aqua science engineers inc.

July 3, 2000

QUARTERLY GROUNDWATER MONITORING REPORT
JUNE 2000 GROUNDWATER SAMPLING
ASE JOB NO. 3412

at
Former Chan's Shell Station
726 Harrison Street
Oakland, CA 94602

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

1.0 INTRODUCTION

Site Location (Site), See Figure 1
Former Chan's Shell Station
726 Harrison Street
Oakland, CA 94602
(510) 444-6583

Responsible Party
Kin Chan
4328 Edgewood Avenue
Oakland, CA 94602

Environmental Consulting Firm
Aqua Science Engineers, Inc. (ASE)
208 W. El Pintado
Danville, CA 94526
Contact: Robert Kitay, Senior Geologist
(925) 820-9391

Agency Review
Larry Seto
Alameda County Health Care Services Agency (ACHCSA)
1131 Harbor Bay Pkwy., Suite 250
Alameda, CA 94502
(510) 567-6700

California Regional Water Quality Control Board (RWQCB)
San Francisco Bay Region
1515 Clay Street, Suite 1400
Oakland, CA 94612
Contact: Mr. Chuck Headlee
(510) 622-2433

The following is a report detailing the results of the June 7, 2000, quarterly groundwater sampling at the former Chan's Shell Station. This sampling was conducted as required by the ACHCSA and RWQCB. ASE has prepared this report on behalf of Kin Chan, property owner. This report is intended to supplement the ASE report: "Report of Soil and Groundwater Assessment" dated January 8, 1999.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On June 7, 2000, ASE associate geologist Ian Reed measured the depth to groundwater in all site monitoring wells using an electric water level sounder. The surface of the groundwater was also checked for the presence of free-floating hydrocarbons or sheen. No free-floating hydrocarbons or sheen were observed in any site monitoring well. Groundwater elevation data is presented in Table One.

TABLE ONE
Groundwater Elevation Data
Chan's Former Shell Station

Well I.D.	Date of Measurement	Top of Casing Elevation (relative to project datum)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	12-15-98	31.95	17.32	14.63
	03-04-99		15.52	16.43
	06-17-99		16.90	15.05
	08-27-99		17.39	14.56
	12-09-99		18.03	13.92
	03-07-00		15.11	16.84
	06-07-00		**16.66**	**15.29**
MW-2	12-15-98	32.40	18.03	14.37
	03-04-99		16.11	16.29
	06-17-99		17.72	14.68
	08-27-99	Inaccessible		
	12-09-99	Inaccessible		
	03-07-00	Inaccessible		
	06-07-00		**17.67**	**14.73**
MW-3	12-15-98	31.61	17.26	14.35
	03-04-99		15.47	16.14
	06-17-99		16.92	14.69
	08-27-99		17.40	14.21
	12-09-99		18.01	13.60
	03-07-00		16.15	15.46
	06-07-00		**16.85**	**14.76**
MW-4	12-15-98	32.53	17.59	14.94
	03-04-99		15.88	16.65
	06-17-99		17.14	15.39
	08-27-99		17.65	14.88
	12-09-99		18.28	14.25
	03-07-00		15.41	17.12
	06-07-00		**17.09**	**15.44**

A groundwater potentiometric surface map is presented as Figure 2. The groundwater flow direction is generally to the south with flow components to the southeast and southwest. The gradient is approximately 0.01-feet/foot. The water table has dropped approximately 1.3-feet this quarter.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, all four monitoring wells were purged of four well casing volumes of groundwater using dedicated polyethylene bailers. **Petroleum hydrocarbon odors were present during the purging and sampling of all four groundwater monitoring wells sampled.** The parameters pH, temperature and conductivity were monitored during the well purging, and samples were not collected until these parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers. The samples were decanted from the bailers into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid. The samples were capped without headspace, labeled and placed in coolers with wet ice for transport to Chromolab, Inc., of Pleasanton California (DHS #1644) under appropriate chain-of-custody documentation. Well sampling field logs are presented in Appendix A.

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

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

TABLE TWO

Certified Analytical Results for GROUNDWATER Samples
Chan's Former Shell Station
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-1						
07/03/97	18,000	2,700	350	450	900	7,400
12/05/98	18,000	1,500	270	260	560	14,000
03/04/99	44,000	2,800	400	440	960	43,000
06/17/99	33,000	2,200	250	460	660	25,000
08/27/99	6,000	1,000	97	190	230	14,000/ 16,000*
12/09/99	15,000	1,500	160	220	420	17,000
03/07/00	9,300	1,500	210	66	530	12,000
06/07/00	**26,000****	**1,700**	**< 250**	**360**	**580**	**30,000**
MW-2						
12/05/98	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<5
03/04/99	Inaccessible due to car parked over well					
06/17/99	< 50	< 0.5	< 0.5	< 0.5	< 0.5	<5
08/27/99	Inaccessible due to car parked over well					
12/09/99	Inaccessible due to car parked over well					
03/07/00	Inaccessible due to car parked over well					
06/07/00	**< 50**	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**< 5.0**
MW-3						
12/05/98	6,500	< 50	50	60	50	3,900
03/04/99	2,800	< 25	< 25	< 25	< 25	1,600
06/17/99	1,000	< 10	< 10	< 10	< 10	1,400
08/27/99	230	< 0.5	0.51	0.5	1.0	1,500/ 1,600*
12/09/99	870**	< 0.5	< 0.5	< 0.5	< 0.5	2,100
03/07/00	150**	4.0	< 0.5	< 0.5	< 0.5	830
06/07/00	**140****	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**1,100**

Table Two continued on next page

TABLE TWO (continued)
Certified Analytical Results for GROUNDWATER Samples
Chan's Former Shell Station
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-4						
12/05/98	880	3	< 0.5	< 0.5	< 0.5	950
03/04/99	3,800	< 25	< 25	< 25	< 25	3,700
06/17/99	2,700	< 25	< 25	< 25	< 25	2,700
08/27/99	440	4.7	1.1	0.58	1.3	1,600/ 1,700*
12/09/99	1,100**	< 2.5	< 2.5	< 2.5	< 2.5	1,700
03/07/00	< 250	< 2.5	< 2.5	< 2.5	< 2.5	1,700
06/07/00	**530****	**8.8**	**< 2.5**	**< 2.5**	**< 2.5**	**440**
DHS MCL	NE	1	150	700	1,750	13

Notes:
* EPA Method 8020/EPA Method 8260 (MTBE confirmation)
** Hydrocarbon reported in the gasoline range does not match the laboratory gasoline standard
DHS MCL = California Department of Health Services maximum contaminant level for
NE = DHS MCL not established
Non-detectable concentrations noted by the less than sign (<) followed by the laboratory detection limit.

4.0 CONCLUSIONS

The groundwater samples collected from monitoring well MW-1 contained 26,000 parts per billion (ppb) TPH-G, 1,700 ppb benzene, 360 ppb ethyl benzene, 580 ppb total xylenes, and 30,000 ppb MTBE. The groundwater samples collected from monitoring well MW-3 contained 140 ppb TPH-G, and 1,100 ppb MTBE. The groundwater samples collected from monitoring well MW-4 contained 530 ppb TPH-G, 8.8 ppb benzene, 440 ppb MTBE. No hydrocarbons were detected above their laboratory reporting limits in groundwater samples collected from monitoring well MW-2.

Hydrocarbon concentrations in groundwater samples collected from monitoring well MW-1 increased from the previous quarter, except for toluene which decreased. The hydrocarbon concentrations in groundwater samples collected from monitoring well MW-3 were similar to the previous results with a slight decrease in TPH-G and benzene, and a slight increase

in MTBE concentrations. The TPH-G and benzene concentrations in groundwater samples collected from monitoring well MW-4 increased from the previous results while the MTBE concentration slightly decreased. In general, there has been a decrease in concentrations from the June 1999 sampling.

The benzene and MTBE concentrations detected in groundwater samples collected from monitoring wells MW-1 and MW-4 exceeded California Department of Health Services (DHS) maximum contaminant levels (MCLs) for drinking water. The MTBE concentration in monitoring well MW-3 also exceeded the DHS MCL for drinking water.

5.0 RECOMMENDATIONS

ASE recommends continued monitoring of the site on a quarterly basis. The next groundwater sampling is scheduled for September 2000.

6.0 REPORT LIMITATIONS

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

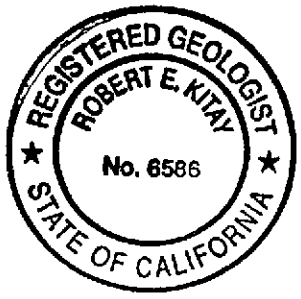
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

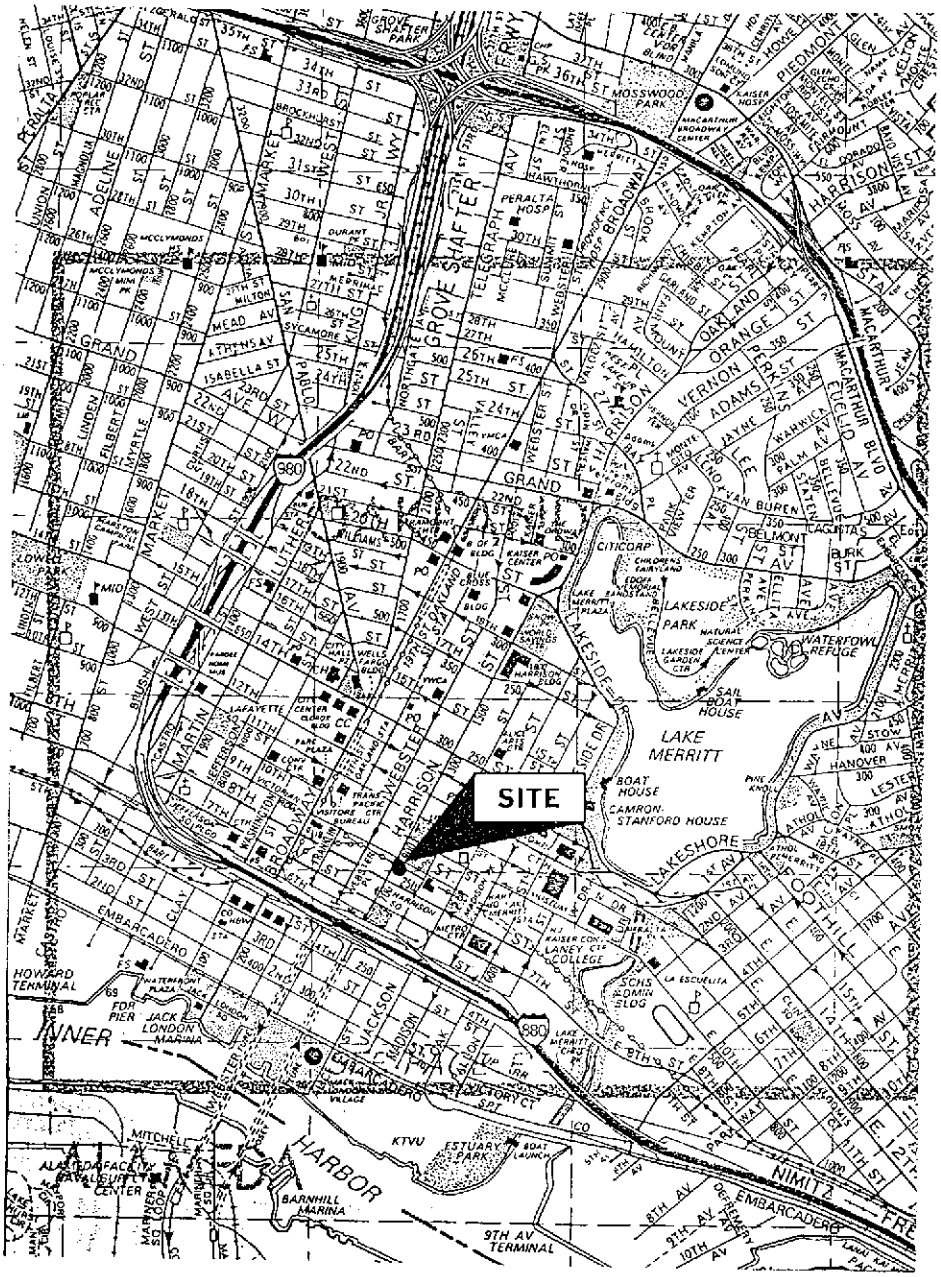
Ian T. Reed
Associate Geologist

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



Attachments: Figures 1 and 2
Appendices A and B

cc: Mr. Larry Seto, Alameda County Health Care Services
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region

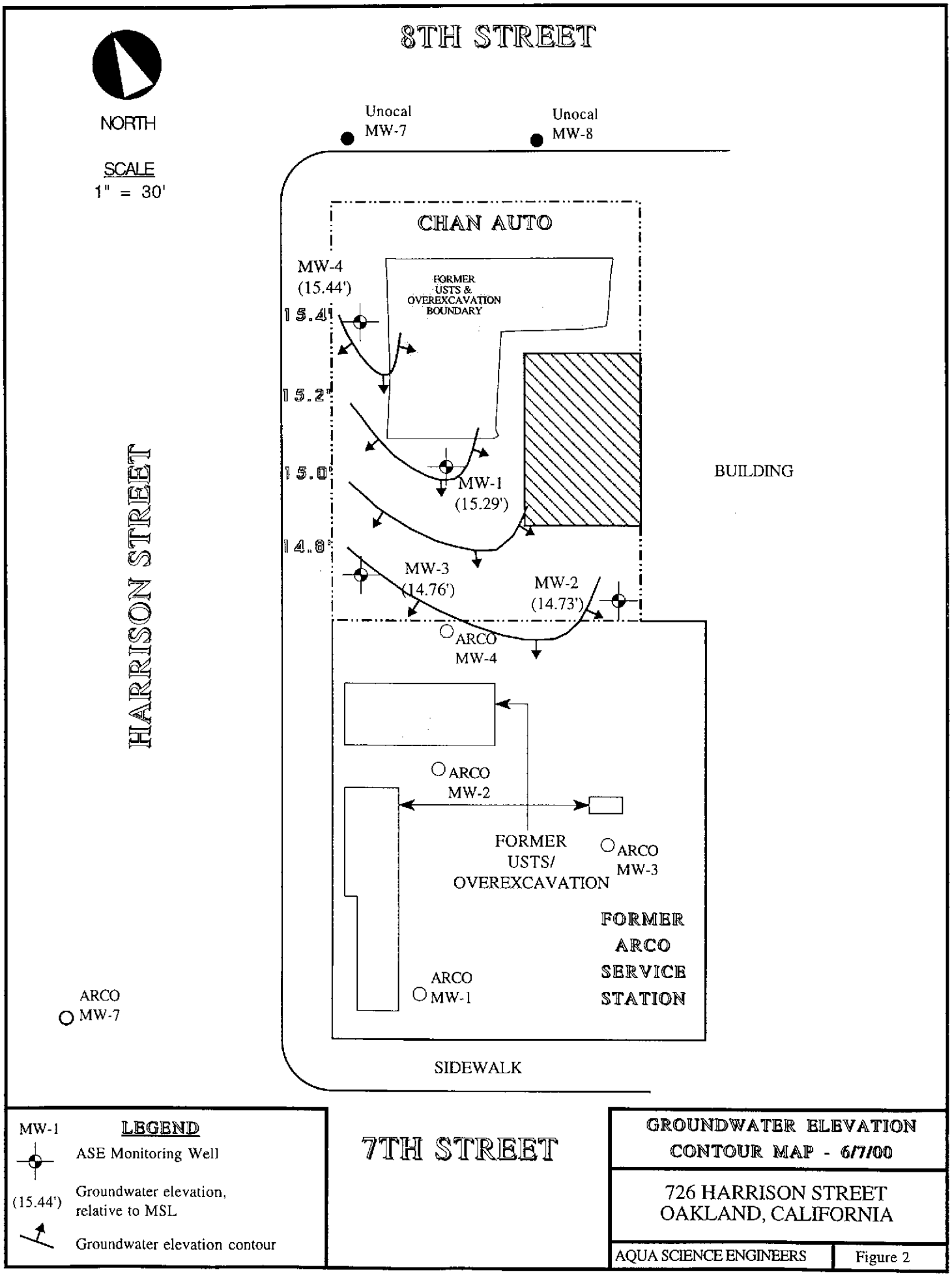


NORTH

SITE LOCATION MAP

726 HARRISON STREET
OAKLAND, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | Figure 1


8TH STREET
NORTH
SCALE
1" = 30'
Unocal
MW-7
Unocal
MW-8
CHAN AUTO
MW-4
(15.44')
FORMER
USTS &
OVEREXCAVATION
BOUNDARY
15.4'
15.2'
15.0'
14.8'
MW-1
(15.29')
BUILDING
MW-3
(14.76')
MW-2
(14.73')
ARCO
MW-4
HARRISON STREET
ARCO
MW-2
FORMER
USTS/
OVEREXCAVATION
ARCO
MW-3
FORMER
ARCO
SERVICE
STATION
ARCO
MW-1
ARCO
MW-7
SIDEWALK
7TH STREET
MW-1
LEGEND
ASE Monitoring Well
(15.44')
Groundwater elevation,
relative to MSL
Groundwater elevation contour
GROUNDWATER ELEVATION
CONTOUR MAP - 6/7/00
726 HARRISON STREET
OAKLAND, CALIFORNIA
AQUA SCIENCE ENGINEERS
Figure 2

APPENDIX A

Well Sampling Field Logs

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: CHAN
Job #: 3412 Date of sampling: 6/7/00
Well Name: MW-1 Sampled by: ITR
Total depth of well (feet): 27.21 Well diameter (inches): 2"
Depth to water before sampling (feet): 16.66
Thickness of floating product if any: —
Depth of well casing in water (feet): 10.55
Number of gallons per well casing volume (gallons): 1.8
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 7.2
Equipment used to purge the well: disp. bailer
Time Evacuation Began: 0740 Time Evacuation Finished: 0755
Approximate volume of groundwater purged: 7.2
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 0800
Depth to water at time of sampling: 17.76
Percent recovery at time of sampling: 92%
Samples collected with: disposable bailer
Sample color: clear/brown Odor: [illegible]
Description of sediment in sample: [illegible]

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	70.1	6.76	784
2	71.4	7.03	792
3	71.2	7.01	810
4	71.3	7.03	792

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-1	3	40 ml VOA	✓	✓	

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: CHAN
Job #: 3412 Date of sampling: 6/7/00
Well Name: MW-2 Sampled by: ITR
Total depth of well (feet): 27' Well diameter (inches): 2"
Depth to water before sampling (feet): 17.67
Thickness of floating product if any: —
Depth of well casing in water (feet): 9.33
Number of gallons per well casing volume (gallons): 1.6
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 6.4
Equipment used to purge the well: dedicated bailer
Time Evacuation Began: 1220 Time Evacuation Finished: 1235
Approximate volume of groundwater purged: 7
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 1240
Depth to water at time of sampling: 17.76
Percent recovery at time of sampling: 99.1
Samples collected with: dedicated bailer
Sample color: brown/clear Odor: none
Description of sediment in sample: f. silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	70.1	7.42	1102
2	70.2	7.17	1112
3	70.2	7.18	1120
4	69.9	7.27	1108

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-2	3	40ml VOA	✓	✓	

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: CHAN —
Job #: 3412 Date of sampling: 6/7/00
Well Name: MW-3 Sampled by: ITR
Total depth of well (feet): 29.66 Well diameter (inches): 2"
Depth to water before sampling (feet): 16.85
Thickness of floating product if any: —
Depth of well casing in water (feet): 12.81
Number of gallons per well casing volume (gallons): 2.2
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 8.8
Equipment used to purge the well: dedicated bailer
Time Evacuation Began: 1250 Time Evacuation Finished: 1310
Approximate volume of groundwater purged: 9
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 1315
Depth to water at time of sampling: 16.91
Percent recovery at time of sampling: 99%
Samples collected with: dedicated bailer
Sample color: clear/gray Odor: slight HC odor
Description of sediment in sample: fine silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	71.4	6.71	812
2	71.5	6.72	790
3	71.4	6.71	780
4	71.4	6.72	769

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-3	5	40ml VOA	✓	✓	

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: CHAN —
Job #: 3412 Date of sampling: 6/7/00
Well Name: MW-4 Sampled by: ITR
Total depth of well (feet): 29.97 Well diameter (inches): 2"
Depth to water before sampling (feet): 17.09
Thickness of floating product if any: —
Depth of well casing in water (feet): 12.88
Number of gallons per well casing volume (gallons): 2.2
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 8.8
Equipment used to purge the well: dedicated bailer
Time Evacuation Began: 1325 Time Evacuation Finished: 1340
Approximate volume of groundwater purged: 9
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 1345
Depth to water at time of sampling: 17.47
Percent recovery at time of sampling: 98%
Samples collected with: dedicated bailer
Sample color: clear/brown Odor: slight HC odor
Description of sediment in sample: f. silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	72.4	6.01	512
2	72.9	6.03	527
3	72.3	6.10	529
4	72.7	6.09	[illegible]

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-4	3	40ml VOA	✓	✓	

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

CHROMALAB, INC.
Environmental Services (SDB)

Submission #: 2000-06-0167
Date: June 21, 2000

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

Attn.: Mr. Ian T. Reed

Project: 3412
Chan Former Shell Station

Dear Mr. Reed,

Attached is our report for your samples received on Thursday June 8, 2000
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 July 8, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919. You can also contact me via email. My email address is: vvancil@chromalab.com

Sincerely,

Vincent Vancil

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

Gas/BTEX and MTBE

Aqua Science Engineers, Inc.

208 West El Pintado Road
Danville, CA 94526

Attn: Ian T. Reed

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #: 3412

Project: Chan Former Shell Station

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	06/08/2000 08:00	1
MW-2	Water	06/08/2000 12:40	2
MW-3	Water	06/08/2000 13:15	3
MW-4	Water	06/08/2000 13:45	4

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-1**	Lab Sample ID:	**2000-06-0167-001**
Project:	3412 Chan Former Shell Station	Received:	06/08/2000 17:05
		Extracted:	06/19/2000 18:16
Sampled:	06/08/2000 08:00	QC-Batch:	2000/06/19-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	26000	25000	ug/L	500.00	06/19/2000 18:16	g
Benzene	1700	250	ug/L	500.00	06/19/2000 18:16	
Toluene	ND	250	ug/L	500.00	06/19/2000 18:16	
Ethyl benzene	360	250	ug/L	500.00	06/19/2000 18:16	
Xylene(s)	580	250	ug/L	500.00	06/19/2000 18:16	
MTBE	30000	2500	ug/L	500.00	06/19/2000 18:16	
Surrogate(s)						
Trifluorotoluene	86.9	58-124	%	1.00	06/19/2000 18:16	
4-Bromofluorobenzene-FID	89.4	50-150	%	1.00	06/19/2000 18:16	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-2**	Lab Sample ID:	**2000-06-0167-002**
Project:	3412 Chan Former Shell Station	Received:	06/08/2000 17:05
		Extracted:	06/19/2000 22:31
Sampled:	06/08/2000 12:40	QC-Batch:	2000/06/19-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	06/19/2000 22:31	
Benzene	ND	0.50	ug/L	1.00	06/19/2000 22:31	
Toluene	ND	0.50	ug/L	1.00	06/19/2000 22:31	
Ethyl benzene	ND	0.50	ug/L	1.00	06/19/2000 22:31	
Xylene(s)	ND	0.50	ug/L	1.00	06/19/2000 22:31	
MTBE	ND	5.0	ug/L	1.00	06/19/2000 22:31	mtbe
Surrogate(s)						
Trifluorotoluene	100.4	58-124	%	1.00	06/19/2000 22:31	
4-Bromofluorobenzene-FID	92.0	50-150	%	1.00	06/19/2000 22:31	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-3**	Lab Sample ID:	**2000-06-0167-003**
Project:	3412 Chan Former Shell Station	Received:	06/08/2000 17:05
		Extracted:	06/20/2000 17:32
Sampled:	06/08/2000 13:15	QC-Batch:	2000/06/20-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	140	50	ug/L	1.00	06/20/2000 17:32	g
Benzene	ND	0.50	ug/L	1.00	06/20/2000 17:32	
Toluene	ND	0.50	ug/L	1.00	06/20/2000 17:32	
Ethyl benzene	ND	0.50	ug/L	1.00	06/20/2000 17:32	
Xylene(s)	ND	0.50	ug/L	1.00	06/20/2000 17:32	
MTBE	1100	5.0	ug/L	1.00	06/20/2000 17:32	mtbe
Surrogate(s)						
Trifluorotoluene	92.3	58-124	%	1.00	06/20/2000 17:32	
4-Bromofluorobenzene-FID	96.0	50-150	%	1.00	06/20/2000 17:32	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-4**	Lab Sample ID:	**2000-06-0167-004**
Project:	3412 Chan Former Shell Station	Received:	06/08/2000 17:05
		Extracted:	06/20/2000 11:22
Sampled:	06/08/2000 13:45	QC-Batch:	2000/06/19-01.05
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	530	250	ug/L	5.00	06/20/2000 11:22	g
Benzene	8.8	2.5	ug/L	5.00	06/20/2000 11:22	
Toluene	ND	2.5	ug/L	5.00	06/20/2000 11:22	
Ethyl benzene	ND	2.5	ug/L	5.00	06/20/2000 11:22	
Xylene(s)	ND	2.5	ug/L	5.00	06/20/2000 11:22	
MTBE	440	25	ug/L	5.00	06/20/2000 11:22	mtbe
Surrogate(s)						
Trifluorotoluene	105.4	58-124	%	1.00	06/20/2000 11:22	
4-Bromofluorobenzene-FID	90.6	50-150	%	1.00	06/20/2000 11:22	

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2000/06/19-01.01**

MB: 2000/06/19-01.01-001

Date Extracted: 06/19/2000 11:37

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	06/19/2000 11:37	
Benzene	ND	0.5	ug/L	06/19/2000 11:37	
Toluene	ND	0.5	ug/L	06/19/2000 11:37	
Ethyl benzene	ND	0.5	ug/L	06/19/2000 11:37	
Xylene(s)	ND	0.5	ug/L	06/19/2000 11:37	
MTBE	ND	5.0	ug/L	06/19/2000 11:37	
Surrogate(s)					
Trifluorotoluene	90.4	58-124	%	06/19/2000 11:37	
4-Bromofluorobenzene-FID	82.2	50-150	%	06/19/2000 11:37	

To: Aqua Science Engineers, Inc.

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2000/06/19-01.05**

MB: 2000/06/19-01.05-001 | Date Extracted: 06/19/2000 10:45

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	06/19/2000 10:45	
Benzene	ND	0.5	ug/L	06/19/2000 10:45	
Toluene	ND	0.5	ug/L	06/19/2000 10:45	
Ethyl benzene	ND	0.5	ug/L	06/19/2000 10:45	
Xylene(s)	ND	0.5	ug/L	06/19/2000 10:45	
Surrogate(s)					
Trifluorotoluene	109.8	58-124	%	06/19/2000 10:45	
4-Bromofluorobenzene-FID	79.0	50-150	%	06/19/2000 10:45	

To: Aqua Science Engineers, Inc.

Attn.: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Method Blank **Water** **QC Batch # 2000/06/20-01.01**

MB: 2000/06/20-01.01-001 Date Extracted: 06/20/2000 08:27

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	06/20/2000 08:27	
Benzene	ND	0.5	ug/L	06/20/2000 08:27	
Toluene	ND	0.5	ug/L	06/20/2000 08:27	
Ethyl benzene	ND	0.5	ug/L	06/20/2000 08:27	
Xylene(s)	ND	0.5	ug/L	06/20/2000 08:27	
MTBE	ND	5.0	ug/L	06/20/2000 08:27	
Surrogate(s)					
Trifluorotoluene	96.4	58-124	%	06/20/2000 08:27	
4-Bromofluorobenzene-FID	92.0	50-150	%	06/20/2000 08:27	

To: Aqua Science Engineers, Inc.

Attn: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/06/19-01.01**

LCS: 2000/06/19-01.01-002 Extracted: 06/19/2000 12:21 Analyzed 06/19/2000 12:21

LCSD: 2000/06/19-01.01-003 Extracted: 06/19/2000 11:46 Analyzed 06/19/2000 11:46

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	507	513	500	500	101.4	102.6	1.2	75-125	20		
Benzene	99.3	99.7	100.0	100.0	99.3	99.7	0.4	77-123	20		
Toluene	93.5	94.2	100.0	100.0	93.5	94.2	0.7	78-122	20		
Ethyl benzene	95.5	96.0	100.0	100.0	95.5	96.0	0.5	70-130	20		
Xylene(s)	287	288	300	300	95.7	96.0	0.3	75-125	20		
Surrogate(s)											
Trifluorotoluene	436	433	500	500	87.2	86.6		58-124			
4-Bromofluorobenzene-FI	456	470	500	500	91.2	94.0		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: Aqua Science Engineers, Inc.

Attn: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/06/19-01.05**

LCS: 2000/06/19-01.05-002 Extracted: 06/19/2000 11:17 Analyzed 06/19/2000 11:17

LCSD: 2000/06/19-01.05-003 Extracted: 06/19/2000 11:49 Analyzed 06/19/2000 11:49

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	580	588	500	500	116.0	117.6	1.4	75-125	20		
Benzene	103	101	100.0	100.0	103.0	101.0	2.0	77-123	20		
Toluene	102	98.5	100.0	100.0	102.0	98.5	3.5	78-122	20		
Ethyl benzene	102	98.5	100.0	100.0	102.0	98.5	3.5	70-130	20		
Xylene(s)	289	281	300	300	96.3	93.7	2.7	75-125	20		
Surrogate(s)											
Trifluorotoluene	513	477	500	500	102.6	95.4		58-124			
4-Bromofluorobenzene-FI	456	462	500	500	91.2	92.4		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-06-0167

To: **Aqua Science Engineers, Inc.**

Attn: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/06/20-01.01**

LCS: 2000/06/20-01.01-002 Extracted: 06/20/2000 11:21 Analyzed 06/20/2000 11:21

LCSD: 2000/06/20-01.01-003 Extracted: 06/20/2000 09:36 Analyzed 06/20/2000 09:36

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	568	491	500	500	113.6	98.2	14.5	75-125	20		
Benzene	104	99.2	100.0	100.0	104.0	99.2	4.7	77-123	20		
Toluene	98.2	94.2	100.0	100.0	98.2	94.2	4.2	78-122	20		
Ethyl benzene	101	97.1	100.0	100.0	101.0	97.1	3.9	70-130	20		
Xylene(s)	300	291	300	300	100.0	97.0	3.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	461	479	500	500	92.2	95.8		58-124			
4-Bromofluorobenzene-FI	442	413	500	500	88.4	82.6		50-150			

To: Aqua Science Engineers, Inc.

Attn:Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Legend & Notes

Gas/BTEX and MTBE

Analyte Flags

g

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

mtbe

MTBE analyzed by GC/MS 8260

2000-06-0167

52632

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

Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE) Lori Reed (PHONE NO.) (925) 820-9391

PROJECT NAME CHAN former Shell Station JOB NO. 3412

ADDRESS 726 Harrison Street, Oakland CA DATE 6/7/00

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

5-day TAT.

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8240)	SEMI-VOLATILE ORGANICS (EPA 625/8270)	OIL & GREASE (EPA 5520)	LUFT METALS (5) (EPA 6010+7000)	CAM 17 METALS (EPA 6010+7000)	PCBs & PESTICIDES (EPA 608/8080)	ORGANOPHOSPHORUS PESTICIDES (EPA 8140) (EPA 608/8080)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)				COMPOSITE
MW-1	6/6	0900	water	2	X																	
MW-2	6/7	1240	water	3	X																	
MW-3	6/7	1315	water	3	X																	
MW-4	6/7	1345	water	3	X																	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
Lori Reed 0900 (signature) (time)	Gary Cook 1500 (signature) (time)	Gary Cook 1705 (signature) (time)	Denise Harrington (signature) (time)	3.5°C
Lori Reed 6/8/00 (printed name) (date)	G Cook 6/8/00 (printed name) (date)	G Cook 6/8/00 (printed name) (date)	D Harrington 1705 (printed name) (date)	5-day TAT
Company- ASE	Company- Chromalab	Company- Chromalab	Company- Chromalab 6/8/00	