aqua science engineers inc.

Reed 10/10/02

October 2, 2002

QUARTERLY GROUNDWATER MONITORING REPORT
SEPTEMBER 2002 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. 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 September 9, 2002 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 September 9, 2002, 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 or sheen were observed in any site monitoring well. Groundwater elevation data is presented as *Table One.*

A groundwater potentiometric surface map is presented as *Figure 2.* Groundwater beneath the site flows to the southwest with a gradient of approximately 0.0051-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 three 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 a cooler 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 0.0051 feet/foot, which is relatively consistent with previous findings.

Groundwater samples collected from monitoring well MW-1 contained 8,300 parts per billion (ppb) TPH-G, 32 ppb benzene, 20 ppb toluene, 390 ppb ethyl benzene, and 670 ppb total xylenes. No oxygenates were detected in groundwater samples collected from monitoring well MW-1. The groundwater samples collected from monitoring well MW-2 contained 1,300 ppb TPH-D and 1.4 ppb methyl-tertiary-butyl ether (MTBE). No other hydrocarbons or oxygenates were detected in the groundwater sample collected from monitoring well MW-2. The groundwater samples collected from monitoring well MW-3 contained 12,000 ppb TPH-G, 1,400 ppb benzene, 44 ppb toluene, 130 ppb ethyl benzene, 27 ppb total xylenes, 760 ppb MTBE, and 160 ppb tert-butanol (TBA). No other oxygenates were detected in monitoring well MW-3.

The benzene concentration detected in groundwater samples collected from monitoring well MW-3 exceeded the Risk-Based Screening Level (RBSL) for groundwater that is not a current or potential source of drinking water as presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region dated December 2001. The TPH-G and total xylene concentrations in the water samples collected from monitoring wells MW-1 and MW-3 also exceeded the RBSLs. The TPH-D concentration in water samples collected from monitoring well MW-2 also exceeded the RBSL for that compound.

Hydrocarbon concentrations in groundwater samples collected from monitoring well MW-1 have increased since the last sampling period, but remain lower than the concentrations one year ago. MTBE was detected in the water sample collected from MW-2 for the first time since May 2000. Hydrocarbon concentrations in the water samples collected from monitoring well MW-3 appear to show a long term decreasing trend for the majority of the hydrocarbons analyzed.

5.0 RECOMMENDATIONS

ASE recommends that this site be sampled on a quarterly sampling schedule. The next sampling is scheduled for December 2002. In addition,

a workplan to conduct additional environmental assessment activities at the site will be prepared during the next quarter.

6.0 REPORT LIMITATIONS

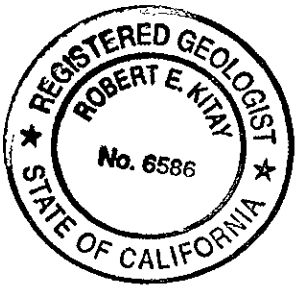
The results presented in this report represent the conditions at the time of the groundwater sampling, at the specific locations where the groundwater samples were collected, and for the specific parameters analyzed by the laboratory. It does not fully characterize the site for contamination resulting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

TABLES

TABLE ONE
Groundwater Elevation Data
Saidian 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
	6/5/02		3.73	23.12
	9/9/02		**5.06**	**21.79**
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**
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**

TABLE TWO

Summary of Chemical Analysis of GROUNDWATER Samples

Saidian Property-Alameda

Petroleum Hydrocarbons

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										
9/6/1999	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
6/5/2002	7,400	<1,500	9 3	6.7	180	230	<1 0	<1.0	<10	<1 0
9/9/2002	**8,300**	**< 3,500**	**32**	**20**	**390**	**670**	**< 2.0**	**< 2.0**	**< 20**	**< 2.0**
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
6/5/2002	< 50	2,300	<0.5	< 0.5	< 0 5	< 0.5	< 0.5	< 0.5	< 5.0	< 0.5
9/9/2002	**< 50**	**1,300**	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**1.4**	**< 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
6/5/2002	11,000	<2,000	1,600	46	210	47	790	<10	220	<10
9/9/2002	**12,000**	**< 800**	**1,400**	**44**	**130**	**27**	**760**	**< 10**	**160**	**< 10**
RBSL	500	640	46	130	290	13	1,800	NE	NE	VARIES

Notes

MTBE = Methyl-t-butyl ether

TAME = Tert-amyl methyl ether

TBA = Tert-Butanol

RBSL = Risk Based Screening Levels presented in the "Application of Risk-Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region, dated December 2001.

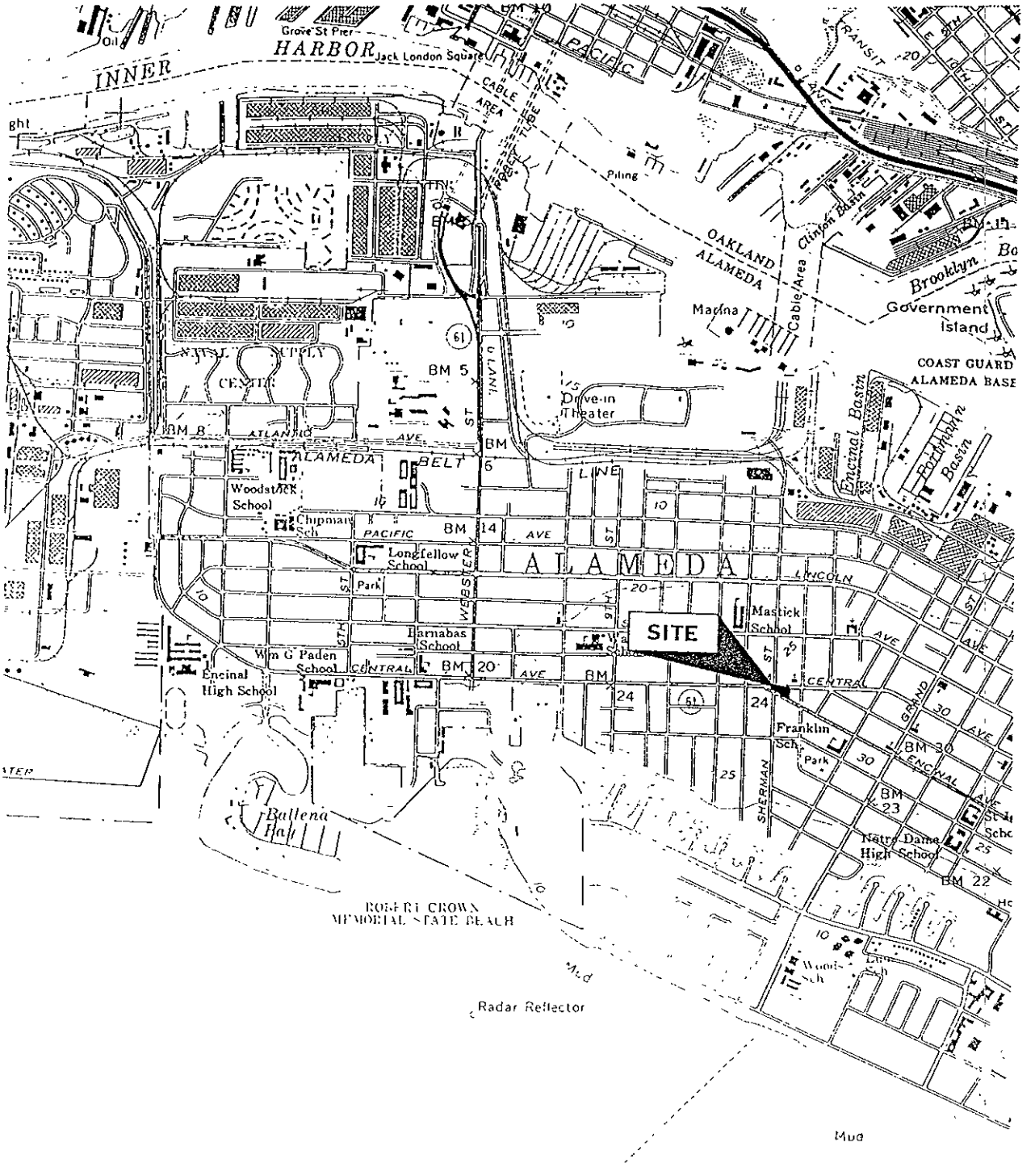
NA = Samples Not Analyzed for this compound

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 (21.42')

CANOPY

MW-1 (21.79')

CASHIER

SERVICE BAYS

21.6'

SIDEWALK

21.8'

MW-2 (21.84')

RESIDENTIAL

RESIDENTIAL

SHERMAN STREET

ENCINAL AVENUE

SIDEWALK

RESIDENTIAL

LEGEND

MW-3 (21.42') — MONITORING WELL WITH GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL

21.6' — POTENTIOMETRIC SURFACE CONTOUR

GROUNDWATER FLOW DIRECTION

NORTH

0 30 60 90

SCALE IN FEET

POTENTIOMETRIC SURFACE CONTOUR MAP
8/9/2002

SAIDIAN PROPERTY
1310 CENTRAL AVENUE
ALAMEDA, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC. | FIGURE 2

APPENDIX A

Well Sampling Field Logs

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Saidian - Alameda
Job #: 3649 Date of sampling: 9/9/02
Well Name: MW-1 Sampled by: EP
Total depth of well (feet): 18.0 Well diameter (inches): 2
Depth to water before sampling (feet): 5.06
Thickness of floating product if any: —
Depth of well casing in water (feet): 12.94
Number of gallons per well casing volume (gallons): 2
Number of well casing volumes to be removed: 3
Req'd volume of groundwater to be purged before sampling (gallons): 6
Equipment used to purge the well: bailer
Time Evacuation Began: 1425 Time Evacuation Finished: 1445
Approximate volume of groundwater purged: 6
Did the well go dry?: no After how many gallons: —
Time samples were collected: 1450
Depth to water at time of sampling: —
Percent recovery at time of sampling: —
Samples collected with: bailer
Sample color: clear/brown gray Odor: slight
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	77.5	5.46	517
2	76.2	5.52	518
3	76.0	5.57	518

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-1	5	40 ml VOA	x	x	

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Sa'dian - Alameda
Job #: 3648 Date of sampling: 9/9/02
Well Name: MW-2 Sampled by: EP
Total depth of well (feet): 17.80 Well diameter (inches): 2
Depth to water before sampling (feet): 5.34
Thickness of floating product if any: -
Depth of well casing in water (feet): 12.46
Number of gallons per well casing volume (gallons): 2
Number of well casing volumes to be removed: 3
Req'd volume of groundwater to be purged before sampling (gallons): 6
Equipment used to purge the well: bailer
Time Evacuation Began: 1350 Time Evacuation Finished: 1410
Approximate volume of groundwater purged: 6
Did the well go dry?: no After how many gallons: -
Time samples were collected: 1415
Depth to water at time of sampling: -
Percent recovery at time of sampling: -
Samples collected with: bailer
Sample color: clear/brown Odor: none
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	79.3	5.35	384
2	75.9	5.24	389
3	75.7	5.19	391

SAMPLES COLLECTED

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

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Saidian - Alameda
Job #: 3648 Date of sampling: 7/9/02
Well Name: MW-3 Sampled by: EP
Total depth of well (feet): 18.0 Well diameter (inches): 2
Depth to water before sampling (feet): 3.88
Thickness of floating product if any: -
Depth of well casing in water (feet): 14.12
Number of gallons per well casing volume (gallons): 2.2
Number of well casing volumes to be removed: 3
Req'd volume of groundwater to be purged before sampling (gallons): 6.6
Equipment used to purge the well: bailer
Time Evacuation Began: 1500 Time Evacuation Finished: 1520
Approximate volume of groundwater purged: 6.5
Did the well go dry?: no After how many gallons: -
Time samples were collected: 1530
Depth to water at time of sampling: -
Percent recovery at time of sampling: -
Samples collected with: bailer
Sample color: gray Odor: moderate
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	78.5	5.91	632
2	77.2	5.96	638
3	76.8	5.98	640

SAMPLES COLLECTED

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

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

KIFF ANALYTICAL LLC

Report Number : 28544
Date : 10/1/02

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

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 28544
Date : 10/1/02

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

Case Narrative

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

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 28544
Date : 10/1/02

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

Sample : **MW-1** Matrix : Water Lab Number : 28544-01
Sample Date :9/9/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**32**	2.0	ug/L	EPA 8260B	9/21/02
Toluene	**20**	2.0	ug/L	EPA 8260B	9/21/02
Ethylbenzene	**390**	2.0	ug/L	EPA 8260B	9/21/02
Total Xylenes	**670**	2.0	ug/L	EPA 8260B	9/21/02
Methyl-t-butyl ether (MTBE)	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/02
Diisopropyl ether (DIPE)	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/02
Ethyl-t-butyl ether (ETBE)	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/02
Tert-amyl methyl ether (TAME)	**< 2.0**	2.0	ug/L	EPA 8260B	9/21/02
Tert-Butanol	**< 20**	20	ug/L	EPA 8260B	9/21/02
TPH as Gasoline	**8300**	200	ug/L	EPA 8260B	9/21/02
Toluene - d8 (Surr)	99.0		% Recovery	EPA 8260B	9/21/02
4-Bromofluorobenzene (Surr)	98.6		% Recovery	EPA 8260B	9/21/02
TPH as Diesel	**< 3500**	3500	ug/L	M EPA 8015	9/22/02

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 28544
Date : 10/1/02

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

Sample : **MW-2** Matrix : Water Lab Number : 28544-02
Sample Date :9/9/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Methyl-t-butyl ether (MTBE)	**1.4**	0.50	ug/L	EPA 8260B	9/12/02
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	EPA 8260B	9/12/02
Tert-Butanol	**< 5.0**	5.0	ug/L	EPA 8260B	9/14/02
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	9/12/02
Toluene - d8 (Surr)	102		% Recovery	EPA 8260B	9/12/02
4-Bromofluorobenzene (Surr)	97.1		% Recovery	EPA 8260B	9/12/02
TPH as Diesel	**1300**	50	ug/L	M EPA 8015	9/22/02

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 28544
Date : 10/1/02

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

Sample : **MW-3** Matrix : Water Lab Number : 28544-03
Sample Date :9/9/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**1400**	10	ug/L	EPA 8260B	9/21/02
Toluene	**44**	10	ug/L	EPA 8260B	9/21/02
Ethylbenzene	**130**	10	ug/L	EPA 8260B	9/21/02
Total Xylenes	**27**	10	ug/L	EPA 8260B	9/21/02
Methyl-t-butyl ether (MTBE)	**760**	10	ug/L	EPA 8260B	9/21/02
Diisopropyl ether (DIPE)	**< 10**	10	ug/L	EPA 8260B	9/21/02
Ethyl-t-butyl ether (ETBE)	**< 10**	10	ug/L	EPA 8260B	9/21/02
Tert-amyl methyl ether (TAME)	**< 10**	10	ug/L	EPA 8260B	9/21/02
Tert-Butanol	**160**	100	ug/L	EPA 8260B	9/21/02
TPH as Gasoline	**12000**	1000	ug/L	EPA 8260B	9/21/02
Toluene - d8 (Surr)	98.5		% Recovery	EPA 8260B	9/21/02
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	9/21/02
TPH as Diesel	**< 800**	800	ug/L	M EPA 8015	9/25/02

Approved By: Joel Kiff

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

Report Number : 28544

Date 10/1/02

QC Report : Method Blank Data

Project Name : **Saidian - Alameda**

Project Number . **3648**

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	9/13/02
Benzene	< 0.50	0 50	ug/L	EPA 8260B	9/20/02
Toluene	< 0.50	0 50	ug/L	EPA 8260B	9/20/02
Ethylbenzene	< 0.50	0 50	ug/L	EPA 8260B	9/20/02
Total Xylenes	< 0 50	0.50	ug/L	EPA 8260B	9/20/02
Methyl-t-butyl ether (MTBE)	< 0 50	0.50	ug/L	EPA 8260B	9/20/02
Diisopropyl ether (DIPE)	< 0 50	0.50	ug/L	EPA 8260B	9/20/02
Ethyl-t-butyl ether (ETBE)	< 0.50	0 50	ug/L	EPA 8260B	9/20/02
Tert-amyl methyl ether (TAME)	< 0 50	0 50	ug/L	EPA 8260B	9/20/02
Tert-Butanol	< 5.0	5 0	ug/L	EPA 8260B	9/20/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/20/02
Toluene - d8 (Surr)	100		%	EPA 8260B	9/20/02
4-Bromofluorobenzene (Surr)	94 1		%	EPA 8260B	9/20/02
Benzene	< 0.50	0.50	ug/L	EPA 8260B	9/12/02
Toluene	< 0 50	0.50	ug/L	EPA 8260B	9/12/02
Ethylbenzene	< 0 50	0.50	ug/L	EPA 8260B	9/12/02
Total Xylenes	< 0 50	0.50	ug/L	EPA 8260B	9/12/02
Methyl-t-butyl ether (MTBE)	< 0.50	0 50	ug/L	EPA 8260B	9/12/02
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	9/12/02
Ethyl-t-butyl ether (ETBE)	< 0 50	0.50	ug/L	EPA 8260B	9/12/02
Tert-amyl methyl ether (TAME)	< 0 50	0.50	ug/L	EPA 8260B	9/12/02
Tert-Butanol	< 5.0	5 0	ug/L	EPA 8260B	9/12/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/12/02
Toluene - d8 (Surr)	100		%	EPA 8260B	9/12/02
4-Bromofluorobenzene (Surr)	98.2		%	EPA 8260B	9/12/02

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0 50	ug/L	EPA 8260B	9/13/02
Toluene	< 0 50	0 50	ug/L	EPA 8260B	9/13/02
Ethylbenzene	< 0 50	0 50	ug/L	EPA 8260B	9/13/02
Total Xylenes	< 0 50	0 50	ug/L	EPA 8260B	9/13/02
Methyl-t-butyl ether (MTBE)	< 0 50	0 50	ug/L	EPA 8260B	9/13/02
Diisopropyl ether (DIPE)	< 0.50	0 50	ug/L	EPA 8260B	9/13/02
Ethyl-t-butyl ether (ETBE)	< 0 50	0 50	ug/L	EPA 8260B	9/13/02
Tert-amyl methyl ether (TAME)	< 0.50	0 50	ug/L	EPA 8260B	9/13/02
Tert-Butanol	< 5 0	5 0	ug/L	EPA 8260B	9/13/02
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	9/13/02
Toluene - d8 (Surr)	107		%	EPA 8260B	9/13/02
4-Bromofluorobenzene (Surr)	94 8		%	EPA 8260B	9/13/02

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 28544

QC Report : Matrix Spike/ Matrix Spike Duplicate

Date : 10/1/02

Project Name : **Saidian - Alameda**

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	1040	1130	ug/L	M EPA 8015	9/13/02	104	113	7.87	70-130	25
Benzene	28482-03	3.0	19.9	20.0	24.0	23.6	ug/L	EPA 8260B	9/20/02	105	103	2.26	70-130	25
Toluene	28482-03	1.8	19.9	20.0	22.1	21.7	ug/L	EPA 8260B	9/20/02	102	99.8	2.02	70-130	25
Tert-Butanol	28482-03	<5.0	99.7	99.8	122	105	ug/L	EPA 8260B	9/20/02	123	105	15.5	70-130	25
Methyl-t-Butyl Ether	28482-03	110	19.9	20.0	119	113	ug/L	EPA 8260B	9/20/02	43.7	12.7	110	70-130	25
Benzene	28527-01	<0.50	40.0	40.0	42.1	41.6	ug/L	EPA 8260B	9/12/02	105	104	1.19	70-130	25
Toluene	28527-01	<0.50	40.0	40.0	41.9	41.0	ug/L	EPA 8260B	9/12/02	105	102	2.07	70-130	25
Tert-Butanol	28527-01	<5.0	200	200	214	213	ug/L	EPA 8260B	9/12/02	107	106	0.810	70-130	25
Methyl-t-Butyl Ether	28527-01	7.6	40.0	40.0	45.0	44.6	ug/L	EPA 8260B	9/12/02	93.3	92.4	0.969	70-130	25
Benzene	28532-02	<0.50	40.0	40.0	39.5	38.1	ug/L	EPA 8260B	9/13/02	98.8	95.2	3.76	70-130	25
Toluene	28532-02	<0.50	40.0	40.0	44.6	43.8	ug/L	EPA 8260B	9/13/02	111	110	1.61	70-130	25
Tert-Butanol	28532-02	<5.0	200	200	195	198	ug/L	EPA 8260B	9/13/02	97.6	99.0	1.45	70-130	25
Methyl-t-Butyl Ether	28532-02	0.51	40.0	40.0	42.3	36.1	ug/L	EPA 8260B	9/13/02	104	89.1	16.0	70-130	25

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

Report Number : 28544

QC Report : Laboratory Control Sample (LCS)

Date : 10/1/02

Project Name : **Saidian - Alameda**

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	9/20/02	104	70-130
Toluene	40.0	ug/L	EPA 8260B	9/20/02	99.8	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/20/02	81.8	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/20/02	98.1	70-130
Benzene	40.0	ug/L	EPA 8260B	9/12/02	100	70-130
Toluene	40.0	ug/L	EPA 8260B	9/12/02	103	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/12/02	103	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/12/02	87.6	70-130
Benzene	40.0	ug/L	EPA 8260B	9/13/02	98.3	70-130
Toluene	40.0	ug/L	EPA 8260B	9/13/02	113	70-130
Tert-Butanol	200	ug/L	EPA 8260B	9/13/02	100	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	9/13/02	107	70-130

Approved By: Joel Kiff

KIFF ANALYTICAL, LLC

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

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

Chain of Custody 28544

PAGE 1 OF 1

SAMPLER (SIGNATURE) E Paddleford

PROJECT NAME Gaidian - Alameda JOB NO. 3648

ADDRESS 1310 Central Ave, Alameda, CA

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS.

Σ

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	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 / LEAD SCAVANGERS/ 1,2-DCP (EPA 8260)		
MW-1	9/9/02	1450	Water	5	X												X			01
MW-2	↓	1415	↓	↓	X												X			02
MW-3	↓	1530	↓	↓	X												X			03

RELINQUISHED BY: (signature) (time)	RECEIVED BY: (signature) (time)	RELINQUISHED BY: (signature) (time)	RECEIVED BY LABORATORY: John Cuttle 1425 (signature) (time)	COMMENTS:
E Paddleford (printed name) (date)	(printed name) (date)	(printed name) (date)	JKC / 091102 (printed name) (date)	TURN AROUND TIME: STANDARD 24Hr 48Hr 72Hr
Company- Aqua Science Engineers, Inc.	Company-	Company-	Company- KIFF ANALYTICAL	OTHER: