



R02S14

August 30, 2005

QUARTERLY GROUNDWATER MONITORING REPORT  
JUNE 2005 GROUNDWATER SAMPLING  
ASE JOB NO. 3928

at  
Kim Property  
925(949) West Grand Avenue  
Oakland, CA 94607

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

Alameda County  
SEP 1 2005  
Environmental Health

## **1.0 INTRODUCTION**

### Site Location (Site), See Figure 1

Kim Property  
925-949 West Grand Avenue  
Oakland, CA 94607

### Responsible Party

Chong and Myung Kim  
2601 Telegraph Avenue  
Oakland, CA 94612

### Environmental Consulting Firm

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

### Agency Review

Alameda County Health  
Care Services Agency (ACHCSA)  
1131 Harbor Bay Pkwy  
Suite 250  
Alameda, CA 94502  
Contact: Mr. Barney Chan  
(510) 567-6700

California Regional Water  
Quality Control Board (RWQCB)  
San Francisco Bay Region  
1515 Clay Street, Suite 1400  
Oakland, CA 94612  
Contact: Ms. Betty Graham  
(510) 622-2433

The following is a report detailing the results of the June 2005 quarterly groundwater sampling at the Kim Property. This sampling was conducted as required by the ACHCSA and RWQCB. ASE has prepared this report on behalf of Chong Kim, the responsible party. This report is intended to supplement the ASE report: "Report of Soil and Groundwater Assessment" dated September 30, 2004.

## **2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT**

On June 23, 2005, ASE measured the depth to groundwater in all three 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; neither was observed in any of the wells. Groundwater elevation data is presented in Table One. A groundwater potentiometric surface map is presented as Figure 2. The groundwater flow direction below the site is generally to the southwest with a gradient of 0.006 feet/foot, which is consistent with previous findings.

## **3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS**

On June 23, 2005, ASE collected groundwater samples from all three monitoring wells. Prior to sampling, each well was purged of three well casing volumes of groundwater using disposable polyethylene bailers. Petroleum hydrocarbon odors were noted during the purging and sampling of monitoring well MW-2. 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 the same polyethylene bailers and 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. The samples were capped without headspace, labeled, and placed in coolers with wet ice for transport to Kiff Analytical of Davis, California (ELAP #2236) under appropriate chain-of-custody documentation. Well sampling field logs are presented in Appendix A.

The well purge water was placed into a 55-gallon steel drum and labeled for temporary storage until proper disposal could be arranged.

The groundwater samples were analyzed by Kiff for total petroleum hydrocarbons as diesel (TPH-D) by EPA Method 3550/8015M. The samples were also analyzed for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethylbenzene, and total xylenes (collectively known as BTEX), fuel oxygenates, and halogenated volatile organic compounds (H VOCs) by EPA Method 8260B. The analytical results for this and previous sampling events are presented in Table Two. The certified analytical report and chain-of-custody documentation are included as Appendix B.

## **4.0 CONCLUSIONS**

- Monitoring well MW-1 contained only TPH-D at 250 ppb.
- The TPH-G, BTEX and cis-1,2-DCE concentrations in monitoring well MW-2 rose slightly in comparison to the previous quarter; MTBE dropped slightly. All of the results were, however, very similar to previous results.
- The TPH-D concentration in monitoring well MW-3 increased slightly in comparison to the previous quarter; MTBE increased and 1,2-DCA decreased slightly. All of the results were, however, very similar to previous results.
- The laboratory noted that the hydrocarbons reported as diesel in monitoring wells MW-1 and MW-3 did not exhibit a typical diesel chromatographic pattern. Also noted was that the reporting limit for TPH-D was increased due to TPH-G interference in monitoring well MW-2.

The TPH-D concentration detected in the groundwater sample collected from monitoring well MW-1 exceeded the Environmental Screening Levels (ESLs) 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 July 2003. The TPH-G, benzene, ethylbenzene, xylenes, and MTBE concentrations detected in the groundwater sample collected from monitoring well MW-2 exceeded the ESL. The TPH-D and 1,2-DCA concentrations in the groundwater sample collected from monitoring well MW-3 also exceeded the ESL.

## **5.0 RECOMMENDATIONS**

ASE has received a letter from Mr. Chong Kim, the responsible party, explaining that he is having financial difficulty, and therefore has requested that we conduct no further work at the site until further notice. Based on this request from our client, ASE has no further activities planned for the site at this time.

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

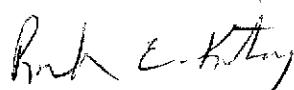
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project, and trust that this report meets your needs. Please feel free to call us at (925) 820-9391 if you have any questions or comments.

Respectfully submitted,

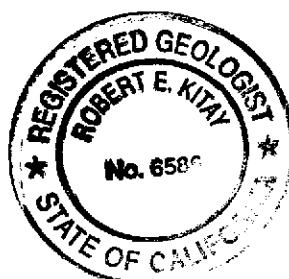
AQUA SCIENCE ENGINEERS, INC.



David Allen, R.E.A.  
Senior Project Manager

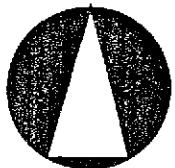


Robert E. Kitay, R.G., R.E.A.  
Senior Geologist

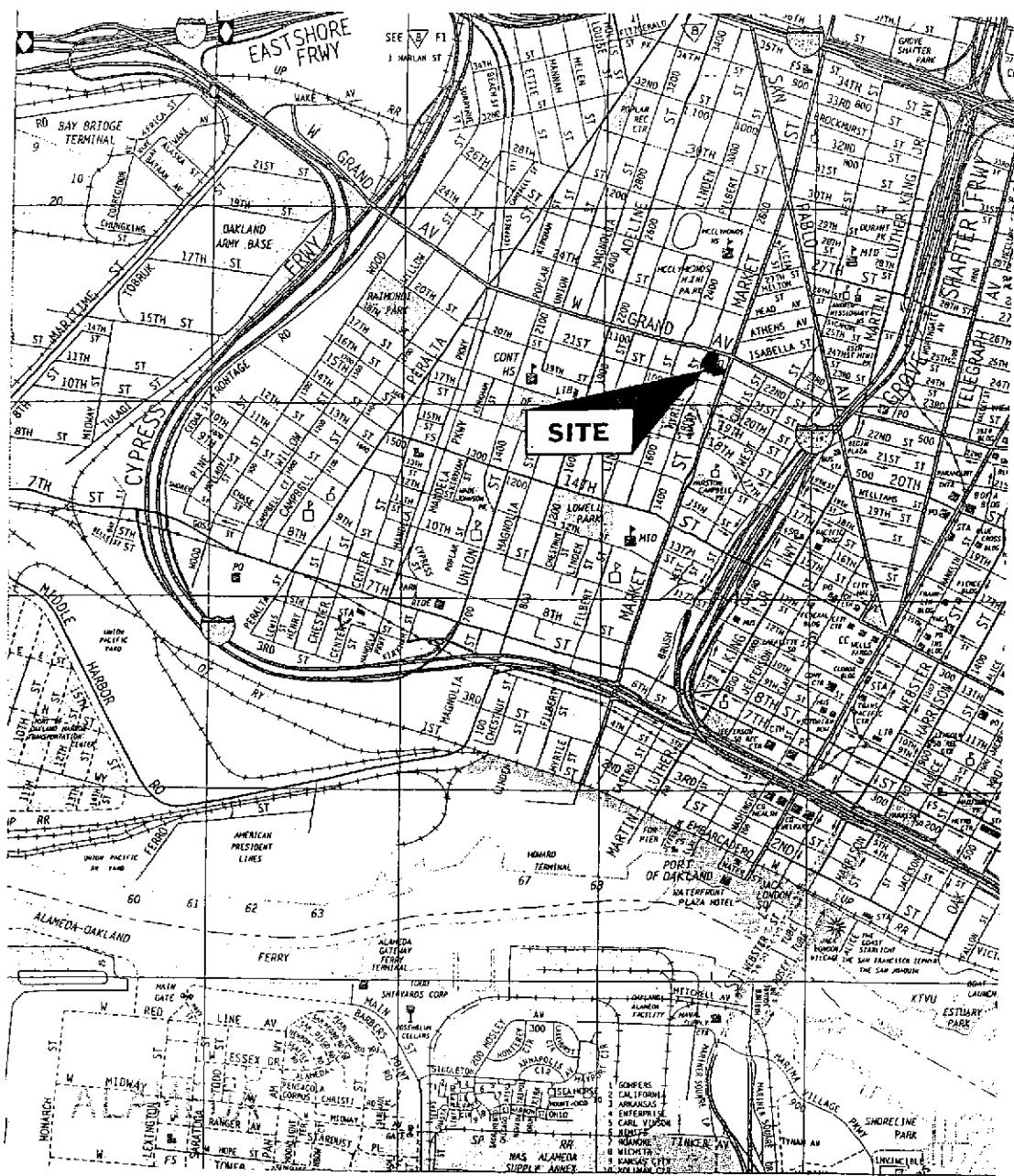


Attachments: Figures 1 and 2  
Tables One and Two  
Appendices A and B

cc: Mr. Barney Chan, ACHCSA  
Ms. Betty Graham, RWQCB  
Mr. Don Kim, Compass Realty, 1714 Franklin Street, Suite 400,  
Oakland, CA 94612



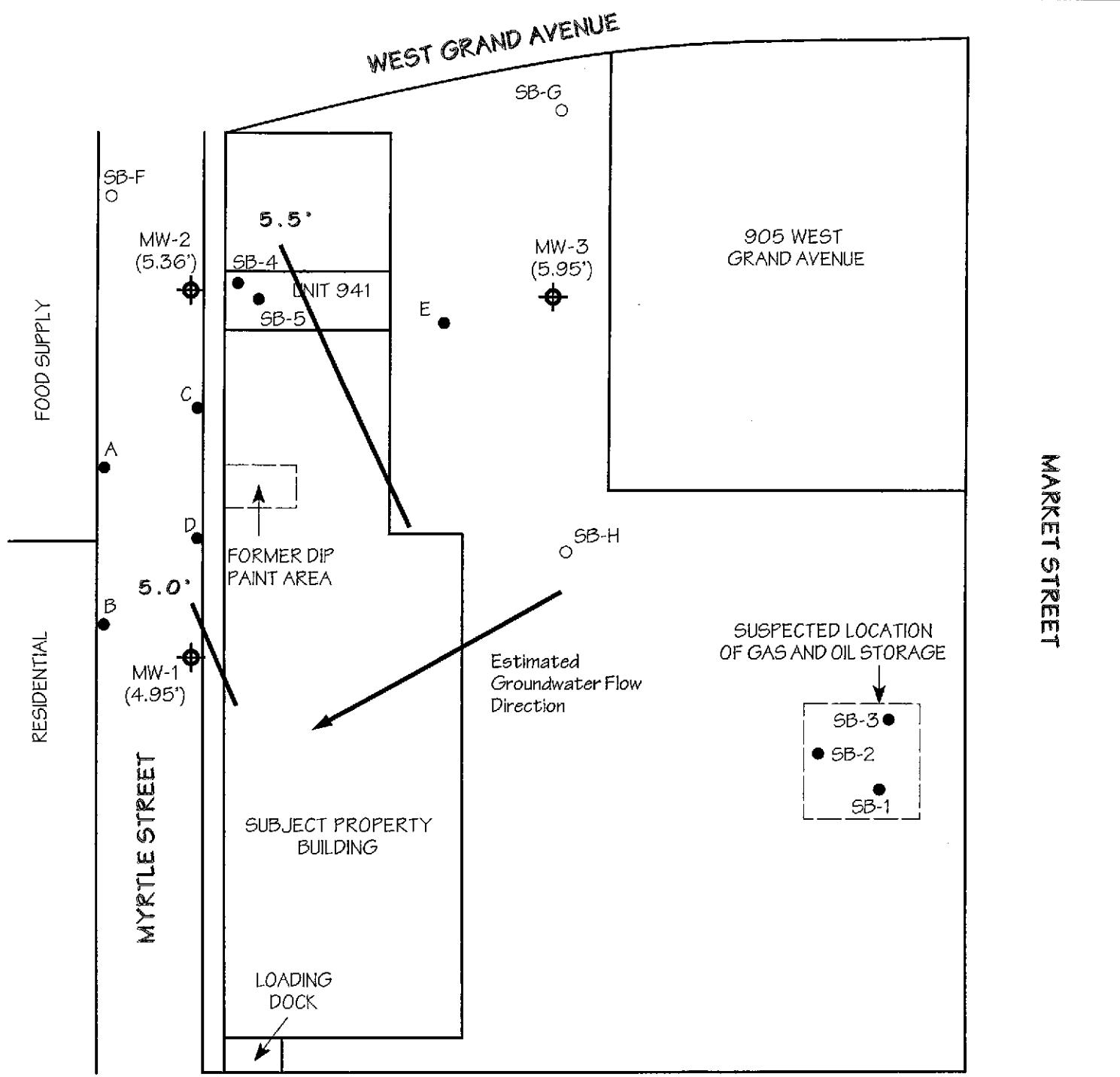
NORTH



### SITE LOCATION MAP

KIM PROPERTY  
925-949 West Grand Avenue  
Oakland, California

AQUA SCIENCE ENGINEERS, INC. Figure 1



BASE MAP:  
ERAS ENVIRONMENTAL "LIMITED SOIL AND GROUNDWATER  
INVESTIGATION," 5/27/2003, FIGURE 2  
AND AEI CONSULTANTS "PHASE II SUBSURFACE  
INVESTIGATION," 3/21/2002, FIGURE 2

LEGEND

- B ● Previous Soil Boring
  - SB-F ○ Soil Boring Drilled for this Assessment
  - MW-1 Monitoring Well with  
(4.95') Groundwater Elevation
  -  Groundwater Elevation Contour



SCALE  
1 INCH = 50 FEET

GROUNDWATER ELEVATION  
CONTOUR MAP - 06/23/05

KIM PROPERTY  
925-949 West Grand Avenue  
Oakland, California

AQUA SCIENCE ENGINEERS, INC. | Figure 2

**TABLE ONE**  
 Groundwater Elevation Data  
 Kim Property  
 925-949 West Grand Avenue, Oakland, CA

Well ID	Date of Measurement	Top of Casing Elevation (msl)	Depth to Water (feet)	Groundwater Elevation (msl)
MW-1	9/14/04	15.12	10.79	4.33
	12/15/04		9.77	5.35
	3/31/05		8.62	6.50
	<b>6/23/05</b>		<b>10.17</b>	<b>4.95</b>
MW-2	9/14/04	14.42	9.76	4.66
	12/15/04		8.67	5.75
	3/31/05		7.55	6.87
	<b>6/23/05</b>		<b>9.06</b>	<b>5.36</b>
MW-3	9/14/04	15.20	10.11	5.09
	12/15/04		8.80	6.40
	3/31/05		7.38	7.82
	<b>6/23/05</b>		<b>9.25</b>	<b>5.95</b>

Notes:

Recent data is in **BOLD**.

**TABLE TWO**  
**Summary of Analytical Results of GROUNDWATER Samples**  
**Petroleum Hydrocarbons and Halogenated Volatile Organic Compounds (HVOCs)**  
**By EPA Methods 8015 and 8260B**  
**925-949 West Grand Avenue, Oakland, California**  
**Results are in parts per billion (ppb)**

Well/ Boring	Date Sampled	TPH Gasoline	TPH Diesel	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE	1,2- DCA	cis-1,2- DCE	trans-1,2- DCE	TCE	Vinyl Chloride	Other VOCs
MW-1	9/14/04	<50	150	<0.5	<0.5	<0.5	<0.5	0.89	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	12/15/04	<50	65	<0.5	<0.5	<0.5	<0.5	0.74	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	3/31/05	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	6/23/05	<50	250	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
MW-2	9/14/04	6,100	<1,000	56	2.6	87	190	15	<1.5	1.5	<1.5	<1.5	<1.5	<1.5 - <20
	12/15/04	22,000	<6,000	150	6.7	760	1,900	11	<1.5	7.2	<1.5	<1.5	1.5	<1.5 - <20
	3/31/05	14,000	<4,000	110	4.0	480	1,100	14	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0 - <20
	6/23/05	16,000	<6,000	170	4.3	480	1,200	8.6	<3.0	3.9	<3.0	<3.0	<3.0	<3.0 - <20
MW-3	9/14/04	<50	100	<0.5	<0.5	<0.5	<0.5	5.8	0.77	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	12/15/04	<50	67	<0.5	<0.5	<0.5	<0.5	6.0	0.70	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	3/31/05	<50	84	<0.5	<0.5	<0.5	<0.5	2.2	0.60	<0.5	<0.5	<0.5	<0.5	<0.5 - <20
	6/23/05	<50	210	<0.5	<0.5	<0.5	<0.5	2.4	0.56	<0.5	<0.5	<0.5	<0.5	<0.5 - <20

ESL = Environmental Screening Levels presented in the "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" document prepared by

TCE - trichloroethene

MTBE - methyl tertiary butyl ether

DCE - dichloroethene

DCA - dichloroethane

TPH - total petroleum hydrocarbons

Notes:

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

Recent concentrations are in **BOLD**.

ESL = Environmental Screening Levels presented in the "Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater" document prepared by

## **APPENDIX A**

### Well Sampling Field Logs

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME

KIM

JOB NUMBER

3928

DATE OF SAMPLING 06.23.05

WELL ID.

MW-3

SAMPLER DA

TOTAL DEPTH OF WELL

20.0

WELL DIAMETER

2

DEPTH TO WATER PRIOR TO PURGING

9.25

PRODUCT THICKNESS

0

DEPTH OF WELL CASING IN WATER

10.75

NUMBER OF GALLONS PER WELL CASING VOLUME

1.72

NUMBER OF WELL CASING VOLUMES TO BE REMOVED

3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.16

EQUIPMENT USED TO PURGE WELL

DISP. BAILER

TIME EVACUATION STARTED

0835

TIME EVACUATION COMPLETED

0845

TIME SAMPLES WERE COLLECTED

0850

DID WELL GO DRY

NO

AFTER HOW MANY GALLONS

—

VOLUME OF GROUNDWATER PURGED

5.2

SAMPLING DEVICE

DISP. BAILER

SAMPLE COLOR

BROWN

ODOR/SEDIMENT

NONE / SILT

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	67.5	7.31	950
2	67.9	7.14	943
3	67.3	7.15	949

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-3	5	40 ml VOL	8015 + 8260	✓

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME

KLM

JOB NUMBER

DATE OF SAMPLING 06-23-05

WELL ID.

MW-2

SAMPLER b4

TOTAL DEPTH OF WELL

14.0

WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING

9.06

PRODUCT THICKNESS

0

DEPTH OF WELL CASING IN WATER

4.94

NUMBER OF GALLONS PER WELL CASING VOLUME

0.79

NUMBER OF WELL CASING VOLUMES TO BE REMOVED

3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 2.37

EQUIPMENT USED TO PURGE WELL DISP. BAILER

TIME EVACUATION STARTED 08 17

TIME EVACUATION COMPLETED 08 23

TIME SAMPLES WERE COLLECTED 08 28

DID WELL GO DRY NO

AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 4

SAMPLING DEVICE DISP. BAILER

SAMPLE COLOR GRAY ODOR/SEDIMENT STRONG (SHEEN) / SILT

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	pH	CONDUCTIVITY
1	66.8	7.01	992
2	67.8	7.03	987
3	67.6	7.00	977

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-2	5	40 ml vials	3015 + 8260	✓

# AQUA SCIENCE ENGINEERS

## WELL SAMPLING FIELD LOG

PROJECT NAME KIM

JOB NUMBER

DATE OF SAMPLING 06.23.05

WELL ID. MW-1

SAMPLER DA

TOTAL DEPTH OF WELL 20.0

WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 10.17

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 9.81

NUMBER OF GALLONS PER WELL CASING VOLUME 1.57

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 4.7

EQUIPMENT USED TO PURGE WELL DISP. BAILER

TIME EVACUATION STARTED 0800 TIME EVACUATION COMPLETED 0810

TIME SAMPLES WERE COLLECTED 0812

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5

SAMPLING DEVICE DISP. BAILER

SAMPLE COLOR Brown ODOR/SEDIMENT none / Silt

### CHEMICAL DATA

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	66.2	7.28	596
2	66.5	7.20	880
3	66.0	7.26	864

### SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
MW-1	5	4oz vials	8015 & 8260	✓

## **APPENDIX B**

Certified Analytical Report  
and  
Chain of Custody Documentation



Report Number : 44527  
Date : 7/5/2005

David Allen  
Aqua Science Engineers, Inc.  
208 West El Pintado Rd.  
Danville, CA 94526

Subject : 3 Water Samples  
Project Name : KIM  
Project Number : 3928

Dear Mr. Allen,

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



Report Number : 44527

Date : 7/5/2005

Subject : 3 Water Samples  
Project Name : KIM  
Project Number : 3928

## Case Narrative

The Method Reporting Limit for TPH as Diesel is increased due to interference from Gasoline-Range Hydrocarbons for sample MW-2.

Hydrocarbons reported as TPH as Diesel do not exhibit a typical Diesel chromatographic pattern for samples MW-1 and MW-3. These hydrocarbons are higher boiling than typical diesel fuel.

Surrogate recovery for Method 8015, for sample MW-3 is above the control limit. This may indicate a bias in the analysis due to the sample's matrix or an interference with the surrogate from compounds present in the sample.

Approved By:

A handwritten signature in black ink that reads "Joe Kiff". The signature is written in cursive and is positioned next to a horizontal line.

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



Report Number : 44527  
Date : 7/5/2005

Project Name : KIM

Project Number : 3928

Sample : MW-1 Matrix : Water Lab Number : 44527-01

Sample Date : 6/23/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	250	50	ug/L	M EPA 8015	6/29/2005
Octacosane (Diesel Surrogate)	122		% Recovery	M EPA 8015	6/29/2005

Sample : MW-2 Matrix : Water Lab Number : 44527-02

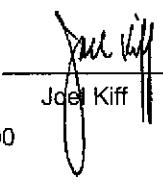
Sample Date : 6/23/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 6000	6000	ug/L	M EPA 8015	6/29/2005
Octacosane (Diesel Surrogate)	114		% Recovery	M EPA 8015	6/29/2005

Sample : MW-3 Matrix : Water Lab Number : 44527-03

Sample Date : 6/23/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	210	50	ug/L	M EPA 8015	6/29/2005
Octacosane (Diesel Surrogate)	147		% Recovery	M EPA 8015	6/29/2005

Approved By:   
Joel Kiff

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



Report Number : 44527

Date : 7/5/2005

Sample : MW-1

Project Name : KIM

Project Number : 3928

Lab Number : 44527-01

Date Analyzed : 6/28/2005

Matrix : Water

Sample Date : 6/23/2005

Analysis Method: EPA 8260B

Parameter	Measured Value	MRL <sup>1)</sup>	Units	Parameter	Measured Value	MRL <sup>1)</sup>	Units
Benzene	< 0.50	0.50	ug/L	1,4-Dichlorobenzene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L	1,2-Dichlorobenzene	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L	1,2-Dibromoethane	< 0.50	0.50	ug/L
Total Xylenes	< 0.50	0.50	ug/L	Toluene - d8 (Surr)	101		% Recovery
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	4-Bromofluorobenzene (Surr)	92.5		% Recovery
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	Dibromofluoromethane (Surr)	102		% Recovery
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	1,2-Dichloroethane-d4 (Surr)	100		% Recovery
Tert-amyyl methyl ether (TAME)	< 0.50	0.50	ug/L				
Tert-Butanol	< 5.0	5.0	ug/L				
TPH as Gasoline	< 50	50	ug/L				
Chloromethane	< 0.50	0.50	ug/L				
Vinyl Chloride	< 0.50	0.50	ug/L				
Bromomethane	< 20	20	ug/L				
Chloroethane	< 0.50	0.50	ug/L				
Trichlorofluoromethane	< 0.50	0.50	ug/L				
1,1-Dichloroethene	< 0.50	0.50	ug/L				
Methylene Chloride	< 5.0	5.0	ug/L				
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L				
1,1-Dichloroethane	< 0.50	0.50	ug/L				
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L				
Chloroform	< 0.50	0.50	ug/L				
1,1,1-Trichloroethane	< 0.50	0.50	ug/L				
1,2-Dichloroethane	< 0.50	0.50	ug/L				
Carbon Tetrachloride	< 0.50	0.50	ug/L				
Trichloroethene	< 0.50	0.50	ug/L				
1,2-Dichloropropane	< 0.50	0.50	ug/L				
Bromodichloromethane	< 0.50	0.50	ug/L				
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L				
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L				
1,1,2-Trichloroethane	< 0.50	0.50	ug/L				
Tetrachloroethene	< 0.50	0.50	ug/L				
Dibromochloromethane	< 0.50	0.50	ug/L				
Chlorobenzene	< 0.50	0.50	ug/L				
Bromoform	< 0.50	0.50	ug/L				
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L				
1,3-Dichlorobenzene	< 0.50	0.50	ug/L				

1) MRL = Method reporting limit

2) MRL raised due to interference

Approved By:

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

Joel Kiff



Report Number : 44527

Date : 7/5/2005

Sample : MW-2

Project Name : KIM

Project Number : 3928

Lab Number : 44527-02

Date Analyzed : 6/29/2005

Matrix : Water

Sample Date : 6/23/2005

Analysis Method: EPA 8260B

Parameter	Measured Value	MRL <sup>1)</sup>	Units	Parameter	Measured Value	MRL <sup>1)</sup>	Units
Benzene	170	3.0	ug/L	1,4-Dichlorobenzene	< 3.0	3.0	ug/L
Toluene	4.3	3.0	ug/L	1,2-Dichlorobenzene	< 3.0	3.0	ug/L
Ethylbenzene	480	3.0	ug/L	1,2-Dibromoethane	< 3.0	3.0	ug/L
Total Xylenes	1200	3.0	ug/L	Toluene - d8 (Surr)	99.0		% Recovery
Methyl-t-butyl ether (MTBE)	8.6	3.0	ug/L	4-Bromofluorobenzene (Surr)	94.5		% Recovery
Diisopropyl ether (DIPE)	< 3.0	3.0	ug/L	Dibromofluoromethane (Surr)	99.7		% Recovery
Ethyl-t-butyl ether (ETBE)	< 3.0	3.0	ug/L	1,2-Dichloroethane-d4 (Surr)	96.4		% Recovery
Tert-amyl methyl ether (TAME)	< 3.0	3.0	ug/L				
Tert-Butanol	< 15	15	ug/L				
TPH as Gasoline	16000	300	ug/L				
Chloromethane	< 3.0	3.0	ug/L				
Vinyl Chloride	< 3.0	3.0	ug/L				
Bromomethane	< 20	20	ug/L				
Chloroethane	< 3.0	3.0	ug/L				
Trichlorofluoromethane	< 3.0	3.0	ug/L				
1,1-Dichloroethene	< 3.0	3.0	ug/L				
Methylene Chloride	< 5.0	5.0	ug/L				
trans-1,2-Dichloroethene	< 3.0	3.0	ug/L				
1,1-Dichloroethane	< 3.0	3.0	ug/L				
cis-1,2-Dichloroethene	3.9	3.0	ug/L				
Chloroform	< 3.0	3.0	ug/L				
1,1,1-Trichloroethane	< 3.0	3.0	ug/L				
1,2-Dichloroethane	< 3.0	3.0	ug/L				
Carbon Tetrachloride	< 3.0	3.0	ug/L				
Trichloroethene	< 3.0	3.0	ug/L				
1,2-Dichloropropane	< 3.0	3.0	ug/L				
Bromodichloromethane	< 3.0	3.0	ug/L				
cis-1,3-Dichloropropene	< 3.0	3.0	ug/L				
trans-1,3-Dichloropropene	< 3.0	3.0	ug/L				
1,1,2-Trichloroethane	< 3.0	3.0	ug/L				
Tetrachloroethene	< 3.0	3.0	ug/L				
Dibromochloromethane	< 3.0	3.0	ug/L				
Chlorobenzene	< 3.0	3.0	ug/L				
Bromoform	< 3.0	3.0	ug/L				
1,1,2,2-Tetrachloroethane	< 3.0	3.0	ug/L				
1,3-Dichlorobenzene	< 3.0	3.0	ug/L				

1) MRL = Method reporting limit

2) MRL raised due to interference

Approved By:

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

  
Joel Kiff



Report Number : 44527

Date : 7/5/2005

Sample : MW-3

Project Name : KIM

Project Number : 3928

Lab Number : 44527-03

Date Analyzed : 6/28/2005

Matrix : Water

Sample Date : 6/23/2005

Analysis Method: EPA 8260B

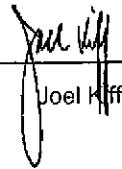
Parameter	Measured Value	MRL <sup>1)</sup>	Units	Parameter	Measured Value	MRL <sup>1)</sup>	Units
Benzene	< 0.50	0.50	ug/L	1,4-Dichlorobenzene	< 0.50	0.50	ug/L
Toluene	< 0.50	0.50	ug/L	1,2-Dichlorobenzene	< 0.50	0.50	ug/L
Ethylbenzene	< 0.50	0.50	ug/L	1,2-Dibromoethane	< 0.50	0.50	ug/L
Total Xylenes	< 0.50	0.50	ug/L	Toluene - d8 (Surrogate)	98.8		% Recovery
<b>Methyl-t-butyl ether (MTBE)</b>	<b>2.4</b>	0.50	ug/L	4-Bromofluorobenzene (Surrogate)	92.5		% Recovery
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	Dibromofluoromethane (Surrogate)	101		% Recovery
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	1,2-Dichloroethane-d4 (Surrogate)	102		% Recovery
Tert-amyI methyl ether (TAME)	< 0.50	0.50	ug/L				
Tert-Butanol	< 5.0	5.0	ug/L				
TPH as Gasoline	< 50	50	ug/L				
Chloromethane	< 0.50	0.50	ug/L				
Vinyl Chloride	< 0.50	0.50	ug/L				
Bromomethane	< 20	20	ug/L				
Chloroethane	< 0.50	0.50	ug/L				
Trichlorofluoromethane	< 0.50	0.50	ug/L				
1,1-Dichloroethene	< 0.50	0.50	ug/L				
Methylene Chloride	< 5.0	5.0	ug/L				
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L				
1,1-Dichloroethane	< 0.50	0.50	ug/L				
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L				
Chloroform	< 0.50	0.50	ug/L				
1,1,1-Trichloroethane	< 0.50	0.50	ug/L				
<b>1,2-Dichloroethane</b>	<b>0.56</b>	0.50	ug/L				
Carbon Tetrachloride	< 0.50	0.50	ug/L				
Trichloroethene	< 0.50	0.50	ug/L				
1,2-Dichloropropane	< 0.50	0.50	ug/L				
Bromodichloromethane	< 0.50	0.50	ug/L				
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L				
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L				
1,1,2-Trichloroethane	< 0.50	0.50	ug/L				
Tetrachloroethene	< 0.50	0.50	ug/L				
Dibromochloromethane	< 0.50	0.50	ug/L				
Chlorobenzene	< 0.50	0.50	ug/L				
Bromoform	< 0.50	0.50	ug/L				
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L				
1,3-Dichlorobenzene	< 0.50	0.50	ug/L				

1) MRL = Method reporting limit

2) MRL raised due to interference

Approved By:

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

  
Joel Kiff

Report Number : 44527

Date : 7/5/2005

## QC Report : Method Blank Data

Project Name : KIM

Project Number : 3928

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
TPH as Diesel	< 50	50	ug/L	M EPA 8015	6/29/2005
Octacosane (Diesel Surrogate)	104		%	M EPA 8015	6/29/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/28/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/28/2005
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Bromomethane	< 20	20	ug/L	EPA 8260B	6/28/2005
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	6/28/2005
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Trichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Tetrachloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	6/28/2005
Toluene - d8 (Surr)	101		%	EPA 8260B	6/28/2005
4-Bromofluorobenzene (Surr)	93.9		%	EPA 8260B	6/28/2005
Dibromofluoromethane (Surr)	100		%	EPA 8260B	6/28/2005
1,2-Dichloroethane-d4 (Surr)	101		%	EPA 8260B	6/28/2005
Benzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Toluene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Diisopropyl ether (DIPE)	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Ethyl-t-butyl ether (ETBE)	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Tert-amyl methyl ether (TAME)	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Tert-Butanol	< 5.0	5.0	ug/L	EPA 8260B	6/29/2005
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	6/29/2005
Chloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Vinyl Chloride	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Bromomethane	< 20	20	ug/L	EPA 8260B	6/29/2005
Chloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Trichlorofluoromethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,1-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Methylene Chloride	< 5.0	5.0	ug/L	EPA 8260B	6/29/2005
trans-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,1-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
cis-1,2-Dichloroethene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Chloroform	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005

Approved By: Joel Kiff

Report Number : 44527

Date : 7/5/2005

**QC Report : Method Blank Data**

Project Name : KIM

Project Number : 3928

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
1,1,1-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,2-Dichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Carbon Tetrachloride	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Trichloroethylene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,2-Dichloropropane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Bromodichloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Cis-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
trans-1,3-Dichloropropene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,1,2-Trichloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Tetrachloroethylene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Dibromochloromethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Chlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Bromoform	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,1,2,2-Tetrachloroethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,3-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,4-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,2-Dichlorobenzene	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
1,2-Dibromoethane	< 0.50	0.50	ug/L	EPA 8260B	6/29/2005
Toluene - d8 (Surr)	102	%		EPA 8260B	6/29/2005
4-Bromofluorobenzene (Surr)	93.7	%		EPA 8260B	6/29/2005
Dibromofluoromethane (Surr)	99.4	%		EPA 8260B	6/29/2005
1,2-Dichloroethane-d4 (Surr)	99.6	%		EPA 8260B	6/29/2005

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed

Approved By: Joel Kiff

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

Report Number : 44527

Date : 7/5/2005

**QC Report : Matrix Spike/ Matrix Spike Duplicate**

Project Name : KIM

Project Number : 3928

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	988	974	ug/L	M EPA 8015	6/29/05	98.8	97.4	1.42	70-130	25
Benzene	44527-01	<0.50	40.0	40.0	40.7	39.4	ug/L	EPA 8260B	6/28/05	102	98.5	3.31	70-130	25
Toluene	44527-01	<0.50	40.0	40.0	40.9	39.6	ug/L	EPA 8260B	6/28/05	102	99.0	3.20	70-130	25
Tert-Butanol	44527-01	<5.0	200	200	199	197	ug/L	EPA 8260B	6/28/05	99.6	98.4	1.28	70-130	25
Methyl-t-Butyl Ether	44527-01	<0.50	40.0	40.0	39.0	38.3	ug/L	EPA 8260B	6/28/05	97.4	95.7	1.78	70-130	25
Benzene	44482-02	<0.50	40.0	40.0	40.4	38.7	ug/L	EPA 8260B	6/29/05	101	96.8	4.18	70-130	25
Toluene	44482-02	<0.50	40.0	40.0	40.8	39.2	ug/L	EPA 8260B	6/29/05	102	98.0	3.92	70-130	25
Tert-Butanol	44482-02	<5.0	200	200	196	197	ug/L	EPA 8260B	6/29/05	98.1	98.3	0.289	70-130	25
Methyl-t-Butyl Ether	44482-02	<0.50	40.0	40.0	38.7	38.1	ug/L	EPA 8260B	6/29/05	96.7	95.2	1.64	70-130	25

Approved By: Joel Kliff

KIFF ANALYTICAL, LLC

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

**QC Report : Laboratory Control Sample (LCS)**

Report Number : 44527

Date : 7/5/2005

Project Name : **KIM**Project Number : **3928**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	40.0	ug/L	EPA 8260B	6/28/05	97.4	70-130
Toluene	40.0	ug/L	EPA 8260B	6/28/05	101	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/28/05	96.2	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/28/05	93.2	70-130
Benzene	40.0	ug/L	EPA 8260B	6/29/05	98.2	70-130
Toluene	40.0	ug/L	EPA 8260B	6/29/05	102	70-130
Tert-Butanol	200	ug/L	EPA 8260B	6/29/05	95.5	70-130
Methyl-t-Butyl Ether	40.0	ug/L	EPA 8260B	6/29/05	91.6	70-130

KIFF ANALYTICAL, LLC

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

Approved By:

Joe Kiff



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

# Chain of Custody 44527

PAGE 1 OF 1

SAMPLER (SIGNATURE) <i>D. Allen</i>					PROJECT NAME <u>KIM</u>		ADDRESS <u>WEST GRAND AVE, OAKLAND</u>		JOB NO. <u>3928</u>												
ANALYSIS REQUEST																					
SPECIAL INSTRUCTIONS:																					
SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTX (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)	LIQUID 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)	MTBE ONLY	TPH-G/BTEX/5 OXY'S (EPA 82260)	TPH-G/BTEX/5 OXY'S & HALOGENATED VOCs (EPA 8260B)	EDF	HOLD
MW-1	6/23	0812	water	5	X													X	X	01	
MW-2	)	0828	(	)		X												X	X	02	
MW-3	✓	0830	✓	✓		X												X	X	03	
											Sample Number: <u>TR3</u> Temp: <u>70</u> °C. T.O. <u>Therm. 105</u> Initial: <u>MWS</u> Date: <u>06/27/05</u> Time: <u>1527</u> Occult presence: <u>N/A</u>										
RELINQUISHED BY: <i>D. Allen</i> (signature) (time)		RECEIVED BY: (signature) (time)		RELINQUISHED BY: (signature) (time)		RECEIVED BY LABORATORY: <u>Michelle Spencer</u> (signature) (time)		COMMENTS:													
D. ALLEN (printed name) <u>6/23/05</u> (date)		(printed name) (date)		(printed name) (date)		Michelle Spencer <u>062705</u> (printed name) (date)															
Company- ASE. INC.		Company-		Company-		Company- <u>KIFF Analytical</u>		TURN AROUND TIME STANDARD 24HR 48HR 72HR OTHER:													