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Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
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September 8, 2006

QUARTERLY GROUNDWATER MONITORING REPORT
AUGUST 2006 GROUNDWATER SAMPLING
ASE JOB NO. 3648

at
1310 Central Avenue
Alameda, California

Prepared for:
Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

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



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1.0 INTRODUCTION

Site Location (Site), See Figure 1

1310 Central Avenue
Alameda, CA

Responsible Party

Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Environmental Consulting Firm

Aqua Science Engineers, Inc. (ASE)
208 West El Pintado, Suite C
Danville, CA 94526
Contact: Robert Kitay, Senior Geologist
(925) 820-9391

Agency Review

Mr. Barney Chan
Alameda County Health Care Services Agency (ACHCSA)
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502

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

The following is a report detailing the methods and findings of the August 2006 quarterly groundwater sampling at the above-referenced site (*Figure 1*). This sampling was conducted as required by the ACHCSA and RWQCB. ASE has prepared this report on behalf of Mr. Nissan Saidian, owner of the property.



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2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On August 10, 2006, ASE measured the depth to water in each site groundwater monitoring well 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 were observed in any of the monitoring wells this quarter. However, the water sampled from MW-3 did have a slight sheen on the water surface. Groundwater elevation data is presented as *Table One*.

A groundwater potentiometric surface map is presented as *Figure 2*. Groundwater beneath the site was calculated as flowing to the northwest with a gradient of approximately 0.014 feet/foot. Groundwater flow direction beneath the site has varied from quarter to quarter. Additionally, monitoring wells, MW-1 and MW-3 in particular, have consistently been noted to be under pressure.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, all five monitoring wells were purged of three well casing volumes of groundwater using disposable polyethylene bailers. The parameters pH, temperature, and conductivity were monitored during the well purging, and samples were not collected until the parameters stabilized. Petroleum hydrocarbon odors were present during the purging and sampling of monitoring wells MW-1 and MW-3. Groundwater samples were collected from each well using disposable polyethylene bailers.

The samples were decanted from the bottom of the bailers using low flow emptying devices into 40-ml volatile organic analysis (VOA) vials, pre-preserved with hydrochloric acid, and sealed without headspace. The samples were then labeled and placed in a cooler with wet ice for transport to Kiff Analytical, LLC (ELAP #2236) of Davis, California 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 and labeled for temporary storage.

The groundwater samples collected from all five site monitoring wells were analyzed for total petroleum hydrocarbons as diesel (TPH-D) by modified EPA method 8015, and total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX), and including fuel oxygenates as methyl tertiary-butyl ether (MTBE) by EPA Method 8260B. The analytical results are presented in *Table Two*, and the certified analytical report and chain-of-custody documentation are included as *Appendix B*.



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4.0 CONCLUSIONS

Concentrations for all analyzed compounds in water samples collected from monitoring wells MW-2 and MW-4 remained very similar to previous results. Groundwater samples collected from monitoring wells MW-1 and MW-5 had a slight decrease in concentrations from the previous quarter. Groundwater samples from monitoring well MW-3 had a slight increase in concentrations. Benzene and MTBE contour maps are presented as *Figure 3* and *Figure 4*.

Concentrations Exceeding Environmental Screening Levels (ESLs)¹

- In MW-1, concentrations of TPH-G, benzene, ethyl benzene and total xylenes exceeded the ESLs.
- In MW-2, concentrations of TPH-D exceeded the ESLs.
- In MW-3, concentrations of TPH-G, BTEX, MTBE and TBA exceeded the ESLs.
- In MW-5, concentrations of MTBE exceeded the ESLs.

5.0 RECOMMENDATIONS

ASE recommends that this site remain on a quarterly sampling schedule. The next sampling is scheduled for November 2006. In addition, ASE recommends that a corrective action plan be prepared for the site as recommended in ASE's report dated July 24, 2006.

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-DHS certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

¹ As presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated February 2005.



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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.

Michael Rauser
Staff Geologist

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



Attachments: Table One and Two
Figures 1 and 2
Appendices A and B

cc: Mr. Nissan Saidian
Mr. Barney Chan, ACHCSA
Mr. Chuck Headlee, RWQCB, San Francisco Bay Region



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FIGURES



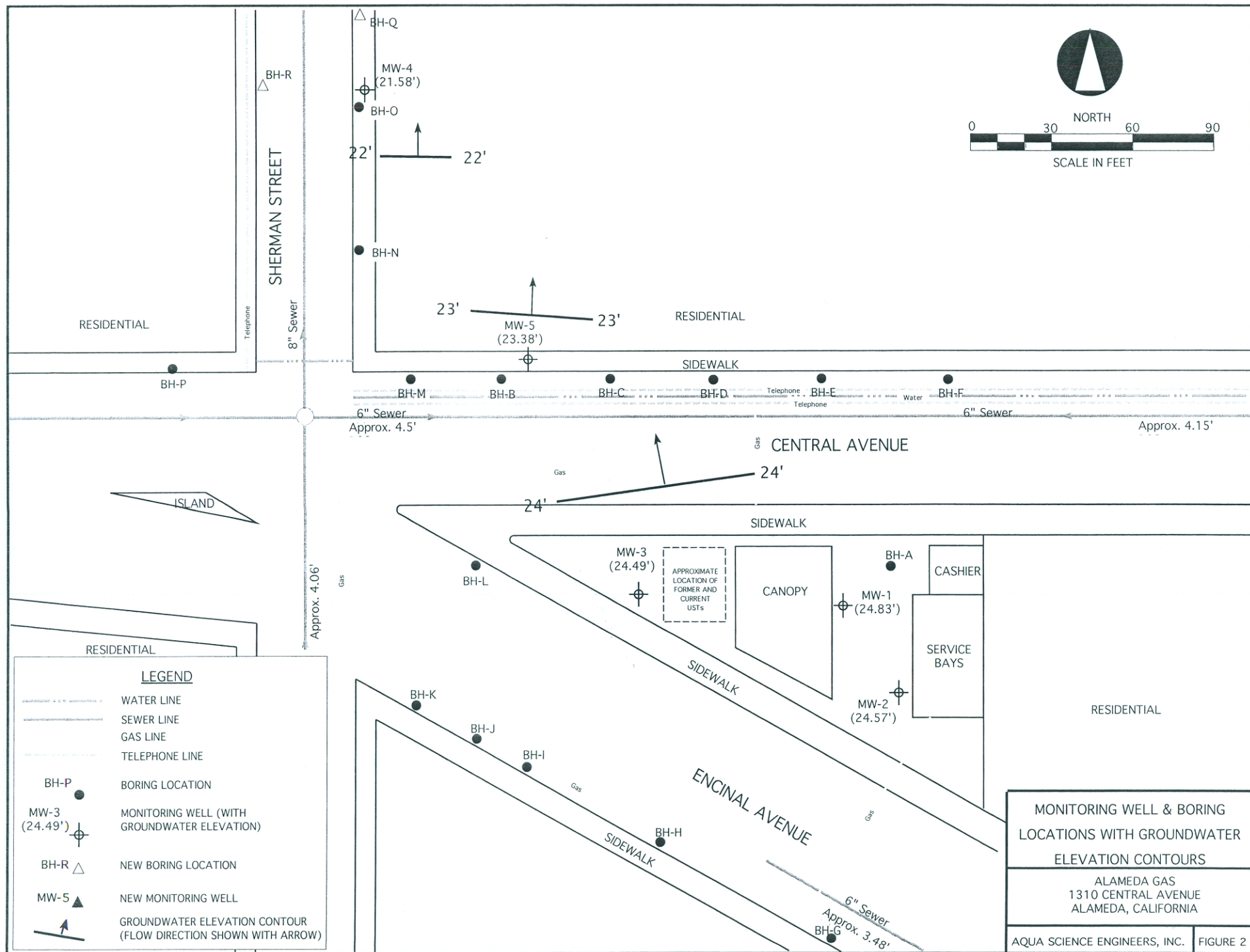
NORTH

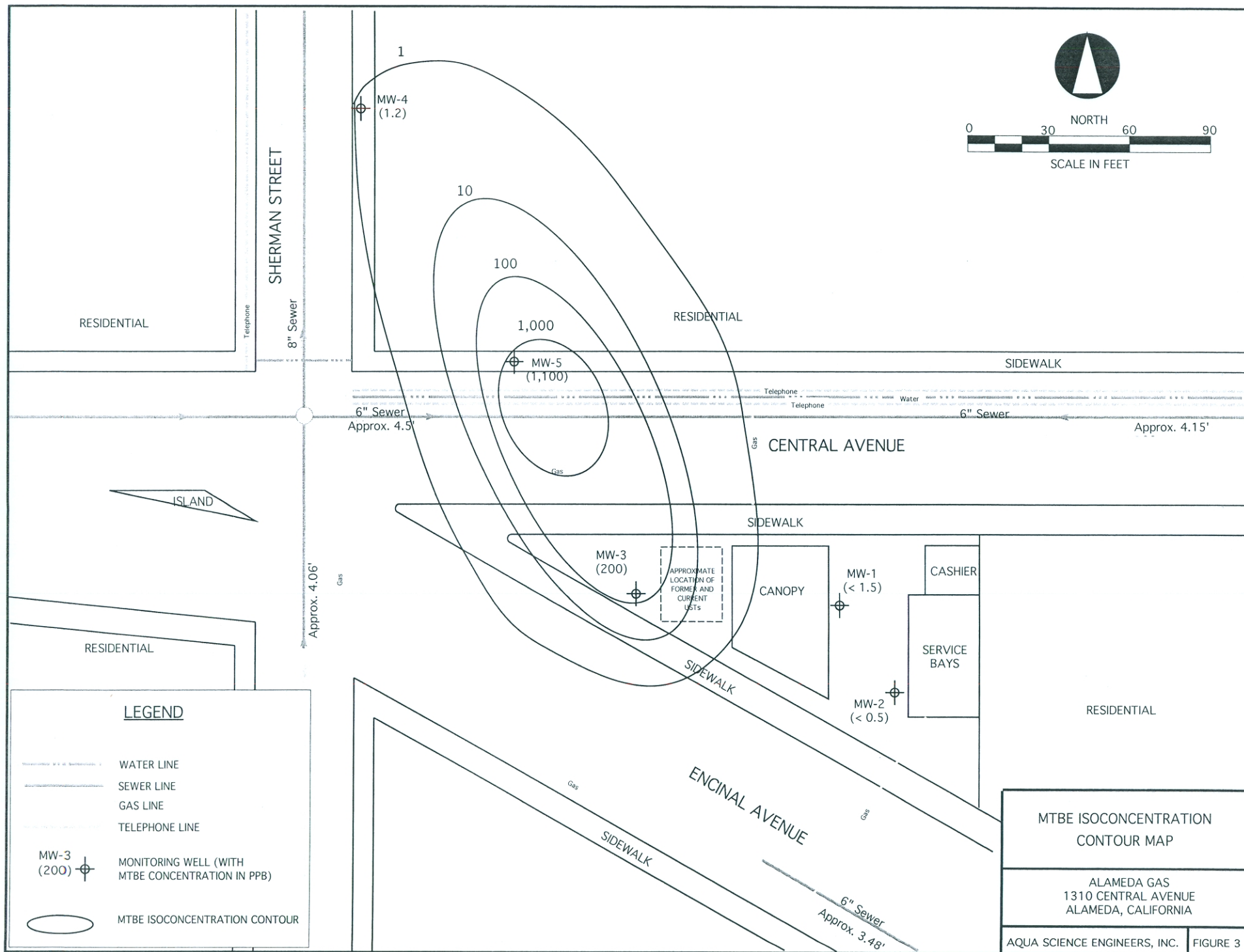
LOCATION MAP

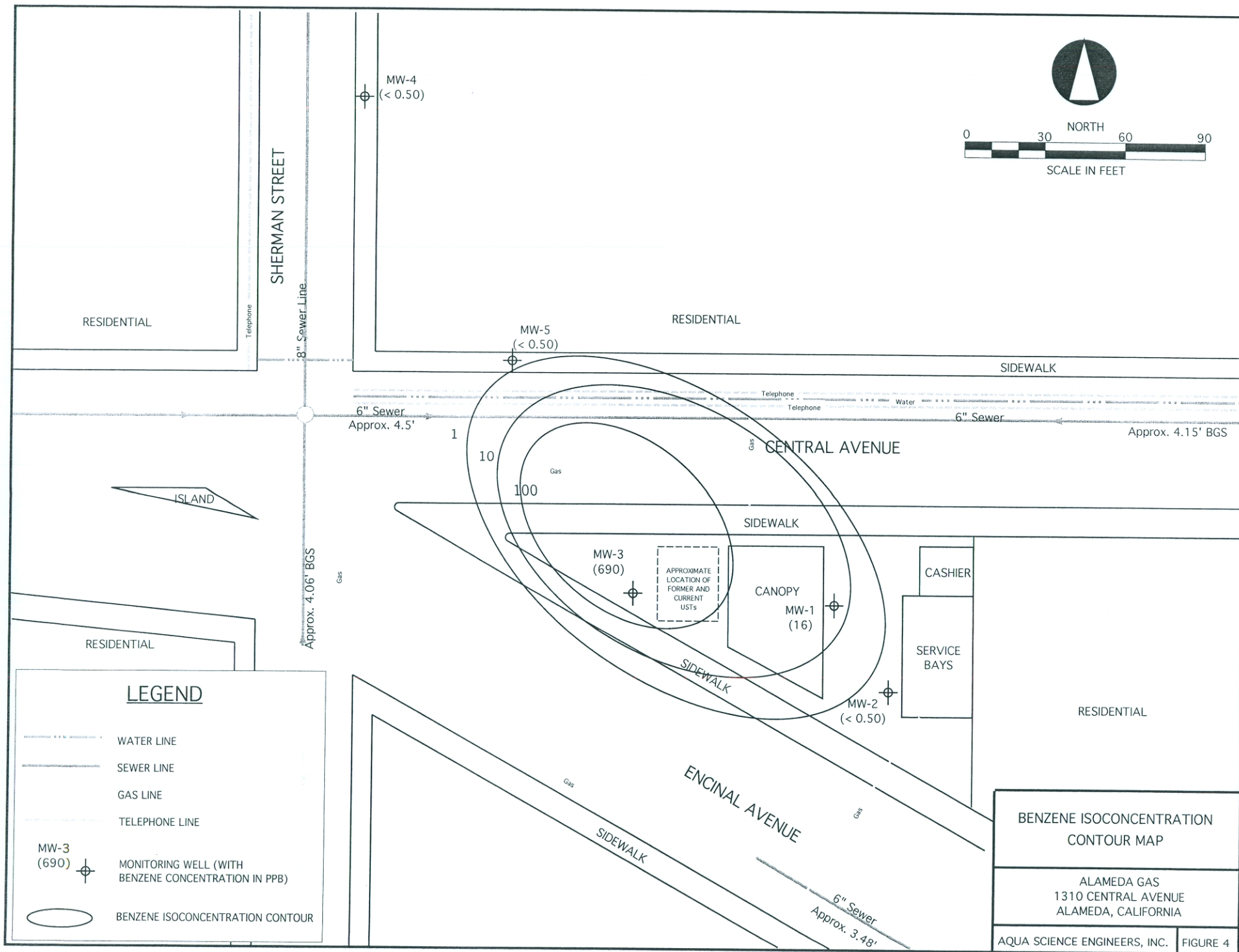
SAIDIAN PROPERTY
1310 CENTRAL AVENUE
ALAMEDA, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1









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TABLES

TABLE ONE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-1	9/6/99	26.85	5.16	21.69
	5/16/00		3.24	23.61
	8/3/00		4.15	22.70
	12/5/00		4.90	21.95
	3/5/01		3.04	23.81
	6/4/01		4.01	22.84
	6/5/02		3.73	23.12
	9/9/02		5.06	21.79
	12/19/02		4.09	22.76
	3/10/03		3.50	23.35
	6/3/03		3.66	23.19
	9/18/03		4.91	21.94
	12/22/03		4.30	22.55
	3/12/04		2.93	23.92
	6/11/04		4.23	22.62
	9/13/04		5.02	21.83
	12/16/04		3.76	23.09
	3/21/05		2.81	24.04
	6/23/05		3.66	23.19
	9/30/05		4.55	22.30
	12/8/05		4.21	22.64
	3/1/06		2.90	23.95
	5/25/06	29.18	2.84	26.34
	8/10/06		4.35	24.83

TABLE ONE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-2	9/6/99	27.18	5.56	21.62
	5/16/00		3.52	23.66
	8/3/00		4.44	22.74
	12/5/00		5.24	21.94
	3/5/01		3.28	23.90
	6/4/01		4.33	22.85
	6/5/02		3.98	23.20
	9/9/02		5.34	21.84
	12/19/02		4.33	22.85
	3/10/03		3.58	23.60
	6/3/03		3.87	23.31
	9/18/03		5.24	21.94
	12/22/03		4.47	22.71
	3/12/04		3.10	24.08
	6/11/04		4.51	22.67
	9/13/04		5.35	21.83
	12/16/04		4.09	23.09
	3/21/05		3.01	24.17
	6/23/05		3.91	23.27
	9/30/05		4.86	22.32
	12/8/05		4.49	22.69
	3/1/06		3.09	24.09
	5/25/06	29.55	3.16	26.39
	8/10/06		4.98	24.57

TABLE ONE
Groundwater Elevation Data
Saidian Property-Alameda
1310 Central Avenue, Alameda, CA

Well	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-3	9/6/00	25.30	4.02	21.28
	5/16/00		2.06	23.24
	8/3/00		3.20	22.10
	12/5/00		3.71	21.59
	3/5/01		1.90	23.40
	6/4/01		2.72	22.58
	6/5/02		2.75	22.55
	9/9/02		3.88	21.42
	12/19/02		2.79	22.51
	3/10/03		2.36	22.94
	6/3/03		2.65	22.65
	9/19/03		3.15	22.15
	12/22/03		2.83	22.47
	3/12/04		2.00	23.30
	6/11/04		3.11	22.19
	9/13/04		3.90	21.40
	12/16/04		2.89	22.41
	3/21/05		1.93	23.37
	6/23/05		2.69	22.61
	9/30/05		4.54	20.76
	12/8/05		3.05	22.25
	3/1/06		1.95	23.35
	5/25/06	27.74	2.11	25.63
	8/10/06		3.25	24.49
MW-4	5/25/06	26.23	2.54	23.69
	8/10/06		4.65	21.58
MW-5	5/25/06	26.78	2.60	24.18
	8/10/06		3.40	23.38

Notes:

Wells were resurveyed on April 27, 2006

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per billion (ppb)

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-1										
9/6/99	5,700	8,700	170	59	22	85	20,000	NA	NA	NA
5/16/00	20,000	< 7,500	38	6.3	740	1,600	< 5.0	< 5.0	< 50	< 5.0
8/3/00	20,000	< 6,000	56	9.7	920	1,600	< 0.5	< 0.5	< 50	< 0.5
12/5/00	31,000	< 4,000	64	27	820	2,200	< 10	< 5.0	< 50	< 5.0
3/5/01	20,000	< 4,000	19	< 5.0	480	870	< 5.0	< 5.0	< 50	< 5.0
6/4/01	23,000	< 7,000	58	50	710	2,100	5.1	< 5.0	< 50	< 5.0
6/5/02	7,400	< 1,500	9.3	6.7	180	230	< 1.0	< 1.0	< 10	< 1.0
9/9/02	8,300	< 3,500	32	20	390	670	< 2.0	< 2.0	< 20	< 2.0
12/19/02	5,100	--	7.9	2.5	56	93	< 1.0	< 1.0	< 10	< 1.0
3/10/03	2,000	< 2,000	3.4	2.9	80	98	< 0.5	< 0.5	< 5.0	< 0.5
6/3/03	7,300	< 4,000	6.8	9.9	300	1,000	2.3	< 0.5	< 5.0	< 0.5
9/18/03	9,000	< 3,000	26	22	420	1,200	4.5	< 1.5	< 20	< 1.5
12/22/03	4,300	< 2,000	12	6.7	200	290	9.1	< 1.0	< 10	< 1.0
3/12/04	7,000	< 3,000	8.3	8.2	250	760	3.9	< 2.0	< 20	< 2.0
6/11/04	13,000	< 4,000	26	27	530	1,700	< 2.5	< 2.5	< 15	< 2.5
9/13/04	17,000	< 4,000	37	42	840	2,000	< 5.0	< 5.0	< 50	< 5.0
12/16/04	1,800	< 1,000	5.9	1.9	100	35	16	< 0.5	< 5.0	< 0.5
3/21/05	7,500	< 3,000	3.4	4.2	290	760	< 1.5	< 1.5	< 20	< 1.5
6/23/05	11,000	< 8,000	15	11	370	910	2.4	< 1.5	< 7	< 1.5
9/30/05	9,800	< 4000	32	25	540	680	1.6	< 1.5	< 7.0	< 1.5
12/8/05	9,200	< 4,000	27	21	500	490	2.2	< 1.5	< 7.0	< 1.5
3/1/06	6,500	< 4,000	8.1	9.4	370	660	1.8	< 1.5	< 6.0	< 1.5
5/25/06	10,000	< 3,000	19	14	900	620	< 1.5	< 1.5	< 7.0	< 1.5
8/10/06	9,800	< 1,500	16	8.1	640	180	< 1.5	< 1.5	< 7.0	< 1.5

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per billion (ppb)

[illegible]

TABLE TWO
Summary of Chemical Analysis of GROUNDWATER Samples
Alameda Gas, 1310 Central Avenue, Alameda, California
All results are in parts per billion (ppb)

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-3										
9/6/99	43,000	870	860	70	< 0.5	65	120,000	NA	NA	NA
5/16/00	17,000	< 5,000	2,800	60	380	190	990	9.1	350	< 5.0
8/3/00	16,000	< 2,000	1,600	29	210	53	1,200	21	260	< 2.0
12/5/00	17,000	5,800	1,700	45	460	240	1,100	21	230	< 5.0
3/5/01	29,000	<1300	2,100	68	280	100	180	<8.0	<80	<8.0
6/4/01	17,000	<6,000	2,000	56	340	230	300	<10	130	<10
6/5/02	11,000	<2,000	1,600	46	210	47	790	<10	220	<10
9/9/02	12,000	< 800	1,400	44	130	27	760	< 10	160	< 10
12/19/02	10,000	--	740	32	180	38	86	< 5.0	< 50	< 5.0
3/10/03	13,000	< 6,000	1,200	42	240	35	470	5.3	140	< 5.0
6/3/03	6,500	< 3,000	750	21	46	15	1,300	< 50	280	< 2.5
9/18/03	9,800	< 3,000	1,500	38	170	32	420	< 10	150	< 10
12/22/03	8,800	< 2,000	1,100	32	82	20	330	5.8	52	< 5.0
3/12/04	7,600	< 3,000	590	23	69	17	470	9.2	63	< 2.5
6/11/04	7,800	< 2,000	840	19	58	15	710	12	140	< 1.5
9/13/04	7,500	< 1,500	840	17	23	7.8	730	15	93	< 2.5
12/16/04	9,300	< 2,000	1,100	26	76	13	600	12	130	< 2.5
3/21/05	11,000	< 3,000	1,200	37	190	24	460	9.3	100	< 2.5
6/23/05	9,600	< 4,000	1,100	28	93	23	370	8.2	67	< 2.5
9/30/05	9,000	< 3,000	690	18	32	14	380	8.4	72	< 1.5
12/8/05	8,700	< 3,000	560	23	38	12	350	6.9	82	< 1.5
3/1/06	8,400	< 2,000	410	24	42	13	360	8.0	58	< 1.5
5/25/06	9,900	< 2,000	630	25	13	13	190	5.3	59	< 1.5
8/10/06	14,000	< 3,000	690	43	130	26	200	5.4	70	< 1.5
MW-4										
5/25/06	< 50	86	< 0.5	< 0.5	< 0.5	< 0.5	1.2	< 0.5	< 5.0	< 0.5
8/10/06	< 50	< 50	< 0.50	< 0.50	< 0.50	< 0.50	1.2	< 0.50	< 5.0	< 0.50
MW-5										
5/25/06	410	< 80	< 2.5	< 2.5	< 2.5	< 2.5	1,800	28	44	< 2.5
8/10/06	55	< 50	< 0.50	< 0.50	< 0.50	< 0.50	1,100	19	9.1	< 0.50
ESL	100	100	1	40	30	20	5	NE	12	VARIES

Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

ESL = Environmental screening levels presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (February 2005)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

NA = Samples Not Analyzed for this compound.

NE = ESLs are not established.

Non-detectable concentrations are noted by the less than symbol (<) followed by the detection limit.

Most recent data in bold.



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APPENDIX A

Well Sampling Field Logs

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WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 8-10-06

WELL ID. MW-1 SAMPLER MLR

TOTAL DEPTH OF WELL 11.03 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 4.35

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 6.68

NUMBER OF GALLONS PER WELL CASING VOLUME 1.12

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 3.34

EQUIPMENT USED TO PURGE WELL Bailer

TIME EVACUATION STARTED 1225 TIME EVACUATION COMPLETED 1240

TIME SAMPLES WERE COLLECTED 1245

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 4.0

SAMPLING DEVICE Bailer

SAMPLE COLOR Clear ODOR/SEDIMENT slight 0 / no S.

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	72.9	6.30	450
2	69.9	6.57	456
3	70.7	6.66	459

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-1	3	VUA	8260B	1H

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WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 8-10-06

WELL ID. MW-2 SAMPLER MLR

TOTAL DEPTH OF WELL 12.20 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 4.98

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 7.22

NUMBER OF GALLONS PER WELL CASING VOLUME 1.2

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 3.6

EQUIPMENT USED TO PURGE WELL Bailer

TIME EVACUATION STARTED 1150 TIME EVACUATION COMPLETED 1215

TIME SAMPLES WERE COLLECTED 1220

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 4.0

SAMPLING DEVICE Bailer

SAMPLE COLOR clear ODOR/SEDIMENT NO 0 / little brown silt

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	73.0	6.80	182
2	71.3	6.20	175
3	71.0	6.80	172

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-2	3	VUA	82608	HLL

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WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3848 DATE OF SAMPLING 8-10-06

WELL ID. MW-3 SAMPLER MLR

TOTAL DEPTH OF WELL 16.03 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 3.25

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 12.78

NUMBER OF GALLONS PER WELL CASING VOLUME 2.1

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 6.4

EQUIPMENT USED TO PURGE WELL

TIME EVACUATION STARTED 1125 TIME EVACUATION COMPLETED 1140

TIME SAMPLES WERE COLLECTED 1145

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 7.0

SAMPLING DEVICE Bailer

SAMPLE COLOR clear ODOR/SEDIMENT slight O / little silt

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
<u>2</u>	<u>75.1</u>	<u>6.69</u>	<u>489</u>
<u>4</u>	<u>72.2</u>	<u>6.47</u>	<u>566</u>
<u>6</u>	<u>73.4</u>	<u>6.40</u>	<u>593</u>

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-3</u>	<u>3</u>	<u>VOA</u>	<u>8260B</u>	<u>He</u>

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WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 8-10-06

WELL ID. MW-4 SAMPLER MLR

TOTAL DEPTH OF WELL 14.2 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 4.65

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 9.55

NUMBER OF GALLONS PER WELL CASING VOLUME 1.59

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4.78

EQUIPMENT USED TO PURGE WELL Pump / Bailer

TIME EVACUATION STARTED 930 TIME EVACUATION COMPLETED 1020

TIME SAMPLES WERE COLLECTED 1025

DID WELL GO DRY Yes AFTER HOW MANY GALLONS 2

VOLUME OF GROUNDWATER PURGED 25.0

SAMPLING DEVICE Bailer

SAMPLE COLOR clear gray ODOR/SEDIMENT No 0 / No S.

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	69.5	8.24	552
2	69.0	7.11	489
3	67.8	7.06	484

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-4	3	VHA	8260B	HU

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME Alameda

JOB NUMBER 3648 DATE OF SAMPLING 8-10-06

WELL ID. MW-5 SAMPLER MLR

TOTAL DEPTH OF WELL 14.8 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 3.40

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 11.40

NUMBER OF GALLONS PER WELL CASING VOLUME 1.9

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.7

EQUIPMENT USED TO PURGE WELL 2-stage Pump / Bailer

TIME EVACUATION STARTED 1030 TIME EVACUATION COMPLETED 1115

TIME SAMPLES WERE COLLECTED 1120

DID WELL GO DRY No AFTER HOW MANY GALLONS 6

VOLUME OF GROUNDWATER PURGED 12

SAMPLING DEVICE Bailer

SAMPLE COLOR clear gray ODOR/SEDIMENT no 0 / some fine silt

CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
2	67.3	7.03	519
4	67.5	6.88	509
6	68.2	6.92	427

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-5	3	VDA	8260B	HU



Aqua Science Engineers, Inc. 208 West El Pintado, Suite C, Danville, CA 94526
(925) 820-9391 - Fax (925) 837-4853 - www.aquascienceengineers.com

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 51621

Date : 8/23/2006

Mike Rauser
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 5 Water Samples
Project Name : Alameda-Saidian
Project Number : 3648

Dear Mr. Rauser,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 530-297-4800.

Sincerely,

A handwritten signature in black ink, appearing to read "Joel Kiff".

Joel Kiff



Subject : 5 Water Samples
Project Name : Alameda-Saidian
Project Number : 3648

Case Narrative

Tert-Butanol results for sample MW-5 may be biased slightly high and are flagged with a 'J'. A fraction of MtBE (typically less than 1%) converts to Tert-Butanol during the analysis of water samples. We consider this conversion effect to be mathematically significant in samples that contain MtBE/Tert-Butanol in ratios of over 20:1.

Matrix Spike/Matrix Spike Duplicate Results associated with samples MW-1 and MW-3 for the analyte Methyl-t-butyl ether were affected by the analyte concentrations already present in the un-spiked sample.

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for samples MW-1 and MW-3.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for sample MW-2. These hydrocarbons are higher boiling than typical diesel fuel.

Approved By: _____

Joe Kiff



Report Number : 51621

Date : 8/23/2006

Project Name : **Alameda-Saidian**

Project Number : **3648**

Sample : **MW-1**

Matrix : Water

Lab Number : 51621-01

Sample Date : 8/10/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	16	1.5	ug/L	EPA 8260B	8/16/2006
Toluene	8.1	1.5	ug/L	EPA 8260B	8/16/2006
Ethylbenzene	640	1.5	ug/L	EPA 8260B	8/16/2006
Total Xylenes	180	1.5	ug/L	EPA 8260B	8/16/2006
Methyl-t-butyl ether (MTBE)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Tert-amyl methyl ether (TAME)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Tert-Butanol	< 7.0	7.0	ug/L	EPA 8260B	8/16/2006
TPH as Gasoline	9800	150	ug/L	EPA 8260B	8/16/2006
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	8/16/2006
4-Bromofluorobenzene (Surr)	96.3		% Recovery	EPA 8260B	8/16/2006
TPH as Diesel (Silica Gel)	< 1500	1500	ug/L	M EPA 8015	8/16/2006
Octacosane (Diesel Surrogate)	90.0		% Recovery	M EPA 8015	8/16/2006

Approved By:

Joel Kiff

Project Name : **Alameda-Saidian**

Project Number : **3648**

Sample : **MW-2**

Matrix : Water

Lab Number : 51621-02

Sample Date : 8/10/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/15/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/15/2006
Toluene - d8 (Surr)	98.9		% Recovery	EPA 8260B	8/15/2006
4-Bromofluorobenzene (Surr)	98.7		% Recovery	EPA 8260B	8/15/2006
TPH as Diesel (Silica Gel)	870	50	ug/L	M EPA 8015	8/22/2006
Octacosane (Diesel Surrogate)	113		% Recovery	M EPA 8015	8/22/2006

Approved By:

Joel Kiff



Report Number : 51621

Date : 8/23/2006

Project Name : **Alameda-Saidian**

Project Number : **3648**

Sample : **MW-3**

Matrix : Water

Lab Number : 51621-03

Sample Date : 8/10/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	690	1.5	ug/L	EPA 8260B	8/16/2006
Toluene	43	1.5	ug/L	EPA 8260B	8/16/2006
Ethylbenzene	130	1.5	ug/L	EPA 8260B	8/16/2006
Total Xylenes	26	1.5	ug/L	EPA 8260B	8/16/2006
Methyl-t-butyl ether (MTBE)	200	1.5	ug/L	EPA 8260B	8/16/2006
Diisopropyl ether (DIPE)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Ethyl-t-butyl ether (ETBE)	< 1.5	1.5	ug/L	EPA 8260B	8/16/2006
Tert-amyl methyl ether (TAME)	5.4	1.5	ug/L	EPA 8260B	8/16/2006
Tert-Butanol	70	7.0	ug/L	EPA 8260B	8/16/2006
TPH as Gasoline	14000	250	ug/L	EPA 8260B	8/17/2006
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	8/16/2006
4-Bromofluorobenzene (Surr)	98.3		% Recovery	EPA 8260B	8/16/2006
TPH as Diesel (Silica Gel)	< 3000	3000	ug/L	M EPA 8015	8/17/2006
Octacosane (Diesel Surrogate)	90.2		% Recovery	M EPA 8015	8/17/2006

Approved By:

Joel Kiff

Project Name : **Alameda-Saidian**

Project Number : **3648**

Sample : **MW-4**

Matrix : Water

Lab Number : 51621-04

Sample Date : 8/10/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Methyl-t-butyl ether (MTBE)	1.2	0.50	ug/L	EPA 8260B	8/17/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/17/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/17/2006
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	8/17/2006
4-Bromofluorobenzene (Surr)	98.3		% Recovery	EPA 8260B	8/17/2006
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	8/22/2006
Octacosane (Diesel Surrogate)	91.4		% Recovery	M EPA 8015	8/22/2006

Approved By:

Joel Kiff



Report Number : 51621

Date : 8/23/2006

Project Name : **Alameda-Saidian**

Project Number : **3648**

Sample : **MW-5**

Matrix : Water

Lab Number : 51621-05

Sample Date : 8/10/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Methyl-t-butyl ether (MTBE)	1100	2.5	ug/L	EPA 8260B	8/16/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Tert-amyl methyl ether (TAME)	19	0.50	ug/L	EPA 8260B	8/15/2006
Tert-Butanol	9.1 J	5.0	ug/L	EPA 8260B	8/15/2006
TPH as Gasoline	55	50	ug/L	EPA 8260B	8/15/2006
Toluene - d8 (Surr)	99.6		% Recovery	EPA 8260B	8/15/2006
4-Bromofluorobenzene (Surr)	98.0		% Recovery	EPA 8260B	8/15/2006
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	8/17/2006
Octacosane (Diesel Surrogate)	90.2		% Recovery	M EPA 8015	8/17/2006

Approved By:

Joel Kiff

QC Report : Method Blank Data

Project Name : **Alameda-Saidian**

Project Number : **3648**

Report Number : 51621

Date : 8/23/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	8/16/2006
Octacosane (Diesel Surrogate)	103		%	M EPA 8015	8/16/2006
TPH as Diesel (Silica Gel)	< 50	50	ug/L	M EPA 8015	8/22/2006
Octacosane (Diesel Surrogate)	110		%	M EPA 8015	8/22/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/16/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/16/2006
Toluene - d8 (Surr)	97.8		%	EPA 8260B	8/16/2006
4-Bromofluorobenzene (Surr)	103		%	EPA 8260B	8/16/2006

Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/17/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/17/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/17/2006
Toluene - d8 (Surr)	99.6		%	EPA 8260B	8/17/2006
4-Bromofluorobenzene (Surr)	99.4		%	EPA 8260B	8/17/2006

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/16/2006
Benzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Toluene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	8/15/2006
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	8/15/2006
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	8/15/2006
Toluene - d8 (Surr)	101		%	EPA 8260B	8/15/2006
4-Bromofluorobenzene (Surr)	98.1		%	EPA 8260B	8/15/2006

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By: Joel Kiff



QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 51621

Date : 8/23/2006

Project Name : Alameda-Saidian

Project Number : 3648

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
Benzene	51642-01	<0.50	39.7	39.9	42.8	42.3	ug/L	EPA 8260B	8/16/06	108	106	1.73	70-130	25
Toluene	51642-01	<0.50	39.7	39.9	41.5	40.8	ug/L	EPA 8260B	8/16/06	105	102	2.40	70-130	25
Tert-Butanol	51642-01	<5.0	198	200	207	201	ug/L	EPA 8260B	8/16/06	104	100	3.83	70-130	25
Methyl-t-Butyl Ether	51642-01	140	39.7	39.9	172	171	ug/L	EPA 8260B	8/16/06	68.8	65.6	4.79	70-130	25
Benzene	51612-07	<0.50	39.9	39.8	43.6	43.2	ug/L	EPA 8260B	8/17/06	109	108	0.637	70-130	25
Toluene	51612-07	<0.50	39.9	39.8	42.7	42.3	ug/L	EPA 8260B	8/17/06	107	106	0.871	70-130	25
Tert-Butanol	51612-07	5.6	200	199	220	225	ug/L	EPA 8260B	8/17/06	108	110	2.47	70-130	25
Methyl-t-Butyl Ether	51612-07	<0.50	39.9	39.8	38.3	38.6	ug/L	EPA 8260B	8/17/06	96.0	96.8	0.812	70-130	25
Benzene	51114-12	<0.50	40.0	40.0	43.1	43.2	ug/L	EPA 8260B	8/16/06	108	108	0.351	70-130	25
Toluene	51114-12	<0.50	40.0	40.0	43.0	43.0	ug/L	EPA 8260B	8/16/06	108	107	0.153	70-130	25
Tert-Butanol	51114-12	<5.0	200	200	206	204	ug/L	EPA 8260B	8/16/06	103	102	1.44	70-130	25
Methyl-t-Butyl Ether	51114-12	<0.50	40.0	40.0	41.5	42.0	ug/L	EPA 8260B	8/16/06	104	105	1.05	70-130	25
Benzene	51618-06	1.4	40.0	40.0	47.6	46.4	ug/L	EPA 8260B	8/15/06	115	112	2.51	70-130	25
Toluene	51618-06	<0.50	40.0	40.0	45.3	44.1	ug/L	EPA 8260B	8/15/06	113	110	2.69	70-130	25
Tert-Butanol	51618-06	<5.0	200	200	210	207	ug/L	EPA 8260B	8/15/06	105	104	1.14	70-130	25
Methyl-t-Butyl Ether	51618-06	92	40.0	40.0	133	132	ug/L	EPA 8260B	8/15/06	101	98.7	2.45	70-130	25
TPH as Diesel	Blank	<50	1000	1000	929	896	ug/L	M EPA 8015	8/16/06	92.9	89.6	3.63	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By: Joel Kiff



QC Report : Matrix Spike/ Matrix Spike Duplicate

Report Number : 51621

Date : 8/23/2006

Project Name : **Alameda-Saidian**

Project Number : **3648**

Parameter	Spiked Sample	Sample Value	Spike Level	Spike Dup. Level	Spiked Sample Value	Duplicate Spiked Sample Value	Units	Analysis Method	Date Analyzed	Spiked Sample Percent Recov.	Duplicate Spiked Sample Percent Recov.	Relative Percent Diff.	Spiked Sample Percent Recov. Limit	Relative Percent Diff. Limit
TPH as Diesel	Blank	<50	1000	1000	1010	1020	ug/L	M EPA 8015	8/22/06	101	102	0.462	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

Approved By:  Joel Kiff

QC Report : Laboratory Control Sample (LCS)

Report Number : 51621

Date : 8/23/2006

Project Name : **Alameda-Saidian**Project Number : **3648**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	8/16/06	109	70-130
Toluene	40.0	ug/L	EPA 8260B	8/16/06	107	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/16/06	101	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/16/06	96.3	70-130
Benzene	40.0	ug/L	EPA 8260B	8/17/06	101	70-130
Toluene	40.0	ug/L	EPA 8260B	8/17/06	97.7	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/17/06	98.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/17/06	95.8	70-130
Benzene	40.0	ug/L	EPA 8260B	8/16/06	101	70-130
Toluene	40.0	ug/L	EPA 8260B	8/16/06	104	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/16/06	107	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/16/06	99.0	70-130
Benzene	40.0	ug/L	EPA 8260B	8/15/06	108	70-130
Toluene	40.0	ug/L	EPA 8260B	8/15/06	109	70-130
Tert-Butanol	200	ug/L	EPA 8260B	8/15/06	103	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	8/15/06	105	70-130

KIFF ANALYTICAL, LLC

Approved By:

Joel Kiff

2795 2nd St, Suite 300 Davis, CA 95616 530-297-4800

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13/0

Alameda-Saidian
Central Ave

JOB NO.

1-

1000

✓	3
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122d

1145

1025



1120

[illegible]

SAMPLE RECEIPT

Temp °C 2.8 Therm. ID# TR-6
Initial JJA Date 08/14/06
Time 022 Coolant present (X) No

(time)

8-10

(date)

(time)

(date)

(time)

(date)

(time

(date

COMMENTS:

TURN AROUND TIME

STANDARD 24Hr 48Hr 72Hr

OTHER: