



July 3, 2001

3828

QUARTERLY GROUNDWATER MONITORING REPORT
JUNE 2001 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

1.0 INTRODUCTION

Site Location (Site), See Figure 1

1310 Central Avenue
Alameda, CA

Responsible Party

Mr. Pritpaul Sappal
c/o Mr. Nissan Saidian
5733 Medallion Court
Castro Valley, CA 94522

Environmental Consulting Firm

Aqua Science Engineers, Inc. (ASE)
208 West El Pintado
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 June 4, 2001 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.

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On June 4, 2001, ASE associate geologist Erik Paddleford 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 with a product thickness bailer. No free-floating hydrocarbons or sheen were observed in any site monitoring well. Groundwater elevation data is presented as *Table One*. The water table dropped an average of approximately 0.95 feet this quarter.

A groundwater potentiometric surface map for the June 4, 2001 sampling is presented as *Figure 2*. Groundwater beneath the site flows to the west with a gradient of approximately 0.0054-feet/foot, which is relatively consistent with previous findings.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

Prior to sampling, all 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 and MW-3. The parameters pH, temperature and conductivity were monitored during the well purging, and samples were not collected until the parameters stabilized. Groundwater samples were collected from each well using dedicated polyethylene bailers.

All samples were decanted from the bailers 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 coolers with wet ice for transport to Kiff Analytical, LLC 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 55-gallon steel drums and labeled for temporary storage.

The groundwater samples collected from all three site monitoring wells were analyzed for total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 3550/8015M, total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX) and fuel oxygenates by EPA Method 8260. The analytical results are presented in *Table Two*, and the certified analytical report and chain-of-custody documentation are included as *Appendix B*.

4.0 CONCLUSIONS

The groundwater flow was to the southwest at a gradient of 0.0054 feet/foot, which is relatively consistent with previous findings. The water table dropped an average of approximately 0.95-feet this quarter.

Groundwater samples collected from monitoring well MW-1 contained 23,000 parts per billion (ppb) TPH-G, 58 ppb benzene, 50 ppb toluene, 710 ppb ethyl benzene, 2,100 ppb total xylenes, and 5.1 ppb methyl-tertiary-butyl ether (MTBE). No other oxygenates were detected in groundwater samples collected from monitoring well MW-1. The groundwater samples collected from monitoring well MW-3 contained 17,000 ppb TPH-G, 2,000 ppb benzene, 56 ppb toluene, 340 ppb ethyl benzene, 230 ppb total xylenes, 300 ppb MTBE, and 130 ppb tert-butanol (TBA). No other oxygenates were detected in monitoring well MW-3. No TPH-G, TPH-D, BTEX, or oxygenates were detected above the laboratory detection limits in groundwater samples collected from monitoring well MW-2.

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

Hydrocarbon concentrations in groundwater samples collected from all three monitoring wells are similar to previous results.

5.0 RECOMMENDATIONS

ASE recommends that this site remain on a quarterly sampling schedule. The next sampling is scheduled for October 2001. ~~In addition, a work plan to conduct additional environmental assessment activities at the site will be prepared during the quarter.~~

Requested by ee

6.0 REPORT LIMITATIONS

The results of this sampling 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.

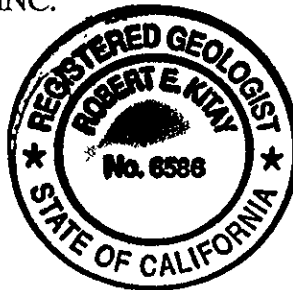
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.



Erik H. Paddleford
Associate Geologist



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

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

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

TABLES

TABLE ONE
 Groundwater Elevation Data
 Saldian Property-Alameda
 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
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
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

TABLE TWO

Summary of Chemical Analysis of GROUNDWATER Samples

Saidlan Property-Alameda

Petroleum Hydrocarbons

All results are in parts per billion

Well/ Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	TAME	TBA	Other Oxygenates
MW-1										
9/6/1999	5,700	8,700	170	59	22	85	20,000	NA	NA	NA
5/16/2000	20,000	<7,500	38	6.3	740	1,600	<5.0	<5.0	<50	<5.0
8/3/2000	20,000	<6,000	56	9.7	920	1,600	<0.5	<0.5	<50	<0.5
12/5/2000	31,000	<4,000	64	27	820	2,200	<10	<5.0	<50	<5.0
3/5/2001	20,000	<4,000	19	<5.0	480	870	<5.0	<5.0	<50	<5.0
6/4/2001	23,000	<7,000	58	50	710	2,100	5.1	<5.0	<50	<5.0
MW-2										
9/6/1999	6,000	70	1,300	92	50	400	6,800	NA	NA	NA
5/16/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<50	<5.0
8/3/2000	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
12/5/2000	<50	1,400	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
3/5/2001	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
6/4/2001	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<5.0	<0.5
MW-3										
9/6/1999	43,000	870	860	70	<0.5	65	120,000	NA	NA	NA
5/16/2000	17,000	<5,000	2,800	60	380	190	990	9.1	350	<5.0
8/3/2000	16,000	<2,000	1,600	29	210	53	1,200	21	260	<2.0
12/5/2000	17,000	5,800	1,700	45	460	240	1,100	21	230	<5.0
3/5/2001	29,000	<1300	2,100	68	280	100	180	<8.0	<80	<8.0
6/4/2001	17,000	<6,000	2,000	56	340	230	300	<10	130	<10

DHS MCL	NE	NE	1	50	700	1,750	13	NE	NE	VARIES
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Notes:

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

DHS MCL is the California Department of Health Services maximum contaminant level for drinking water.

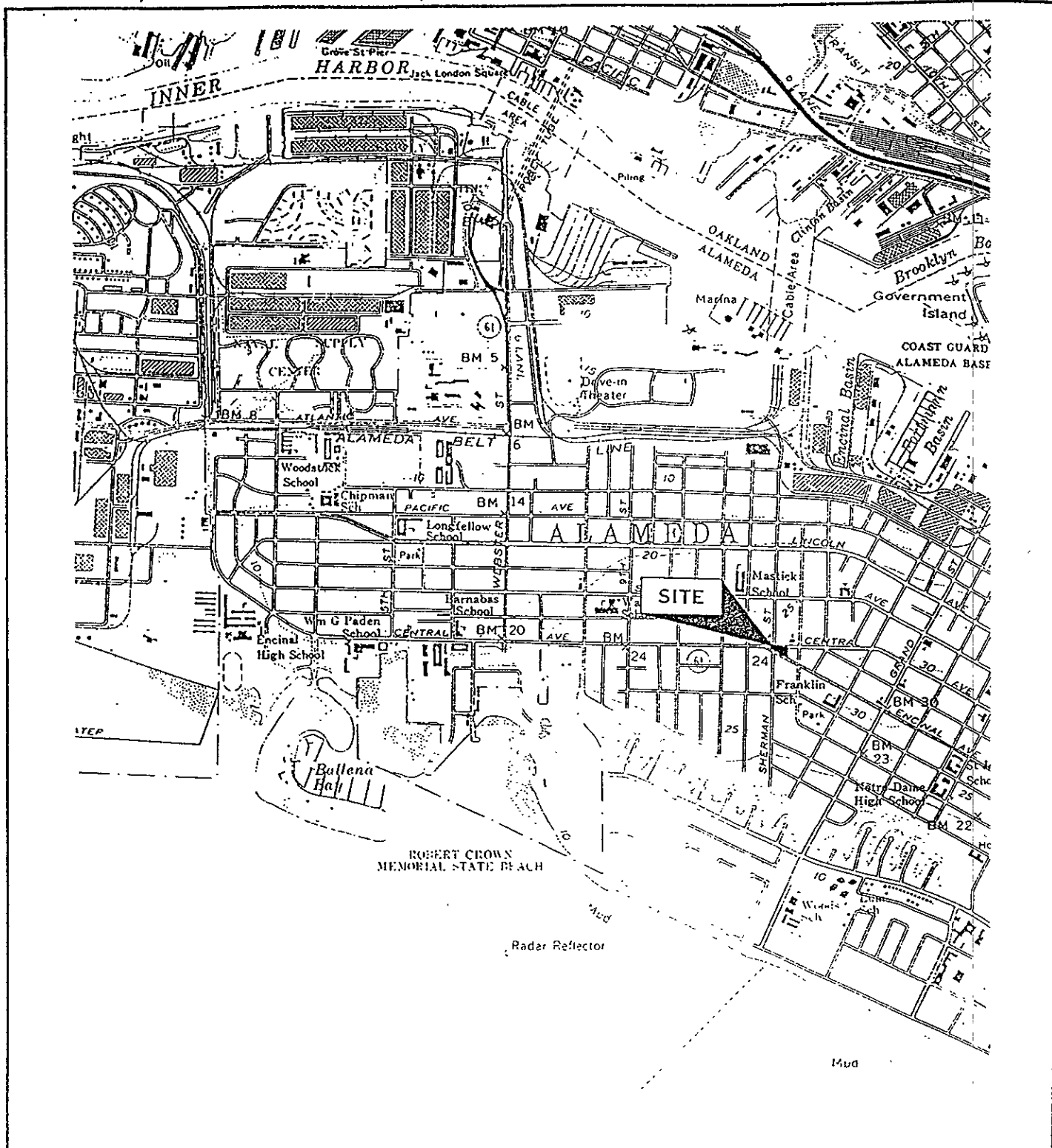
NA = Samples Not Analyzed for this compound.

NE = DHS MCLs are not established.

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

Most recent data in bold.

FIGURES



NORTH

LOCATION MAP

SAIDIAN PROPERTY
 1310 CENTRAL AVENUE
 ALAMEDA, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

Figure 1

RESIDENTIAL

RESIDENTIAL

SIDEWALK

CENTRAL AVENUE

APPROXIMATE
LOCATION OF
FORMER AND
CURRENT
USTs

ISLAND

SIDEWALK

MW-3
(22.58')

22.6'

CANOPY

22.7'

MW-1
(22.84')

CASHIER

SERVICE
BAYS

22.8'

MW-2
(22.85')

RESIDENTIAL

RESIDENTIAL

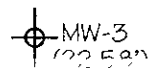
SHERMAN STREET

ENCINAL AVENUE

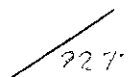
SIDEWALK

RESIDENTIAL

LEGEND



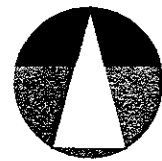
MONITORING WELL WITH
GROUNDWATER ELEVATION IN FEET.
ARC ELEVATION



POTENTIAL SURFACE
CONTOUR



GROUNDWATER FLOW
DIRECTION



NORTH



SCALE IN FEET

POTENTIOMETRIC
SURFACE CONTOUR MAP
JUNE 4, 2001

SAIDIAN PROPERTY
1310 CENTRAL AVENUE
ALAMEDA, CALIFORNIA

APPENDIX A

Well Sampling Field Logs



WELL SAMPLING FIELD LOG

Project Name and Address: Saldian - Alameda
 Job #: 3648 Date of sampling: 6/4/01
 Well Name: MV-1 Sampled by: EP
 Total depth of well (feet): 18.0 Well diameter (inches): 2
 Depth to water before sampling (feet): 2.72 4.01
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 13.99
 Number of gallons per well casing volume (gallons): 2.38
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 9.5
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1400 Time Evacuation Finished: 1430
 Approximate volume of groundwater purged: 9.5
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1435
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: >90%
 Samples collected with: bailer
 Sample color: gray Odor: slight HCL odor
 Description of sediment in sample: silt to fine sand

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>71.3</u>	<u>7.11</u>	<u>592</u>
<u>2</u>	<u>71.2</u>	<u>7.01</u>	<u>519</u>
<u>3</u>	<u>70.8</u>	<u>6.79</u>	<u>510</u>
<u>4</u>	<u>70.1</u>	<u>6.79</u>	<u>490</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MV-1</u>	<u>5</u>	<u>40 ml VOA</u>	<u>X</u>	<u>X</u>	



WELL SAMPLING FIELD LOG

Project Name and Address: Saidisa Alameda
 Job #: 3648 Date of sampling: 6/24/07
 Well Name: MW-2 Sampled by: EP
 Total depth of well (feet): 17.8 Well diameter (inches): 2"
 Depth to water before sampling (feet): 4.01 4.33
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 13.47
 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): 9.16
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1445 Time Evacuation Finished: 1510
 Approximate volume of groundwater purged: 9
 Did the well go dry?: NO After how many gallons: _____
 Time samples were collected: 1515
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: 790%
 Samples collected with: bailer
 Sample color: clear/brown Odor: none
 Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	78.4	7.16	701
2	74.6	6.94	423
3	71.2	6.81	392
4	70.3	6.76	375

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-2	5	40 ml VOA	X	X	



WELL SAMPLING FIELD LOG

Project Name and Address: Saidian - Alameda
 Job #: 3648 Date of sampling: 3-5-01
 Well Name: MW-3 Sampled by: EP
 Total depth of well (feet): 18.0 Well diameter (inches): 2
 Depth to water before sampling (feet): 2.72
 Thickness of floating product if any: -
 Depth of well casing in water (feet): 15.28
 Number of gallons per well casing volume (gallons): 2.6
 Number of well casing volumes to be removed: 4
 Req'd volume of groundwater to be purged before sampling (gallons): 10.4
 Equipment used to purge the well: bailer
 Time Evacuation Began: 1520 Time Evacuation Finished: 1550
 Approximate volume of groundwater purged: 10
 Did the well go dry?: NO After how many gallons: -
 Time samples were collected: 1555
 Depth to water at time of sampling: -
 Percent recovery at time of sampling: 790%
 Samples collected with: bailer
 Sample color: gray Odor: silt
 Description of sediment in sample: moderate HC odor

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
<u>1</u>	<u>71.2</u>	<u>6.71</u>	<u>692</u>
<u>2</u>	<u>70.8</u>	<u>6.71</u>	<u>610</u>
<u>3</u>	<u>70.2</u>	<u>6.70</u>	<u>551</u>
<u>4</u>	<u>70.6</u>	<u>6.68</u>	<u>562</u>

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
<u>MW-3</u>	<u>5</u>	<u>40 ml VOA</u>	<u>X</u>	<u>X</u>	

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 20591

Date : 6/19/2001

Eric Paddleford
Aqua Science Engineers, Inc.
208 West El Pintado Rd.
Danville, CA 94526

Subject : 3 Water Samples
Project Name : Saidian-Alameda
Project Number : 3648

Dear Mr. Paddleford,

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,


Joel Kiff



Report Number : 20591

Date : 6/19/2001

Subject : 3 Water Samples
Project Name : Saidian-Alameda
Project Number : 3648

Case Narrative

The Method Reporting Limit for TPH as Diesel has been increased due to interference from Gasoline-Range Hydrocarbons for the following samples :

MW-1
MW-3

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 916-297-4800



Report Number : 20591

Date : 6/19/2001

Project Name : **Saidian-Alameda**

Project Number : **3648**

Sample : **MW-1**

Matrix : Water

Lab Number : 20591-01

Sample Date :6/4/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	58	5.0	ug/L	EPA 8260B	6/14/2001
Toluene	50	5.0	ug/L	EPA 8260B	6/14/2001
Ethylbenzene	710	5.0	ug/L	EPA 8260B	6/14/2001
Total Xylenes	2100	5.0	ug/L	EPA 8260B	6/14/2001
Methyl-t-butyl ether (MTBE)	5.1	5.0	ug/L	EPA 8260B	6/14/2001
Diisopropyl ether (DIPE)	< 5.0	5.0	ug/L	EPA 8260B	6/14/2001
Ethyl-t-butyl ether (ETBE)	< 5.0	5.0	ug/L	EPA 8260B	6/14/2001
Tert-amyl methyl ether (TAME)	< 5.0	5.0	ug/L	EPA 8260B	6/14/2001
Tert-Butanol	< 50	50	ug/L	EPA 8260B	6/14/2001
TPH as Gasoline	23000	500	ug/L	EPA 8260B	6/14/2001
Toluene - d8 (Surr)	101		% Recovery	EPA 8260B	6/14/2001
4-Bromofluorobenzene (Surr)	98.4		% Recovery	EPA 8260B	6/14/2001
TPH as Diesel	< 7000	7000	ug/L	M EPA 8015	6/9/2001

Approved By:  Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Report Number : 20591

Date : 6/19/2001

Project Name : **Saidian-Alameda**

Project Number : **3648**

Sample : **MW-2**

Matrix : **Water**

Lab Number : **20591-02**

Sample Date : **6/4/2001**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/16/2001
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/16/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/16/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/16/2001
4-Bromofluorobenzene (Surr)	99.2		% Recovery	EPA 8260B	6/16/2001
TPH as Diesel	< 50	50	ug/L	M EPA 8015	6/9/2001

Approved By:  Joel Kiff



Report Number : 20591

Date : 6/19/2001

Project Name : **Saidian-Alameda**

Project Number : **3648**

Sample : **MW-3**

Matrix : **Water**

Lab Number : **20591-03**

Sample Date : **6/4/2001**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2000	10	ug/L	EPA 8260B	6/14/2001
Toluene	56	10	ug/L	EPA 8260B	6/14/2001
Ethylbenzene	340	10	ug/L	EPA 8260B	6/14/2001
Total Xylenes	230	10	ug/L	EPA 8260B	6/14/2001
Methyl-t-butyl ether (MTBE)	300	10	ug/L	EPA 8260B	6/14/2001
Diisopropyl ether (DIPE)	< 10	10	ug/L	EPA 8260B	6/14/2001
Ethyl-t-butyl ether (ETBE)	< 10	10	ug/L	EPA 8260B	6/14/2001
Tert-amyl methyl ether (TAME)	< 10	10	ug/L	EPA 8260B	6/14/2001
Tert-Butanol	130	100	ug/L	EPA 8260B	6/14/2001
TPH as Gasoline	17000	1000	ug/L	EPA 8260B	6/14/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	6/14/2001
4-Bromofluorobenzene (Surr)	101		% Recovery	EPA 8260B	6/14/2001
TPH as Diesel	< 6000	6000	ug/L	M EPA 8015	6/9/2001

Approved By:  **Joel Kiff**

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800

20591

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

Chain of Custody

SAMPLER (SIGNATURE) [Signature] (PHONE NO.) _____

PROJECT NAME Scidism - Alameda JOB NO. 3648
ADDRESS 1310 Central Ave, Alameda, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:
5 DAY TAT
Standard

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 825/8270)	OIL & GREASE (EPA 5520)	LIFT METALS (S) (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 / LEAD SCAVENGERS / 1,2-DCP (EPA 8260)	COMPOSITE	
MW-1	6/4		W	5		X													X		01
MW-2	↓		↓	↓		X													X		02
MW-3	↓		↓	↓		X													X		03

RELINQUISHED BY:
[Signature]
(signature) (time)
E. Paddelford
(printed name) (date)
Company- ASE

RECEIVED BY:

(signature) (time)

(printed name) (date)
Company- _____

RELINQUISHED BY:

(signature) (time)

(printed name) (date)
Company- _____

RECEIVED BY LABORATORY:
[Signature] 0950
(signature) (time)
JOHN CUTLER 060501
(printed name) (date)
Company- KIFF ANALYTICAL

COMMENTS:
1,2-DCP = 1,2-dichloropropane

TURN AROUND TIME
STANDARD 24H+ 48H+ 72H+
OTHER: