

June 17, 2003

RO 2541

Mr. Kelly Engineer  
All Star Inc.  
1791 Pine Street  
Concord, CA 94520

Alameda County  
JUN 19 2003  
Environmental Health

RE: May 2003 Groundwater Monitoring Report  
1220 West Tennyson Road, Hayward, California  
ACC Project Number: 6651-004.00

Dear Mr. Engineer:

ACC Environmental Consultants, Inc., (ACC) has enclosed two copies of the Groundwater Sampling and Monitoring Report. Methyl tertiary butyl ether (MTBE) was the only gasoline constituent reported in the samples from the three existing groundwater monitoring wells. On your behalf, a copy of this report has been submitted to Mr. Barney Chan of the Alameda County Health Care Services Agency (ACHCSA) for review. ACC understands that the Hayward Fire Department has referred the case to the ACHCSA for oversight and to be the lead regulatory agency.

If you have any questions regarding this report or the findings of the work, please contact me at (510) 638-8400, extension 109.

Sincerely,



David R. DeMent, RG, REA II  
Environmental Division Manager

/ejg:drd

Enclosures

cc: Mr. Paul Rosenstein, Attorney at Law  
Mr. Barney Chan, ACHCSA



**MAY 2003**  
**GROUNDWATER**  
**MONITORING**  
**REPORT**

*Alameda County*  
*JUN 19 2003*  
*Environmental Health*

June 17, 2003

1220 West Tennyson Road  
Hayward, California

Prepared For:  
Mr. Kelly Engineer  
All Star Inc.  
1791 Pine Street  
Concord, CA

OAKLAND ▪ SACRAMENTO  
SEATTLE ▪ LOS ANGELES

ACC Project Number 6651-004.00

**MAY 2003 GROUNDWATER MONITORING REPORT**

**1220 West Tennyson Road  
Hayward, California**

*ACC Project Number 6651-004.00*

Prepared for:

**Mr. Kelly Engineer  
All Star Inc.  
1791 Pine Street  
Concord, CA 94520**

June 17, 2003

Prepared by:



Edward Giacometti  
Staff Geologist

Reviewed by:



David R. DeMent, RG, REA II  
Environmental Division Manager

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**MAY 2003 GROUNDWATER MONITORING REPORT**  
**1220 West Tennyson Road**  
**Hayward, California**

## **1.0 INTRODUCTION**

This May 2003 Groundwater Sampling and Monitoring Report was prepared by ACC Environmental Consultants, Inc., (ACC) at the request of Kelly Engineer and All Star Inc., to describe work performed at 1220 West Tennyson Road, Hayward, California (Site). The project objectives were to purge and sample three groundwater monitoring wells and one observation well, calculate groundwater gradient and flow direction, and characterize concentrations of petroleum hydrocarbons in groundwater in the vicinity of four former underground storage tanks (USTs).

## **2.0 BACKGROUND**

The subject site is located on the southwest corner of West Tennyson Road and Pompano Street, Hayward, California (Figure 1). An operating gasoline and automobile repair facility currently occupy the Site. The following information was obtained during file review at the City of Hayward Fire Department.

Environmental Geotechnical Consultants, Inc. removed one 6,000-gallon and three 4,000-gallon USTs from the site in October 1990. Four new USTs were subsequently installed at the site. One groundwater and eight soil samples were collected from the tank pit during removal of the USTs. Analysis of the soil samples revealed the presence of total petroleum hydrocarbons as gasoline (TPHg) at 4,300 parts per million (ppm), benzene at 29,000 parts per billion (ppb), toluene at 160,000 ppb, ethylbenzene at 68,000 ppb and total xylenes at 280,000 ppb. Analysis of the groundwater sample revealed the presence of TPHg at 26 ppm, benzene at 2,400 ppb, toluene at 1,800 ppb and total xylenes at 5,200 ppb.

Artesian Environmental Consultants (Artesian) performed a subsurface investigation at the Site in March 1992. Three soil borings were drilled at the Site and converted into groundwater monitoring wells (MW-1, MW-2 and MW-3). Analysis of seven soil samples collected from the borings revealed the presence of TPHg at 680 ppm, benzene at 8,100 ppb, toluene at 15,000 ppb, ethylbenzene at 11,000 ppm and total xylenes at 73,000 ppb. Analyses of soil samples collected from the tank pit revealed the presence of TPHg at 2,900 ppm, benzene at 12,000 ppm, toluene at 160,000 ppm, ethylbenzene at 35,000 ppb and total xylenes at 420,000 ppb. Analyses of groundwater samples collected from the groundwater monitoring wells revealed the presence of TPHg at 59,000 ppb, benzene at 13,000 ppb, toluene at 12,000 ppb, ethylbenzene at 1,600 ppb and total xylenes at 13,000 ppb.

The City of Hayward has requested additional site investigation and remediation at the Site.

### 3.0 GROUNDWATER SAMPLING AND MONITORING

ACC conducted groundwater sampling and monitoring on May 27, 2003. Work at the site included measuring depth to water, subjectively evaluating groundwater in the wells, purging and sampling the wells, and submitting the samples to a laboratory for analysis.

#### 3.1 Groundwater Monitoring

Before groundwater sampling, the depth to the surface of the water table was measured from the top of the well casing using a Solinst water level meter. The water level measurements were recorded to the nearest 0.01 foot with respect to mean sea level (MSL). Worksheets of recorded groundwater monitoring data are included as Appendix 1. Information regarding well elevations and groundwater depths is summarized in Table 1.

**TABLE 1 - GROUNDWATER DEPTH INFORMATION**

Well No.	Well Elevation* (above MSL)	Date Measured	Depth to Groundwater	Groundwater Elevation
MW-1	21.86	04/07/92	10.08	11.78
		04/11/01	10.54	11.32
		07/16/01	11.18	10.68
		11/25/02	11.62	10.24
		2/24/03	11.29	10.57
		05/27/03	11.49	10.37
MW-2	21.56	04/07/92	9.49	12.07
		04/11/01	9.67	11.89
		07/16/01	10.36	11.20
		11/25/02	11.13	10.43
		2/24/03**	10.51	11.05
		05/27/03	10.99	10.57
MW-3	20.54	04/07/92	10.64	9.90
		04/11/01	11.40	9.14
		07/16/01	11.67	8.87
		11/25/02	10.22	9.68
		2/24/03	9.88	10.66
		05/27/03	10.09	10.45

Notes: All measurements in feet  
\*Well elevation measured to top of casing  
\*\*ACC

#### 3.2 Groundwater Gradient

The groundwater flow direction, as determined from monitoring well data that was obtained on May 27, 2003, is illustrated on Figure 3. ACC utilized the well elevations relative to mean seal level reported by Artesian in its *Subsurface Investigation Report* dated April 1992. Based on groundwater

elevation calculations, groundwater flow direction is toward the west-southwest at an average gradient of 0.005 foot per foot. These values are inconsistent with previous trends. Table 2 summarizes previous gradients and calculated groundwater flow directions.

**TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION**

Date Monitored	Gradient (foot/foot)	Direction
04/07/92	0.025	south-southeast
04/11/01	0.031	south
07/16/01	0.026	south
11/25/02	0.008	south
02/24/03	0.002	south
05/27/03	0.005	west-southwest

### 3.3 Groundwater Sampling

Before groundwater sampling, each well was purged using a disposable polyethylene bailer. Groundwater samples were collected when a minimum of four well casing volumes of water had been removed. Following purging, each well was allowed to recharge before sampling. When recovery to 80 percent of the static water level was observed, a sample was collected for analysis.

Wells were sampled using disposable polyethylene bailers attached to new rope for each well. From each monitoring well, approved, laboratory-supplied sample vials were filled to overflowing and sealed to eliminate trapped air in the vial. Once filled, sample vials were inverted and tapped to test for air bubbles. Sample containers were labeled with self adhesive, preprinted tags. The samples were stored in a prechilled, insulated container pending delivery to STL San Francisco, a state-certified laboratory for analysis.

Water purged prior to sampling the monitoring wells was temporarily stored on site in Department of Transportation-approved 55-gallon drums pending laboratory analysis and proper disposal.

### 4.0 RESULTS OF GROUNDWATER SAMPLING

Groundwater samples from monitoring wells MW-1, MW-2, MW-3 were collected and submitted to Chromalab for analysis of TPHg, BTEX, and MTBE by EPA Method 5030/8015M/8020. MTBE was reported in the samples at concentrations ranging from 190 to 53,000 ppb. Analytical results from the groundwater samples are summarized in Table 3. A copy of the analytical results and chain of custody record for groundwater samples is included as Appendix 2.

**TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS**

Well No.	Date Sampled	TPHg (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl-benzene (µg/L)	Total Xylenes (µg/L)	MTBE* (µg/L)	TBA* (µg/L)
MW-1	04/07/92	< 50	2.1	0.56	<0.5	1.4	NA	NA
	04/11/01	< 50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
	07/16/01	< 50	<0.5	<0.5	<0.5	<0.5	<5.0	NA
	11/25/02	16,000*	<100	<100	<100	<100	20,000	NA
	02/24/03	<25,000	<250	<250	<250	<500	59,000	NA
	05/27/03	38,000*	<250	<250	<250	<500	53,000	NA
MW-2	04/07/92	2,100	450	200	45	360	NA	NA
	04/11/01	<5,000	<50	<50	<50	150	5,200	NA
	07/16/01	6,300	<50	<50	<50	<50	6,500	NA
	11/25/02	13,000*	<50	<50	<50	<50	20,000	NA
	02/24/03**	<5,000	<50	<50	<50	<100	17,000	NA
	05/27/03	130*	<0.50	<0.50	<0.50	<1.0	190	NA
MW-3	04/07/92	59,000	13,000	12,000	1,600	13,000	NA	NA
	04/11/01	4,800	<5.0	5.1	320	<5	760	1,500
	07/16/01	4,300	<10	<10	100	60	2,400	NA
	11/25/02	2,900*	<10	<10	<10	<10	4,000	NA
	02/24/03	<5,000	<50	<50	<50	<100	4,900	NA
	05/27/03	<10,000	<100	<100	<100	<200	7,400	NA

Notes: µg/L = micrograms per liter (approximately equivalent to ppb)

< = concentrations were below reporting limits

NA = Not analyzed

\* = Hydrocarbon reported in the gasoline range does not match the gasoline standard

\*\* = ACC mistakenly sampled a 4-inch observation well located on the site instead of the correct 2 inch monitoring well (MW-2)

## 5.0 DISCUSSION

The May 2003 sampling event represents the seventh groundwater monitoring event. The calculated groundwater flow direction and gradient were west-southwest at 0.005 foot per foot. The groundwater gradient is similar to the last two sampling events but the calculated groundwater flow direction is approximately 80 degrees to the west. ACC believes the groundwater flow direction shift may be the result of the relatively flat gradient and the lack of any significant precipitation in the last few months.

Water sample analytical results are fairly consistent with previous analytical results. MTBE only was reported in the water samples at concentrations ranging from 190 to 53,000 ppb. MTBE concentrations decreased significantly in well MW-2 (190 ppb) and to a much lesser degree in well MW-1(53,000 ppb). Increased MTBE concentrations were noticed in well MW-3 in comparison to prior sampling events. These changes in the reported MTBE concentrations in wells MW-1 and MW-2 are consistent with a more westerly groundwater flow direction.



The reported TPHg values are likely comprised entirely of MTBE since they do not match the laboratory gasoline standard and no reportable BTEX was detected. While reporting limits were raised due to interference effects of MTBE, TPHg and BTEX concentrations are significantly less than those reported by Artesian Environmental in 1992.

## **6.0 CONCLUSIONS**

Based on the results of groundwater sampling and monitoring performed at 1220 West Tennyson Road in May 2003, ACC concludes the following:

- Groundwater gradient and flow direction were calculated at 0.005 foot/foot to the west-southwest;
- Groundwater sample analytical results indicate that previous TPHg and BTEX impact in groundwater across the majority of the site appears to have decreased or is below laboratory reporting limits due to natural attenuation processes; and
- MTBE decreased significantly in well MW-2 and elevated MTBE concentrations were reported in wells MW-1 and MW-3.

## **7.0 RECOMMENDATIONS**

Based on the conclusions of previous investigation and recent groundwater monitoring performed, ACC recommends:

- Instituting quarterly groundwater monitoring in wells MW-1, MW-2, and MW-3;
- Analyzing all future water samples for TPHg, BTEX, and MTBE by EPA Method 8260 in case additional analysis for all five fuel oxygenates and scavengers are indicated; and
- Request a meeting with the Alameda County Health Care Services Agency to discuss site conditions and the scope of additional subsurface investigation.

The next monitoring event is tentatively scheduled for August 2003.

## 8.0 LIMITATIONS

The service performed by ACC has been conducted in a manner consistent with the levels of care and skill ordinarily exercised by members of our profession currently practicing under similar conditions in the area. No other warranty, expressed or implied, is made.

The conclusions presented in this report are professional opinions based on the indicated data described in this report and applicable regulations and guidelines currently in place. They are intended only for the purpose, site, and project indicated. Opinions and recommendations presented herein apply to site conditions existing at the time of our study.

ACC has included analytical results from a state-certified laboratory, which performs analyses according to procedures suggested by the U.S. Environmental Protection Agency and the State of California. ACC is not responsible for laboratory errors in procedure or result reporting.

## FIGURES

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Source: Thomas Guide Digital Edition 2002

Title: **Location Map**  
**1220 West Tennyson Avenue**  
**Hayward, California**

Figure Number: 1

Scale: None

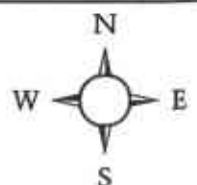
Project No: 6551-004.00

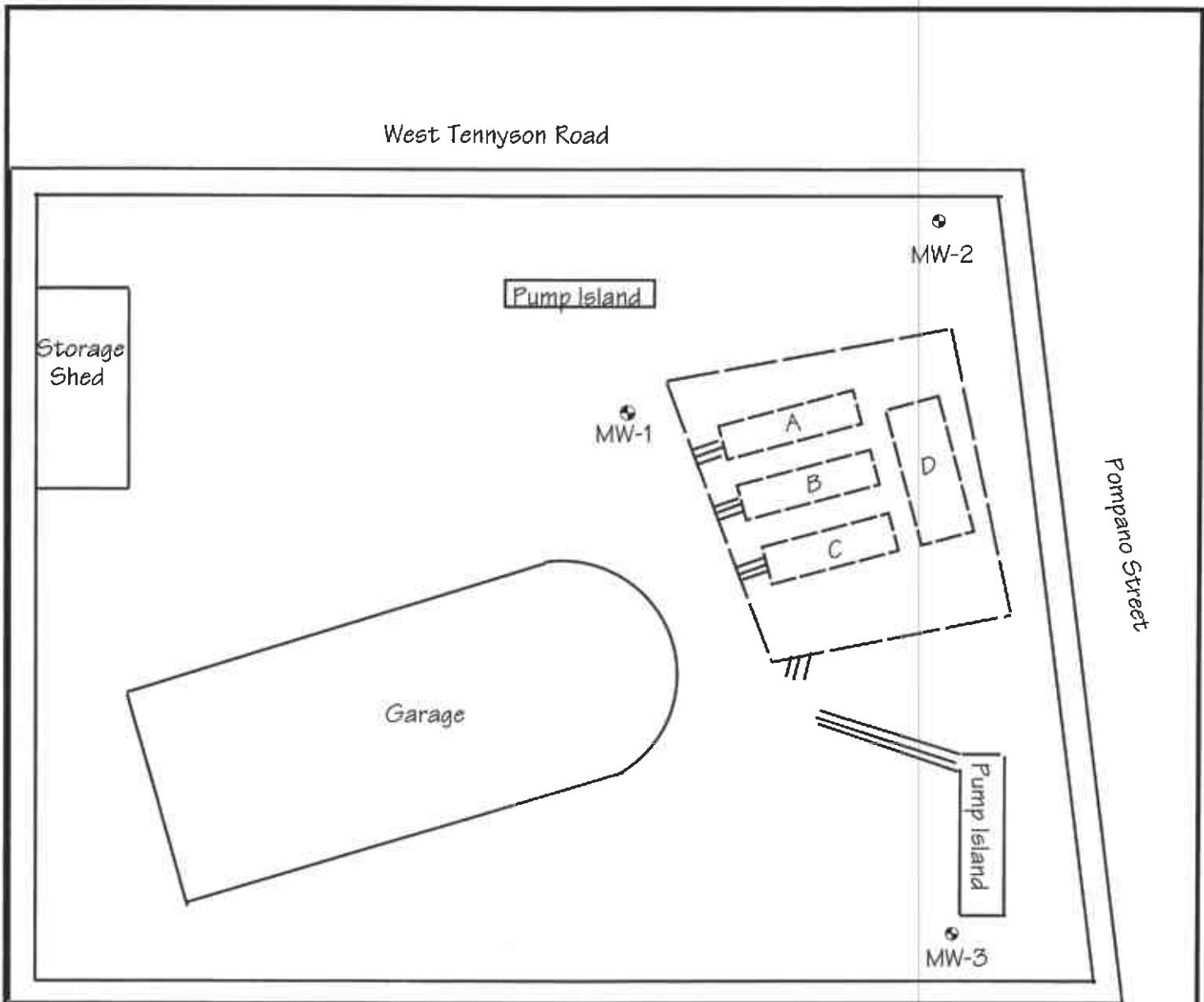
Drawn By: EJG

**A • C • C**  
**ENVIRONMENTAL**  
**CONSULTANTS**

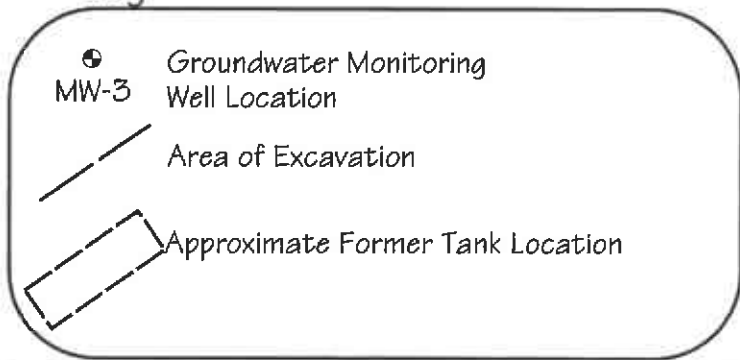
Date: 6/5/03

7977 Capwell Drive, Suite 100  
 Oakland, California 94621  
 (510) 638-8400 Fax: (510) 638-8404

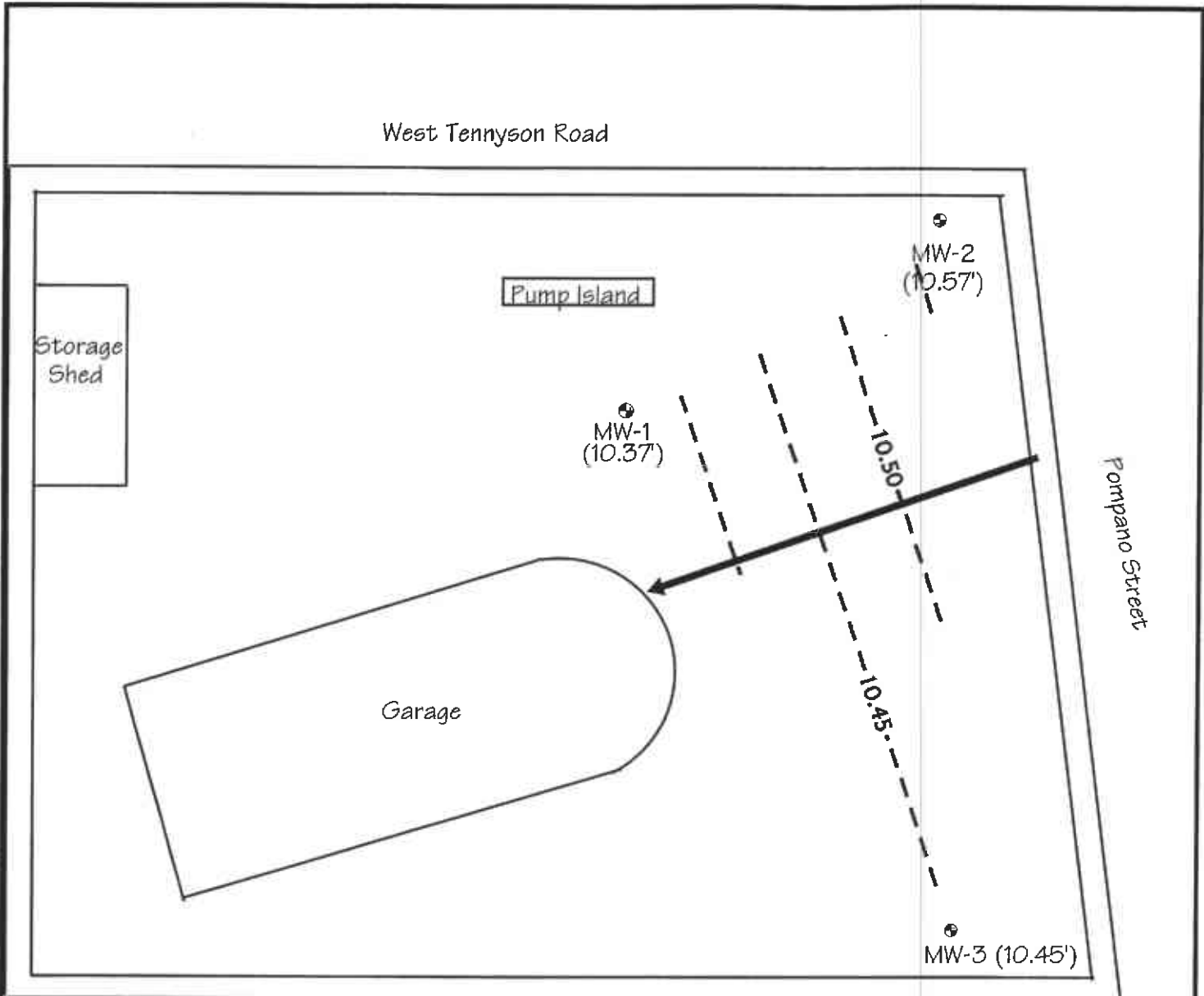




**Legend**



<b>Title: Site Map</b> 1220 W. Tennyson Ave. Hayward, California	
Figure Number: 2	Scale: 1" = 20'
Project Number: 6551-004.00	Drawn By: EJJ
<b>A·C·C</b> ENVIRONMENTAL CONSULTANTS	Date: 6/5/03
7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax (510) 638-8404	



West Tennyson Road

Pump Island

Storage Shed

MW-1  
(10.37')

MW-2  
(10.57')

Garage

Pompano Street




10.50

10.45

MW-3 (10.45')

Mantilla Avenue

**Legend**

-  Groundwater Monitoring Well Location
- MW-3 (10.45') (Groundwater Elevation in Feet Above MSL)
-  Approximate Groundwater Flow Direction
-  Groundwater Elevation Contour

Title: <b>Site Map</b> 1220 W. Tennyson Ave. Hayward, California	
Figure Number: <b>3</b>	Scale: 1" = 20'
Project Number: <b>6551-004.00</b>	Drawn By: <b>EJG</b>
 <b>A·C·C</b> ENVIRONMENTAL CONSULTANTS	Date: <b>6/5/03</b>
	
7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax (510) 638-8404	

## APPENDICES

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**ACC Environmental Consultants**

June 04, 2003

7977 Capwell Drive, Suite 100  
Oakland, CA 94621

Attn.: Ed Giacometti

Project#: 6651-004.00

Project: 1220 W. Tennyson

Dear Mr. Giacometti,

Attached is our report for your samples received on 05/28/2003 14:58

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 07/12/2003 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@stl-inc.com](mailto:vvancil@stl-inc.com)

Sincerely,



Vincent Vancil  
Project Manager

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100  
Oakland, CA 94621  
Phone: (510) 638-8400 Fax: (510) 638-8404Project: 6651-004.00  
1220 W. Tennyson

Received: 05/28/2003 14:58

**Samples Reported**

Sample Name	Date Sampled	Matrix	Lab #
MW-1	05/27/2003 13:30	Water	1
MW-2	05/27/2003 13:45	Water	2
MW-3	05/27/2003 14:00	Water	3

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.st-linc.com \* CA DHS ELAP# 2496

06/04/2003 14:32

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

Oakland, CA 94621

Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-004.00

1220 W. Tennyson

Received: 05/28/2003 14:58

Prep(s): 5030B Test(s): 8260B  
 Sample ID: MW-1 Lab ID: 2003-05-0762 - 1  
 Sampled: 05/27/2003 13:30 Extracted: 6/4/2003 12:48  
 Matrix: Water QC Batch#: 2003/06/04-1a:64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	38000	25000	ug/L	500.00	06/04/2003 12:48	g
Methyl tert-butyl ether (MTBE)	53000	250	ug/L	500.00	06/04/2003 12:48	
Benzene	ND	250	ug/L	500.00	06/04/2003 12:48	
Toluene	ND	250	ug/L	500.00	06/04/2003 12:48	
Ethylbenzene	ND	250	ug/L	500.00	06/04/2003 12:48	
Total xylenes	ND	500	ug/L	500.00	06/04/2003 12:48	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	109.8	76-114	%	500.00	06/04/2003 12:48	
Toluene-d8	98.3	88-110	%	500.00	06/04/2003 12:48	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/04/2003 14:32

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants  
Attn.: Ed Giacometti  
  
7977 Capwell Drive, Suite 100  
Oakland, CA 94621  
Phone: (510) 638-8400 Fax: (510) 638-8404  
Project: 6651-004.00  
1220 W. Tennyson

Received: 05/28/2003 14:58

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-2	Lab ID:	2003-05-0762 - 2
Sampled:	05/27/2003 13:45	Extracted:	6/3/2003 17:52
Matrix:	Water	QC Batch#:	2003/06/03-1j.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	130	50	ug/L	1.00	06/03/2003 17:52	g
Methyl tert-butyl ether (MTBE)	190	0.50	ug/L	1.00	06/03/2003 17:52	
Benzene	ND	0.50	ug/L	1.00	06/03/2003 17:52	
Toluene	ND	0.50	ug/L	1.00	06/03/2003 17:52	
Ethylbenzene	ND	0.50	ug/L	1.00	06/03/2003 17:52	
Total xylenes	ND	1.0	ug/L	1.00	06/03/2003 17:52	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	107.8	76-114	%	1.00	06/03/2003 17:52	
Toluene-d8	100.3	88-110	%	1.00	06/03/2003 17:52	

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

Oakland, CA 94621

Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-004.00

1220 W. Tennyson

Received: 05/28/2003 14:58

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-3	Lab ID:	2003-05-0762 - 3
Sampled:	05/27/2003 14:00	Extracted:	6/3/2003 18:14
Matrix:	Water	QC Batch#:	2003/06/03-1.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	ND	10000	ug/L	200.00	06/03/2003 18:14	
Methyl tert-butyl ether (MTBE)	7400	100	ug/L	200.00	06/03/2003 18:14	
Benzene	ND	100	ug/L	200.00	06/03/2003 18:14	
Toluene	ND	100	ug/L	200.00	06/03/2003 18:14	
Ethylbenzene	ND	100	ug/L	200.00	06/03/2003 18:14	
Total xylenes	ND	200	ug/L	200.00	06/03/2003 18:14	
<b>Surrogates(s)</b>						
1,2-Dichloroethane-d4	123.1	76-114	%	200.00	06/03/2003 18:14	sh
Toluene-d8	101.2	88-110	%	200.00	06/03/2003 18:14	

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100  
Oakland, CA 94621  
Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-004.00  
1220 W. Tennyson

Received: 05/28/2003 14:58

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Method Blank

Water

QC Batch # 2003/06/03-1j.64

MB: 2003/06/03-1j.64-003

Date Extracted: 06/03/2003 11:27

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/03/2003 11:27	
Benzene	ND	0.5	ug/L	06/03/2003 11:27	
Toluene	ND	0.5	ug/L	06/03/2003 11:27	
Ethylbenzene	ND	0.5	ug/L	06/03/2003 11:27	
Total xylenes	ND	1.0	ug/L	06/03/2003 11:27	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/03/2003 11:27	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	98.8	76-114	%	06/03/2003 11:27	
Toluene-d8	103.6	88-110	%	06/03/2003 11:27	

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100  
Oakland, CA 94621  
Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-004.00  
1220 W. Tennyson

Received: 05/28/2003 14:58

**Batch QC Report**

Prep(s): 5030B

Method Blank

MB: 2003/06/04-1a.64-003

Water

Test(s): 8260B

QC Batch # 2003/06/04-1a.64

Date Extracted: 06/04/2003 11:13

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/04/2003 11:13	
Benzene	ND	0.5	ug/L	06/04/2003 11:13	
Toluene	ND	0.5	ug/L	06/04/2003 11:13	
Ethylbenzene	ND	0.5	ug/L	06/04/2003 11:13	
Total xylenes	ND	1.0	ug/L	06/04/2003 11:13	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/04/2003 11:13	
<b>Surrogates(s)</b>					
1,2-Dichloroethane-d4	97.8	76-114	%	06/04/2003 11:13	
Toluene-d8	98.2	88-110	%	06/04/2003 11:13	

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/04/2003 14:32

**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

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Phone: (510) 638-8400 Fax: (510) 638-8404  
Project: 6651-004.00  
1220 W. Tennyson

Received: 05/28/2003 14:58

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/06/03-1j.64

LCS 2003/06/03-1j.64-002

Extracted: 06/03/2003

Analyzed: 06/03/2003 10:43

LCSD 2003/06/03-1j.64-001

Extracted: 06/03/2003

Analyzed: 06/03/2003 11:05

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.7	23.3	25	94.8	93.2	1.7	69-129	20		
Toluene	23.4	24.1	25	93.6	96.4	2.9	70-130	20		
Methyl tert-butyl ether (MTBE)	25.1	24.3	25	100.4	97.2	3.2	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	518	517	500	103.6	103.4		76-114			
Toluene-d8	505	518	500	101.0	103.6		88-110			

Severn Trent Laboratories, Inc.

STL San Francisco \* 1220 Quarry Lane, Pleasanton, CA 94566

Tel 925 484 1919 Fax 925 484 1096 \* www.stl-inc.com \* CA DHS ELAP# 2496

06/04/2003 14:32



**Fuel Oxygenates by 8260B**

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

Oakland, CA 94621

Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-004.00

1220 W. Tennyson

Received: 05/28/2003 14:58

**Batch QC Report**

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/06/04-1a.64

LCS 2003/06/04-1a.64-002

Extracted: 06/04/2003

Analyzed: 06/04/2003 10:29

LCSD 2003/06/04-1a.64-001

Extracted: 06/04/2003

Analyzed: 06/04/2003 10:51

Compound	Conc. ug/L		Exp. Conc.	Recovery		RPD %	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		Rec.	RPD	LCS	LCSD
Benzene	24.0	23.1	25	96.0	92.4	3.8	69-129	20		
Toluene	23.5	22.7	25	94.0	90.8	3.5	70-130	20		
Methyl tert-butyl ether (MTBE)	26.2	24.8	25	104.8	99.2	5.5	65-165	20		
<b>Surrogates(s)</b>										
1,2-Dichloroethane-d4	488	495	500	97.6	99.0		76-114			
Toluene-d8	491	491	500	98.2	98.2		88-110			

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06/04/2003 14:32

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1220 W. Tennyson

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**Legend and Notes**

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**Result Flag**

g

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

sh

Surrogate recovery was higher than QC limit due to matrix interference.

Report To					Analysis Request															Number of Containers
Client Information					Analytical Parameters															
Client: ED GIACOMETTI					<input type="checkbox"/> TPH EPA - 8015/8021/8260B <input checked="" type="checkbox"/> Gas w/ <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE <input type="checkbox"/> Purgeable Aromatics <input type="checkbox"/> BTEX EPA - 8021 <input type="checkbox"/> 8260B <input type="checkbox"/> TEPH EPA 8015M <input type="checkbox"/> Silica Gel <input type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____ <input type="checkbox"/> Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxygenates <input type="checkbox"/> DCA, EDB <input type="checkbox"/> Ethanol <input type="checkbox"/> Purgeable Halocarbons (HVOCs) EPA 8021 <input type="checkbox"/> Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 824 <input type="checkbox"/> Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 825 <input type="checkbox"/> Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total <input type="checkbox"/> Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 808 <input type="checkbox"/> PCBs <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 808 <input type="checkbox"/> PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 <input type="checkbox"/> CAM17 Metals (EPA 8010/7470/7471) <input type="checkbox"/> Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____ <input type="checkbox"/> WET (STLC) <input type="checkbox"/> TCLP <input type="checkbox"/> Hexavalent Chromium <input type="checkbox"/> pH (24h hold time for H <sub>2</sub> O) <input type="checkbox"/> Spec Cond. <input type="checkbox"/> Alkalinity <input type="checkbox"/> TSS <input type="checkbox"/> TDS <input type="checkbox"/> Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO <sub>4</sub> <input type="checkbox"/> NO <sub>3</sub> <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO <sub>2</sub> <input type="checkbox"/> PO <sub>4</sub>															
Company: ACC ENVIRONMENTAL CONSULTANTS																				
Address: 7977 CAPWELL DRIVE, OAKLAND, CA																				
Phone: (510) 638-8400 x 114   E: <a href="mailto:egiacometti@accenv.com">egiacometti@accenv.com</a>																				
Bill To: ACC ENVIRONMENTAL		Sampled By: <u>Ed Giacometti</u>																		
Client: ED		Phone ext: 114																		
Sample ID	Date	Time	Mat. rx	Pres. any																
MW-1	5/27/03	13:30	HD	HD																1
MW-2	5/27/03	13:45	HD	HD																1
MW-3	5/27/03	14:00	HD	HD																1

Project Info.				Sample Receipt				1) Relinquished by:				2) Relinquished by:				3) Relinquished by:			
Project Name: <u>220 W. Tennessee</u>				# of Containers:				Signature: <u>[Signature]</u>				Signature: _____				Signature: _____			
Project#: <u>(425) - 004.00</u>				Head Space:				Printed Name: <u>ED GIACOMETTI</u>				Printed Name: _____				Printed Name: _____			
CO#:				Temp:				Date: <u>5/27/03</u>				Date: _____				Date: _____			
Credit Card#:				Conforms to record:				Company: <u>ACC ENVIRONMENTAL CONSULTANTS</u>				Company: _____				Company: _____			
<input checked="" type="checkbox"/> Std 5 Day <input type="checkbox"/> 72h <input type="checkbox"/> 48h <input type="checkbox"/> 24h Other: _____				1) Received by:				2) Received by:				3) Received by:							
Report: <input checked="" type="checkbox"/> Routine <input type="checkbox"/> Level 3 <input type="checkbox"/> Level 4 <input type="checkbox"/> EDD <input type="checkbox"/> State Tank Fund EDF				Signature: <u>[Signature]</u>				Signature: _____				Signature: _____							
Special Instructions / Comments: <u>I have noted the correct tests that need to be performed on these samples per your email. This way you have a connected coc. attached</u>				Printed Name: <u>[Signature]</u>				Printed Name: _____				Printed Name: _____							
Global ID: _____				Date: <u>5/28/03</u>				Date: _____				Date: _____							
Company: <u>STL - SF</u>				Company: _____				Company: _____				Company: _____							