aqua science engineers inc.

PROTECTION

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February 10, 2000

RESPONDED to
2/15/2000

QUARTERLY GROUNDWATER MONITORING REPORT
JANUARY 2000 GROUNDWATER SAMPLING
ASE JOB NO. 3411
at
Hutch's Carwash
17945 Hesperian Boulevard
San Lorenzo, California

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

1.0 INTRODUCTION

The following is a report detailing the results of the January 2000 quarterly groundwater sampling at the Hutch's Carwash property located at 17945 Hesperian Boulevard in San Lorenzo, California (Figure 1 and 2).

2.0 GROUNDWATER FLOW DIRECTION AND GRADIENT

On January 13, 2000, ASE associate geologist Ian Reed 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 and groundwater elevation (potentiometric surface) contours are plotted on Figure 2. The groundwater flow is to the west at a gradient of 0.001-feet/foot.

TABLE TWO
Groundwater Elevation Data

Well I.D.	Date of Measurement	Top of Casing Elevation (relative to project datum)	Depth to Water (feet)	Groundwater Elevation (project data)
MW-1	10-06-99	35.00	15.58	19.42
	01-13-00		**15.58**	**19.42**
MW-2	10-06-99	35.21	15.84	19.37
	01-13-00		**15.78**	**19.43**
MW-3	10-06-99	34.47	14.98	19.49
	01-13-00		**14.98**	**19.49**

3.0 GROUNDWATER SAMPLE COLLECTION AND ANALYSIS

On January 13, 2000, ASE associate geologist Ian Reed collected groundwater samples from all three site monitoring wells for analysis. No free-floating hydrocarbons or sheen were present on the surface of groundwater in any of the monitoring wells. However, hydrocarbon odors were present in water purged from monitoring wells MW-1 and MW-2. Prior to sampling, the wells were purged of four well casing volumes of groundwater. The pH, temperature and conductivity of the purge water were monitored during evacuation, and samples were not collected until these parameters stabilized. Samples were collected from each well using dedicated polyethylene bailers. The groundwater samples were decanted

from the bailers into 40-ml volatile organic analysis (VOA) vials, preserved with hydrochloric acid, labeled, placed in protective foam sleeves, and stored on ice for transport to Chromalab, Inc. of Pleasanton, California under chain of custody. Well sampling purge water was contained in sealed and labeled 55-gallon steel drums and left on-site for temporary storage until off-site disposal can be arranged. See Appendix A for a copy of the Field Logs.

The groundwater samples were analyzed by Chromalab for total petroleum hydrocarbons as gasoline (TPH-G) by modified EPA Method 5030/8015 and benzene, toluene, ethyl benzene, and total xylenes (collectively known as BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8020. 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.

TABLE TWO
Certified Analytical Results of **GROUNDWATER** Samples
All results are in **parts per billion**

Well	TPH Gasoline	Benzene	Toluene	Ethyl Benzene	Total Xylenes	MTBE
MW-1	1,500	3.3	2.3	27	72	120
	1,500	**15**	**19**	**19**	**33**	**650**
MW-2	< 50	< 0.5	< 0.5	< 0.5	< 0.5	18
	< 50	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**16**
MW-3	< 50	< 0.5	< 0.5	< 0.5	< 0.5	< 5.0
	< 50	**< 0.5**	**< 0.5**	**< 0.5**	**< 0.5**	**< 5.0**
DHS MCL	NE	1	150	700	1,750	13

Notes:
Most recent concentrations are in **bold**.

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

DHS MCL = California Department of Health Services maximum contaminant level for drinking water

NE = DHS MCL not established

4.0 CONCLUSIONS AND RECOMMENDATIONS

The groundwater samples collected from monitoring well MW-1 contained 1,500 parts per billion (ppb) TPH-G, 15 ppb benzene, 19 ppb ethyl benzene, 33 ppb total xylenes, and 650 ppb MTBE. The groundwater samples collected from monitoring well MW-2 contained 16 ppb MTBE. No other compounds were detected above the laboratory reporting limits in groundwater samples collected from monitoring well MW-2. No hydrocarbons were detected in the groundwater samples collected from monitoring well MW-3.

The benzene concentration in groundwater samples collected from monitoring well MW-1 exceeded the California Department of Health Services (DHS) maximum contaminant level (MCL) for drinking water. The MTBE concentrations in groundwater samples collected from monitoring wells MW-1 and MW-2 exceeded the DHS MCL for drinking water.

The analytical results this quarter are very similar to last quarter's results with only a minor increase in benzene, toluene, and MTBE concentrations and a minor decrease in ethyl benzene and total xylenes concentrations in groundwater samples collected from monitoring well MW-1.

ASE recommends that this site remain on a quarterly groundwater monitoring program. Based on this sampling schedule, the next sampling is scheduled for April 2000.

10.0 REPORT LIMITATIONS

The results of this assessment 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-EPA certified laboratory. The independent laboratory is solely responsible for the contents and conclusions of the chemical analysis data.

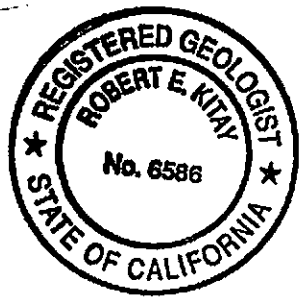
Aqua Science Engineers appreciates the opportunity to provide environmental consulting services for this project. Should you have any questions or comments, please feel free to call us at (925) 820-9391.

Respectfully submitted,

AQUA SCIENCE ENGINEERS, INC.

Ian T. Reed.
Associate Geologist

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

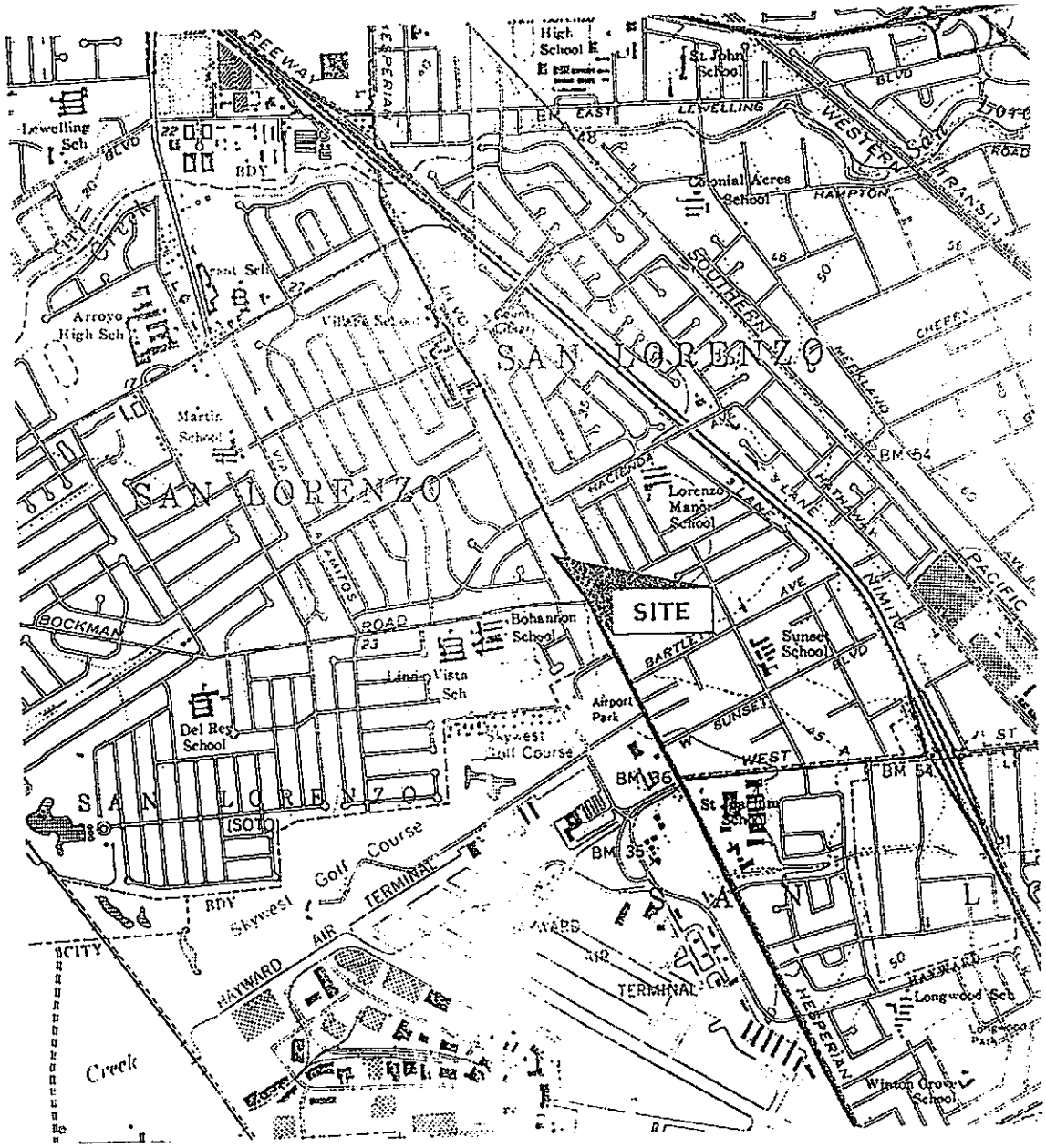


Attachments: Figures 1 through 2
Appendices A through B

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

NORTH

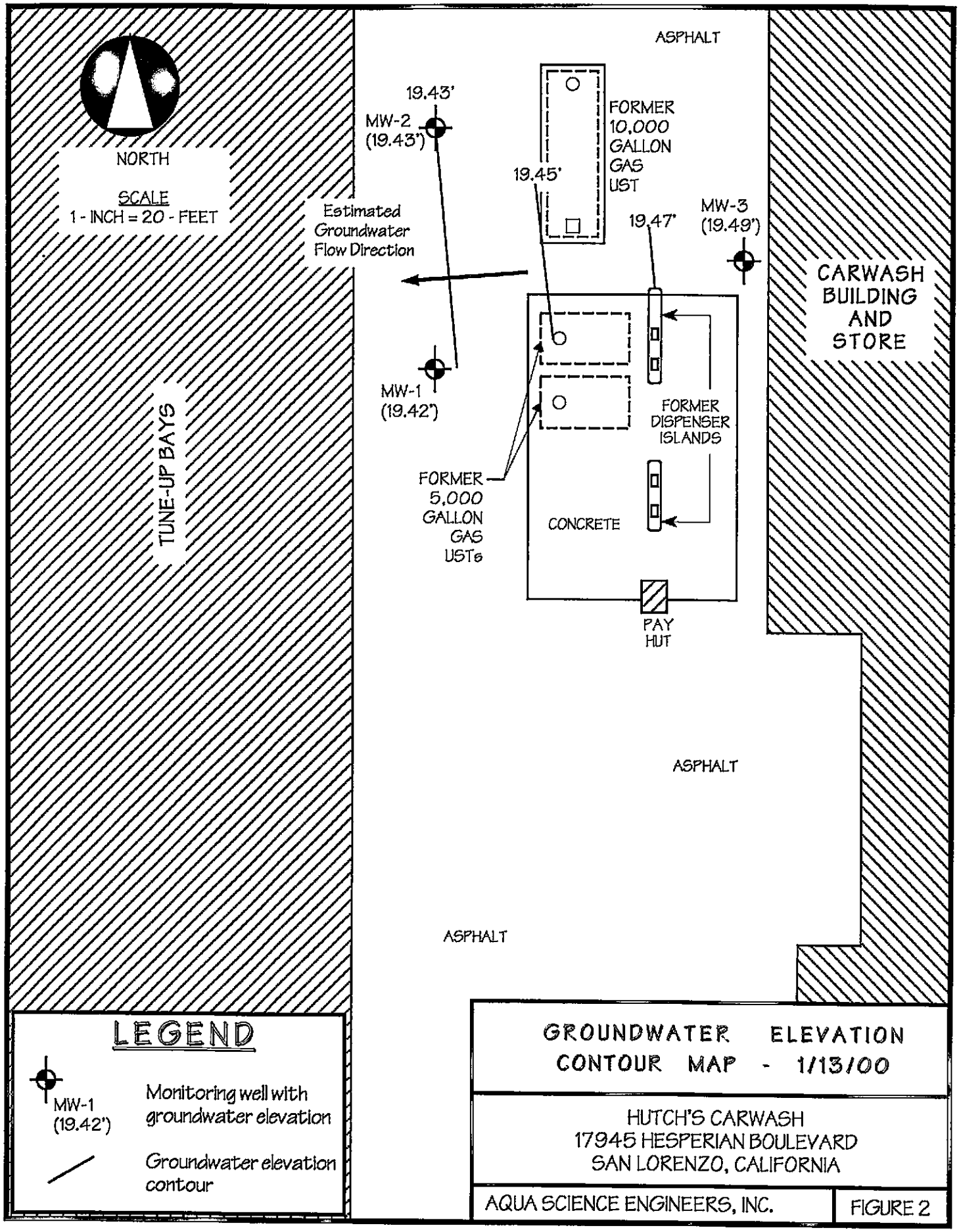
NOT TO SCALE



LOCATION MAP

Hutch's Carwash
17945 Hesperian Boulevard
San Lorenzo, California

AQUA SCIENCE ENGINEERS, INC. | Figure 1


NORTH
SCALE
1 - INCH = 20 - FEET
Estimated Groundwater Flow Direction
ASPHALT
19.43'
MW-2
(19.43')
FORMER 10,000 GALLON GAS UST
19.45'
19.47'
MW-3
(19.49')
CARWASH BUILDING AND STORE
MW-1
(19.42')
TUNE-UP BAYS
FORMER DISPENSER ISLANDS
FORMER 5,000 GALLON GAS USTs
CONCRETE
PAY HUT
ASPHALT
ASPHALT
LEGEND
MW-1
(19.42')
Monitoring well with groundwater elevation
Groundwater elevation contour
GROUNDWATER ELEVATION CONTOUR MAP - 1/13/00
HUTCH'S CARWASH
17945 HESPERIAN BOULEVARD
SAN LORENZO, 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: Hutch's Car Wash
Job #: _____ Date of sampling: 1/13/00
Well Name: MW-1 Sampled by: ITR
Total depth of well (feet): 26.68' Well diameter (inches): 2"
Depth to water before sampling (feet): 15.58'
Thickness of floating product if any: —
Depth of well casing in water (feet): 11.1
Number of gallons per well casing volume (gallons): 1.9
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 7.5
Equipment used to purge the well: Dedicated bailer
Time Evacuation Began: 10:30 Time Evacuation Finished: 1040
Approximate volume of groundwater purged: 7.5
Did the well go dry?: NO After how many gallons: _____
Time samples were collected: 1050
Depth to water at time of sampling: 15.62'
Percent recovery at time of sampling: 98%
Samples collected with: Dedicated bailer
Sample color: Brown brown Odor: Med. HC odor
Description of sediment in sample: silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	71.6	7.64	713
2	70.9	6.54	823
3	71.6	5.60	810
4	72.0	5.34	814

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-1	3	40ml VOA	✓	✓	TPH-g/BTEX/MTBE

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Hutchs Car Wash
Job #: _____ Date of sampling: 1/13/00
Well Name: MW-2 Sampled by: ITR
Total depth of well (feet): 25.96 Well diameter (inches): 2"
Depth to water before sampling (feet): 15.78
Thickness of floating product if any: —
Depth of well casing in water (feet): 9.78
Number of gallons per well casing volume (gallons): 1.67
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 6.7
Equipment used to purge the well: Dedicated bailer
Time Evacuation Began: 9:55 Time Evacuation Finished: 1008
Approximate volume of groundwater purged: 6.7
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 1015
Depth to water at time of sampling: 15.78
Percent recovery at time of sampling: 100 +
Samples collected with: dedicated bailer
Sample color: orange brown Odor: slight HC odor
Description of sediment in sample: heavy silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	71.9	5.67	450
2	72.3	5.80	710
3	71.6	6.11	579
4	72.3	6.34	613

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-2	3	40 ml VOA	✓	✓	TPH-G/BTEX/MTBE

aqua science engineers inc.

WELL SAMPLING FIELD LOG

Project Name and Address: Hutch's Car Wash
Job #: _____ Date of sampling: 1/13/00
Well Name: MW-3 Sampled by: ITR
Total depth of well (feet): 26.94' Well diameter (inches): 2"
Depth to water before sampling (feet): 14.98'
Thickness of floating product if any: —
Depth of well casing in water (feet): 11.96
Number of gallons per well casing volume (gallons): 2.03
Number of well casing volumes to be removed: 4
Req'd volume of groundwater to be purged before sampling (gallons): 8.13
Equipment used to purge the well: Dedicated bailer
Time Evacuation Began: 9:55 Time Evacuation Finished: 10:10
Approximate volume of groundwater purged: 8
Did the well go dry?: NO After how many gallons: —
Time samples were collected: 1015
Depth to water at time of sampling: 14.98
Percent recovery at time of sampling: 100%
Samples collected with: Dedicated bailer
Sample color: Yellow - Brown Odor: None
Description of sediment in sample: Silt

CHEMICAL DATA

Volume Purged	Temp	pH	Conductivity
1	72.6	6.76	784
2	71.6	7.10	613
3	72.0	6.97	794
4	72.1	7.13	1100

SAMPLES COLLECTED

Sample	# of containers	Volume & type container	Pres	Iced?	Analysis
MW-3	3	40 ml VOA	✓	✓	TPH(g) / BTEX / MTBE

APPENDIX B

Certified Analytical Report
and
Chain of Custody Documentation

Aqua Science Engineers, Inc.
208 West El Pintado Road
Danville, CA 94526

Attn.: Mr. Ian T. Reed

Project: Hutch`s Car Wash

Site: Hesperian, San Lorenzo, CA

Dear Mr. Reed,

Attached is our report for your samples received on Friday January 14, 2000
This report has been reviewed and approved for release. Reproduction of this report is permitted only in its entirety.

Please note that any unused portion of the samples will be discarded after February 13, 2000 unless you have requested otherwise. We appreciate the opportunity to be of service to you. If you have any questions, please call me at (925) 484-1919. You can also contact me via email. My email address is: vvancil@chromalab.com

Sincerely,

Vincent Vancil

Gas/BTEX and MTBE

Aqua Science Engineers, Inc.

208 West El Pintado Road
Danville, CA 94526

Attn: Ian T. Reed

Phone: (925) 820-9391 Fax: (925) 837-4853

Project #:

Project: Hutch`s Car Wash

Site: Hesperian, San Lorenzo, CA

Samples Reported

Sample ID	Matrix	Date Sampled	Lab #
MW-1	Water	01/13/2000 10:50	1
MW-2	Water	01/13/2000 10:15	2
MW-3	Water	01/13/2000 10:15	3

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-1**	Lab Sample ID:	**2000-01-0218-001**
Project:	Hutch`s Car Wash	Received:	01/14/2000 18:47
Site:	Hesperian, San Lorenzo, CA	Extracted:	01/24/2000 12:17
Sampled:	01/13/2000 10:50	QC-Batch:	2000/01/24-01.04
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	1500	1000	ug/L	20.00	01/24/2000 12:17	
Benzene	15	10	ug/L	20.00	01/24/2000 12:17	
Toluene	19	10	ug/L	20.00	01/24/2000 12:17	
Ethyl benzene	19	10	ug/L	20.00	01/24/2000 12:17	
Xylene(s)	33	10	ug/L	20.00	01/24/2000 12:17	
MTBE	650	100	ug/L	20.00	01/24/2000 12:17	
Surrogate(s)						
Trifluorotoluene	88.4	58-124	%	1.00	01/24/2000 12:17	
4-Bromofluorobenzene-FID	84.6	50-150	%	1.00	01/24/2000 12:17	

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-2**	Lab Sample ID:	**2000-01-0218-002**
Project:	Hutch's Car Wash	Received:	01/14/2000 18:47
Site:	Hesperian, San Lorenzo, CA	Extracted:	01/23/2000 16:35
Sampled:	01/13/2000 10:15	QC-Batch:	2000/01/23-01.04
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/23/2000 16:35	
Benzene	ND	0.50	ug/L	1.00	01/23/2000 16:35	
Toluene	ND	0.50	ug/L	1.00	01/23/2000 16:35	
Ethyl benzene	ND	0.50	ug/L	1.00	01/23/2000 16:35	
Xylene(s)	ND	0.50	ug/L	1.00	01/23/2000 16:35	
MTBE	16	5.0	ug/L	1.00	01/23/2000 16:35	
Surrogate(s)						
Trifluorotoluene	79.3	58-124	%	1.00	01/23/2000 16:35	
4-Bromofluorobenzene-FID	89.5	50-150	%	1.00	01/23/2000 16:35	

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Gas/BTEX and MTBE

Sample ID:	**MW-3**	Lab Sample ID:	**2000-01-0218-003**
Project:	Hutch`s Car Wash	Received:	01/14/2000 18:47
Site:	Hesperian, San Lorenzo, CA	Extracted:	01/23/2000 17:04
Sampled:	01/13/2000 10:15	QC-Batch:	2000/01/23-01.04
Matrix:	Water		

Compound	Result	Rep.Limit	Units	Dilution	Analyzed	Flag
Gasoline	ND	50	ug/L	1.00	01/23/2000 17:04	
Benzene	ND	0.50	ug/L	1.00	01/23/2000 17:04	
Toluene	ND	0.50	ug/L	1.00	01/23/2000 17:04	
Ethyl benzene	ND	0.50	ug/L	1.00	01/23/2000 17:04	
Xylene(s)	ND	0.50	ug/L	1.00	01/23/2000 17:04	
MTBE	ND	5.0	ug/L	1.00	01/23/2000 17:04	
Surrogate(s)						
Trifluorotoluene	85.7	58-124	%	1.00	01/23/2000 17:04	
4-Bromofluorobenzene-FID	91.5	50-150	%	1.00	01/23/2000 17:04	

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2000/01/24-01.04**

MB: 2000/01/24-01.04-001

Date Extracted: 01/24/2000 09:18

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	01/24/2000 09:18	
Benzene	ND	0.5	ug/L	01/24/2000 09:18	
Toluene	ND	0.5	ug/L	01/24/2000 09:18	
Ethyl benzene	ND	0.5	ug/L	01/24/2000 09:18	
Xylene(s)	ND	0.5	ug/L	01/24/2000 09:18	
MTBE	ND	5.0	ug/L	01/24/2000 09:18	
Surrogate(s)					
Trifluorotoluene	92.8	58-124	%	01/24/2000 09:18	
4-Bromofluorobenzene-FID	93.0	50-150	%	01/24/2000 09:18	

To: **Aqua Science Engineers, Inc.**

Attn.: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Method Blank | **Water** | **QC Batch # 2000/01/23-01.04**

MB: 2000/01/23-01.04-001

Date Extracted: 01/23/2000 14:14

Compound	Result	Rep.Limit	Units	Analyzed	Flag
Gasoline	ND	50	ug/L	01/23/2000 14:14	
Benzene	ND	0.5	ug/L	01/23/2000 14:14	
Toluene	ND	0.5	ug/L	01/23/2000 14:14	
Ethyl benzene	ND	0.5	ug/L	01/23/2000 14:14	
Xylene(s)	ND	0.5	ug/L	01/23/2000 14:14	
MTBE	ND	5.0	ug/L	01/23/2000 14:14	
Surrogate(s)					
Trifluorotoluene	89.2	58-124	%	01/23/2000 14:14	
4-Bromofluorobenzene-FID	85.6	50-150	%	01/23/2000 14:14	

To: **Aqua Science Engineers, Inc.**

Attn: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/01/24-01.04**

LCS: 2000/01/24-01.04-002 Extracted: 01/24/2000 10:05 Analyzed: 01/24/2000 10:05

LCSD: 2000/01/24-01.04-003 Extracted: 01/24/2000 10:32 Analyzed: 01/24/2000 10:32

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	591	585	500	500	118.2	117.0	1.0	75-125	20		
Benzene	98.7	91.1	100.0	100.0	98.7	91.1	8.0	77-123	20		
Toluene	98.5	89.8	100.0	100.0	98.5	89.8	9.2	78-122	20		
Ethyl benzene	97.6	88.4	100.0	100.0	97.6	88.4	9.9	70-130	20		
Xylene(s)	290	265	300	300	96.7	88.3	9.1	75-125	20		
Surrogate(s)											
Trifluorotoluene	453	408	500	500	90.6	81.6		58-124			
4-Bromofluorobenzene-FI	468	458	500	500	93.6	91.6		50-150			

To: **Aqua Science Engineers, Inc.**

Attn: Ian T. Reed

Test Method: 8020
8015M

Prep Method: 5030

Batch QC Report

Gas/BTEX and MTBE

Laboratory Control Spike (LCS/LCSD) **Water** **QC Batch # 2000/01/23-01.04**

LCS: 2000/01/23-01.04-002 Extracted: 01/23/2000 12:21 Analyzed: 01/23/2000 12:21

LCSD: 2000/01/23-01.04-003 Extracted: 01/23/2000 14:43 Analyzed: 01/23/2000 14:43

Compound	Conc. [ug/L]		Exp.Conc. [ug/L]		Recovery [%]		RPD	Ctrl. Limits [%]		Flags	
	LCS	LCSD	LCS	LCSD	LCS	LCSD	[%]	Recovery	RPD	LCS	LCSD
Gasoline	562	567	500	500	112.4	113.4	0.9	75-125	20		
Benzene	102	101	100.0	100.0	102.0	101.0	1.0	77-123	20		
Toluene	101	99.3	100.0	100.0	101.0	99.3	1.7	78-122	20		
Ethyl benzene	99.4	97.6	100.0	100.0	99.4	97.6	1.8	70-130	20		
Xylene(s)	294	291	300	300	98.0	97.0	1.0	75-125	20		
Surrogate(s)											
Trifluorotoluene	462	447	500	500	92.4	89.4		58-124			
4-Bromofluorobenzene-FI	456	466	500	500	91.2	93.2		50-150			

2000-01-0218

49981

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

Chain of Custody

PAGE 1 OF 1

SAMPLER (SIGNATURE) Ian Reed (PHONE NO.) (925)820-9391

PROJECT NAME Hutch's Car Wash JOB NO.

ADDRESS Hesperian, San Lorenzo, CA DATE 1/13/00

ANALYSIS REQUEST

SPECIAL INSTRUCTIONS:

5-day TAT

SAMPLE ID.	DATE	TIME	MATRIX	NO. OF SAMPLES	TPH-GAS / MTBE & BTEX (EPA 5030/8015-8020)	TPH-GASOLINE (EPA 5030/8015)	TPH-DIESEL (EPA 3510/8015)	PURGEABLE HALOCARBONS (EPA 601/8010)	PURGEABLE AROMATICS (EPA 602/8020)	VOLATILE ORGANICS (EPA 624/8240)	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)	ORGANOCHLORINE HERBICIDES (EPA 8150)	FUEL OXYGENATES (EPA 8260)					COMPOSITE
MW-1	1/13/00	1050	water	3	X																		
MW-2	1/13/00	1015	water	3	X																		
MW-3	1/13/00	1015	water	3	X																		

RELINQUISHED BY:	RECEIVED BY:	RELINQUISHED BY:	RECEIVED BY LABORATORY:	COMMENTS:
(signature) Ian Reed (time)	(signature) (time) 1040	(signature) (time)	(signature) Denise Harrington (time)	
(printed name) Ian T Reed (date) 1/14/00	(printed name) (date) 1/14/00	(printed name) B Morton (date) 1-14-00	(printed name) D. Harrington (date) 1847	5-day TAT
Company- ASE	Company-	Company- Chromalab	Company- Chromalab 1/14/00	5.0°C