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Alameda County
Environmental Health

March 16, 2009

**GROUNDWATER MONITORING REPORT
JANUARY 2009 GROUNDWATER SAMPLING
ASE JOB NO. 3411**

at

Hutch's Carwash
17945 Hesperian Boulevard
San Lorenzo, California

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
55 Oak Court, Suite 220
Danville, CA 94526
(925) 820-9391



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1.0 INTRODUCTION

The following is a report detailing the results of the January 27, 2009 groundwater sampling at the Hutch's Carwash property located at 17945 Hesperian Boulevard in San Lorenzo, California (Figures 1 and 2).

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On January 27, 2009, ASE measured the depth to water in each site 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 of the monitoring wells. Groundwater elevation data is presented in Table One.

The groundwater flow is to the northwest at a gradient of 0.002-feet/foot. Groundwater elevation (potentiometric surface) contours are plotted on Figure 2.

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

On January 27, 2009, ASE collected a groundwater sample from monitoring well MW-1 for analyses. Monitoring well MW-3 is no longer being sampled because hydrocarbons have not been detected since its installation. Monitoring well MW-2 is also no longer being sampled in accordance with a letter from the Alameda County Health Care Services Agency (ACHCSA) dated August 12, 2002 stating MW-2 may be excluded from further sampling events until further notice. Prior to sampling, monitoring well MW-1 was purged of three well casing volumes of groundwater. Samples were then collected using a disposable polyethylene bailer. The groundwater samples were decanted from the bottom of the bailer using a low-flow emptying device into 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, labeled, and stored on ice for transport to Kiff Analytical, LLC of Davis, California (CA ELAP #2236) under appropriate chain of custody documentation.

The well sampling purge water was contained in a sealed and labeled 55-gallon steel drum. The well sampling field logs are included as Appendix A.

The groundwater samples were analyzed by Kiff Analytical, LLC for total petroleum hydrocarbons as gasoline (TPH-G), benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8260B.

The analytical results are tabulated in Table Two, and copies of the certified analytical report and chain of custody form are included in Appendix B.



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4.0 RESULTS AND CONCLUSIONS

The groundwater sample collected from monitoring well MW-1 contained 140 parts per billion (ppb) TPH-G and 170 ppb MTBE. This MTBE concentration is a decrease from the previous sampling.

Both the TPH-G and MTBE concentrations in the groundwater sample collected from monitoring well MW-1 exceeded California Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs) presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater" document dated May 2008 for sites where water is a current or potential source of drinking water. However, both the TPH-G and MTBE concentration did not exceed ESLs for sites where groundwater is not a current or potential source of drinking water.

5.0 RECOMMENDATIONS

ASE is currently preparing an area well survey and preferential pathway survey for the site. This will be followed by a soil and groundwater assessment as proposed in ASE's May 2, 2008 workplan. In addition, ASE recommends continued groundwater monitoring on a semi-annual basis. The next sampling event is scheduled for July 2009.

6.0 REPORT LIMITATIONS

The results presented in this report represent conditions at the time of groundwater sampling, at the specific locations where the samples were collected, and for the specific parameters analyzed by the laboratory.

It does not fully characterize the site for contamination resulting from unknown sources, 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.



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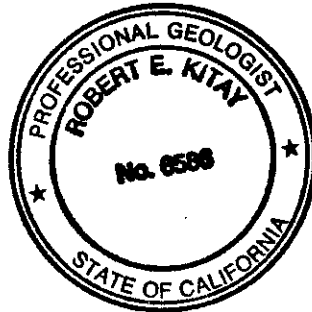
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

A handwritten signature in black ink that reads 'Robert E. Kitay'.

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



Attachments: Figures 1 and 2
Appendices A and B

cc: Mr. Kirk Hutchison, Hutch's Car Wash
Mr. Steven Plunkett, Alameda County Health Care Services Agency
Mr. Chuck Headlee, California Regional Water Quality Control Board



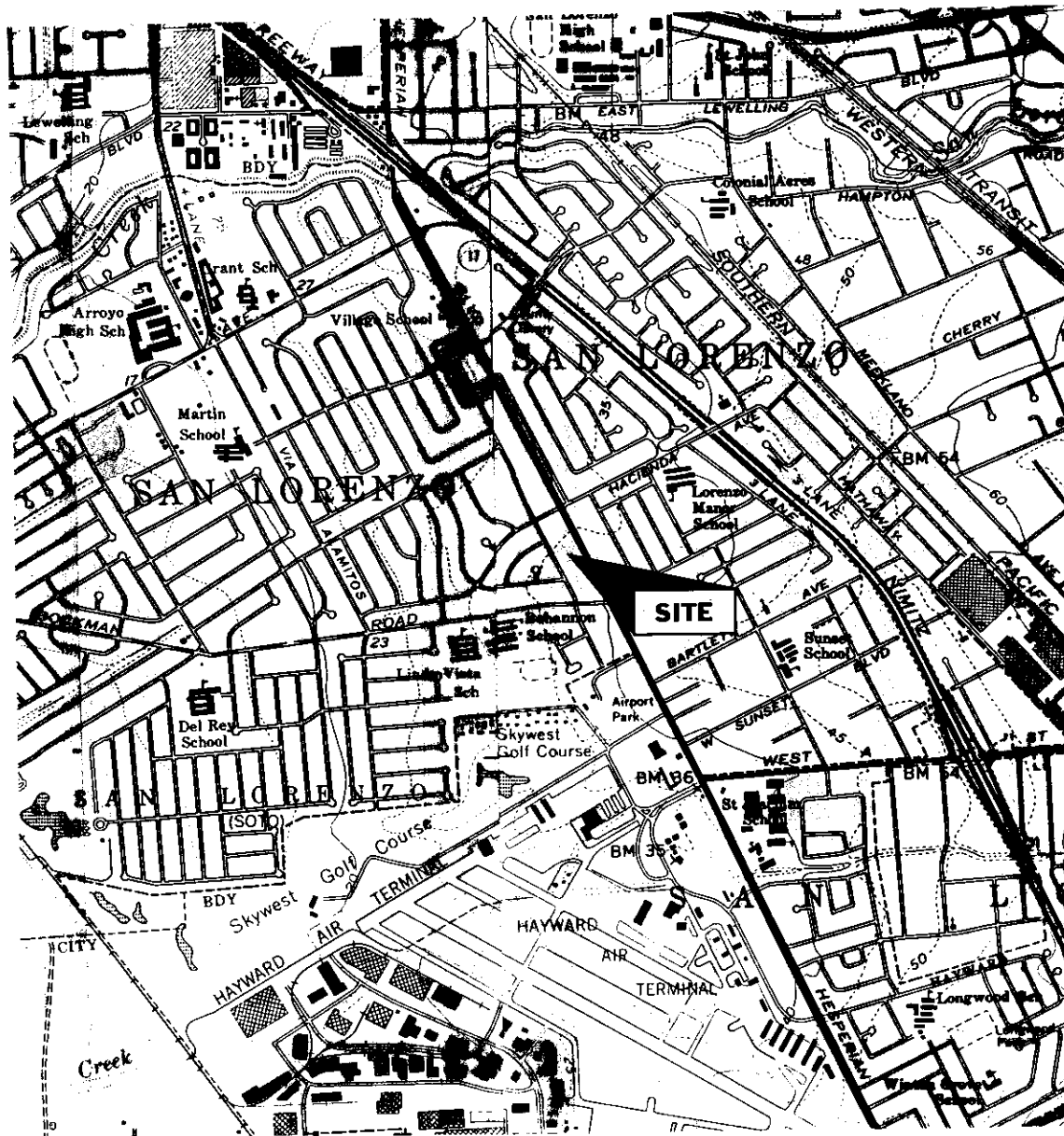
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FIGURES



NORTH

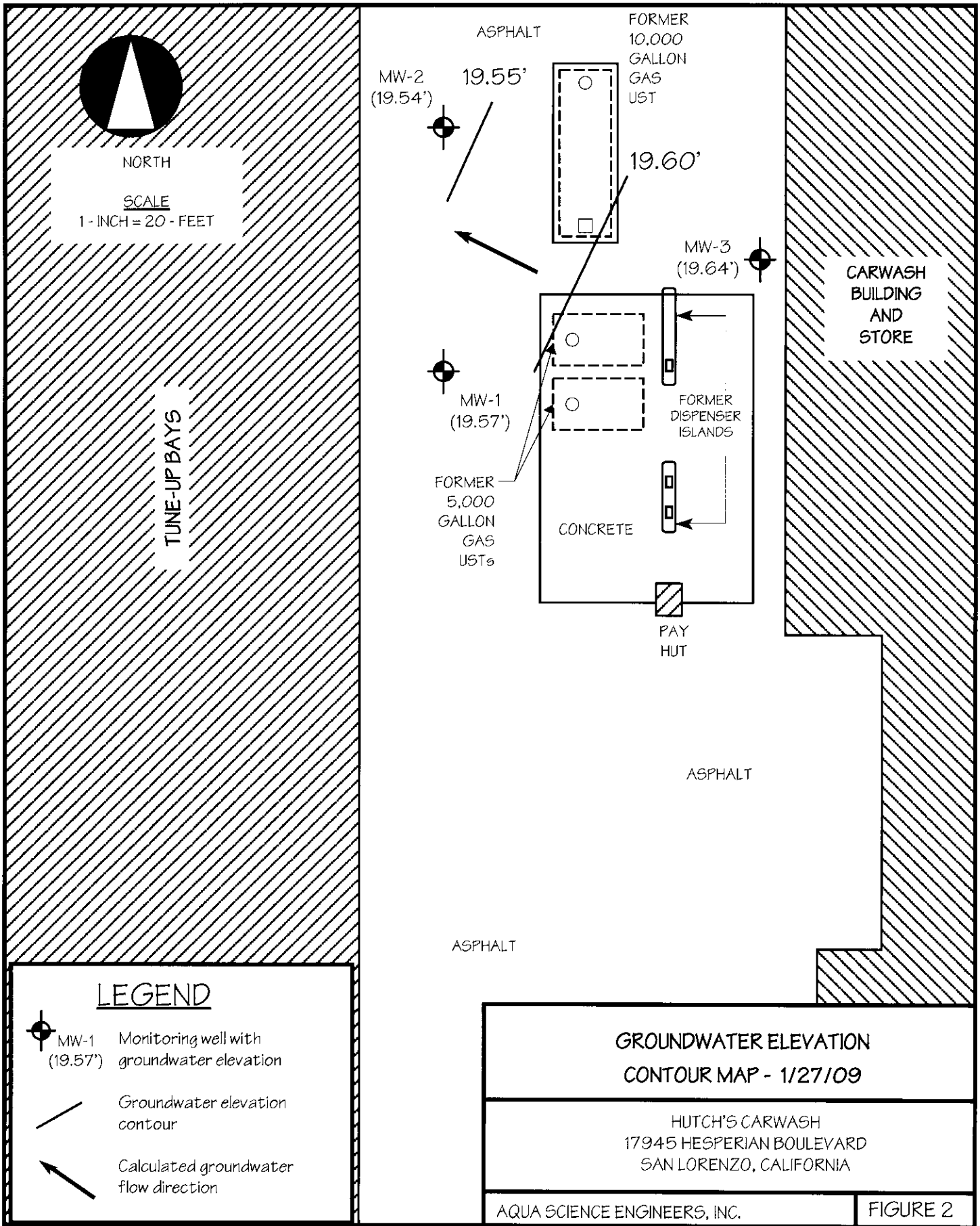
NOT TO SCALE



LOCATION MAP

Hutch's Carwash
17945 Hesperian Boulevard
San Lorenzo, California

AQUA SCIENCE ENGINEERS, INC. Figure 1



NORTH

SCALE
1 - INCH = 20 - FEET

TUNE-UP BAYS

ASPHALT

MW-2
(19.54')

19.55'

FORMER
10,000
GALLON
GAS
UST

19.60'

MW-3
(19.64')

CARWASH
BUILDING
AND
STORE



MW-1
(19.57')

FORMER
DISPENSER
ISLANDS

FORMER
5,000
GALLON
GAS
USTs

CONCRETE

PAY
HUT

ASPHALT

ASPHALT



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TABLES

TABLE ONE
Groundwater Elevation Data
Hutch's Carwash
17945 Hesperian Blvd., San Lorenzo, CA

Well ID	Date of Measurement	Top of Casing Elevation (Relative to Mean Sea Level)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	10/6/99	35.00	15.58	19.42
	1/13/00		15.58	19.42
	4/12/00		14.75	20.25
	7/19/00		15.29	19.71
	10/25/00		15.56	19.44
	1/16/01		15.22	19.78
	4/4/01		15.05	19.95
	7/6/01		15.49	19.51
	10/1/01		15.78	19.22
	1/7/02		13.83	21.17
	4/2/02		14.83	20.17
	7/9/02		15.41	19.59
	10/1/02		15.70	19.3
	1/24/03		14.69	20.31
	7/25/03		15.41	19.59
	1/16/04		14.73	20.27
	7/14/04		15.54	19.46
	1/29/05		14.38	20.62
	7/22/05		15.23	19.77
	1/25/06		14.00	21.00
6/10/06	15.13	19.87		
1/26/07	15.30	19.70		
7/5/07	15.46	19.54		
1/30/08	14.32	20.68		
1/27/09		15.43	19.57	
MW-2	10/6/99	35.21	15.84	19.37
	1/13/00		15.78	19.43
	4/12/00		14.94	20.27
	7/19/00		15.54	19.67
	10/25/00		15.81	19.4
	1/16/01		15.50	19.71
	4/4/01		15.28	19.93
	7/6/01		15.73	19.48
	10/1/01		16.06	19.15
	1/7/02		14.08	21.13
	4/2/02		15.04	20.17
	7/9/02		15.66	19.55
	10/1/02		15.96	19.25
	1/24/03		14.90	20.31
	7/25/03		15.68	19.53
	1/16/04		14.93	20.28
	7/14/04		15.81	19.40
	1/29/05		14.90	20.31
	7/22/05		15.46	19.75
	1/25/06		14.16	21.05
6/10/06	15.40	19.81		
1/26/07	15.55	19.66		
7/5/07	15.72	19.49		
1/30/08	14.51	20.70		
1/27/09		15.67	19.54	

TABLE ONE
 Groundwater Elevation Data
 Hutch's Carwash
 17945 Hesperian Blvd., San Lorenzo, CA

Well ID	Date of Measurement	Top of Casing Elevation (Relative to Mean Sea Level)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-3	10/6/99	34.47	14.98	19.49
	1/13/00		14.98	19.49
	4/12/00		14.09	20.38
	7/19/00		14.70	19.77
	10/25/00		14.98	19.49
	1/16/01		14.58	19.89
	4/4/01		14.43	20.04
	7/6/01		14.85	19.62
	10/1/01		15.21	19.26
	1/7/02		13.24	21.23
	4/2/02		14.20	20.27
	7/9/02		14.81	19.66
	10/1/02		15.12	19.35
	1/24/03		14.05	20.42
	7/25/03		14.82	19.65
	1/16/04		14.08	20.39
	7/14/04		14.94	19.53
	1/29/05		14.03	20.44
	7/22/05		14.59	19.88
	1/25/06		13.31	21.16
	6/10/06		14.53	19.94
	1/26/07		14.69	19.78
	7/5/07		14.88	19.59
1/30/08	13.64	20.83		
1/27/09	14.83	19.64		

TABLE TWO
Summary of Analytical Results for GROUNDWATER Samples
Hutch's Carwash
17945 Hesperian Blvd., San Lorenzo, CA
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
<u>MW-1</u>						
10/6/99	1,500	3.3	2.3	27	72	120
1/13/00	1,500	15	19	19	33	650
4/12/00	1,700	18	13	45	79	2,600
7/19/00	2,200	31	< 5.0	81	100	2,000
10/25/00	3,300	20	< 5.0	98	9.4	3,300
1/16/01	4,100	34	14	60	120	1,300
4/4/01	2,900	14	< 0.5	34	32	2,000
7/6/01	1,300	4.4	< 0.5	12	13	700
10/1/01	1,100	4.1	< 0.5	18	19	520
1/7/02	1,400	34	< 0.5	13	15	1,300
4/2/02	1,900	30	6.7	24	30	1,000
7/9/02	1,500	26	< 5.0	12	8.6	820
10/1/02	830	3.6	< 2.5	7.4	2.9	520
1/24/03	1,300	6.2	< 5.0	12	< 5.0	680
7/25/03	520	15	< 1.0	11	1.0	250
1/16/04	540	3.9	< 2.5	8.3	3.1	290
7/14/04	220	< 1.0	< 1.0	8.1	< 1.0	140
1/29/05	160	1.0	< 0.5	2.5	< 1.0	60
7/22/05	380	2.5	< 1.0	9.1	< 2.0	210
1/25/06	250	1.2	< 1.0	3.3	< 2.0	220
6/10/06	< 100	< 1.0	< 1.0	1.3	< 2.0	180
1/26/07	< 50	< 0.5	< 0.5	< 0.5	< 1.0	18
7/5/07	< 50	< 0.5	< 0.5	< 0.5	< 1.0	37
1/30/08	< 200	< 2.0	< 2.0	< 2.0	< 4.0	290
1/27/09	140	< 0.5	< 0.5	< 0.5	< 0.5	170

TABLE TWO
Summary of Analytical Results for GROUNDWATER Samples
Hutch's Carwash
17945 Hesperian Blvd., San Lorenzo, CA
All results are in parts per billion (ppb)

Well ID & Dates Sampled	TPH-G	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE
MW-2						
10/6/99	< 50	< 0.5	< 0.5	< 0.5	< 0.5	18
1/13/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	16
4/12/00	< 100	< 1.0	< 1.0	< 1.0	< 1.0	240
7/19/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/25/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	6
1/16/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	8
4/4/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
7/6/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	6
10/1/01	< 50	< 0.5	< 0.5	< 0.5	< 0.5	21
1/7/02	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
4/2/02	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
7/9/02	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/1/02	No longer sampled					
MW-3						
10/6/99	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
1/13/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
4/12/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
7/19/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
10/25/00	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
1/16/01	No longer sampled					
ESL (DW)	100	1	40	30	20	5
ESL (NDW)	210	46	130	43	100	1,800

Notes:

* EPA Method 8020/EPA Method 8260 (MTBE confirmation)

** Hydrocarbon reported in the gasoline range does not match the laboratory gasoline standard

*** Sample contains a discrete peak in addition to gasoline

ESL = Environmental screening level presented in the "Screening For Environmental Concerns at Sites With Contaminated Soil and Groundwater (May 2008)" document prepared by the California Regional Water Quality Control Board, San Francisco Bay Region.

DW = Groundwater is considered a current or potential source of drinking water

NDW = Groundwater is not considered a current or potential source of drinking water

Most current data is in **Bold**

Non-detectable concentrations noted by the less than sign (<) followed by the laboratory reporting limit



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APPENDIX A

Well Sampling Field Logs

AQUA SCIENCE ENGINEERS

WELL SAMPLING FIELD LOG

PROJECT NAME HUTCH'S S.L.

JOB NUMBER 3411 DATE OF SAMPLING 01.27.09

WELL ID. MW-1 SAMPLER DA

TOTAL DEPTH OF WELL 26.0 WELL DIAMETER 2

DEPTH TO WATER PRIOR TO PURGING 15.43

PRODUCT THICKNESS 0

DEPTH OF WELL CASING IN WATER 10.57

NUMBER OF GALLONS PER WELL CASING VOLUME 1.69

NUMBER OF WELL CASING VOLUMES TO BE REMOVED 3

REQUIRED VOLUME OF GROUNDWATER TO BE PURGED PRIOR TO SAMPLING 5.07

EQUIPMENT USED TO PURGE WELL NEW DISPOSABLE BALLER

TIME EVACUATION STARTED 1340 TIME EVACUATION COMPLETED 1349

TIME SAMPLES WERE COLLECTED 1351

DID WELL GO DRY NO AFTER HOW MANY GALLONS —

VOLUME OF GROUNDWATER PURGED 5.1

SAMPLING DEVICE NEW DISPOSABLE BALLER

SAMPLE COLOR LT BRN ODOR/SEDIMENT NO/SL

CHEMICAL DATA

	<u>MW-2</u>	<u>MW-3</u>
<u>DTW</u>	<u>15.67'</u>	<u>14.83'</u>

VOLUME PURGED	TEMPERATURE	PH	CONDUCTIVITY
1	65.9	6.19	—
2	66.5	6.20	—
3	66.7	6.20	✓

SAMPLES COLLECTED

SAMPLE	# OF CONTAINERS	SIZE AND TYPE OF CONTAINER	ANALYSIS	PRESERVED
<u>MW-1</u>	<u>3</u>	<u>40 ml JDA</u>	<u>8260B</u>	<u>✓</u>



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APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation



Report Number : 67058

Date : 01/29/2009

David Allen
Aqua Science Engineers, Inc.
55 Oak Court, Suite 220
Danville, CA 94526

Subject : 1 Water Sample
Project Name : HUTCH'S SAN LORENZO
Project Number : 3411

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 : 67058

Date : 01/29/2009

Project Name : HUTCH'S SAN LORENZO

Project Number : 3411

Sample : MW-1

Matrix : Water

Lab Number : 67058-01

Sample Date :01/27/2009

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Methyl-t-butyl ether (MTBE)	170	0.50	ug/L	EPA 8260B	01/29/2009
TPH as Gasoline	140	50	ug/L	EPA 8260B	01/29/2009
1,2-Dichloroethane-d4 (Surr)	99.7		% Recovery	EPA 8260B	01/29/2009
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	01/29/2009

Report Number : 67058

Date : 01/29/2009

QC Report : Method Blank Data

Project Name : **HUTCH'S SAN LORENZO**

Project Number : **3411**

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
Benzene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Toluene	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	01/29/2009
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	01/29/2009
1,2-Dichloroethane-d4 (Surr)	100		%	EPA 8260B	01/29/2009
Toluene - d8 (Surr)	100		%	EPA 8260B	01/29/2009

<u>Parameter</u>	<u>Measured Value</u>	<u>Method Reporting Limit</u>	<u>Units</u>	<u>Analysis Method</u>	<u>Date Analyzed</u>
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KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 67058

Date : 01/29/2009

QC Report : Matrix Spike/ Matrix Spike Duplicate

Project Name : **HUTCH'S SAN LORENZO**

Project Number : **3411**

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	67077-04	<0.50	39.3	39.3	38.1	35.2	ug/L	EPA 8260B	1/29/09	96.8	89.4	8.00	70-130	25
Methyl-t-butyl ether	67077-04	<0.50	39.6	39.6	37.5	33.7	ug/L	EPA 8260B	1/29/09	94.8	85.2	10.7	70-130	25
Toluene	67077-04	<0.50	40.1	40.1	40.8	37.8	ug/L	EPA 8260B	1/29/09	102	94.1	7.85	70-130	25

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

Report Number : 67058

Date : 01/29/2009

QC Report : Laboratory Control Sample (LCS)

Project Name : **HUTCH'S SAN LORENZO**

Project Number : **3411**

Parameter	Spike Level	Units	Analysis Method	Date Analyzed	LCS Percent Recov.	LCS Percent Recov. Limit
Benzene	39.8	ug/L	EPA 8260B	1/29/09	105	70-130
Methyl-t-butyl ether	39.4	ug/L	EPA 8260B	1/29/09	108	70-130
Toluene	39.8	ug/L	EPA 8260B	1/29/09	108	70-130

KIFF ANALYTICAL, LLC

2795 2nd Street, Suite 300 Davis, CA 95618 530-297-4800

