CAMBRIA

March 2, 2007

Mr. Steven Plunkett
Hazardous Materials Specialist
Alameda County Environmental Health Department
1311 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: **Site Assessment and Preferential Pathway Study Workplan**
Former Olympic Service Station
1436 Grant Avenue
San Lorenzo, California
Fuel Leak Case No. RO00000373

Dear Mr. Plunkett:

On behalf of Encinal Properties, Cambria Environmental Technology, Inc. (Cambria) has prepared this workplan to complete a site assessment and a preferential pathway study at the referenced site. This scope of work was requested by the Alameda County Environmental Health Department (ACEHD), in a letter dated December 4, 2006 (Attachment A). The objectives of this workplan are to complete a preferential pathway study, define the vertical and horizontal extent of the petroleum hydrocarbons in soil and groundwater, and to re-instate the quarterly groundwater monitoring and sampling at the site. A site summary, discussions of previous environmental investigations and remedial actions, hydrocarbon distribution in soil and groundwater, and Cambria's proposed scope of work are described below.

SITE SUMMARY

Location and Description: The site is located at 1436 Grant Avenue in San Lorenzo, California, on the south corner at the intersection of Grant Avenue and Channel Street (Figures 1,2, and 3). The site is a former Olympic Service Station that currently operates as San Lorenzo Auto Repair. The property is owned by Mr. George Jaber (Encinal Properties) and Mr. Tony Malonzo operates the auto repair shop at the site. Commercial properties are located south and southwest of the site. A school is located north of the site. The remainder of the surrounding area is residential in nature (Figure 3). On July 10, 1998, four steel, single wall underground storage tanks (USTs) were removed from the site: one 10,000-gallon gasoline UST, one 8,000-gallon gasoline UST; one 5,000-gallon diesel UST, and one 250-gallon waste-oil UST (Figure 2). Six dispensers located on two islands north of the auto repair building were also removed. Based on the ACEHD October 21, 1998 letter, all fuel USTs were constructed of tar-wrapped steel, the waste-oil UST was only bare steel. During removal activities, holes were observed in the waste-oil tank.

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Lithology: The soils beneath the site consist of a heterogeneous mixture of sandy gravel, gravelly sand, silty sand, sandy silt, clayey silt, and silty clay. Moderate to high estimated permeability soils exists between ground surface and approximately 4 feet below ground surface (ft bgs), low estimated permeability soils between approximately 4 and 17 ft bgs, and moderate to high estimated permeability soils between 17 and the total explored depth of 26.5 ft bgs. Copies of boring and well logs are presented as Attachment B.

SITE BACKGROUND

In 1998 the USTs and fueling facilities were removed from the site. From 1999 to 2002 soil and groundwater assessments were completed and five quarterly groundwater monitoring and sampling events were conducted during 1999 and 2000. A summary of the UST removals, site assessments, and quarterly groundwater monitoring results are below. Boring and well locations are presented on Figure 2. Monitoring well construction details are presented on Table 1, soil and groundwater analytical data are presented in Tables 2 through 4.

July 1998 UST Removal Activities: On July 10, 1998, Reese Construction removed four steel, single wall USTs: one 10,000-gallon gasoline UST, one 8,000-gallon gasoline UST, one 5,000-gallon diesel UST, and one 250-gallon waste-oil UST. Additionally, six dispensers and associated fuel piping were removed. The fuel UST excavation dimensions were approximately 40 feet (ft) by 30 ft and 10 to 12 ft deep, and the waste-oil tank excavation dimensions were approximately 8 ft by 6 ft and 6 ft deep. Groundwater was present in the fuel UST excavation at approximately 10 ft bgs and no groundwater was encountered in the waste-oil tank excavation. Eleven (11) confirmation soil samples were collected from the sidewalls and bottoms of the UST and waste oil excavations; at the piping intersections; and at the dispensers. Additional details are presented in Reese Construction September 14, 1998 *Tank Closure Report.*

September 1998 Excavation Dewatering: On September 8, 1998, Foss Environmental Services (FES), pumped, transported, and disposed of groundwater contained in the fuel UST excavation. A total of approximately 5,000 gallons of groundwater was pumped out of the excavation into the vacuum truck. Additional details are presented in FES's September 21, 1998 *Report of Excavation Dewatering Activities.*

November 1998 Soil Stockpile Sampling: In November 1998, Aqua Science Engineers Inc. (ASE) sampled the UST excavation soil stockpiles to characterize them for disposal or reuse. The highest concentrations detected were 280 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as

diesel (TPHd), 0.066 mg/kg xylenes, 0.012 mg/kg methyl tertiary-butyl ether (MTBE), and 110 mg/kg total lead. No total petroleum hydrocarbons as gasoline (TPHg) or benzene were detected above laboratory detection limits. The ACEHD approved the UST excavation soil stockpile to be re-used as backfill in the fuel UST excavation. The fuel UST excavation was subsequently backfilled and compacted. Additional details are presented in ASE's November 24, 1998 *Stockpiled Soil Sampling Results*.

December 1998 Waste-Oil and Dispenser Overexcavation: On December 18, 1998 ASE oversaw the overexcavation of the waste-oil UST excavation and the northern dispenser island due to the presence of elevated concentrations of petroleum hydrocarbons, oil and grease, volatile organic compounds (VOCs), and/or total lead. The waste-oil excavation bottom was approximately 12 ft bgs and the dispenser excavation was approximately 3.5 ft bgs. Excavating deeper was not feasible due to the location of the waste-oil excavation in relation to the adjacent building wall. The waste-oil UST excavation was subsequently backfilled with clean imported fill material. The 15.3 tons of soil from the waste-oil excavation stockpile were transported from the site by Lutrell Trucking to Chemical. Waste Management in Kettleman City, California for disposal on September 24, 1999. ASE collected confirmation soil samples from the waste-oil (WO-OEX-12) and dispenser (D1G-OEX-3.5) excavations. Sample WO-OEX-12 contained 570 mg/kg oil and grease, 940 mg/kg TPHmo, and 250 mg/kg TPHd. No TPHg or benzene was detected above laboratory detection limits. No total petroleum hydrocarbons as motor oil (TPHmo), TPHd, TPHg, benzene, toluene, ethylbenzene, and xylenes (BTEX), and MTBE were detected above detection limits from sample D1G-OEX-3.5. Additional details are presented in ASE's January 7, 1999 *Report Detailing Former Waste-Oil UST Overexcavation Activities.*

1999 Monitoring Well Installation: On September 24, 1999, ASE installed groundwater monitoring well MW-1 downgradient of the former USTs, well MW-2 downgradient of the former waste-oil UST, and well MW-3 downgradient of the former dispensers. The two-inch wells were screened from approximately 5 ft bgs to 26.5 ft bgs (Table 1). Soil samples were either collected at 10 or 10.5 ft bgs. No semi-volatile organic compounds (SVOCs) or halogenated volatile organic compounds (HVOCs) were detected above laboratory detection limits. The highest concentrations of TPHg and benzene detected were 11 mg/kg and 0.63 mg/kg in boring MW-3 at 10 ft bgs, respectively. The highest MTBE concentration was 1.7 mg/kg in boring MW-1 at 10.5 ft bgs. Concentrations of oil and grease, TPHmo, and TPHd were detected at 700 mg/kg, 2,400 mg/kg, and 1,000 mg/kg, respectively, in boring MW-2 at 10 ft bgs. Additional details are presented in ASE's November 12, 1999 *Report of Soil and Groundwater Assessment.*

2002 Soil and Groundwater Assessment: On April 30, 2002, ASE advanced borings BH-A, BH-B, and BH-C approximately 30 ft southwest (downgradient) of the site. The borings were advanced to 20 ft bgs, and soil and grab groundwater samples were collected from each boring. The highest soil concentrations were 290 mg/kg TPHg, 320 mg/kg TPHd, 2.2 mg/kg benzene from boring BH-B. The highest groundwater concentrations were 2,300 micrograms per liter (ug/L) TPHg, 120 ug/L benzene, and 2,000 ug/L MTBE from boring BH-B. ASE recommended continuing quarterly groundwater monitoring, and to further delineate the petroleum hydrocarbon plume downgradient. Additional details are presented in ASE's May 31, 2002 *Report of Soil and Groundwater Assessment.*

Quarterly Monitoring: Five consecutive quarters of groundwater monitoring and sampling were initiated in October 1999 (Table 2). Samples were analyzed for TPHg, BTEX, and MTBE. Well MW-2 samples were also analyzed for oil and grease, TPHmo, SVOCs and HVOCs. Depth to groundwater has ranged from 6.61 to 8.35 ft below top of casing. In October 2000, the highest groundwater concentrations were 150 ug/L TPHd in well MW-3, 4,100 ug/L TPHg in well MW-1, 180 ug/L benzene in well MW-3, and 6,100 ug/L MTBE in well MW-1.

HYDROCARBON AND MTBE DISTRIBUTION IN SOIL

The highest petroleum hydrocarbon concentrations remaining at the site are 700 mg/kg oil & grease in boring MW-2 at 10 ft bgs, 2,400 mg/kg TPHmo in boring MW-2 at 10 ft bgs, 3,800 mg/kg TPHg in soil sample T-3E-7.0 at 7 ft bgs, 30 mg/kg benzene in soil sample T-3E-7.0 at 7 ft bgs, and 27 mg/kg MTBE in soil sample T-3E-7.0 at 7 ft bgs (Table 3). Based on the data from previous assessments, the vertical and horizontal extent of petroleum hydrocarbons has not been established. Soil analytical results are presented in Tables 3 and 4.

HYDROCARBON AND MTBE DISTRIBUTION IN GROUNDWATER

The highest groundwater concentrations detected in wells at the site are 1,300 ug/L oil& grease in well MW-2, 640 ug/L TPHd in well MW-3, 4,100 ug/L TPHg in well MW-1, 900 ug/L benzene in well MW-3, and 6,100 ug/L MTBE in well MW-1. Downgradient of the site TPHmo and TPHd have been delineated by borings BH-A, BH-B, and BH-C. Otherwise, additional assessment is required to horizontally delineate petroleum hydrocarbons at the site. Groundwater analytical results are presented in Table 2.

PROPOSED SCOPE OF WORK

As recommended in ACEHD's December 4, 2006 letter, Cambria proposes to complete a preferential pathway study, and a soil and groundwater assessment. A summary of this proposed scope of work is outlined below.

PREFERENTIAL PATHWAY STUDY

The purpose of the preferential pathway study is to locate potential migration pathways and conduits to determine the probability of the plume encountering the pathways and conduits. The study includes a utility survey and well survey.

Utility Survey

Cambria proposes to map the subsurface utility structures at the site by noting exposed features (e.g. manhole covers) and underground service alert markings, and reviewing engineering drawings from the utility purveyors, and completing a private utility mark out onsite. Cambria will attempt to determine the top and bottom of utility trenches. All utilities will be shown on a scaled site plan, and if available the diameter, depth, and flow direction of the utilities will also be represented. Cambria will also identify underground utilities on scaled cross-sections.

Well Survey

Cambria will request the *Well Driller Completion Reports* from the California Department of Water Resources (DWR) for all wells located within a ½ mile radius of the site. In addition, Cambria will contact Alameda County Public Works Agency to get a map and table of wells located within a ½ mile radius of the site. Cambria will identify and discuss all surface water bodies within ½ mile radius of the site. Cambria will identify and discuss any sites with sensitive land usage (i.e. schools, daycare, hospitals, and etc.) within 500 ft of the site. In addition, Cambria will contact local agencies to determine if any municipal wells are located in the vicinity of the site. All wells identified will be tabulated and represented on a scaled map and included in the site assessment.

SOIL AND GROUNDWATER ASSESSMENT

Cambria proposes advancing soil borings to further define the vertical and horizontal extent of petroleum hydrocarbons in soil and groundwater at the site. Soil and grab groundwater samples will be collected and analyzed from each boring. Proposed boring locations are shown on Figure 2. The pre-field and field activities to complete this proposed scope of work are outlined below.

Health and Safety Plan

To protect the public and site personnel during the fieldwork, a site-specific Health and Safety Plan (HSP) will be distributed to all members of the project team. The HSP addresses physical health threats posed by drilling and potential health threats posed by contact with petroleum hydrocarbons. The HSP also prescribes appropriate personal protective equipment (PPE) to protect site workers.

Permits

Prior to initiating field activities, Cambria will obtain boring permits from Alameda County Public Works Agency (ACPWA). An encroachment permit may be required from City of San Lorenzo or a site access agreement from an adjacent property owner for off-site locations.

Utility Location

The proposed boring and well locations will be marked and Underground Service Alert (USA) will be notified of our site activities to identify utilities in the site vicinity. A private utility locator will be contracted to survey underground utilities on private property. Prior to drilling, the soil boring locations will be cleared to 8 ft bgs to minimize the potential for damaging underground utilities.

Soil Borings

Cambria proposes to advance eight (8) soil borings to approximately 20 ft bgs using direct push rig to collect soil and groundwater samples. Cambria will use this data to determine if and where additional monitoring wells may be needed. Soil borings will be advanced onsite and offsite to horizontally and vertically delineate petroleum hydrocarbons at the site. Proposed boring locations are presented in

Figure 3. Cambria's standard field procedures for soil borings are presented in Attachment C.

Soil Sampling

Proposed borings will be continuously sampled and logged using a direct push rig. Select samples will be collected for chemical analyses approximately every five ft. Additional samples will be collected in the capillary fringe, at obvious changes in lithology, at depths previously identified as petroleum hydrocarbon-bearing, or where petroleum hydrocarbons are detected with a photo-ionization detector (PID). Sediments encountered in the samples and drill cuttings will be recorded in a boring log using the Unified Soil Classification System. Cambria's standard operating procedures for soil sampling are presented as Attachment C.

Grab Groundwater Sampling

Grab groundwater samples will be collected from borings to delineate the horizontal extent of the petroleum hydrocarbon plume. The samples will be collected with disposable bailers and decanted into the appropriate glassware provided by the laboratory. The samples will be labeled, stored in a cooler on ice, and transported under a completed chain of custody to McCampbell Analytical., a state certified laboratory.

Soil Chemical Analyses

Select soil samples will be submitted to a state-certified laboratory for analysis. Sample selection will be based on visual field inspection, data obtained with a PID, and at depths previously identified as petroleum hydrocarbon-bearing. Selected soil samples will be analyzed for TPHg and TPHd by EPA Method 8015M; BTEX, MTBE, tertiary-amyl methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), di-isopropyl ether (DIPE), tertiary-butyl alcohol (TBA), 1,2- dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), and ethanol (EtOH) by EPA Method 8260B; and total lead by EPA Method 6010. All analytical data will be prepared in the appropriate format and uploaded to the State's Geotracker database.

Groundwater Chemical Analyses

Grab groundwater and quarterly groundwater samples will be submitted to a state-certified laboratory for analysis. Selected samples will be analyzed for TPHg and TPHd by EPA Method 8015M; and BTEX, MTBE, TAME, ETBE, DIPE, TBA, EDB, 1,2-DCA, and EtOH by EPA Method 8260B. All analytical data will be prepared in the appropriate format and uploaded to the State's Geotracker database.

Site Plan and Top-of-Casing Elevation Survey

The existing wells will be surveyed to mean sea level, latitude and longitude to within 1-meter accuracy using NAD 83. The survey data will be uploaded to the State's Geotracker Database. The survey will also include adjacent site features to accurately update the site plan.

Waste Management/Disposal

Drill cuttings will be temporarily stored onsite in stockpiles covered with six-mil plastic sheeting or in DOT-approved drums, as necessary. Cambria will characterize the stockpiled soil and will have it transported by a licensed waste hauler to the appropriate disposal facilities. Cambria's standard procedures for waste handling and disposal are presented as Attachment C.

QUARTERLY GROUNDWATER MONITORING

In a letter dated December 4, 2006, the ACEHD requested that the groundwater monitoring and sampling program be reinstated. On February 16, 2007, Cambria had the monitoring wells developed. On March 1, 2007, Cambria had the monitoring wells monitored and sampled. The results of the well development and monitoring and sampling event will be presented in the first quarter 2007 groundwater monitoring report. All the appropriate data will be submitted to the State's Geotracker database.

REPORTING

After the analytical results are received, a *Site Assessment Report* will be prepared that will include the following:

- A summary of the site background and history;
- Description of drilling and soil sampling methods;
- Lithologic and well construction logs;
- Results of preferential pathway study;
- A discussion of hydrocarbon distribution at the site;
- Waste management/disposal methods; and
- A site map showing the boring locations;
- Groundwater Elevation Map with a Rose Diagram;
- Geologic Cross-Sections;
- Tabulated soil and groundwater data;
- Analytical reports and chain-of-custody documentation;
- Our conclusions and recommendations.

SCHEDULE

Upon your approval of this workplan, Cambria will immediately begin the permitting process and will schedule the drilling activities. Cambria will submit a Site Assessment Report 90 days after the completion of field activities.

CLOSING

Cambria appreciates your assistance and cooperation with this project. Please call Ms. Celina Hernandez at (510) 420-3313 with any questions or comments.

shall be represented as a legal opinion of any kind or nature.

Sincerely,
Cambria Environmental Technology, Inc.

Glenn D Russ for Celina Hernandez

Celina Hernandez
Senior Staff Geologist

Brandon S. Wilken, P.G.
Senior Project Geologist

Figures:
1 - Vicinity Map
2 - Site Plan
3 - Area Map

Tables:
1 - Monitoring Well Construction Details
2 - Groundwater Analytical Data
3 - TPH Soil Analytical Data
4 - SVOCs, HVOCs, and Metals Soil Analytical Data

Attachments:
A – Regulatory Correspondence
B – Boring and Well Logs
C – Cambria's Standard Operating Procedures

Cc: Mr. George Jaber, Encinal Properties, 2801 Encinal Avenue, Alameda, CA 94501

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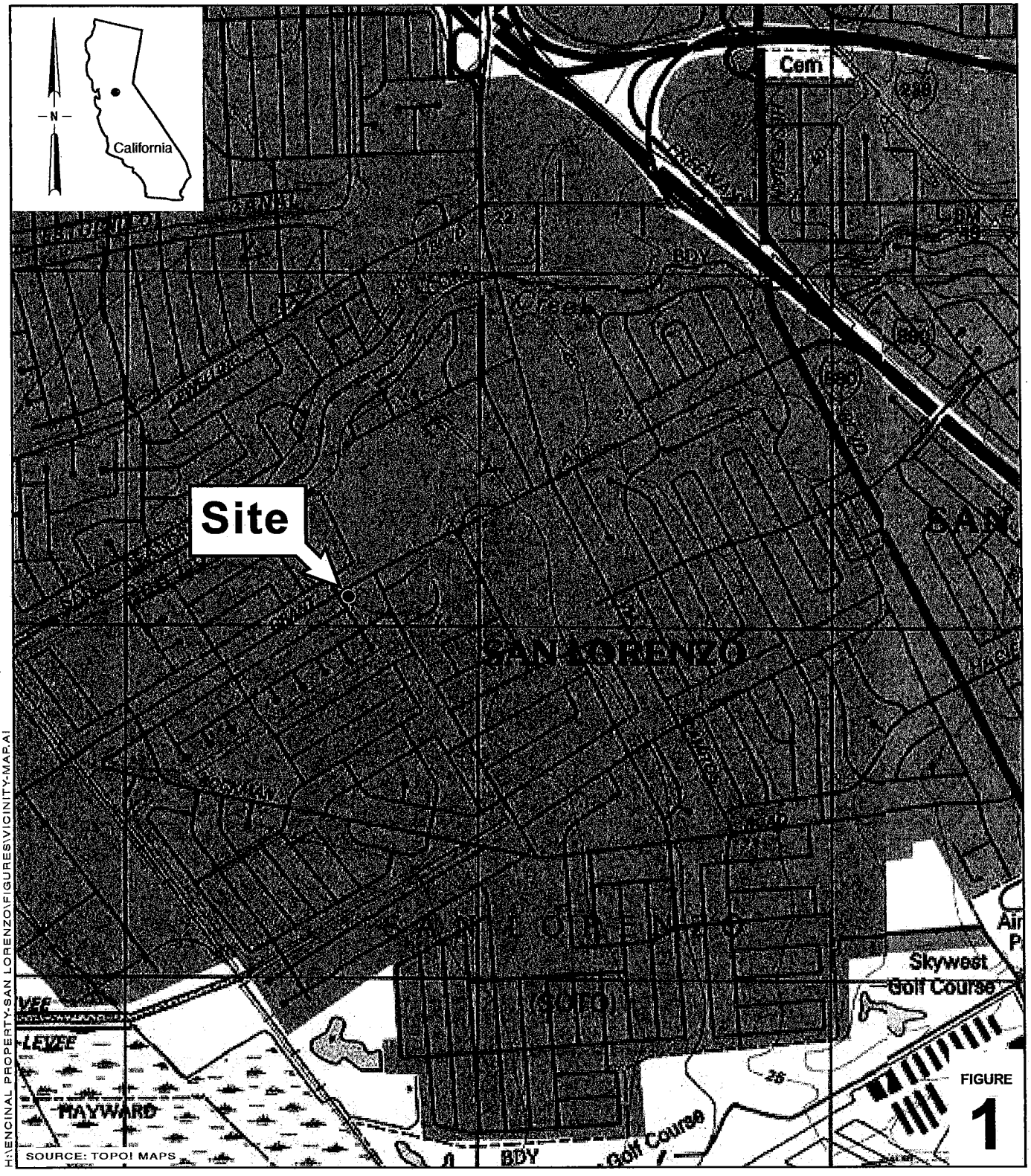

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0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Olympic Service Station

1436 Grant Avenue

San Lorenzo, California

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Vicinity Map

03/01/07

Site Plan

CHANNEL STREET

GRANT AVENUE

EXPLANATION

- MW-1 — Monitoring well location
- BH-A — Soil boring location
- Confirmation soil sample location (July 1998)
- Confirmation soil sample location (December 1998)

T-3E-7.0 T-2E-8.0 T-1E-7.5

underground fuel piping

former UST excavation

PL-2-2.0 PL-1-1.5

T-3W-10.0

MW-1

D-2D-2.0 D-2G-1.5

former dispenser islands

D-1D-2.0 D1G-OEX-3.5 D-1G-1.5

WO-OEX-12

WO-1-7.5

former waste oil tank excavation

Office and Garage

planter

Arroyo Center parking lot

MW-2

MW-3

BH-A

BH-B

BH-C

Arroyo Center Buildings

0 10 20 40

Scale (ft)

FIGURE

2

CAMBRIA

Olympic Service Station
1436 Grant Avenue
San Lorenzo, California

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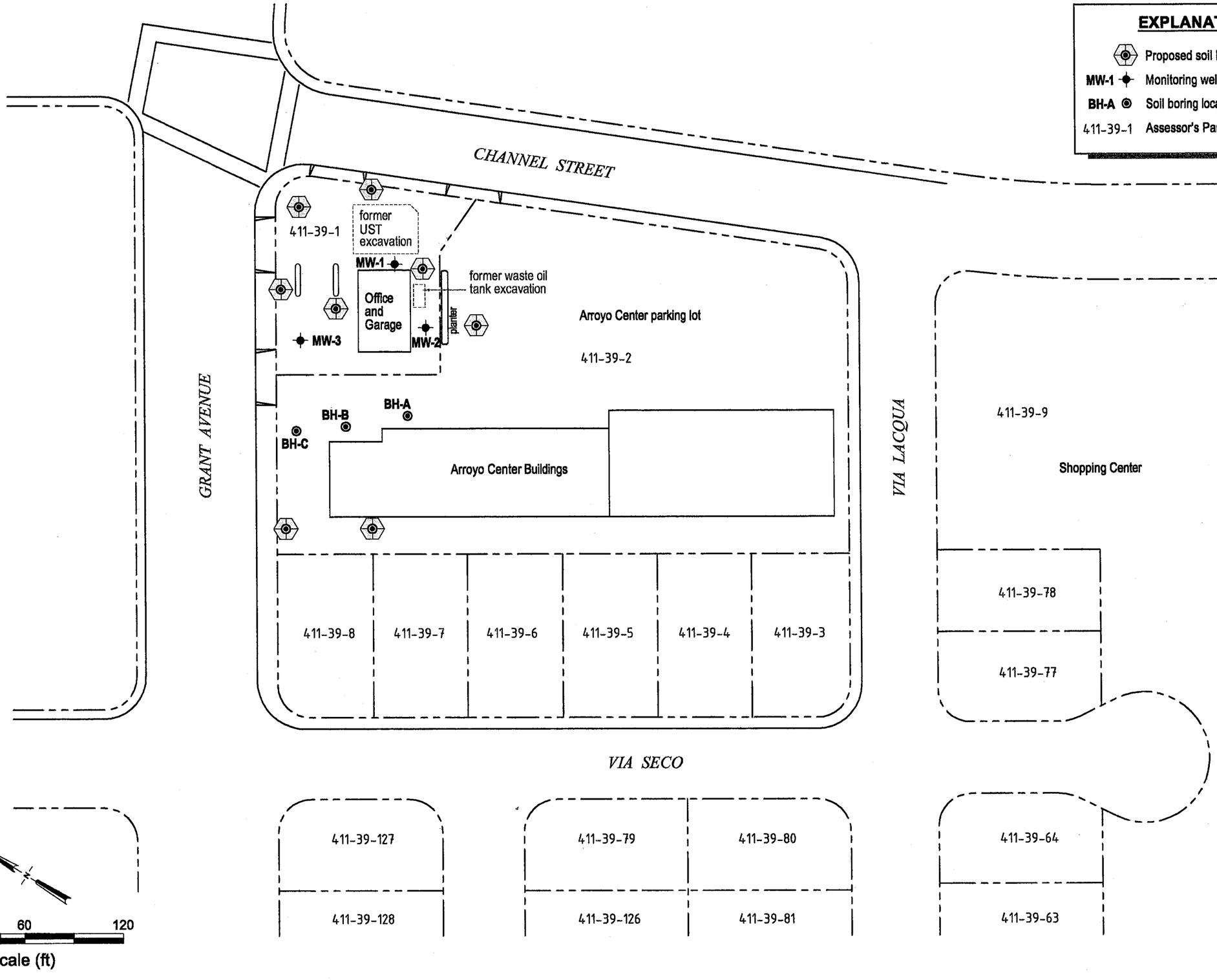

Area Map

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Olympic Service Station
1436 Grant Avenue
San Lorenzo, California

FIGURE
3

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Table 1. Monitoring Well Construction Details - Encinal Properties, Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, California

Well ID	Date Installed	Borehole diameter (in)	Depth of borehole (ft)	Casing diameter (in)	Screened interval (ft bgs)	Slot Size (in)	Filter Pack (ft bgs)	Bentonite seal (ft bgs)	Cement (ft bgs)	TOC elevation (ft above msl)
MW-1	9/24/1999	8	26.5	2	5-26.5	0.020	3.5-26.5	3-3.5	1.5-3	15.00
MW-2	9/24/1999	8	20.0	2	5-20	0.020	3.5-20	3-3.5	1.5-3	14.46
MW-3	9/24/1999	8	21.5	2	5-21	0.020	3.5-21.5	3-3.5	1.5-3	14.41

Abbreviations / Notes

ft = feet

in = inches

ft bgs = feet below grade surface

ft above msl = feet above mean sea level

TOC = top of casing

TOC elevations are relative to a project datum determined by Aqua Science Engineers, Inc. in 1998.

Table 2. Groundwater Analytical Data - Encinal Properties, Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, California

Well ID	Date	DTW	GWE	Oil &	TPHmo	TPHd	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	SVOCs &	DIPE	TAME	ETBE	TBA	Notes
TOC	Sampled	(ft)	(ft above msl)	Grease									HVOCs					
(ft above msl)				← Concentrations in micrograms per liter (µg/L) →														
Grab Groundwater Samples																		
Pit Water	9/13/1998	--	--	--	--	2,100	3,600	350	130	39	380	17,000	--	--	--	--	--	
BH-A	4/30/2002	17/8	--	--	<100	<100	180	<0.50	<0.50	8.8	<0.50	82	--	<0.50	<0.50	<0.50	<5.0	
BH-B	4/30/2002	16/8	--	--	<100	<200	2,300	120	11	60	150	2,000	--	<5.0	<5.0	<5.0	<50	
BH-C	4/30/2002	16/8	--	--	<100	<150	1,200	57	0.72	43	87	240	--	<0.50	1.0	<0.50	<5.0	
Quarterly Groundwater Samples																		
MW-1	10/6/1999	8.35	6.65	--	--	84	3,900	<25	<25	<25	<25	3,500	--	--	--	--	--	Y
15.00	1/13/2000	7.90	7.10	--	--	<50	<1,300	18	<13	<13	<13	1,700	--	--	--	--	--	
	4/12/2000	7.08	7.92	--	--	56	<1,000	66	<10	<10	<10	1,600	--	--	--	--	--	Y
	7/19/2000	7.66	7.34	--	--	52	<1,000	<10	<10	<10	<10	1,200	--	--	--	--	--	Y
	10/25/2000	7.91	7.09	--	--	76	4,100	120	<25	<25	<25	6,100	--	--	--	--	--	Y
MW-2	10/6/1999	7.87	6.59	<1,000	<500	<50	70	<0.5	<0.5	<0.5	<0.5	11	ND	--	--	--	--	Y
14.46	1/13/2000	7.46	7.00	<1,000	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	6.2	ND	--	--	--	--	
	4/12/2000	6.67	7.79	1,100	<500	<50	<50	<0.5	<0.5	<0.5	<0.5	39	--	--	--	--	--	
	7/19/2000	7.23	7.23	1,300	<500	<50	<1,000	<10	<10	<10	<10	990	--	--	--	--	--	
	10/25/2000	7.52	6.94	--	<500	<50	370	<2.5	<2.5	<2.5	<2.5	690	--	--	--	--	--	
MW-3	10/6/1999	7.90	6.51	--	--	300	3,900	900	89	160	560	790	--	--	--	--	--	
14.41	1/13/2000	7.50	6.91	--	--	210	740	110	4.8	35	18	290	--	--	--	--	--	
	4/12/2000	6.61	7.80	--	--	640	2,200	650	9.7	180	24	140	--	--	--	--	--	
	7/19/2000	7.24	7.17	--	--	270	2,700	420	<2.5	160	<2.5	99	--	--	--	--	--	Y
	10/25/2000	7.52	6.89	--	--	150	710	180	<2.5	24	<2.5	71	--	--	--	--	--	Y

Abbreviations / Notes

TOC = Top of casing
DTW = Depth to water
GWE = Groundwater elevation in feet above mean sea level
ft above msl = feet above mean sea level
17/8 = Depth to first encountered groundwater/depth of static groundwater
<n = Not detected above laboratory reporting limit
-- = Not sampled, not analyzed
Oil and grease by EPA Method 5520 E&F
TPHd = Total Petroleum Hydrocarbons as diesel range by EPA Method 8015
TPHg = Total Petroleum Hydrocarbons as gasoline range by EPA Method 8015
TPHmo = Total Petroleum Hydrocarbons as motor oil by EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes (BTEX) by EPA Method 8020
MTBE = Methyl tertiary butyl ether by EPA Method 8020
Di-isopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), tertiary-butyl alcohol (TBA) by EPA Method 8260B
SVOCs = Semi-volatile organic compounds by EPA Method 8270, refer to corresponding analytical laboratory report for a full list of compounds
HVOCs = Halogenated volatile organic compoundy by EPA Method 8010, refer to corresponding analytical laboratory report for a full list of compounds
Y = Sample exhibits chromatographic pattern which does not resemble gasoline/diesel standard
TOC elevations are relative to a project datum determined by Aqua Science Engineers, Inc. in 1998.

Table 3 - TPH Soil Analytical Data - Encinal Properties, Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, California

Sample ID	Sample Date	Sample Depth (ft)	Oil & Grease	TPHmo	TPHd	TPHg		Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		DIPE	TAME	ETBE	TBA	1,2-DCA	Notes
			←							Concentrations in mg/kg								→	
July 1998 UST Removal																			
WO-1-7.5	7/10/1998	7.5	4,300	--	1,300	200		1.5	11	3.6	20	1.4	*	--	--	--	--	<0.025	a,b,g
T-1E-7.5	7/10/1998	7.5	--	--	--	180		<0.01	0.94	4.6	0.56	<0.2	*	--	--	--	--	--	a,j
T-2E-8.0	7/10/1998	8	--	--	--	82		<0.01	0.39	2.9	0.28	0.45	*	--	--	--	--	--	a,j
T-3E-7.0	7/10/1998	7	--	--	--	3,800		30	180	93	430	27	*	--	--	--	--	--	a,j
T-3W-10.0	7/10/1998	10	--	--	--	170		<0.02	0.71	5.3	6.6	<0.4	*	--	--	--	--	--	a,j
D-1G-1.5	7/10/1998	1.5	--	--	--	5,700		<0.25	14	54	280	<5	*	--	--	--	--	--	b
D-2G-1.5	7/10/1998	2	--	--	--	460		<0.02	0.26	0.61	5.0	<0.4	*	--	--	--	--	--	b,j
D-1D-2.0	7/10/1998	2	--	--	5.7	--		--	--	--	--	--		--	--	--	--	--	b
D-2D-2.0	7/10/1998	2	--	--	39	--		--	--	--	--	--		--	--	--	--	--	b
PL-1-1.5	7/10/1998	1.5	--	--	2.8	5.8		0.062	0.062	0.33	0.14	<0.05	*	--	--	--	--	--	a,b
PL-2-2.0	7/10/1998	2	--	--	1.3	5.9		0.10	0.56	0.19	0.42	0.75	*	--	--	--	--	--	a,b
December 1998 Waste Oil Tank Overexcavation																			
WO-OEX-12	12/18/1998	12	570	940	250	<1.3		<0.0050	0.024	0.057	0.24	<0.0050	*	--	--	--	--	<0.0050	
D1G-OEX-3.5	12/18/1998	3.5	--	<50	<1.0	<1.0		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	*	--	--	--	--	--	
1999 Assessment																			
MW-1	9/24/1999	10.5	--	--	250	6.5		0.42	0.18	0.065	0.027	1.7	*	--	--	--	--	--	
MW-2	9/24/1999	10	700	2,400	1,000	2.9		<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	*	--	--	--	--	--	
MW-3	9/24/1999	10	--	--	26	11		0.63	0.18	0.31	1.1	<0.0050	*	--	--	--	--	--	
2002 Assessment																			
BH-A	4/30/2002	11.5	--	180	270	150	*	<0.025	0.027	1.9	0.28	<0.025		<0.025	<0.025	<0.025	<0.25	--	
BH-B	4/30/2002	11.5	--	<10	320	290	*	2.2	0.49	5.0	12	<0.050		<0.050	<0.050	<0.050	<0.25	--	
BH-C	4/30/2002	11.5	--	12	280	240	*	1.7	0.016	4.3	5.1	0.014		<0.0050	<0.0050	<0.0050	<0.050	--	

Abbreviations and Notes:

mg/kg = milligrams per kilograms

Oil and grease by EPA Method 5520 E&F

TPHd = Total Petroleum Hydrocarbons as diesel range by EPA Method 8015M

TPHg = Total Petroleum Hydrocarbons as gasoline range by EPA Method 8015M

Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020

MTBE = Methyl tertiary butyl ether by EPA Method 8020 or 8260

* = MTBE by EPA Method 8020; TPHg by EPA Method 8260

Di-isopropyl ether (DIPE), tertiary-amyl methyl ether (TAME), ethyl tertiary-butyl ether (ETBE), tertiary-butyl alcohol (TBA) by EPA Method 8260B

1,2-dichloroethane (1,2-DCA) by EPA Method 8240A, 8010 list

<n = Not detected above laboratory reporting limit

-- = Not analyzed or not sampled.

a = Unmodified or weakly modified gasoline is significant

b = Gasoline range compounds are significant; diesel range compounds are significant; oil range compounds significant

g = Strongly aged gasoline or diesel range compounds are significant

j = No recognizable pattern

Table 4 - SVOCs, HVOCs and Metals Soil Analytical Data - Encinal Properties, Former Olympic Service Station, 1436 Grant Avenue, San Lorenzo, California

Sample ID	Sample Date	Sample Depth (ft)	*SVOCs* Napthalene	2-Methyl Napthalene	Phenanthrene	Pyrene	Benzo(a)-anthracene	Fluoranthene	Other SVOCs	*HVOCs* PCE	Vinyl Chloride	1,1 DCA	Other HVOCs	*METALS* Cadmium	Chromium	Nickel	Zinc	Lead
			Concentrations in mg/kg															
July 1998 UST Removal																		
WO-1-7.5	7/10/1998	7.5	3.0	4.1	0.60	0.60	0.40	0.60	ND	1.2	<0.025	0.026	ND	0.93	42	38	870	1,900
T-1E-7.5	7/10/1998	7.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
T-2E-8.0	7/10/1998	8	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	10
T-3E-7.0	7/10/1998	7	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16
T-3W-10.0	7/10/1998	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D-1G-1.5	7/10/1998	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	24
D-1D-2.0	7/10/1998	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
D-2G-1.5	7/10/1998	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	16
D-2D-2.0	7/10/1998	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
PL-1-1.5	7/10/1998	1.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	11
PL-2-2.0	7/10/1998	2	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	9.6
December 1998 Waste Oil Tank Overexcavation																		
WO-OEX-12	12/18/1998	12	0.56	0.89	0.15	0.12	<0.10	<0.10	ND	<0.0050	0.0087	<0.0050	ND	1.2	30	34	200	996
D1G-OEX-3.5	12/18/1998	3.5	--	--	--	--	--	--	--	--	--		--	--	--	--	--	6.3
1999 Assessment																		
MW-1	9/24/1999	10.5	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	8.8
MW-2	9/24/1999	10	--	--	--	--	--	--	ND	--	--	--	ND	<0.50	28	37	46	7.4
MW-3	9/24/1999	10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Abbreviations and Notes:

mg/kg = milligrams per kilograms

SVOCs = Semi-volatile organic compounds by EPA Method 8270A, refer to corresponding analytical laboratory report for a full list of compounds

HVOCs = Halogenated volatile organic compoundy by EPA Method 8240A, 8010 list, refer to corresponding analytical laboratory report for a full list of compounds

1,1-DCA = 1,1-dichloroethane

Metals by EPA Method 6010A

ND = Not detected above laboratory reporting limit

<n = Not detected above laboratory reporting limit

-- = Not analyzed

ATTACHMENT A

Regulatory Correspondence

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

December 4, 2006

Mr. George Jaber
George H. Jaber Trust
2801 Encinal Avenue
Alameda, CA 94501-4726

Subject: Fuel Leak Case No. RO00000373 Olympic Station, 1436 Grant Avenue, San Lorenzo, CA

Dear Mr. Jaber:

Alameda County Environmental Health Department (ACEH) staff has reviewed the case file and the report entitled, "Soil and Groundwater Assessment Report", dated May 31, 2002 and prepared on your behalf by Aqua Science Engineers Inc. Soil and groundwater sampling conducted during the 2002 investigation confirmed the presence of elevated concentrations of TPHg and MtBE in both soil and groundwater immediately downgradient of the former USTs.

In addition, our review of the case files indicates that no offsite investigation has been conducted to determine the three dimensional extent of soil and groundwater contamination downgradient of your site. Consequently, ACEH requests that you prepare a work plan to define the vertical and horizontal extent of contamination in soil and groundwater and determine the extent of the dissolved petroleum hydrocarbon contamination immediately down gradient of your site. Lastly, groundwater monitoring is no longer being conducted at your site. Therefore, ACEH request that you re-instate a groundwater monitoring program according to the schedule outlined below.

Based on ACEH staff review of the case file, we request that you address the following technical comments and prepare a work plan detailing work to be performed, and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Preferential Pathway Study**

   The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. Of particular concern is the identification of abandoned wells and improperly-destroyed wells that can act as vertical conduits to deeper water bearing zones, pumping wells in the vicinity of your site, and manmade conduits for shallow contamination migration.

   We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for horizontal and vertical

migration that may be present in the vicinity of the site. Discuss your analysis and interpretation of the results of the preferential pathway study (including the detailed well survey and utility survey) and report your results in the Preferential Pathway Study requested below. Include an evaluation of the probability of the dissolved phase and NAPL plumes for all constituents of concern encountering preferential pathways and conduits that could spread the contamination, particularly in the vertical direction to deeper drinking water aquifers. The results of your study shall contain all information required by 23 CCR, Section 2654(b).

a) **Utility Survey**

An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Submittal of map(s) and cross-sections showing the location and depth of all utility lines and trenches within and near the site and plume area(s) is required as part of your study.

b) **Well Survey**

The preferential pathway study shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, destroyed (sealed with concrete), abandoned (improperly destroyed); and dewatering, drainage, and cathodic protection wells) within a 1/2-mile radius of the subject site. Submittal of map(s) showing the location of all wells identified in your study, and the use of tables to report the data collected as part of your survey are required. Please refer to the Regional Board's guidance for identification, location, and evaluation of potential deep well conduits when conducting your preferential pathway study.

2. **Offsite Soil and Groundwater Contamination Investigation.** Results of previous investigative work performed at the site have been insufficient to adequately characterize the extent of soil and groundwater contamination downgradient of your site. Based on the concentrations of TPH and TPH constituents detected in the soil and groundwater, additional investigation is required to evaluate the extent of soil and groundwater contamination immediately downgradient of the site.

ACEH recommend that your investigation incorporate expedited site assessment techniques to collect soil samples and depth-discrete groundwater samples prior to the installation of groundwater monitoring wells. Expedited site assessment tools and methods are a scientifically valid and cost-effective approach to fully define the three-dimensional extent of soil and groundwater contamination. Technical protocol for expedited site assessments are provided in the U.S. Environmental Protection Agency's "Expedited Site Assessment tools for Underground Storage Tanks: A Guide for Regulators," (EPA 510-B-97-001), dated March 1997. Therefore, we recommend that you utilize direct push technology to collect soil samples and depth-discrete groundwater samples. Sampling locations should be positioned to accurately assess the extent of soil and groundwater contamination. Other options for additional investigation may be appropriate to define contamination at your site. Please submit a detailed Work Plan presenting your proposal to fully characterize the lateral and vertical extent of soil and groundwater contamination. The Work Plan should be prepared by a qualified professional and must fully describe the proposed scope and methods for the soil and groundwater investigation.

3. **Contamination Plume Delineation.**

The purpose of contaminant plume delineation is to determine the three-dimensional extent of contamination (MTBE, petroleum products, and associated blending compounds and additives) in soil and groundwater from the unauthorized release at your site. The three-dimensional extent of contamination in soil and groundwater downgradient of your site is undefined. The results of groundwater monitoring indicate the presence of high levels of dissolved MTBE and other petroleum products at your site. Dissolved phase petroleum hydrocarbons and gasoline additives were detected in groundwater at concentrations of up 4,100 µg/L TPHg and 17,000 µg/L MtBE.

MTBE is highly soluble and very mobile in groundwater and is not readily biodegradable. Conventional monitoring well networks currently installed at fuel leak sites are generally insufficient to properly locate and define the extent of MTBE plumes. MTBE plumes can be long, narrow, and erratic (meandering). Movement of MTBE plumes, as with other dissolved contaminants, is primarily controlled by groundwater flowlines. These flowlines can be dramatically affected by discontinuities and can drop vertically in certain parts of groundwater basins, such as recharge zones, cascade zones, and near pumping wells. In addition, the plumes can appear as discontinuous slugs particularly for those releases that occurred during the use of MTBE as a wintertime oxygenate (the period 1991 to 1995 in northern California). Thus, the positioning of current monitoring well networks can miss the MTBE plume core, and the monitoring well's design can incorrectly reflect the severity of the release. Therefore, we request that you perform a detailed, expedited site assessment using depth discrete sampling techniques on borings installed along transects to define and quantify the full three-dimensional extent of MTBE, Total Petroleum Hydrocarbons, Benzene, and other contamination in groundwater.

Discuss your proposal for performing this work in the work plan requested below. Report the results of your investigation in the Soil and Water Investigation (Results of Expedited Site Assessment) Report requested below.

Please note, we request that you immediately pursue any off-site access agreements that you may need to complete your investigation activities. Following submittal of your work plan, we will mail a letter to owners of the neighboring properties where you propose to perform investigation activities.

4. **Soil Sampling and Analysis.** All soils from the soil borings are to be examined for staining and hydrocarbon odor and screened using a photo-ionizing detector (PID). Soil samples are to be collected from any interval where staining, odors, changes in lithology or elevated PID readings are observed. If no staining, odor, or elevated PID readings are observed, soil sample are to be collected from each boring at the capillary fringe, immediately above the zone where groundwater is first encountered and at the total depth of the boring. All soil samples collected during the investigation are to be analyzed for TPHg and TPHd by EPA Method 8015M or 8260, BTEX, EDB, EDC, MtBE, TAME, ETBE, DIPE, TBA and EtOH by EPA Method 8260 and total lead. Please present the results from soil sampling in the Soil and Groundwater Investigation Report requested below.

5. **Monitoring Well Rehabilitation and Redevelopment.** In October 2000 groundwater monitoring was discontinued without consent of ACEH. Therefore, we request that you

reinstate groundwater monitoring at your site, beginning with the fourth quarter of 2006. However, prior to implementation of the groundwater monitoring program at your site ACEH requests that all onsite monitoring wells be rehabilitated and/or redeveloped; thus allowing the collection of a representative sample of formation groundwater. During well redevelopment, water quality parameter such as temperature, pH, conductivity and turbidity should be recorded after each well volume removed. Note that well redevelopment may require additional well volumes be removed to assure that water quality parameters are satisfied. Please present the results of the well redevelopment and rehabilitation activities in the 4th Quarter 2006 Groundwater Monitoring Report requested below.

6. **Groundwater Sampling and Analysis.** The groundwater samples collected during the investigation and after the monitoring well redevelopment are to be analyzed for TPHg and TPHd by EPA Method 8015M or 8260, BTEX, EDB, EDC, MtBE, TAME, ETBE, DIPE, TBA and EtOH by EPA Method 8260. Please present the results from groundwater sampling in the Soil and Groundwater Investigation Report requested below.

7. **Geotracker EDF Submittals** - A review of the case file and the State Water Resources Control Board's (SWRCB) Geotracker website indicate that electronic copies of analytical data have not been submitted for your site. Pursuant to CCR Sections 2729 and 2729.1, beginning September 1, 2001, all analytical data, including monitoring well samples, submitted in a report to a regulatory agency as part of the LUFT program, must be transmitted electronically to the SWRCB Geotracker website via the internet. Additionally, beginning January 1, 2002, all permanent monitoring points utilized to collected groundwater samples (i.e. monitoring wells) and submitted in a report to a regulatory agency, must be surveyed (top of casing) to mean sea level and latitude and longitude accurate to within 1-meter accuracy, using NAD 83, and transmitted electronically to the SWRCB Geotracker website. Beginning July 1, 2005, electronic submittal of a complete copy of all reports is required in Geotracker (in PDF format). In order to remain in regulatory compliance, please upload all analytical data (collected on or after September 1, 2001), to the SWRCB's Geotracker database website in accordance with the above-cited regulation. Please perform the electronic submittals for applicable data and submit verification to this Agency by December 30, 2006.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **December 30, 2006** – Work Plan for Soil and Groundwater Investigation and Preferential Pathway Study
- **January 30, 2007** – 4th Quarter 2006 Groundwater Monitoring Report
- **February 30, 2007** – Soil and Groundwater Investigation Report
- **March 30, 2007** – 1st Quarter 2007 Groundwater Monitoring Report
- **June 30, 2007** – 2nd Quarter 2007 Groundwater Monitoring Report
- **September 30, 2007** – 3nd Quarter 2007 Groundwater Monitoring Report
- **December 30, 2007** – 4th Quarter 2007 Groundwater Monitoring Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Should you have any questions, do not hesitate to call me at (510) 383-1767.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Robert Kitay
Aqua Science Engineers Inc.
208 W. El Pintado Road, Suite C
Danville, CA 94526

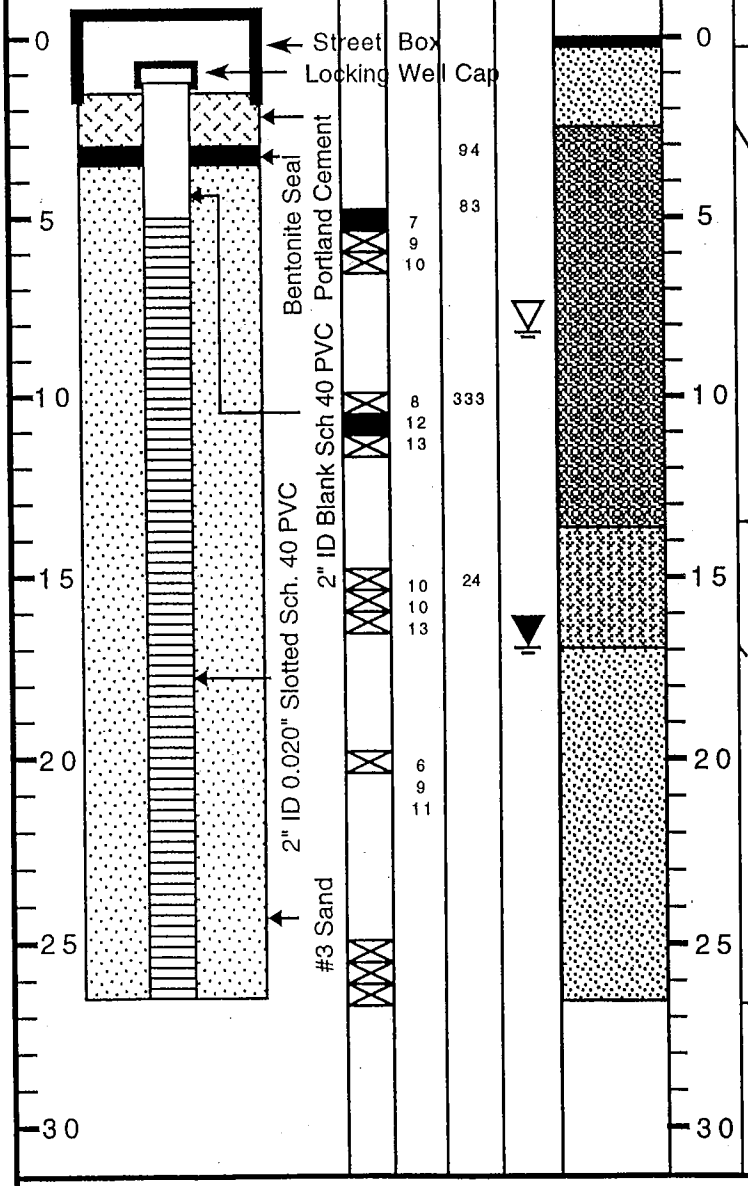
Donna Drogos, ACEH
Steven Plunkett, ACEH
File

ATTACHMENT B

Boring and Well Logs

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		MONITORING WELL: MW-1
Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: West Hazmat Drilling	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert Kitay	Date Drilled: September 24, 1999	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 16.5'	Total Depth of Well Completed: 26.5'
Static Depth of Water in Well: 8.35'	Well Screen Type and Diameter: 0.020" slotted, 2" sch. PVC
Total Depth of Boring: 26.5'	Well Screen Slot Size: 0.020"
	Type and Size of Soil Sampler: 2.0" I.D. Split Barrell



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Asphalt

Silty SAND (SM); yellow brown; medium dense; damp; 60% fine sand; 35% silt; 5% subrounded gravel to 1" diameter; non-plastic; medium estimated K; no odor

Clayey SILT (MH); black; medium stiff; damp; 85% silt; 15% clay; medium plasticity; low estimated K; moderate hydrocarbon odor

Sandy SILT (ML); yellow brown; medium stiff; moist; 50% silt; 35% fine to medium sand; 15% clay; medium plasticity; low estimated K; no odor
wet at 16.5'

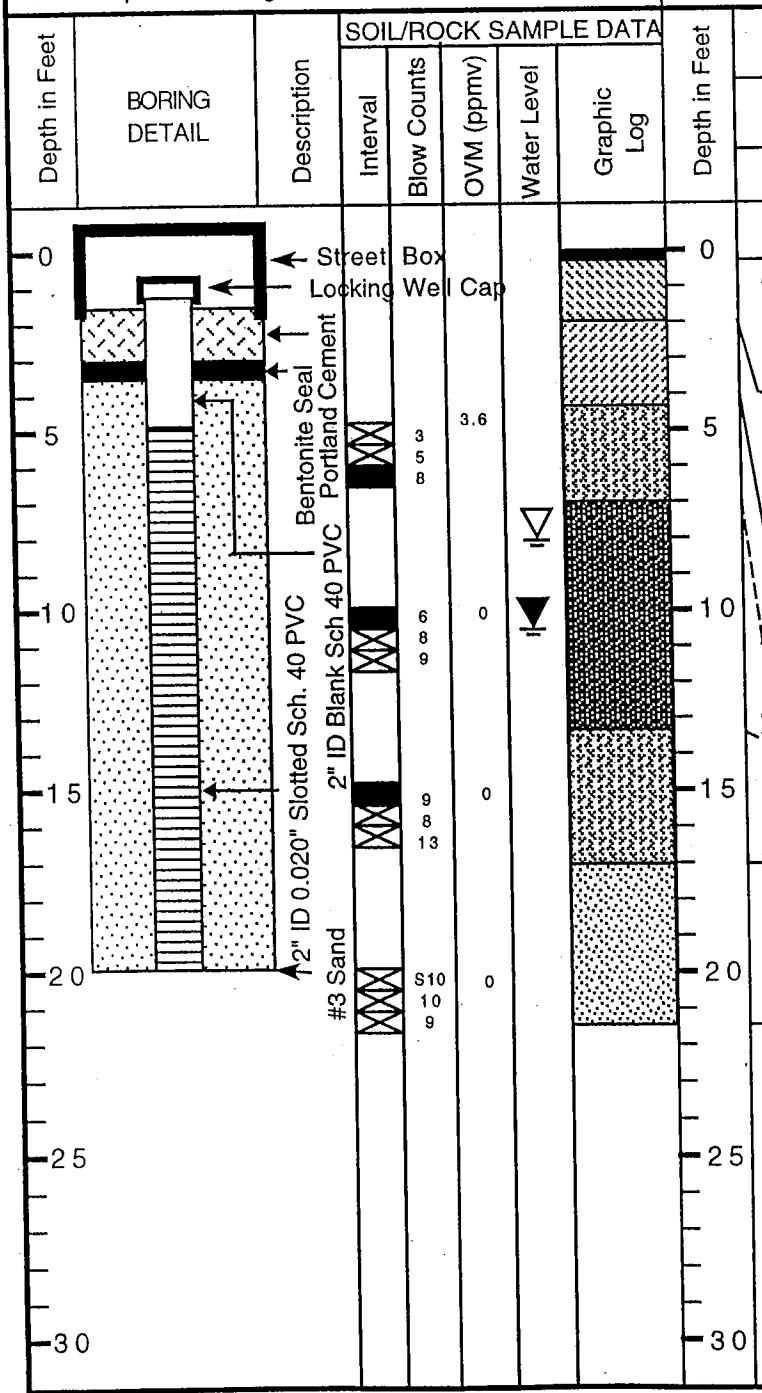
Silty SAND (SM); gray; medium dense; wet; 90% fine to medium sand; 10% silt; non-plastic; high estimated K; no odor

End of boring at 26.5'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		MONITORING WELL: MW-2
Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: West Hazmat Drilling	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert Kitay	Date Drilled: September 24, 1999	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 10.5'	Total Depth of Well Completed: 20.0'
Static Depth of Water in Well: 7.87'	Well Screen Type and Diameter: 0.020" slotted, 2" sch. PVC
Total Depth of Boring: 21.5'	Well Screen Slot Size: 0.020"
	Type and Size of Soil Sampler: 2.0" I.D. Split Barrell



DESCRIPTION OF LITHOLOGY
standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
Asphalt
Gravelly SAND (SM); green; loose; damp; 75% fine to medium sand; 15% subrounded to rounded gravel to 0.5" diameter; 10% silt; non-plastic; high estimated K; slight gasoline-like odor
Sandy GRAVEL (GW); yellow brown; medium dense; damp; 55% subrounded to rounded gravel to 0.6" diameter; 35% fine to medium sand; 10% silt; non-plastic; high estimated K; slight hydrocarbon odor
Sandy SILT (ML); black; medium stiff; damp; 65% silt; 20% fine sand; 15% clay; medium plasticity; low estimated K; slight hydrocarbon odor
Silty CLAY (CH); brown; stiff; damp; 90% clay; 10% silt; high plasticity; very low estimated K; no odor
wet at 10.5'
Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine to medium sand; 15% clay; medium plasticity; low estimated K; no odor
Silty SAND (SM); yellow brown; medium dense; wet; 90% sand; 10% silt; non-plastic; high estimated K; no odor
End of boring at 21.5'

AQUA SCIENCE ENGINEERS, INC.

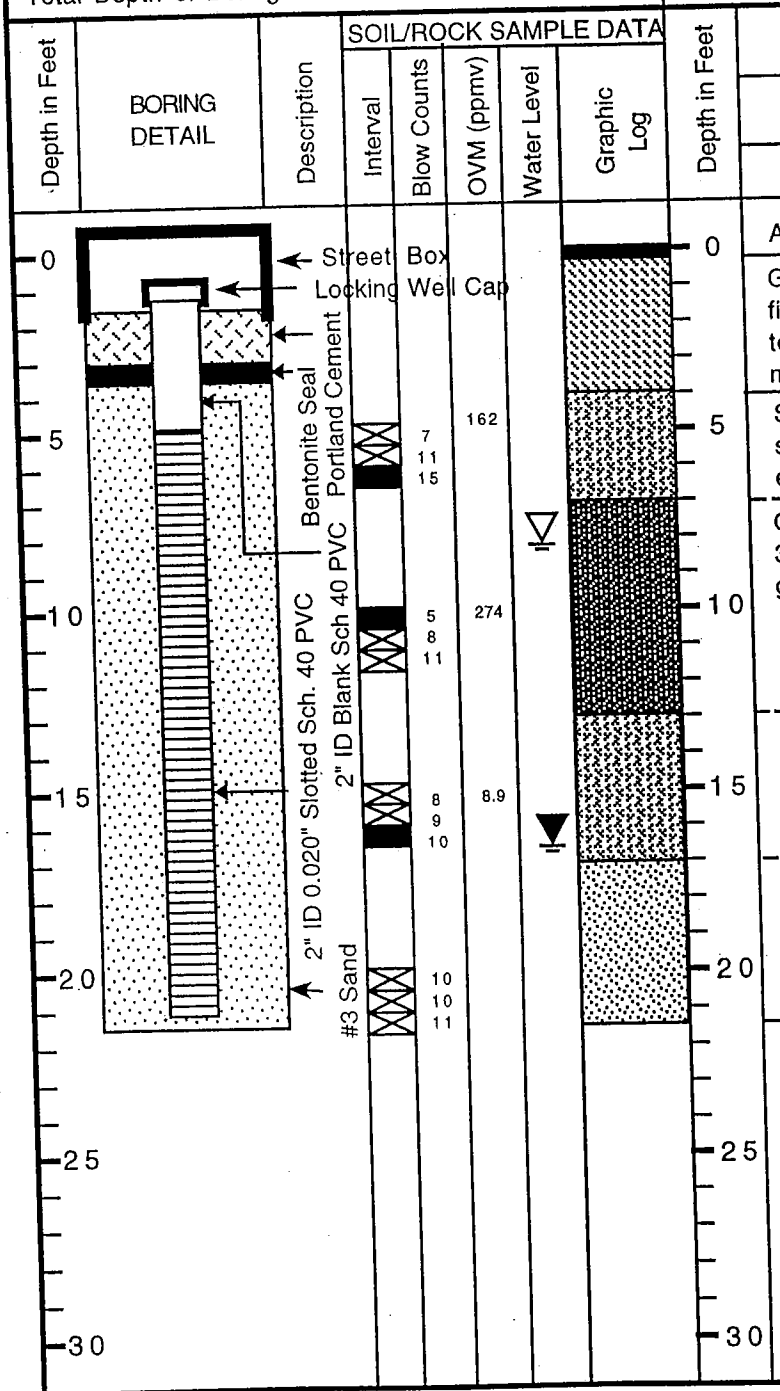
SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

MONITORING WELL: MW-3

Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: West Hazmat Drilling	Type of Rig: Hollow-Stem Auger	Size of Drill: 8.0" Diameter
Logged By: Robert Kitay	Date Drilled: September 24, 1999	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 16.5'	Total Depth of Well Completed: 21.0'
Static Depth of Water in Well: 7.90'	Well Screen Type and Diameter: 0.020" slotted, 2" sch. PVC
Total Depth of Boring: 21.5'	Well Screen Slot Size: 0.020"
	Type and Size of Soil Sampler: 2.0" I.D. Split Barrell



DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
Asphalt
Gravelly SAND (SM); yellow brown; loose; damp; 60% fine to medium sand; 30% subrounded to rounded gravel to 0.5" diameter; 10% silt; non-plastic; high estimated K moderate gasoline-like odor
Sandy SILT (ML); olive black; medium stiff; damp; 65% silt; 20% fine sand; 15% clay; medium plasticity; low estimated K; moderate gasoline-like odor
Clayey SILT (MH); yellow brown; stiff; damp; 70% silt; 30% clay; high plasticity; very low estimated K; strong gasoline-like odor
Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine to medium sand; 15% clay; medium plasticity; low estimated K; no odor
Silty SAND (SP); yellow brown; medium dense; wet; 90% fine to medium sand; 10% silt; non-plastic; high estimated K; no odor
End of boring at 21.5'

AQUA SCIENCE ENGINEERS, INC.

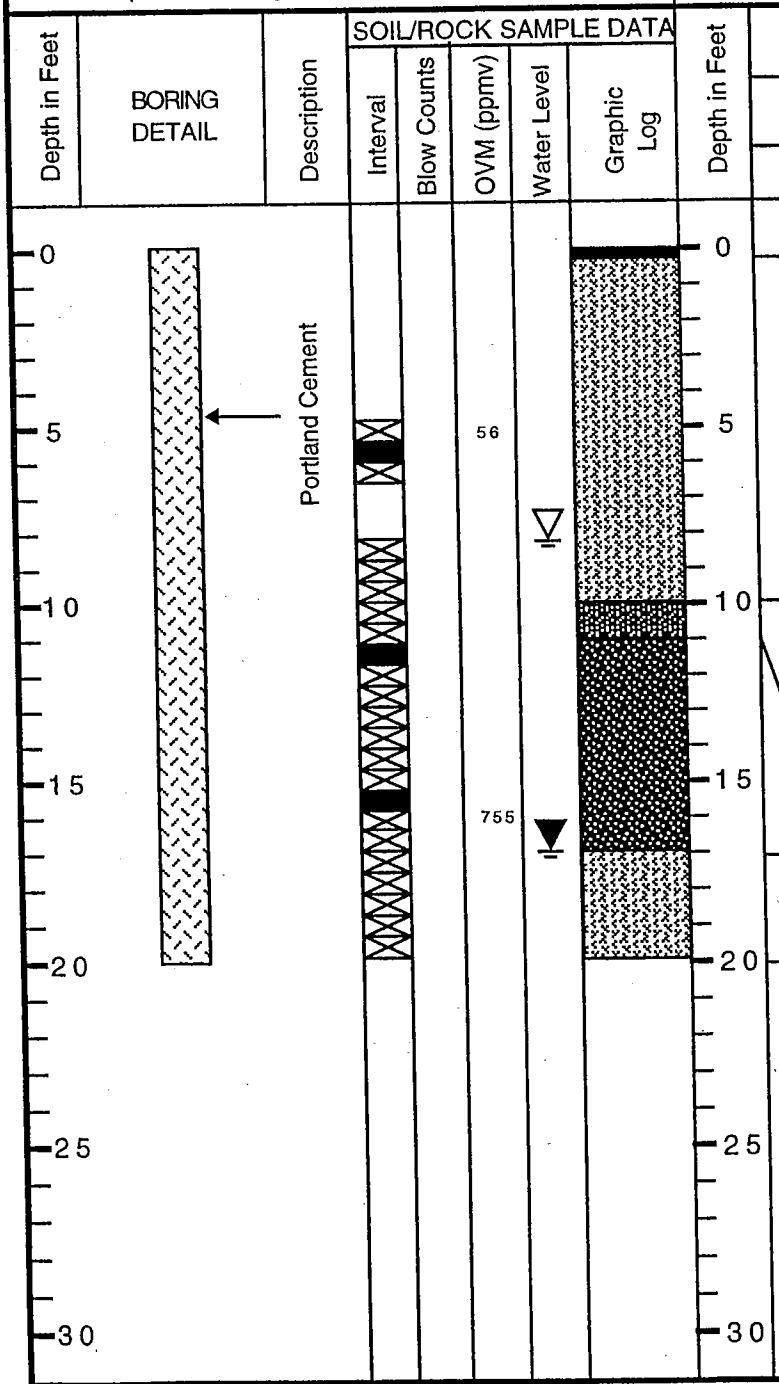
SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-A

Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: Gregg Drilling	Type of Rig: Geoprobe	Size of Drill: 2.0" Diameter
Logged By: Robert E. Kitay, R.G.	Date Drilled: April 30, 2002	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 17'	Total Depth of Well Completed: NA
Static Depth of Water in Well: 8'	Well Screen Type and Diameter: NA
Total Depth of Boring: 20.0'	Well Screen Slot Size: NA
	Type and Size of Soil Sampler: 2.0" Macro-core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Asphalt

Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 40% fine sand; non-plastic; low estimated K; no odor

Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; no odor

Silty CLAY (CH); black; stiff; damp; 80% clay; 20% silt; high plasticity; very low estimated K; no odor

Sandy SILT (ML); yellow brown; medium stiff; moist; 75% silt; 25% fine to medium sand; non-plastic; low estimated K; no odor

End of boring at 20.0'

AQUA SCIENCE ENGINEERS, INC.

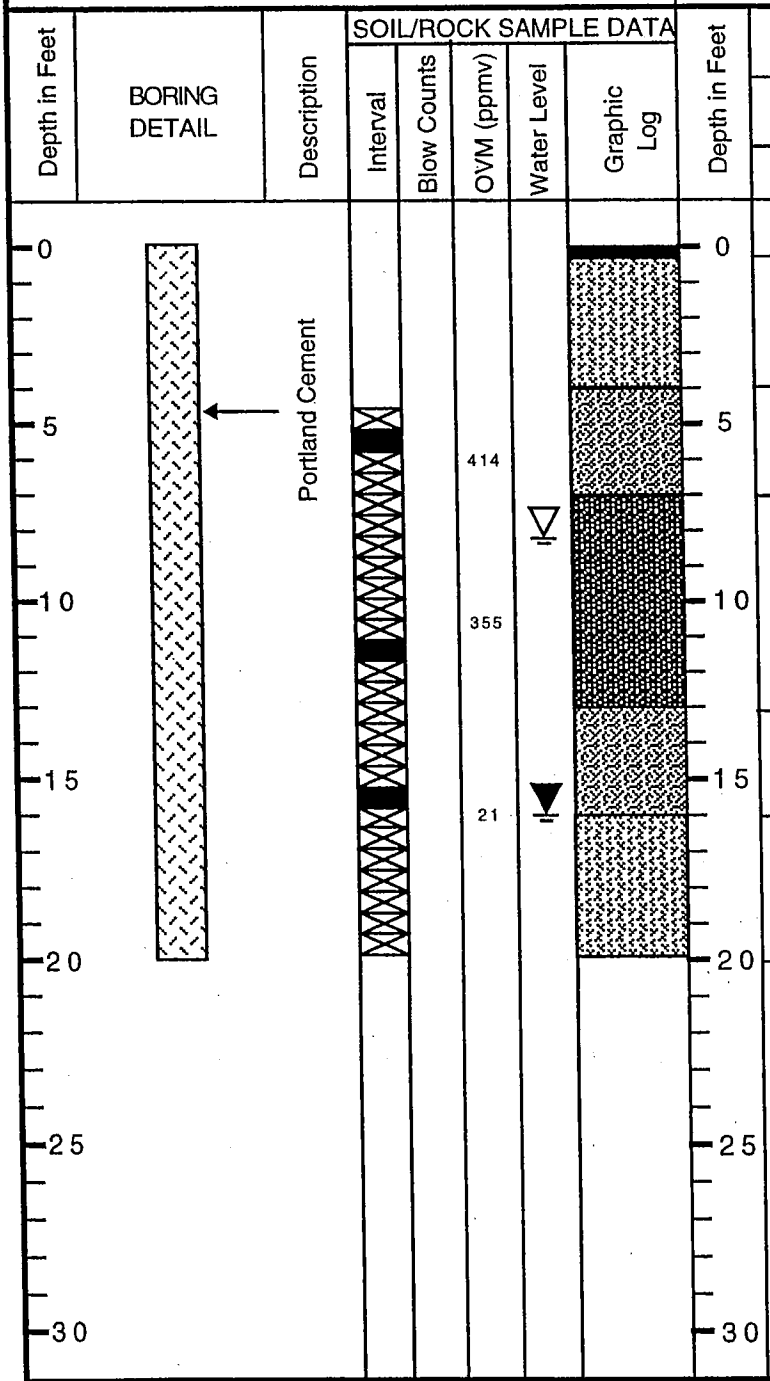
SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS

BORING: BH-B

Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: Gregg Drilling	Type of Rig: Geoprobe	Size of Drill: 2.0" Diameter
Logged By: Robert E. Kitay, R.G.	Date Drilled: April 30, 2002	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA

Depth of Water First Encountered: 16'	Total Depth of Well Completed: NA
Static Depth of Water in Well: 8'	Well Screen Type and Diameter: NA
Total Depth of Boring: 20.0'	Well Screen Slot Size: NA
	Type and Size of Soil Sampler: 2.0" Macro-core



DESCRIPTION OF LITHOLOGY

standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.

Asphalt

Silty SAND (SM); yellow brown; loose; dry; 70% fine sand; 30% silt; non-plastic; low estimated K; no odor

Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 40% fine sand; non-plastic; low estimated K; moderate hc odor

Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; strong hc odor

Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine sand, 15% clay; medium plasticity; low estimated K; strong hc odor

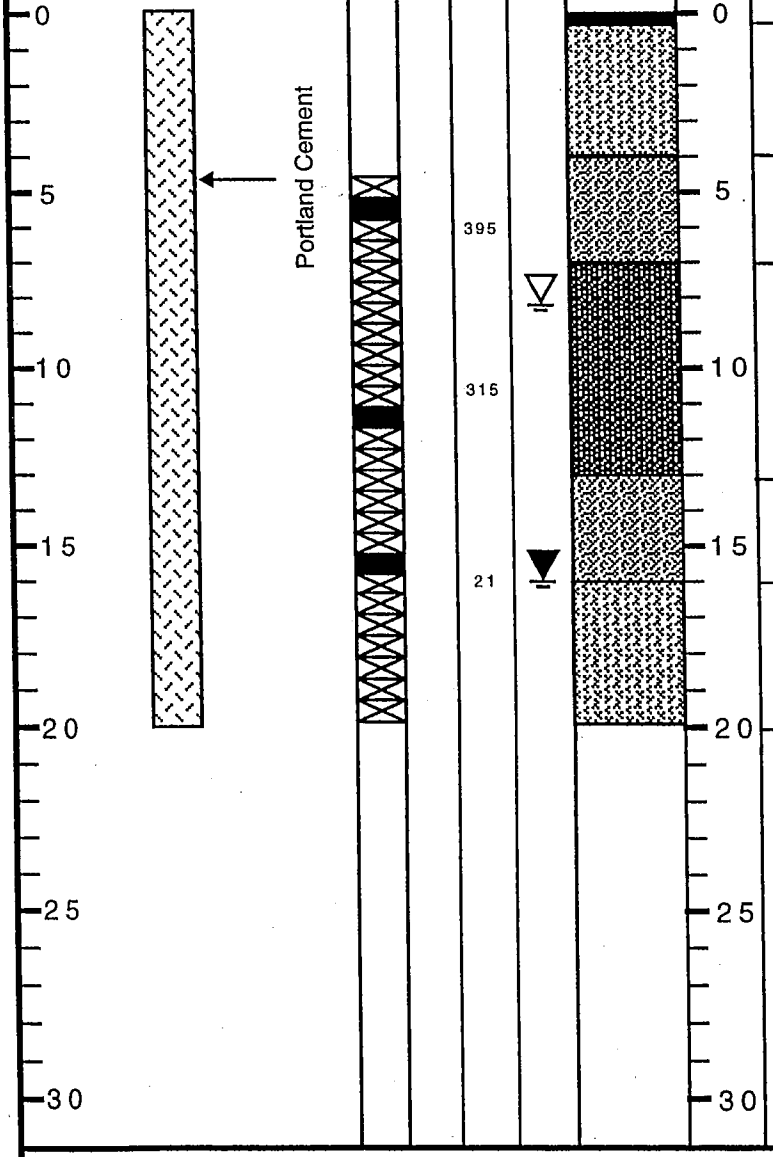
Silty SAND (SM); yellow brown; medium dense; wet; 80% fine sand; 20% silt; non-plastic; medium estimated K; strong hc odor

End of boring at 20.0'

AQUA SCIENCE ENGINEERS, INC.

SOIL BORING LOG AND MONITORING WELL COMPLETION DETAILS		BORING: BH-C
Project Name: Olympic Station	Project Location: 1436 Grant Ave., San Lorenzo, CA	Page 1 of 1
Driller: Gregg Drilling	Type of Rig: Geoprobe	Size of Drill: 2.0" Diameter
Logged By: Robert E. Kitay, R.G.	Date Drilled: April 30, 2002	Checked By: Robert E. Kitay, R.G.

WATER AND WELL DATA	
Depth of Water First Encountered: 16'	Total Depth of Well Completed: NA
Static Depth of Water in Well: 8'	Well Screen Type and Diameter: NA
Total Depth of Boring: 20.0'	Well Screen Slot Size: NA
	Type and Size of Soil Sampler: 2.0" Macro-core



Depth in Feet	DESCRIPTION OF LITHOLOGY standard classification, texture, relative moisture, density, stiffness, odor-staining, USCS designation.
0	Asphalt
	Silty SAND (SM); yellow brown; loose; dry; 70% fine sand; 30% silt; non-plastic; low estimated K; no odor
5	Sandy SILT (ML); yellow brown; soft; dry; 60% silt; 30% fine sand; 10% clay; low plasticity; low estimated K; moderate hc odor
10	Clayey SILT (MH); brown; medium stiff; damp; 70% silt; 20% clay; 10% fine sand; high plasticity; very low estimated K; strong hc odor
15	Sandy SILT (ML); yellow brown; medium stiff; damp; 60% silt; 25% fine sand, 15% clay; medium plasticity; low estimated K; strong hc odor
	Silty SAND (SM); yellow brown; medium dense; wet; 80% fine sand; 20% silt; non-plastic; medium estimated K; strong hc odor
20	End of boring at 20.0'
25	
30	

AQUA SCIENCE ENGINEERS, INC.

ATTACHMENT C

Cambria's Standard Operating Procedures

CAMBRIA

STANDARD FIELD PROCEDURES FOR SOIL BORING AND MONITORING WELL INSTALLATION

This document presents standard field methods for drilling and sampling soil borings and installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

SOIL BORINGS

Objectives

Soil samples are collected to characterize subsurface lithology, assess whether the soils exhibit obvious hydrocarbon or other compound vapor or staining, and to collect samples for analysis at a State-certified laboratory. All borings are logged using the Unified Soil Classification System by a trained geologist working under the supervision of a California Professional Geologist (PG).

Soil Boring and Sampling

Soil borings are typically drilled using hollow-stem augers or direct-push technologies such as the Geoprobe®. Soil samples are collected at least every five ft to characterize the subsurface sediments and for possible chemical analysis. Additional soil samples are collected near the water table and at lithologic changes. Samples are collected using lined split-barrel or equivalent samplers driven into undisturbed sediments at the bottom of the borehole.

Drilling and sampling equipment is steam-cleaned prior to drilling and between borings to prevent cross-contamination. Sampling equipment is washed between samples with trisodium phosphate or an equivalent EPA-approved detergent.

Sample Analysis

Sampling tubes chosen for analysis are trimmed of excess soil and capped with Teflon tape and plastic end caps. Soil samples are labeled and stored at or below 4° C on either crushed or dry ice, depending upon local regulations. Samples are transported under chain-of-custody to a State-certified analytic laboratory.

Field Screening

One of the remaining tubes is partially emptied leaving about one-third of the soil in the tube. The tube is capped with plastic end caps and set aside to allow hydrocarbons to volatilize from the soil. After ten to fifteen minutes, a portable volatile vapor analyzer measures volatile hydrocarbon vapor concentrations in the tube headspace, extracting the vapor through a slit in the cap. Volatile vapor analyzer measurements are used along with the field observations, odors, stratigraphy and groundwater depth to select soil samples for analysis.

Water Sampling

Water samples, if they are collected from the boring, are either collected using a driven Hydropunch® type sampler or are collected from the open borehole using bailers. The groundwater samples are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Grouting

If the borings are not completed as wells, the borings are filled to the ground surface with cement grout poured or pumped through a tremie pipe.

MONITORING WELL INSTALLATION, DEVELOPMENT AND SAMPLING

Well Construction and Surveying

Groundwater monitoring wells are installed to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two feet above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security.

The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible. This process usually occurs prior to installing the sanitary surface seal to ensure sand pack stabilization. If development occurs after surface seal installation, then development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

Waste Handling and Disposal

Soil cuttings from drilling activities are usually stockpiled onsite and covered by plastic sheeting. At least three individual soil samples are collected from the stockpiles and composited at the analytic laboratory. The composite sample is analyzed for the same constituents analyzed in the borehole samples in addition to any analytes required by the receiving disposal facility. Soil cuttings are transported by licensed waste haulers and disposed in secure, licensed facilities based on the composite analytic results.

Groundwater removed during development and sampling is typically stored onsite in sealed 55-gallon drums. Each drum is labeled with the drum number, date of generation, suspected contents, generator identification and consultant contact. Upon receipt of analytic results, the water is either pumped out using a vacuum truck for transport to a licensed waste treatment/disposal facility or the individual drums are picked up and transported to the waste facility where the drum contents are removed and appropriately disposed.