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Alameda County

AUG 13 2004

Health Care Services Agency

August 12, 2004

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 9, 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

Alameda County

AUG 13 2004

Richard Kelly

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 June 9, 2004. 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
		03/23/04	7.31	20.23
		06/09/04	8.65	18.89
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
		03/23/04	7.59	18.38
		06/09/04	8.75	17.22

Well No	Well Elevation* (above MSL)	Date Measured	Depth to Groundwater	Groundwater Elevation
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
		03/23/04	7.85	18.67
		06/09/04	9.00	17.52

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 June 9, 2004. The calculated groundwater flow direction and gradient values are south at 0.030 feet per foot. Historic values are summarized in Table 2.

TABLE 2 - GROUNDWATER GRADIENT AND FLOW DIRECTION

Date Monitored	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
03/23/04	0.033	South-southwest
06/09/04	0.030	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	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (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
	03/23/04	140	120 ^{ndp}	1.3	<0.50	1.2	<1.0	11
	06/09/04	570	84 ^{edr}	1.6	<.50	1.5	<1.0	11

Sample ID	Date	TPHg (µg/L)	TPHd (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
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
	03/23/04	660	350 ^{ndp}	0.81	<0.50	<0.50	<1.0	7.7
	06/09/04	1,000	1,300 ^{ndp}	8.9	0.55	<0.50	<1.0	28
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
	03/23/04	41,000	12,000 ^{ndp}	12,000	130	1,100	<200	27,000
	06/09/04	50,000	13,000 ^{ndp}	16,000	<250	1,200	<500	32,000

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

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 50,000 micrograms per Liter (µg/L) TPHg, 13,000 µg/L TPHd, 16,000 µg/L benzene, 32,000 µg/L 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. *stable*

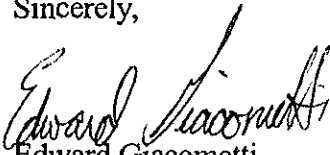
RECOMMENDATIONS


Based on conclusions of groundwater monitoring performed to date and downgradient groundwater investigation, 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;
- Analyze future water samples from all three monitoring wells for TPHg, BTEX, and all fuel oxygenates by EPA Method 8260B and TPHd by EPA Method 8015M; and
- Meet with the Alameda County Health Care Services Agency to discuss the findings of subsurface investigation obtained to date and clarify additional investigation and any interim remediation.

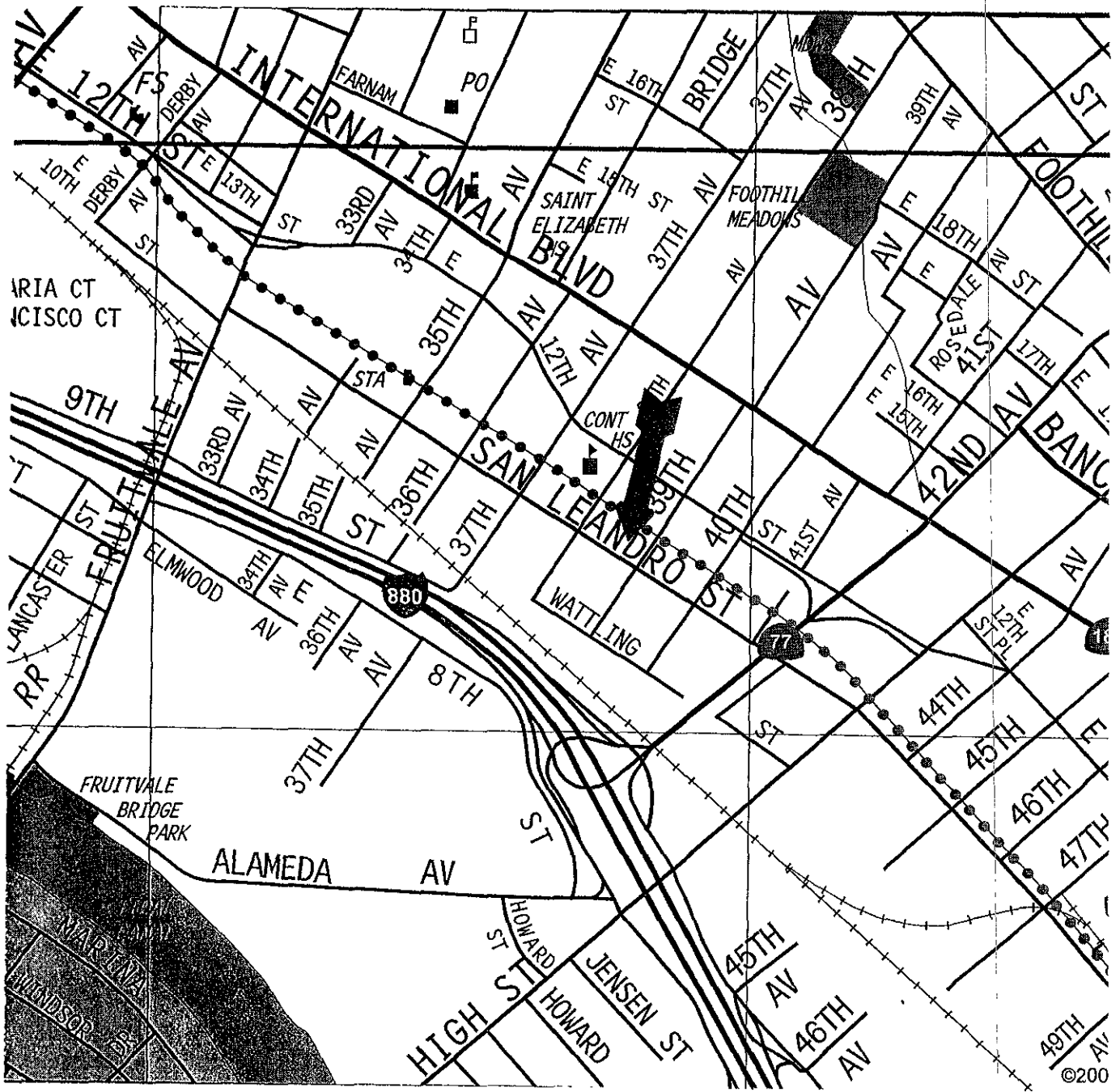
If you have any questions regarding this report or the findings of the work, please contact me at (510) 638-8400, extension 109.

Sincerely,


Edward Giacometti
Staff Geologist


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

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

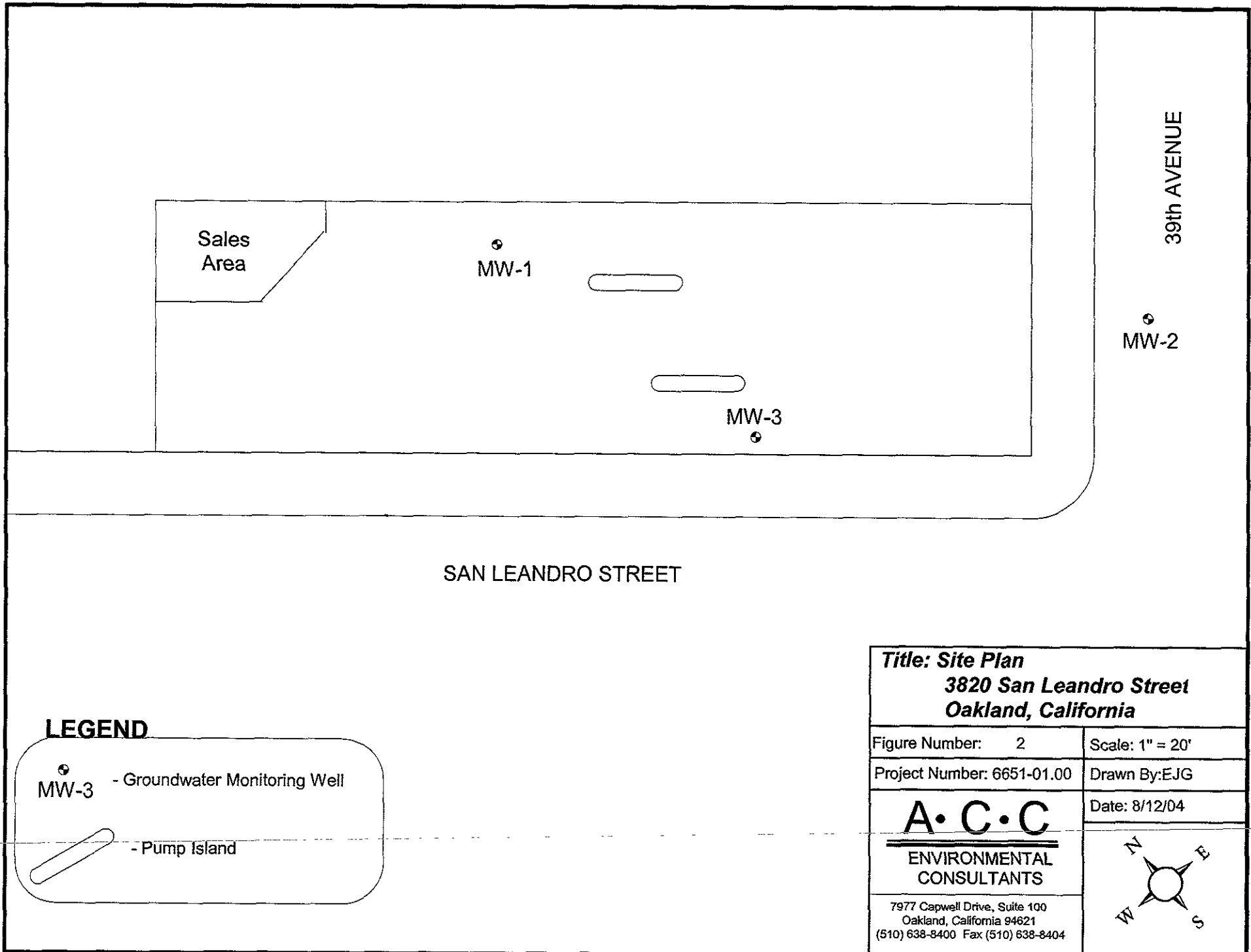


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Source: The Thomas Guide, Bay Area 2002

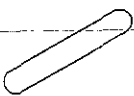
Title: Location Map 3820 San Leandro Street Oakland, California	
Figure Number: 1	Scale: None
Project No: 6551-001.00	Drawn By: EJG
A • C • C ENVIRONMENTAL CONSULTANTS	Date: 8/25/03
7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax: (510) 638-8404	

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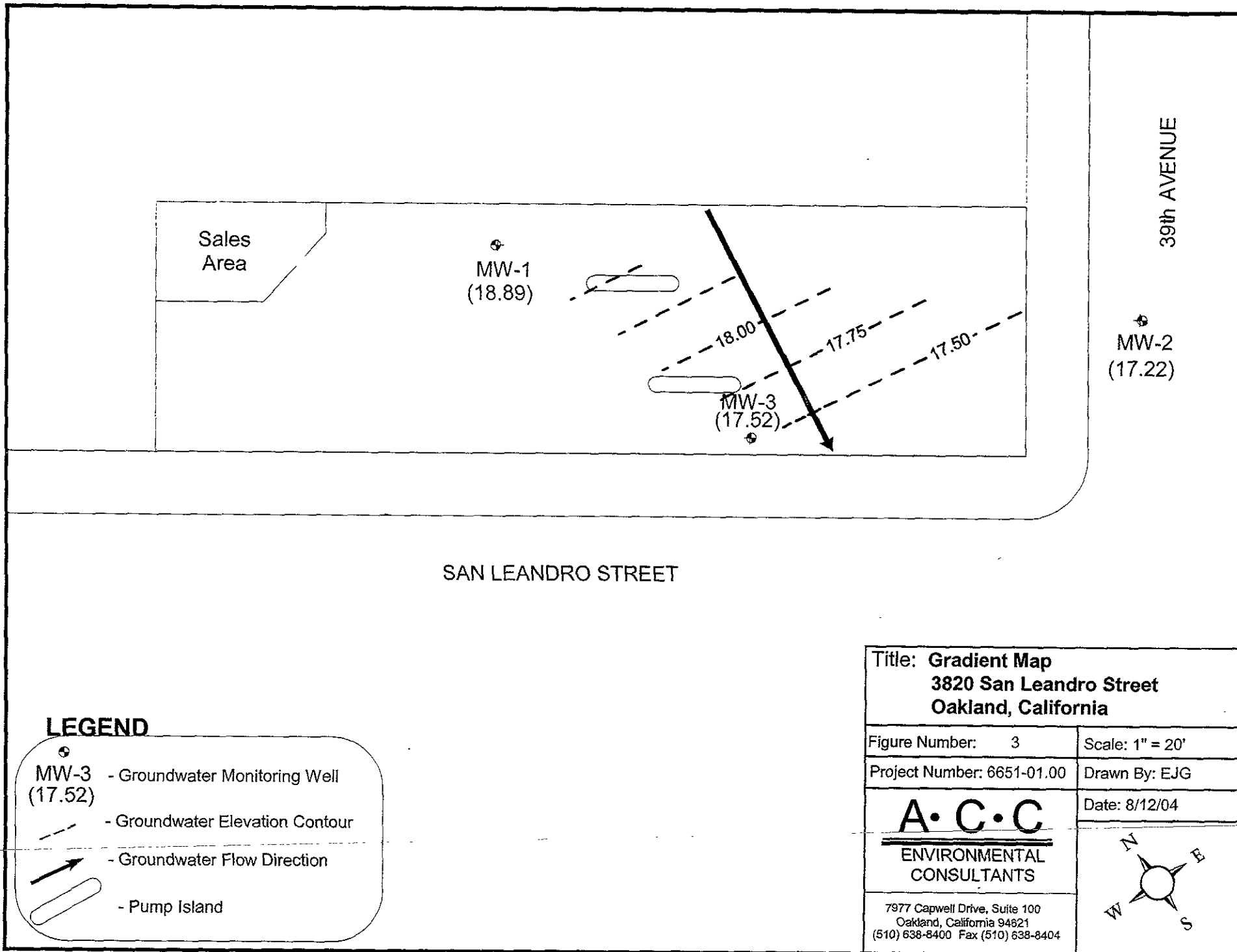


LEGEND

 MW-3 - Groundwater Monitoring Well

 - Pump Island

<p>Title: Site Plan 3820 San Leandro Street Oakland, California</p>	
Figure Number: 2	Scale: 1" = 20'
Project Number: 6651-01.00	Drawn By: EJG
<p>A • C • C ENVIRONMENTAL CONSULTANTS</p>	Date: 8/12/04
	
<p>7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax (510) 638-8404</p>	



Sales Area

MW-1
(18.89)





MW-3
(17.52)

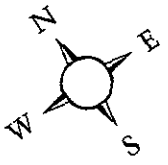
MW-2
(17.22)

39th AVENUE

SAN LEANDRO STREET

LEGEND

-  MW-3 (17.52) - 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	
7977 Capwell Drive, Suite 100 Oakland, California 94621 (510) 638-8400 Fax (510) 638-8404	
	

JOB NAME: <i>Guys Diesel</i>	PURGE METHOD: <i>Manual Bail</i>
SITE ADDRESS: <i>3820 San Leandro Street</i>	SAMPLED BY: <i>Ed Giacometti</i>
JOB #: <i>6551-001.00</i>	LABORATORY: <i>STL-SF</i>
DATE: <i>3/28/04</i>	ANALYSIS: <i>TPH/TPH₂/BTEX/MTBE</i>
Onsite Drum Inventory SOIL:	MONITORING <input checked="" type="checkbox"/>
EMPTY: WATER: <i>1 @ 86%</i>	DEVELOPING <input type="checkbox"/>
	SAMPLING <input checked="" type="checkbox"/>

	PURGE VOL (Gal)	PURGE WATER READINGS						OBSERVATIONS	
		pH	Temp.(C)	Cond.	Sal.	Turb.	D.O.	<input type="checkbox"/> Froth	<input type="checkbox"/> Sheen
WELL: <i>MW-1</i>								<input type="checkbox"/> Odor Type _____	
DEPTH OF BORING: <i>20.03</i>	<i>2.0</i>		<i>18.4</i>				<i>2.25</i>	<input type="checkbox"/> Free Product	
DEPTH TO WATER: <i>7.31</i>	<i>4.0</i>		<i>18.3</i>				<i>2.16</i>	<input type="checkbox"/> Amount _____ Type _____	
WATER COLUMN: <i>12.72</i>	<i>6.0</i>		<i>18.1</i>				<i>2.50</i>	<input type="checkbox"/> Other	
WELL DIAMETER: <i>2"</i>	<i>8.0</i>		<i>18.0</i>				<i>2.48</i>	<input type="checkbox"/>	<i>silty</i>
WELL VOLUME: <i>2.0 gallons</i>									
COMMENTS: <i>Purge: 8:30</i> <i>Sample: 10:00</i>									
WELL: <i>MW-2</i>								<input type="checkbox"/> Froth	
DEPTH OF BORING: <i>20.07</i>	<i>2.0</i>		<i>17.6</i>				<i>2.34</i>	<input checked="" type="checkbox"/> Sheen	
DEPTH TO WATER: <i>7.59</i>	<i>4.0</i>		<i>17.8</i>				<i>2.25</i>	<input checked="" type="checkbox"/> Odor Type <i>gas</i>	
WATER COLUMN: <i>12.48</i>	<i>6.0</i>		<i>18.4</i>				<i>2.13</i>	<input type="checkbox"/> Free Product	
WELL DIAMETER: <i>2"</i>	<i>8.0</i>		<i>18.3</i>				<i>2.09</i>	<input type="checkbox"/> Amount _____ Type _____	
WELL VOLUME: <i>2.0 gallons</i>								<input type="checkbox"/> Other	<i>gray silt</i>
COMMENTS: <i>Purge: 9:00</i> <i>Sample: 10:10</i>									
WELL: <i>MW-3</i>								<input type="checkbox"/> Froth	
DEPTH OF BORING: <i>19.49</i>	<i>2.0</i>		<i>16.9</i>				<i>3.00</i>	<input checked="" type="checkbox"/> Sheen	
DEPTH TO WATER: <i>7.85</i>	<i>4.0</i>		<i>17.2</i>				<i>2.96</i>	<input checked="" type="checkbox"/> Odor Type <i>gas</i>	
WATER COLUMN: <i>11.64</i>	<i>6.0</i>		<i>17.4</i>				<i>2.87</i>	<input type="checkbox"/> Free Product	
WELL DIAMETER: <i>2"</i>	<i>8.0</i>		<i>17.6</i>				<i>2.71</i>	<input type="checkbox"/> Amount _____ Type _____	
WELL VOLUME: <i>2.0 gallons</i>								<input type="checkbox"/> Other	
COMMENTS: <i>Purge: 9:30</i> <i>Sample: 10:20</i>									

ACC Environmental Consultants

June 16, 2004

7977 Capwell Drive, Suite 100
Oakland, CA 94621

Attn.: Aaron Wolf

Project#: 6551-001.00

Project: Guy Gas & Diesel

Site: San Leandro

Dear Mr. Wolf,

Attached is our report for your samples received on 06/09/2004 17:15

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 07/24/2004 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

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

7977 Capwell Drive, Suite 100

Oakland, CA 94621

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

Project: 6551-001.00

Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	06/09/2004 13:00	Water	1
MW-2	06/09/2004 13:22	Water	2
MW-3	06/09/2004 13:17	Water	3

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

06/16/2004 15:09

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

7977 Capwell Drive, Suite 100

Oakland, CA 94621

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

Project: 6551-001.00

Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Prep(s):	3510/8015M	Test(s):	8015M
Sample ID:	MW-1	Lab ID:	2004-06-0305 - 1
Sampled:	06/09/2004 13:00	Extracted:	6/11/2004 06:55
Matrix:	Water	QC Batch#:	2004/06/11-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	84	50	ug/L	1.00	06/12/2004 00:53	edr
Surrogate(s)						
o-Terphenyl	77.6	50-120	%	1.00	06/12/2004 00:53	

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

06/16/2004 15:09

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

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

Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Prep(s): 3510/8015M	Test(s): 8015M
Sample ID: MW-2	Lab ID: 2004-06-0305 - 2
Sampled: 06/09/2004 18:22	Extracted: 06/11/2004 06:55
Matrix: Water	QC Batch#: 2004/06/11-02.10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	1300	50	ug/L	1.00	06/12/2004 01:21	ndp
Surrogate(s)						
o-Terphenyl	79.9	50-120	%	1.00	06/12/2004 01:21	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

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

Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Prep(s): 8510/8015M	Test(s): 8015M
Sample ID: MW-3	Lab ID: 2004-06-0305 - 3
Sampled: 06/09/2004 13:17	Extracted: 6/11/2004 06:55
Matrix: Water	QC Batch#: 2004/06/11-02:10

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Diesel	13000	250	ug/L	5.00	06/12/2004 20:00	ndp
Surrogate(s)						
o-Terphenyl	NA	50-120	%	5.00	06/12/2004 20:00	sd

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

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

Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Batch QC Report	
Prep(s): 6510/8015M Method: Blank MB: 2004/06/11-02:10-001	Test(s): 8015M QC Batch # 2004/06/11-02:10 Date Extracted: 06/11/2004 06:55
Water	

Compound	Conc.	RL	Unit	Analyzed	Flag
Diesel	ND	50	ug/L	06/11/2004 14:25	
Surrogates(s) o-Terphenyl	85.2	60-130	%	06/11/2004 14:25	

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

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

Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Batch QC Report			
Prep(s): 3510/8015M		Test(s): 8015M	
Laboratory Control Spike		Water	
QC Batch # 2004/06/11-02.10			
LCS	2004/06/11-02-10-002	Extracted: 06/11/2004	Analyzed: 06/11/2004 14:15
LCSD	2004/06/11-02-10-003	Extracted: 06/11/2004	Analyzed: 06/11/2004 14:41

Compound	Conc. ug/L		Exp. Conc.	Recovery %		RPD	Ctrl. Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Diesel	797	749	1000	79.7	74.9	6.2	60-130	25		
Surrogates(s) o-Terphenyl	16.5	15.4	20.0	82.6	76.9		60-130	0		

Diesel with Silica Gel Clean-up

ACC Environmental Consultants

Attn.: Aaron Wolf

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Oakland, CA 94621

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

Project: 6551-001.00

Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro



Result Flag

edr

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

ndp

Hydrocarbon reported does not match the pattern of our Diesel standard

sd

Surrogate recovery not reportable due to required dilution.

Fuel Oxygenates by 8260B

ACC Environmental Consultants

Attn.: Aaron Wolf

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Samples Reported

Sample Name	Date Sampled	Matrix	Lab #
MW-1	06/09/2004 13:00	Water	1
MW-2	06/09/2004 13:22	Water	2
MW-3	06/09/2004 13:17	Water	3

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Fuel Oxygenates by 8260B

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Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Prep(s):	6030B	Test(s):	8260B
Sample ID:	MW-1	Lab ID:	2004-06-0305 - 1
Sampled:	06/09/2004 13:00	Extracted:	6/15/2004 15:26
Matrix:	Water	QC Batch#:	2004/06/15-01-62

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	570	50	ug/L	1.00	06/15/2004 15:26	
Methyl tert-butyl ether (MTBE)	11	0.50	ug/L	1.00	06/15/2004 15:26	
Benzene	1.6	0.50	ug/L	1.00	06/15/2004 15:26	
Toluene	ND	0.50	ug/L	1.00	06/15/2004 15:26	
Ethylbenzene	1.5	0.50	ug/L	1.00	06/15/2004 15:26	
Total xylenes	ND	1.0	ug/L	1.00	06/15/2004 15:26	
Surrogate(s)						
1,2-Dichloroethane-d4	103.9	72-128	%	1.00	06/15/2004 15:26	
Toluene-d8	95.4	80-113	%	1.00	06/15/2004 15:26	

Fuel Oxygenates by 8260B

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Site: San Leandro

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW-2	Lab ID:	2004-06-0305-2
Sampled:	06/09/2004 13:22	Extracted:	6/15/2004 14:46
Matrix:	Water	QC Batch#:	2004/06/15-0168

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	1000	50	ug/L	1.00	06/15/2004 14:46	
Methyl tert-butyl ether (MTBE)	28	0.50	ug/L	1.00	06/15/2004 14:46	
Benzene	8.9	0.50	ug/L	1.00	06/15/2004 14:46	
Toluene	0.55	0.50	ug/L	1.00	06/15/2004 14:46	
Ethylbenzene	ND	0.50	ug/L	1.00	06/15/2004 14:46	
Total xylenes	ND	1.0	ug/L	1.00	06/15/2004 14:46	
Surrogate(s)						
1,2-Dichloroethane-d4	101.4	72-128	%	1.00	06/15/2004 14:46	
Toluene-d8	99.6	80-113	%	1.00	06/15/2004 14:46	

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Fuel Oxygenates by 8260B

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Site: San Leandro

Prep(s):	5030B	Test(s):	8260B
Sample ID:	MW#3	Lab ID:	2004-06-0305 - 3
Sampled:	06/09/2004 13:17	Extracted:	6/16/2004 11:49
Matrix:	Water	QC Batch#:	2004/06/16-01-68
Analysis Flag: o (See Legend and Note Section)			

Compound	Conc.	RL	Unit	Dilution	Analyzed	Flag
Gasoline	50000	25000	ug/L	500.00	06/16/2004 11:49	dp
Methyl tert-butyl ether (MTBE)	32000	250	ug/L	500.00	06/16/2004 11:49	
Benzene	16000	250	ug/L	500.00	06/16/2004 11:49	
Toluene	ND	250	ug/L	500.00	06/16/2004 11:49	
Ethylbenzene	1200	250	ug/L	500.00	06/16/2004 11:49	
Total xylenes	ND	500	ug/L	500.00	06/16/2004 11:49	
Surrogate(s)						
1,2-Dichloroethane-d4	106.2	72-128	%	500.00	06/16/2004 11:49	
Toluene-d8	99.2	80-113	%	500.00	06/16/2004 11:49	

Fuel Oxygenates by 8260B

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Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Batch QC Report					
Prep(s): 6080B				Test(s): 8260B	
Method: Blank		Water		QC Batch # 2004/06/15-01.62	
MB: 2004/06/15-01.62-056				Date Extracted: 06/15/2004 07:56	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/15/2004 07:56	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/15/2004 07:56	
Benzene	ND	0.5	ug/L	06/15/2004 07:56	
Toluene	ND	0.5	ug/L	06/15/2004 07:56	
Ethylbenzene	ND	0.5	ug/L	06/15/2004 07:56	
Total xylenes	ND	1.0	ug/L	06/15/2004 07:56	
Surrogates(s)					
1,2-Dichloroethane-d4	98.2	72-128	%	06/15/2004 07:56	
Toluene-d8	103.8	80-113	%	06/15/2004 07:56	

Fuel Oxygenates by 8260B

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Project: 6551-001.00
Guy Gas & Diesel

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Site: San Leandro

Batch QC Report					
Prep(s): 5030B				Test(s): 8260B	
Method: Blank		Water:		QC Batch #: 2004/06/15-01.68	
MB: 2004/06/15-01.68.046				Date Extracted: 06/15/2004 07:46	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/15/2004 07:46	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/15/2004 07:46	
Benzene	ND	0.5	ug/L	06/15/2004 07:46	
Toluene	ND	0.5	ug/L	06/15/2004 07:46	
Ethylbenzene	ND	0.5	ug/L	06/15/2004 07:46	
Total xylenes	ND	1.0	ug/L	06/15/2004 07:46	
Surrogates(s)					
1,2-Dichloroethane-d4	99.2	72-128	%	06/15/2004 07:46	
Toluene-d8	101.0	80-113	%	06/15/2004 07:46	

Fuel Oxygenates by 8260B

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Project: 6551-001.00

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Site: San Leandro

Batch QC Report					
Prep(s): 5030B				Test(s): 8260B	
Method Blank		Water		QC Batch # 2004/06/16-01.68	
MB: 2004/06/16-01.68-056				Date Extracted: 06/16/2004 08:56	

Compound	Conc.	RL	Unit	Analyzed	Flag
Gasoline	ND	50	ug/L	06/16/2004 08:56	
Methyl tert-butyl ether (MTBE)	ND	0.5	ug/L	06/16/2004 08:56	
Benzene	ND	0.5	ug/L	06/16/2004 08:56	
Toluene	ND	0.5	ug/L	06/16/2004 08:56	
Ethylbenzene	ND	0.5	ug/L	06/16/2004 08:56	
Total xylenes	ND	1.0	ug/L	06/16/2004 08:56	
Surrogates(s)					
1,2-Dichloroethane-d4	95.2	72-128	%	06/16/2004 08:56	
Toluene-d8	99.0	80-113	%	06/16/2004 08:56	

Fuel Oxygenates by 8260B

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Batch QC Report			
Prep(s): 5030B			Test(s): 8260B
Laboratory Control Spike	Water		QC Batch # 2004/06/15-01.62
LCS 2004/06/15-01.62-012	Extracted: 06/15/2004		Analyzed: 06/15/2004 07:12
LCSD 2004/06/15-01.62-034	Extracted: 06/15/2004		Analyzed: 06/15/2004 07:34

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	27.6	24.8	25.0	110.4	99.2	10.7	65-165	20		
Benzene	26.0	26.1	25.0	104.0	104.4	0.4	69-129	20		
Toluene	26.8	26.9	25.0	107.2	107.6	0.4	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	466	458	500	93.2	91.6		72-128			
Toluene-d8	503	509	500	100.6	101.8		80-113			

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Fuel Oxygenates by 8260B

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Batch QC Report									
Prep(s): 6030B					Test(s): 8260B				
Laboratory Control Spike			Water			QC Batch # 2004/06/15-01-68			
LCS	2004/06/15-01-68-009		Extracted: 06/15/2004			Analyzed: 06/15/2004 07:09			
LCSD	2004/06/15-01-68-028		Extracted: 06/15/2004			Analyzed: 06/15/2004 07:28			

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	24.8	23.0	25.0	99.2	92.0	7.5	65-165	20		
Benzene	25.0	25.6	25.0	100.0	102.4	2.4	69-129	20		
Toluene	26.4	27.5	25.0	105.6	110.0	4.1	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	471	436	500	94.2	87.2		72-128			
Toluene-d8	482	475	500	96.4	95.0		80-113			

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Fuel Oxygenates by 8260B

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Project: 6551-001.00
Guy Gas & Diesel

Received: 06/09/2004 17:15

Site: San Leandro

Batch QC Report			
Prep(s): 6030B			Test(s): 8260B
Laboratory Control Spike	Water		QC Batch # 2004/06/16-01:68
LCS 2004/06/16-01:68-018	Extracted: 06/16/2004		Analyzed: 06/16/2004 08:18
LCSD 2004/06/16-01:68-037	Extracted: 06/16/2004		Analyzed: 06/16/2004 08:37

Compound	Conc. ug/L		Exp.Conc.	Recovery %		RPD	Ctrl.Limits %		Flags	
	LCS	LCSD		LCS	LCSD		%	Rec.	RPD	LCS
Methyl tert-butyl ether (MTBE)	23.7	22.2	25.0	94.8	88.8	6.5	65-165	20		
Benzene	24.8	24.9	25.0	99.2	99.6	0.4	69-129	20		
Toluene	25.7	24.5	25.0	102.8	98.0	4.8	70-130	20		
Surrogates(s)										
1,2-Dichloroethane-d4	470	427	500	94.0	85.4		72-128			
Toluene-d8	491	506	500	98.2	101.2		80-113			

Fuel Oxygenates by 8260B

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Legend and Notes

Analysis Flag

o

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

Result Flag

dp

Sample contains discrete peak in addition to gasoline.

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Report To Analysis Request

Attn: <u>Aaron N. Wolfe</u>		Company: <u>ACC ENVIRONMENTAL CONSULTANTS</u>	
Address: <u>7977 CAPWELL DRIVE, OAKLAND, CA</u>			
Phone: (510) <u>639-8400</u>	Email: <u>AWOLF@accem.com</u>		
Bill To: <u>ACC ENVIRONMENTAL</u>	Sampled By: <u>[Signature]</u>		
Attn: <u>Aaron</u>	Phone ext: <u>X102</u>		

Sample ID	Date	Time	Who	Pres	TPH EPA	Pluggable	TEPH	Lead	Pluggable	Volatile	Semivolatile	Oil	Pesticides	PAHs	GC/MS	Metals	MELT	Relevant	Spec	Anions				Number of Containers		
MW-1	6-9	13:00	AW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW-2	6-9	13:22	AW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
MW-3	6-9	13:17	AW	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

Project Info:		Sample Receipt:		1) Relinquished by:		2) Relinquished by:		3) Relinquished by:	
Project Name: <u>SAN LEAN</u>		Head Space:		Signature: <u>[Signature]</u>		Signature: <u>[Signature]</u>		Signature: _____	
Project #: <u>6551-001-00</u>		Temp: <u>3.10</u>		Time: <u>2:02P</u>		Time: <u>17:15</u>		Time: _____	
PG#: _____		Conforms to record:		Date: <u>6-09-04</u>		Date: <u>6/9/04</u>		Date: _____	
Credit Card#: _____		Company: <u>ACC ENVIRONMENTAL CONSULTANTS</u>		Company: <u>STL-SF</u>		Company: <u>STL-SF</u>		Company: _____	
T	Std 5 Day	72h	48h	24h	Other:	1) Received by:		3) Received by:	
A						Signature: <u>[Signature]</u>		Signature: _____	
T						Time: <u>14:50</u>		Time: <u>17:15</u>	
						Date: <u>6/9/04</u>		Date: _____	
						Company: <u>STL-SF</u>		Company: _____	