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April 29, 2010

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9:10 am, May 27, 2010

Alameda County
Environmental Health

PREFERENTIAL PATHWAY STUDY
AND AREA WELL SURVEY
at
Hutch's Carwash
17945 Hesperian Boulevard
San Lorenzo, California

Submitted by:
AQUA SCIENCE ENGINEERS, INC.
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1.0 INTRODUCTION

This report presents Aqua Science Engineer's, Inc. (ASE) preferential pathway study and area well survey for the Hutch's Carwash property located at 17945 Hesperian Boulevard in San Lorenzo, California (Figure 1). These activities were initiated by Mr. Kirk Hutchison, owner of the property, as required by the Alameda County Health Care Services Agency (ACHCSA) in their letter dated October 23, 2008.

2.0 SITE HISTORY

2.1 Soil and Groundwater Assessment, December 1998

On December 1, 1998, eight soil borings were drilled at the site using a Geoprobe hydraulic sampling rig (Figure 2). Borings BH-A and BH-B were located near the former fuel dispensers. The remaining borings (BH-C through BH-H) were located in areas surrounding the underground storage tanks (USTs).

Soil samples were collected from each of the eight borings and were analyzed 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), and total lead. None of the soil samples contained significant concentrations of any of the compounds analyzed. Groundwater samples collected from the six deeper borings were analyzed for TPH-G, BTEX and MTBE. The water samples contained up to 290 parts per billion (ppb) benzene, 620 ppb toluene, 3,000 ppb ethylbenzene, 7,100 ppb total xylenes, and 4,400 ppb MTBE. For complete details of the afore-mentioned assessment activities, see the ASE Assessment Report dated December 22, 1998.

2.2 UST Closure Activities

On January 21, 1999, ASE provided project management support for the closure-in-place of the two 5,000 gallon USTs and one 10,000 gallon UST at the subject site (Figure 2). Hutch's Carwash plan was to use the former fuel tanks for a water-reclamation system for their car washing operations. This proposed plan for the USTs' closure-in-place and subsequent re-use as water holding tanks was previously approved by the ACHCSA.

Clearwater Environmental Management, Inc. (Clearwater) mobilized to the site on January 21, 1999 with a pressure washing unit and a vacuum truck for UST evacuation. Using the pressure washer, the interior of the piping systems and each UST was rinsed. The rinsate and residual fuel was then removed from each UST using the vacuum truck. The liquid was transported by Clearwater from the site to the Alviso Independent Oil facility in Alviso, California where it was recycled.

Using a remote camera and television screen supplied by Rescue Rooter, the interior of each UST was inspected by ASE and Mr. Weston of the ACHCSA. It was visually obvious that the interior of the USTs had been coated with a sprayed-on coating that appeared shiny in most views. There did not appear to exist any obvious integrity failures, staining or scaling.



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Hutch's personnel later filled each of the USTs to capacity with water then sealed all pipe and tank openings with caps and plugs as necessary. For complete details regarding the UST closure activities, see the ASE UST Closure Report dated February 8, 1999.

2.3 Monitoring Well Installation

In September 1999, ASE drilled three soil borings at the site and installed monitoring wells MW-1 through MW-3 in the borings. The only hydrocarbons detected in the soil samples collected during the assessment were 24 parts per million (ppm) TPH-G in the soil sample collected from 15.0-feet below ground surface (bgs) in boring MW-1, 200 ppm MTBE in the soil sample collected from 10.5-feet bgs in boring MW-1, 0.011 ppm MTBE in the soil sample collected from 11.0-feet bgs in boring MW-2 and 0.070 ppm in the soil sample collected from 15.0-feet bgs in boring MW-2. Lead was detected in the soil sample collected from 15.0-feet bgs in boring MW-1 at 5.0 ppm and in the soil sample collected from 15.0-feet bgs in boring MW-3 at 6.0 ppm. No other hydrocarbons or lead were detected in any of the soil samples analyzed.

The groundwater sample collected from monitoring well MW-1 contained 1,500 ppb TPH-G, 3.3 ppb benzene, 2.3 ppb ethyl benzene, 27 ppb toluene, 72 ppb total xylenes and 120 ppb MTBE. The groundwater sample collected from monitoring well MW-2 contained 18 ppb MTBE. No TPH-G or BTEX were detected in groundwater samples collected from monitoring well MW-2. No hydrocarbons were detected in groundwater samples collected from monitoring well MW-3.

2.4 Groundwater Monitoring

The site has been on a quarterly, and then semi-annual sampling program since the well installation. In general, the hydrocarbon concentrations have decreased and currently only groundwater samples are collected from monitoring well MW-1 following periods of non-detectable concentrations in monitoring wells MW-2 and MW-3. Depth to groundwater and analytical results from the groundwater monitoring are presented in Tables One and Two.

2.5 Workplan for Additional Assessment

In May 2008, ASE prepared a workplan to conduct an additional soil and groundwater assessment on the downgradient edge of the site. This workplan was generally approved by the ACHCSA in a letter dated October 23, 2008 with a requested modification of the spacing of the borings. This letter from the ACHCSA also requested that a preferential pathway survey and area well survey be conducted for the site. ASE did not receive this letter until a much later date due to the letter being mailed to outdated/old mailing address. This document presents the requested preferential pathway survey, area well survey and includes a figure with the revised boring locations.

3.0 CONDUIT AND POTENTIAL PREFERENTIAL PATHWAY STUDY

This study was conducted by reviewing Underground Service Alert (USA) markings in the site vicinity, making visual inspections of the property and surrounding area, reviewing documents



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such as as-built drawings supplied by the city and individual utility companies, and contacting individuals that would have knowledge of the individual utility lines. Figure 3 presents the location of all known utility lines in the site vicinity. A discussion of each type of line is presented below along with an evaluation as to whether each line could present a potential preferred pathway for the movement of groundwater contamination.

3.1 Main Water Lines

Main water lines in the site vicinity belong to the East Bay Municipal Utility District (EBMUD). ASE contacted EBMUD and maps showing the lines in the site vicinity were provided to ASE. ASE also reviewed USA markings in the site vicinity. The water main in Hesperian Blvd closest to the site (just west of center of the street) is 8-inches in diameter, is constructed of cast iron with cement lining, and was installed in 1947. There is also a second line down Hesperian Blvd on the opposite (eastern) side of the street that is 30-inches in diameter and was constructed with concrete lined and coated steel. This line was installed in 1955. A 1.5-inch diameter irrigation line is also present beneath the landscaped center divide of Hesperian Blvd. Information regarding the buried depth of these lines was not provided.

In addition, EBMUD also has a 6-inch in diameter water line beneath the eastern portion of Via Arriba, downgradient of the site. This line is constructed of cast iron with cement lining and was installed in 1947. Once again, no depth was provided for this water line.

All of the lines beneath Hesperian Blvd are upgradient and should not present a potential pathway for the movement of groundwater contamination. Although the depth of the line beneath Via Arriba is not known, the highest historical water level at the site since monitoring began in 1999 was 13.24-feet below ground surface (bgs). It is ASE's experience that water service lines in residential areas are very rarely present deeper than 5-feet bgs. Based on this information, it is highly unlikely that water lines in the site vicinity could act as a potential preferential pathway for the movement of groundwater contamination.

3.2 Natural Gas Lines

Natural gas lines in the site vicinity belong to Pacific Gas and Electric (PG&E). Gas lines are located under Hesperian Blvd, just west of the center divider upgradient of the site, and beneath the center of Via Arriba, downgradient of the site. PG&E would not provide depth information for antique lines such as those in the site vicinity, and this information would only be available if PG&E was hired to "pothole" the lines. PG&E did state that the lines are likely no deeper than 6-feet below grade unless there was a significant change in grade (which there isn't in the site vicinity).

Given the depth to groundwater in the site vicinity (deeper than 13-feet bgs), these lines would not present a conduit for the preferential flow of groundwater.



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3.3 Electric Lines

Electric lines in the site vicinity belong to PG&E. The only underground electric line is beneath the eastern sidewalk of Hesperian Blvd. This electric line is upgradient of the site and most certainly too shallow to be a potential conduit for the preferential movement of groundwater contamination. All other electric lines, including those servicing houses on Via Arriba, are overhead.

Based on this information, electric lines will not present a conduit for the preferential flow of groundwater contamination related to the site.

3.4 Telephone Lines

Telephone lines in the site vicinity belong to AT&T. AT&T provided a map to ASE that is labeled as a Pacific Bell map. This map shows a line located beneath the sidewalk on west (near) side of Hesperian Blvd and beneath the eastern (far) side of Hesperian Blvd. USA markings show phone lines beneath the western Hesperian Blvd sidewalk as well as 3-feet east of the curb on the western side of Hesperian Blvd. There is no indication as to the ownership of the phone line 3-feet off the western curb of Hesperian Blvd; however, it is possible that this line may belong to MCI Worldcom as they were on the USA notification list. MCI could not be reached to determine whether this line belongs to them. No depth or other information was available regarding these lines, and AT&T will not provide depth information on their lines. However, AT&T has previously stated to ASE that they do not bury lines deeper than 3 to 6-feet below grade unless they have to trench under other buried lines. No line is shown beneath Via Arriba, downgradient of the site. It is believed that the telephone lines along Via Arriba are overhead.

Given that all of the underground telephone lines are upgradient of the site and shallower than the depth of groundwater, telephone lines would not present a conduit for the preferential flow of groundwater for the site.

3.5 Cable Television Lines

The cable television lines in the site vicinity belong to Comcast. No cable television lines were marked by USA and Comcast did not return numerous calls for information on lines in the site vicinity. However, it is ASE's experience that cable TV lines are usually buried 3 to 5-feet bgs in the east bay area and may share a joint trench with telephone lines.

Given that cable TV lines are usually buried at depths much shallower than the depth to groundwater at the site, these lines should not present a conduit for the preferential flow of groundwater.



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3.6 Storm Sewer Lines

The Alameda County Public Works Agency (ACPWA) provides storm sewer service in the site vicinity. There is a storm sewer located on the western (downgradient) edge of the property that was found by visual observation of a drain and a manhole on both sides of the site. Ownership of this storm sewer line is not known, and the ACPWA has no records of this storm sewer. However, ASE measured the depth to the bottom of this line through a drain and the bottom is shown to be 2.2-feet bgs. This depth is well above the highest recorded depth to groundwater recorded at the site. In addition, two storm sewer drains are located on the western side of Hesperian Blvd indicating the presence of a storm sewer. However ASE visited the ACPWA office in Hayward and checked all computer records, maps, microfiche records, and tract plans for the site vicinity and they had no records of a storm sewer line in this location. When asked for an explanation, ACHCSA could offer no reason that they did not have records of this line. Regardless, this line is located upgradient of the site and would not represent a potential conduit for the preferential flow of groundwater contamination related to the site. No storm sewer is located on Via Arriba on the block downgradient of the site.

Given the depth to groundwater in the site vicinity (deeper than 13-feet bgs) and/or location of the storm sewer lines, these lines would not present a conduit for the preferential flow of groundwater contamination related to the site.

3.7 Sanitary Sewer Lines

The Oro Loma Sanitary District has sanitary sewer lines beneath both the eastern side of Hesperian Blvd, upgradient of the site, and the center of Via Arriba, downgradient of the site. The bottom of the sewer beneath Hesperian Blvd is 4-feet bgs and the bottom of the sewer beneath Via Arriba is 4.5-feet bgs.

Given the depth to groundwater in the site vicinity (deeper than 13-feet bgs), these sanitary sewer lines would not present a conduit for the preferential flow of groundwater.

3.8 Other Lines

XO Communications has a fiberoptic communications cable beneath the eastern (upgradient) side of Hesperian Blvd. This line is well upgradient of the site and is likely buried much shallower than groundwater.

Based on the location of this line and the depth to groundwater in the site vicinity, this line should not present a conduit for the preferential flow of groundwater.

4.0 AREA WELL SURVEY

ASE obtained records of wells in the site vicinity from the ACPWA and California Department of Water Resources (DWR) regarding wells within 1/4-mile of the site. The wells located in this survey are listed in Table Three along with the well address or location, well owner and address,



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well type, and year drilled. The locations of wells are shown on Figure 4. The three site monitoring wells were not included in this survey.

Forty wells were located during this survey. Of these wells, 29 are monitoring wells, two are extraction (remediation) wells, four are destroyed wells, three are irrigation wells, one is a boring, and one is a domestic well. In addition, there are three wells in the southern portion of the study area that could not be located precisely given the data provided that may also be in the study area. These additional wells are listed as a domestic well, a destroyed well and an irrigation well. It is believed that these wells are likely located in John F. Kennedy Park on the southern edge of the study area and in a crossgradient location of the site.

All of the wells listed as irrigation or domestic wells are located either upgradient of the site or crossgradient of the site at a distance of approximately 1,000-feet from the site. Based on this data, none of the domestic and irrigation wells in the site vicinity are at risk of contamination from hydrocarbons that originated from sources on the subject site.

All of the downgradient wells are located at least 1/8th of a mile from the site and all are monitoring wells related to the Arco Petroleum Products environmental investigation. In general, wells related to environmental investigations are constructed under direction of geologists or engineers and are usually adequately sealed. In addition, wells related to gasoline stations such as Arco are usually limited to the first water-bearing zone and likely poses little risk as a potential conduit for the downward movement of contamination. For these reasons, ASE does not see any concern with these wells as a potential conduit for the movement of contamination that originated at the subject site. The only downgradient well that is not a monitoring well is a destroyed well located nearly 1/4-mile from the site. Based on the distance from the subject site, ASE has no concern with this destroyed well as a potential conduit for the movement of contamination that may have originated at the subject site.

5.0 CONCLUSIONS

Based on the location and depth of the underground utility lines in the site vicinity and the depth to groundwater in the site vicinity, it does not appear that any of the utility lines in the site vicinity present a potential preferential pathway for the migration of groundwater contamination that may have originated from the subject site.

There are between 40 and 43 wells located within 1/4-mile of the site. Of these well, 3 to 4 of these wells are irrigation wells and 1 to 2 are listed as domestic wells. All of these domestic and irrigation wells are either upgradient of the site or crossgradient of the site at a sufficient distance to be of no danger of being impacted by hydrocarbons related to the subject site. In addition, none of the wells located downgradient of the site appear to have the potential to provide a preferred vertical pathway for the migration of contaminants that may have originated at the subject site.



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6.0 RECOMMENDATION

ASE recommends implementation of ASE's workplan dated May 2, 2008. As requested in the October 23, 2008 letter from the ACHCSA, the spacing of the soil borings has been modified to 30-feet. The updated boring locations are shown on Figure 5.

ASE will also continue semi-annual groundwater monitoring at the site. The next well sampling is scheduled for May 2010 and the report will be submitted by the end of June 2010.

7.0 SCHEDULE

ASE plans to begin drilling the soil borings for this site in June 2010. ASE anticipates that the report will be completed in late July 2010.

The next well sampling is scheduled for May 2010. The groundwater monitoring report will be submitted by the end of June 2010.

Should you have any questions or comments, please 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

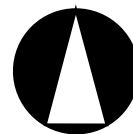
cc: Mr. Steven Plunkett, Alameda County Health Care Services Agency, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502

Mr. Kirk Hutchison, Hutch's Carwash, 1367 A Street, Hayward, CA 94541



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FIGURES



NORTH

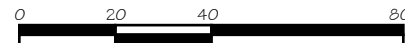
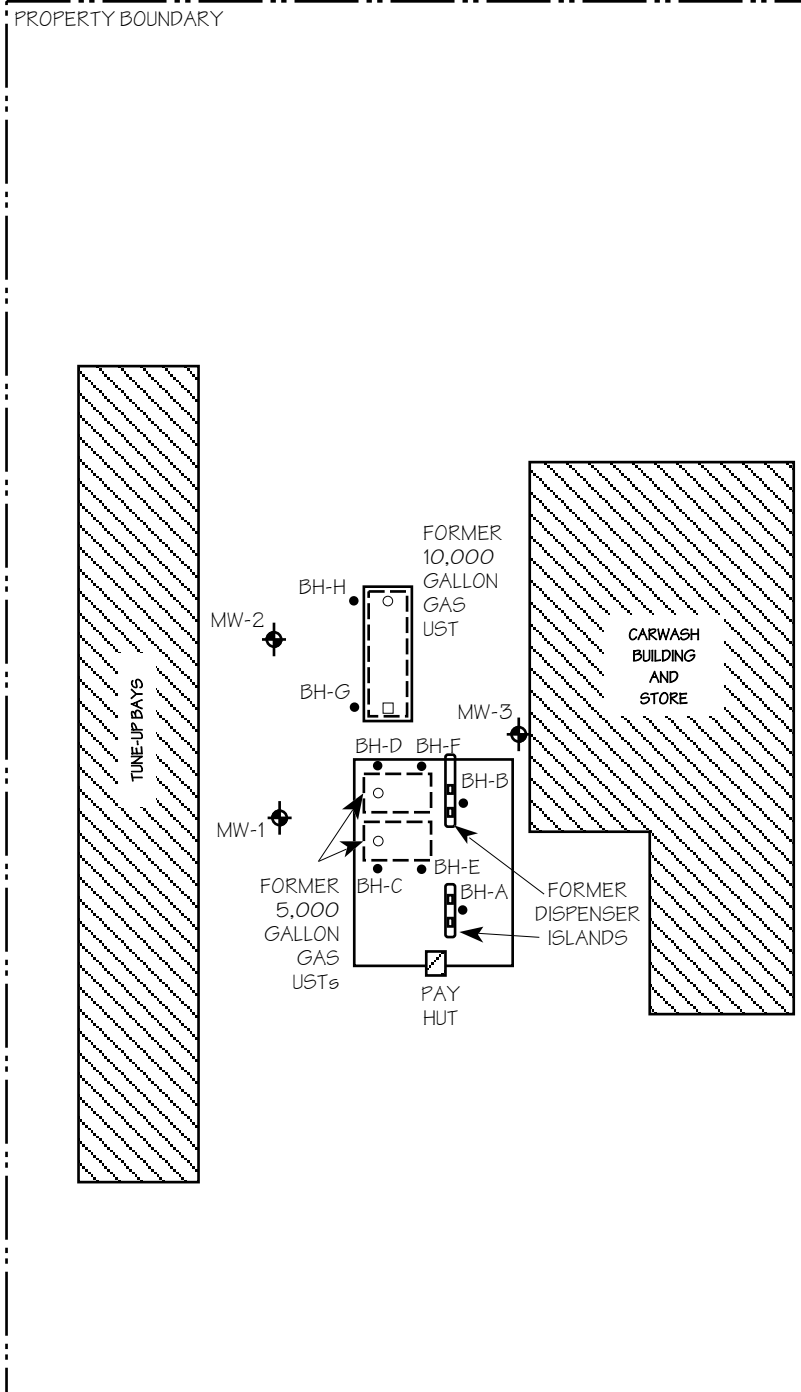


SITE LOCATION MAP	
HUTCH'S CARWASH 17945 HESPERIAN BOULEVARD SAN LORENZO, CA	
AQUA SCIENCE ENGINEERS, INC.	Figure 1



NORTH

SCALE
1 - INCH = 40 - FEET



SCALE IN FEET

LEGEND

BH-H ● SOIL BORING, DRILLED BY ASE IN 12/98

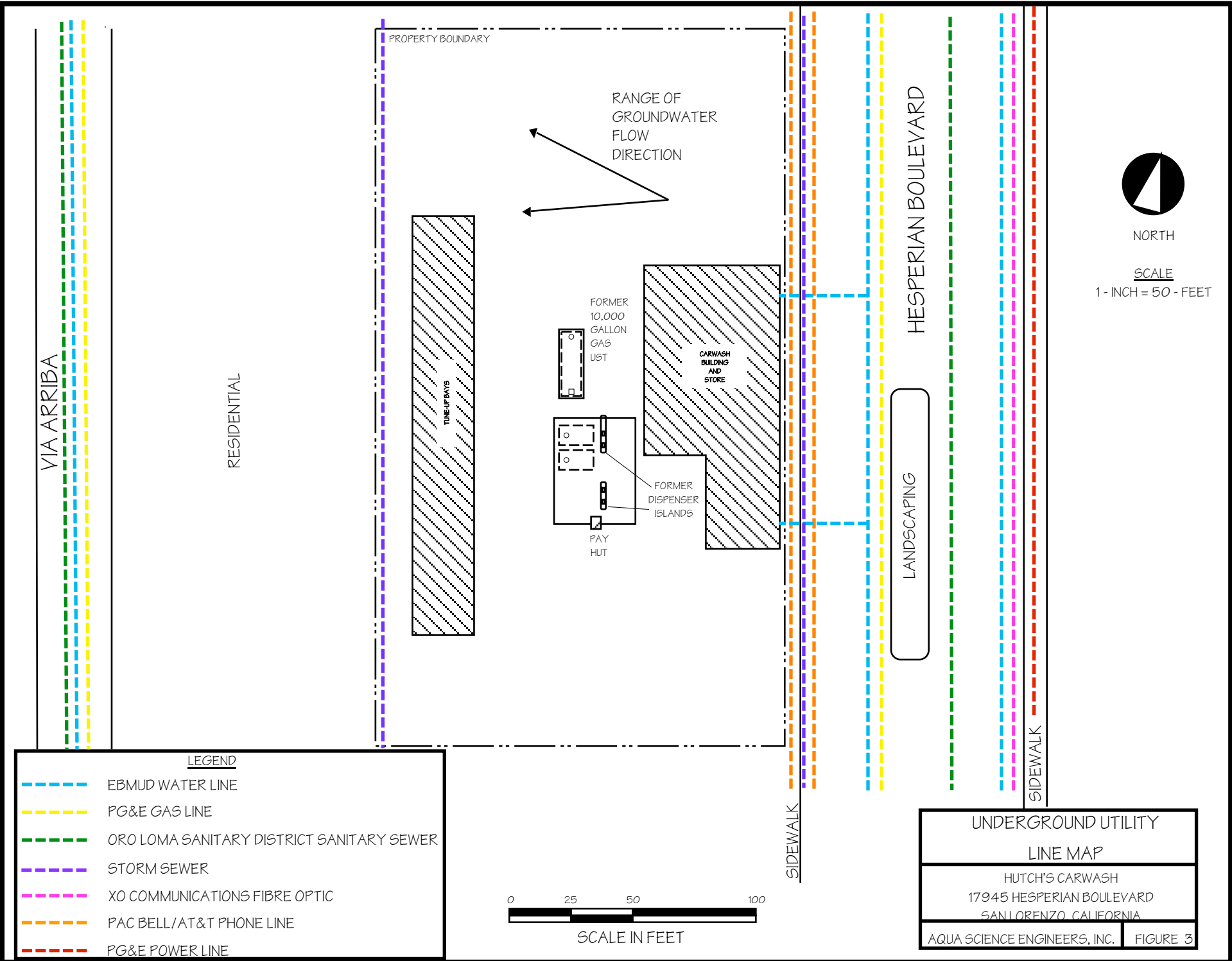
MW-3 ◈ MONITORING WELL, INSTALLED BY ASE IN 9/99

PREVIOUS BORING & WELL LOCATION MAP

HUTCH'S CARWASH
17945 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

FIGURE 2



VIA ARRIBA

RESIDENTIAL

PROPERTY BOUNDARY

RANGE OF
GROUNDWATER
FLOW
DIRECTION

TUNE-UP BAYS

FORMER
10,000
GALLON
GAS
UST

CARWASH
BUILDING
AND
STORE

FORMER
DISPENSER
ISLANDS

PAY
HUT

HESPERIAN BOULEVARD

LANDSCAPING

SIDEWALK



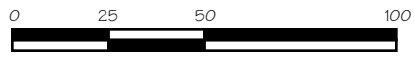
NORTH

SCALE

1 - INCH = 50 - FEET

LEGEND

- EBMUD WATER LINE
- PG&E GAS LINE
- ORO LOMA SANITARY DISTRICT SANITARY SEWER
- STORM SEWER
- XO COMMUNICATIONS FIBRE OPTIC
- PAC BELL/AT&T PHONE LINE
- PG&E POWER LINE



SCALE IN FEET

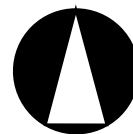
UNDERGROUND UTILITY

LINE MAP

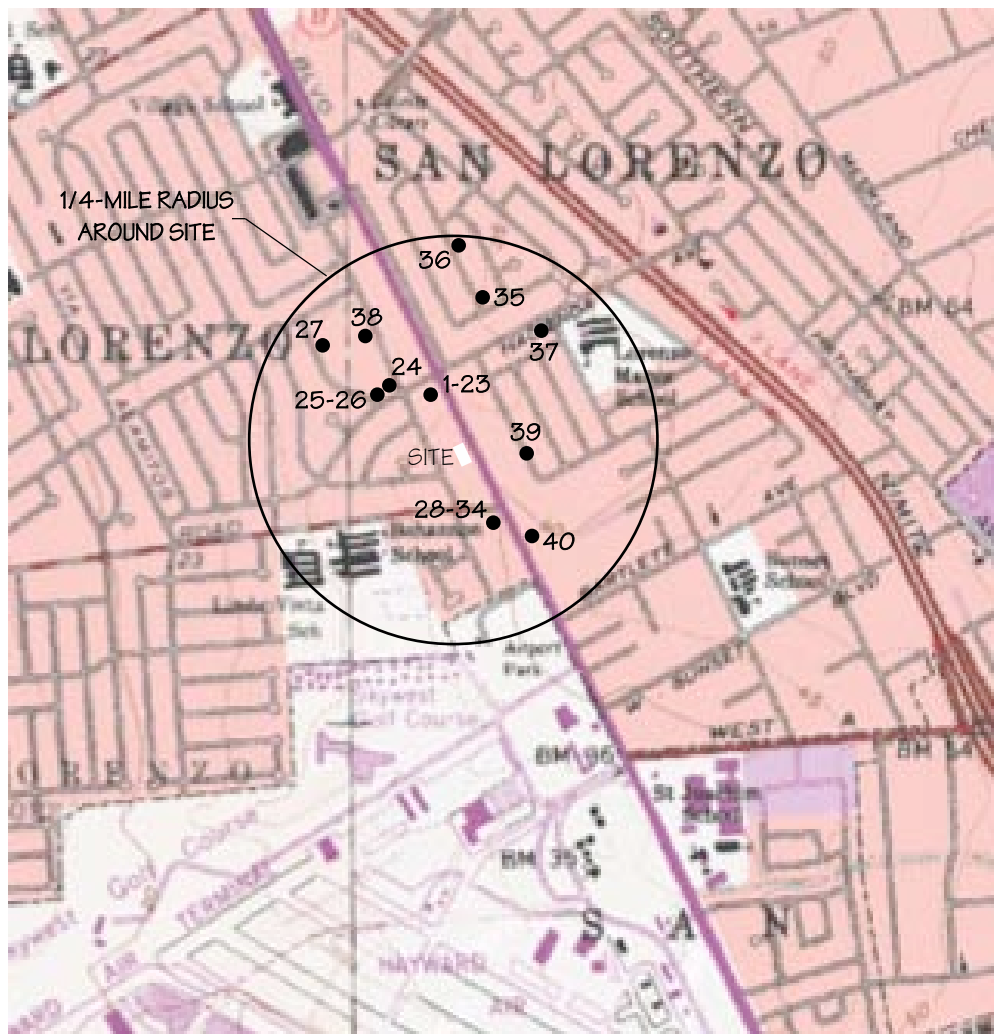
HUTCH'S CARWASH
17945 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA

AQUA SCIENCE ENGINEERS, INC.

FIGURE 3



NORTH



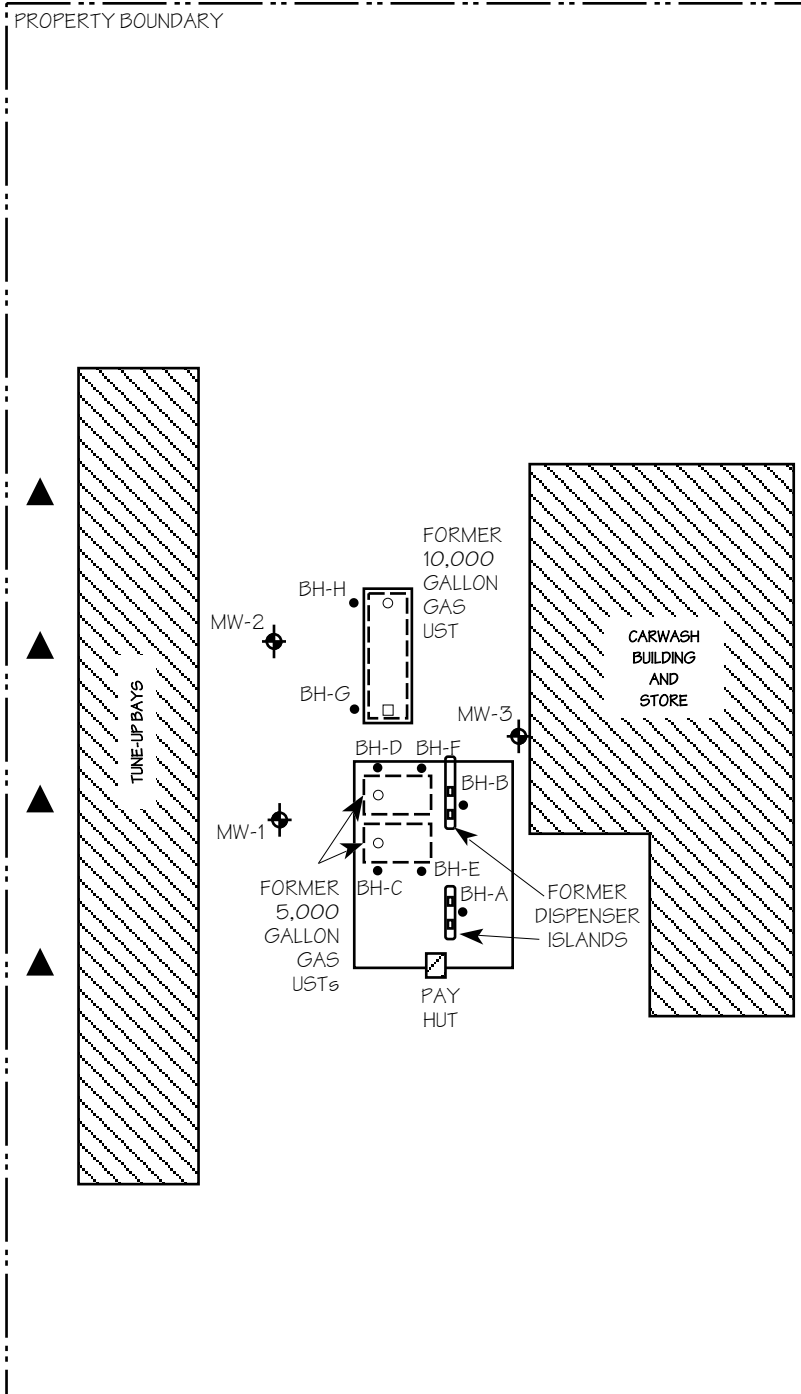
LEGEND	
40 ●	WELL LOCATION, REFERENCED IN TABLE THREE

WELL LOCATION MAP	
HUTCH'S CARWASH 17945 HESPERIAN BOULEVARD SAN LORENZO, CA	
AQUA SCIENCE ENGINEERS, INC.	Figure 4



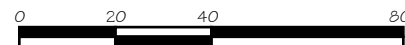
NORTH

SCALE
1 - INCH = 40 - FEET



LEGEND

- BH-H ● SOIL BORING, DRILLED BY ASE IN 12/98
- MW-3 ◈ MONITORING WELL, INSTALLED BY ASE IN 9/99
- ▲ PROPOSED SOIL BORING



SCALE IN FEET

REVISED PROPOSED SOIL BORING LOCATION MAP

HUTCH'S CARWASH
17945 HESPERIAN BOULEVARD
SAN LORENZO, CALIFORNIA



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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		
	12/8/09		15.57	19.43
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		
	12/8/09		15.85	19.36

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	
12/8/09			14.98	19.49

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-1						
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
12/8/09	170	< 0.5	< 0.5	< 0.5	< 0.5	150

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-2</u>						
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					
<u>MW-3</u>						
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

TABLE THREE
Wells Located Within 1/4-Mile Radius of
17945 Hesperian Blvd, San Lorenzo, California

Well Number	Well Address or Location	Well Owner and Address	Well Type	Year Drilled
1-2	17601 Hesperian Blvd, San Leandro	Arco Petroleum Products	Monitoring	1988
3-8	17601 Hesperian Blvd, San Leandro	Arco Petroleum Products	Monitoring	1990
9	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Destroyed	1991
10	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Boring	1993
11-14	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Monitoring	1993
15-16	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Extraction	1993
17-18	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Destroyed	1988
19-23	17601 Hesperian Blvd, San Lorenzo	Arco Petroleum Products	Monitoring	1991
24	Via Arriba & Hacienda, San Lorenzo	Arco Petroleum Products	Monitoring	1991
25-26	Via Magdalena & Hacienda, San Lorenzo	Arco Petroleum Products	Monitoring	1991
27	17200 Via Magdalena, San Lorenzo	Arco Petroleum Products	Monitoring	1991
28-31	18501 Hesperian Blvd, Hayward	BP Oil Company	Monitoring	1992
32-34	18501 Hesperian Blvd, Hayward	BP Oil Company	Monitoring	1995
35	17578 Via Primero, San Lorenzo	Andres Glassow	Domestic	1989
36	17162 Via Primero, San Lorenzo	Edward Vieira	Irrigation	1978

TABLE THREE
Wells Located Within 1/4-Mile Radius of
17945 Hesperian Blvd, San Lorenzo, California

37	396 Hacienda Ave, San Lorenzo	Robert Reeder	Irrigation	1977
38	575 Quigley, San Lorenzo	Unknown	Destroyed	Unknown
39	18451 Robscott Ave, Hayward	Lewis Barton	Monitoring	1992
40	18600 Hesperian Blvd, Hayward	Hatakeda	Irrigation	1929

The following wells did not have enough information to locate but may be in southern portion of study area

	Hesperian Blvd, Hayward	HARD	Domestic	1950
	Kennedy Park, Hayward	HARD	Destroyed	Unknown
	Hesperian Blvd, Hayward	HARD	Irrigation	1978