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May 11, 2004

Mr. Scott Seery, CHMM
Alameda County Department of
Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Project: 2840

Subject: Site Located at 5565 Tesla Road, Livermore, California

Dear Scott:

Enclosed for your review is a copy of SOMA's "Workplan for Conducting an Additional Site Investigation and Groundwater Monitoring Well Installation at Wente Winery" located at 5565 Tesla Road, Livermore, California.

Thank you for your time in reviewing our report. Please do not hesitate to call me at (925) 244-6600, if you have any questions or comments.

Sincerely,

Mansour Sepehr, Ph.D., PE
Principal Hydrogeologist

REGISTERED PROFESSIONAL ENGINEER
MANSOUR SEPEHR
No. C042928
Exp. 3-31-06
CIVIL
STATE OF CALIFORNIA

Enclosure

cc: Mr. Aris Krimetz

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WORKPLAN FOR CONDUCTING AN ADDITIONAL SITE INVESTIGATION AND GROUNDWATER MONITORING WELL INSTALLATION AT WENTE WINERY 5565 Tesla Road LIVERMORE, CALIFORNIA

May 11, 2004

Project 2840

Prepared for

Wente Bros.
5565 Tesla Road
Livermore, California 94550

Prepared by

SOMA Environmental Engineering, Inc.
2680 Bishop Drive, Suite 203
San Ramon, California 94583

CERTIFICATION

This workplan has been prepared by SOMA Environmental Engineering, Inc. on behalf of Wente Bros., the property owners of 5565 Tesla Road, Livermore, California, for conducting an additional site investigation, including the installation of groundwater monitoring wells, and sensitive receptor survey. The workplan is submitted to the Alameda County Health Care Services for their review and approval.

Mansour Sepehr, Ph.D., P.E.
Principal Hydrogeologist

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APPENDIX

1.0 INTRODUCTION

This workplan has been prepared by SOMA Environmental Engineering, Inc., (SOMA) on behalf of Wente Bros. the property owners of Wente Winery. As shown in Figure 1, the property is located at 5565 Tesla Road, between South Vasco Road and Mines Road, in Livermore, California (the "Site"). Currently, the Site is an operating winery with three aboveground fuel storage tanks, with a total capacity of 4,000 gallons. Reportedly, the aboveground fuel storage tanks replaced two underground storage tanks (USTs) in 1987. The latest site investigation activities confirmed the presence of residual petroleum hydrocarbon concentrations in the subsurface at the vicinity of the former USTs. This workplan is designed to provide additional data in order to characterize the extent of the groundwater contamination around the former USTs, and to define the beneficial use of the groundwater, in order to assess the impact of the present groundwater contamination to human health and the environment. This workplan will be implemented after receiving approval from the Alameda County Health Care Services (ACHCS).

In late 2002, Wente Winery retained Clayton Group Services (Clayton) to conduct a Phase I Site Investigation at the Site. Based on the results of the Phase I Environmental Site Assessment report prepared by Clayton, dated November 8, 2002, the developed portion of the Site consists of approximately thirty buildings constructed between the 1920s and 1980s, with an on-site septic system. West of the winery buildings is an enclosed maintenance and agricultural storage area with a former UST pit that contained one gasoline and one diesel UST. The USTs were replaced with three aboveground storage tanks (ASTs), with a total capacity of 4,000 gallons; the ASTS are reportedly located in the same area of the former USTs. Although California Water Service Company provides potable water to the Site, an on-site potable water supply well provides backup potable drinking water and process water for the winery facility. This

water supply well is located south of and presumably upgradient from the former UST area.

1.1 Previous Activities

In 1987, two fuel USTs were removed from the Site without any agency's oversight. Without available records of the tank removal, there are no documented observations of tank conditions or evidence of leakage.

In 1990, the ACHCS issued a notice of violation (NOV) for discharging waste sludge to an open ditch adjacent to a former steam-cleaning bay, which is at the south end of the steel storage and welding shed. The NOV required sampling of the ditch area and around a stained drum, along with remediation of the contaminated area(s). No available records reportedly exist to document the implementation of the required tasks.

1.2 Previous Investigations

As mentioned earlier, in 2002, Clayton conducted a Phase I Environmental Site Assessment investigation of the maintenance and storage area, in accordance with Comerica Bank guidelines. The bank requires ASTM D standard Phase I investigations to identify recognized environmental concerns (RECs). The Phase I study revealed the existence of the former USTs, former waste discharge area, and a number of agricultural storage areas. Agricultural chemicals and equipment are currently stored in the Agricultural Storeroom. However, documents indicate that these items were also previously stored in Building S and in a detached garage. Clayton concluded that the identified areas constituted RECs and recommended sampling of these areas for relevant constituents of concern.

In 2003, Clayton performed a subsurface investigation at the Site to implement the recommendations of the Phase I report. Soil samples were analyzed for pesticides, herbicides, petroleum hydrocarbons, volatile organic compounds

(VOCs), and heavy metals. Groundwater samples collected from the UST and former steam cleaning areas were analyzed for petroleum hydrocarbons, VOCs, pesticides and herbicides. Appendix A presents the tabulated results of the soil and groundwater analyses, along with maps of sampling locations and groundwater analytical results. Clayton concluded that a fuel release in the former UST area impacted groundwater at concentrations that significantly exceeded Risk Based Screening Levels (RBSLs). In the former steam cleaning bay, which is located south/southwest of, and presumably upgradient from the former UST pit, no total petroleum hydrocarbon (TPH) or VOCs were detected in the soil. However, gasoline- to motor oil-range petroleum hydrocarbons were detected in the groundwater at concentrations that were slightly above RBSLs. Other borehole samples contained constituents of concern below RBSLs. Figure 2 illustrates the locations of the soil borings drilled by Clayton.

2.0 SCOPE OF WORK

Based on the results of the most recent site investigation conducted by Clayton, SOMA proposes to perform the following tasks:

Task 1: **Permit Acquisition, Preparation of Site Health and Safety Plan, and Utility Clearance**

Task 2: **Installation of Groundwater Monitoring Wells**

Task 3: **Develop and Sample Monitoring Wells**

Task 4: **Survey Monitoring Wells**

Task 5: **Laboratory Analysis**

Task 6: **Sensitive Receptor Survey**

Task 7: **Report Preparation**

The following is a brief description of the above tasks.

2.1 Permit Acquisition, Preparation of Site Health and Safety Plan, and Utility Clearance

For the drilling and installation of groundwater monitoring wells, SOMA will obtain the necessary permits from the Zone 7 Water Agency. Prior to the commencement of field activities, a site-specific health and safety plan (HASP) will be prepared by SOMA. The HASP is designed to address safety provisions during field activities. It provides procedures to protect the field crew from physical and chemical hazards resulting from drilling, well installation, and groundwater monitoring and sampling. The HASP establishes personnel responsibilities, general safe work practices, field procedures, personal protective equipment standards, decontamination procedures, and emergency action plans. To protect the field crew from underground utility hazards, SOMA will notify Underground Service Alert (USA) and interface with the utility companies to clear the proposed drilling locations. In addition, a private utility locator will survey and mark subsurface utilities in the vicinity of the proposed well borehole locations.

2.2 Installation of Groundwater Monitoring Wells

As shown in Figure 3, SOMA proposes installing three groundwater monitoring wells (MW-1 through MW-3) to evaluate the groundwater flow direction, gradient, and the extent of the groundwater contamination in the area downgradient from the USTs. SOMA will oversee the installation of the wells within the shallow/perched water-bearing zone identified in the Clayton report, to an approximate maximum depth of 19 to 22 feet below ground surface (bgs), using a hollow-stem auger drilling rig.

During the drilling operation, the thickness of the saturated zone will be verified by continuous sampling with an unlined sampler. Several feet above the anticipated capillary fringe zone, the sampler will be sleeved to collect a capillary fringe sample for laboratory analysis. The field geologist will also collect

representative bag samples of soil units encountered in the boreholes and heat the bag samples before measuring volatile vapors with a photo ionization detector (PID). The PID readings will be recorded on the monitoring well borehole logs.

After advancing the borehole to approximately ten feet below first encountered groundwater, the drilling crew will install clean, 2-inch diameter, threaded, schedule 40 PVC pipe into the monitoring well boreholes. The screened interval will consist of slotted casing with 0.01-inch slots and will span the saturated zone without extending above the first encountered groundwater. The drilling crew will cap the bottom of the screen with a PVC cap fastened to the casing without solvent, adhesive, or cement.

After setting the casing inside the borehole, the drilling crew will carefully pour 2/12 sand into the annular space to one or two feet above the screened interval. A one- to two-foot thick hydrated bentonite seal will be placed above the sand to prevent grout from infiltrating down into the sand pack. The drilling crew will then seal the well from the top of the bentonite to one-foot below surface grade with neat cement containing about 5% bentonite. At surface grade, a traffic-rated flush-mount well vault or stovepipe well vault will be installed into a concrete foundation.

2.3 Develop and Sample the Monitoring Wells

After the well installation, SOMA field personnel will develop the wells using surge and pump methodology. The field crew will initially bail sediment-laden water from the wells before surging the well casings with a surge block. After surging, the wells will be pumped until the purgewater clarifies and groundwater quality parameters stabilize.

2.4 Survey Monitoring Wells

A California registered surveyor will survey the wells. SOMA will use the survey results to determine the groundwater flow direction and incorporate the groundwater analytical results to evaluate the extent of the groundwater contamination.

2.5 Laboratory Analysis

The soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX) using EPA Methods 8020 and 8015 Modified. The lab will also analyze the soil and groundwater samples for gas oxygenates using EPA Method 8260.

2.6 Sensitive Receptor Survey

After determining the on-site groundwater flow direction, SOMA personnel will conduct a sensitive receptor survey to identify water supply wells within a 2,000-foot radius of the Site. To search for the possible locations of the water supply wells, the Department of Water Resources' database will be utilized. The wells will be plotted on a scaled map showing the Site and surrounding areas, along with the documented on-site groundwater flow direction. The results of this evaluation will help identify if the existing shallow water-bearing zone is currently being used for drinking or irrigation purposes. In addition, the results will reveal if any of the water supply wells are in danger of being impacted by the Site's contaminants.

2.7 Report Preparation

A technical report will be prepared to document the soil and groundwater conditions, and the extent of the petroleum hydrocarbon contamination. The technical report will include a detailed description of field investigation procedures, investigative results, conclusions, and recommendations, as well as,

figures, tables, geologic cross sections and geologic logs. The results of such findings will be discussed with the ACHCS, to identify the Site's regulatory status for possible closure.

3.0 REFERENCES

Clayton Group Services, June 23, 2003. "Report of Preliminary Subsurface Investigation at Wente Winery, 5565 Tesla Road, Livermore, California."

Clayton Group Services, November 8, 2002. "Phase I Environmental Site Assessment of the Wente Winery, 5565 Tesla Road, Livermore, California."

FIGURES

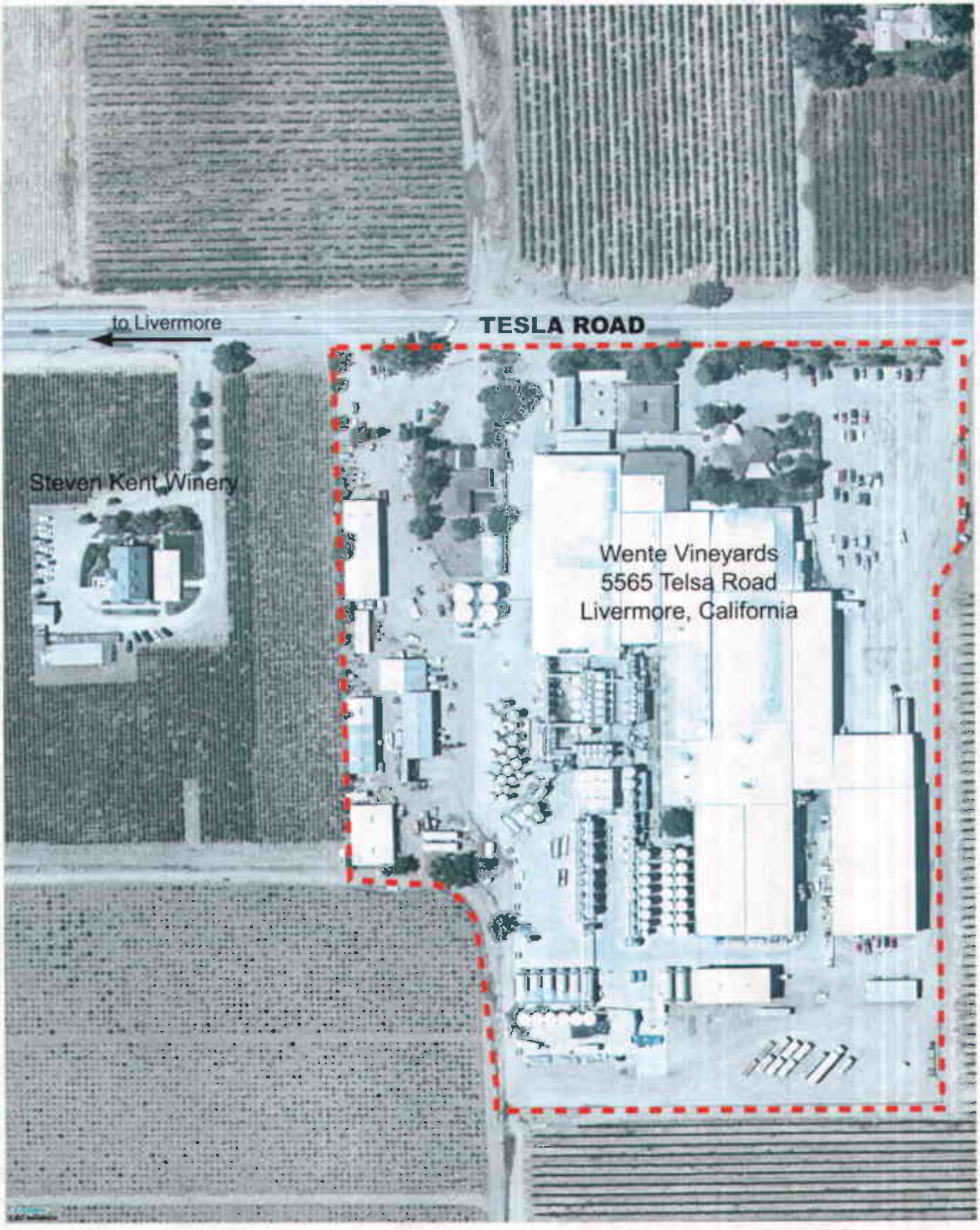

Figure 1: Site vicinity map.

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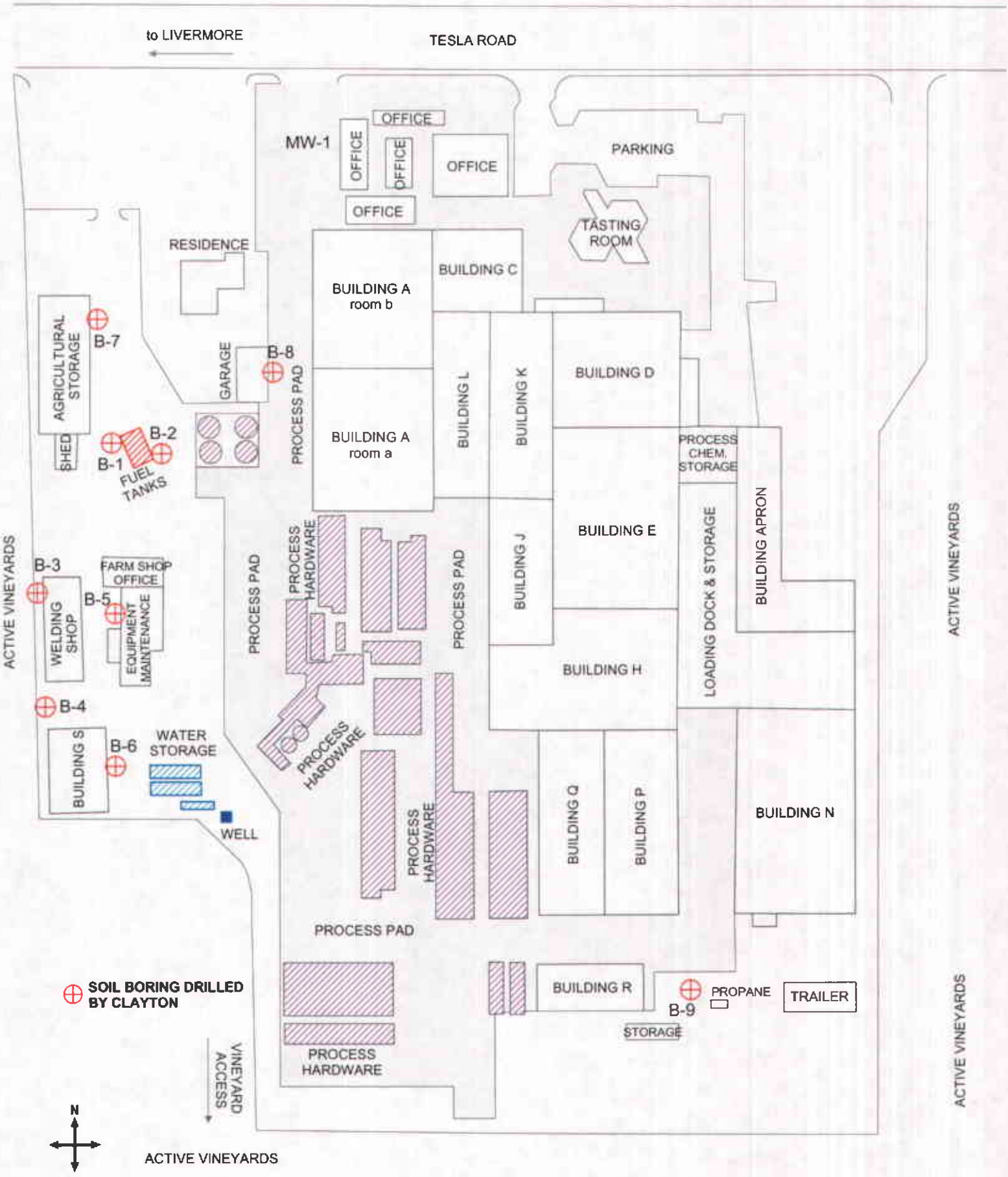

approximate scale in feet

0 50 100

Figure 2: Site map showing approximate locations of previously drilled soil borings.

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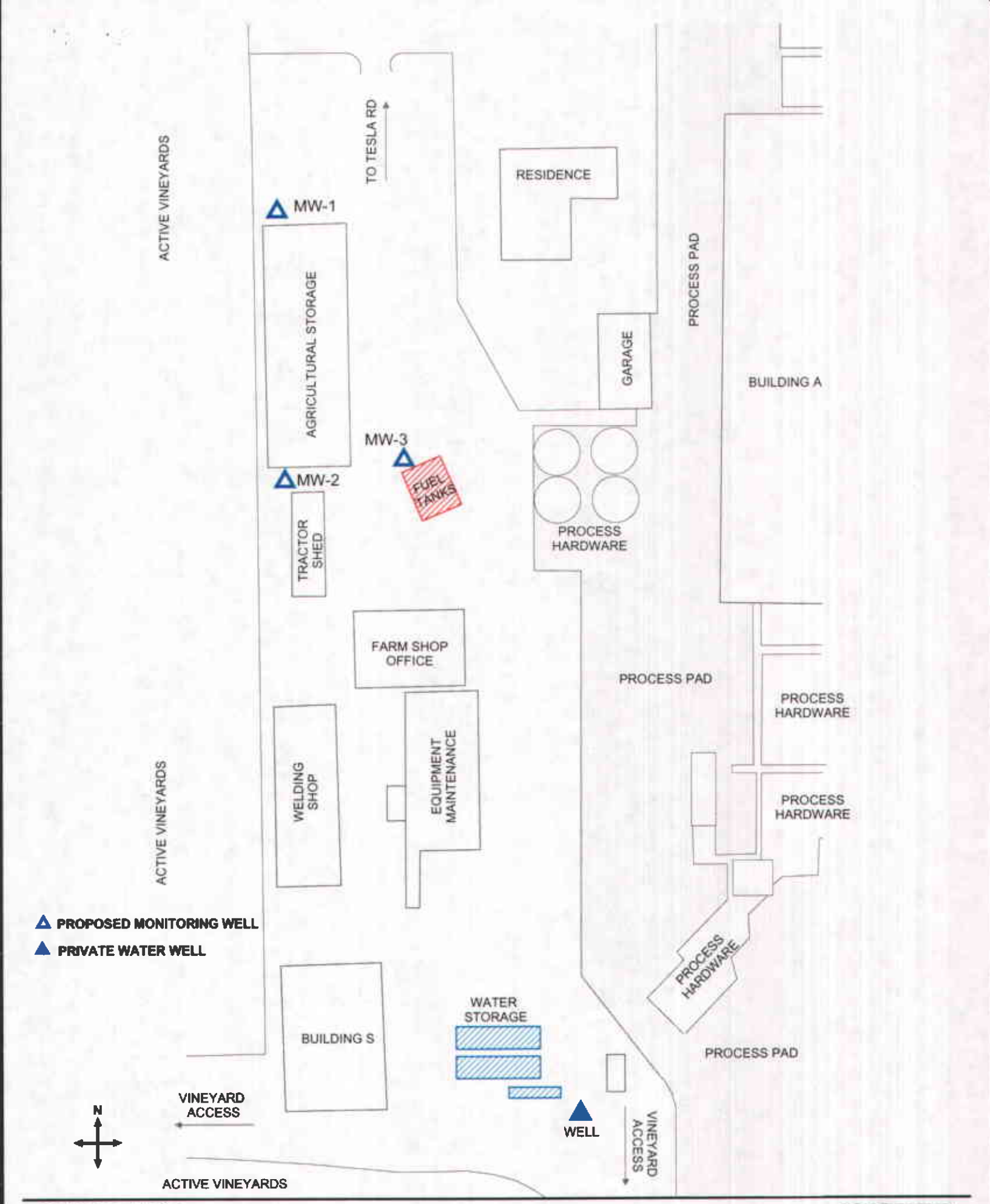

Figure 3: Site map showing approximate locations of existing water well and proposed groundwater monitoring wells.

APPENDIX A

Prior Soil and Groundwater Analytical Results

Table 1
Summary of Sampling and Analytical Program
Wente Winery, Livermore, CA

Boring ID	Depth	Analytical Methods TPH Scan	VOCs	LUFT Metals	Organochlorine Pesticides	Organophosphorus Pesticides	Chlorinated Herbicides	Total Metals As & Pb
SOIL								
B-1	0.5 - 1'				Comp1345	Comp1345	Comp1345	
	7.5 - 8'	X	X					
B-2	7.5 - 8'	X	X					
B-3	0.5 - 1'	X		X	Comp1345	Comp1345	Comp1345	
	3.5 - 4'		X					
B-4	0.5 - 1'	X		X	Comp1345	Comp1345	Comp1345	
	7.5 - 8'		X					
B-5	0.5 - 1'	X		X	Comp1345	Comp1345	Comp1345	
	3.5 - 4'		X					
B-6	0.5 - 1'				Comp6789	Comp6789	Comp6789	Comp6789
B-7	0.5 - 1'				Comp6789	Comp6789	Comp6789	Comp6789
B-8	3.5 - 4'				Comp6789	Comp6789	Comp6789	Comp6789
B-9	0.5 - 1'				Comp6789	Comp6789	Comp6789	Comp6789
GROUNDWATER								
B-1		X	X					
B-4		X	X					
Total Analyses:		7	7	3	2	2	2	1

Table 2
Summary of Soil Analytical Results: TPH, VOCs, and Metals
Wente Winery, Livermore, CA

Analytical Method	Analyte	Units	Sample ID, Depth (Feet), & Date								RBSLs
			B-1 7.5-8' 4/18/03	B-2 7.5-8' 4/18/03	B-3 0.5-1' 4/18/03	B-3 3.5-4' 4/18/03	B-4 0.5-1' 4/18/03	B-4 7.5-8' 4/18/03	B-5 0.5-1' 4/18/03	B-5 3.5-4' 4/18/03	Industrial
Total Petroleum Hydrocarbons	TPH-Gasoline	mg/Kg	24	<1.0	<1.0	--	<1.0	--	1.2	--	100
(EPA 8015M)	TPH-Diesel	mg/Kg	44	1.7	<1.0	--	<1.0	--	33	--	100
	TPH-Motor Oil	mg/Kg	<5.0	7.5	<5.0	--	<5.0	--	190	--	1000
Volatile Organic Compounds	MTBE	ug/Kg	<100	<5.0	--	<5.0	--	<5.0	--	<5.0	28
(EPA 8260B)	Benzene	ug/Kg	<100	<5.0	--	<5.0	--	<5.0	--	<5.0	45
	Toluene	ug/Kg	<100	<5.0	--	<5.0	--	<5.0	--	<5.0	2.6
	Ethylbenzene	ug/Kg	140	<5.0	--	<5.0	--	<5.0	--	<5.0	2,500
	Xylenes	ug/Kg	210	<5.0	--	<5.0	--	<5.0	--	<5.0	1.0
	Naphthalene	ug/Kg	560	<5.0	--	<5.0	--	<5.0	--	<5.0	4.3
	1,2,4-Trimethylbenzene	ug/Kg	3,400	<5.0	--	<5.0	--	<5.0	--	<5.0	NE
	sec-Butyl benzene	ug/Kg	150	<5.0	--	<5.0	--	<5.0	--	<5.0	NE
	Isopropylbenzene	ug/Kg	100	<5.0	--	<5.0	--	<5.0	--	<5.0	NE
	n-Propyl benzene	ug/Kg	610	<5.0	--	<5.0	--	<5.0	--	<5.0	NE
	1,3,5-Trimethylbenzene	ug/Kg	1,300	<5.0	--	<5.0	--	<5.0	--	<5.0	NE
LUFT Total Metals	Cadmium	mg/Kg	--	--	<0.5	--	<0.5	--	<0.5	--	12
(SW Series 6000, 7010)	Chromium	mg/Kg	--	--	69	--	60	--	52	--	750
	Lead	mg/Kg	--	--	7.9	--	8.0	--	41.0	--	750
	Nickel	mg/Kg	--	--	180	--	160	--	150	--	150
	Zinc	mg/Kg	--	--	99	--	54	--	57	--	600

Notes:

ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

-- = Not analyzed

<x = Analyte not detected at or above detection limit of x.

RBSLs = Risk Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, RWQCB, Interim Final - December 2001, Table A.

NE = Not established

Table 3
Summary of Soil Analytical Results: Pesticides, Herbicides and Metals
Wente Winery, Livermore, CA

Analytical Method	Analyte	Units	Sample ID & Date		RBSLs
			Comp1345 4/18/03	Comp6789 4/18/03	Industrial
Organochlorine Pesticides (EPA 8080)	a-Chlordane	ug/Kg	<1.0	6.2	2,900
	g-Chlordane	ug/Kg	<1.0	6.8	2,900
	p,p-DDD	ug/Kg	1.4	<5.0	17,000
	p,p-DDE	ug/Kg	3.3	<5.0	4,000
	p,p-DDT	ug/Kg	8.8	<5.0	4,000
Organophosphorus Pesticides (EPA 8081)	Herbicides	ug/Kg	ND	ND*	NE
Chlorinated Organic Herbicides (EPA 8151)	Herbicides	ug/Kg	ND*	ND*	NE
Total Metals (SW Series 7010)	Arsenic	mg/Kg	--	<2.5	2.7
	Lead	mg/Kg	--	9.4	750

Notes:

ug/kg = micrograms per kilogram

mg/kg = milligrams per kilogram

<x = Analyte not detected at or above detection limit of x.

ND = No Analytes Detected.

ND* = No analytes detected; however, elevated detection levels due to sample dilution

-- = Not analyzed

RBSLs = Risk Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, RWQCB, Interim Final - December 2001 Table A.

NE = Not established

Table 4
Summary of Grab-Groundwater Analytical Results - TPH and VOCs
Wente Winery, Livermore, CA

Category	Chemical	Units	Sample ID & Date B-1W 4/18/03	Sample ID & Date B-4W 4/18/03	RBSLs Industrial
Total Petroleum Hydrocarbons (EPA 8015M)	TPH-Gasoline	ug/L	**200,000**	**74**	100
	TPH-Diesel	ug/L	**150,000**	**180**	100
	TPH-Motor Oil	ug/L	<5,000	**370**	100
Volatile Organic Compounds (EPA 8260B)	MTBE	ug/L	<1000	<0.5	5.0
	Benzene	ug/L	**2,100**	<0.5	1.0
	Toluene	ug/L	**34,000**	**5.1**	40
	Ethylbenzene	ug/L	**5,900**	**2.0**	30
	Xylenes	ug/L	**31,000**	**12**	13
	n-Butyl benzene	ug/L	**1,300**	<0.5	NE
	tert-Butyl benzene	ug/L	<1000	**0.51**	NE
	chloroform	ug/L	<1000	**1.2**	28
	Naphthalene	ug/L	**1,800**	**1.3**	21
	1,2,4-Trimethylbenzene	ug/L	**9,900**	**4.0**	NE
	sec-Butyl benzene	ug/L	<1000	<0.5	NE
	Isopropylbenzene	ug/L	<1000	<0.5	NE
	n-Propyl benzene	ug/L	**1,100**	**0.67**	NE
	1,3,5-Trimethylbenzene	ug/L	**3,300**	**1.7**	NE

Notes:

ug/L = micrograms per liter

<x = Analyte not detected at or above detection limit of x.

RBSLs = Risk Based Screening Levels and Decision Making to Sites with Impacted Soil and Groundwater, RWQCB Interim Final - December 2001, Table A.

NE = Not established