

January 8, 2004

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Rec 1/13/04

Mr. Kelly Engineer
1791 Pine Street
Concord, California 94520

RE: Groundwater Sampling Letter Report
3820 San Leandro Street, Oakland, California
ACC Project Number 6651-001.00

Dear Mr. Engineer:

ACC Environmental Consultants, Inc., (ACC) has prepared this letter report to document results of groundwater sampling at 3820 San Leandro Street, Oakland, California. The project objectives were to obtain groundwater samples from three onsite monitoring wells, analyze the water samples for constituents of concern, and report the findings.

On your behalf, ACC will forward a copy of this report to Mr. Barney Chan of the Alameda County Health Care Services Agency (ACHCSA) for review.

BACKGROUND

The site consists of a gasoline and diesel fueling station (Guy's Diesel) located at 3820 San Leandro Street in Oakland, California (Figure 1). In his letter dated June 12, 2000, Mr. Chan of the ACHCSA requested that groundwater monitoring and sampling be performed at the site, and that the groundwater samples be analyzed for total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd), benzene, toluene, ethylbenzene and total xylenes (BTEX), and methyl tertiary butyl ether (MTBE). In addition, one groundwater sample was analyzed for all fuel oxygenates in accordance with regulations recently enacted by the Regional Water Quality Control Board (RWQCB).

In January 2003, ACC obtained and reviewed a copy of the August 10, 1998 Soil and Groundwater Investigation Report, prepared by Brunsing Associates, Inc. (Brunsing) for Mr. Kelly Engineer. According to Brunsing, two diesel fuel and two gasoline fuel underground storage tanks (USTs) were removed by American Consulting Remediation and Construction (ACRC) in January 1998. UST removal activities were summarized in ACRC's Tank Closure Report. Excavated soil removed during the UST removal was profiled and disposed at Forward Landfill. Brunsing advanced six exploratory soil borings (B1, B2, B5, B6, and B7) and installed three groundwater monitoring wells. The monitoring wells were subsequently developed and sampled on July 6, 1998. The six exploratory soil borings were completed to depths of 7.0 to 16.5 feet below ground surface (bgs) and the three groundwater monitoring wells were completed to depths of 21.0 to 21.5 feet bgs. The three groundwater monitoring wells are screened from 5 to 20 feet bgs.

FIELD PROCEDURES

Groundwater Sampling

ACC performed groundwater sampling at the site on November 21, 2003. The locations of the three monitoring wells are illustrated on Figure 2. Prior to groundwater sampling, the depth to the surface of the water table in each well was measured from the top of the well casing using an electronic water level meter. The water level measurements were recorded to the nearest 0.01 foot. The wells were constructed of 2-inch diameter polyvinyl chloride (PVC) with locked well caps, and appeared to be in good condition. The total depth of each of the wells was approximately 20 feet below ground surface (bgs), and the depth to groundwater was measured to be approximately 11 feet below the top of the well casing.

TABLE 1 - GROUNDWATER DEPTH INFORMATION

Well No	Well Elevation (above MSL)	Date Measured	Depth to Groundwater	Groundwater Elevation
MW-1	27.54	07/06/98**	7.77	19.77
		09/10/00	N/A	N/A
		04/10/01	7.34	20.20
		07/17/01	9.00	18.54
		01/15/03	6.94	20.60
		04/17/03	7.01	20.53
		07/17/03	8.71	18.83
		11/21/03	9.61	17.93
MW-2	25.97	07/06/98**	8.15	17.82
		09/10/00	N/A	N/A
		04/10/01	7.32	18.65
		07/17/01	8.96	17.01
		01/15/03	7.25	18.72
		04/17/03	7.43	18.54
		07/17/03	8.89	17.08
		11/21/03	9.41	16.56
MW-3	26.52	07/06/98**	8.42	18.10
		09/10/00	N/A	N/A
		04/10/01	7.73	18.79
		07/17/01	8.42	18.10
		01/15/03	7.60	18.92
		04/17/03	8.07	18.45
		07/17/03	9.07	17.45
		11/21/03	9.73	16.79

Notes: All measurements in feet

*Well elevation measured to top of casing

**Groundwater elevations recorded by BACE Environmental

Groundwater Gradient

Groundwater elevations were calculated from data collected from the wells on November 21, 2003. The calculated groundwater flow direction and gradient values are south at 0.025 feet per foot. Historic values are summarized in Table 2.

TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION

Date Measured	Gradient (foot/foot)	Direction
07/06/98	0.04	South
09/10/00	N/A	N/A
04/10/01	0.038	South
07/17/01	0.020	East
01/15/03	0.038	South
04/17/03	0.050	South
07/17/03	0.030	South
11/21/03	0.025	South

After water level measurements were collected, wells MW-1, MW-2 and MW-3 were purged by hand using a designated disposable polyethylene bailer for each well. The wells were considered to be purged when approximately four volumes were removed from each well. The removed purge water was stored onsite in a steel 55-gallon drum.

After the groundwater level had recovered to a minimum of approximately 80 percent of its static level in wells MW-1 and MW-2 and 60 percent in well MW-3, water samples were obtained using designated disposable polyethylene bailers. Three 40-milliliter VOA vials and one amber glass liter were filled to overflowing with the water collected from the three wells. The samples were preserved in a pre-chilled, insulated container and submitted to STL San Francisco (STL-SF), a state-certified analytical laboratory, following chain of custody protocol.

Analytical Results

Groundwater samples from wells MW-1, MW-2 and MW-3 were submitted to STL-SF for analysis of TPHg, TPHd, BTEX, and MTBE by EPA Method 8260B. Relatively minor concentrations were reported in monitoring wells MW-1 and MW-2 and elevated TPHg, BTEX, and MTBE were reported in monitoring well MW-3.

Analytical results from the groundwater samples are summarized in Table 3. Copies of the analytical results and chain of custody record are attached.

**TABLE 3 - GROUNDWATER SAMPLE ANALYTICAL RESULTS
 PETROLEUM HYDROCARBONS**

Sample ID	Date	TPH ^g (µg/L)	BPH ^g (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
MW-1	07/06/98	4,100	< 100	36	53	< 5.0	20	80
	09/10/00	1,000 ^g	1,800 ^{ndp}	4.8	< 0.50	6.2	1.2	< 5.0
	04/10/01	1,100	N/A	12	7.7	< 2.5	< 2.5	73
	07/17/01	920	320 ^{ndp}	6.2	1.1	< 0.50	< 0.50	49
	01/15/03	360 ^g	86 ^{ndp}	5.5	< 0.50	4.3	1.3	19
	04/17/03	< 50	< 50	< 0.50	< 0.50	< 0.50	< 1.0	11
	07/17/03	380	95 ^{ndp}	19	< 0.50	3.7	1.5	5.6
	11/21/03	600	160 ^{ndp}	4.7	< 0.50	8.8	2.0	4.3
MW-2	07/06/98	6,400	< 100	190	14	13	12	210
	09/10/00	760 ^g	270 ^{edr}	19	< 0.50	< 0.50	< 0.50	110
	04/10/01	320	N/A	3.6	1.1	1.2	0.79	< 5.0
	07/17/01	440 ^g	68 ^{ndp}	6.0	< 0.50	6.2	< 0.50	< 5.0
	01/15/03	750 ^g	250 ^{ndp}	13	< 0.50	< 0.50	< 0.50	78
	04/17/03	180	120	< 0.50	< 0.50	< 0.50	< 1.0	8.1
	07/17/03	640	400 ^{ndp}	10	< 0.50	< 0.50	< 1.0	27
	11/21/03	980	1,100 ^{ndp}	2.2	0.62	< 0.50	1.1	54
MW-3	07/06/98	36,000	< 100	6,700	72	6.2	530	13,000
	09/10/00	20,000 ^g	4,200 ^{ndp}	9,200	70	710	79	6,400
	04/10/01	15,000	N/A	4,500	27	320	140	8,800
	07/17/01	28,000 ^g	8,000 ^{ndp}	7,000	< 50	270	75	15,000
	01/15/03	40,000 ^g	11,000 ^{ndp}	10,000	110	680	210	20,000
	04/17/03	39,000	3,200 ^{ndp}	11,000	< 100	870	< 200	34,000
	07/17/03	58,000 ^g	5,100 ^{ndp}	16,000	< 250	850	< 500	28,000
	11/21/03	80,000	7,500 ^{ndp}	15,000	< 200	1,300	< 400	27,000

Notes: µg/L = micrograms per liter (approximately equivalent to parts per billion)
 < Indicates the sample tested below the indicated laboratory reporting limit
 g = hydrocarbon reported does not match the laboratory's gasoline standard
 edr = hydrocarbon is in the early diesel range and does not match the laboratory's diesel standard
 ndp = hydrocarbon reported does not match the laboratory diesel standard
 N/A = sample not analyzed for this constituent

DISCUSSION

Previous site investigation and groundwater monitoring results have demonstrated that soil and groundwater have been impacted by a release from the former onsite USTs and/or fuel delivery system. This sampling event was performed to document trends in groundwater flow direction, gradient, and concentrations of constituents of concern in groundwater at the Site.

Similar to previous groundwater monitoring events, the groundwater sample from well MW-3 reported the highest concentrations of petroleum hydrocarbons and related constituents. Well MW-3 reported 80,000 parts per billion (ppb) TPHg, 7,500 ppb TPHd, 15,000 ppb benzene, 27,000 ppb MTBE, and lesser concentrations of toluene, ethylbenzene, and xylenes. Concentrations of constituents of concern were significantly less in wells MW-1 and MW-2, indicating that the release(s) may be localized in the vicinity of well MW-3. Well MW-3 is located generally downgradient of the USTs and product dispensers.

CONCLUSIONS

Based on groundwater sample analytical results, ACC has made the following conclusions:

- Groundwater at the site is being impacted by ongoing releases of petroleum hydrocarbons as TPHg, TPHd, BTEX, and MTBE;
- Groundwater flow direction and gradient are consistent with historical trends and approximate surface topography; and
- The majority of impacted groundwater appears to be located in the vicinity of well MW-3.

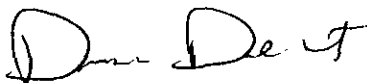
RECOMMENDATIONS

Based on conclusions of groundwater monitoring performed to date, ACC recommends the following:

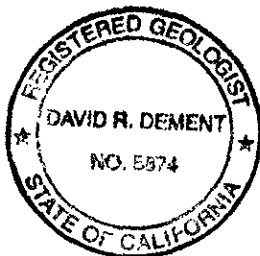
- Evaluate groundwater extraction in well MW-3 as an interim remedial option and to help minimize offsite migration of gasoline-impacted groundwater; and
- Analyze future water samples from all three monitoring wells for TPHg, BTEX, and all fuel oxygenates by EPA Method 8260B.

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

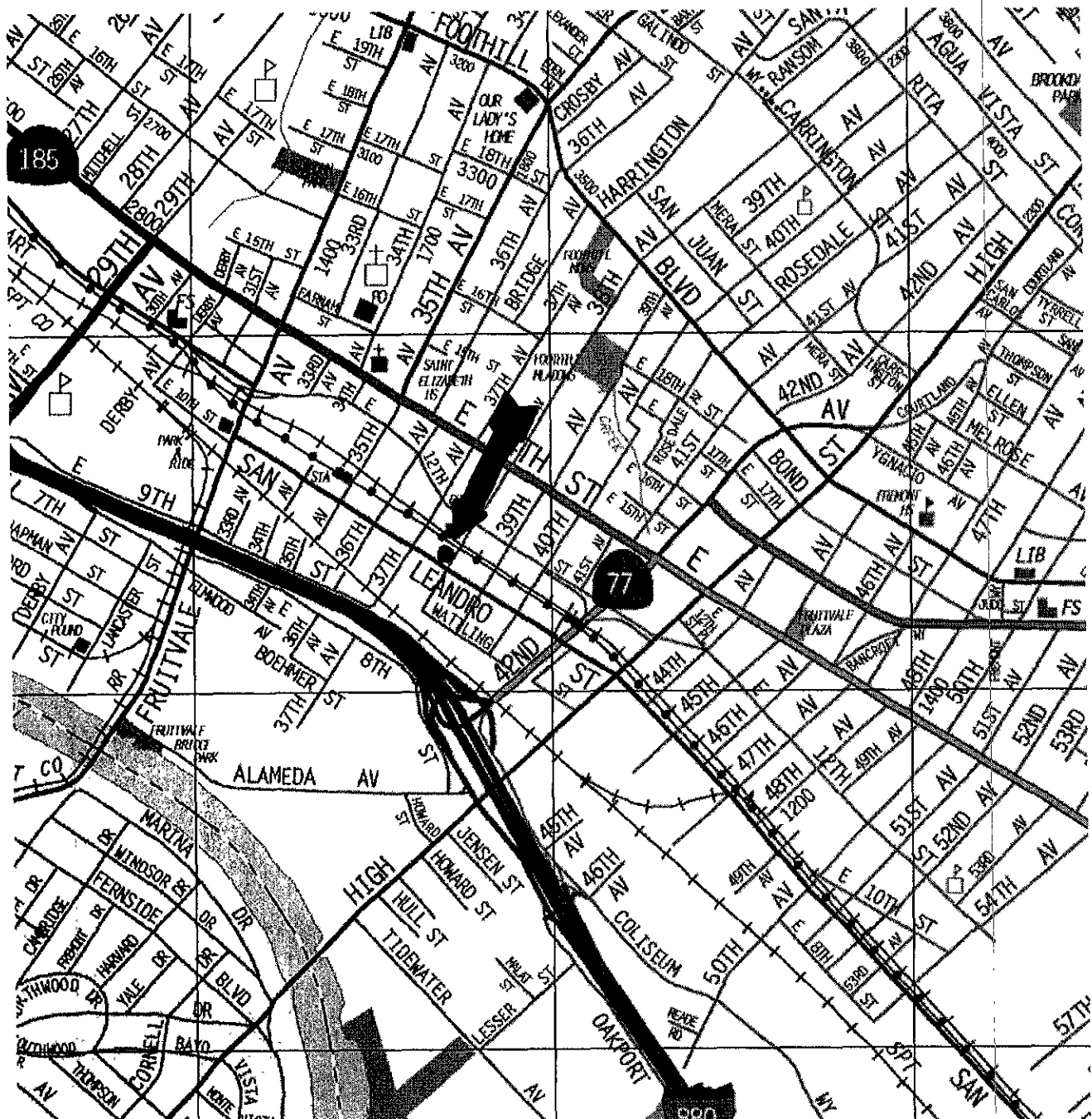
Sincerely,



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



cc: Mr. Barney Chan, ACHCSA
Mr. Paul Rosenstein, Esq.

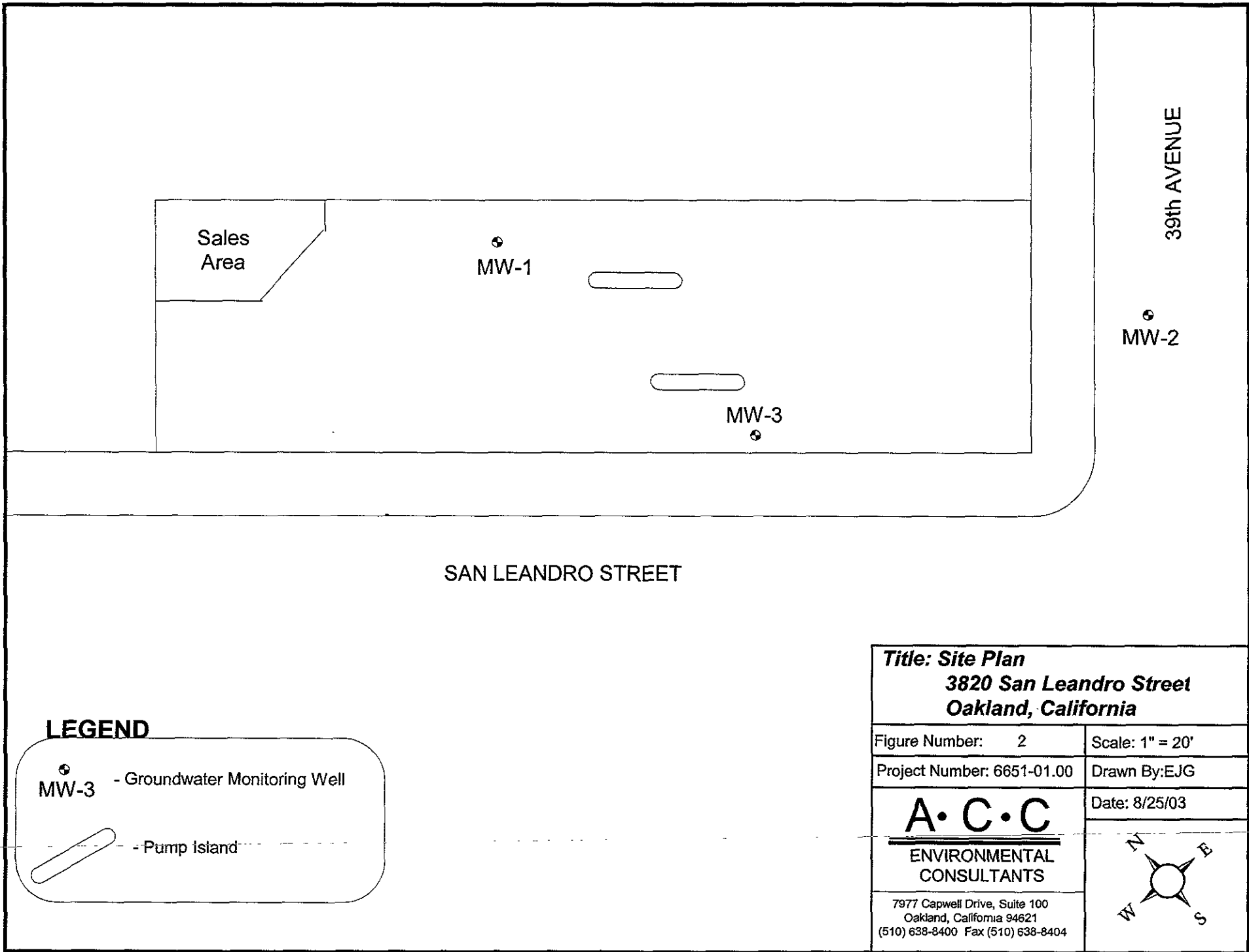


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SOURCE: Thomas Guide CD ROM, 1997

Title: Location Map 3820 San Leandro Street Oakland, California	
Figure Number: 1	Scale: 1" = 0.3 Mile
Project Number: 6651-01.00	Drawn By: NHD
A·C·C ENVIRONMENTAL CONSULTANTS 7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	Date: 3/29/00



Sales Area

MW-1

39th AVENUE
MW-2

MW-3

SAN LEANDRO STREET

LEGEND

⊕
MW-3 - Groundwater Monitoring Well

— — — — —
- Pump Island

Title: Site Plan
3820 San Leandro Street
Oakland, California

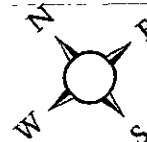
Figure Number: 2 Scale: 1" = 20'

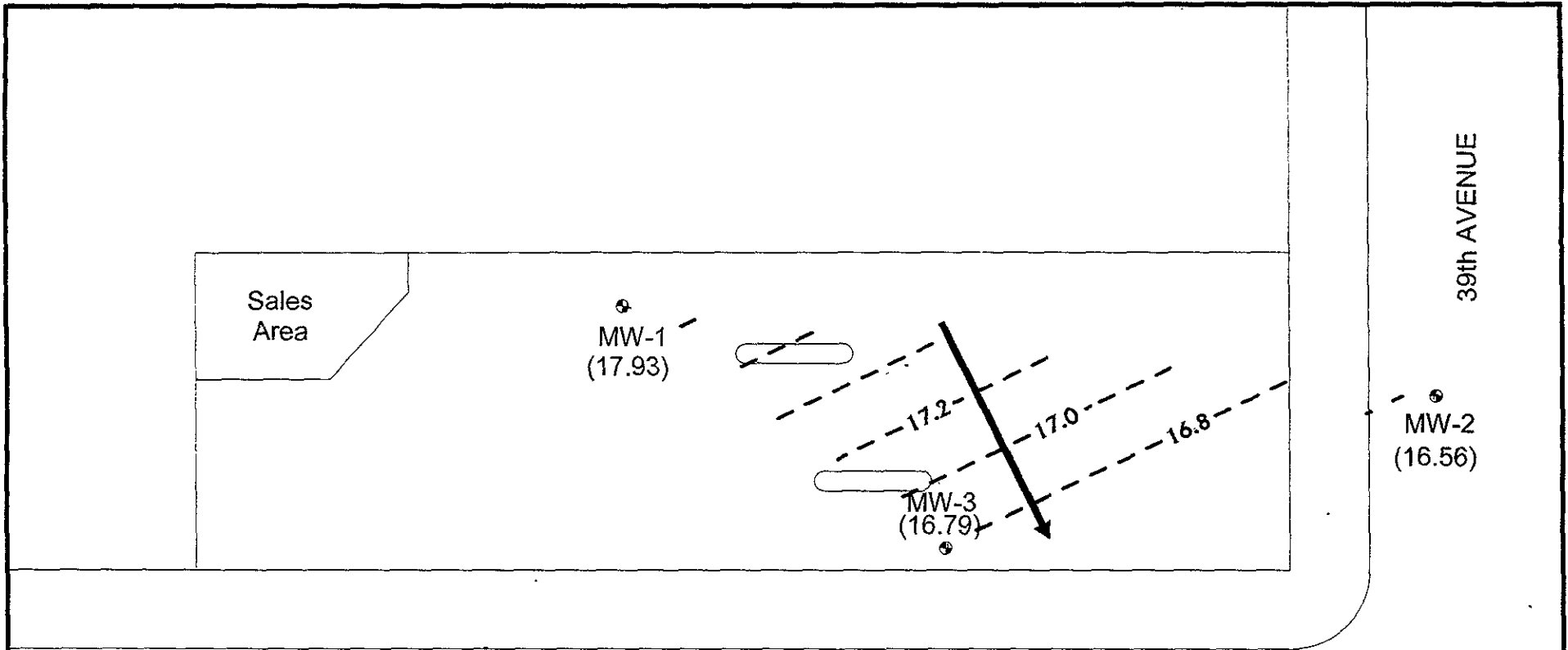
Project Number: 6651-01.00 Drawn By: EJG

A · C · C
ENVIRONMENTAL
CONSULTANTS

Date: 8/25/03

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










SAN LEANDRO STREET

39th AVENUE

LEGEND

-  MW-3 (17.45) - Groundwater Monitoring Well
-  - Groundwater Elevation Contour
-  - Groundwater Flow Direction
-  - Pump Island

Title: Gradient Map 3820 San Leandro Street Oakland, California	
Figure Number: 3	Scale: 1" = 20'
Project Number: 6651-01.00	Drawn By: EJG
A · C · C ENVIRONMENTAL CONSULTANTS	Date: 1/8/04
	
7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax (510) 638-8404	

JOB NAME: <i>Guy's Diesel</i>	PURGE METHOD: <i>Manual Bail</i>
SITE ADDRESS: <i>8820 San Leandro St.</i>	SAMPLED BY: <i>Ed Giacometti</i>
JOB #: <i>(105) - 001 .00</i>	LABORATORY: <i>STL-SF</i>
DATE: <i>11/21/03</i>	ANALYSIS: <i>TPH/TPHg/RTEX/MTBE</i>
Onsite Drum Inventory SOIL: <i>1 @ 100%</i>	MONITORING <input checked="" type="checkbox"/> DEVELOPING <input type="checkbox"/>
EMPTY: WATER: <i>1 @ 20%</i>	SAMPLING <input checked="" type="checkbox"/>

	PURGE VOL.	PURGE WATER READINGS						OBSERVATIONS	
	(Gal)	pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	<input type="checkbox"/> Froth	<input type="checkbox"/> Sheen
WELL: MW-1								<input type="checkbox"/>	
DEPTH OF BORING: <i>20.03</i>	<i>1.6</i>		<i>22.1</i>				<i>2.13</i>	<input type="checkbox"/>	
DEPTH TO WATER: <i>9.61</i>	<i>3.2</i>		<i>22.4</i>				<i>2.04</i>	<input checked="" type="checkbox"/>	Odor Type <i>mild gas</i>
WATER COLUMN: <i>10.42</i>	<i>4.8</i>		<i>22.2</i>				<i>2.21</i>	<input type="checkbox"/>	Free Product
WELL DIAMETER: <i>2"</i>	<i>6.4</i>		<i>22.2</i>				<i>2.26</i>	<input type="checkbox"/>	Amount _____ Type _____
WELL VOLUME: <i>1.6</i>								<input type="checkbox"/>	Other
COMMENTS: <i>Purge: 10:20</i> <i>Sample: 11:30</i>									
WELL: MW-2								<input type="checkbox"/>	
DEPTH OF BORING: <i>20.07</i>	<i>1.8</i>		<i>21.1</i>				<i>1.61</i>	<input type="checkbox"/>	
DEPTH TO WATER: <i>9.41</i>	<i>3.6</i>		<i>21.1</i>				<i>1.81</i>	<input checked="" type="checkbox"/>	Odor Type <i>old diesel</i>
WATER COLUMN: <i>10.66</i>	<i>5.4</i>		<i>21.1</i>				<i>2.12</i>	<input type="checkbox"/>	Free Product
WELL DIAMETER: <i>2"</i>	<i>7.2</i>		<i>21.1</i>				<i>2.00</i>	<input type="checkbox"/>	Amount _____ Type _____
WELL VOLUME: <i>1.8</i>								<input type="checkbox"/>	Other
COMMENTS: <i>Purge: 10:45</i> <i>Sample: 11:40</i>									<i>gray silt</i>
WELL: MW-3								<input type="checkbox"/>	
DEPTH OF BORING: <i>19.49</i>	<i>1.6</i>		<i>22.4</i>				<i>1.66</i>	<input checked="" type="checkbox"/>	Sheen
DEPTH TO WATER: <i>9.73</i>	<i>3.2</i>		<i>22.3</i>				<i>1.79</i>	<input checked="" type="checkbox"/>	Odor Type <i>strong gas</i>
WATER COLUMN: <i>9.76</i>	<i>4.8</i>		<i>22.2</i>				<i>1.81</i>	<input type="checkbox"/>	Free Product
WELL DIAMETER: <i>2"</i>	<i>6.4</i>		<i>22.2</i>				<i>1.72</i>	<input type="checkbox"/>	Amount _____ Type _____
WELL VOLUME: <i>1.6</i>								<input type="checkbox"/>	Other
COMMENTS: <i>Purge: 11:05</i> <i>Sample: 11:50</i>									

ACC Environmental Consultants

December 04, 2003

7977 Capwell Drive, Suite 100
Oakland, CA 94621

Attn.: Ed Giacometti

Project#: 6651-001.00

Project: 3820 San Leandro St.

Dear Mr. Giacometti,

Attached is our report for your samples received on 11/24/2003 14:00

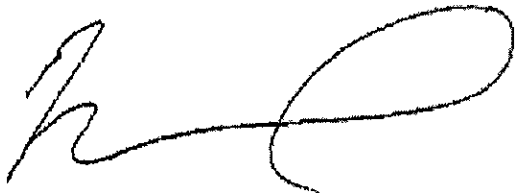
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after 01/08/2004 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

Sincerely,



Vincent Vancil
Project Manager

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

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: 6651-001.00

3820 San Leandro St.

Received: 11/24/2003 14:00

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	11/21/2003 11:30	Water	1
MW-2	11/21/2003 11:40	Water	2
MW-3	11/21/2003 11:50	Water	3

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Prep(s): 5030B Test(s): 8260B
Sample ID: MW-1 Lab ID: 2003-11-0823 - 1
Sampled: 11/21/2003 11:30 Extracted: 12/1/2003 19:25
Matrix: Water QC Batch#: 2003/12/01-01.64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	600	50	ug/L	1.00	12/01/2003 19:25	
Methyl tert-butyl ether (MTBE)	4.3	0.50	ug/L	1.00	12/01/2003 19:25	
Benzene	4.7	0.50	ug/L	1.00	12/01/2003 19:25	
Toluene	ND	0.50	ug/L	1.00	12/01/2003 19:25	
Ethylbenzene	8.8	0.50	ug/L	1.00	12/01/2003 19:25	
Total xylenes	2.0	1.0	ug/L	1.00	12/01/2003 19:25	
Surrogate(s)						
1,2-Dichloroethane-d4	103.8	76	%	1.00	12/01/2003 19:25	
Toluene-d8	90.2	88	%	1.00	12/01/2003 19:25	

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-2	Lab ID:	2003-11-0823 - 2
Sampled:	11/21/2003 11:40	Extracted:	12/1/2003 20:31
Matrix:	Water	QC Batch#:	2003/12/01-01:64

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	980	50	ug/L	1.00	12/01/2003 20:31	
Methyl tert-butyl ether (MTBE)	54	0.50	ug/L	1.00	12/01/2003 20:31	
Benzene	2.2	0.50	ug/L	1.00	12/01/2003 20:31	
Toluene	0.62	0.50	ug/L	1.00	12/01/2003 20:31	
Ethylbenzene	ND	0.50	ug/L	1.00	12/01/2003 20:31	
Total xylenes	1.1	1.0	ug/L	1.00	12/01/2003 20:31	
Surrogate(s)						
1,2-Dichloroethane-d4	106.5	76	%	1.00	12/01/2003 20:31	
Toluene-d8	90.2	88	%	1.00	12/01/2003 20:31	

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Prep(s): 5030B Test(s): 8260B
Sample ID: MW-3 Lab ID: 2003-11-0823 - 3
Sampled: 11/21/2003 11:50 Extracted: 12/1/2003 20:53
Matrix: Water QC Batch#: 2003/12/01-01.64
Analysis Flag: o (See Legend and Note Section)

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	80000	20000	ug/L	400.00	12/01/2003 20:53	
Methyl tert-butyl ether (MTBE)	27000	200	ug/L	400.00	12/01/2003 20:53	
Benzene	15000	200	ug/L	400.00	12/01/2003 20:53	
Toluene	ND	200	ug/L	400.00	12/01/2003 20:53	
Ethylbenzene	1300	200	ug/L	400.00	12/01/2003 20:53	
Total xylenes	ND	400	ug/L	400.00	12/01/2003 20:53	
Surrogate(s)						
1,2-Dichloroethane-d4	105.7	76	%	400.00	12/01/2003 20:53	
Toluene-d8	93.5	88	%	400.00	12/01/2003 20:53	

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 5030B

Method Blank

MB: 2003/12/01-01.64-023

Water

Test(s): 8260B

QC Batch # 2003/12/01-01.64

Date Extracted: 12/01/2003 10:23

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	12/01/2003 10:23	
Benzene	ND	0.5	ug/L	12/01/2003 10:23	
Toluene	ND	0.5	ug/L	12/01/2003 10:23	
Ethylbenzene	ND	0.5	ug/L	12/01/2003 10:23	
Total xylenes	ND	1.0	ug/L	12/01/2003 10:23	
Methyl tert-butyl ether (MTBE)	ND	2.0	ug/L	12/01/2003 10:23	
Surrogates(s)					
1,2-Dichloroethane-d4	93.0	76-114	%	12/01/2003 10:23	
Toluene-d8	90.2	88-110	%	12/01/2003 10:23	

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Laboratory Control Spike

Water

QC Batch # 2003/12/01-01:64

LCS 2003/12/01-01.64-039

Extracted: 12/01/2003

Analyzed: 12/01/2003 09:39

LCSD 2003/12/01-01.64-001

Extracted: 12/01/2003

Analyzed: 12/01/2003 10:01

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Benzene	23.7	25.4	25.0	94.8	101.6	6.9	69-129	20		
Toluene	23.8	25.2	25.0	95.2	100.8	5.7	70-130	20		
Methyl tert-butyl ether (MTBE)	22.4	25.0	25.0	89.6	100.0	11.0	65-165	20		
Surrogates(s)										
1,2-Dichloroethane-d4	457	474	500	91.4	94.8		76-114			
Toluene-d8	461	455	500	92.2	91.0		88-110			

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: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 5030B

Test(s): 8260B

Matrix Spike (MS / MSD)

Water

QC Batch # 2003/12/01-01.64

MW-1 >> MS

Lab ID: 2003-11-0823 - 001

MS: 2003/12/01-01.64-047

Extracted: 12/01/2003

Analyzed: 12/01/2003 19:47

Dilution: 1.00

MSD: 2003/12/01-01.64-009

Extracted: 12/01/2003

Analyzed: 12/01/2003 20:09

Dilution: 1.00

Compound	Conc. ug/L			Spk.Level ug/L	Recovery %			Limits %		Flags	
	MS	MSD	Sample		MS	MSD	RPD	Rec.	RPD	MS	MSD
Methyl tert-butyl ether	30.8	31.0	4.35	25.0	105.8	106.6	0.8	65-165	20		
Benzene	28.6	30.2	4.68	25.0	95.7	102.1	6.5	69-129	20		
Toluene	23.6	25.5	ND	25.0	94.4	102.0	7.7	70-130	20		
Surrogate(s)											
1,2-Dichloroethane-d4	542	526		500	108.4	105.2		76-114			
Toluene-d8	436	457		500	87.2	91.4		88-110		s	

Fuel Oxygenates by 8260B

ACC Environmental Consultants

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Project: 6651-001.00

Received: 11/24/2003 14:00

3820 San Leandro St.

Legend and Notes

Analysis Flag

o

Reporting limits were raised due to high level of analyte present in the sample.

Result Flag

s

One surrogate recovery out of control, but second surrogate within QC limits confirms test performance.

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

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

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	11/21/2003 11:30	Water	1
MW-2	11/21/2003 11:40	Water	2
MW-3	11/21/2003 11:50	Water	3

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

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Project: 6651-001.00

Received: 11/24/2003 14:00

3820 San Leandro St.

Prep(s): 3510/8015M Test(s): 8015M
 Sample ID: MW-1 Lab ID: 2003-11-0823 - 1
 Sampled: 11/21/2003 11:30 Extracted: 12/1/2003 05:34
 Matrix: Water QC Batch#: 2003/12/01-01.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	160	50	ug/L	1.00	12/02/2003 03:33	ndp
<i>Surrogate(s)</i>						
o-Terphenyl	64.5	50-120	%	1.00	12/02/2003 03:33	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

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Oakland, CA 94621
Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MW-2	Lab ID:	2003-11-0823 - 2
Sampled:	11/21/2003 11:40	Extracted:	11/25/2003 10:38
Matrix:	Water	QC Batch#:	2003/11/25-02.10
Analysis Flag: rl (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1100	50	ug/L	1.00	11/26/2003 18:02	ndp
Surrogate(s) o-Terphenyl	86.5	50-120	%	1.00	11/26/2003 18:02	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

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

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MW-3	Lab ID:	2003-11-0823 - 3
Sampled:	11/21/2003 11:50	Extracted:	11/25/2003 10:38
Matrix:	Water	QC Batch#:	2003/11/25-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	7500	50	ug/L	1.00	11/26/2003 17:36	ndp
Surrogate(s) o-Terphenyl	71.6	50-120	%	1.00	11/26/2003 17:36	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

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

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 3510/8015M

Method Blank

MB: 2003/11/25-02.10-001

Water

Test(s): 8015M

QC Batch # 2003/11/25-02.10

Date Extracted: 11/25/2003 10:38

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	58.5	50	ug/L	11/26/2003 14:12	b
Surrogates(s)					
o-Terphenyl	84.4	60-130	%	11/26/2003 14:12	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

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Oakland, CA 94621
Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 3510/8015M

Method Blank

MB: 2003/12/01-01.10-001

Water

Test(s): 8015M

QC Batch # 2003/12/01-01.10

Date Extracted: 12/01/2003 05:34

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	12/03/2003 13:37	
Surrogates(s) o-Terphenyl	81.5	60-130	%	12/03/2003 13:37	

Diesel with Silica Gel Clean-up

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Attn.: Ed Giacometti

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Oakland, CA 94621
Phone: (510) 638-8400 Fax: (510) 638-8404

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2003/11/25-02.10

LCS 2003/11/25-02.10-002

Extracted: 11/25/2003

Analyzed: 11/26/2003 14:43

LCSD 2003/11/25-02.10-003

Extracted: 11/25/2003

Analyzed: 11/26/2003 15:13

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	726	795	1000	72.6	79.5	9.1	60-130	25		
Surrogates(s) o-Terphenyl	15.9	17.5	20.0	79.5	87.7		60-130	0		

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

Oakland, CA 94621

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

Project: 6651-001.00

3820 San Leandro St.

Received: 11/24/2003 14:00

Batch QC Report

Prep(s): 3510/8015M

Test(s): 8015M

Laboratory Control Spike

Water

QC Batch # 2003/12/01-01.10

LCS 2003/12/01-01.10-002

Extracted: 12/01/2003

Analyzed: 12/03/2003 12:44

LCSD 2003/12/01-01.10-003

Extracted: 12/01/2003

Analyzed: 12/03/2003 13:11

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	935	948	1000	93.5	94.8	1.4	60-130	25		
Surrogates(s) o-Terphenyl	17.1	17.1	20.0	85.7	85.5		60-130	0		

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Ed Giacometti

7977 Capwell Drive, Suite 100

Oakland, CA 94621

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

Project: 6651-001.00
3820 San Leandro St.

Received: 11/24/2003 14:00

Legend and Notes

Analysis Flag

rl

Reporting limits raised due to reduced sample size.

Result Flag

b

Analyte was found in the method blank at a concentration greater than the reporting limit.

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

2003-11-0823

Report To **Analysis Request**

Attn: ED GIACOMETTI		TPH EPA - <input type="checkbox"/> 8015/8021 <input checked="" type="checkbox"/> 8260B <input checked="" type="checkbox"/> Gas w/ <input checked="" type="checkbox"/> BTEX <input checked="" type="checkbox"/> MTBE Purgeable Aromatics BTEX EPA - <input type="checkbox"/> 8021 <input type="checkbox"/> 8260B TEPH EPA 8015M <input checked="" type="checkbox"/> Silica Gel <input checked="" type="checkbox"/> Diesel <input type="checkbox"/> Motor Oil <input type="checkbox"/> Other _____ Fuel Tests EPA 8260B: <input type="checkbox"/> Gas <input type="checkbox"/> BTEX <input type="checkbox"/> Five Oxygenates <input type="checkbox"/> DCA, ED6 <input type="checkbox"/> Ethanol Purgeable Halocarbons (HVOCs) EPA 8021 Volatile Organics GC/MS (VOCs) <input type="checkbox"/> EPA 8260B <input type="checkbox"/> 624 Semivolatiles GC/MS <input type="checkbox"/> EPA 8270 <input type="checkbox"/> 625 Oil and Grease <input type="checkbox"/> Petroleum (EPA 1664) <input type="checkbox"/> Total Pesticides <input type="checkbox"/> EPA 8081 <input type="checkbox"/> 608 <input type="checkbox"/> EPA 8082 <input type="checkbox"/> 608 PNAs by <input type="checkbox"/> 8270 <input type="checkbox"/> 8310 CAM17 Metals (EPA 6010/7470/7471) Metals: <input type="checkbox"/> Lead <input type="checkbox"/> LUFT <input type="checkbox"/> RCRA <input type="checkbox"/> Other: _____ W.E.T (STLC) <input type="checkbox"/> TCLP Hexavalent Chromium pH (24h hold time for H ₂ O) Spec Cond. <input type="checkbox"/> Alkalinity TSS <input type="checkbox"/> TDS Anions: <input type="checkbox"/> Cl <input type="checkbox"/> SO ₄ <input type="checkbox"/> NO ₃ <input type="checkbox"/> F <input type="checkbox"/> Br <input type="checkbox"/> NO ₂ <input type="checkbox"/> PO ₄
Company: ACC ENVIRONMENTAL CONSULTANTS		
Address: 7977 CAPWELL DRIVE, OAKLAND, CA		
P: (510) 638-8400 x 114 E: egiacometti@accenv.com		
Bill To: ACC ENVIRONMENTAL	Sampled By: <u>Ed Giacometti</u>	
Attn: ED	Phone ext: 114	

Sample ID	Date	Time	Mat rix	Pres erv.	TPH EPA	BTEX EPA	TEPH EPA	Fuel Tests	Purgeable Halocarbons	Volatile Organics	Semivolatiles	Oil and Grease	Pesticides	PCBs	PNAs	CAM17 Metals	Metals	W.E.T	Hexavalent Chromium	Spec Cond.	Anions	Number of Containers	
MW-1	11/21/03	11:20	H ₂ O	HCl/acid	X	X	X															X	5
MW-2	11/21/03	11:40	H ₂ O	HCl/acid	X	X	X															X	5
MW-3	11/21/03	11:50	H ₂ O	HCl/acid	X	X	X															X	5

Project Info.	Sample Receipt	Relinquished by:
Project Name: <u>3820 San Leandro St.</u>	# of Containers: _____	Signature: <u>Edward Giacometti</u> Time: _____
Project#: <u>6061-001, 00</u>	Head Space: _____	Printed Name: ED GIACOMETTI Date: <u>11/21/03</u>
PO#: _____	Temp: _____	Company: ACC ENVIRONMENTAL CONSULTANTS
Credit Card#: _____	Conforms to record: _____	Company: _____
T A T	<input checked="" type="checkbox"/> Std 5 Day <input type="checkbox"/> 72h <input type="checkbox"/> 48h <input type="checkbox"/> 24h Other: _____	1) Received by: <u>Rachel</u> 13:10 Signature: _____ Time: _____ Printed Name: <u>Rachel</u> Date: <u>11/24/03</u> Company: <u>STL-SF</u>
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 <input type="checkbox"/> Global ID: _____	Special Instructions / Comments: _____	2) Received by: _____ Signature: _____ Time: _____ Printed Name: _____ Date: _____ Company: _____
		3) Received by: <u>Nouna K.</u> 1400 Signature: _____ Time: _____ Printed Name: <u>Nouna K.</u> Date: <u>11/24/03</u> Company: <u>STL-SF</u>