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TRANSMITTAL

DATE: January 31, 2011

REFERENCE NO.: 240523

PROJECT NAME: 4212 First Street, Pleasanton

TO: Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

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Alameda County
Environmental Health

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QUANTITY	DESCRIPTION
1	Data Review and Subsurface Investigation Work Plan

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐

COMMENTS:
If you have any questions regarding the contents of this document, please call Peter Schaefer at (510) 420-3319.

Copy to: Denis Brown, Shell Oil Products US (electronic copy)
Danielle Stefani, Livermore-Pleasanton Fire Department, 3560 Nevada Street, Pleasanton, CA 94566-6267
Cheryl Dizon, Zone 7 Water Agency, 100 North Canyons Parkway, Livermore, CA 94551
Douglas E. & Mary M. Safreno, 1627 Vineyard Avenue, Pleasanton, CA 94566-6389

Completed by: Peter Schaefer Signed: Peter Schaefer

Filing: **Correspondence File**

Denis L. Brown
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Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Shell Service Station
4212 First Street
Pleasanton, California
SAP Code 135782
Incident No. 98995840
ACEH Case No. RO0000360

Dear Mr. Wickham:

The attached document is provided for your review and comment. Upon information and belief, I declare, under penalty of perjury, that the information contained in the attached document is true and correct.

If you have any questions or concerns, please call me at (707) 865-0251.

Sincerely,

Denis L. Brown
Senior Program Manager

DATA REVIEW AND SUBSURFACE INVESTIGATION WORK PLAN

SHELL-BRANDED SERVICE STATION
4212 FIRST STREET
PLEASANTON, CALIFORNIA

SAP CODE	135782
INCIDENT NO.	98995840
AGENCY NO.	RO0000360

Prepared by:
Conestoga-Rovers & Associates

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JANUARY 31, 2011
REF. NO. 240523 (1)
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EXECUTIVE SUMMARY

- An AS/SVE system has been proposed and pilot tested to address MTBE impacts in groundwater.
- CRA's review of the groundwater remediation pilot test data found that the AS/SVE pilot test data are flawed. The flaws in the data are likely due to high sparging pressure creating a preferential pathway between the sparge well (AS-10) and an adjacent well (MW-4). Subsequently, the pilot test data cannot be used to determine the radius of influence for the AS/SVE system or demonstrate the efficacy of the proposed remediation system. DPE pilot test data indicate DPE may be feasible; however, the monitoring well network used for the pilot test was inadequate for assessing groundwater drawdown and vacuum radius of influence. Additional testing would be required to determine DPE's feasibility.
- CRA also evaluated historical soil and groundwater data to determine if site conditions have been adequately characterized prior to assessing the need for active remediation.
- While soil impacts appear to have been adequately characterized and defined, CRA identified a data gap in the down-gradient definition of groundwater impacts to the north and northeast of the site.
- CRA proposes to install two groundwater monitoring wells to further define the extent of the groundwater plume. The objective of the additional investigation is to determine the down-gradient extent of MTBE in groundwater and ultimately to determine if active remediation is warranted.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) prepared this data analysis and review and subsurface investigation work plan on behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), as recommended in CRA's November 30, 2010 electronic correspondence and approved in Alameda County Environmental Health's (ACEH's) November 30, 2010 electronic correspondence. CRA presents an analysis of the air sparging with soil vapor extraction (AS/SVE) pilot test data submitted in Delta Consultant's (Delta's) June 7, 2010 *2010 Air Sparge Pilot Test Report* and a review of historical soil and groundwater data. Based on these reviews, CRA proposes a subsurface investigation to further define the down-gradient extent of groundwater impact north and northeast of the site prior to assessing the need for active remediation or implementing remedial alternatives.

The subject site is an active Shell-branded Service Station located on the southeastern corner of the First Street and Vineyard Avenue intersection in a mixed residential and commercial area of Pleasanton, California (Figure 1). The site layout includes three current fuel underground storage tanks (USTs), a former fuel UST complex, two fuel dispenser islands, a former waste oil UST, and a station building (Figure 2).

A summary of previous work performed at the site and additional background information is contained in Appendix A.

2.0 ANALYSIS OF PILOT TEST DATA

CRA reviewed Delta's February 12, 2009 *Dual-Phase Extraction Pilot Test Report* and June 7, 2010 *2010 Air Sparge Pilot Test Report* to evaluate the remedial strategy for the subject site. CRA's review found that the AS/SVE pilot test data are flawed. The flaws in the data are likely due to high sparging pressure creating a preferential pathway between the sparge well (AS-10) and an adjacent well (MW-4). Subsequently, the pilot test data cannot be used to determine the radius of influence for the AS/SVE system or demonstrate the efficacy of the proposed remediation system. Dual-phase extraction (DPE) pilot test data indicate DPE may be feasible; however, the monitoring well network used for the pilot test was inadequate for assessing groundwater drawdown and vacuum radius of influence. Additional testing would be required to determine DPE's feasibility. The following sections summarize the conclusions of these reports and further discuss our findings.

2.1 DPE PILOT TEST

The DPE test was initiated on January 5, 2009. Initially, step-drawdown testing of MW-1 and MW-4 occurred, which indicated the aquifer yield was approximately 0.5 gallons per minute (gpm). Hydraulic conductivity was estimated at approximately $3x10^{-5}$ centimeters per second (cm/s), which corresponds with the logged silty soils.

Following the step-drawdown tests, a 5-day DPE test was conducted on well MW-4, which contained the highest concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, and methyl tertiary-butyl ether (MTBE). Wells MW-1 and MW-2 were DPE tested for 4 hours each following the MW-4 test. Following are the primary data for each tested well:

- ***MW-4:*** The applied vacuum to well MW-4 was recorded consistently at >150 inches of water column-gauge (inWC), indicating that the wellhead vacuum exceeded the field instruments upper limit of 150 inWC. The maximum measured flow rate was 75 cubic feet per minute (cfm). The maximum vapor-phase TPHg concentration was 4,990 parts per million by volume (ppmv). The ending vapor-phase TPHg concentration was 3,600 ppmv. Groundwater drawdown was not observed in any monitoring wells while extracting from MW-4. The nearest monitoring well (MW-1) is located approximately 40 feet from well MW-4. Induced vacuum was not observed in the monitoring wells likely due to the distance between the monitoring wells and MW-4.

- ***MW-1:*** The applied vacuum to well MW-1 was recorded consistently at >150 inWC. The maximum measured flow rate was 70 cfm. The maximum vapor-phase TPHg concentration was the initial concentration of 73 ppmv. As with MW-4, groundwater drawdown and induced vacuum were not observed in any monitoring wells while extracting from MW-1.

- ***MW-2:*** The applied vacuum to well MW-2 was recorded consistently at 75 inWC. The maximum measured flow rate was 125 cfm. The maximum vapor-phase TPHg concentration was the final concentration of 120 ppmv. Groundwater drawdown and induced vacuum were not observed in any monitoring wells while extracting from MW-2.

Approximately 287 pounds of TPHg were removed by DPE during testing. The majority of the mass was removed from well MW-4 and via vapor-phase mass removal. Based on the results of the pilot test, the report concluded that groundwater extraction was limited by the impermeable aquifer, and "the soil permeability documented by the

relative success of soil vapor extraction (SVE) suggests air or oxygen sparging may be suitable" for groundwater remediation.

CRA's finding in review of this report is that DPE may be feasible. However, the monitoring well network was inadequate for assessing groundwater drawdown and vacuum radius of influence. Groundwater production was not excessive, which would prohibit drawdown and exposure of saturated soils to SVE. Feasible vapor flow was achieved from each well at a reasonable applied vacuum. However, mass removal was only favorable from well MW-4. Well MW-4 is screened from 37 to 47 feet below grade (fbg), indicating that source material was present in the targeted saturated soils.

The data from wells MW-1 and MW-2 suggest minimal source material in the targeted depth intervals. Well MW-1 is screened from 37.5 to 57.5 fbg, which is almost completely in saturated soils. Well MW-2 is screened from 26 to 46 fbg, which left approximately the top 10 feet of screen above the groundwater table in the vadose zone.

2.2 AIR SPARGE PILOT TEST

Four SVE wells (SVE-1, SVE-2, SVE-3, and SVE-4), one air sparge well (AS-10), and one observation well (OBS-1) were installed in January 2010 to accommodate an air sparge pilot test. Soil samples from wells SVE-1, OBS-1, and AS-10 were submitted for laboratory analysis. TPHg was detected in borings AS-10 between 35 and 50 fbg and OBS-1 at 35 fbg, with a maximum concentration of 350 milligrams per kilogram (mg/kg) in OBS-1 at 35 fbg. Benzene was not detected in any samples. A maximum concentration of 0.62 mg/kg MTBE was detected in AS-10 at 45 fbg. All reported detections were in samples collected at or below groundwater and may be indicative of groundwater conditions rather than soil impacts. Soil samples from the other borings were not submitted for laboratory analysis. However, these soil samples were field-screened with a photo-ionization detector (PID) and the results recorded on the boring logs. According to the PID data on the logs, minimal hydrocarbon vapors were detected only at the bottom (30 fbg) samples from borings SVE-1, SVE-2, and SVE-3. No hydrocarbons were detected by the PID in soil samples from boring SVE-4.

The air sparge pilot test was conducted on January 26, 2010. For the first 120 minutes of the test, approximately 17 pounds per square inch (psi) were applied to AS-10, which allowed approximately 7 cfm of air to be injected into the formation. For the next 120 minutes of the test, approximately 20 psi were applied to AS-10, which allowed an air flow of 10 cfm.

Induced pressure in well MW-4, located approximately 8 feet from AS-10, was measured at approximately 150 inWC until the well cap popped off. The cap was left off for the remainder of the test. Induced pressure was measured in all five monitoring wells, and it was determined that an effective radius of influence was demonstrated. Based on groundwater mounding, the radius of influence was determined to be at least 31 feet. The report concluded that air sparging was feasible based on the data collected. CRA's finding in review of this report is that the data from air sparge testing were inconclusive or more likely demonstrated air sparging was infeasible.

An injection pressure of 31 psi was applied to AS-10 for 25 minutes at the outset of the test. This injection pressure exceeded the soil overburden pressure and could have resulted in soil fracturing. This may be evidenced by the higher induced pressure and eventual popping off of the well cap at MW-4. Furthermore, this cap was left off for the remainder of the test which may have short-circuited flow.

The minimum sparge flow for determining technical feasibility is 10 cfm. This minimum flow was achieved at approximately the maximum applied pressure, taken as 75 percent of the soil overburden pressure or 22 psi. These data suggest air sparging is marginally feasible based on limited sparge flow.

Well MW-1B was used for monitoring induced pressure. This well is screened from 100 to 108 fbg and should not have been affected by air sparging. Induced pressure in this well may be attributed to water level changes. Similarly, the induced pressure measurement in OBS-1 may be attributed to water level changes. Water level monitoring in OBS-1 shows an overall change of approximately 0.20 feet, whereas the maximum induce pressure in OBS-1 was 0.30 inWC. The induced pressure data in wells SVE-3 and SVE-4 appear to be valid.

The maximum water level change (referred to as mounding) of 0.06 feet in OBS-1 was considered indicative of sparge influence. However, as depicted in Graph 2 of the pilot test report, the water level rose 0.15 feet prior to the start of the test. A maximum change of 0.06 feet during testing is negligible and falls within the background water table fluctuation as evidenced by the 0.15 foot rise prior to sparging. The water level data do not indicate influence from air sparging.

No SVE data were collected during the air sparge test. Mass removal and vacuum radius of influence using the new SVE wells is unknown. The hydrocarbon impact to the vadose zone appears to be minimal based on the analytical results and PID readings from soil samples collected from borings SVE-1 through SVE-4, OBS-1, and AS-10. It is

unknown if vapor-phase mass removal is increased by sparge air stripping hydrocarbons from groundwater.

3.0 INVESTIGATION RATIONALE

In addition to reviewing data from the recent pilot tests, CRA believes that it is necessary to evaluate historical soil and groundwater data and confirm that site conditions are adequately characterized prior to assessing the need for active remediation or implementing remedial alternatives. CRA reviewed historical soil and groundwater data and presents an overview below.

3.1 CONSTITUENTS OF CONCERN (COCS)

3.1.1 SOIL

The horizontal extent of petroleum hydrocarbon vadose zone soil impacts (less than 30 fbg) is adequately defined on site below San Francisco Bay Regional Water Quality Control Board's (RWQCB's) environmental screening levels (ESLs) for shallow soil where groundwater is a source of drinking water with commercial land use[1] by soil data from borings SB-2, B-2, MW-2, S-E, SB-4, MW-1 (SB-6), SB-7, S-C, B-5, SB-1, WO-1, WO-2, MW-3, and SB-3. Soil data from borings S-B and B-1 through B-5 provide chemical concentrations in the vicinity of the probable source areas. Detections in saturated soil (greater than 30 fbg) are likely due to impacted groundwater. Historical soil analytical data are presented on Figure 3 and in Tables 1 and 2.

3.1.2 GROUNDWATER

During the August 2010 groundwater monitoring event, groundwater samples contained up to 4,200 micrograms per liter (µg/l) TPHg, 12 µg/l benzene, 3,800 µg/l MTBE, and 1,300 µg/l tertiary-butyl alcohol (TBA), all of which exceed the ESLs for groundwater where groundwater is a potential source of drinking water. It should be noted that the RWQCB guidance advises that "TPH ESLs must be used in conjunction with ESLs for related chemicals (e.g. BTEX, polynuclear aromatic hydrocarbons, oxidizers, etc.)." In this case, benzene, toluene, ethylbenzene, and xylenes (BTEX), and fuel oxygenates would be the appropriate related chemicals. Benzene was detected only

1 *Screening for Environmental Concerns at Site With Contaminated Soil and Groundwater,* California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]

in well MW-1 during the most recent groundwater monitoring event, and the long-term concentration trend is decreasing. TBA is a degradation product of MTBE and is likely to decline when MTBE concentrations diminish. Thus, the primary COC at the site is MTBE.

The down-gradient extent of MTBE in groundwater is defined to the north and northwest by grab groundwater samples from cone penetrometer test (CPT) boring CPT-2 and groundwater samples from wells at the 76 station located at 4191 First Street. It is defined vertically by grab groundwater samples from boring CPT-2 and groundwater samples from well MW-1B. The down-gradient extent of MTBE in groundwater is not defined to the northeast. Historical grab groundwater analytical data are provided in Table 3, and historical groundwater monitoring data are provided in Appendix B. A map showing groundwater chemical concentrations during the third quarter 2010 groundwater monitoring event is provided in Appendix C.

3.2 PROPOSED INVESTIGATION

CRA proposes to install two groundwater monitoring wells to further investigate the down-gradient extent of MTBE in shallow groundwater to the northeast of the site. Historical soil data appear to be adequate to characterize source areas and define the extent of soil impacts.

4.0 WORK TASKS

4.1 PERMITS

CRA will obtain drilling permits from the Alameda County Flood Control and Water Conservation District - Zone 7 Water Agency (Zone 7) and an encroachment permit from the City of Pleasanton.

4.2 HEALTH AND SAFETY PLAN (HASP)

CRA will prepare a HASP to protect site workers. The plan will be kept on site during field activities and will be reviewed and signed by each site worker.

4.3 UTILITY CLEARANCE

CRA will mark the proposed drilling locations, and the locations will be cleared through Underground Service Alert and a private line locator service prior to drilling.

4.4 SUBSURFACE INVESTIGATION

To further investigate the extent of MTBE impact to groundwater, two borings will be drilled using hollow-stem augers and converted to groundwater monitoring wells. Wells MW-5 and MW-6 will be installed down gradient of the site, across Vineyard Avenue (Figure 2).

A CRA geologist will supervise the drilling and describe encountered soils using the Unified Soil Classification System and Munsell Soil Color Charts. After clearing the boring to 5 fbg with an air- or water-knife, soil samples will be collected at 5-foot intervals to in the bottom of well borings MW-5 and MW-6 for soil description. Soil samples will be screened in the field for organic vapors using a PID. CRA will prepare a boring log for each well boring, and PID measurements will be recorded on the boring logs. No soil samples will be retained for laboratory analyses from the well borings, unless we observe elevated PID readings in vadose zone soils.

CRA will perform this work under the supervision of a professional geologist or engineer.

4.5 MONITORING WELL INSTALLATION

Well borings MW-5 and MW-6 will be completed to approximately 40 fbg and will be screened from approximately 5 feet above to 10 feet below first-encountered groundwater. The wells will be constructed using 2-inch-diameter Schedule 40 PVC casing, a filter pack that will be placed from the bottom of the well screen up to 2 feet above the top of the well screen, followed by a 1-foot-thick bentonite seal, and cement grout to grade. Actual well construction details will be based on soil types and field conditions encountered during drilling. The wells will be secured with a locking cap under a traffic-rated well box.

4.6 WELL DEVELOPMENT AND SAMPLING

Upon waiting at least 72 hours after well installations, Blaine Tech Services, Inc. (Blaine) of San Jose, California will develop the new groundwater monitoring wells. At least 72 hours after well development, Blaine will sample the site's groundwater monitoring wells according to the existing sampling schedule and chemical analysis protocol.

4.7 CHEMICAL ANALYSES

The groundwater samples from wells MW-5 and MW-6 will be analyzed for TPHg, BTEX, and fuel oxygenates using EPA Method 8260B. Groundwater samples from the existing wells will be analyzed per the existing protocol.

4.8 WELLHEAD SURVEY

A licensed surveyor will survey the wellhead elevations relative to mean sea level and the wells' latitudes and longitudes.

4.9 REPORT PREPARATION

Following the receipt of analytical results from the laboratory, CRA will prepare a written report which will include field procedures, laboratory results, and boring logs.

5.0 SCHEDULE

CRA will begin work upon receiving ACEH's written approval of this work plan and the appropriate permits from Zone 7 and the City of Pleasanton.

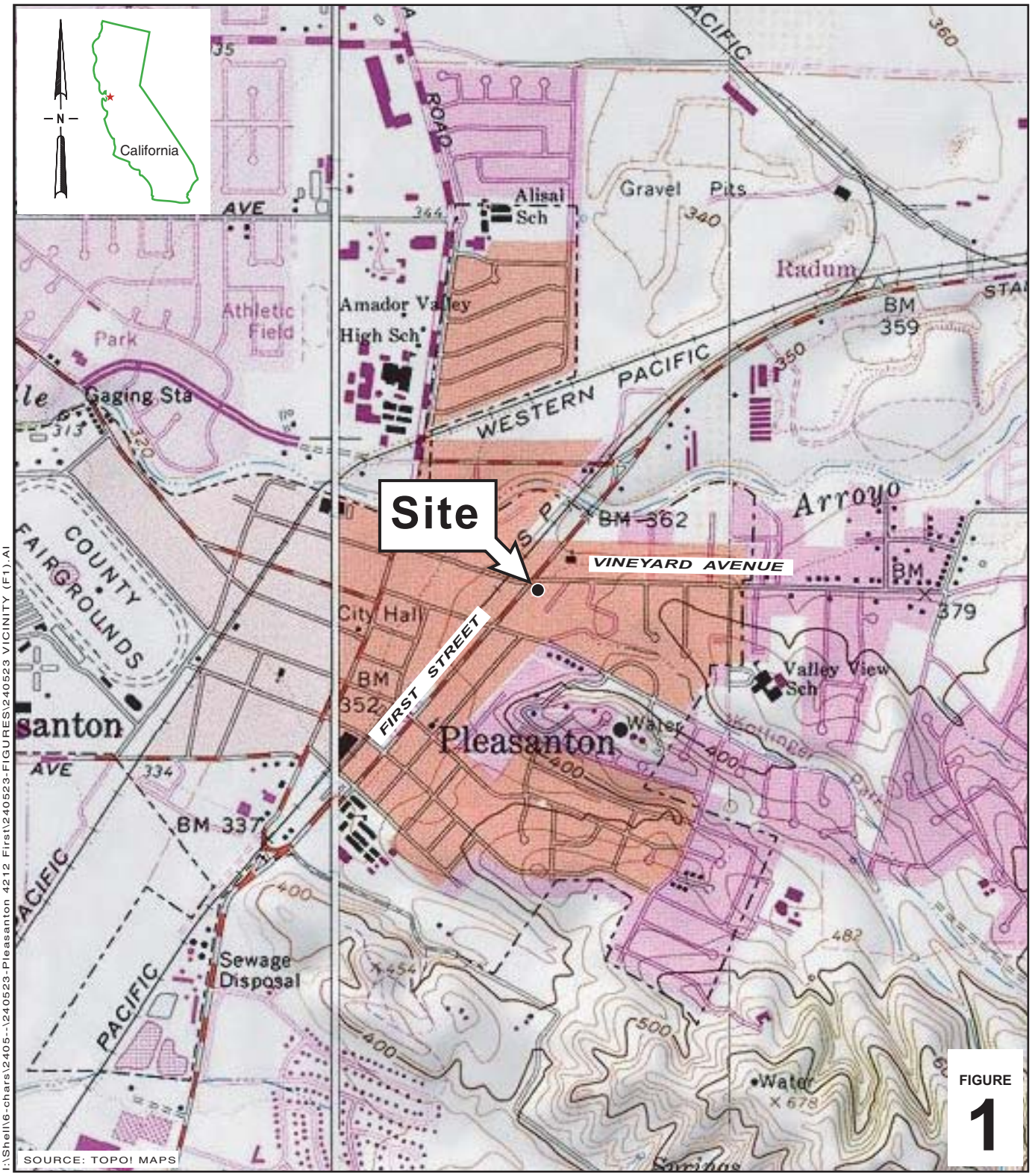
All of Which is Respectfully Submitted,
CONESTOGA-ROVERS & ASSOCIATES

Peter Schaefer, CEG, CHG

Dan Lescure, PE

FIGURES

01/18/2011



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0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

FIGURE 1

Shell-branded Service Station

4212 First Street

Pleasanton, California

CONESTOGA-ROVERS & ASSOCIATES

Vicinity Map

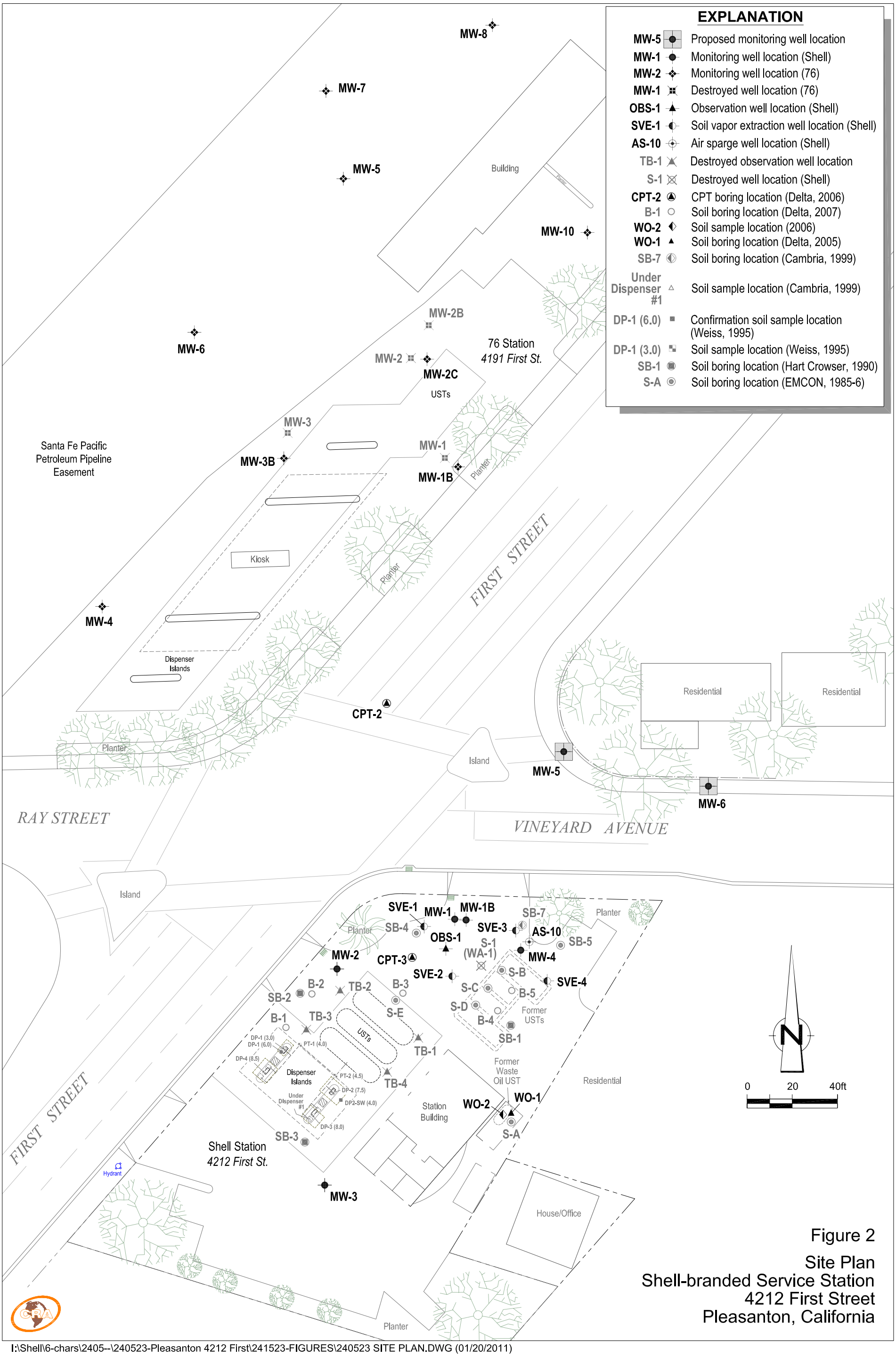

Figure 2

Site Plan
Shell-branded Service Station
4212 First Street
Pleasanton, California

I:\Shell\6-chars\2405--\240523-Pleasanton 4212 First\241523-FIGURES\240523 SITE PLAN.DWG (01/20/2011)

EXPLANATION

- MW-1 — Monitoring well location (Shell)
- OBS-1 — Observation well location (Shell)
- SVE-1 — Soil vapor extraction well location (Shell)
- AS-10 — Air sparge well location (Shell)
- TB-1 — Destroyed observation well location
- S-1 — Destroyed well location (Shell)
- CPT-3 — CPT boring location (Delta, 2006)
- B-1 — Soil boring location (Delta, 2007)
- WO-2 — Soil sample location (2006)
- WO-1 — Soil boring location (Delta, 2005)
- SB-7 — Soil boring location (Cambria, 1999)
- Under Dispenser #1 — Soil sample location (Cambria, 1999)
- DP-1 (6.0) — Confirmation soil sample location (Weiss, 1995)
- DP-1 (3.0) — Soil sample location (Weiss, 1995)
- SB-1 — Soil boring location (Hart Crowser, 1990)
- S-A — Soil boring location (EMCON, 1985-6)

ID	Depth	TPHg	Benzene	MTBE
DP-1	3	1.3	<0.0050	NA

Notes:
Soil sample ID, date, depth in feet below grade, and concentrations in milligrams per kilogram
TPHg = Total petroleum hydrocarbons as gasoline
MTBE = Methyl tertiary-butyl ether
NA = Not analyzed
<X = Not detected at reporting limit X
- Values in **bold** are above the Environmental Screening Level (ESL)

ID	Depth	TPHg	Benzene	MTBE
MW-2-6.3	6.3	<1.0	<0.0050	<0.050
MW-2-16.5	16.5	<1.0	<0.0050	<0.050
MW-2-21.5	21.5	<1.0	<0.0050	<0.050
MW-2-26	26	<1.0	<0.0050	<0.050
MW-2-30.5	30.5	<1.0	<0.0050	<0.050
MW-2-35.0	35	<1.0	<0.0050	<0.050

ID	Depth	TPHg	Benzene	MTBE
B-2@5	5	<0.10	<0.0050	<0.0050
B-2@9.5	9.5	<0.10	<0.0050	<0.0050
B-2@14.5	14.5	<0.10	<0.0050	<0.0050
B-2@19.5	19.5	<0.10	<0.0050	<0.0050
B-2@24.5	24.5	<0.10	<0.0050	**0.11**
B-2@29.5	29.5	0.25	<0.0050	**0.22**
B-2@34.5	34.5	0.32	<0.0050	**0.45**

ID	Depth	TPHg	Benzene	MTBE
SVE-1@30'	30	<0.50	<0.0050	<0.0050

ID	Depth	TPHg	Benzene	MTBE
SB4-15	15	<1.0	<0.0050	NA
SB4-35	35	<1.0	0.023	NA
SB4-50	50	<1.0	0.030	NA

ID	Depth	TPHg	Benzene	MTBE
B-3@5	5	<0.10	<0.0050	<0.0050
B-3@9.5	9.5	<0.10	<0.0050	<0.0050
B-3@14.5	14.5	<0.10	<0.0050	**0.080**
B-3@19.5	19.5	0.11	<0.0050	**0.14**
B-3@24.5	24.5	0.45	<0.0050	**0.083**
B-3@29	29	<0.10	<0.0050	0.016
B-3@34.5	34.5	**710**	**0.096**	<0.025

ID	Depth	TPHg	Benzene	MTBE
SB-6-15.5	15.5	<1.0	<0.0050	<0.025
SB-6-19.5	19.5	<1.0	<0.0050	<0.025
SB-6-25.0	25	<1.0	<0.0050	<0.025
SB-6-30.0	30	<1.0	<0.0050	<0.025
SB-6-35.0	35	<1.0	<0.0050	<0.025
SB-6-40.0	40	<1.0	<0.0050	<0.025
SB-6-45.0	45	<1.0	**0.10**	<0.025

ID	Depth	TPHg	Benzene	MTBE
MW-1B@65	65	<2.5	<0.025	<0.025
MW-1B@69.5	69.5	<2.5	<0.025	<0.025
MW-1B@95	95	<2.5	<0.025	<0.025

ID	Depth	TPHg	Benzene	MTBE
SB-7-15.0	15	<1.0	<0.0050	<0.025
SB-7-19.5	19.5	<1.0	<0.0050	<0.025
SB-7-24.5	24.5	<1.0	<0.0050	<0.025
SB-7-29.3	29.3	<1.0	<0.0050	<0.025
SB-7-34.3	34.3	<1.0	<0.0050	<0.025
SB-7-40.0	40	**83**	<0.0050	<0.025
SB-7-44.5	44.5	<1.0	<0.0050	<0.025
SB-7-59.5	59.5	<1.0	<0.0050	<0.050
SB-7-64.5	64.5	<1.0	<0.0050	<0.050

ID	Depth	TPHg	Benzene	MTBE
SB5-35	35	**820**	**65**	NA
SB5-40	40	<1.0	<0.0050	NA
SB5-50	50	<1.0	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
OBS-1@30'	30	<0.50	<0.0050	<0.0050
OBS-1@35'	35	**350**	<1.0	<1.0
OBS-1@40'	40	<0.50	<0.0050	0.0089

ID	Depth	TPHg	Benzene	MTBE
AS-10@30'	30	<0.50	<0.0050	<0.0050
AS-10@35'	35	**140**	<0.50	<0.50
AS-10@40'	40	<50	<0.50	<0.50
AS-10@45'	45	0.90	<0.0050	**0.62**
AS-10@50'	50	1.4	<0.0050	**0.36**

ID	Depth	TPHg	Benzene	MTBE
MW-4@35'	35	51	<0.025	**0.17**
MW-4@36.5'	36.5	**380**	<0.025	**0.092**
MW-4@39.5'	39.5	6.7	<0.025	**0.038**
MW-4@44.5'	44.5	<2.5	<0.025	**0.59**
MW-4@50'	50	<2.5	<0.025	**0.56**

ID	Depth	TPHg	Benzene	MTBE
S-B	3.5-5	2.0	<0.10	NA
S-B	7-8.5	**460**	<2.0	NA
S-B	10.5-12	**610**	<2.0	NA
S-B	14-15.5	**1,300**	<2.5	NA
S-B	19-20	<2.0	<0.10	NA

ID	Depth	TPHg	Benzene	MTBE
B-5@5	5	<0.10	<0.0050	<0.0050
B-5@10.5	10.5	<0.10	<0.0050	<0.0050
B-5@15.5	15.5	<0.10	<0.0050	<0.0050
B-5@20.5	20.5	<0.10	<0.0050	0.0054
B-5@25.5	25.5	<0.10	<0.0050	<0.0050
B-5@30	30	<0.10	<0.0050	**0.065**
B-5@35	35	<0.50	<0.025	**0.30**

ID	Depth	TPHg	Benzene	MTBE
WA-1	30	**380**	**2.2**	NA
WA-1	35	**290**	**1.8**	NA
WA-1	40	<1.0	<0.050	NA
WA-1	50	<1.0	<0.050	NA

ID	Depth	TPHg	Benzene	MTBE
SB-2	15	<1.0	<0.050	NA
SB-2	30	7.2	<0.050	NA

ID	Depth	TPHg	Benzene	MTBE
S-D	10.5-12	<2.0	<0.10	NA

ID	Depth	TPHg	Benzene	MTBE
S-E	5.5	ND	ND	NA
S-E	10.5	ND	ND	NA
S-E	15.5	ND	ND	NA

ID	Depth	TPHg	Benzene	MTBE
S-C	10.5-12	<2.0	<0.10	NA

ID	Depth	TPHg	Benzene	MTBE
PT-1	4	2.5	0.0080	NA

ID	Depth	TPHg	Benzene	MTBE
PT-2	4.5	<1.0	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
B-1@5	5	<0.10	<0.0050	<0.0050
B-1@9.5	9.5	5.4	<0.0050	<0.0050
B-1@14.5	14.5	0.13	<0.0050	**0.046**
B-1@19.5	19.5	0.57	<0.010	**0.60**
B-1@24.5	24.5	0.92	<0.050	**0.78**
B-1@29.5	29.5	<0.10	<0.0050	**0.059**
B-1@34.5	34.5	<0.10	<0.0050	**0.12**

ID	Depth	TPHg	Benzene	MTBE
B-4@5	5	<0.10	<0.0050	<0.0050
B-4@9.5	9.5	<0.10	<0.0050	<0.0050
B-4@14.5	14.5	<0.10	<0.0050	<0.0050
B-4@20	20	<0.10	<0.0050	**0.040**
B-4@24.5	24.5	<0.10	<0.0050	**0.026**
B-4@29.5	29.5	<0.10	<0.0050	0.0063
B-4@35	35	0.54	<0.025	**0.80**

ID	Depth	TPHg	Benzene	MTBE
SB-1	15	4.2	<0.050	NA
SB-1	35	18	<0.050	NA
SB-1	50	<1.0	<0.050	NA

ID	Depth	TPHg	Benzene	MTBE
DP-4	8.5	<1.0	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
DP-1	6	2.5	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
DP-1	3	1.3	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
Under Dispenser #1	3	<0.50	<0.0050	<0.0050

ID	Depth	TPHg	Benzene	MTBE
DP-2	7.5	<1.0	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
DP2-SW	4	1.7	<0.0050	NA

ID	Depth	TPHg	Benzene	MTBE
DP-3	8	**120**	<0.12	NA

ID	Depth	TPHg	Benzene	MTBE
SB-3	10	<1.0	<0.050	NA
SB-3	30	<1.0	<0.050	NA

ID	Depth	TPHg	Benzene	MTBE
MW-3-5.0	5	<1.0	<0.0050	<0.050
MW-3-10.5	10.5	<1.0	<0.0050	<0.050
MW-3-15.5	15.5	<1.0	<0.0050	<0.050
MW-3-25.5	20.5	<1.0	<0.0050	<0.050
MW-3-25.5	25.5	<1.0	<0.0050	<0.050

ID	Depth	TPHg	Benzene	MTBE
WO-2-14	14	<1.0	<0.0050	0.021

ID	Depth	TPHg	Benzene	MTBE
WO-1@10	10	<1.0	<0.0050	<0.050
WO-1@20	20	<1.0	<0.0050	<0.050
WO-1@30	30	<1.0	<0.0050	<0.050

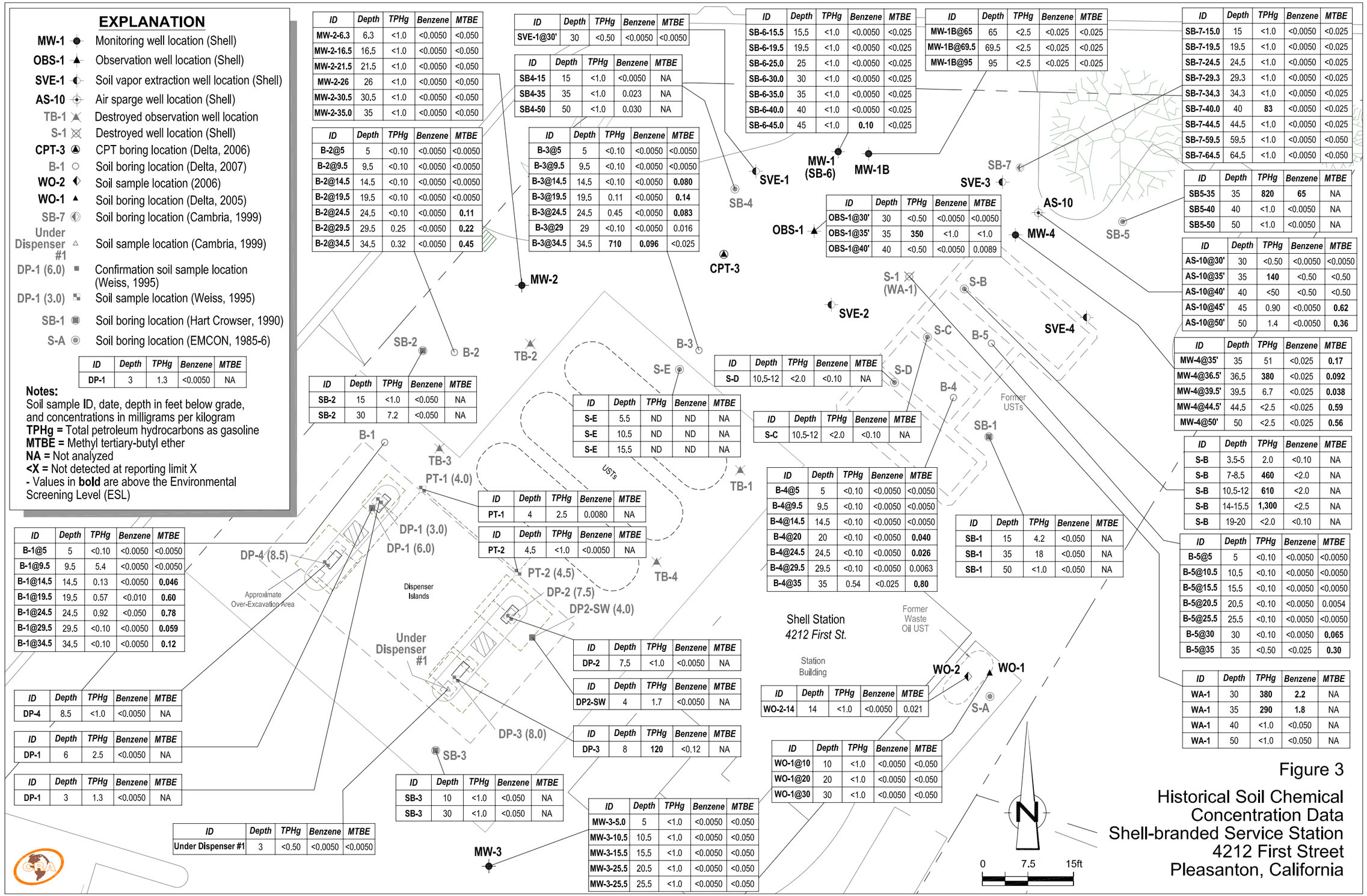

Figure 3

Historical Soil Chemical Concentration Data
Shell-branded Service Station
4212 First Street
Pleasanton, California

I:\Shell\6-chars\2405--\240523-Pleasanton 4212 First\241523-FIGURES\240523 SITE PLAN.DWG (01/24/2011)

TABLES

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*	*PCBs*
S-A	9/24/1985	7-8.5	---	<20	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-B	9/27/1985	3.5-5	---	---	---	2.0	<0.10[a]	<0.10[a]	---	---	<0.40[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-B	9/27/1985	7-8.5	---	---	---	**460**	<2.0[a]	2.0[a]	---	---	32[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-B	9/27/1985	10.5-12	---	---	---	**610**	<2.0[a]	**3.5**[a]	---	---	63[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-B	9/27/1985	14-15.5	---	---	---	**1,300**	<2.5[a]	**9.6**[a]	---	---	260[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-B	9/27/1985	19-20	---	---	---	<2.0	<0.10[a]	<0.10[a]	---	---	<0.40[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-C	9/27/1985	10.5-12	---	---	---	<2.0	<0.10[a]	<0.10[a]	---	---	<0.40[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-D	9/27/1985	10.5-12	---	---	---	<2.0	<0.10[a]	<0.10[a]	---	---	<0.40[a]	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-E	3/1986	5.5	---	---	---	ND	ND	ND	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-E	3/1986	10.5	---	---	---	ND	ND	ND	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
S-E	3/1986	15.5	---	---	---	ND	ND	ND	---	---	ND	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-1	3/5/1990	15	---	---	---	4.2	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-1	3/5/1990	35	---	---	---	18	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-1	3/5/1990	50	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-2	3/5/1990	15	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-2	3/5/1990	30	---	---	---	7.2	<0.050	0.17	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-3	3/5/1990	10	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-3	3/5/1990	30	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WA-1 (S-1)	3/6/1990	30	---	---	---	**380**	**2.2**	2.7	**5.3**	**32**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WA-1 (S-1)	3/6/1990	35	---	---	---	**290**	**1.8**	0.35	0.24	1.5	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WA-1 (S-1)	3/6/1990	40	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WA-1 (S-1)	3/6/1990	50	---	---	---	<1.0	<0.050	<0.10	<0.10	<0.10	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-4-15	7/17/1990	15	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-4-35	7/17/1990	35	---	---	---	<1.0	0.023	0.0071	<0.0050	0.0055	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*
SB-4-50	7/17/1990	50	---	---	---	<1.0	0.030	0.0059	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-5-35	7/17/1990	35	---	---	---	**820**	**65**	**3.7**	**6.5**	**65**	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-5-40	7/17/1990	40	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-5-50	7/17/1990	50	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-1	9/8/1995	3	---	---	---	1.3	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-1	9/11/1995	6	---	---	---	2.5	<0.0050	<0.0050	0.020	0.035	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-2	9/8/1995	7.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-2-SW	9/8/1995	4	---	---	---	1.7	<0.0050	<0.0050	0.0075	0.017	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-3	9/8/1995	8	---	---	---	**120**	<0.12	<0.12	<0.12	<0.12	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
DP-4	9/8/1995	8.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PT-1	9/8/1995	4	---	---	---	2.5	0.0080	<0.0050	0.038	0.19	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
PT-2	9/8/1995	4.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-15.5' (MW-1)	4/9/1999	15.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-19.5' (MW-1)	4/9/1999	19.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-25.0' (MW-1)	4/9/1999	25	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-30.0' (MW-1)	4/9/1999	30	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-35.0' (MW-1)	4/9/1999	35	---	---	---	<1.0	0.0069	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-40.0' (MW-1)	4/9/1999	40	---	---	---	<1.0	<0.0050	0.28	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-6-45.0' (MW-1)	4/9/1999	45	---	---	---	<1.0	**0.10**	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-15.0'	4/7/1999	15	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-19.5'	4/7/1999	19.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-24.5'	4/7/1999	24.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-29.3'	4/7/1999	29.3	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*	*PCBs*
SB-7-34.3'	4/7/1999	34.3	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-40.0'	4/7/1999	40	---	---	---	**83**	<0.0050	0.37	0.26	0.26	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-44.5'	4/7/1999	44.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.025	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-59.5'	4/7/1999	59.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
SB-7-64.5'	4/7/1999	64.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-6.3'	1/18/2000	6.3	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-16.5'	1/18/2000	16.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-21.5'	1/18/2000	21.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-26.0'	1/18/2000	26	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-30.5'	1/18/2000	30.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-2-35.0'	1/18/2000	35	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3-5.0'	1/18/2000	5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3-10.5'	1/18/2000	10.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3-15.5'	1/18/2000	15.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3-20.5'	1/18/2000	20.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-3-25.5'	1/18/2000	25.5	---	---	---	<1.0	<0.0050	<0.0050	<0.0050	<0.010	---	<0.050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WO-1@10	6/10/2005	10	<100	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WO-1@20	6/10/2005	20	<100	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	---	---	---	---	---	---	---	---	---	---	---	---	---	---
WO-1@30	6/10/2005	30	<100	---	<1.0	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	---	---	---	---	---	ND	ND	<0.0050	<0.010	ND	---	---	---	<0.050
WO-2-14	7/20/2006	14	26	---	5.5[b]	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	---	0.021	<0.0050	<0.0050	<0.0050	<0.0050	---	c	---	<0.0050	<0.0050	---	c	<2.5	<0.40	<0.050
MW-1B@65'	8/23/2006	65	---	---	---	<2.5	<0.025	<0.025	<0.025	<0.050	---	<0.025	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1B@69.5'	8/23/2006	69.5	---	---	---	<2.5	<0.025	<0.025	<0.025	<0.050	---	<0.025	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-1B@95'	8/23/2006	95	---	---	---	<2.5	<0.025	<0.025	<0.025	<0.050	---	<0.025	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4@35'	8/24/2006	35	---	---	---	51	<0.025	<0.025	<0.025	<0.050	---	**0.17**	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4@36.5'	8/24/2006	36.5	---	---	---	**380**	<0.025	<0.025	1.2	1.6	---	**0.092**	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4@39.5'	8/24/2006	39.5	---	---	---	6.7	<0.025	<0.025	0.050	0.064	---	**0.038**	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
MW-4@44.5'	8/24/2006	44.5	---	---	---	<2.5	<0.025	<0.025	<0.025	<0.050	---	**0.59**	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*	*PCBs*
MW-4@50'	8/24/2006	50	---	---	---	<2.5	<0.025	<0.025	<0.025	<0.050	---	**0.56**	<0.250	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@5	3/27/2007	5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@9.5	3/29/2007	9.5	---	---	---	5.4	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@14.5	3/29/2007	14.5	---	---	---	0.13d	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.046**	0.068	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@19.5	3/29/2007	19.5	---	---	---	0.57d	<0.010	<0.010	<0.010	<0.010	---	**0.60**	**0.80**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@24.5	3/29/2007	24.5	---	---	---	0.92d	<0.050	<0.050	<0.050	<0.050	---	**0.78**	**0.20**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@29.5	3/29/2007	29.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.059**	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-1@34.5	3/29/2007	34.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.12**	0.033	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@5	3/27/2007	5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@9.5	3/29/2007	9.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@14.5	3/29/2007	14.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@19.5	3/29/2007	19.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	**0.082**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@24.5	3/29/2007	24.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.11**	0.030	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@29	3/29/2007	29	---	---	---	0.25	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.22**	**0.14**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-2@34.5	3/29/2007	34.5	---	---	---	0.32d	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.45**	**0.75**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@5	3/27/2007	5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@9.5	3/28/2007	9.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@14.5	3/28/2007	14.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.080**	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@19.5	3/28/2007	19.5	---	---	---	0.11d	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.14**	0.021	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@24.5	3/28/2007	24.5	---	---	---	0.45	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.083**	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@29	3/28/2007	29	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	0.016	0.073	---	---	---	---	---	---	---	---	---	---	---	---	---
B-3@34.5	3/28/2007	34.5	---	---	---	**710**	**0.096**	<0.05	2.3	**16**	---	<0.025	<5.0	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@5	3/27/2007	5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@9.5	3/28/2007	9.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@14.5	3/28/2007	14.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@20	3/28/2007	20	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.040**	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@24.5	3/28/2007	24.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.026**	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@29.5	3/28/2007	29.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	0.0063	0.071	---	---	---	---	---	---	---	---	---	---	---	---	---
B-4@35	3/28/2007	35	---	---	---	0.54[d]	<0.025	<0.025	<0.025	<0.025	---	**0.80**	**0.63**	---	---	---	---	---	---	---	---	---	---	---	---	---

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*	*PCBs*
B-5@5	3/27/2007	5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@10.5	3/28/2007	10.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@15.5	3/28/2007	15.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@20.5	3/28/2007	20.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	0.0054	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@25.5	3/28/2007	25.5	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.020	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@30	3/28/2007	30	---	---	---	<0.10	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.065**	**0.10**	---	---	---	---	---	---	---	---	---	---	---	---	---
B-5@35	3/28/2007	35	---	---	---	<0.50	<0.025	<0.025	<0.025	<0.025	---	**0.30**	**0.46**	---	---	---	---	---	---	---	---	---	---	---	---	---
Under Dispenser #1	1/22/2009	3	---	---	<9.0	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.050	<0.010	<0.010	<0.010	---	---	---	<0.0050	<0.0050	---	---	---	---	---
AS-10@30'	1/14/2010	30	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
AS-10@35'	1/14/2010	35	---	---	---	**140**	<0.50	<0.50	0.50	0.90	---	<0.50	<5.0	<1.0	<1.0	<1.0	<50	---	---	---	---	---	---	---	---	---
AS-10@40'	1/14/2010	40	---	---	---	<50	<0.50[e]	<0.50[e]	<0.50[e]	<0.50[e]	---	<0.50[e]	<5.0[e]	<1.0[e]	<1.0[e]	<1.0[e]	<50	---	---	---	---	---	---	---	---	---
AS-10@45'	1/14/2010	45	---	---	---	0.90	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.62**	**0.19**	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
AS-10@50'	1/14/2010	50	---	---	---	1.4	<0.0050	<0.0050	<0.0050	<0.0050	---	**0.36[f]**	**0.14**	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
OBS-1@30'	1/13/2010	30	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
OBS-1@35'	1/13/2010	35	---	---	---	**350**	<1.0	<1.0	<1.0	<1.0	---	<1.0	<10	<2.0	<2.0	<2.0	<100	---	---	---	---	---	---	---	---	---
OBS-1@40'	1/13/2010	40	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	0.0089	<0.050	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
SVE-1@30'	1/14/2010	30	---	---	---	<0.50	<0.0050	<0.0050	<0.0050	<0.0050	---	<0.0050	<0.050	<0.010	<0.010	<0.010	<0.50	---	---	---	---	---	---	---	---	---
Shallow Soil (≤10 fbg) ESL[1]:			NA	2,500	83	83	0.044	2.9	3.3	2.3	NA	0.023	0.075	NA	NA	NA	NA	Various	Various	0.0045	0.00033	Various	Various	5.0	NA	0.74
Deep Soil (>10 fbg) ESL[1]:			NA	5,000	83	83	0.044	2.9	3.3	2.3	NA	0.023	0.075	NA	NA	NA	NA	Various	Various	0.0045	0.00033	Various	Various	99	NA	63

Notes:

All results in milligrams per kilogram (mg/kg) unless otherwise indicated.
fbg = Feet below grade
O&G = Oil and grease analyzed by EPA Method 1664 A (Modified)
TPHmo = Total petroleum hydrocarbons as motor oil analyzed by EPA Method 8015 (Modified)
TPHd = Total petroleum hydrocarbons as diesel analyzed by EPA Method 8015 (Modified)
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before July 6, 2006, analyzed by EPA Method 8015
Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B; before July 6, 2006, analyzed by EPA Method 8020 unless otherwise noted

TABLE 1

HISTORICAL SOIL ANALYTICAL DATA - ORGANICS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*O&G*	*TPHmo*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*Xylenes & Ethyl-benzene*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*Ethanol*	*Chlorinated Hydro-carbons*	*VOCs*	1,2-DCA	EDB	*SVOCs*	*PNAs*	*PCP*	*Creosote*	*PCBs*

MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B; before July 6, 2006, analyzed by EPA Method 8020
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
DIPE = Di-isopropyl ether analyzed by EPA Method 8260B
ETBE = Ethyl tertiary-butyl ether analyzed by EPA Method 8260B
TAME = Tertiary-amyl methyl ether analyzed by EPA Method 8260B
Ethanol analyzed by EPA Method 8260B
Chlorinated hydrocarbons analyzed by EPA Method 8260B; see laboratory analytical report for a complete list of specific constituents
VOC = Volatile organic compounds analyzed by EPA Method 8260B; see laboratory analytical report for a complete list of specific constituents
1,2-DCA = 1,2-Dichloroethane analyzed by EPA Method 8260B
EDB = 1,2-Dibromoethane analyzed by EPA Method 8260B
SVOCs - Semi-volatile organic compounds analyzed by EPA Method 8270C; see laboratory analytical report for a complete list of specific constituents
PNAs = Polynuclear aromatics analyzed by EPA Method 8270C; see laboratory analytical report for a complete list of specific constituents
PCP = Pentachlorophenol by EPA Method 8270C
Creosote analyzed by EPA Method 8270C. It is reported as a combination of naphthalene, acenaphthylene, fluorene, phenanthrene, anthracene, fluoranthene, pyrene, 1-methylnaphthalene, and 2-methylnaphthene.
PCBs = Polychlorinated biphenyls analyzed by EPA Method 8082; see laboratory analytical report for a complete list of specific constituents
ND = Not detected; detection limit unknown
<x = Not detected at reporting limit x
--- = Not analyzed
NA = No applicable ESL
Results in **bold** equal or exceed applicable ESL

a = Analyzed by EPA Method 8015
b = Hydrocarbons reported as TPHd do not exhibit a typical Diesel chromatographic pattern. These hydrocarbons are higher boiling than typical diesel fuel.
c = Not detected; see laboratory analytical report for constituent-specific reporting limits
d = Hydrocarbon result partly due to individual peak(s) in quantitation range
e = The reporting limit is elevated resulting from matrix interference.
f = Results were evaluated to the MDL, and concentration was >= to the MDL but < RL
g = Pea gravel sample from waste oil tank excavation
h = Hydrocarbon reported in the late diesel range, and does not match the laboratory diesel standard.
i = Not detected except for phenanthrene at 0.42 mg/kg. See laboratory analytical report for constituent-specific reporting limits
j = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is a potential source of drinking water (Tables A and C of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater* , California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 2

HISTORICAL SOIL ANALYTICAL DATA - METALS
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*Antimony*	*Arsenic*	*Barium*	*Beryllium*	*Cadmium*	*Chromium*	*Cobalt*	*Copper*	*Lead*	*Molyb-denum*	*Nickel*	*Selenium*	*Silver*	*Thallium*	*Vanadium*	*Zinc*	*Mercury*
W-1@30	6/10/2005	30	<2.0	2.8	93	<0.50	1.0	30	6.2	13	7.4	<1.0	32	<2.0	<1.0	<1.0	22	28	<0.050
W0-2-14	7/20/2006	14	---	---	---	---	<0.500	40.7	---	---	6.00	---	46.9	---	---	---	---	52.5	---
Deep Soil (>10 fbg) ESL [a]:			310	15	2,600	98	39	5,000	94	5,000	750	3,900	260	3,900	3,900	62	770	5,000	58

Notes:

All results in milligrams per kilogram (mg/kg) unless otherwise indicated.
fbg = Feet below grade
Mercury analyzed by EPA Method 7471A; all other constituents analyzed by EPA Method 6010B.
<x = Not detected at reporting limit x
--- = Not analyzed
ESL = Environmental screening level
Results in **bold** equal or exceed applicable ESL

a = San Francisco Bay Regional Water Quality Control Board commercial/industrial ESL for soil where groundwater is a potential source of drinking water (Tables A and C of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

TABLE 3

HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA
SHELL-BRANDED SERVICE STATION
4212 FIRST STREET, PLEASANTON, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*
SB-6 (MW-1)	4/9/1999	NA	**10,000**	**4,500**	<50	<50	**140**	**250**	---
SB-7	4/8/1999	NA	**750**	**20**	<0.50	3.4	2.9	<2.5	---
CPT-2d72-78	9/29/2006	74-78	<50[a]	0.99[a]	<0.50[a]	<0.50[a]	<0.50[a]	**15**[a]	**27**[a]
CPT-2d92-98	9/29/2006	94-98	<50	<0.50	<0.50	<0.50	<0.50	**47**	<20
CPT-3@57'	8/15/2006	53-57	**700**	<0.50	<0.50	0.78	2.1	**79**	**2,000**
Groundwater (≤10 fbg) ESL[b]*:*		NA	100	1.0	40	30	20	5.0	12

Notes:

All results in micrograms per liter (µg/l) unless otherwise indicated.
TPHg = Total petroleum hydrocarbons as gasoline analyzed by EPA Method 8260B; before August 15, 2006, analyzed by EPA Method 8015B
Benzene, toluene, ethylbenzene, and xylenes analyzed by EPA Method 8260B; before August 15, 2006, analyzed by EPA Method 8020
MTBE = Methyl tertiary-butyl ether analyzed by EPA Method 8260B; before August 15, 2006, analyzed by EPA Method 8020
TBA = Tertiary-butyl alcohol analyzed by EPA Method 8260B
fbg = Feet below grade
<x = Not detected at reporting limit x
--- = Not analyzed
ESL = Environmental screening level
Results in **bold** equal or exceed applicable ESL
NA = Not available or no applicable ESL

a = Analyzed beyond the recommended EPA holding time
b = San Francisco Bay Regional Water Quality Control Board Environmental Screening Level for groundwater where groundwater is a potential source of drinking water (Tables A and C of *Screening for Environmental Concerns at Sites With Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, Interim Final - November 2007 [Revised May 2008]).

APPENDIX A

SITE HISTORY

SITE HISTORY

1985 Subsurface Investigation: In September 1985, Emcon Associates (Emcon) drilled one soil boring (S-A) adjacent to the waste oil underground storage tank (UST), and drilled three soil borings (S-B through S-D) and installed one groundwater monitoring well (S-1) adjacent to the gasoline USTs. Soil samples contained up to 1,300 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg), 9.6 mg/kg toluene, and 260 mg/kg xylenes and ethylbenzene. Benzene was not detected in the soil samples. The monitoring well was dry. Emcon's November 12, 1985 letter presents details of this investigation.

1986 Subsurface Investigation: In March 1986, one soil boring (S-E) was drilled adjacent to product lines. No TPHg, benzene, toluene, ethylbenzene, or xylenes (BTEX) were detected in soil samples.

1986 *UST Removal:* In May 1986, Blaine Tech Services (Blaine) collected soil samples following removal of four gasoline USTs and one waste oil UST. Soil samples from the gasoline UST excavation contained up to 240 mg/kg TPHg. Hydrocarbons were not detected in a soil sample collected from the waste oil tank excavation. Three 10,000-gallon, double-walled, fiberglass tanks were installed at a location closer to the dispenser islands.

1988 Gasoline Spill: In August 1988, approximately 40 gallons of gasoline were spilled in the area of the pump islands. Impacted soil was removed to a depth of 1 to 2 feet below grade (fbg).

1990 Subsurface Investigations: In March 1990, Hart Crowser, Inc. (Hart) drilled three soil borings (SB-1 through SB-3) and destroyed one groundwater monitoring well (S-1). Following the well destruction, Hart continued drilling a boring (WA-1) below the depth of the monitoring well. Soil samples contained up to 380 mg/kg TPHg, 2.2 mg/kg benzene, 2.7 mg/kg toluene, 5.3 mg/kg ethylbenzene, and 32 mg/kg xylenes. Hart's April 23, 1990 *Report of Supplemental Site Assessment* provides details of this investigation.

In July 1990, Hart drilled two additional soil borings (SB-4 and SB-5) down gradient from the former UST complex. Soil samples contained up to 820 mg/kg TPHg, 65 mg/kg benzene, 3.7 mg/kg toluene, 6.5 mg/kg ethylbenzene, and 65 mg/kg xylenes (SB-5 at 35 fbg). Hart's December 11, 1990 *Supplemental Site Assessment* provides details of this investigation.

1995 Dispenser and Piping Replacement: In September 1995, Paradiso Mechanical of San Leandro, California removed the product lines and replaced the dispensers and piping. Weiss Associates (Weiss) collected soil samples from beneath the gasoline product piping (PT-1 and PT-2) and dispensers (DP-1 through DP-4). Soil samples contained up to 120 mg/kg TPHg, 0.038 mg/kg ethylbenzene, and 0.19 mg/kg xylenes. Benzene and toluene were not detected in the soil samples. Approximately 40 cubic yards of soil were over-excavated at the direction of the Pleasanton Fire Department. Weiss' December 21, 1995 *Dispenser Replacement Sampling* report provides details of this investigation.

1998 Facility Upgrade: In July 1998, Cambria Environmental Technology, Inc. (Cambria) inspected the waste oil tank remote-fill piping during its removal by Gettler-Ryan of Dublin, California. No hydrocarbon impact was observed during the site visit, and, therefore, no sampling was required. A pea gravel sample contained 27 mg/kg total petroleum hydrocarbons as diesel (TPHd). Cambria's September 2, 1998 *1998 Upgrade Site Inspection Report* provides details.

1999 Subsurface Investigation: In April 1999, Cambria drilled two soil borings (SB-6 and SB-7) and converted SB-6 to monitoring well MW-1. Soil samples contained up to 83 mg/kg TPHg, 0.10 mg/kg benzene, 0.37 mg/kg toluene, 0.26 mg/kg ethylbenzene, and 0.26 mg/kg xylenes. Methyl tertiary-butyl ether (MTBE) was not detected in soil samples. Grab groundwater samples contained up to 10,000 micrograms per liter (µg/l) TPHg, 4,500 µg/l benzene, 3.4 µg/l ethylbenzene, and 2.9 µg/l xylenes. Toluene and MTBE were not detected in the grab groundwater samples. Cambria's August 12, 1999 *Subsurface Investigation Report* presents details of this investigation.

2000 Subsurface Investigation: In January 2000, Cambria installed two wells (MW-2 and MW-3) to determine whether groundwater had been impacted by petroleum hydrocarbons. No petroleum hydrocarbons or MTBE were detected in soil samples. Cambria's June 23, 2000 *Subsurface Investigation Report* presents details of the investigation.

2004 Well Survey: In May 2004, Toxichem Management Systems, Inc. (Toxichem) conducted a well survey, which identified a municipal well (3S/1E-21B1) and a well of unknown use (3S/1E-21B) approximately 900 feet northeast of the site and another municipal well (3S/1E-16P1) approximately 1,200 feet north of the site. The locations of the wells could not be field verified.

2005 UST Upgrades: In January 2005, Town and Country Contractors, Inc. (T & C) upgraded the gasoline USTs.

2005 Tank Backfill Well Destructions: In January 2005, T & C destroyed four tank backfill wells (TB-1 through TB-4).

2005 Waste Oil UST Investigation: In January 2005, an unknown liquid was likely poured into a port on the waste oil UST which led directly into the pea gravel surrounding the UST. Based on this observation, Shell submitted an UST Unauthorized Release (Leak)/Site Contamination Report on January 19, 2005. Able Maintenance (Able) and Service Station Systems sealed the UST port with epoxy and excavated pea gravel around the UST. Toxichem collected pea gravel samples which contained 1.4 mg/kg TPHg, 1,400 mg/kg TPHd, and 10,000 mg/kg total petroleum hydrocarbons as oil and grease. In June 2005, Delta Consultants (Delta) drilled one soil boring (WO-1) adjacent to the waste oil UST to determine if the liquid poured into the pea gravel had impacted soils. Petroleum hydrocarbons were not detected in the soil samples. Delta's July 11, 2005 *Soil and Water Investigation Report* provides details of this investigation.

2005 Receptor Survey: In September 2005, a well survey conducted by Delta located an old water tower in the area of the wells identified in Toxichem's 2004 well survey and identified a water supply well (3S/1E-21C1) and an irrigation well (3S/1E-21C4) approximately 1,000 feet northwest of the site and another irrigation well in Kottinger Park, approximately 800 feet east of the site. Delta identified the nearest surface water as Arroyo Del Valle Creek located approximately 1,130 feet northwest of the site.

2006 Waste Oil UST Removal: In July 2006, Wayne Perry Inc. removed a 550-gallon waste oil UST. Cambria collected a soil sample from the bottom of the UST excavation (WO-2) which contained 26 mg/kg oil and grease, 5.5 mg/kg TPHd, 0.021 mg/kg MTBE, 40.7 mg/kg chromium, 6.00 mg/kg lead, 46.9 mg/kg nickel, and 52.5 mg/kg zinc. Based on these concentrations, Shell submitted an UST Unauthorized Release (Leak)/Site Contamination Report on July 28, 2006. Cambria's September 21, 2006 *UST Removal Report* presents details of the investigation.

2006 Subsurface Investigation: In August and September 2006, Delta installed two monitoring wells (MW-1B and MW-4) and drilled two cone penetrometer test (CPT) borings (CPT-2 and CPT-3). Well MW-4 was installed in first-encountered groundwater and well MW-1B was installed in a deeper water-bearing zone. Soil samples from well boring MW-4 contained up to 380 mg/kg TPHg, 1.2 mg/kg ethylbenzene, 1.6 mg/kg xylenes, and 0.59 mg/kg MTBE. TPHg, BTEX, MTBE, and tertiary-butyl alcohol (TBA) were not detected in soil samples from MW-1B, and benzene, toluene, and TBA were not detected in soil samples from MW-4. Grab groundwater samples from off-site CPT boring CPT-2 contained up to 0.99 µg/l benzene, 47 µg/l MTBE, and 27 µg/l TBA. Grab

groundwater samples from on-site CPT boring CPT-3 contained up to 700 µg/l TPHg, 0.78 µg/l ethylbenzene, 2.1 µg/l xylenes, 79 µg/l MTBE, and 2,000 µg/l TBA. Delta's October 31, 2006 *Soil and Groundwater Investigation Report* provides details of this investigation.

2007 Subsurface Investigation: In March 2007, Delta drilled five soil borings (B-1 through B-5) in or near on-site source areas. Soil samples from the soil borings contained up to 710 mg/kg TPHg, 2.3 mg/kg ethylbenzene, 16 mg/kg xylenes, 0.78 mg/kg MTBE, and 0.80 mg/kg TBA. Delta's June 25, 2007 *Site Investigation and Interim Remediation Report* provides details of this investigation.

2007 GWE: From June through August 2007, Delta extracted approximately 4,226 gallons of groundwater from MW-4. Delta's June 25, 2007 *Site Investigation and Interim Remediation Report* and November 2, 2007 *Draft Corrective Action Plan (CAP)* provide details of this remediation.

2009 Dual-Phase Extraction (DPE) Pilot Test: In January 2009, Delta conducted a 5-day DPE pilot test on MW-4 and 4-hour DPE pilot tests on MW-1 and MW-2. Prior to conducting the DPE pilot tests, Delta conducted step drawdown tests in MW-1 and MW-4. Delta calculated hydraulic conductivities of 3.59×10^{-5} centimeters per second (cm/sec) in MW-1 at a pumping rate of 0.48 gallons per minute (gpm) and 3.17×10^{-5} cm/sec in MW-4 at a pumping rate of 0.40 gpm. Based on the results of the DPE pilot test, Delta calculated a theoretical radius of influence of 26 feet for soil vapor extraction and estimated that 286.3 pounds of hydrocarbons were removed from the vadose zone. An estimated 0.23 pounds of dissolved hydrocarbons were removed along with 2,748 gallons of groundwater. Delta concluded that while GWE results indicated it was likely not a viable remediation strategy, soil vapor extraction (SVE) could be a viable remediation alternative. Delta's February 12, 2009 *DPE Pilot Test Report* provides details of the pilot test.

2009 Dispenser Repairs: In January 2009, Able replaced the faulty pan beneath the south dispenser on the pump island closest to the station building. Delta collected a soil sample (Under Dispenser #1) from the dispenser excavation. No TPHg, TPHd, BTEX, fuel oxygenates, or lead scavengers were detected in the soil sample. Delta's March 6, 2009 *Dispenser Repair Report* presents details of the repair and soil sampling.

2010 Subsurface Investigation: In January 2010, Delta installed one observation well (OBS-1), one AS well (AS-1) and four SVE wells (SVE-1 through SVE-4). Delta's June 7, 2010 *2010 AS Pilot Test Report* provides well installation details.

2010 AS Pilot Test: In January 2010, Delta conducted an AS pilot test using well AS-10. Delta calculated an air sparging radius of influence of 31 feet. Delta's June 7, 2010 *2010 AS Pilot Test Report* provides details of the pilot test.

Groundwater Monitoring Program: Groundwater monitoring and sampling began in June 1999 and is currently conducted quarterly.

APPENDIX B

HISTORICAL GROUNDWATER ANALYTICAL DATA

TABLE 1
HISTORIC WELL CONCENTRATIONS
Shell-branded Service Station
4212 (*aka 4226*) First Street
Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	6/16/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	371.20	37.81	333.39
MW-1	6/30/1999	89.0	5.89	<0.500	<0.500	0.652	<5.00	NA	NA	NA	NA	NA	371.20	33.65	337.55
MW-1	9/24/1999	1,560	473	<10.0	<10.0	22.8	<2.50	NA	NA	NA	NA	NA	371.20	37.04	334.16
MW-1	12/8/1999	1,020	375	<5.00	<5.00	15.2	<50.0	NA	NA	NA	NA	NA	371.20	36.79	334.41
MW-1	2/10/2000	523	106	<5.00	<5.00	31.8	2.9	NA	NA	NA	NA	NA	371.20	34.90	336.30
MW-1	5/17/2000	<50.0	<0.500	<0.500	<0.500	<0.500	37	29.5	NA	NA	NA	NA	371.20	32.55	338.65
MW-1	8/3/2000	808	290	<2.50	<2.50	8.9	<12.5	NA	NA	NA	NA	NA	371.20	39.13	332.07
MW-1	10/31/2000	507	250	0.962	<0.500	23.5	3.76	NA	NA	NA	NA	NA	371.20	37.91	333.29
MW-1	3/1/2001	<50.0	<0.500	<0.500	<0.500	<0.500	74.6	NA	NA	NA	NA	NA	371.20	39.60	331.60
MW-1	5/30/2001	780	280	<2.0	<2.0	11	NA	<2.0	NA	NA	NA	NA	371.20	39.53	331.67
MW-1	8/2/2001	1,900	580	<2.5	<2.5	12	NA	<25	NA	NA	NA	NA	371.20	39.61	331.59
MW-1	12/6/2001	840	190	<0.50	<0.50	13	NA	<5.0	NA	NA	NA	NA	371.20	39.63	331.57
MW-1	2/5/2002	2,700	650	<2.5	<2.5	7.2	NA	<25	NA	NA	NA	NA	371.20	35.53	335.67
MW-1	6/17/2002	2,500	550	<2.0	<2.0	5.9	NA	<20	NA	NA	NA	NA	371.20	39.29	331.91
MW-1	7/25/2002	690	130	<0.50	<0.50	4.4	NA	18	NA	NA	NA	NA	371.20	39.39	331.81
MW-1	11/14/2002	400	31	<0.50	<0.50	2.7	NA	27	NA	NA	NA	NA	371.20	40.00	331.20
MW-1	2/12/2003	840	0.85	<0.50	<0.50	<0.50	NA	40	NA	NA	NA	NA	371.20	32.92	338.28
MW-1	5/14/2003	680	190	<2.5	<2.5	<5.0	NA	95	NA	NA	NA	NA	371.20	32.57	338.63
MW-1	7/29/2003	870	190	<2.5	<2.5	<5.0	NA	150	NA	NA	NA	NA	371.20	33.82	337.38
MW-1	11/19/2003	<200	14	<2.0	<2.0	<4.0	NA	230	NA	NA	NA	NA	371.20	38.28	332.92
MW-1	2/19/2004	58 d	11	<0.50	<0.50	<1.0	NA	85	NA	NA	NA	NA	371.20	36.93	334.27
MW-1	5/3/2004	670	310	<2.5	<2.5	<5.0	NA	420	NA	NA	NA	NA	371.20	32.70	338.50
MW-1	8/24/2004	430 d	34	<2.5	<2.5	<5.0	NA	690	NA	NA	NA	NA	371.20	34.66	336.54
MW-1	11/15/2004	<250	29	<2.5	<2.5	<5.0	NA	470	NA	NA	NA	NA	371.20	38.27	332.93
MW-1	2/2/2005	540 e	87	<2.5	<2.5	<5.0	NA	700	NA	NA	NA	NA	371.20	32.02	339.18
MW-1	5/5/2005	460 e	88	<2.5	<2.5	<5.0	NA	300	NA	NA	NA	NA	371.20	36.82	334.38
MW-1	8/5/2005	910	230	<2.5	<2.5	<5.0	NA	480	NA	NA	NA	NA	371.20	33.35	337.85
MW-1	11/22/2005	1,760	27	<0.500	<0.500	1	NA	1,160	NA	NA	NA	NA	371.20	33.42	337.78
MW-1	2/7/2006	4,620	225	<0.500	<0.500	<0.500	NA	1,480	NA	NA	NA	NA	371.20	31.63	339.57
MW-1	5/16/2006	1,100	130	<0.50	2	2	NA	1,600	NA	NA	NA	NA	371.20	31.16	340.04

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Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	8/21/2006	2,700	86	<0.500	1	1	NA	1,960	NA	NA	NA	NA	371.20	33.07	338.13
MW-1	11/14/2006	1,400 g	30	<25	<25	<25	NA	2,100	<25	<25	<25	<1,000	371.20	33.73	337.47
MW-1	2/1/2007	800	21	<0.50	<0.50	<1.0	NA	2,300	NA	NA	NA	NA	371.20	33.02	338.18
MW-1	6/1/2007	1,400 j,k	68	<20	<20	4.4 l	NA	2,200	NA	NA	NA	NA	371.20	32.87	338.33
MW-1	8/22/2007	250 j	20	<20	<20	<20	NA	3,100	NA	NA	NA	1,500	371.20	34.64	336.56
MW-1	11/26/2007	1,800 j	33	<20	<20	<20	NA	3,100	<40	<40	<40	930	371.20	35.59	335.61
MW-1	2/19/2008	1,800 j	33	<20	<20	<20	NA	3,700	NA	NA	NA	1,700	371.20	31.05	340.15
MW-1	5/23/2008	3,700	100	<25	<25	<25	NA	3,100	NA	NA	NA	1,300	371.20	31.80	339.40
MW-1	8/7/2008	4,200	33	<25	<25	<25	NA	3,500	NA	NA	NA	<250	371.20	33.03	338.17
MW-1	12/3/2008	3,400	34	<25	<25	<25	NA	3,200	NA	NA	NA	980	371.20	35.19	336.01
MW-1	2/5/2009	2,100	26	<25	<25	<25	NA	1,700	NA	NA	NA	340	371.20	35.07	336.13
MW-1	5/7/2009	4,400	230	<25	<25	<25	NA	3,700	NA	NA	NA	980	371.20	32.45	338.75
MW-1	8/20/2009	3,100	86	<25	<25	<25	NA	2,500	NA	NA	NA	730	371.20	34.48	336.72
MW-1	11/9/2009	3,200	230	<20	<20	33	NA	2,100	<40	<40	<40	530	371.20	35.84	335.36
MW-1	2/11/2010	4,400	30	<20	<20	<20	NA	3,000	NA	NA	NA	730	371.20	34.06	337.14
MW-1	5/13/2010	3,300	38	<20	<20	<20	NA	3,300	NA	NA	NA	1,100	371.20	31.99	339.21
MW-1	**8/5/2010**	**4,200**	**12**	**<20**	**<20**	**<20**	**NA**	**3,800**	**NA**	**NA**	**NA**	**1,300**	**371.20**	**33.70**	**337.50**
MW-1B	9/21/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	371.67	76.94	294.73
MW-1B	9/28/2006	<50	<0.50	<0.50	<0.50	<0.50	NA	21	NA	NA	NA	<20	371.67	77.15	294.52
MW-1B	11/14/2006	320 g	<5.0	<5.0	<5.0	<5.0	NA	310	<5.0	<5.0	<5.0	<200	371.67	69.38	302.29
MW-1B	2/1/2007	77	0.53	<0.50	<0.50	<1.0	NA	150	NA	NA	NA	NA	371.67	60.92	310.75
MW-1B	6/1/2007	<50 j,k	0.25 l	<1.0	<1.0	<1.0	NA	74	NA	NA	NA	NA	371.67	61.07	310.60
MW-1B	8/22/2007	<50 j	0.25 l	<1.0	<1.0	<1.0	NA	35	NA	NA	NA	7.1 l	371.67	77.54	294.13
MW-1B	11/26/2007	<50 j	<0.50	<1.0	<1.0	<1.0	NA	1.7	<2.0	<2.0	<2.0	<10	371.67	68.50	303.17
MW-1B	2/19/2008	65 j	2.6	4.2	<1.0	1.1	NA	58	NA	NA	NA	<10	371.67	57.21	314.46
MW-1B	5/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	3.6	NA	NA	NA	<10	371.67	57.53	314.14
MW-1B	8/7/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	1.1	NA	NA	NA	<10	371.67	72.51	299.16
MW-1B	12/3/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	3.4	NA	NA	NA	<10	371.67	80.84	290.83
MW-1B	2/5/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	4.4	NA	NA	NA	<10	371.67	76.11	295.56
MW-1B	5/7/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	2.5	NA	NA	NA	13	371.67	66.97	304.70

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MW-1B	8/20/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	1.7	NA	NA	NA	<10	371.67	97.32	274.35
MW-1B	11/9/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	371.67	98.90	272.77
MW-1B	2/11/2010	<50	<0.50	<1.0	<1.0	<1.0	NA	1.1	NA	NA	NA	<10	371.67	90.72	280.95
MW-1B	5/13/2010	<50	<0.50	<1.0	<1.0	<1.0	NA	2.0	NA	NA	NA	<10	371.67	80.56	291.11
MW-1B	**8/5/2010**	**<50**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**<1.0**	**NA**	**NA**	**NA**	**<10**	**371.67**	**90.10**	**281.57**
MW-2	2/3/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	372.40	32.65	339.75
MW-2	2/7/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	372.40	35.51	336.89
MW-2	2/10/2000	<50.0	<0.500	<0.500	<0.500	<0.500	2.61	NA	NA	NA	NA	NA	372.40	36.62	335.78
MW-2	5/17/2000	120	4.09	<0.500	<0.500	<0.500	29	NA	NA	NA	NA	NA	372.40	32.14	340.26
MW-2	8/3/2000	<50.0	0.692	<0.500	<0.500	<0.500	40.5	36.6b	NA	NA	NA	NA	372.40	32.42	339.98
MW-2	10/31/2000	<50.0	<0.500	<0.500	<0.500	<0.500	57.4	44.8c	NA	NA	NA	NA	372.40	33.02	339.38
MW-2	3/1/2001	173	1.64	1.65	2.86	3.97	127	167	NA	NA	NA	NA	372.40	32.54	339.86
MW-2	5/30/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	170	NA	NA	NA	NA	372.40	32.42	339.98
MW-2	8/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	160	NA	NA	NA	NA	372.40	32.55	339.85
MW-2	12/6/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	170	NA	NA	NA	NA	372.40	33.15	339.25
MW-2	2/5/2002	<50	0.72	<0.50	<0.50	1.7	NA	170	NA	NA	NA	NA	372.40	32.29	340.11
MW-2	6/17/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	260	NA	NA	NA	NA	372.40	32.63	339.77
MW-2	7/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	280	NA	NA	NA	NA	372.40	32.80	339.60
MW-2	11/14/2002	120	13	9	3.8	14	NA	430	NA	NA	NA	NA	372.40	33.31	339.09
MW-2	2/12/2003	<100	<1.0	<1.0	<1.0	<1.0	NA	430	NA	NA	NA	NA	372.40	32.15	340.25
MW-2	5/14/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	470	NA	NA	NA	NA	372.40	32.01	340.39
MW-2	7/29/2003	<250	<2.5	<2.5	<2.5	<5.0	NA	670	NA	NA	NA	NA	372.40	32.51	339.89
MW-2	11/19/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	54	NA	NA	NA	NA	372.40	33.83	338.57
MW-2	2/19/2004	65	<0.50	3.4	1.4	6.5	NA	8.2	NA	NA	NA	NA	372.40	32.68	339.72
MW-2	5/3/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	5.2	NA	NA	NA	NA	372.40	32.07	340.33
MW-2	8/24/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	2.7	NA	NA	NA	NA	372.40	32.44	339.96
MW-2	11/15/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	1.3	NA	NA	NA	NA	372.40	32.95	339.45
MW-2	2/2/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	24	NA	NA	NA	NA	372.40	31.94	340.46
MW-2	5/5/2005	72 f	<0.50	<0.50	<0.50	<1.0	NA	4.9	NA	NA	NA	NA	372.40	31.91	340.49
MW-2	8/5/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	16	NA	NA	NA	NA	372.40	32.15	340.25

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Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-2	11/22/2005	840	1	<0.500	<0.500	1	NA	556	NA	NA	NA	NA	372.40	32.31	340.09
MW-2	2/7/2006	3,550	<0.500	<0.500	<0.500	<0.500	NA	2,500	NA	NA	NA	NA	372.40	31.70	340.70
MW-2	5/16/2006	1,400	<5.0	<5.0	<5.0	<10	NA	1,700	NA	NA	NA	NA	372.40	31.38	341.02
MW-2	8/21/2006	1,910	<0.500	<0.500	<0.500	<0.500	NA	2,590	NA	NA	NA	NA	372.40	33.29	339.11
MW-2	11/14/2006	2,300 g	<25	<25	<25	<25	NA	2,500	<25	<25	<25	<1,000	372.40	32.67	339.73
MW-2	2/1/2007	670	<0.50	<0.50	<0.50	<1.0	NA	2,000	NA	NA	NA	NA	372.40	32.13	340.27
MW-2	6/1/2007	500 j,k	<10	<20	<20	<20	NA	2,000	NA	NA	NA	NA	372.40	32.14	340.26
MW-2	8/22/2007	100 j,k	<10	<20	<20	<20	NA	2,400	NA	NA	NA	120 l	372.40	32.93	339.47
MW-2	11/26/2007	1,600 j,k	<10	<20	<20	<20	NA	2,900	<40	<40	<40	<200	372.40	33.44	338.96
MW-2	2/19/2008	1,300 j,k	<10	<20	<20	<20	NA	3,300	NA	NA	NA	<200	372.40	31.18	341.22
MW-2	5/23/2008	1,900	<12	<25	<25	<25	NA	1,700	NA	NA	NA	<250	372.40	31.44	340.96
MW-2	8/7/2008	1,700	<10	<20	<20	<20	NA	1,300	NA	NA	NA	<200	372.40	31.94	340.46
MW-2	12/3/2008	3,000	<10	<20	<20	<20	NA	2,900	NA	NA	NA	<200	372.40	32.53	339.87
MW-2	2/5/2009	1,200	<10	<20	<20	<20	NA	1,000	NA	NA	NA	<200	372.40	32.29	340.11
MW-2	5/7/2009	2,400	<10	<20	<20	<20	NA	2,400	NA	NA	NA	<200	372.40	31.98	340.42
MW-2	8/20/2009	2,800	<10	<20	<20	<20	NA	2,400	NA	NA	NA	<200	372.40	32.51	339.89
MW-2	11/9/2009	4,100	<12	<25	<25	<25	NA	3,800	<50	<50	<50	<250	372.40	32.43	339.97
MW-2	2/11/2010	4,300	<12	<25	<25	<25	NA	3,200	NA	NA	NA	<250	372.40	32.07	340.33
MW-2	5/13/2010	2,400	<10	<20	<20	<20	NA	2,500	NA	NA	NA	<200	372.40	31.63	340.77
MW-2	**8/5/2010**	**1,500**	**<5.0**	**<10**	**<10**	**<10**	**NA**	**1,400**	**NA**	**NA**	**NA**	**210**	**372.40**	**33.82**	**338.58**
MW-3	2/3/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	375.05	32.06	342.99
MW-3	2/7/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	375.05	32.57	342.48
MW-3	2/10/2000	180	5.12	<0.500	<0.500	0.714	26.8	21.5a	NA	NA	NA	NA	375.05	32.77	342.28
MW-3	5/17/2000	1,360	414	<5.00	<5.00	17.6	<25.0	NA	NA	NA	NA	NA	375.05	31.00	344.05
MW-3	8/3/2000	<50.0	0.536	<0.500	<0.500	<0.500	22	NA	NA	NA	NA	NA	375.05	31.03	344.02
MW-3	10/31/2000	<50.0	<0.500	<0.500	<0.500	<0.500	31.1	NA	NA	NA	NA	NA	375.05	31.28	343.77
MW-3	3/1/2001	384	172	0.815	<0.500	8	5.16	NA	NA	NA	NA	NA	375.05	31.21	343.84
MW-3	5/30/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	110	NA	NA	NA	NA	375.05	31.02	344.03
MW-3	8/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	93	NA	NA	NA	NA	375.05	30.94	344.11
MW-3	12/6/2001	110	<0.50	<0.50	<0.50	2.3	NA	180	NA	NA	NA	NA	375.05	31.28	343.77

TABLE 1
HISTORIC WELL CONCENTRATIONS
Shell-branded Service Station
4212 (*aka 4226*) First Street
Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-3	2/5/2002	<50	0.89	0.6	<0.50	2.1	NA	130	NA	NA	NA	NA	375.05	31.12	343.93
MW-3	6/17/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	72	NA	NA	NA	NA	375.05	31.21	343.84
MW-3	7/25/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	81	NA	NA	NA	NA	375.05	30.96	344.09
MW-3	11/14/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	60	NA	NA	NA	NA	375.05	31.44	343.61
MW-3	2/12/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	43	NA	NA	NA	NA	375.05	31.28	343.77
MW-3	5/14/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	24	NA	NA	NA	NA	375.05	31.20	343.85
MW-3	7/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	21	NA	NA	NA	NA	375.05	31.29	343.76
MW-3	11/19/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	8.2	NA	NA	NA	NA	375.05	31.86	343.19
MW-3	2/19/2004	81	0.67	4.4	1.8	8.6	NA	13	NA	NA	NA	NA	375.05	31.66	343.39
MW-3	5/3/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	13	NA	NA	NA	NA	375.05	31.72	343.33
MW-3	8/24/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	10	NA	NA	NA	NA	375.05	32.09	342.96
MW-3	11/15/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	6.6	NA	NA	NA	NA	375.05	31.50	343.55
MW-3	2/2/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	3.1	NA	NA	NA	NA	375.05	31.28	343.77
MW-3	5/5/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	2.3	NA	NA	NA	NA	375.05	31.42	343.63
MW-3	8/5/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	2.4	NA	NA	NA	NA	375.05	31.35	343.70
MW-3	11/22/2005	<50	<0.500	<0.500	<0.500	<0.500	NA	3.84	NA	NA	NA	NA	375.05	31.98	343.07
MW-3	2/7/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	<0.500	NA	NA	NA	NA	375.05	31.24	343.81
MW-3	5/16/2006	<50	<0.50	<0.50	<0.50	<1.0	NA	4.5	NA	NA	NA	NA	375.05	31.37	343.68
MW-3	8/21/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	4.04	NA	NA	NA	NA	375.05	31.95	343.10
MW-3	11/14/2006	<50	<0.50	<0.50	<0.50	<0.50	NA	3.8	<0.50	<0.50	<0.50	<20	375.05	32.24	342.81
MW-3	2/1/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	2.8	NA	NA	NA	NA	375.05	32.17	342.88
MW-3	6/1/2007	<50 j	<0.50	<1.0	<1.0	<1.0	NA	3.1	NA	NA	NA	NA	375.05	31.86	343.19
MW-3	8/22/2007	<50 j	<0.50	<1.0	<1.0	<1.0	NA	4.6	NA	NA	NA	<10	375.05	32.18	342.87
MW-3	11/26/2007	<50 j	<0.50	<1.0	<1.0	<1.0	NA	3.5	<2.0	<2.0	<2.0	<10	375.05	32.69	342.36
MW-3	2/19/2008	<50 j	<0.50	1.2	<1.0	<1.0	NA	2.6	NA	NA	NA	<10	375.05	30.94	344.11
MW-3	5/23/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	3.6	NA	NA	NA	<10	375.05	31.45	343.60
MW-3	8/7/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	3.0	NA	NA	NA	<10	375.05	31.40	343.65
MW-3	12/3/2008	<50	<0.50	<1.0	<1.0	<1.0	NA	2.1	NA	NA	NA	<10	375.05	32.12	342.93
MW-3	2/5/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	1.1	NA	NA	NA	<10	375.05	32.74	342.31
MW-3	5/7/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	<1.0	NA	NA	NA	<10	375.05	31.69	343.36
MW-3	8/20/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	2.0	NA	NA	NA	<10	375.05	32.42	342.63

TABLE 1
HISTORIC WELL CONCENTRATIONS
Shell-branded Service Station
4212 (*aka 4226*) First Street
Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-3	11/9/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	1.7	<2.0	<2.0	<2.0	<10	375.05	32.54	342.51
MW-3	2/11/2010	<50	<0.50	<1.0	<1.0	<1.0	NA	2.1	NA	NA	NA	<10	375.05	31.81	343.24
MW-3	5/13/2010	<50	<0.50	<1.0	<1.0	<1.0	NA	1.7	NA	NA	NA	<10	375.05	31.25	343.80
MW-3	**8/5/2010**	**<50**	**<0.50**	**<1.0**	**<1.0**	**<1.0**	**NA**	**1.2**	**NA**	**NA**	**NA**	**<10**	**375.05**	**32.00**	**343.05**
MW-4	9/21/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	372.78	31.58	341.20
MW-4	9/28/2006	11,000	<250	<250	<250	<250	NA	13,000	NA	NA	NA	<10,000	372.78	31.57	341.21
MW-4	11/14/2006	30,000	<250	<250	<250	<250 h,i	NA	14,000	<250	<250	<250	<10,000	372.78	32.11	340.67
MW-4	2/1/2007	6,300	50	<5.0	19	120	NA	14,000	NA	NA	NA	NA	372.78	33.23	339.55
MW-4	6/1/2007	8,200 j	52	<25	26	150	NA	11,000	NA	NA	NA	NA	372.78	31.57	341.21
MW-4	8/22/2007	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	372.78	33.40	339.38
MW-4	11/26/2007	12,000 j	71	<100	<100	<100	NA	20,000	<200	<200	<200	<1,000	372.78	34.74	338.04
MW-4	2/19/2008	13,000 j	<100	<200	<200	<200	NA	18,000	NA	NA	NA	2,900	372.78	29.70	343.08
MW-4	5/23/2008	21,000	<100	<200	<200	<200	NA	16,000	NA	NA	NA	<2,000	372.78	31.67	341.11
MW-4	8/7/2008	27,000	<100	<200	<200	<200	NA	21,000	NA	NA	NA	<2,000	372.78	31.90	340.88
MW-4	12/3/2008	20,000	19	<25	<25	29	NA	21,000	NA	NA	NA	2,500	372.78	34.32	338.46
MW-4	2/5/2009	15,000	200	<200	<200	<200	NA	13,000	NA	NA	NA	<2,000	372.78	34.58	338.20
MW-4	5/7/2009	18,000	<100	<200	<200	<200	NA	17,000	NA	NA	NA	<2,000	372.78	31.34	341.44
MW-4	8/20/2009	15,000	<50	<100	<100	<100	NA	13,000	NA	NA	NA	1,900	372.78	33.56	339.22
MW-4	11/9/2009	13,000	<50	<100	<100	<100	NA	11,000	<200	<200	<200	<1000	372.78	33.57	339.21
MW-4	2/11/2010	11,000	95	<100	<100	110	NA	7,500	NA	NA	NA	3,200	372.78	31.21	341.57
MW-4	5/13/2010	8,800	48	<50	57	96	NA	7,800	NA	NA	NA	2,900	372.78	30.19	342.59
MW-4	**8/5/2010**	**4,000**	**<12**	**<25**	**<25**	**<25**	**NA**	**3,600**	**NA**	**NA**	**NA**	**600**	**372.78**	**32.22**	**340.56**

TABLE 1
HISTORIC WELL CONCENTRATIONS
Shell-branded Service Station
4212 (*aka 4226*) First Street
Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
TB-1	2/12/2003	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-1	2/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.54	NA
TB-1	5/14/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	NA	NA	NA	NA	NA	12.31	NA
TB-2	2/12/2003	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-2	2/28/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.56	NA
TB-2	5/14/2003	Insufficient water		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	12.54	NA
TB-3	2/12/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-3	2/28/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-3	5/14/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-4	2/12/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-4	2/28/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TB-4	5/14/2003	Well dry	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to May 30, 2001, analyzed by EPA Method 8015.
BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to May 30, 2001, analyzed by EPA Method 8020.
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260B
TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260B
TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260B
TOC = Top of Casing Elevation
GW = Groundwater
ug/L = Parts per billion
MSL = Mean sea level
ft. = Feet
<n = Below detection limit
NA = Not applicable

TABLE 1
HISTORIC WELL CONCENTRATIONS
Shell-branded Service Station
4212 (*aka 4226*) First Street
Pleasanton, California

Well ID	Date	TPH-g (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	DIPE (ug/L)	ETBE (ug/L)	TAME (ug/L)	TBA (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)

Notes:

a = Sample was analyzed outside of the EPA recommended holding time.

b = Concentration is an estimate value above the linear quantitation range.

c = The result reported was generated out of time. The sample was originally run within hold time, but needed to be re-analyzed.

d = Sample contains discrete peak in addition to gasoline.

e = Quantity of unknown hydrocarbon(s) in sample based on gasoline.

f = The concentration reported reflect(s) individual or discrete unidentified peaks not matching a typical fuel pattern.

g = The result for this hydrocarbon is elevated due to the presence of single analyte peak(s) in the quantitation range.

h = Sample was originally analyzed with a positive result, however the reanalysis did not confirm the presence of the analyte.

i = Confirmatory analysis was past holding time.

j = Analyzed by EPA Method 8015B (M).

k = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

l = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Well MW-1 surveyed on May 4, 1999 by Virgil Chavez Land Surveying of Vallejo, CA.

Site surveyed on March 19, 2000 by Virgil Chavez Land Surveying of Vallejo, CA.

Site surveyed on January 15, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

3Q06 survey data for wells MW-1B and MW-4 provided by Delta Environmental Consultants, Inc. of San Jose, CA.

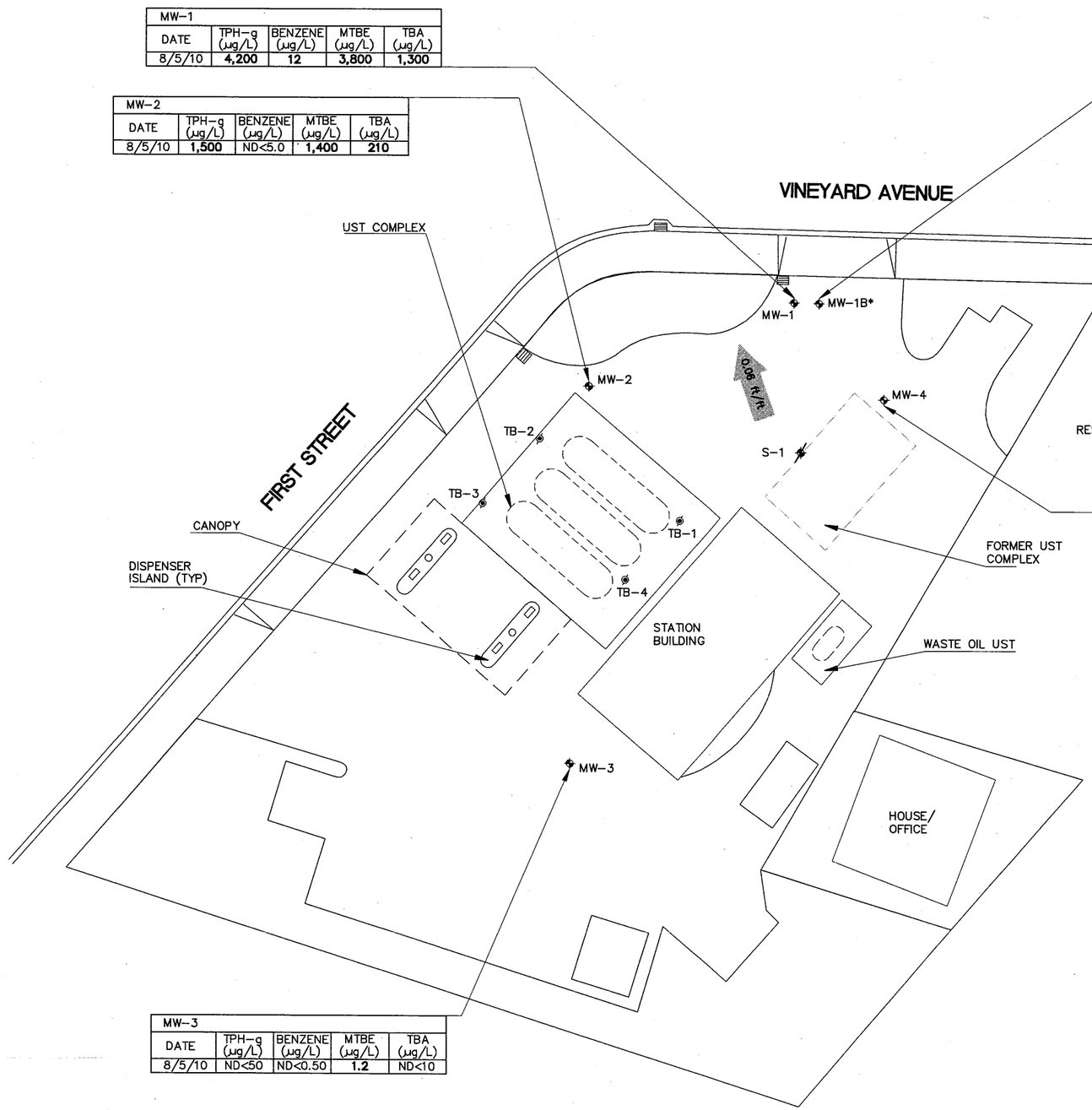
APPENDIX C

DELTA CONSULTANTS - GROUNDWATER HYDROCARBON DISTRIBUTION MAP – AUGUST 5, 2010

MW-1				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
8/5/10	**4,200**	**12**	**3,800**	**1,300**

MW-2				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
8/5/10	**1,500**	ND<5.0	**1,400**	**210**

MW-1B				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
8/5/10	ND<50	ND<0.50	ND<1.0	ND<10



MW-4				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
8/5/10	**4,000**	ND<12	**3,600**	**600**

MW-3				
DATE	TPH-g (µg/L)	BENZENE (µg/L)	MTBE (µg/L)	TBA (µg/L)
8/5/10	ND<50	ND<0.50	**1.2**	ND<10

N
W E
S

LEGEND

MW-1 ◆	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
S-1	DESTROYED GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
TB-1	ABANDONED TANK BACKFILL WELL LOCATION
TPH-g	TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE	METHYL TERT-BUTYL ETHER
TBA	TERT-BUTYL ALCOHOL
µg/L	MICROGRAMS PER LITER
ND<	NOT DETECTED ABOVE LIMIT NOTED
MW-1B*	MONITORS DEEPER WATER BEARING ZONE
0.06 ft/ft	APPROXIMATE GROUNDWATER GRADIENT DIRECTION (ft/ft)

0 15 30
SCALE IN FEET

PROJECT NUMBER SCA421211D
APPROVED BY
CHECKED BY
DRAWN BY 8/24/2010
J.F.F

DELTA CONSULTANTS

SHELL OIL PRODUCTS US
SHELL-BRANDED SERVICE STATION
PLEASANTON, CALIFORNIA

FIGURE 3
GROUNDWATER HYDROCARBON DISTRIBUTION MAP
8/5/2010

4212 FIRST STREET
PLEASANTON, CALIFORNIA