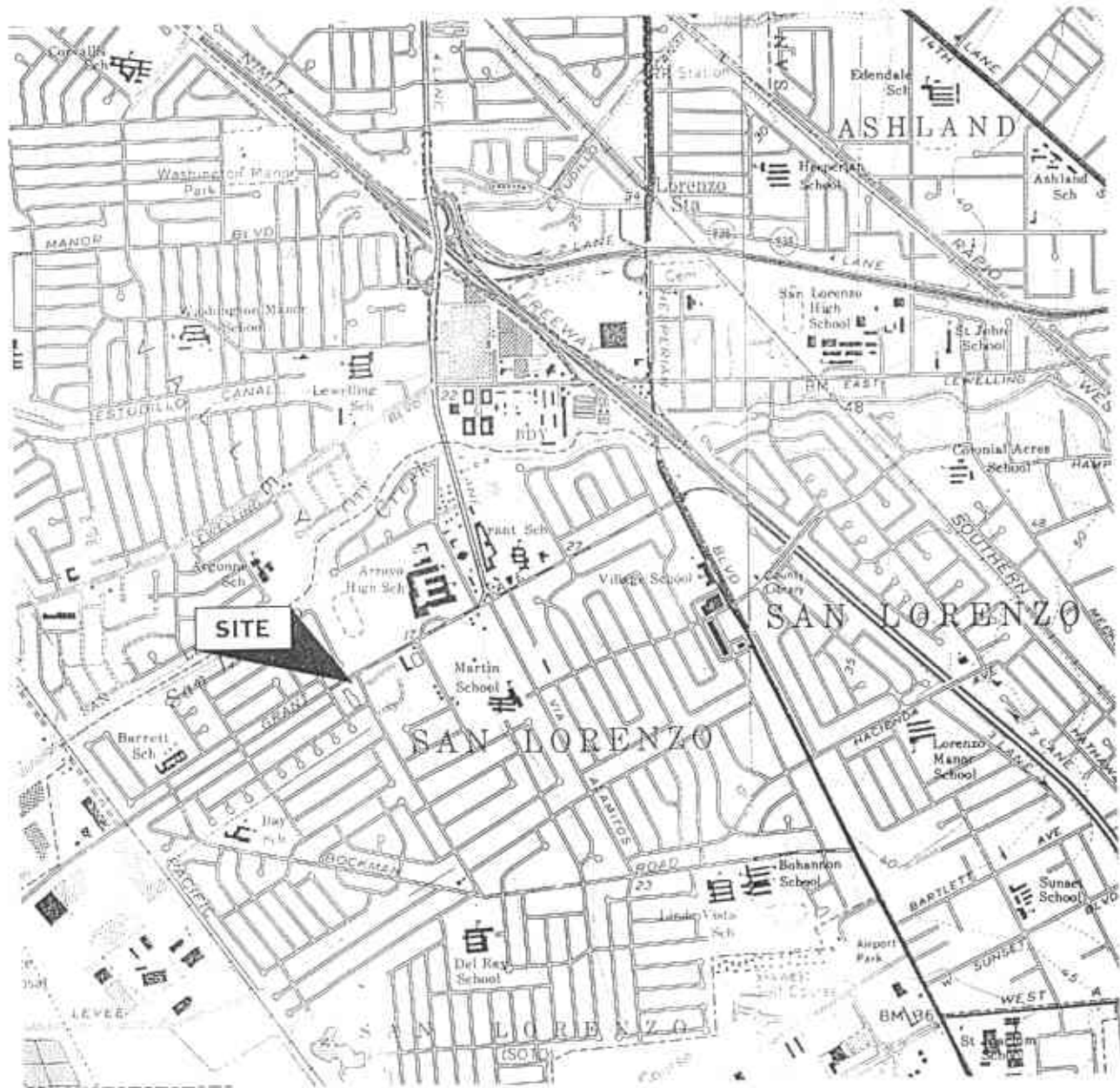


Attachments: Figures 1 and 2  
Appendices A through B

cc: Mr. George Jaber  
Mr. Scott Seery, Alameda County Health Care Services Agency  
Mr. Chuck Headlee, California Regional Water Quality Control Board



NORTH



## LOCATION MAP

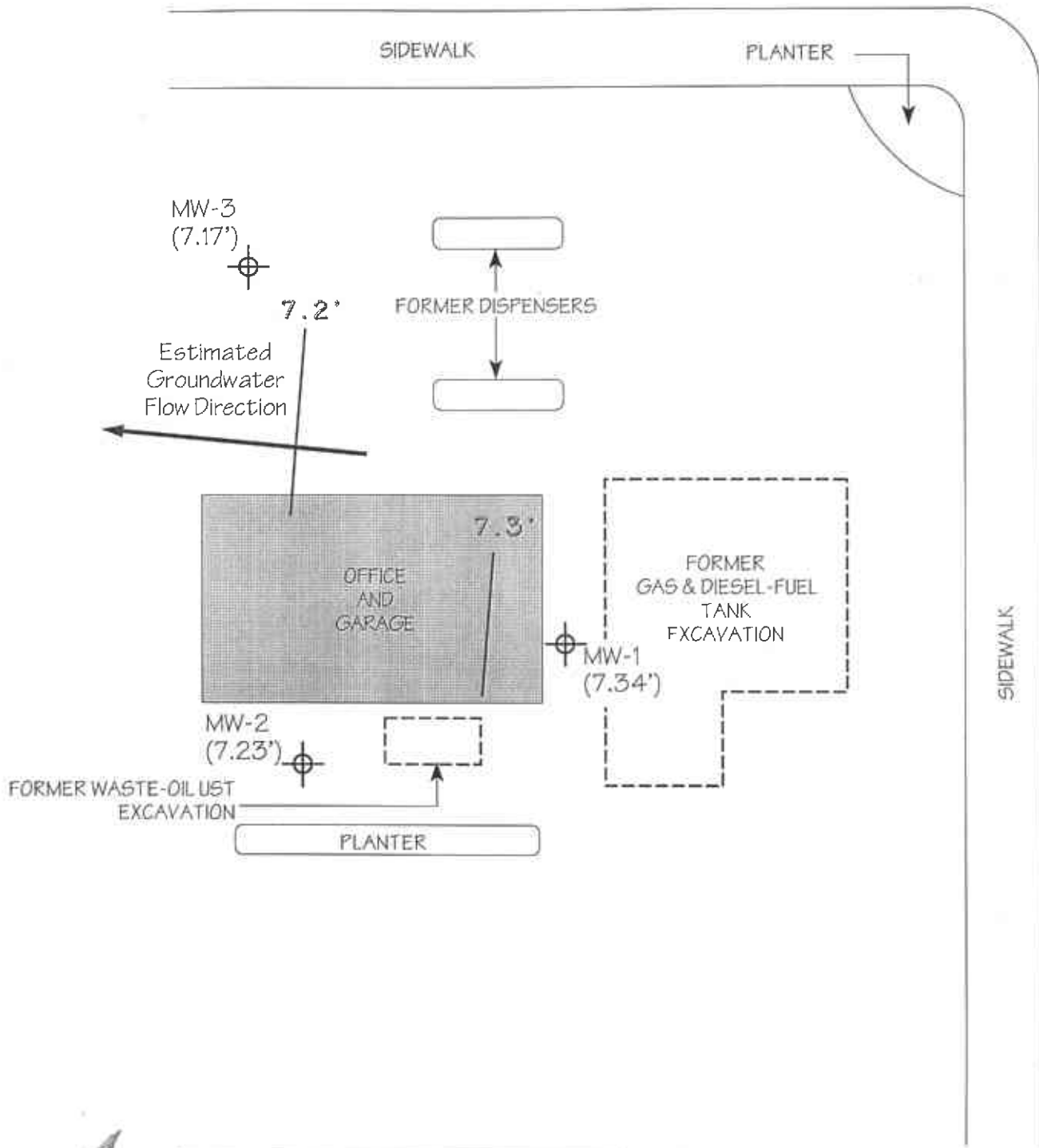
Olympic Service Station  
1436 Grant Avenue  
San Lorenzo, California

AQUA SCIENCE ENGINEERS, INC.

Figure 1


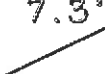
# GRANT AVENUE

# CHANNEL STREET



NORTH  
SCALE  
1" = 20'

## LEGEND

- MW-1 (7.34')  
 Monitoring Well with groundwater elevation
- 7.3'  
 Groundwater elevation contour

## POTENTIOMETRIC SURFACE

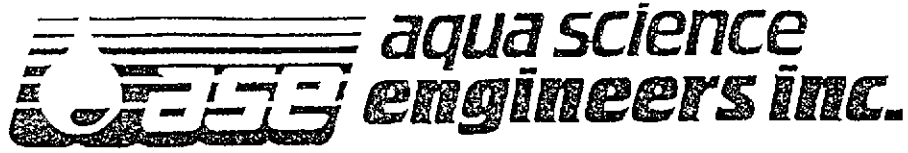
MAP - 7119100

Olympic Service Station  
1436 Grant Avenue  
San Lorenzo, California

AQUA SCIENCE ENGINEERS, INC.

Figure 2





# WELL SAMPLING FIELD LOG

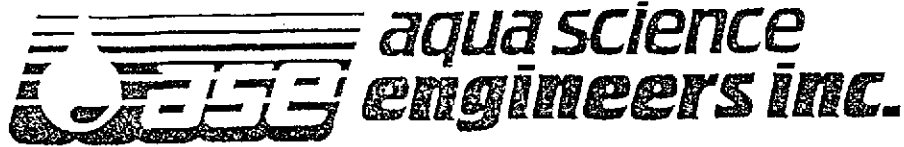
Project Name and Address: Jabar  
 Job #: 3406 Date of sampling: 7/19/00  
 Well Name: MW-1 Sampled by: ITR  
 Total depth of well (feet): 24,34' Well diameter (inches): 2"  
 Depth to water before sampling (feet): 7.66'  
 Thickness of floating product if any: None  
 Depth of well casing in water (feet): 16.69  
 Number of gallons per well casing volume (gallons): 3  
 Number of well casing volumes to be removed: 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 12  
 Equipment used to purge the well: Sub. pump  
 Time Evacuation Began: 1115 Time Evacuation Finished: 1135  
 Approximate volume of groundwater purged: 12  
 Did the well go dry?: NO After how many gallons: ---  
 Time samples were collected: 1140  
 Depth to water at time of sampling: 8.1  
 Percent recovery at time of sampling: 96%  
 Samples collected with: Clear water  
 Sample color: clear Odor: None  
 Description of sediment in sample: Gr. silt

## CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>71.4</u>	<u>6.71</u>	<u>1210</u>
<u>2</u>	<u>70.9</u>	<u>6.72</u>	<u>1210</u>
<u>3</u>	<u>71.0</u>	<u>6.72</u>	<u>1210</u>
<u>4</u>	<u>71.0</u>	<u>6.72</u>	<u>1210</u>

## SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-1</u>	<u>3</u>	<u>40 ml VOA</u>	<u>✓</u>	<u>✓</u>	
	<u>2</u>	<u>1-liter Amber</u>		<u>✓</u>	



# WELL SAMPLING FIELD LOG

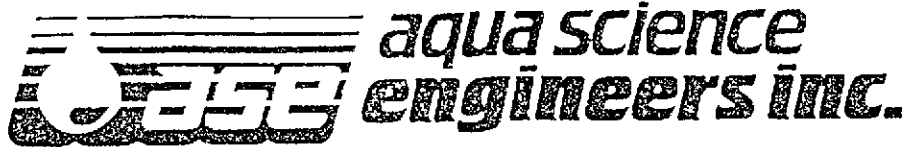
Project Name and Address: Jabor  
 Job #: 3406 Date of sampling: 7/19/00  
 Well Name: MW-2 Sampled by: ITR  
 Total depth of well (feet): 18.56 Well diameter (inches): 2"  
 Depth to water before sampling (feet): 7.23'  
 Thickness of floating product if any: \_\_\_\_\_  
 Depth of well casing in water (feet): 11.33'  
 Number of gallons per well casing volume (gallons): 2.0  
 Number of well casing volumes to be removed: 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 8  
 Equipment used to purge the well: dec. bailer  
 Time Evacuation Began: 1045 Time Evacuation Finished: 1100  
 Approximate volume of groundwater purged: 8  
 Did the well go dry?: NO After how many gallons: ---  
 Time samples were collected: 1105  
 Depth to water at time of sampling: 7.48'  
 Percent recovery at time of sampling: 99%  
 Samples collected with: dec. bailer  
 Sample color: clear brown Odor: none  
 Description of sediment in sample: fine sand

## CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	72.1	6.81	700
2	71.9	6.52	790
3	71.1	6.23	720
4	72.8	6.02	780

## SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pre-	?	Analysis
MW-2	3	40 ml VCH	✓	✓	
	3	1-liter Amber			



# WELL SAMPLING FIELD LOG

Project Name and Address: Jobor  
 Job #: 3406 Date of sampling: 7/19/00  
 Well Name: MW-3 Sampled by: ITR  
 Total depth of well (feet): 19.0' Well diameter (inches): 2"  
 Depth to water before sampling (feet): 7.24  
 Thickness of floating product if any: —  
 Depth of well casing in water (feet): 11.74  
 Number of gallons per well casing volume (gallons): 2  
 Number of well casing volumes to be removed: 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 8  
 Equipment used to purge the well: ded. bailer  
 Time Evacuation Began: 1150 Time Evacuation Finished: 1200  
 Approximate volume of groundwater purged: 8  
 Did the well go dry?: NO After how many gallons: —  
 Time samples were collected: 1205  
 Depth to water at time of sampling: 7.62  
 Percent recovery at time of sampling: 90% /  
 Samples collected with: ded. bailer  
 Sample color: clear / gray Odor: and HC odor  
 Description of sediment in sample: f. silt

## CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>70.1</u>	<u>7.02</u>	<u>820</u>
<u>2</u>	<u>71.2</u>	<u>7.13</u>	<u>810</u>
<u>3</u>	<u>71.0</u>	<u>7.12</u>	<u>811</u>
<u>4</u>	<u>71.3</u>	<u>7.11</u>	<u>810</u>

## SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-3</u>	<u>3</u>	<u>40ml VCH</u>			
	<u>2</u>	<u>1-ltr Amber</u>			

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

Date: July 26, 2000

---

**Aqua Science Engineers, Inc.**

208 West El Pintado Road  
Danville, CA 94526

Attn.: Mr. Ian T. Reed

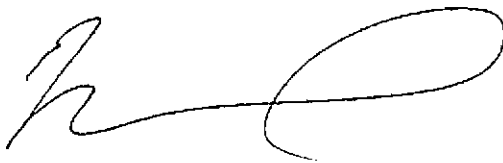
Project: JABOR

Dear Mr. Reed,

Attached is our report for your samples received on Wednesday July 19, 2000  
This report has been reviewed and approved for release. Reproduction of this report  
is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after August 18, 2000  
unless you have requested otherwise. We appreciate the opportunity to be of service to you.  
If you have any questions, please call me at (925) 484-1919. You can also contact me via email.  
My email address is: [vvancil@chromalab.com](mailto:vvancil@chromalab.com)

Sincerely,



Vincent Vancil

---

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

Petroleum Oil & Grease

Aqua Science Engineers, Inc.	☒ 208 West El Pintado Road Danville, CA 94526
Attn: Ian T. Reed	Phone: (925) 820-9391 Fax: (925) 837-4853
Project #:	Project: JABOR

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-2	Water	07/19/2000 11:05	2

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn: Ian T. Reed

Test Method: 5520 B & F  
Prep Method: 5520 B & F

Petroleum Oil & Grease

Sample ID: MW-2	Lab Sample ID: 2000-07-0285-002
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 11:05	Extracted: 07/20/2000
Matrix: Water	QC-Batch: 2000/07/20-02.23

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Oil and Grease (Petroleum)	1.3	1.0	mg/L	1.00	07/20/2000	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn: Ian T. Reed

Test Method: 5520 B & F  
Prep Method: 5520 B & F

## Batch QC Report Petroleum Oil & Grease

Method Blank	Water	QC Batch # 2000/07/20-02.23
MB: 2000/07/20-02.23-001		Date Extracted: 07/20/2000

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Oil and Grease (Petroleum)	ND	1	mg/L	07/20/2000	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 5520 B & F

Attn: Ian T. Reed

Prep Method: 5520 B & F

## Batch QC Report

Petroleum Oil & Grease

Laboratory Control Spike (LCS/LCSD)		Water		QC Batch # 2000/07/20-02.23	
LCS:	2000/07/20-02.23-002	Extracted:	07/20/2000	Analyzed	07/20/2000
LCSD:	2000/07/20-02.23-003	Extracted:	07/20/2000	Analyzed	07/20/2000

Compound	Conc. [mg/L]		Exp. Conc. [mg/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD	Recovery	RPD	LCS	LCSD		
Oil and Grease	39.4	38.1	40.0	40.0	98.5	95.3	3.3	80-120	20				

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096



# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

Gas/BTEX and MTBE

Aqua Science Engineers, Inc.

✉ 208 West El Pintado Road  
Danville, CA 94526

Attn: Ian T. Reed

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #:

Project: JABOR

## Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	07/19/2000 11:40	1
MW-2	Water	07/19/2000 11:05	2
MW-3	Water	07/19/2000 12:05	3

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-1	Lab Sample ID: 2000-07-0285-001
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 11:40	Extracted: 07/21/2000 19:33
Matrix: Water	QC-Batch: 2000/07/21-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/L	20.00	07/21/2000 19:33	
Benzene	ND	10	ug/L	20.00	07/21/2000 19:33	
Toluene	ND	10	ug/L	20.00	07/21/2000 19:33	
Ethyl benzene	ND	10	ug/L	20.00	07/21/2000 19:33	
Xylene(s)	ND	10	ug/L	20.00	07/21/2000 19:33	
MTBE	1200	100	ug/L	20.00	07/21/2000 19:33	
<i>Surrogate(s)</i>						
Trifluorotoluene	78.8	58-124	%	1.00	07/21/2000 19:33	
4-Bromofluorobenzene-FID	71.9	50-150	%	1.00	07/21/2000 19:33	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-2	Lab Sample ID: 2000-07-0285-002
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 11:05	Extracted: 07/24/2000 15:46
Matrix: Water	QC-Batch: 2000/07/24-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	1000	ug/L	20.00	07/24/2000 15:46	
Benzene	ND	10	ug/L	20.00	07/24/2000 15:46	
Toluene	ND	10	ug/L	20.00	07/24/2000 15:46	
Ethyl benzene	ND	10	ug/L	20.00	07/24/2000 15:46	
Xylene(s)	ND	10	ug/L	20.00	07/24/2000 15:46	
MTBE	990	100	ug/L	20.00	07/24/2000 15:46	
<i>Surrogate(s)</i>						
Trifluorotoluene	61.7	58-124	%	1.00	07/24/2000 15:46	
4-Bromofluorobenzene-FID	76.1	50-150	%	1.00	07/24/2000 15:46	

1220 Quarry Lane \* Pleasanton, CA 94566-4756

Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-3	Lab Sample ID: 2000-07-0285-003
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 12:05	Extracted: 07/24/2000 12:04
Matrix: Water	QC-Batch: 2000/07/24-01.02

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	2700	250	ug/L	5.00	07/24/2000 12:04	g
Benzene	420	2.5	ug/L	5.00	07/24/2000 12:04	
Toluene	ND	2.5	ug/L	5.00	07/24/2000 12:04	
Ethyl benzene	160	2.5	ug/L	5.00	07/24/2000 12:04	
Xylene(s)	ND	2.5	ug/L	5.00	07/24/2000 12:04	
MTBE	99	25	ug/L	5.00	07/24/2000 12:04	
<i>Surrogate(s)</i>						
Trifluorotoluene	96.1	58-124	%	1.00	07/24/2000 12:04	
4-Bromofluorobenzene-FID	115.1	50-150	%	1.00	07/24/2000 12:04	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

## Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/21-01.01
MB: 2000/07/21-01.01-001		Date Extracted: 07/21/2000 06:54

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/21/2000 06:54	
Benzene	ND	0.5	ug/L	07/21/2000 06:54	
Toluene	ND	0.5	ug/L	07/21/2000 06:54	
Ethyl benzene	ND	0.5	ug/L	07/21/2000 06:54	
Xylene(s)	ND	0.5	ug/L	07/21/2000 06:54	
MTBE	ND	5.0	ug/L	07/21/2000 06:54	
<i>Surrogate(s)</i>					
Trifluorotoluene	95.2	58-124	%	07/21/2000 06:54	
4-Bromofluorobenzene-FID	71.4	50-150	%	07/21/2000 06:54	

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

## Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/24-01.02
MB: 2000/07/24-01.02-001		Date Extracted: 07/24/2000 05:50

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2000 05:50	
Benzene	ND	0.5	ug/L	07/24/2000 05:50	
Toluene	ND	0.5	ug/L	07/24/2000 05:50	
Ethyl benzene	ND	0.5	ug/L	07/24/2000 05:50	
Xylene(s)	ND	0.5	ug/L	07/24/2000 05:50	
MTBE	ND	5.0	ug/L	07/24/2000 05:50	
<i>Surrogate(s)</i>					
Trifluorotoluene	90.6	58-124	%	07/24/2000 05:50	
4-Bromofluorobenzene-FID	101.6	50-150	%	07/24/2000 05:50	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

## Batch QC Report Gas/BTEX and MTBE

Method Blank	Water	QC Batch # 2000/07/24-01.01
MB: 2000/07/24-01.01-001		Date Extracted: 07/24/2000 06:22

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	07/24/2000 06:22	
Benzene	ND	0.5	ug/L	07/24/2000 06:22	
Toluene	ND	0.5	ug/L	07/24/2000 06:22	
Ethyl benzene	ND	0.5	ug/L	07/24/2000 06:22	
Xylene(s)	ND	0.5	ug/L	07/24/2000 06:22	
MTBE	ND	5.0	ug/L	07/24/2000 06:22	
<i>Surrogate(s)</i>					
Trifluorotoluene	90.4	58-124	%	07/24/2000 06:22	
4-Bromofluorobenzene-FID	75.0	50-150	%	07/24/2000 06:22	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn: Ian T. Reed

Prep Method: 5030

## Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/21-01.01
LCS: 2000/07/21-01.01-002	Extracted: 07/21/2000 07:30	Analyzed 07/21/2000 07:30
LCSD: 2000/07/21-01.01-003	Extracted: 07/21/2000 08:05	Analyzed 07/21/2000 08:05

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	520	481	500	500	104.0	96.2	7.8	75-125	20		
Benzene	92.5	91.1	100.0	100.0	92.5	91.1	1.5	77-123	20		
Toluene	86.3	85.1	100.0	100.0	86.3	85.1	1.4	78-122	20		
Ethyl benzene	83.1	82.6	100.0	100.0	83.1	82.6	0.6	70-130	20		
Xylene(s)	241	241	300	300	80.3	80.3	0.0	75-125	20		
<i>Surrogate(s)</i>											
Trifluorotoluene	421	419	500	500	84.2	83.8		58-124			
4-Bromofluorobenzene-FI	375	354	500	500	75.0	70.8		50-150			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn: Ian T. Reed

Prep Method: 5030

## Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/24-01.02
LCS: 2000/07/24-01.02-002	Extracted: 07/24/2000 06:21	Analyzed 07/24/2000 06:21
LCSD: 2000/07/24-01.02-003	Extracted: 07/24/2000 06:52	Analyzed 07/24/2000 06:52

Compound	Conc. [ ug/L ]		Exp.Conc. [ ug/L ]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	533	535	500	500	106.6	107.0	0.4	75-125	20		
Benzene	92.0	85.3	100.0	100.0	92.0	85.3	7.6	77-123	20		
Toluene	89.4	82.8	100.0	100.0	89.4	82.8	7.7	78-122	20		
Ethyl benzene	83.5	78.7	100.0	100.0	83.5	78.7	5.9	70-130	20		
Xylene(s)	255	243	300	300	85.0	81.0	4.8	75-125	20		
<i>Surrogate(s)</i>											
Trifluorotoluene	452	391	500	500	90.4	78.2		58-124			
4-Bromofluorobenzene-FI	579	594	500	500	115.8	118.8		50-150			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn: Ian T. Reed

Prep Method: 5030

## Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/24-01.01
LCS: 2000/07/24-01.01-002	Extracted: 07/24/2000 06:57	Analyzed 07/24/2000 06:57
LCSD: 2000/07/24-01.01-003	Extracted: 07/24/2000 07:32	Analyzed 07/24/2000 07:32

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	531	474	500	500	106.2	94.8	11.3	75-125	20		
Benzene	93.5	91.3	100.0	100.0	93.5	91.3	2.4	77-123	20		
Toluene	88.2	85.5	100.0	100.0	88.2	85.5	3.1	78-122	20		
Ethyl benzene	86.0	81.7	100.0	100.0	86.0	81.7	5.1	70-130	20		
Xylene(s)	251	241	300	300	83.7	80.3	4.1	75-125	20		
<i>Surrogate(s)</i>											
Trifluorotoluene	429	410	500	500	85.8	82.0		58-124			
4-Bromofluorobenzene-Fl	394	378	500	500	78.8	75.6		50-150			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn: Ian T. Reed

Prep Method: 5030

## Legend & Notes

Gas/BTEX and MTBE

## Analyte Flags

g

Hydrocarbon reported in the gasoline range does not match our gasoline standard.

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

Diesel

Aqua Science Engineers, Inc.

☒ 208 West El Pintado Road  
Danville, CA 94526

Attn: Ian T. Reed

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #:

Project: JABOR

## Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	07/19/2000 11:40	1
MW-3	Water	07/19/2000 12:05	3

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Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8015M

Attn.: Ian T. Reed

Prep Method: 3510/8015M

Diesel

Sample ID: MW-1	Lab Sample ID: 2000-07-0285-001
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 11:40	Extracted: 07/19/2000 12:49
Matrix: Water	QC-Batch: 2000/07/19-04.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	52	50	ug/L	1.00	07/20/2000 10:58	edr
Surrogate(s) o-Terphenyl	94.4	60-130	%	1.00	07/20/2000 10:58	

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Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn.: Ian T. Reed

Test Method: 8015M  
Prep Method: 3510/8015M

Diesel

Sample ID: MW-3	Lab Sample ID: 2000-07-0285-003
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 12:05	Extracted: 07/19/2000 12:49
Matrix: Water	QC-Batch: 2000/07/19-04.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	270	50	ug/L	1.00	07/20/2000 12:07	edr
Surrogate(s) o-Terphenyl	87.9	60-130	%	1.00	07/20/2000 12:07	

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Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn.: Ian T. Reed

Test Method: 8015M  
Prep Method: 3510/8015M

## Batch QC Report Diesel

Method Blank	Water	QC Batch # 2000/07/19-04.10
MB: 2000/07/19-04.10-001		Date Extracted: 07/19/2000 12:49

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	07/20/2000 23:02	
Surrogate(s) o-Terphenyl	89.5	60-130	%	07/20/2000 23:02	

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8015M

Attn: Ian T. Reed

Prep Method: 3510/8015M

## Batch QC Report

Diesel

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/19-04.10
LCS: 2000/07/19-04.10-002	Extracted: 07/19/2000 12:49	Analyzed 07/20/2000 19:15
LCSD: 2000/07/19-04.10-003	Extracted: 07/19/2000 12:49	Analyzed 07/20/2000 20:02

Compound	Conc. [ ug/L ]		Exp.Conc. [ ug/L ]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	973	986	1250	1250	77.8	78.9	1.4	60-130	25		
<i>Surrogate(s)</i> o-Terphenyl	20.2	20.2	20.0	20.0	101.0	101.0		60-130			

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn: Ian T. Reed

Test Method: 8015M  
Prep Method: 3510/8015M

## Legend & Notes

Diesel

### Analyte Flags

edr

Hydrocarbon reported is in the early Diesel range, and does not match our Diesel standard

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

## Total Extractable Petroleum Hydrocarbons (TEPH)

Aqua Science Engineers, Inc.	☒ 208 West El Pintado Road Danville, CA 94526
Attn: Ian T. Reed	Phone: (925) 820-9391 Fax: (925) 837-4853
Project #:	Project: JABOR

### Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-2	Water	07/19/2000 11:05	2

1220 Quarry Lane \* Pleasanton, CA 94566-4756  
Telephone: (925) 484-1919 \* Facsimile: (925) 484-1096

# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8015m

Attn.: Ian T. Reed

Prep Method: 3510/8015M

## Total Extractable Petroleum Hydrocarbons (TEPH)

Sample ID: MW-2	Lab Sample ID: 2000-07-0285-002
Project: JABOR	Received: 07/19/2000 14:15
Sampled: 07/19/2000 11:05	Extracted: 07/19/2000 12:49
Matrix: Water	QC-Batch: 2000/07/19-04.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	07/20/2000 11:32	
Motor Oil	ND	500	ug/L	1.00	07/20/2000 11:32	
<i>Surrogate(s)</i> o-Terphenyl	101.4	60-130	%	1.00	07/20/2000 11:32	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.  
Attn.: Ian T. Reed

Test Method: 8015m  
Prep Method: 3510/8015M

Batch QC Report  
Total Extractable Petroleum Hydrocarbons (TEPH)

Method Blank	Water	QC Batch # 2000/07/19-04.10
MB: 2000/07/19-04.10-001		Date Extracted: 07/19/2000 12:49

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	07/20/2000 23:02	
Motor Oil	ND	500	ug/L	07/20/2000 23:02	
<i>Surrogate(s)</i> o-Terphenyl	89.5	60-130	%	07/20/2000 23:02	

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# CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-07-0285

To: Aqua Science Engineers, Inc.

Test Method: 8015m

Attn: Ian T. Reed

Prep Method: 3510/8015M

## Batch QC Report

Total Extractable Petroleum Hydrocarbons (TEPH)

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2000/07/19-04.10
LCS: 2000/07/19-04.10-002	Extracted: 07/19/2000 12:49	Analyzed 07/20/2000 19:15
LCSD: 2000/07/19-04.10-003	Extracted: 07/19/2000 12:49	Analyzed 07/20/2000 20:02

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	973	986	1250	1250	77.8	78.9	1.4	60-130	25		
Surrogate(s)											
o-Terphenyl	20.2	20.2	20.0	20.0	101.0	101.0		60-130			

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# CHROMALAB, INC.

Environmental Services (SDP) (DOHS 1094)

1220 Quarry Lane • Pleasanton, California 94566-4756  
(925) 484-1919 • Fax (925) 484-1096

## 2000-07-0285

Reference #: 53423

### Chain of Custody

DATE 7/19/00 PAGE 1 OF 1

PROJ MEN: <u>J. Reel</u> COMPANY: <u>Alpha Stone Express Inc</u> ADDRESS: <u>208 W. 96th Pkwy</u> <u>Danville CA 94526</u>					ANALYSIS REQUEST <input type="checkbox"/> TPH (EPA 8015, 8020) <input checked="" type="checkbox"/> PURGEABLE AROMATICS <input type="checkbox"/> BTEX (EPA 8020) <input checked="" type="checkbox"/> TPH-Diesel (EPA 8016M) <input type="checkbox"/> TPEE (EPA 8016M) <input type="checkbox"/> Diesel (EPA 8016) <input type="checkbox"/> FURANOLS & CARBONIS <input type="checkbox"/> (EPA 8016) <input type="checkbox"/> VOLATILE ORGANICS <input type="checkbox"/> (EPA 8210) <input type="checkbox"/> SEMI-VOLATILES <input type="checkbox"/> (EPA 8210) <input type="checkbox"/> Oil & Grease <input type="checkbox"/> Control (EPA 1664) <input type="checkbox"/> PESTICIDES (EPA 8260) <input type="checkbox"/> PCB'S (EPA 8060) <input type="checkbox"/> HPA's by (EPA 8270) <input type="checkbox"/> 8310 <input type="checkbox"/> Spill Cond. <input type="checkbox"/> DIDS <input type="checkbox"/> LEAD METALS: <input type="checkbox"/> Cd, Cr, Pb, Ni, Zn <input type="checkbox"/> CANNED METALS <input type="checkbox"/> (EPA 8210, 8270, 8291) <input type="checkbox"/> TOTAL LEAD <input type="checkbox"/> W&T (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> PCB (24 hr hold time for PCB) <u>TPH-MU/TPH-D</u>															NUMBER OF CONTAINERS  										
SAMPLE ID	DATE	TIME	MATRIX	USE	TPH (EPA 8015, 8020)	PURGEABLE AROMATICS	BTEX (EPA 8020)	TPH-Diesel (EPA 8016M)	TPEE (EPA 8016M)	Diesel (EPA 8016)	FURANOLS & CARBONIS (EPA 8016)	VOLATILE ORGANICS (EPA 8210)	SEMI-VOLATILES (EPA 8210)	Oil & Grease Control (EPA 1664)	PESTICIDES (EPA 8260)	PCB'S (EPA 8060)	HPA's by (EPA 8270)	8310	Spill Cond.	DIDS	LEAD METALS: Cd, Cr, Pb, Ni, Zn	CANNED METALS (EPA 8210, 8270, 8291)	TOTAL LEAD	W&T (STLC)	TCLP	Hexavalent Chromium	PCB (24 hr hold time for PCB)	TPH-MU/TPH-D	NUMBER OF CONTAINERS	
MW-1	7/19	1140	water	REC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																						
MW-2	7/19	1105	water	REC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																						
MW-3	7/19	1205	water	REC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>																						

PROJECT INFORMATION		SAMPLE RECEIPT	
PROJECT NAME: <u>SABR</u>	TOTAL NO. OF CONTAINERS	RECEIVED BY: <u>J. Reel</u>	DATE: <u>7/19/00</u>
PROJECT NUMBER: <u>3406</u>	HEAD SPACE	SIGNATURE: <u>[Signature]</u>	DATE: <u>7/19/00</u>
P.O. #	TEMPERATURE: <u>5.0°C</u>	PRINTED NAME: <u>[Name]</u>	DATE: <u>7/19/00</u>
TAT: <u>STANDARD 5-DAY</u>	CONFORMS TO RECORD	COMPANY: <u>[Company]</u>	DATE: <u>7/19/00</u>
SPECIAL INSTRUCTIONS/COMMENTS: Report: <input type="checkbox"/> Hard Copy <input type="checkbox"/> Level 2 <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> Electronic Report		RECEIVED BY: <u>[Signature]</u>	DATE: <u>7/19/00</u>

RELINQUISHED BY: <u>J. Reel</u>	RELINQUISHED BY: <u>[Signature]</u>	RELINQUISHED BY: <u>[Signature]</u>
SIGNATURE: <u>[Signature]</u>	SIGNATURE: <u>[Signature]</u>	SIGNATURE: <u>[Signature]</u>
PRINTED NAME: <u>[Name]</u>	PRINTED NAME: <u>[Name]</u>	PRINTED NAME: <u>[Name]</u>
DATE: <u>7/19/00</u>	DATE: <u>7/19/00</u>	DATE: <u>7/19/00</u>
COMPANY: <u>[Company]</u>	COMPANY: <u>[Company]</u>	COMPANY: <u>[Company]</u>
RECEIVED BY: <u>[Signature]</u>	RECEIVED BY: <u>[Signature]</u>	RECEIVED BY (LABORATORY): <u>[Signature]</u>
SIGNATURE: <u>[Signature]</u>	SIGNATURE: <u>[Signature]</u>	SIGNATURE: <u>[Signature]</u>
PRINTED NAME: <u>[Name]</u>	PRINTED NAME: <u>[Name]</u>	PRINTED NAME: <u>[Name]</u>
DATE: <u>7/19/00</u>	DATE: <u>7/19/00</u>	DATE: <u>7/19/00</u>
COMPANY: <u>[Company]</u>	COMPANY: <u>[Company]</u>	COMPANY: <u>[Company]</u>