



Rec'd 3/3/01

March 8, 2001

QUARTERLY GROUNDWATER MONITORING REPORT  
FEBRUARY 2001 GROUNDWATER SAMPLING  
ASE JOB NO. 3190

at the  
Former Peerless Stages Bus Property  
2021 Brush Street  
Oakland, California

3/13/01 Ask R. Kitay if SBs will be done. Proposal in to  
Gaela - Need to see if he will approve proposal.  
Issue NOV if no action by April 5,

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

## 1.0 INTRODUCTION

The following is a report detailing the results of the February 2001 quarterly groundwater sampling at the former Peerless Stages Bus Company site located at 2021 Brush Street in Oakland, California (*Figure 1*).

## 2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On February 22, 2001, ASE associate geologist Erik Paddleford measured the depth to water in all four site groundwater monitoring wells using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. No free-floating hydrocarbons or sheen were observed in any site monitoring well. Groundwater elevation data is presented as *Table One*.

A groundwater potentiometric surface map is presented as *Figure 2*. The groundwater flow direction is to the west to southwest with an approximate gradient of 0.0033 feet/foot. The water table rose approximately 1.6 feet since last quarter.

## 3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, each monitoring well was purged of four well casing volumes of groundwater using dedicated polyethylene bailers. The parameters pH, temperature, and conductivity were monitored during the well purging. Samples were not collected until these parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers.

The samples to be analyzed for volatile compounds were decanted from the bailers into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid, and capped without headspace. The samples to be analyzed for total petroleum hydrocarbons as diesel (TPH-D) were contained in 1-liter amber glass containers. All of the samples were labeled and placed in a cooler with wet ice for transport to Chromalab, Inc. of Pleasanton, California (ELAP #1094) under appropriate chain-of-custody documentation. Well sampling field logs are presented in *Appendix A*.

The well purge water was placed in 55-gallon steel drums, and labeled for temporary storage.

The groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 5030/8015M, TPH-D by modified EPA Method 3510/8015M, benzene, toluene, ethylbenzene and total xylenes (collectively known as BTEX) by EPA Method 8020 and methyl tertiary-butyl ether (MTBE) by EPA Method 8020. The analytical results for this and previous sampling periods are presented in *Table Two*. The certified analytical report and chain-of-custody documentation are included as *Appendix B*.

#### 4.0 CONCLUSIONS

The groundwater samples collected from monitoring well MW-1 contained 87 parts per billion (ppb) TPH-G and 54 ppb TPH-D. Samples collected from monitoring well MW-2 contained 1,300 ppb TPH-D and 1,600 ppb MTBE. The groundwater samples collected from monitoring well MW-4 contained 76 ppb TPH-G and 170 ppb TPH-D. Monitoring well MW-3 did not contain contaminant concentrations above the laboratory detection limits for any of the compounds analyzed. The laboratory noted that all TPH-G and TPH-D concentrations detected did not match their gasoline and diesel standards. There appears to be an overall decreasing trend in MTBE concentrations in groundwater samples collected from monitoring well MW-2. Groundwater samples collected from monitoring well MW-1 contained TPH-D and TPH-G concentrations for the first time since August 1999.

The MTBE concentration in groundwater samples collected from monitoring well MW-2 exceeded the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water.

#### 5.0 RECOMMENDATIONS

ASE recommends that two additional borings be drilled downgradient of monitoring well MW-2 to investigate for the offsite migration of MTBE. The closest these borings could be placed is approximately 200-feet west of site in the parking lane of West Street.

## 6.0 REPORT LIMITATIONS

The results presented in this report represent the conditions at the time of the groundwater sampling, at the specific locations where the groundwater samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting from sources other than the former underground storage tanks and associated plumbing at the site, or for parameters not analyzed by the laboratory. All of the laboratory work cited in this report was prepared under the direction of independent CAL-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

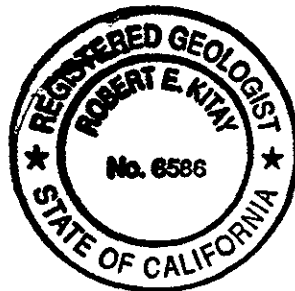
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this site and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Erik H. Paddelford  
Associate Geologist

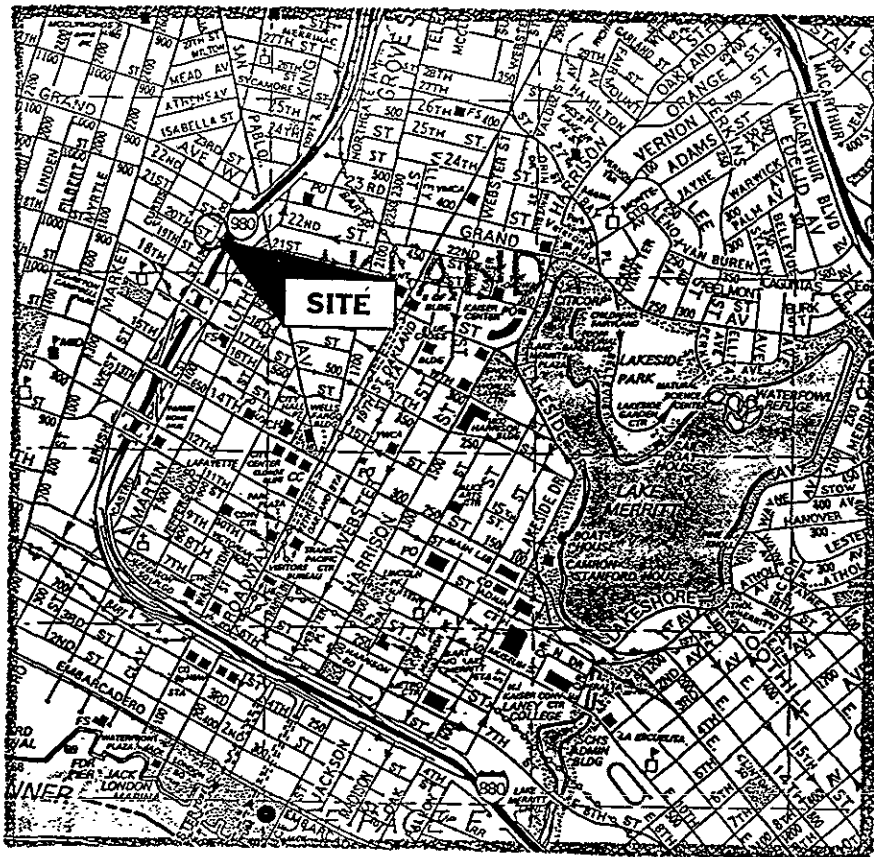
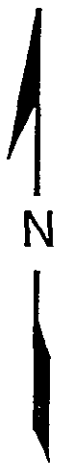


Robert E. Kitay, R.G., R.E.A.  
Senior Geologist

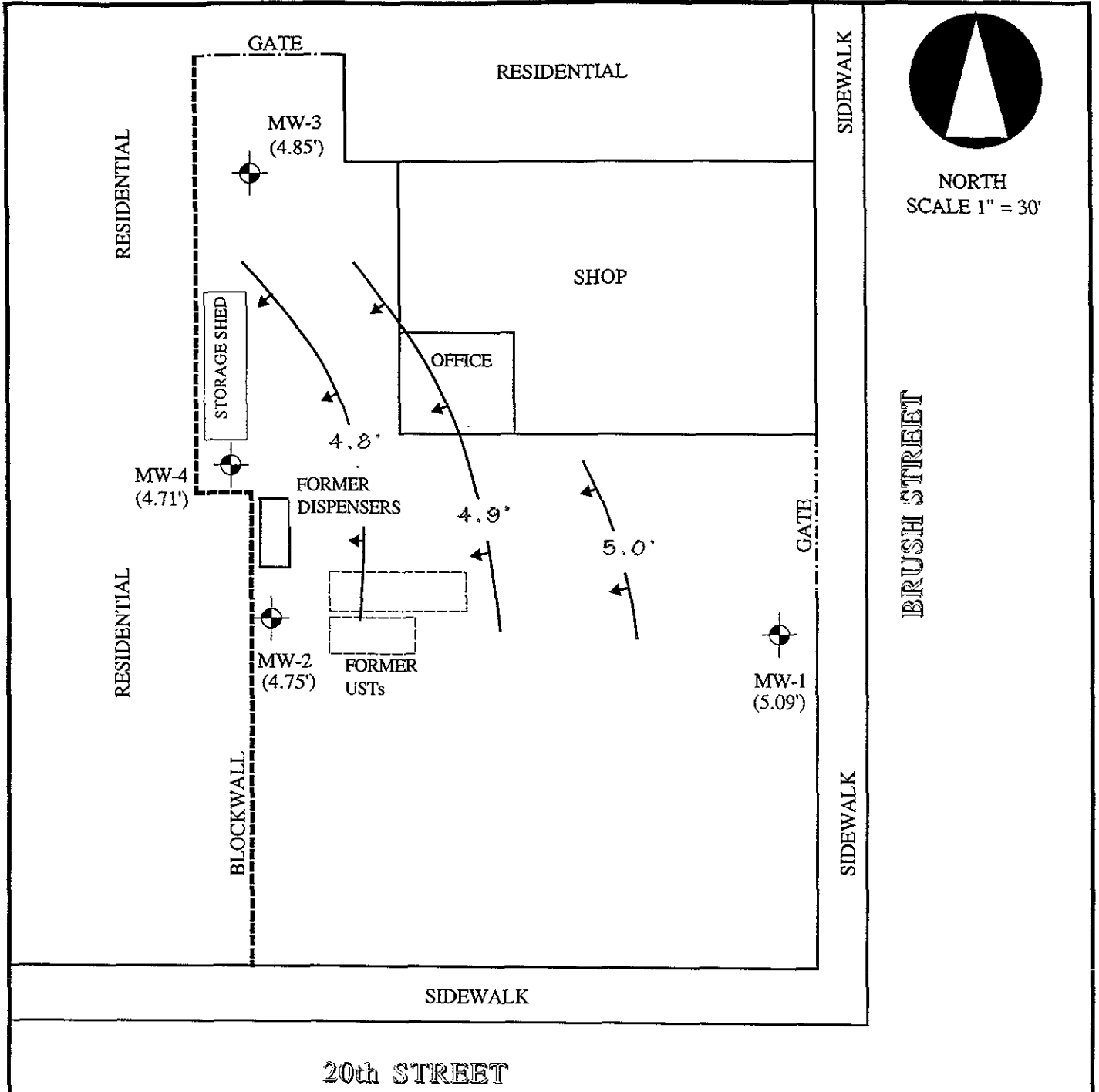
Attachments: Tables One and Two  
Figures 1 and 2  
Appendices A and B

cc: Mr. Alex Gaeta, Responsible Party  
Mr. Gardner Kent, Property Owner  
Ms. Eva Chu, ACHSA  
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region

## FIGURES



SITE LOCATION MAP	
Former Peerless Stages, Inc. Property 2021 Brush Street Oakland, California	
Aqua Science Engineers	Figure 1



LEGEND

MW-4		MONITORING WELL
(4.75')		GROUNDWATER ELEVATION RELATIVE TO PROJECT DATUM
4.8'		GROUNDWATER ELEVATION CONTOUR
		FORMER UST LOCATION

GROUNDWATER ELEVATION CONTOUR MAP 2/22/2001	
Former Peerless Stages, Inc. Property 2021 Brush Street Oakland, California	
AQUA SCIENCE ENGINEERS	Figure 2

# TABLES



**TABLE ONE**  
**Summary of Groundwater Well Survey Data**  
**Peerless Stages Property, Oakland, California**

WELL ID	Date of Measurement	Top of Casing Elevation (relative to project datum)	Depth to Water (feet)	Groundwater Elevation (project datum)
MW-1	08/26/1999	19.66	16.44	3.22
	11/11/1999		16.56	3.1
	02/16/2000		13.02	6.64
	05/17/2000		14.88	4.78
	08/23/2000		15.86	3.80
	11/30/2000		16.26	3.40
	02/22/2001		14.57	5.09
MW-2	08/26/1999	20.00	16.88	3.12
	11/11/1999		16.92	3.08
	02/16/2000		13.76	6.24
	05/17/2000		15.32	4.68
	08/23/2000		15.96	4.04
	11/30/2000		16.73	3.27
	02/22/2001		15.25	4.75
MW-3	08/26/1999	18.91	15.94	2.97
	11/11/1999		15.98	2.93
	02/16/2000		12.70	6.21
	05/17/2000		14.44	4.47
	08/23/2000		15.33	3.58
	11/30/2000		15.75	3.16
	02/22/2001		14.06	4.85
MW-4	08/26/1999	19.43	16.48	2.95
	11/11/1999		16.50	2.93
	02/16/2000		13.19	6.24
	05/17/2000		14.95	4.48
	08/23/2000		15.97	3.46
	11/30/2000		16.29	3.14
	02/22/2001		14.72	4.71

## TABLE TWO

Summary of Chemical Analysis for Groundwater Samples  
Peerless Stages Property, Oakland, California  
All results are in parts per billion (ppb)

SAMPLE ID	DATE SAMPLED	TPH-G	TPH-D	BENZENE	TOLUENE	ETHYL-BENZENE	TOTAL XYLENES	MTBE	PNA's	VOC's
MW-1	08/26/1999	81	<50	3.5	7.9	3.2	15	<5.0	NA	NA
	11/11/1999	<50	110	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/16/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	05/17/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	08/23/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	11/30/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/22/2001	87**	54*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
MW-2	08/26/1999	8,600	1,200*	<25	<25	<25	<25	14,000	<0.057 - <0.23	NA
	11/11/1999	710	2,300*	<0.5	<0.5	<0.5	<0.5	6,200	NA	NA
	02/16/2000	<50	1,500*	<0.5	<0.5	<0.5	<0.5	3,800	NA	<10 - <1,000
	05/17/2000	58	1,400*	<0.5	<0.5	<0.5	<0.5	5,800	NA	NA
	08/23/2000	1,300**	600*	<0.5	<0.5	<0.5	<0.5	2,000	NA	<0.5 - <50
	11/30/2000	<2,500	1,200*	<0.5	<0.5	<0.5	<0.5	2,700	NA	NA
	02/22/2001	<2,500	1,300*	<0.5	<0.5	<0.5	<0.5	1,600	NA	NA
MW-3	08/26/1999	<50	<63	2.5	3	0.87	4	<5.0	NA	NA
	11/11/1999	<50	<56	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/16/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	05/17/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	08/23/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	11/30/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/22/2001	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
MW-4	08/26/1999	<50	420*	<0.5	<0.5	0.88	3.6	<5.0	NA	NA
	11/11/1999	<50	120*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/16/2000	<50	76*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	05/17/2000	120**	130*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	08/23/2000	<50	73*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	11/30/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
	02/22/2001	76**	170*	<0.5	<0.5	<0.5	<0.5	<5.0	NA	NA
DHS MCL		NE	NE	1	150	700	1,750	13	varies	varies

**Notes:**

Non-Detectable concentrations are noted by a less than symbol (<) followed by the laboratory reporting limit

NE = DHS MCL not established

PNA's = Polynuclear Aromatic Hydrocarbons

VOC's = Volatile Organic Compounds

DHS MCL = Department of Health Services Maximum Contaminant Level for drinking water


NA = Sample was not analyzed for these compounds

\* = Hydrocarbons do not match the laboratory diesel standard

\*\* = Hydrocarbons do not match the laboratory gasoline standard

# **APPENDIX A**

## Well Sampling Field Logs



# aqua science engineers inc.

## WELL SAMPLING FIELD LOG

Project Name and Address: Peerless ctgcs  
 Job #: 3190 Date of sampling: 2-22-01  
 Well Name: MW-1 Sampled by: EP  
 Total depth of well (feet): 27.0' Well diameter (inches): 2"  
 Depth to water before sampling (feet): 16.26 14.57  
 Thickness of floating product if any: -  
 Depth of well casing in water (feet): 14.57 12.43  
 Number of gallons per well casing volume (gallons): 2.11  
 Number of well casing volumes to be removed: 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 8.22  
 Equipment used to purge the well: bailer  
 Time Evacuation Began: 1020 Time Evacuation Finished: 1045  
 Approximate volume of groundwater purged: 9  
 Did the well go dry?: No After how many gallons: -  
 Time samples were collected: 1050  
 Depth to water at time of sampling: 15.0  
 Percent recovery at time of sampling: 97  
 Samples collected with: bailer  
 Sample color: brown opaque Odor: none  
 Description of sediment in sample: very silty

### CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>17.21</u>	<u>6.9</u>	<u>960</u>
<u>2</u>	<u>17.20</u>	<u>6.7</u>	<u>970</u>
<u>3</u>	<u>17.31</u>	<u>6.9</u>	<u>970.</u>
<u>4</u>	<u>17.25</u>	<u>6.8</u>	<u>960</u>

### SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-1</u>	<u>3</u>	<u>40ml vov</u>	<u>X</u>	<u>X</u>	
<u>MW-1</u>	<u>3</u>	<u>1 liter amber</u>	<u>X</u>	<u>X</u>	



# WELL SAMPLING FIELD LOG

Project Name and Address: Peerless Stages  
 Job #: 3190 Date of sampling: 2-22-01  
 Well Name: MW-2 Sampled by: EP  
 Total depth of well (feet): ~~30.0~~ 29.7 Well diameter (inches): 2  
 Depth to water before sampling (feet): 15.25  
 Thickness of floating product if any: -  
 Depth of well casing in water (feet): 14.45  
 Number of gallons per well casing volume (gallons): 2.45  
 Number of well casing volumes to be removed: 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 9.8  
 Equipment used to purge the well: bailer  
 Time Evacuation Began: 1110 Time Evacuation Finished: 1135  
 Approximate volume of groundwater purged: 10  
 Did the well go dry?: No After how many gallons: -  
 Time samples were collected: 1145  
 Depth to water at time of sampling: -  
 Percent recovery at time of sampling: 79%  
 Samples collected with: bailer  
 Sample color: brown Odor: none  
 Description of sediment in sample: silt

## CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>17.12</u>	<u>6.02</u>	<u>1160</u>
<u>2</u>	<u>17.10</u>	<u>6.16</u>	<u>1180</u>
<u>3</u>	<u>17.10</u>	<u>6.05</u>	<u>1150</u>
<u>4</u>	<u>17.11</u>	<u>6.05</u>	<u>1170</u>

## SAMPLES COLLECTED

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





# WELL SAMPLING FIELD LOG

Project Name and Address: Peerless Steaks  
 Job #: 3190 Date of sampling: 2-22-01  
 Well Name: MW-4 Sampled by: EP  
 Total depth of well (feet): 29.64 Well diameter (inches): 2  
 Depth to water before sampling (feet): 14.16 14.72  
 Thickness of floating product if any: -  
 Depth of well casing in water (feet): 15.48 14.92  
 Number of gallons per well casing volume (gallons): 2.63 2.53  
 Number of well casing volumes to be removed: 10.52 4  
 Req'd volume of groundwater to be purged before sampling (gallons): 10.52 <sup>15</sup> 15  
 Equipment used to purge the well: boiler  
 Time Evacuation Began: 1245 Time Evacuation Finished: 1315  
 Approximate volume of groundwater purged: //  
 Did the well go dry?: no After how many gallons: -  
 Time samples were collected: 1330  
 Depth to water at time of sampling: -  
 Percent recovery at time of sampling: 795%  
 Samples collected with: boiler  
 Sample color: brown/clear Odor: none  
 Description of sediment in sample: silt

## CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>17.21</u>	<u>6.51</u>	<u>1260</u>
<u>2</u>	<u>17.21</u>	<u>6.52</u>	<u>1250</u>
<u>3</u>	<u>17.23</u>	<u>6.53</u>	<u>1260</u>
<u>4</u>	<u>17.22</u>	<u>6.51</u>	<u>1260</u>

## SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-4</u>	<u>3</u>	<u>40ml VOA</u>	<u>X</u>	<u>X</u>	
<u>MW-4</u>	<u>3</u>	<u>1-1.5L Amber</u>		<u>X</u>	

# **APPENDIX B**

Certified Analytical Report  
and  
Chain of Custody Documentation



**Aqua Science Engineers, Inc.**  
208 West El Pintado Road  
Danville, CA 94526

Attn.: Mr. Ian T. Reed

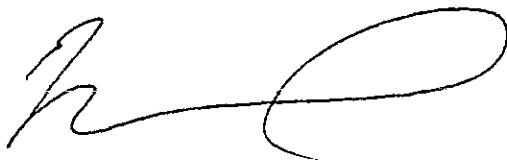
Project: 3190  
Former Peerless Stages

Dear Mr. Reed,

Attached is our report for your samples received on Friday February 23, 2001  
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 April 9, 2001  
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

Diesel

<b>Aqua Science Engineers, Inc.</b>	☒ 208 West El Pintado Road Danville, CA 94526
Attn: Ian T. Reed	Phone: (925) 820-9391 Fax: (925) 837-4853
Project #: 3190	Project: Former Peerless Stages

**Samples Reported**

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	02/22/2001 10:50	1
MW-2	Water	02/22/2001 11:45	2
MW-3	Water	02/22/2001 12:30	3
MW-4	Water	02/22/2001 13:30	4

**STL ChromaLab**  
Environmental Services (CA 1094)

Submission #: 2001-02-0446

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

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

Diesel

Sample ID: MW-1	Lab Sample ID: 2001-02-0446-001
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 10:50	Extracted: 02/26/2001 16:07
Matrix: Water	QC-Batch: 2001/02/26-05.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	54	50	ug/L	1.00	02/27/2001 23:57	ndp
<i>Surrogate(s)</i> o-Terphenyl	88.9	60-130	%	1.00	02/27/2001 23:57	

# STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-02-0446

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

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

Diesel

Sample ID: MW-2	Lab Sample ID: 2001-02-0446-002
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 11:45	Extracted: 02/26/2001 16:07
Matrix: Water	QC-Batch: 2001/02/26-05.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	1300	50	ug/L	1.00	02/28/2001 00:43	ndp
<i>Surrogate(s)</i> o-Terphenyl	73.4	60-130	%	1.00	02/28/2001 00:43	

# STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-02-0446

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

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

Diesel

Sample ID: MW-3	Lab Sample ID: 2001-02-0446-003
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 12:30	Extracted: 02/26/2001 16:07
Matrix: Water	QC-Batch: 2001/02/26-05.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	ND	50	ug/L	1.00	02/28/2001 13:49	
<b>Surrogate(s)</b> o-Terphenyl	88.1	60-130	%	1.00	02/28/2001 13:49	

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

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

Diesel

Sample ID: <b>MW-4</b>	Lab Sample ID: <b>2001-02-0446-004</b>
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 13:30	Extracted: 02/26/2001 16:07
Matrix: Water	QC-Batch: 2001/02/26-05.10

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Diesel	170	50	ug/L	1.00	02/28/2001 02:15	ndp
<b>Surrogate(s)</b> o-Terphenyl	89.6	60-130	%	1.00	02/28/2001 02:15	

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

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

**Batch QC Report**  
Diesel

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 2001/02/26-05.10</b>
MB: 2001/02/26-05.10-001		Date Extracted: 02/26/2001 16:07

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Diesel	ND	50	ug/L	02/27/2001 12:15	
<i>Surrogate(s)</i> o-Terphenyl	83.5	60-130	%	02/27/2001 12:15	

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

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

**Batch QC Report**

Diesel

<b>Laboratory Control Spike (LCS/LCSD)</b>	<b>Water</b>	<b>QC Batch # 2001/02/26-05.10</b>
LCS: 2001/02/26-05.10-002	Extracted: 02/26/2001 16:07	Analyzed 02/27/2001 10:58
LCSD: 2001/02/26-05.10-003	Extracted: 02/26/2001 16:07	Analyzed 02/27/2001 11:37

Compound	Conc. [ ug/L ]		Exp. Conc. [ ug/L ]		Recovery [%]		RPD [%]	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Diesel	945	991	1250	1250	75.6	79.3	4.8	60-130	25		
<b>Surrogate(s)</b> o-Terphenyl	21.1	21.3	20.0	20.0	105.5	106.5		60-130			



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

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

**Legend & Notes**

Diesel

**Analyte Flags**

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

Gas/BTEX and MTBE

<b>Aqua Science Engineers, Inc.</b>	☒ 208 West El Pintado Road Danville, CA 94526
Attn: Ian T. Reed	Phone: (925) 820-9391 Fax: (925) 837-4853
Project #: 3190	Project Former Peerless Stages

**Samples Reported**

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	02/22/2001 10:50	1
MW-2	Water	02/22/2001 11:45	2
MW-3	Water	02/22/2001 12:30	3
MW-4	Water	02/22/2001 13:30	4

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: 2001-02-0446-001
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 10:50	Extracted: 03/02/2001 15:41
Matrix: Water	QC-Batch: 2001/03/02-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	87	50	ug/L	1.00	03/02/2001 15:41	g
Benzene	ND	0.50	ug/L	1.00	03/02/2001 15:41	
Toluene	ND	0.50	ug/L	1.00	03/02/2001 15:41	
Ethyl benzene	ND	0.50	ug/L	1.00	03/02/2001 15:41	
Xylene(s)	ND	0.50	ug/L	1.00	03/02/2001 15:41	
MTBE	ND	5.0	ug/L	1.00	03/02/2001 15:41	
<b>Surrogate(s)</b>						
Trifluorotoluene	93.8	58-124	%	1.00	03/02/2001 15:41	
4-Bromofluorobenzene-FID	111.8	50-150	%	1.00	03/02/2001 15:41	

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: <b>MW-2</b>	Lab Sample ID: <b>2001-02-0446-002</b>
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 11:45	Extracted: 03/02/2001 20:41
Matrix: Water	QC-Batch: 2001/03/02-01.01 2001/03/05-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	2500	ug/L	50.00	03/02/2001 20:41	
Benzene	ND	0.50	ug/L	1.00	03/05/2001 12:49	
Toluene	ND	0.50	ug/L	1.00	03/05/2001 12:49	
Ethyl benzene	ND	0.50	ug/L	1.00	03/05/2001 12:49	
Xylene(s)	ND	0.50	ug/L	1.00	03/05/2001 12:49	
MTBE	1600	250	ug/L	50.00	03/02/2001 20:41	
<b>Surrogate(s)</b>						
Trifluorotoluene	87.9	58-124	%	1.00	03/05/2001 12:49	
Trifluorotoluene	93.8	58-124	%	1.00	03/02/2001 20:41	
4-Bromofluorobenzene-FID	90.4	50-150	%	1.00	03/02/2001 20:41	
4-Bromofluorobenzene-FID	94.7	50-150	%	1.00	03/05/2001 12:49	

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: 2001-02-0446-003
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 12:30	Extracted: 03/02/2001 19:04
Matrix: Water	QC-Batch: 2001/03/02-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	03/02/2001 19:04	
Benzene	ND	0.50	ug/L	1.00	03/02/2001 19:04	
Toluene	ND	0.50	ug/L	1.00	03/02/2001 19:04	
Ethyl benzene	ND	0.50	ug/L	1.00	03/02/2001 19:04	
Xylene(s)	ND	0.50	ug/L	1.00	03/02/2001 19:04	
MTBE	ND	5.0	ug/L	1.00	03/02/2001 19:04	
<b>Surrogate(s)</b>						
Trifluorotoluene	81.4	58-124	%	1.00	03/02/2001 19:04	
4-Bromofluorobenzene-FID	96.3	50-150	%	1.00	03/02/2001 19:04	

To: Aqua Science Engineers, Inc.

Test Method: 8020  
8015M

Attn.: Ian T. Reed

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID: MW-4	Lab Sample ID: 2001-02-0446-004
Project: 3190 Former Peerless Stages	Received: 02/23/2001 18:17
Sampled: 02/22/2001 13:30	Extracted: 03/02/2001 16:51
Matrix: Water	QC-Batch: 2001/03/02-01.01

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	76	50	ug/L	1.00	03/02/2001 16:51	g
Benzene	ND	0.50	ug/L	1.00	03/02/2001 16:51	
Toluene	ND	0.50	ug/L	1.00	03/02/2001 16:51	
Ethyl benzene	ND	0.50	ug/L	1.00	03/02/2001 16:51	
Xylene(s)	ND	0.50	ug/L	1.00	03/02/2001 16:51	
MTBE	ND	5.0	ug/L	1.00	03/02/2001 16:51	
<b>Surrogate(s)</b>						
Trifluorotoluene	87.4	58-124	%	1.00	03/02/2001 16:51	
4-Bromofluorobenzene-FID	103.3	50-150	%	1.00	03/02/2001 16:51	

To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn.: Ian T. Reed

Prep Method: 5030

**Batch QC Report**  
Gas/BTEX and MTBE

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 2001/03/02-01.01</b>
MB: 2001/03/02-01.01-001		Date Extracted: 03/02/2001 14:36

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/02/2001 14:36	
Benzene	ND	0.5	ug/L	03/02/2001 14:36	
Toluene	ND	0.5	ug/L	03/02/2001 14:36	
Ethyl benzene	ND	0.5	ug/L	03/02/2001 14:36	
Xylene(s)	ND	0.5	ug/L	03/02/2001 14:36	
MTBE	ND	5.0	ug/L	03/02/2001 14:36	
<b>Surrogate(s)</b>					
Trifluorotoluene	90.8	58-124	%	03/02/2001 14:36	
4-Bromofluorobenzene-FID	91.6	50-150	%	03/02/2001 14:36	

To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn.: Ian T. Reed

Prep Method: 5030

**Batch QC Report**  
Gas/BTEX and MTBE

<b>Method Blank</b>	<b>Water</b>	<b>QC Batch # 2001/03/05-01.01</b>
MB: 2001/03/05-01.01-003		Date Extracted: 03/05/2001 07:55

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/05/2001 07:55	
Benzene	ND	0.5	ug/L	03/05/2001 07:55	
Toluene	ND	0.5	ug/L	03/05/2001 07:55	
Ethyl benzene	ND	0.5	ug/L	03/05/2001 07:55	
Xylene(s)	ND	0.5	ug/L	03/05/2001 07:55	
MTBE	ND	5.0	ug/L	03/05/2001 07:55	
<b>Surrogate(s)</b>					
Trifluorotoluene	94.0	58-124	%	03/05/2001 07:55	
4-Bromofluorobenzene-FID	94.8	50-150	%	03/05/2001 07:55	



To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn: Ian T. Reed

Prep Method: 5030

**Batch QC Report**

Gas/BTEX and MTBE

<b>Laboratory Control Spike (LCS/LCSD)</b>	<b>Water</b>	<b>QC Batch # 2001/03/02-01.01</b>
LCS: 2001/03/02-01.01-002	Extracted: 03/02/2001 12:25	Analyzed 03/02/2001 12:25
LCSD: 2001/03/02-01.01-003	Extracted: 03/02/2001 12:58	Analyzed 03/02/2001 12:58

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD		
Gasoline	429	487	500	500	85.8	97.4	12.7	75-125	20				
Benzene	95.9	93.7	100.0	100.0	95.9	93.7	2.3	77-123	20				
Toluene	94.3	93.1	100.0	100.0	94.3	93.1	1.3	78-122	20				
Ethyl benzene	93.5	94.0	100.0	100.0	93.5	94.0	0.5	70-130	20				
Xylene(s)	279	283	300	300	93.0	94.3	1.4	75-125	20				
<b>Surrogate(s)</b>													
Trifluorotoluene	481	455	500	500	96.2	91.0		58-124					
4-Bromofluorobenzene-FI	345	421	500	500	69.0	84.2		50-150					

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

Test Method: 8020  
Prep Method: 5030

**Batch QC Report**

Gas/BTEX and MTBE

<b>Laboratory Control Spike (LCS/LCSD)</b>	<b>Water</b>	<b>QC Batch # 2001/03/05-01.01</b>
LCS: 2001/03/05-01.01-004	Extracted: 03/05/2001 08:27	Analyzed 03/05/2001 08:27
LCSD: 2001/03/05-01.01-005	Extracted: 03/05/2001 09:00	Analyzed 03/05/2001 09:00

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]			RPD		Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	RPD [%]	Recovery	RPD	LCS	LCSD		
Benzene	100	95.2	100.0	100.0	100.0	95.2	4.9	77-123	20				
Toluene	98.9	95.0	100.0	100.0	98.9	95.0	4.0	78-122	20				
Ethyl benzene	99.5	94.8	100.0	100.0	99.5	94.8	0.0	70-130	20				
Xylene(s)	300	286	300	300	100.0	95.3	4.8	75-125	20				
<b>Surrogate(s)</b>													
Trifluorotoluene	488	466	500	500	97.6	93.2		58-124					

# STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-02-0446

To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn: Ian T. Reed

Prep Method: 5030

## Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)	Water	QC Batch # 2001/03/05-01.01
LCS: 2001/03/05-01.01-006	Extracted: 03/05/2001 09:33	Analyzed 03/05/2001 09:33
LCSD: 2001/03/05-01.01-007	Extracted: 03/05/2001 10:05	Analyzed 03/05/2001 10:05

Compound	Conc. [ug/L]		Exp. Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD		Recovery	RPD	LCS	LCSD
Gasoline	438	548	500	500	87.6	109.6	22.3	75-125	20		
<b>Surrogate(s)</b> 4-Bromofluorobenzene-FI	360	422	500	500	72.0	84.4		50-150			

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

To: Aqua Science Engineers, Inc.

Test Method: 8015M  
8020

Attn.: Ian T. Reed

Prep Method: 5030

**Batch QC Report**  
Gas/BTEX and MTBE

<b>Matrix Spike ( MS / MSD )</b>	<b>Water</b>	<b>QC Batch # 2001/03/02-01.01</b>
Sample ID: <b>MW-4</b>		Lab Sample ID: 2001-02-0446-004
MS: 2001/03/02-01.01-004	Extracted: 03/02/2001 21:14	Analyzed: 03/02/2001 21:14 Dilution: 1.0
MSD: 2001/03/02-01.01-005	Extracted: 03/02/2001 21:47	Analyzed: 03/02/2001 21:47 Dilution: 1.0

Compound	Conc. [ ug/L ]			Exp. Conc. [ ug/L ]		Recovery [%]			RPD	Ctrl. Limits [%]			Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	MSD		Recovery	RPD	MS	MSD	
Gasoline	560	501	75.8	500	500	96.8	85.0	13.0		65-135	20			
Benzene	97.6	97.2	ND	100.0	100.0	97.6	97.2	0.4		65-135	20			
Toluene	96.5	95.2	ND	100.0	100.0	96.5	95.2	1.4		65-135	20			
Ethyl benzene	96.5	97.1	ND	100.0	100.0	96.5	97.1	0.6		65-135	20			
Xylene(s)	288	281	ND	300	300	96.0	93.7	2.4		65-135	20			
<b>Surrogate(s)</b>														
Trifluorotoluene	474	455		500	500	94.8	91.0			58-124				
4-Bromofluorobenzene-F	444	407		500	500	88.8	81.4			50-150				

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.

Aqua Science Engineers, Inc.  
 208 W. El Pintado Road  
 Danville, CA 94526  
 (925) 820-9391  
 FAX (925) 837-4853

# Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE)

(PHONE NO.)

PROJECT NAME

Former Peerless Steeps

JOB NO. 3190

*Erik Paddlesrd*

ADDRESS

2021 Brush St. Oakland CA

DATE 2/22/01

## ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

*5-day TAT*

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8240)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LIFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140) (EPA 608/8080)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)	COMPOSITE		
					MW-1	2/22	1050	Water	6	X	X										
MW-2	2/22	1145	↓	↓	X	X															
MW-3	2/22	1230	↓	↓	X	X															
MW-4	2/22	1330	↓	↓	X	X															

RELINQUISHED BY:

*Erik Paddlesrd*  
 (signature) (time)

RECEIVED BY:

*B. Molino*  
 (signature) (time) 104

RELINQUISHED BY:

(signature) (time)

RECEIVED BY LABORATORY:

(signature) (time)

COMMENTS:

Erik Paddlesrd

(printed name) (date)

B. Molino 2/25/01

(printed name) (date)

(printed name) (date)

(printed name) (date)

(printed name) (date)

(printed name) (date)

Company-

*Ase*

Company-

*B. Molino*

Company-

Company-