aqua science engineers inc.

February 5, 2001

#39

QUARTERLY GROUNDWATER MONITORING REPORT
JANUARY 2001 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 x 203
(925) 820-9391

Agency Review
Contact: Mr. Barney Chan
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 January 2001, 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 January 18, 2001, ASE associate geologist Erik Paddleford 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
	10-11-00		18.08	13.87
	01-18-01		**17.96**	**13.99**
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
	10-11-00		18.91	13.49
	01-18-01		**18.66**	**13.74**
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
	10-11-00		18.07	13.54
	01-18-01		**17.89**	**13.72**

Table One continued on next page

TABLE ONE (Continued)
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-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
	10-11-00		18.33	14.20
	01-18-01		**18.23**	**14.30**

A groundwater potentiometric surface map is presented as Figure 2. The groundwater flow direction is generally to the south with a gradient of approximately 0.013-feet/foot. The water table has risen an average of 0.16-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 monitoring wells MW-1, MW-2, and MW-3. 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 a 55-gallon steel drum, 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
10/11/00	13,000**	1,600	<100	140	160	19,000
01/18/01	**14,000****	**450**	**<100**	**110**	**230**	**9,600**
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
10/11/00	<50	<0.5	<0.5	<0.5	<0.5	<5.0
01/18/01	**<50**	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**< 5.0**

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-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
10/11/00	620**	<5.0	<5.0	<5.0	<5.0	1,500
01/18/01	**1,200****	**< 5.0**	**< 5.0**	**< 5.0**	**< 5.0**	**1,000**
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
10/11/00	700**	3.9	<2.5	<2.5	<2.5	680
01/18/01	**2,000****	**<2.5**	**< 2.5**	**< 2.5**	**< 2.5**	**780**
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 14,000 parts per billion (ppb) TPH-G, 450 ppb benzene, 110 ppb ethyl

benzene, 230 ppb total xylenes, and 9,600 ppb MTBE. The groundwater samples collected from monitoring well MW-3 contained 1,200 ppb TPH-G and 1,000 ppb MTBE. The groundwater samples collected from monitoring well MW-4 contained 2,000 ppb TPH-G and 780 ppb MTBE. No hydrocarbons were detected above laboratory reporting limits in the groundwater sample collected from monitoring well MW-2.

In general, there appears to be a long term decreasing trend in hydrocarbon concentrations at the site. In particular, the benzene concentration in the groundwater sample collected from monitoring well MW-1 decreased significantly to a historic low this quarter.

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

5.0 RECOMMENDATIONS

ASE recommends continued groundwater monitoring on a quarterly basis. The next groundwater sampling is scheduled for April 2001. ASE recommends that monitoring well MW-2 be removed from the groundwater sampling program since hydrocarbons have never been detected in previous sampling events. In addition, ASE will submit a workplan to complete additional work during the next quarter.

6.0 REPORT LIMITATIONS

The results presented in 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,

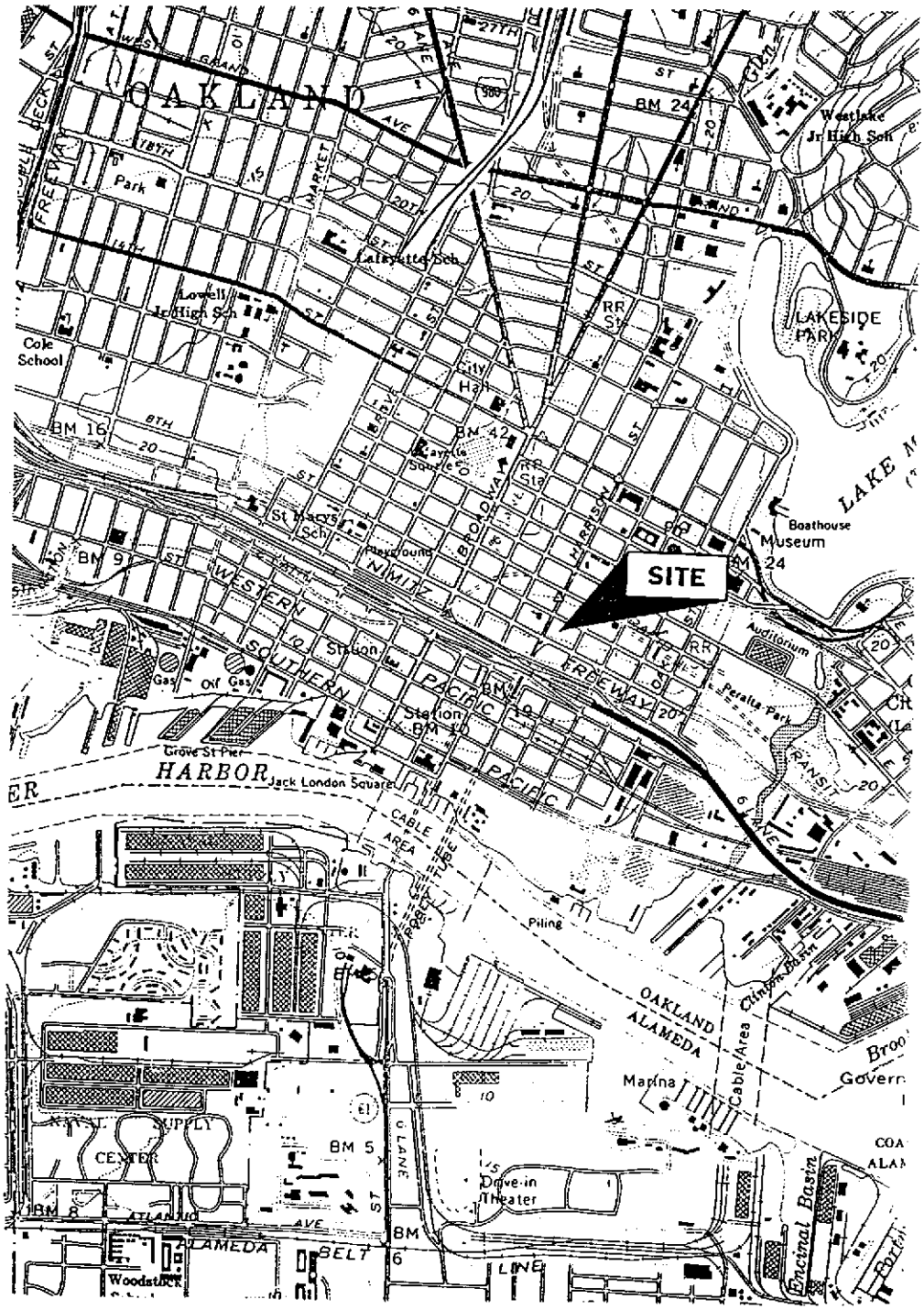
AQUA SCIENCE ENGINEERS, INC.

Erik H. Paddleford
Associate Geologist

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

Attachments: Figures 1 and 2
Appendices A and B

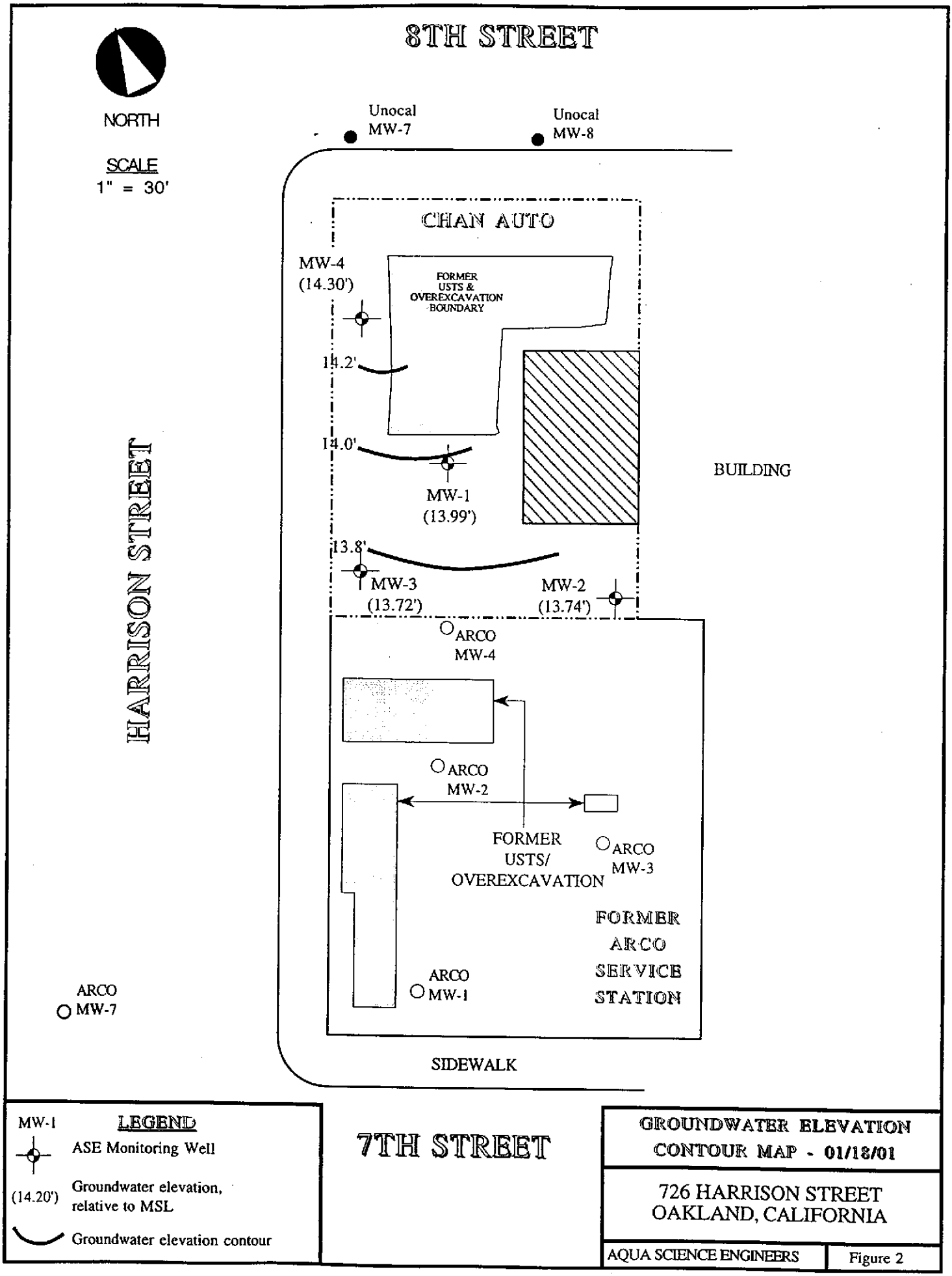
cc: Mr. Barney Chan, Alameda County Health Care Services
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region



SITE LOCATION MAP

FORMER CHAN'S SHELL STATION
726 HARRISION STREET
OAKLAND, CALIFORNIA

Aqua Science Engineers | Figure 1


8TH STREET
NORTH
SCALE
1" = 30'
Unocal
MW-7
Unocal
MW-8
CHAN AUTO
MW-4
(14.30')
FORMER
USTS &
OVEREXCAVATION
BOUNDARY
14.2'
14.0'
MW-1
(13.99')
BUILDING
13.8'
MW-3
(13.72')
MW-2
(13.74')
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
(14.20')
Groundwater elevation,
relative to MSL
Groundwater elevation contour
GROUNDWATER ELEVATION
CONTOUR MAP - 01/18/01
726 HARRISON STREET
OAKLAND, CALIFORNIA
AQUA SCIENCE ENGINEERS
Figure 2

APPENDIX A

Well Sampling Field Logs

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WELL SAMPLING FIELD LOG

Project Name and Address: Chan Auto
Job #: 3412 Date of sampling: 1/18/01
Well Name: MW-1 Sampled by: EP
Total depth of well (feet): 27.21 Well diameter (inches): 2"
Depth to water before sampling (feet): 17.96
Thickness of floating product if any: —
Depth of well casing in water (feet): 9.25
Number of gallons per well casing volume (gallons): 1.57
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 6.3
Equipment used to purge the well: Bailer
Time Evacuation Began: 805 Time Evacuation Finished: 830
Approximate volume of groundwater purged: 6
Did the well go dry?: No After how many gallons: —
Time samples were collected: 835
Depth to water at time of sampling: —
Percent recovery at time of sampling: 90%
Samples collected with: Bailer
Sample color: green/gray Odor: moderate
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	16.0	7.19	10
2	15.8	7.20	11
3	15.9	7.15	12
4	16.0	7.20	12

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW1	3	40 ml VOA	✓	✓	

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WELL SAMPLING FIELD LOG

Project Name and Address: Chan Auto
Job #: MW-2 Date of sampling: 1/18/11
Well Name: 3412 Sampled by: EP
Total depth of well (feet): 27.0 Well diameter (inches): 2
Depth to water before sampling (feet): 18.66
Thickness of floating product if any: -
Depth of well casing in water (feet): 8.34
Number of gallons per well casing volume (gallons): 1.42
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 5.7
Equipment used to purge the well: bailer
Time Evacuation Began: 1000 Time Evacuation Finished: 1020
Approximate volume of groundwater purged: 6
Did the well go dry?: no After how many gallons: —
Time samples were collected: 1030
Depth to water at time of sampling: —
Percent recovery at time of sampling: 90%
Samples collected with: Bailer
Sample color: clear/brown Odor: none to slight
Description of sediment in sample: silt sized

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	18.4	7.18	11
2	18.2	7.22	11
3	18.2	7.13	12
4	18.1	7.06	13

SAMPLES COLLECTED

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

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WELL SAMPLING FIELD LOG

Project Name and Address: Chan Auto
Job #: 3412 Date of sampling: 1/18/00
Well Name: MW-3 Sampled by: EP
Total depth of well (feet): 29.66 Well diameter (inches): 2"
Depth to water before sampling (feet): 17.89
Thickness of floating product if any: ~
Depth of well casing in water (feet): 11.77
Number of gallons per well casing volume (gallons): 2.0
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 8.0
Equipment used to purge the well: bailer
Time Evacuation Began: 845 Time Evacuation Finished: 910
Approximate volume of groundwater purged: 8
Did the well go dry?: No After how many gallons: —
Time samples were collected: 915
Depth to water at time of sampling: —
Percent recovery at time of sampling: 90%
Samples collected with: Bailer
Sample color: clear/tan Odor: none
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	15.4	6.93	12
2	16.2	7.14	12
3	18.1	7.17	13
4	18.0	7.09	13

SAMPLES COLLECTED

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

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WELL SAMPLING FIELD LOG

Project Name and Address: Chan Auto
Job #: 3412 Date of sampling: 1/18/01
Well Name: MW-4 Sampled by: EP
Total depth of well (feet): 29.97 Well diameter (inches): 2"
Depth to water before sampling (feet): 18.23
Thickness of floating product if any: —
Depth of well casing in water (feet): 11.74
Number of gallons per well casing volume (gallons): 2.0
Number of well casing volumes to be removed: 4.0
Req'd volume of groundwater to be purged before sampling (gallons): 8.0
Equipment used to purge the well: Bailer
Time Evacuation Began: 920 Time Evacuation Finished: 945
Approximate volume of groundwater purged: 8
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 950
Depth to water at time of sampling: —
Percent recovery at time of sampling: 90%
Samples collected with: Bailer
Sample color: gray Odor: slight
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	19.4	6.96	13
2	18.6	6.98	13
3	17.0	7.06	13
4	17.2	7.10	13

SAMPLES COLLECTED

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

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APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

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

Attn.: Mr. Robert Kitay

Project: 3412
Chan

Site: 726 Harrison St.
Oakland

Dear Mr. Kitay,

Attached is our report for your samples received on Friday January 19, 2001
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 March 5, 2001 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

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-01-0361

Gas/BTEX and MTBE

Aqua Science Engineers, Inc.	✉ 208 West El Pintado Road Danville, CA 94526
Attn: Robert Kitay	Phone: (925) 820-9391 Fax: (925) 837-4853
Project #: 3412	Project: Chan
Site: 726 Harrison St. Oakland	

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	01/18/2001 08:35	1
MW-2	Water	01/18/2001 10:30	2
MW-3	Water	01/18/2001 09:15	3
MW-4	Water	01/18/2001 09:50	4

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-01-0361

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

Attn.: Robert Kitay

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-1**	Lab Sample ID:	**2001-01-0361-001**
Project:	3412 Chan	Received:	01/19/2001 17:15
Site:	726 Harrison St. Oakland	Extracted:	01/24/2001 14:03
Sampled:	01/18/2001 08:35	QC-Batch:	2001/01/24-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	14000	10000	ug/L	200.00	01/24/2001 14:03	g
Benzene	450	100	ug/L	200.00	01/24/2001 14:03	
Toluene	ND	100	ug/L	200.00	01/24/2001 14:03	
Ethyl benzene	110	100	ug/L	200.00	01/24/2001 14:03	
Xylene(s)	230	100	ug/L	200.00	01/24/2001 14:03	
MTBE	9600	1000	ug/L	200.00	01/24/2001 14:03	
Surrogate(s)						
Trifluorotoluene	102.1	58-124	%	1.00	01/24/2001 14:03	
4-Bromofluorobenzene-FID	105.0	50-150	%	1.00	01/24/2001 14:03	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-01-0361

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

Attn.: Robert Kitay

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-2**	Lab Sample ID:	**2001-01-0361-002**
Project:	3412 Chan	Received:	01/19/2001 17:15
Site:	726 Harrison St. Oakland	Extracted:	01/24/2001 14:36
Sampled:	01/18/2001 10:30	QC-Batch:	2001/01/24-01.01
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/24/2001 14:36	
Benzene	ND	0.50	ug/L	1.00	01/24/2001 14:36	
Toluene	ND	0.50	ug/L	1.00	01/24/2001 14:36	
Ethyl benzene	ND	0.50	ug/L	1.00	01/24/2001 14:36	
Xylene(s)	ND	0.50	ug/L	1.00	01/24/2001 14:36	
MTBE	ND	5.0	ug/L	1.00	01/24/2001 14:36	
Surrogate(s)						
Trifluorotoluene	99.6	58-124	%	1.00	01/24/2001 14:36	
4-Bromofluorobenzene-FID	96.2	50-150	%	1.00	01/24/2001 14:36	

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-01-0361

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

Attn.: Robert Kitay

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-3**	Lab Sample ID:	**2001-01-0361-003**
Project:	3412 Chan	Received:	01/19/2001 17:15
Site:	726 Harrison St. Oakland	Extracted:	01/24/2001 15:09
Sampled:	01/18/2001 09:15	QC-Batch:	2001/01/24-01.01
Matrix:	Water		

Sample/Analysis Flag o (See Legend & Note section)

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	1200	500	ug/L	10.00	01/24/2001 15:09	g
Benzene	ND	5.0	ug/L	10.00	01/24/2001 15:09	
Toluene	ND	5.0	ug/L	10.00	01/24/2001 15:09	
Ethyl benzene	ND	5.0	ug/L	10.00	01/24/2001 15:09	
Xylene(s)	ND	5.0	ug/L	10.00	01/24/2001 15:09	
MTBE	1000	50	ug/L	10.00	01/24/2001 15:09	
Surrogate(s)						
Trifluorotoluene	97.4	58-124	%	1.00	01/24/2001 15:09	
4-Bromofluorobenzene-FID	99.2	50-150	%	1.00	01/24/2001 15:09	

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

Attn.: Robert Kitay

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-4**	Lab Sample ID:	**2001-01-0361-004**
Project:	3412 Chan	Received:	01/19/2001 17:15
Site:	726 Harrison St. Oakland	Extracted:	01/25/2001 12:15
Sampled:	01/18/2001 09:50	QC-Batch:	2001/01/25-01.01
Matrix:	Water		

Sample/Analysis Flag o (See Legend & Note section)

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	2000	250	ug/L	5.00	01/25/2001 12:15	g
Benzene	ND	2.5	ug/L	5.00	01/25/2001 12:15	
Toluene	ND	2.5	ug/L	5.00	01/25/2001 12:15	
Ethyl benzene	ND	2.5	ug/L	5.00	01/25/2001 12:15	
Xylene(s)	ND	2.5	ug/L	5.00	01/25/2001 12:15	
MTBE	780	25	ug/L	5.00	01/25/2001 12:15	
Surrogate(s)						
Trifluorotoluene	92.0	58-124	%	1.00	01/25/2001 12:15	
4-Bromofluorobenzene-FID	98.5	50-150	%	1.00	01/25/2001 12:15	

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

Attn.: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report
Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2001/01/24-01.01**

MB: 2001/01/24-01.01-001

Date Extracted: 01/24/2001 10:08

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	01/24/2001 10:08	
Benzene	ND	0.5	ug/L	01/24/2001 10:08	
Toluene	ND	0.5	ug/L	01/24/2001 10:08	
Ethyl benzene	ND	0.5	ug/L	01/24/2001 10:08	
Xylene(s)	ND	0.5	ug/L	01/24/2001 10:08	
MTBE	ND	5.0	ug/L	01/24/2001 10:08	
Surrogate(s)					
Trifluorotoluene	107.0	58-124	%	01/24/2001 10:08	
4-Bromofluorobenzene-FID	106.8	50-150	%	01/24/2001 10:08	

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

Attn.: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report
Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2001/01/25-01.01**

MB: 2001/01/25-01.01-003

Date Extracted: 01/25/2001 06:46

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	01/25/2001 06:46	
Benzene	ND	0.5	ug/L	01/25/2001 06:46	
Toluene	ND	0.5	ug/L	01/25/2001 06:46	
Ethyl benzene	ND	0.5	ug/L	01/25/2001 06:46	
Xylene(s)	ND	0.5	ug/L	01/25/2001 06:46	
MTBE	ND	5.0	ug/L	01/25/2001 06:46	
Surrogate(s)					
Trifluorotoluene	101.0	58-124	%	01/25/2001 06:46	
4-Bromofluorobenzene-FID	99.0	50-150	%	01/25/2001 06:46	

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

Attn: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/01/24-01.01**

LCS: 2001/01/24-01.01-002 Extracted: 01/24/2001 10:41 Analyzed 01/24/2001 10:41

LCSD: 2001/01/24-01.01-003 Extracted: 01/24/2001 11:14 Analyzed 01/24/2001 11:14

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	540	554	500	500	108.0	110.8	2.6	75-125	20		
Benzene	99.0	98.3	100.0	100.0	99.0	98.3	0.7	77-123	20		
Toluene	88.8	88.3	100.0	100.0	88.8	88.3	0.6	78-122	20		
Ethyl benzene	95.6	94.4	100.0	100.0	95.6	94.4	1.3	70-130	20		
Xylene(s)	285	284	300	300	95.0	94.7	0.3	75-125	20		
Surrogate(s)											
Trifluorotoluene	491	484	500	500	98.2	96.8		58-124			
4-Bromofluorobenzene-FI	464	466	500	500	92.8	93.2		50-150			

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

Attn: Robert Kitay

Test Method: 8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/01/25-01.01**

LCS: 2001/01/25-01.01-004 Extracted: 01/25/2001 07:19 Analyzed 01/25/2001 07:19

LCSD: 2001/01/25-01.01-005 Extracted: 01/25/2001 07:52 Analyzed 01/25/2001 07:52

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Benzene	94.2	96.3	100.0	100.0	94.2	96.3	2.2	77-123	20		
Toluene	85.1	86.1	100.0	100.0	85.1	86.1	1.2	78-122	20		
Ethyl benzene	91.2	93.3	100.0	100.0	91.2	93.3	2.3	70-130	20		
Xylene(s)	271	278	300	300	90.3	92.7	2.6	75-125	20		
Surrogate(s)											
Trifluorotoluene	478	479	500	500	95.6	95.8		58-124			

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

Attn: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2001/01/25-01.01**

LCS: 2001/01/25-01.01-016 Extracted: 01/25/2001 16:06 Analyzed 01/25/2001 16:06

LCSD: 2001/01/25-01.01–001 Extracted: 01/25/2001 16:06 Analyzed 01/25/2001 16:06

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	558		500		111.6			75-125	20		
Surrogate(s)											
4-Bromofluorobenzene-FI	432		500		86.4			50-150			

STL ChromaLab

Environmental Services (CA 1094)

Submission #: 2001-01-0361

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

Attn.: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Matrix Spike (MS / MSD) **Water** **QC Batch # 2001/01/24-01.01**

Sample ID: **MW-2** Lab Sample ID: 2001-01-0361-002

MS: 2001/01/24-01.01-004 Extracted: 01/24/2001 20:37 Analyzed: 01/24/2001 20:37 Dilution: 1.0

MSD: 2001/01/24-01.01-005 Extracted: 01/24/2001 21:10 Analyzed: 01/24/2001 21:10 Dilution: 1.0

Compound	Conc. [ug/L]			Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	MS	MSD	Sample	MS	MSD	MS	MSD	[%]	Recovery	RPD	MS	MSD
Gasoline	494	464	ND	500	500	98.8	92.8	6.3	65-135	20		
Benzene	96.6	97.3	ND	100.0	100.0	96.6	97.3	0.7	65-135	20		
Toluene	85.8	85.8	ND	100.0	100.0	85.8	85.8	0.0	65-135	20		
Ethyl benzene	90.8	93.6	ND	100.0	100.0	90.8	93.6	3.0	65-135	20		
Xylene(s)	268	263	ND	300	300	89.3	87.7	1.8	65-135	20		
Surrogate(s)												
Trifluorotoluene	478	483		500	500	95.6	96.6		58-124			
4-Bromofluorobenzene-F	431	431		500	500	86.2	86.2		50-150			

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

Attn: Robert Kitay

Test Method: 8015M
8020

Prep Method: 5030

Legend & Notes

Gas/BTEX and MTBE

Analysis Flags

o

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

Analyte Flags

g

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

2001-01-0361 57010 ~~57010~~

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) E.K Peddlefoot (PHONE NO.)

PROJECT NAME Chan JOB NO. 3412

ADDRESS 726 Harrison St. Oakland

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

5-day TAT

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-DIESEL (EPA 3510/8015)	TPH-DIESEL & MOTOR OIL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	VOLATILE ORGANICS (EPA 624/8240/8260)	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)	FUEL OXYGENATES (EPA 8260)	Pb (TOTAL or DISSOLVED) (EPA 6010)	TPH-G/BTEX/5 OXY'S (EPA 8260)	TPH-G/BTEX/7 OXY'S / HVOCS (EPA 8260)			COMPOSITE
MW-1	1/18	835	Water	3	X																	
MW-2	1/18	1030	↓	↓	X																	
MW-3	1/18	915			X																	
MW-4	1/18	950			X																	

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
(signature) E.K Peddlefoot (time)	(signature) (time) 1005	(signature) (time) 1640	(signature) C Rowley (time) 1715	3.2°C
(printed name) E.K Peddlefoot (date)	(printed name) Norma (date) 1-19-01	(printed name) D Norma (date) 1/9-01	(printed name) C Rowley (date) 01/19/01	TURN AROUND TIME
Company- ASE	Company- Chandler	Company- Chandler	Company- STL-CL	STANDARD 24Hr 48Hr 72Hr
				OTHER: