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August 4, 2006

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

SUBJECT:

250 8th Street

Oakland, California

Dear Mr. Wickham:

Attached please find a copy of the Remedial Action Plan for the above referenced site. I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge.

Sincerely,

Russell Lim



August 4, 2006

Mr. Jerry Wickham Alameda County Health Care Services Agency 1131 Harbor Bay Parkway, Suite 250 Alameda, CA 94502

SUBJECT: REMEDIAL ACTION PLAN

SITE: Fuel Leak Case RO0000479

Lim Property 250 8th Street

Oakland, CA 94607

Dear Mr. Wickham:

Attached is Aqua Science Engineers, Inc.'s (ASE) remedial action plan (RAP) for the subject site. This RAP is in response to your agency's letter dated May 12, 2006. Although several of your requests are not included within this RAP (cross sections, pathway survey, and a well survey), ASE is committed to providing those items in the very near future.

Your agency's approval of this RAP will not only get our client's case back into compliance, but it will also set-in-motion a remedial strategy that both ASE and the responsible party are anxious to perform.

Should you have any questions or comments, please feel free to contact us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

David Allen

Vice President, R.E.A.



August 4, 2006

REMEDIAL ACTION PLAN LIM PROPERTY 250 8TH STREET OAKLAND, CALIFORNIA (ASE JOB NO. 2808)

for

Mr. Russell Lim 3111 Diablo Road Lafayette, CA 94549

Submitted by:

Aqua Science Engineers 208 West El Pintado Road Danville, CA 94526 (925) 820-9391



TABLE OF CONTENTS

SECT	ION		PAGE
1.0	INTRO	DUCTION	1
2.0	SITE H	IISTORY AND BACKGROUND INFORMATION	1
3.0	SCOPE	E OF WORK	4
4.0	DETAI 4.1 4.2 4.3 4.4 4.5 4.6 4.7 4.8 4.9 4.10 4.11 4.12 4.13	Permitting Health & Safety Plan Mobilize to the Site with the ASE DPE Unit Connection of the DPE Unit to MW-3 Extraction of Vapors and Water Destruction of Vapors Storage of Water/Product Measurement of System Operating and Radius of Influence Parameters Measurement of Vapors Using PID Sample Collection Depth to Water Measurements Analysis of Samples Transportation & Disposal of Extracted Groundwater/Product	5 5 6 6 6 6 7 7 7 7 8 8
5.0	DATA	ANALYSIS AND REPORT PREPARATION	8
6.0	SCHEI	DULE OF ACTIVITIES	9
LIST	OF FIGUR	<u>ES</u>	
FIGUE	RE 1	LOCATION MAP	
FIGUE	RE 2	SITE PLAN	
FIGUE	RE 3	EXTRACTION WELL AND DPE SYSTEM LOCAT	ION MAP



LIST OF TABLES

TABLE ONE GROUNDWATER ELEVATIONS

TABLE TWO HISTORICAL GROUNDWATER MONITORING ANALYTICAL

RESULTS



1.0 INTRODUCTION

This report presents Aqua Science Engineers, Inc.'s (ASEs) remedial action plan (RAP) for remediation of free-phase hydrocarbons and dissolved hydrocarbons in the shallow groundwater at the Lim Property located at 250 8th Street in Oakland, California, Figures 1 and 2. The selected remedial technology will be Dual-Phase Extraction (DPE) using a mobile unit supplied by ASE.

This RAP will satisfy <u>several</u> of the requirements requested by the Alameda County Health Care Services Agency (ACHCSA) in their letters dated November 7, 2005 and May 12, 2006. The remaining items requested in the two ACHCSA letters will be completed by ASE in the next 6 to 8 weeks. Items remaining to be completed are cross sections, a utility and preferential pathway survey, and a plan for further assessment activities, as necessary.

2.0 SITE HISTORY AND BACKGROUND INFORMATION

2.1 May 1992 Underground Storage Tank Removal

A gasoline service station previously occupied the site. In May 1992, ASE removed ten underground fuel storage tanks (USTs) from the site. The USTs consisted of one (1) 10,000-gallon gasoline tank, one (1) 5,000-gallon diesel tank, three (3) 2,000-gallon gasoline tanks, one (1) 2,000-gallon diesel tank, three (3) 500-gallon gasoline tanks and one (1) 250-gallon waste oil tank. Up to 10,000 parts per million (ppm) total petroleum hydrocarbons as gasoline (TPH-G) and 5,900 ppm total petroleum hydrocarbons as diesel (TPH-D) were detected in soil samples collected during the tank removal.

2.2 December 1992 through March 1993 Soil Overexcavation

Between December 1992 and March 1993, All Environmental of San Ramon, California overexcavated 1,762 cubic yards of soil from the site and off-hauled the soil to the BFI Landfill in Livermore, California for disposal (Figure 2). Analytical results show that all on-site soil with hydrocarbon concentrations greater than 10 ppm was removed from the site with the exception of soil along the 8th Street shoring. Up to 1,800 ppm TPH-G and 120 ppm TPH-D were detected in soil samples collected along the shoring indicating that contamination likely extends below 8th Street. This contamination left in place may still be a source for groundwater contamination.



2.3 January 1995 Monitoring Well Installation

In January 1995, ASE installed monitoring wells MW-1 and MW-2 at the site (Figure 2). High hydrocarbon concentrations were detected in monitoring well MW-2, downgradient of the site. Moderate hydrocarbon concentrations were detected in on-site monitoring well MW-1.

2.4 January 1996 Borings and Groundwater Sampling

In July 1996, ASE collected groundwater samples from each monitoring well and drilled borings BH-C and BH-D to further define the width of the hydrocarbon plume downgradient of the site. Relatively high hydrocarbon concentrations were detected in groundwater samples collected from monitoring well MW-2, downgradient of the site. Slightly lower but still very high hydrocarbon concentrations were detected in groundwater samples collected from boring BH-D, west of monitoring well MW-2. Very low hydrocarbon concentrations were detected in groundwater samples collected from monitoring well MW-1, located on the site, and boring BH-C, east of monitoring well MW-2. Based on these findings, the plume appears to be moving to the south of Excavation I.

2.5 Quarterly Groundwater Monitoring

In April 1995, ASE began a quarterly groundwater monitoring program for the site. Since that time, the site has been on either a quarterly or semi-annual sampling schedule. Depth to groundwater data and analytical results for all groundwater sampling periods are tabulated in Tables One through Three in the Tables section of this report.

2.6 June 1997 Remedial Action Plan

On June 5, 1997, ASE prepared a remedial action plan (RAP) addressing the need for groundwater remediation at the site, describing the appropriateness of several remedial options and choosing an option. Low flow hydrogen peroxide injection was chosen as the groundwater remediation option of choice for the site in order to raise dissolved oxygen (DO) concentrations in the groundwater to stimulate in-situ bioremediation.

2.7 February 1999 Hydrogen Peroxide Remediation System Installation

On February 2 and 3, 1999, five (5) injection wells were installed at the site (Figure 2). On February 18, 1999, the injection system began operation. It delivered a water and hydrogen peroxide solution to each injection well on a constant basis. DO concentrations within the injection wells rose to above 20 ppm. Groundwater in downgradient monitoring well MW-2 never showed a measurable increase in DO.



2.8 June 1999 Discovery of Free-Floating Hydrocarbons

On June 22, 1999, while measuring the DO content within the injection wells, ASE discovered that the DO probe had a very strong gasoline odor when removed from injection well IW-5. A clear bailer was inserted into IW-5 to check for the presence of free-floating hydrocarbons. The bailer contained approximately 18-inches of what appeared to be aged gasoline. On June 24, 1999, ASE returned to the site with an interface probe to accurately measure the thickness of the free-floating hydrocarbons. On that day, 1.75-feet of free-floating hydrocarbons was measured on the water surface in IW-5. Injection well IW-4 (15-feet east of IW-5) was measured with the interface probe and did not contain a measurable thickness of floating hydrocarbons. On June 24, 1999, ASE bailed the free-floating hydrocarbons from IW-5 until only a sheen was present on the water surface. Approximately 3 gallons of product was removed from IW-5. ASE continued to measure and bail the floating product within well IW-5 on a bi-weekly basis.

2.9 January 2000 Monitoring Well Installation

In January 2000, ASE installed groundwater monitoring wells MW-3 and MW-4, east of injection well IW-5 and monitoring well MW-2 (Figure 2). High hydrocarbon concentrations were detected in groundwater samples collected from both of these wells, including up to 140,000 parts per billion (ppb) TPH-G, 13,000 ppb TPH-D and 22,000 ppb benzene.

2.10 April 2000 Groundwater Sampling

In April 2000, ASE collected groundwater samples from all four monitoring wells. Elevated hydrocarbon concentrations were detected in groundwater samples collected from monitoring wells MW-2, MW-3 and MW-4, including up to 240,000 ppb TPH-G, 700,000 ppb TPH-D and 35,000 ppb benzene. Monitoring well MW-3 contained free-floating hydrocarbons.

2.11 Hydrogen Peroxide System Discontinuation

On November 27, 2000, with the approval of the Alameda County Health Care Services Agency, ASE turned off the hydrogen peroxide injection system since there was no noticeable DO increase in downgradient monitoring wells MW-2 and MW-4 on the west side of 8th Street.

2.12 May 2002 Monitoring Well Installation

In May 2002, ASE installed groundwater monitoring wells MW-5 and MW-7 south of the site, across 8th Street, and MW-6 northwest of the site approximately 70 feet west of existing monitoring well MW-3 (Figure 2). Low concentrations of MTBE were identified in groundwater samples collected from wells MW-5 and MW-6. High concentrations of petroleum hydrocarbons were identified in well MW-7, including up to 38,000 ppb TPH-G and 890 ppb benzene.



2.13 October 2004 DPE Event

In October 2004, CalClean mobilized to the site with a truck-mounted DPE system to perform both a DPE pilot test and a 14-day DPE interim remediation event at the site. At the completion of the DPE interim remediation event, a total of 94,470 gallons of free-product and groundwater were removed from three extraction wells. The average TPH-G concentration in the extracted groundwater was 13,900 ppb; the average benzene concentration of that extracted groundwater was 780 ppb. The extracted groundwater was treated on-site with activated carbon vessels, and then discharged, under permit, to the East Bay Municipal Utilities District (EBMUD) sanitary sewer system on-site.

A total of 2.3 million cubic feet of hydrocarbon-laden vapors were extracted from three extraction wells during the 15 day event. Based on field measurements and laboratory analytical data, over 7,000 pounds of petroleum hydrocarbons were extracted from three extraction wells during the 15-day event. This equates to approximately 1,150 gallons of petroleum hydrocarbons. The extracted vapors were treated on-site by CalClean's thermal oxidizer. Based on the success of this DPE event, ASE recommended a second DPE event for the site prior to designing and installing a long-term remediation system.

2.14 Current Quarterly Groundwater Monitoring Program

The site is currently on a quarterly groundwater monitoring program. Depth to groundwater and analytical results for all historical groundwater sampling events are tabulated in the Tables section of this report as Tables One through Three.

3.0 SCOPE OF WORK

The following is ASE's scope of work for the next DPE event proposed for the site.

- 1) Secure permits from the City of Oakland for encroachment on a city street, closure of a sidewalk, and closure of parking spaces.
- 2) Prepare a health and safety plan.
- 3) Mobilize to the site with ASE personnel and equipment to perform the DPE event.
- 4) Connect the ASE DPE equipment to monitoring well MW-3 located within the parking strip of 8th Street.
- 5) Extract free-product, groundwater and vadose-zone vapors from monitoring well MW-3 for a period of 10 hours.
- Remediate the petroleum-hydrocarbon laden vapors with the trailer-mounted granulated activated carbon (GAC) units, two by two plumbed in parallel.



- 7) Store the extracted free-phase product and hydrocarbon-laden groundwater in an on-site, 4,000 gallon, temporary holding tank.
- 8) Collect data to determine system operating parameters and a radius of influence of the DPE system.
- 9) Using a hand-held photoionization detector (PID), measure the influent vapor concentrations of the extracted hydrocarbons removed from the vadose-zone.
- 10) Collect groundwater and vapor samples from the influent water and vapor stream at the beginning and end of the DPE event.
- 11) Measure the depth to water in the extraction well and observation wells at the completion of the DPE event.
- Analyze water and vapor samples at a State of California Department of Health Services (CA DHS) certified analytical laboratory for TPH-G, benzene toluene, ethylbenzene and xylenes (collectively known as BTEX), MTBE and oxygenates, and lead scavengers by EPA Method 8260B. Analyze the water samples also for TPH-D by EPA Method 8015M.
- Profile the extracted water within the holding tank. Using a subcontracted vacuum-truck service, dispose of the water/product mixture at a licensed disposal facility.

4.0 DETAILS OF THE SCOPE OF WORK

Below is a detailed description of each task listed within the Scope of Work.

4.1 Permitting

ASE will secure permits from the City of Oakland for encroachment on a city street, closure of a sidewalk, and closure of parking spaces. ASE will obtain an exemption from the Bay Area Air Quality Management District (BAAQMD) for operation of the GAC units used to treat extracted soil vapor during the DPE remediation event.

4.2 Health & Safety Plan

Prior to conducting all field activities, a Health and Safety Plan will be prepared outlining all field activities to be performed at the site during the DPE activities. A copy of the Health and Safety Plan will be available on-site during all field activities.



4.3 Mobilize to the Site with the ASE DPE Unit.

The DPE unit will be operated at the site for a period of 10 hours per event. <u>This RAP allows for three DPE events in the next 3 to 6 months.</u> The ASE trailer-mounted DPE unit is comprised of soil vapor and groundwater pumps and a soil vapor treatment unit. The modified Solleco Model 125 soil vapor extraction unit has a maximum vacuum of 80-inch water column and a maximum flow rate of 180 SCFM vapor. The Grundfos submersible pump is capable of groundwater flow rates of 10 gallons per minute (gpm) at 30-ft. of head. The extracted soil gas is passed through four granular activated carbon vessels plumbed two-by-two in parallel (Figure 3).

Measure and record the distance from the extraction well to the selected observation wells (Injection Wells IW-1 through IW-3 and monitoring well MW-6 at the site). Gauge the depth to water and free-phase product thickness in the extraction and observation wells. Install a cap on top of each observation well outfitted with a Dwyer Instruments minihelix gauge accurate to 0.1 inch water column. Make certain that all gauges are "zeroed" prior to the start of the DPE event.

4.4 Connect the DPE Unit to Extraction Well MW-3

During the three days of DPE conducted over the 3 to 6 months, monitoring well MW-3 will be used as the extraction well, since it has consistently contained over 2-feet of free-phase product floating on the groundwater. ASE's DPE unit is plumbed to the top of the extraction well using a "y" style manifold. The bottom leg of the manifold is sealed to the top of the extraction well with a hose clamp. One of the top legs is then used to accept a ¾-inch groundwater extraction hose hooked to a Grundfos pump placed approximately 5-feet beneath the groundwater/product depth. The second top leg is then fitted with the vacuum hose, which is connected to the blower. All connections are sealed with foam and tape to inhibit the occurrence of short-circuiting.

4.5 Extraction of Hydrocarbon-Laden Vapors and Groundwater/Product

Turn on the vacuum pump and Grundfos pump and begin extracting both vapors and groundwater/product simultaneously. ASE expects that the DPE event will continue for a duration of 10 hours. The ASE DPE system runs off a generator, and is completely contained with a trailer. The unit will be placed adjacent to monitoring well MW-3, located in the parking area of 8th Street (Figure 3).

4.6 Destruction of Hydrocarbon-Laden Vapors

Extracted hydrocarbon-laden vapors will be plumbed from the well head to the trailer-mounted GAC units. The four GAC units are 250 pounds each and are plumbed two by two in parallel. ASE will obtain a permit or variance from the BAAQMD prior to initiation of the DPE event. A flowmeter will be used to observe and record the vapor flow rates (scfm) from the extraction wellhead. Repeat flow measurements every 60 minutes and record information on Field Data Sheets.



4.7 Storage of Hydrocarbon-Laden Groundwater/Product

Extracted water will be piped from the well head and stored in an on-site 4,000 gallon polyethylene tank. This tank will likely remain on site until the third DPE event is completed, space provided. Observe and record groundwater extraction rates using a totalizer (Figure 3).

4.8 Measure and Record System Operating Parameters And Radius of Influence

A flowmeter will be used to observe and record the vapor flow rates (scfm) from the extraction wellhead. Repeat flow measurements every 60 minutes and record information on Field Data Sheets.

A totalizer will be used to observe and record the groundwater extraction rate from the extraction wellhead. Repeat flow measurements every 60 minutes and record information on Field Data Sheets.

Observe and record the negative pressure every 60 minutes in each observation well outfitted with a Dwyer Instruments minihelix gauge accurate to 0.1 inch water column.

The groundwater surface elevation is measured in the extraction well and other adjacent monitoring wells prior to initiation of DPE event, and at the end of the event to determine elevation difference, and thus, the radius of groundwater influence.

4.9 Measure Influent Vapor Concentrations with a PID

During the DPE event, measure and record the hydrocarbon concentration, in parts per million by volume (ppmv), of the influent vapor stream using a hand-held PID. Note measurements every 60 minutes.

4.10 Collect Influent Vapor and Water Samples

Field measurements of influent vapor concentration in ppmv will be obtained and recorded periodically using a PID throughout the DPE event. An influent soil vapor sample will be collected near the completion of the DPE event in a laboratory supplied Tedlar™ bag. An influent water sample will be collected near the completion of the DPE event in new, unused 40-ml VOA vials and 1-liter amber bottles. All samples will be labeled with the sample ID and location, date and time, and name of sampler. The vapor samples will be stored at ambient temperature in a cooler that protects the samples from direct sunlight. The water samples will be stored within a cooler containing wet ice.



4.11 Depth to Water Measurements

At the completion of the DPE event, depth to water and product thickness will be measured and recorded from the extraction well and the observations wells. This data will be compared to the measurements collected prior to the start of the DPE event.

4.12 Analysis of Vapor and Water Samples

The samples will be shipped to McCampbell Analytical of Pittsburg, California (ELAP #1644) under chain-of-custody documentation. The vapor and water samples will be analyzed for the presence of TPH-G, BTEX and MTBE by EPA Method 8260B. The water samples will also be analyzed for TPH-D by EPA Method 8015.

4.13 Transportation and Disposal of Extracted Groundwater/Product

Following the DPE event, a water sample will be collected from the stored groundwater for analysis of TPH-G, BTEX and MTBE by EPA Method 8260B, and TPH-D by EPA Method 8015M. The groundwater analytical results will be used to profile the water for disposal and eventual transport in a licensed vacuum tanker truck, under manifest, to a licensed treatment facility.

5.0 DATA ANALYSIS AND REPORT PREPARATION

Field data collected during the DPE event will include applied vacuum, air-flow rates, soil pressures, PID readings, groundwater pumping rates, and depth to water measurements.

Following completion of the three DPE events and data analysis, ASE will prepare a Remediation Feasibility Study report. The report will document the DPE event activities and provide conclusions and recommendations for further remedial activities or monitoring, whichever is determined to be appropriate.

-8-



6.0 SCHEDULE OF ACTIVITIES

ASE has begun permitting since the receipt of the approval letter from Alameda County Health Care Services Agency. Upon receiving the permits, and approval of this RAP, ASE will implement this RAP immediately.

ASE would like to thank you in advance for your assistance and prompt attention to this matter. Please feel free to call us if you have any questions or comments.

No. REA-06211

Sincerely,

Aqua Science Engineers, Inc.

Janil Oll

David Allen, R.E.A. Vice President

Robert Kitay, P.G., R.E.A.

2 E. Kily

Senior Geologist

cc:

No. 6586

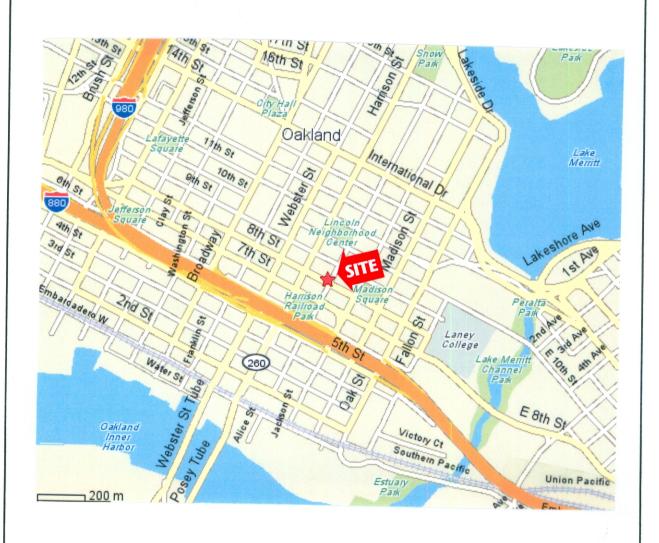
Responsible Party Representative, Mr. Russell Lim, 3111 Diablo Road, Lafayette, CA

94549

Mr. Jerry Wickham, ACHCSA



FIGURES

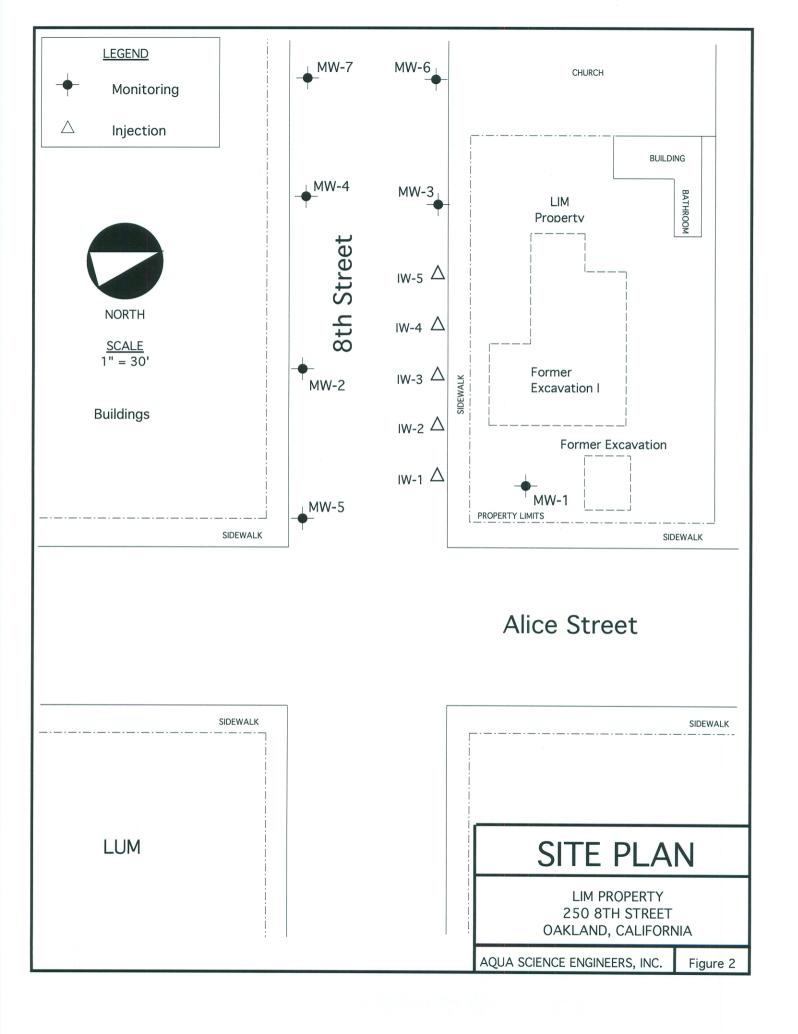


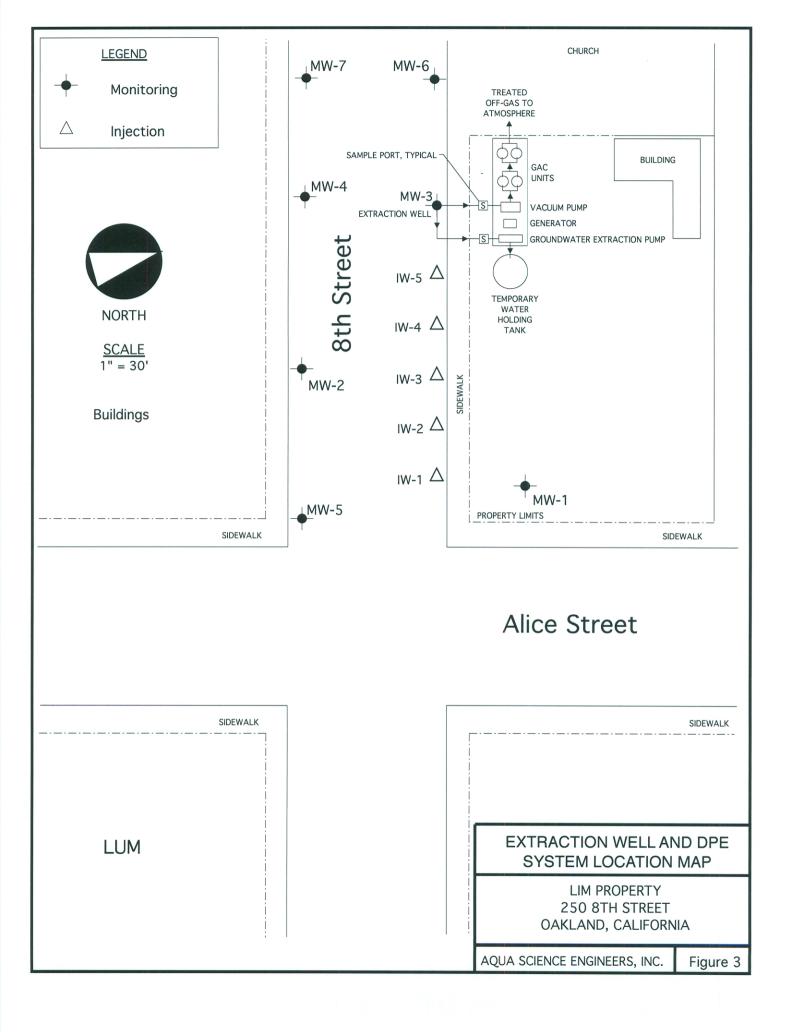
SITE LOCATION MAP

LIM PROPERTY 250 8TH STREET OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1







TABLES

	Date	Top of	Depth to	Product	Groundwater
	of	Elevation	Water	Thickness	Elevation
Well I.D.	Measurement	(msl)	(feet)	(feet)	(msl)
	04 (00 (05	05.54	1001		0.20
MW-1	01/30/95	25.51	16.21		9.30
	04/12/95		15.71		9.80
	07/14/95		16.71		8.80
	10/17/95		17.72		7.79
	01/12/96		18.03		7.48
	07/25/96		16.82		8.69
	01/06/97		15.60		9.91
	07/08/97		17.31		8.20
	01/26/98		15.21		10.30
	07/23/98		15.38		10.13
	01/05/99		16.82		8.69
	07/13/99		15.89		9.62
	01/12/00		17.44		8.07
	04/24/00		16.37		9.14
	07/20/00		16.30		9.21
	10/24/00		17.25		8.26
	01/18/01		17.29		8.22
	04/05/01		15.88		9.63
	07/17/01		16.54		8.97
	10/25/01		16.89		8.62
	01/21/02		14.92		10.59
	04/11/02		14.02		11.49
	06/11/02	29.72	15.33		14.39
	09/17/02		15.96		13.76
	12/18/02		16.14		13.58
	03/25/03		16.16		13.56
	06/23/03		16.01		13.71
	09/26/03		16.57		13.15
	12/18/03		16.41		13.31
	03/12/04		14.64		15.08
	06/17/04		15.71		14.01
	09/17/04		16.35		13.37
	12/17/04		16.10		13.62
	04/28/05		14.10		15.62
	07/19/05		15.94		13.78
	10/03/05		16.34		13.38
	12/06/05		16.21		13.51
	03/15/06		16.21		13.51
	06/28/06		14.92		14.80
	00/20/00		17.32		17.00

	Date	Top of	Depth to	Product	Groundwater
Wall ID	of	Elevation (msl)	Water (feet)	Thickness (feet)	Elevation
Well I.D.	Measurement	(11151)	(leet)	(leet)	(msl)
MW-2	01/30/95	23.99	15.02		8.97
	04/12/95		14.75		9.24
	07/14/95		16.02		7.97
	10/17/95		16.94		7.05
	01/12/96		17.05		6.94
	07/25/96		16.02		7.97
	01/06/97		14.34		9.65
	07/08/97		16.52		7.47
	01/26/98		14.10		9.89
	07/23/98		14.70		9.29
	01/05/99		16.01		7.98
	07/13/99		15.40		8.59
	01/12/00		16.76		7.23
	04/24/00		15.67		8.32
	07/20/00		15.70		8.29
	10/24/00		16.56		7.43
	01/18/01		16.47		7.52
	04/05/01		15.88		8.11
	07/17/01		15.35		8.64
	10/25/01		15.63		8.36
	01/21/02		13.55		10.44
	04/11/02		13.74		10.25
	06/11/02	28.19	14.06		14.13
	09/17/02		14.67		13.52
	12/18/02		14.88		13.31
	03/25/03		15.11		13.08
	06/23/03		14.94		13.25
	09/26/03		15.49		12.70
	12/18/03		15.13		13.06 14.69
	03/12/04		13.50 14.63		13.56
	06/17/04 09/17/04		15.19		13.00
	12/17/04 04/28/05		14.88 13.39		13.31 14.80
	07/19/05		15.27		12.92
	10/03/05		15.57		12.62
	12/06/05		15.35		12.84
	03/15/06		12.65		15.54
	06/28/06		14.45		13.74
	00/20/00		נדירו		13.77

TABLE ONE
Groundwater Elevation Data
Lim Family Property
250 8th Street
Oakland, CA

			5 .1 .	·	0 1 1
	Date	Top of	Depth to	Product	Groundwater
	of	Elevation	Water	Thickness	Elevation
Well I.D.	Measurement	(msl)	(feet)	(feet)	(msl)
MW-3	01/12/00	24.25	16.68	0.01	7.58*
	04/24/00		15.58	0.15	8.79*
	07/20/00		16.01	0.41	8.57*
	10/24/00		16.95	0.21	7.47*
	01/18/01		16.63	0.21	7.79*
	04/05/01		15.16	0.23	9.27*
	07/17/01		15.92	0.39	8.64*
	10/25/01		16.26	0.38	8.29*
	01/21/02		14.08	0.16	10.30*
	04/11/02		14.59	0.54	10.09*
	06/11/02	28.58	15.16	0.90	14.14*
	09/17/02		16.04	1.24	13.53*
	10/01/02		16.14	1.23	13.42*
	10/25/02		15.80	0.60	13.26*
	11/12/02		15.87	0.47	13.09*
	12/18/02		15.42	0.47	13.54*
	03/25/03		16.11	1.14	13.38*
	06/23/03		16.58	1.86	13.49*
	09/26/03		16.11	0.66	13.00*
	12/18/03		15.83	0.59	13.22*
	03/12/04		14.51	1.21	15.04*
	06/17/04		15.25	0.68	13.87*
	09/17/04		16.14	0.96	13.21*
	12/17/04		15.05	0.25	13.73*
	01/13/05		13.40	0.45	15.54*
	04/28/05		15.31	2.43	15.21*
	07/19/05		16.29	1.67	13.63*
	10/03/05		16.10	1.47	13.66*
	12/06/05		15.04	1.17	14.48*
	03/15/06		12.65	2.41	17.86*
	06/28/06		13.55	2.61	16.16*

		Date	Top of	Depth to	Product	Groundwater
		of	Elevation	Water	Thickness	Elevation
	Well I.D.	Measurement	(msl)	(feet)	(feet)	(msl)
١						
						0.47
	MW-4	01/12/00	23.71	17.24		6.47
		04/24/00		16.18		7.53
		07/20/00		16.18		7.53
		10/24/00		17.03		6.68
		01/18/01		16.87		6.84
		04/05/01		15.28		8.43
		07/17/01		15.92		7.79
		10/25/01		16.23		7.48
		01/21/01		14.14		9.57
		04/11/02		14.43		9.28
		06/11/02	28.61	14.72		13.89
		09/17/02		15.29		13.32
		12/18/02		15.20		13.41
		03/25/03		15.53		13.08
		06/23/03		15.35		13.26
		09/26/03		15.91		12.70
		12/18/03		15.63		12.98
		03/12/04		13.88		14.73
		06/17/04		15.03		13.58
		09/17/04		15.61		13.00
		12/17/04		15.32		13.29
		04/28/05		13.82		14.79
		07/19/05		15.44		13.17
		10/03/05		15.91		12.70
		12/06/05		15.71		12.90
		03/15/06		13.05		15.56
		06/28/06		14.49		14.12

	Date	Top of	Depth to	Product	Groundwate
	of	Elevation	Water	Thickness	Elevation
Well I.D.	Measurement	(msl)	(feet)	(feet)	(msl)
MW-5	06/11/02	28.40	14.23		14.17
	09/17/02		14.80		13.60
	12/18/02		15.08		13.32
	03/25/03		15.31		13.09
	06/23/03		15.16		13.24
	09/26/03		15.72		12.68
	12/18/03		15.47		12.93
	03/12/04		13.44		14.96
	06/17/04		14.90		13.50
	09/17/04		15.45		12.95
	12/17/04		15.12		13.28
	04/28/05		13.63		14.77
	07/19/05		15.67		12.73
	10/03/05		15.81		12.59
	12/06/05		15.60		12.80
	03/15/06		12.81		15.59
	06/28/06		15.21		13.19
MW-6	06/11/02	29.20	14.95		14.25
	09/17/02		15.47		13.73
	12/18/02		15.43		13.77
	03/25/03		15.67		13.53
	06/23/03		15.48		13.72
	09/26/03	NOT ME	ASURED - S	OUNDER MAI	LFUNCTION
	12/18/03		15.79		13.41
	03/12/04		14.04		15.16
	06/17/04		15.13		14.07
	09/17/04		15.74		13.46
	12/17/04		15.54		13.66
	04/28/05		13.91		15.29
	07/19/05		15.30		13.90
	10/03/05		15.35		13.85
			15.69		13.51
	12/06/05				
	12/06/05 03/15/06		13.14		16.06

Groundwater Elevation Data Lim Family Property 250 8th Street Oakland, CA

141					
	Date	Top of	Depth to	Product	Groundwater
	of	Elevation	Water	Thickness	Elevation
Well I.D.	Measurement	(msl)	(feet)	(feet)	(msl)
MW-7	06/11/02	28.95	15.19		13.76
	09/17/02		15.73		13.22
	12/18/02	NOT ME	ASURED - CA	AR PARKED (OVER WELL
	03/25/03		15.96		12.99
	06/23/03		15.75		13.20
	09/26/03		16.29		12.66
	12/18/03		16.03		12.92
	03/12/04		14.28		14.67
	06/17/04		15.42		13.53
	09/17/04		16.02		12.93
	12/17/04		15.45		13.50
	04/28/05		14.15		14.80
	07/19/05		15.30		13.65
	10/03/05		16.25		12.70
	12/06/05		16.05		12.90
	03/15/06		13.36		15.59
	06/28/06		14.81		14.14

Top of casing elevations resurveyed by Mid Coast Engineers on 6/27/02 and 7/11/02.

 $[\]frac{\text{Notes:}}{\text{*} = \text{Adjusted for the presence of free-floating oil by the equation:}} \text{ Top of Casing Elevation -}$ Depth to Water + (0.8 x Floating Hydrocarbon Thickness) = Groundwater Elevation (Adjusted).

TABLE TWO
Summary of Chemical Analysis of Groundwater Samples
Petroleum Hydrocarbon Concentrations
All results are in parts per billion

Well/							
Date	TPH	TPH			Ethyl-	Total	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	MTBE
MW-1							
01/30/95	740	200	3	5	1	4	
04/12/95	400	500	< 0.5	< 0.5	3	< 2	
07/14/95	520	400	1	< 0.5	2	3	
10/17/95	400	200	0.5	1	3	< 2	
01/12/96	120	890	< 0.5	< 0.5	< 0.5	< 1.0	< 2.0
07/08/96	320	300	0.52	2.7	1.2	2.3	< 5.0
01/06/97	110	75	< 0.5	0.68	< 0.5	< 0.5	< 5.0
07/08/97	380	290	< 0.5	1.5	1.4	1.9	< 5.0
01/26/98	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
07/23/98	190	< 50	0.54	2.8	2	1.8	< 5.0
01/05/99	200	< 50	1.8	1.6	3.3	< 0.5	< 5.0
07/13/99	340	<50	< 0.5	< 0.5	2.6	<0.5	< 5.0
01/12/00	300	1,000	22	36	5.5	24	< 5.0
04/24/00	360	280*	< 0.5	< 0.5	< 0.5	2.1	< 5.0
07/20/00	290	150*	1.8	< 0.5	< 0.5	< 0.5	< 5.0
10/24/00	170**	280*	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
01/18/01	170**	150*	< 0.5	< 0.5	< 0.5	2.1	< 5.0
04/05/01	350**	190*	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
07/17/01	310	570	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/25/01	250	260	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
01/22/02	200	250	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
04/11/02	260	300	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
06/11/02	270	330	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
09/17/02	320	1,700	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
12/18/02	170	320	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
03/25/03	320	< 500	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
06/23/03	240	310	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
09/26/03	110	300	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/18/03	150	340	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
03/12/04	220	510	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
06/17/04	250	490	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
09/17/04	110		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/10/04***	180	400	0.68	< 0.5	1.7	< 0.5	< 5.0
12/17/04	77	130	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
04/28/05	250	190	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
07/19/05	340	na	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
10/03/05	170	< 100	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/06/05	140	67	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
03/15/06	170	< 80	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
06/28/06	230	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5

TABLE TWO
Summary of Chemical Analysis of Groundwater Samples
Petroleum Hydrocarbon Concentrations
All results are in parts per billion

Well/							
Date	TPH	TPH			Ethyl-	Total	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	MTBE
MW-2							
01/30/95	88,000	800	19,000	18,000	2,400	10,000	
04/12/95	110,000	990	21,000	28,000	2,800	14,000	
07/14/95	120,000	5,000	20,000	25,000	3,200	15,000	
10/17/95	190,000	4,000	15,000	26,000	4,900	23,000	
01/12/96	32,000	2,600	10,000	8,000	1,100	4,800	< 2
07/08/96	110,000	2,500	20,000	18,000	2,500	12,000	< 500
01/06/97	230,000	37,000	11,000	19,000	4,300	20,000	< 1,200
07/08/97	91,000	35,000	16,000	20,000	2,700	13,000	< 1,000
01/26/98	50,000	11,000	12,000	12,000	1,600	6,700	< 250
07/23/98	50,000	8,100#	11,000	8,300	1,800	7,000	1,100
01/05/99	50,000	7,600#	12,000	12,000	2,300	9,600	1,300
07/13/99	73,000	8,500	11,000	13,000	2,200	9,800	< 500
01/12/00	63,000	11,000	10,000	12,000	1,800	7,800	< 500
04/24/00	76,000	23,000*	7,100	14,000	2,000	9,400	< 500
07/20/00	68,000	5,300#	11,000	14,000	2,300	11,000	< 1,000
10/24/00	48,000	6,400*	11,000	9,400	1,500	7,300	< 500
01/18/01	37,000	4,600*	6,900	5,600	1,200 1,600	5,300 7,600	< 500 < 500
04/05/01 07/17/01	59,000 90,000	4,600* < 10,000	7,100 9,200	9,800 14,000	2,700	11,000	< 500
10/25/01	79,000	< 3,800	9,200	14,000	2,400	11,000	< 50
01/22/02	76,000	< 2,300	7,000	13,000	2,200	9,600	< 50
04/11/02	76,000	< 1,500	7,800	11,000	2,900	12,000	< 50
06/11/02	72,000	< 2,500	7,300	9,600	2,500	12,000	< 50
09/17/02	52,000	< 3,000	5,000	5,400	2,100	9,100	< 20
12/18/02	46,000	< 6,000	2,900	3,000	1,800	7,600	22
03/25/03	87,000	< 8,000	7,900	9,300	2,900	12,000	< 50
06/23/03	46,000	< 3000	7,800	4,000	1,900	6,600	< 50
09/26/03	52,000	< 3000	9,100	3,500	1,300	5,000	< 50
12/18/03	61,000	< 4,000	13,000	3,500	1,600	5,600	< 20
03/12/04	53,000	< 4,000	9,100	3,500	1,700	5,700	< 25
06/17/04	59,000	< 3,000	7,100	4,000	1,700	7,300	< 25
09/17/04	33,000		9,800	1,200	1,300	4,000	< 20
11/10/04***	44,000	3,600	13,000	4,400	1,600	6,000	< 1000
12/17/04	54,000	< 3,000	7,900	2,200	1,700	3,900	< 15
04/28/05	81,000	< 3,000	7,000	6,000	2,100	8,700	< 15
07/19/05	59,000	na	7,900	4,400	1,900	7,000	< 15
10/03/05	34,000	< 800	7,800	810	1,000	2,800	< 15
12/06/05	26,000	< 800	6,100	940	770	2,000	< 15
03/15/06	33,000	< 1,500	7,700	2,600	1,400	4,200	< 15
06/28/06	96,000	< 4,000	10,000	14,000	2,900	12,000	< 15

TABLE TWO

Summary of Chemical Analysis of Groundwater Samples Petroleum Hydrocarbon Concentrations All results are in parts per billion

Well/							
Date	TPH	TPH			Ethyl-	Total	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	MTBE
<u>MW-3</u>							
01/12/00	,	13,000*	,	,	,	,	
04/24/00	240,000	700,000*		′ 52,000/		,	< 5,000
			35,000	,		,	
07/20/00				FREE-FLOA			
10/24/00		· · · · · ·		FREE-FLOA			
01/18/01		·		FREE-FLOA			
04/05/01		·		FREE-FLOA			
07/17/01		·		FREE-FLOA			
10/25/01				FREE-FLOA			
01/22/02				FREE-FLOA			
04/11/02		O		FREE-FLOA			
06/11/02		O		FREE-FLOA			
09/17/02				FREE-FLOA			
12/18/02				FREE-FLOA			
03/25/03				FREE-FLOA			
06/23/03		·		FREE-FLOA			
09/26/03				FREE-FLOA			
12/18/03				FREE-FLOA			
03/12/04				FREE-FLOA			
06/17/04				FREE-FLOA			
09/17/04				FREE-FLOA			
11/10/04				FREE-FLOA			
12/17/04		·· ··		FREE-FLOA			
04/28/05				FREE-FLOA			
07/19/05				FREE-FLOA			
10/03/05		O		FREE-FLOA			
12/06/05				FREE-FLOA			
03/15/06		o		FREE-FLOA			
06/28/06	NOT	SAMPLED	DUE TO	FREE-FLOA	ATING HYD	ROCARBO	DNS

TABLE TWO
Summary of Chemical Analysis of Groundwater Samples
Petroleum Hydrocarbon Concentrations
All results are in parts per billion

Well/							
Date	TPH	TPH			Ethyl-	Total	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	MTBE
MW-4							
01/12/00	99,000	7,900*	16,000	20,000	2,100		< 2,500
04/24/00	54,000	44,000*	3,400/	13,000/	1,800/	8,800/	< 1,300
			4,500	20,000	2,800	14,000	
07/20/00	8,000	3,500	9,200/	20,000	2,500		< 1,000
			11,000	22,000	3,400	13,000	
10/24/00	98,000	8,000*	21,000	29,000	2,700		< 1,000
01/18/01	91,000	12,000	17,000/	21,000/	2,500/	13,000/	
			15,000	21,000	2,800	11,000	<5,000
04/05/01	88,000	7,500*	6,900/	18,000/	2,500/		< 1,000
			3,200	9,000	1,300	6,400	< 500
07/17/01	95,000	< 3,000	8,000	16,000	2,900	11,000	49
10/25/01	89,000	< 2,200	9,300	18,000	2,400	12,000	66
01/22/02	80,000	< 2,300	4,600	15,000	2,500	11,000	< 50
04/11/02	90,000	< 900	6,600	18,000	2,800	12,000	55
06/25/02	110,000	< 3,000	10,000	20,000	2,900	13,000	< 100
09/17/02	110,000	< 3,000	9,600	21,000	2,800	13,000	< 100
12/18/02	97,000	< 4,000	8,000	20,000	2,600	12,000	< 50
03/25/03	97,000	< 7,500	7,600	22,000	2,500	12,000	< 100
06/23/03	100,000	< 3,000	9,600	22,000	3,300	15,000	< 100
09/26/03	110,000	< 4,000	9,300	17,000	2,100	10,000	< 50
12/18/03	110,000	< 2,000	8,900	19,000	2,500	12,000	< 25
03/12/04	96,000	< 4,000	6,500	18,000	2,700	12,000	< 40
06/17/04	110,000	< 4,000	10,000	20,000	2,900	13,000	< 50
09/17/04	78,000		9,300	15,000	2,400	11,000	<50
11/10/04***	87,000	4,300	15,000	21,000	3,000	16,000	< 1300
12/17/04	88,000	< 3,000	8,500	16,000	2,800	12,000	< 25
04/28/05	110,000	< 3,000	7,800	14,000	2,200	10,000	< 25
07/19/05	90,000	na	10,000	13,000	2,300	10,000	< 40
10/03/05	68,000	< 800	9,400	4,000	1,800	8,700	23
12/06/05	81,000	< 1,500	8,900	7,200	2,200	9,500	< 20
03/15/06	68,000	< 3,000	7,300	14,000	2,500	10,000	< 20
06/28/06	61,000	< 3,000	8,500	4,100	2,600	11,000	< 20
MW-5							
06/11/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	28
09/17/02	< 50	110	< 0.5	< 0.5	< 0.5	< 0.5	4.8
12/18/02	< 50	140	< 0.5	< 0.5	< 0.5	< 0.5	1.8
03/25/03	< 50	130	< 0.5	< 0.5	< 0.5	< 0.5	7.4
06/23/03	< 50	390	< 0.5	< 0.5	< 0.5	< 0.5	17
09/26/03	< 50	700	< 0.5	< 0.5	< 0.5	< 0.5	21
12/18/03	< 50	550	< 0.5	< 0.5	< 0.5	< 0.5	16
03/12/04	< 50	490	< 0.5	< 0.5	< 0.5	< 0.5	9.1
06/17/04	< 50	510	< 0.5	< 0.5	< 0.5	< 0.5	9.8
09/17/04	< 50		< 0.5	< 0.5	< 0.5	< 0.5	5.5
11/10/04***	< 50	370	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
12/17/04	< 50	120	< 0.5	< 0.5	< 0.5	< 0.5	9.2
04/28/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.2
07/19/05	< 50	na	< 0.5	< 0.5	< 0.5	< 0.5	6.1
10/03/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	2.4
12/06/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
03/15/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	3.3
06/28/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.8

TABLE TWO

Summary of Chemical Analysis of Groundwater Samples Petroleum Hydrocarbon Concentrations All results are in parts per billion

Well/							
Date	TPH	TPH			Ethyl-	Total	
Sampled	Gasoline	Diesel	Benzene	Toluene	benzene	Xylenes	MTBE
MW-6							
06/11/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.2
09/17/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	1.0
12/18/02	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	0.90
03/25/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
06/23/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
09/26/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/18/03	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
03/12/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
06/17/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
09/17/04	< 50		< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
11/10/04***	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
12/17/04	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
04/28/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
07/19/05	< 50	na	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
10/03/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
12/06/05	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
03/15/06	< 50	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
06/28/06	< 50	< 50	< 0.5	< 0.5	< 0.5	0.65	< 0.5
<u>MW-7</u>							
06/25/02	38,000	< 2,000	890	5,100	1,200	5,200	< 20
09/17/02	26,000	< 2,000	590	3,600	880	4,000	< 20
12/18/02		NOT SA	MPLED - (ED OVER		
03/25/03	39,000	< 2,900	410	7,700	1,000	6,400	< 5.0
06/23/03	17,000	< 1,000	440	2,600	630	2,600	< 10
09/26/03	17,000	< 1,000	230	1,800	470	2,200	< 5.0
12/18/03	20,000	< 1,000	290	2,500	590	2,900	< 5.0
03/12/04	20,000	< 1,500	300	3,000	760	3,200	< 10
06/17/04	12,000	< 800	250	1,800	450	1,900	< 5.0
09/17/04	9,900		200	1,500	450	1,800	< 5.0
11/10/04***	20,000	1,900	550	4,200	920	4,000	< 500
12/17/04	14,000	< 800	220	1,700	530	2,000	< 3.0
04/28/05	13,000	< 300	84	1,000	660	2,200	< 2.5
07/19/05	16,000	na	170	1,800	540	2,200	< 2.5
10/03/05	7,400	< 200	140	710	350	1,100	< 0.50
12/06/05	22,000	< 600	240	2,300	800	3,400	< 5.0
03/15/06	3,800	< 200	4.6	160	120	620	< 0.50
06/28/06	6,400	< 500	19.0	340	490	940	< 0.90
ESL	500	640	46	130	290	13	1,800
Notes:							

Notes

Non-detectable concentrations noted by the less than sign (<) followed by the detection limit. Most recent data in bold.

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (July 2003)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

 $[\]stackrel{\star}{=}$ Hydrocarbons reported are in the early diesel range, and do not match the laboratory standard.

 $[\]star\star$ = Hydrocarbons reported do not match the laboratory gasoline standard.

^{***=} Grab sample - Not purged

^{# =} Estimated concentration reported due to overlapping fuel patterns.

^{/ =} Results separated by a slash represent results from two different laboratory methods (8020/8260).

na = not analyzed