aqua science engineers inc.

MARCH 28, 2000

QUARTERLY GROUNDWATER MONITORING REPORT
MARCH 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 March 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 Assesment" dated January 8, 1999.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On March 7, 2000, ASE associate geologist Ian Reed measured the depth to groundwater in monitoring wells MW-1, MW-3, and MW-4 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. Monitoring well MW-2 was inaccessable due to cars parked over the 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**
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	Inaccessable		
	12-09-99	Inaccessable		
	03-07-00	**Inaccessable**		
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**
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**

A groundwater potentiometric surface map is presented as Figure 2. The groundwater flow direction is to the southwest with a gradient of

approximately 0.042-feet/foot. This gradient and flow direction are consistant with previous results and neighboring sites. The water table has risen approximately 2.5-feet this quarter.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, monitoring wells MW-1, MW-3, and MW-4 were purged of four well casing volumes of groundwater using dedicated polyethylene bailers. Monitoring well MW-2 was inaccessable due to a car parked over the well, and therefore was not sampled. Petroleum hydrocarbon odors were present during the purging and sampling of all three 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**
MW-2						
12/05/98	<50	<0.5	<0.5	<0.5	<0.5	<5
03/04/99	Inaccessable due to car parked over well					
06/17/99	<50	<0.5	<0.5	<0.5	<0.5	<5
08/27/99	Inaccessable due to car parked over well					
12/09/99	Inaccessable due to car parked over well					
03/07/00	**Inaccessable due to car parked over well**					
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**

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**
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

Hydrocarbon concentrations in groundwater samples collected from monitoring wells MW-1, MW-3, and MW-4 were similiar to previous results. The benzene and MTBE concentrations detected in groundwater samples collected from monitoring wells MW-1 and MW-3 exceeded California Department of Health Services (DHS) maximum contaminant levels (MCLs) for drinking water. The toluene concentration in monitoring well MW-1 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 June 2000.

6.0 REPORT LIMITATIONS

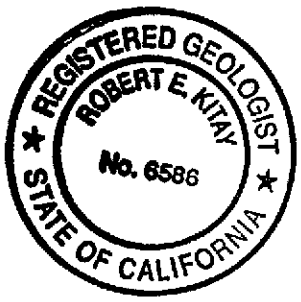
The results of this report represent the conditions at the time of the groundwater sampling, at the specific locations where the groundwater samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting from sources 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.

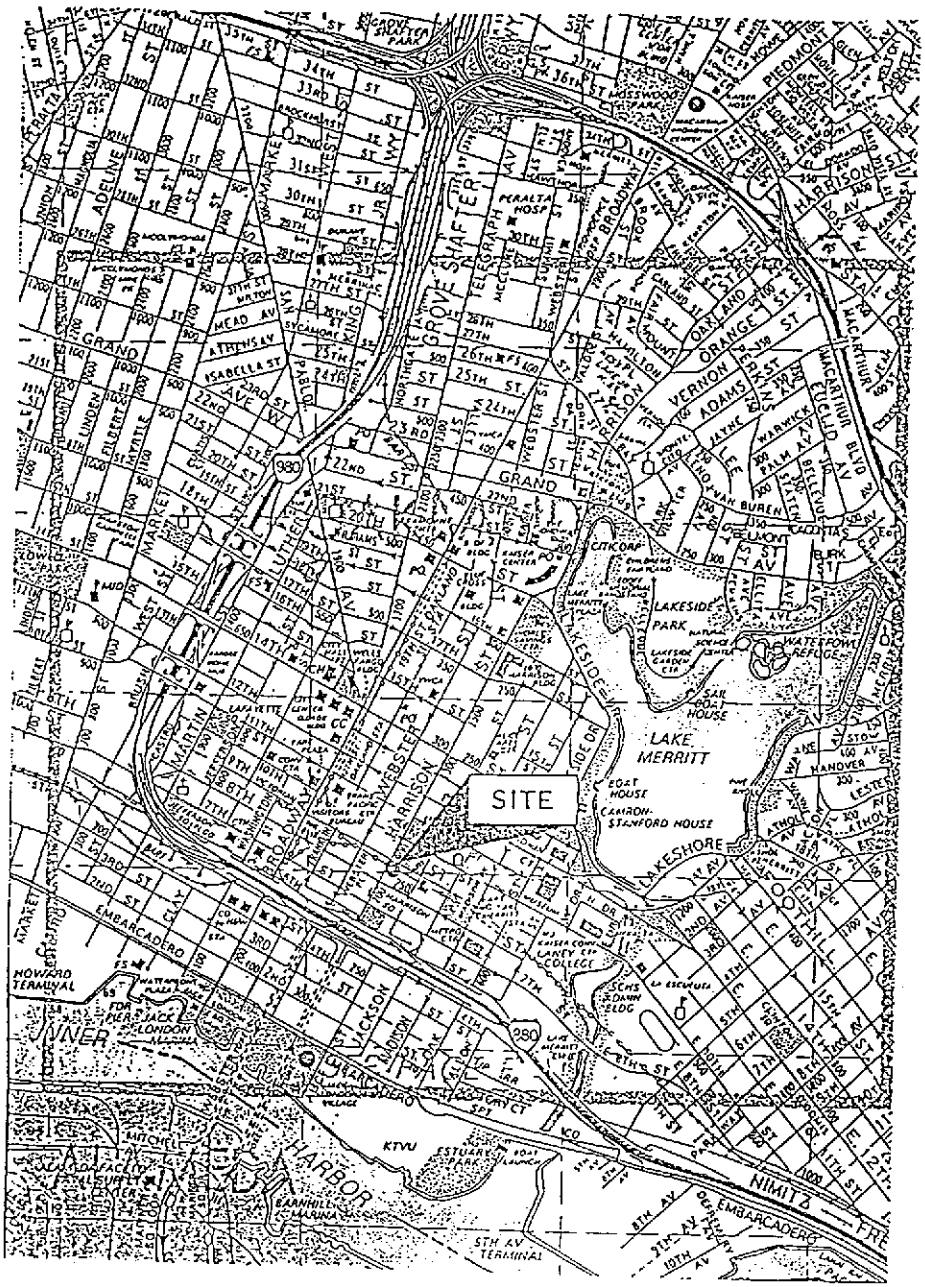
Ian T. Reed
Associate Geologist



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

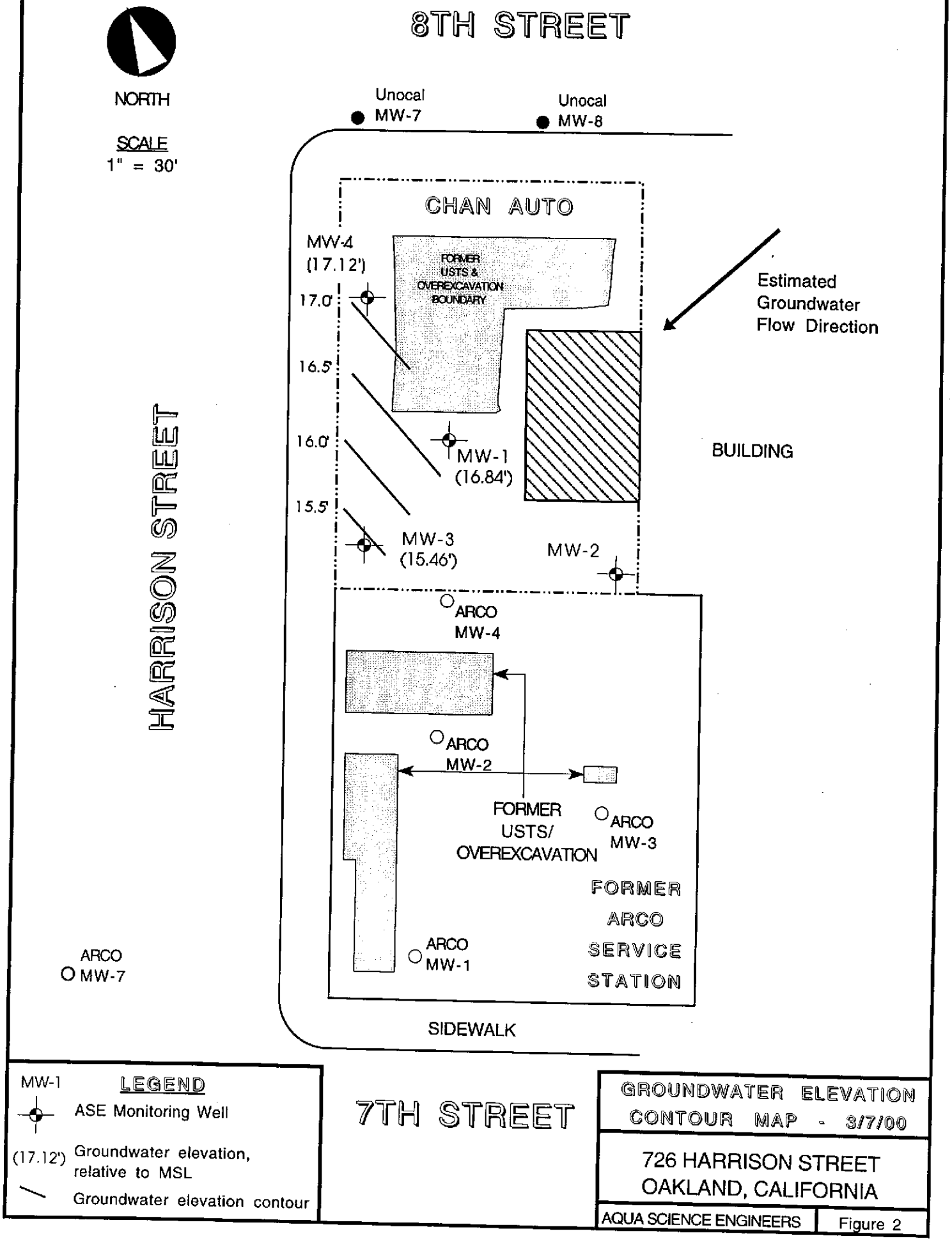
Attachments: Figures 1 and 2
Appendices A and B

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
(17.12')
FORMER
USTS &
OVEREXCAVATION
BOUNDARY
17.0'
16.5'
16.0'
15.5'
MW-1
(16.84')
MW-3
(15.46')
MW-2
Estimated
Groundwater
Flow Direction
BUILDING
HARRISON STREET
ARCO
MW-4
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
(17.12')
Groundwater elevation,
relative to MSL
Groundwater elevation contour
GROUNDWATER ELEVATION
CONTOUR MAP - 3/7/00
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: 3-7-00
Well Name: MW-3 Sampled by: _____
Total depth of well (feet): 29.66 Well diameter (inches): 2"
Depth to water before sampling (feet): 16.15
Thickness of floating product if any: —
Depth of well casing in water (feet): 13.51
Number of gallons per well casing volume (gallons): 2.3
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 9.2
Equipment used to purge the well: dedicated bailer
Time Evacuation Began: 0920 Time Evacuation Finished: 0935
Approximate volume of groundwater purged: 10
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 0940
Depth to water at time of sampling: [illegible]
Percent recovery at time of sampling: [illegible]
Samples collected with: [illegible]
Sample color: clear Odor: [illegible]
Description of sediment in sample: [illegible]

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	[illegible]	4.21	761
2	[illegible]	5.21	254
3	[illegible]	5.35	313
4	[illegible]	5.23	318

SAMPLES COLLECTED

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

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WELL SAMPLING FIELD LOG

Project Name and Address: CHAN
Job #: 3412 Date of sampling: 3-7-00
Well Name: MW-1 Sampled by: ITR
Total depth of well (feet): 27.21 Well diameter (inches): 2"
Depth to water before sampling (feet): 15.11
Thickness of floating product if any: NO
Depth of well casing in water (feet): 12.10
Number of gallons per well casing volume (gallons): 2
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 8
Equipment used to purge the well:
Time Evacuation Began: 0845 Time Evacuation Finished: 0855
Approximate volume of groundwater purged: 8.5
Did the well go dry?: NO After how many gallons: -
Time samples were collected: 0900
Depth to water at time of sampling: 15.21
Percent recovery at time of sampling: 98%
Samples collected with: dedicated bailer
Sample color: clear Odor: slight HC odor
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	70.3	5.61	621
2	71.4	5.78	732
3	69.9	5.43	691
4	76.8	5.71	698

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: 3-7-00
Well Name: MW-4 Sampled by: ITR
Total depth of well (feet): 29.97 Well diameter (inches): 2"
Depth to water before sampling (feet): 15.41
Thickness of floating product if any: —
Depth of well casing in water (feet): 14.56
Number of gallons per well casing volume (gallons): 2.48
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 10
Equipment used to purge the well: dedicated bailer
Time Evacuation Began: 0905 Time Evacuation Finished: 0920
Approximate volume of groundwater purged: 10
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 0925
Depth to water at time of sampling: 15.47
Percent recovery at time of sampling: 98%
Samples collected with: dedicated bailer
Sample color: clear Odor: slight HC odor
Description of sediment in sample: —

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	72.3	5.61	752
2	71.7	5.77	714
3	70.4	5.72	703
4	72.5	5.80	701

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 #: 2000-03-0152
Date: March 20, 2000

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

Attn.: Mr. Ian T. Reed

Project: 3412
CHAN

Site: 726 Harrison Street,
Oakland, CA

Dear Mr. Reed,

Attached is our report for your samples received on Thursday March 9, 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 April 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 #: 2000-03-0152

Gas/BTEX and MTBE

Aqua Science Engineers, Inc.

Attn: Ian T. Reed

208 West El Pintado Road
Danville, CA 94526

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

Project #: 3412

Site: 726 Harrison Street,
Oakland, CA

Project: CHAN

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	03/07/2000 09:00	1
MW-3	Water	03/07/2000 08:40	2
MW-4	Water	03/07/2000 09:25	3

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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:	**2000-03-0152-001**
Project:	3412 CHAN	Received:	03/09/2000 12:51
Site:	726 Harrison Street, Oakland, CA	Extracted:	03/17/2000 11:11
Sampled:	03/07/2000 09:00	QC-Batch:	2000/03/17-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	9300	5000	ug/L	100.00	03/17/2000 11:11	
Benzene	1500	50	ug/L	100.00	03/17/2000 11:11	
Toluene	210	50	ug/L	100.00	03/17/2000 11:11	
Ethyl benzene	66	50	ug/L	100.00	03/17/2000 11:11	
Xylene(s)	530	50	ug/L	100.00	03/17/2000 11:11	
MTBE	12000	500	ug/L	100.00	03/17/2000 11:11	
Surrogate(s)						
Trifluorotoluene	87.2	58-124	%	1.00	03/17/2000 11:11	
4-Bromofluorobenzene-FID	81.3	50-150	%	1.00	03/17/2000 11:11	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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:	**2000-03-0152-002**
Project:	3412 CHAN	Received:	03/09/2000 12:51
Site:	726 Harrison Street, Oakland, CA	Extracted:	03/17/2000 14:11
Sampled:	03/07/2000 08:40	QC-Batch:	2000/03/17-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	150	50	ug/L	1.00	03/17/2000 14:11	g
Benzene	4.0	0.50	ug/L	1.00	03/17/2000 14:11	
Toluene	ND	0.50	ug/L	1.00	03/17/2000 14:11	
Ethyl benzene	ND	0.50	ug/L	1.00	03/17/2000 14:11	
Xylene(s)	ND	0.50	ug/L	1.00	03/17/2000 14:11	
MTBE	830	100	ug/L	20.00	03/15/2000 13:12	
Surrogate(s)						
Trifluorotoluene	101.2	58-124	%	1.00	03/17/2000 13:11	
4-Bromofluorobenzene-FID	93.1	50-150	%	1.00	03/17/2000 14:11	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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:	**2000-03-0152-003**
Project:	3412 CHAN	Received:	03/09/2000 12:51
Site:	726 Harrison Street, Oakland, CA	Extracted:	03/16/2000 04:00
Sampled:	03/07/2000 09:25	QC-Batch:	2000/03/15-01.03
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	250	ug/L	5.00	03/16/2000 04:00	
Benzene	ND	2.5	ug/L	5.00	03/16/2000 04:00	
Toluene	ND	2.5	ug/L	5.00	03/16/2000 04:00	
Ethyl benzene	ND	2.5	ug/L	5.00	03/16/2000 04:00	
Xylene(s)	ND	2.5	ug/L	5.00	03/16/2000 04:00	
MTBE	1700	250	ug/L	50.00	03/16/2000 16:52	
Surrogate(s)						
Trifluorotoluene	92.4	58-124	%	1.00	03/16/2000 04:00	
4-Bromofluorobenzene-FID	96.9	50-150	%	1.00	03/16/2000 04:00	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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 # 2000/03/15-01.03**
MB: 2000/03/15-01.03-001		Date Extracted: 03/15/2000 11:42

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/15/2000 11:42	
Benzene	ND	0.5	ug/L	03/15/2000 11:42	
Toluene	ND	0.5	ug/L	03/15/2000 11:42	
Ethyl benzene	ND	0.5	ug/L	03/15/2000 11:42	
Xylene(s)	ND	0.5	ug/L	03/15/2000 11:42	
MTBE	ND	5.0	ug/L	03/15/2000 11:42	
Surrogate(s)					
Trifluorotoluene	99.2	58-124	%	03/15/2000 11:42	
4-Bromofluorobenzene-FID	113.4	50-150	%	03/15/2000 11:42	

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 # 2000/03/16-01.04**
MB: 2000/03/16-01.04-001		Date Extracted: 03/16/2000 13:55

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/16/2000 13:55	
Benzene	ND	0.5	ug/L	03/16/2000 13:55	
Toluene	ND	0.5	ug/L	03/16/2000 13:55	
Ethyl benzene	ND	0.5	ug/L	03/16/2000 13:55	
Xylene(s)	ND	0.5	ug/L	03/16/2000 13:55	
MTBE	ND	5.0	ug/L	03/16/2000 13:55	
Surrogate(s)					
Trifluorotoluene	85.0	58-124	%	03/16/2000 13:55	
4-Bromofluorobenzene-FID	89.4	50-150	%	03/16/2000 13:55	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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 # 2000/03/17-01.01**
MB: 2000/03/17-01.01-001		Date Extracted: 03/17/2000 06:57

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/17/2000 06:57	
Benzene	ND	0.5	ug/L	03/17/2000 06:57	
Toluene	ND	0.5	ug/L	03/17/2000 06:57	
Ethyl benzene	ND	0.5	ug/L	03/17/2000 06:57	
Xylene(s)	ND	0.5	ug/L	03/17/2000 06:57	
MTBE	ND	5.0	ug/L	03/17/2000 06:57	
Surrogate(s)					
Trifluorotoluene	85.6	58-124	%	03/17/2000 06:57	
4-Bromofluorobenzene-FID	79.6	50-150	%	03/17/2000 06:57	

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 # 2000/03/17-01.03**

MB: 2000/03/17-01.03-001

Date Extracted: 03/17/2000 08:44

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	03/17/2000 08:44	
Benzene	ND	0.5	ug/L	03/17/2000 08:44	
Toluene	ND	0.5	ug/L	03/17/2000 08:44	
Ethyl benzene	ND	0.5	ug/L	03/17/2000 08:44	
Xylene(s)	ND	0.5	ug/L	03/17/2000 08:44	
Surrogate(s)					
Trifluorotoluene	97.8	58-124	%	03/17/2000 08:44	
4-Bromofluorobenzene-FID	91.0	50-150	%	03/17/2000 08:44	

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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

Attn: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/03/15-01.03**

LCS: 2000/03/15-01.03-002 Extracted: 03/15/2000 09:32 Analyzed 03/15/2000 09:32

LCSD: 2000/03/15-01.03-003 Extracted: 03/15/2000 10:04 Analyzed 03/15/2000 10:04

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	594	609	500	500	118.8	121.8	2.5	75-125	20		
Benzene	98.5	88.7	100.0	100.0	98.5	88.7	10.5	77-123	20		
Toluene	100	92.1	100.0	100.0	100.0	92.1	8.2	78-122	20		
Ethyl benzene	94.2	88.1	100.0	100.0	94.2	88.1	6.7	70-130	20		
Xylene(s)	275	258	300	300	91.7	86.0	6.4	75-125	20		
Surrogate(s)											
Trifluorotoluene	510	452	500	500	102.0	90.4		58-124			
4-Bromofluorobenzene-FI	536	552	500	500	107.2	110.4		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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

Attn: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/03/16-01.04**

LCS: 2000/03/16-01.04-002 Extracted: 03/16/2000 09:44 Analyzed 03/16/2000 09:44

LCSD: 2000/03/16-01.04-003 Extracted: 03/16/2000 10:13 Analyzed 03/16/2000 10:13

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	419	495	500	500	83.8	99.0	16.6	75-125	20		
Benzene	96.3	85.6	100.0	100.0	96.3	85.6	11.8	77-123	20		
Toluene	95.5	84.8	100.0	100.0	95.5	84.8	11.9	78-122	20		
Ethyl benzene	92.8	82.5	100.0	100.0	92.8	82.5	11.8	70-130	20		
Xylene(s)	279	252	300	300	93.0	84.0	10.2	75-125	20		
Surrogate(s)											
Trifluorotoluene	443	392	500	500	88.6	78.4		58-124			
4-Bromofluorobenzene-FI	473	480	500	500	94.6	96.0		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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

Attn: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/03/17-01.01**

LCS: 2000/03/17-01.01-002 Extracted: 03/17/2000 07:33 Analyzed 03/17/2000 07:33

LCSD: 2000/03/17-01.01-003 Extracted: 03/17/2000 08:08 Analyzed 03/17/2000 08:08

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	469	445	500	500	93.8	89.0	5.3	75-125	20		
Benzene	89.8	88.1	100.0	100.0	89.8	88.1	1.9	77-123	20		
Toluene	88.3	86.1	100.0	100.0	88.3	86.1	2.5	78-122	20		
Ethyl benzene	89.2	86.8	100.0	100.0	89.2	86.8	2.7	70-130	20		
Xylene(s)	268	260	300	300	89.3	86.7	3.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	416	414	500	500	83.2	82.8		58-124			
4-Bromofluorobenzene-FI	449	438	500	500	89.8	87.6		50-150			

CHROMALAB, INC.

Environmental Services (SDB)

Submission #: 2000-03-0152

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

Attn: Ian T. Reed

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD)		**Water**		**QC Batch # 2000/03/17-01.03**
LCS:	2000/03/17-01.03-002	Extracted: 03/17/2000 09:16	Analyzed	03/17/2000 09:16
LCSD:	2000/03/17-01.03-003	Extracted: 03/17/2000 09:49	Analyzed	03/17/2000 09:49

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	506	561	500	500	101.2	112.2	10.3	75-125	20		
Benzene	90.0	81.4	100.0	100.0	90.0	81.4	10.0	77-123	20		
Toluene	92.4	84.6	100.0	100.0	92.4	84.6	8.8	78-122	20		
Ethyl benzene	87.8	82.3	100.0	100.0	87.8	82.3	6.5	70-130	20		
Xylene(s)	255	244	300	300	85.0	81.3	4.4	75-125	20		
Surrogate(s)											
Trifluorotoluene	459	412	500	500	91.8	82.4		58-124			
4-Bromofluorobenzene-FI	448	498	500	500	89.6	99.6		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.

2000-03-0152

50867

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) Ian T. Reed (PHONE NO.) (925) 820-9391

PROJECT NAME CHAN JOB NO. 3412

ADDRESS 726 Harrison Street, Oakland CA DATE 3-9-00

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	3-7-00	0900	water	3	X																	
MW-3	3-7-00	1540	↓	↓	X																	
MW-4	3-7-00	0925	↓	↓	X																	

RELINQUISHED BY: (signature)	RECEIVED BY: (signature)	RELINQUISHED BY: (signature)	RECEIVED BY LABORATORY: (signature)
Ian T. Reed 0920 (time)	0920 (time)	1030 (time)	1155 (time)
Ian T Reed 3-9-00 (printed name) (date)	(printed name) 3-9-00 (date)	(printed name) 03/09/00 (date)	(printed name) 03/09/00 (date)
Company- AGE	Company- CL	Company-	Company- Chromalab

COMMENTS: H. 3