Denis L. Brown
Shell Oil Products US
HSE – Environmental Services
20945 S. Wilmington Ave.
Carson, CA 90810-1039
Tel (707) 865 0251
Fax (707) 865 2542
Email denis.l.brown@shell.com

Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Former Shell Service Station/Current KFC Restaurant
2800 Telegraph Avenue
Oakland, California
SAP Code 129450
Incident No. 97093398
ACHCSA Case No. RO0000009

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
Project Manager

CONESTOGA-ROVERS
& ASSOCIATES

19449 Riverside Drive, Suite 230, Sonoma, California 95476
Telephone: 707-935-4850 Facsimile: 707-935-6649
www.CRAworld.com

October 29, 2008

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 129450

RE: **Risk Evaluation and Case Closure Request**
Former Shell Service Station/Current KFC Restaurant
2800 Telegraph Avenue
Oakland, California
SAP Code 129450
Incident No. 97093398
Agency Case No. RO0000009

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC dba Shell Oil Products US (Shell), Conestoga-Rovers & Associates, Inc. (CRA) is submitting this risk evaluation and request for case closure for the facility referenced above. Based on our review of the site background and conditions, CRA believes that this site meets the Regional Water Quality Control Board's (RWQCB's) definition of a low-risk fuel site, as described in their memorandum "*Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*", dated January 5, 1996. The risk evaluation presented herein incorporates the most recent San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) Environmental Screening Levels (ESL's) based on the November 2007 (revised May 2008) publication. A summary of the site background, site conditions, documentation that this case meets the low-risk fuel site criteria, and a risk evaluation are presented below, along with a request for case closure.

SITE LOCATION AND DESCRIPTION

The subject site is a former Shell service station located on the northeast corner of the intersection of 28th Street and Telegraph Avenue in Oakland, California (Figure 1). The site is currently occupied by a Kentucky Fried Chicken Restaurant. Shell demolished this former service station and removed all their fuel system and service station facilities between 1988 and 1992. The former station layout consisted of a single first-generation fuel underground storage tank (UST) that was located near the northeast corner of the property, three second-generation fuel UST's, a waste oil tank (WOT), four product dispensers, an oil water separator (OWS), three hydraulic lifts, and a station building (Figure 2 and 3). The site is surrounded by a mix of commercial and residential developments.

SITE BACKGROUND AND PROJECT HISTORY

A summary of previous work performed at the site and additional background information is presented in Attachment A. The site vicinity and the locations of any municipal or private water producing wells in the vicinity are presented on Figure 1. The locations of historical borings and wells, and utilities in the vicinity of the site are presented on Figure 2. The locations of former Shell service station facilities, former fuel system features, soil over-excavation boundaries, and soil sample points associated with system removal and over-excavation sampling are presented on Figure 3. The groundwater chemical concentrations and depth to water reported for the site wells during the most recent Second Quarter 2008 groundwater monitoring event, and a Rose Diagram showing the groundwater flow direction between the Second Quarter 1989 and the Third Quarter 2003 groundwater monitoring event are presented on Figure 4. Historical soil analytical data is summarized on Table 1. Graphs plotting groundwater concentrations vs. time for total petroleum hydrocarbons as gasoline (TPHg) in onsite wells S-3R and offsite wells S-6 and S-8, and for benzene in offsite well S-6, are presented on Graphs 1 through 4, respectively. Available boring logs for wells and exploratory borings, a well and boring specification table, and a geologic cross section are presented in Attachment B. Historical grab groundwater analytical data and historical groundwater monitoring data from the groundwater monitoring wells on the site are summarized in the tables in Attachment C. A Site Closure Summary Form including a list of known environmental documents for the site is included in Attachment D.

SITE LITHOLOGIC AND HYDROLOGIC CONDITIONS

Water Basin Setting: According to the *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report,* (California Regional Water Quality Control Board – San Francisco Bay Region, June 1999), the site is located within the Oakland Sub-Area of the San Francisco Basin of the East Bay Plain. The Oakland Sub-Area contains a sequence of alluvial fans. The alluvial fill thickness ranges from 300 to 700 feet deep. There are no well-defined aquitards such as the estuarine muds. The largest and deepest wells in this Sub-Area historically pumped 1 to 2 million gallons per day at depths greater than 200 feet. Overall, sustainable yields are low due to low recharge potential. Primary surface water bodies in the vicinity of the site are the San Francisco Bay, which is located approximately 1.75 miles northwest of the site, the Oakland Inner Harbor located approximately 1.75 miles south of the site, Lake Merritt, a tidal lake, located over a ½ mile to the southeast of the site, and Glen Echo Creek located approximately ¼ of mile east (upgradient) of the site. Designated existing beneficial uses of groundwater in the East Bay Plain are municipal and domestic, industrial process, industrial service and agricultural water supply.

Geologic Setting: The elevation of the site is approximately 32 feet above mean sea level. Topography in the area slopes gently to the southwest to approximately Grand Avenue then due west to the San Francisco Bay. United States Geological Survey (USGS) publications and maps indicate that the site area is underlain by Holocene and Pleistocene Era Merritt Sand (symbol Q_{ms}) (*Geologic Map and Map Database of the Oakland Metropolitan Area, Alameda, Contra Costa, and San Francisco Counties, California, USGS,* R.W. Graymer, 2000). USGS describes Merritt Sand (Holocene and Pleistocene) as fine-grained, very well sorted well drained eolian deposits of western Alameda County. The Merritt Sand outcrops in three large areas in Oakland and Alameda. Previously thought to be only of Pleistocene age, the Merritt Sand is probably time-correlative with dune sand unit (Q_{ds}), based on similar interfingering with Holocene bay mud (Q_{hmb}) and presumably similar depositional environments associated with long-term sea-level fluctuations. The Merritt Sand displays different morphology from unit Q_{ds}, however, forming large sheets up to 15 meters high with yardang morphology.

Hydrogeology: Historically, depth to water at the site has been observed as high as 4.01 feet below grade (fbg) and as low as 10.85 fbg, but is typically found between 6 and 10 fbg. As demonstrated by the Rose Diagram on Figure 2, groundwater flow direction at the site is consistently to the southwest with a typical gradient between 0.01 to 0.03.

Site Lithology: The lithology beneath the site appears to consist primarily of interbedded clay, silt, sand and gravel to a total explored depth of 35.5 fbg, typical of alluvial deposition. Portions of the site appear to have up to 4 feet of fill material consisting of clay, silt, and gravel. Generally, silts and clays, and clayey and sandy silts, extend beneath the site to approximately 13 to 15 fbg, where the first water bearing zone is encountered. The uppermost water bearing zone consists of sands and gravels interbedded with silts and clays that extend down to between 20 to 25 fbg. A layer of less permeable clays and silts appears in some borings below the first water bearing zone which may locally act as an aquitard within the shallow aquifer zone. Exploratory boring log information indicates that the uppermost water bearing zone appears to be unconfined to semi-confined in nature and may be laterally continuous beneath the site. Available boring logs and a geologic cross section are included in Attachment B.

HYDROCARBON DISTRIBUTION IN SOIL

Historical soil sample locations are presented on Figure 2 and 3, and the available historical soil sample analytical data is presented in Table 1. Historically, soil samples were collected from this site during two distinctly different time periods. One, during the fuel system removal and over-excavation activities, and initial boring and well installations that occurred between approximately 1987 and 1992; and two, during the more recent 2004 site investigation (borings HB-1 HB-2, and HB-3) of the residual hydrocarbons

remaining at the southwest corner of the site, and 2006 installation of well S-3R which replaced well S-3 at this same location.

1987 to 1992:

Soil samples collected from onsite locations between 1987 and 1992 reported maximum concentrations of

- TPHg at 4,800 milligrams per kilogram (mg/kg) (boring S-3 at 10 fbg),
- total petroleum hydrocarbons as diesel (TPHd) at 40 mg/kg (hydraulic lift's sampling at 7.5 fbg),
- total petroleum hydrocarbons as motor oil (TPHmo) at 580 mg/kg (hydraulic lift's sampling at 7.5 fbg),
- oil and grease (O&G) at 68 mg/kg (OWS sampling at 5.5 fbg.),
- benzene at 38 mg/kg (boring S-3 at 10 fbg),
- toluene at 400 mg/kg (boring S-3 at 10 fbg),
- ethylbenzene at 1,100 mg/kg (boring S-B at 10.5 fbg), and
- xylenes 1,100 mg/kg (boring S-B at 10.5 fbg).

Methyl tertiary butyl ether (MTBE) was not a constituent analyzed in soils during this period.

The soils that reported TPHd, TPHmo, and O&G concentrations beneath the former hydraulic lifts and OWS were later overexcavated, and the post excavation samples collected at these locations did not report any detectable residual TPHd, TPHmo, or O&G. A soil sample collected from beneath the former WOT reported only 4 mg/kg O&G, and did not report any detectable concentrations of TPHd, or benzene, toluene, ethylbenzene, or xylenes (BTEX). No soil samples were collected from the former single first generation UST, or from the nearby boring S-1, however, the initial groundwater sample collected from well S-1 reported only 0.005 micrograms per liter (µg/l) benzene and was below detection limits for TPHg, toluene, ethylbenzene, xylenes, TPHd, and TPHmo. Based on the above, the subsurface conditions in the vicinity of the fueling system features and service station facilities referenced are not areas of concern at the site.

Based on the soil samples collected onsite between 1987 and 1992, the soil impact at that time appears to have been mainly confined to the vicinity of the former second generation UST's and the former WOT. Of the 28 soil samples collected from these areas during that period, only four were collected from depths shallower then eight fbg. The remaining 24 soil samples were collected at depths between 8 and 14 fbg, and the concentrations of petroleum hydrocarbons reported in these samples maybe partially attributed to groundwater impacts in these areas. Further, given that these samples were collected between 16 and 20 years ago, the concentrations reported above have attenuated, and therefore no longer accurately reflect current soil impact conditions.

2004 to 2006:

More recent soil sampling occurred in May of 2004 (borings HB-1, HB-2, and HB-3), and in March of 2006 (well S-3R) in the southwest corner of the site (vicinity of the former second-generation UST's).

- TPHg was reported in soils in each of these four borings at concentrations ranging between 2.6 to 4,900 mg/kg.
- Toluene was reported in soils in HB-1 and HB-3 at concentrations ranging between 1.4 to 9.3 mg/kg.
- Ethylbenzene was reported in soils in each of the four borings at concentrations ranging between 0.020 to 81 mg/kg.
- Xylenes were reported in soils in HB-1, HB-2, and HB-3 at concentrations ranging between 0.0051 to 490 mg/kg.
- No detectable concentrations of benzene, MTBE, tertiary butyl alcohol (TBA), 1,2-dibromoethane (EDB), or 1,2-dichloroethane (1,2 DCA) were reported in any of the soil samples collected from any of these four soil borings.

Given that depth to water levels were measured at 6.96 fbg in nearby well SR-1 in April of 2004, and at 4.5 fbg in well S-3R in March of 2006, the concentrations of petroleum hydrocarbons reported in the samples that were collected from deeper than 7 fbg may be partially attributed to groundwater impact in this area. In addition, a comparison of the soil impact observed in HB-3 in 2004 to those reported from the adjacent S-3R in 2006 show significant attenuation in this vicinity over the nearly two year time period. Because these samples were collected in more recent investigations, CRA believes that these soil samples more accurately reflect current site conditions, particularly the samples most recently collected in this area from S-3R in 2006.

Based on the soil sampling, soil impact at this site was found mainly in and around of the vicinity of the former second generation UST's and the former WOT; however, as discussed above, soil impacts reported at the site between 1987 and 1992 were excavated and residual concentrations have attenuated and no longer represent current site soil conditions. Based on the more recent soil data from source-area soil borings HB-3 and S-3R, current site soil impact appears to be limited to the southwest corner of the site, downgradient from the former second generation UST's. As seen by the data from HB-3 and S-3R, the impacted material appears to be concentrated between 7 to 10 fbg (soil water interface), but vertically attenuates rapidly with depth. Groundwater impact at the site is being sampled and monitored, and is addressed further in the below sections.

HYDROCARBON DISTRIBUTION IN GROUNDWATER

The historical groundwater monitoring data for the wells associated with this site, through the Second Quarter 2008, along with results of the grab groundwater samples collected from borings HB-1, HB-2, and HB-3 in 2004, are presented in the data tables included in Attachment C. Please note that the benzene, TPHd, and TPHmo results shown on Table 2 in Attachment C for the initial May 2, 1988 groundwater sample collected from onsite well S-1 are not correct, and should be 0.005, <0.1, and <0.5 parts per million benzene, TPHd, and TPHmo, respectively. This correction has been noted on the data table. Currently, only the onsite source-area well S-3R, and the two offsite and downgradient wells S-6 and S-8 are being monitored. All the other wells have been properly abandoned with concurrence from ACHCSA. As discussed in Attachment A, documentation of these well destructions can be found in Cambria Environmental Technology Inc's, (Cambria's) January 14, 2000 *Monitoring Well Destruction Report*, Cambria's December 20, 2005 *Monitoring Well Destruction Report*, and Cambria's May 15, 2006 *Well Destruction, Well Installation, and Groundwater Monitoring Report – First Quarter 2006*. The depth to water, and the TPHg and benzene concentrations for Second Quarter 2008 groundwater monitoring event are presented on Figure 4.

Separate Phase Hydrocarbon (SPH): Separate phase hydrocarbons (SPH) was observed and measured in onsite well S-3 during four consecutive monitoring events between October of 1990 through July of 1991 and is shown in Table 2 in Attachment C. The maximum SPH was measured in this well in January of 1991 at 0.15 feet.

Chemicals of Concern: Based on the absence of detectable benzene reported in the soil samples from source-area borings HB-1, HB-2, HB-3, and S-3R, and the non-detectable to very low concentrations of benzene reported in the groundwater samples collected from these locations, benzene appears to have been mostly depleted from the groundwater plume and the residual plume is from an old and degraded source of gasoline. However, some low level benzene still exists, and thus based on historical groundwater analytical data collected from this site, the chemicals of concern in groundwater that warrant further evaluation herein, have been identified as TPHg and benzene. Historically, MTBE has only been reported in the offsite wells S-6, S-7, S-8, S-9 and S-11, with the highest historical concentrations of MTBE being report at 229 µg/l in S-8 in March of 2000. The MTBE historically reported in wells S-7, S-9, and S-11 was at low levels and each of these three wells reported three consecutive quarters of MTBE below detection limits prior to their abandonment in November of 1999. A concentration of MTBE in S-6 was last reported at 5.6 µg/l in July of 1998, and has subsequently been reported below detection limits since then. Similarly, a concentration of MTBE in S-8 was last reported at 70.4 µg/l in March of 2001 and has also subsequently been reported below detection limits since then. Detectable

concentrations of MTBE have not been reported in the onsite source-area well S-3R. Thus, MTBE is not a chemical of concern in the groundwater at this site.

Further evaluation of the TPHg and benzene plumes, including trend-line analyses, is presented below.

Total Petroleum Hydrocarbons as Gasoline (TPHg): Based on over twenty years of monitoring data, TPHg concentrations have decreased significantly. Historical maximum concentrations of TPHg were reported in source-area well S-3 at 46,000 µg/l in May of 1988, which also reported SPH in 1990 and 1991. This well was last gauged but not sampled in May of 1992, just prior to being paved over, and/or 'lost', during the site demolition and re-development activities. This is also the area that reported concentrations of TPHg up to 86,000 µg/l from the grab groundwater collected from soil boring HB-3 in May of 2004. Well S-3R was installed in this source-area in March of 2006 to replace well S-3. The initial groundwater sample collected from well S-3R reported 6,930 µg/l TPHg in March of 2006, which is an order of magnitude lower than the previous results from this area. Based on the non-detectable to very low concentrations of TPHg historically reported in onsite well S-1 and offsite wells S-10, S-7, S-9, S-11, S-4 and S-5, the horizontal extent of the TPHg plume has been delineated by these wells in their respective directions. As mentioned, currently the only three active wells being monitored are in the former source area (S-3R) and downgradient of this area (S-6 and S-8). During the most recent (Second Quarter 2008) groundwater monitoring event concentrations of TPHg were reported in these three wells at 450, 1,400, and 1,200 µg/l, respectively. Concentration vs. time graphs for TPHg in S-3R, S-6, and S-8 (Graphs 1, 2 and 3, respectively) show the decreasing trends of TPHg in these wells, and support a shrinking TPHg plume at the site.

Benzene: The benzene plume is essentially non-existent at this site. Benzene in onsite source-area well S-3R was initially reported at 1.99 µg/l (March 2006), which is the historical high for this well, and has been below detection limits for six of the last ten quarterly sample events, including the last three. Historical maximum concentrations of benzene in offsite downgradient well S-6 were reported at 1,400 µg/l in June of 1993, while more recently the benzene in this well has been at less than 10 µg/l in the last nine consecutive quarterly sample events, and at less than 2.4 µg/l in last four quarterly sample events. Historical maximum concentrations of benzene in offsite downgradient well S-8 were reported at 461 µg/l in March of 2000, and similar to S-6, more recently the benzene in this well has been reported at less than 1.5 µg/l in the last eight consecutive quarterly sample events. During the most recent Second Quarter 2008 groundwater monitoring event the only well that reported detectable concentrations of benzene was S-6, at 2.0 µg/l, with concentrations of benzene reported below minimum detection limits of < 0.50 µg/l in wells S-3R and S-8. The decreasing trends in the benzene plume is demonstrated in the concentration vs. time graph for benzene in S-6 shown in Graph 4, which also demonstrates a shrinking benzene plume.

REGULATORY STATUS REVIEW AND RECOMMENDATIONS

The site appears to meet the RWQCB criteria for a low-risk fuel site. As described by the January 5, 1995 RWQCB memorandum Regional Board Supplemental Instructions to State Water Board December 8, 1995, *Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*, a low-risk groundwater case has the following general characteristics:

- The leak has stopped and ongoing sources, including free product, have been removed or remediated;
- The site has been adequately characterized;
- The dissolved hydrocarbon plume is not migrating;
- No water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted; and
- The site presents no significant risk to human health or the environment.

Each of the low-risk groundwater case characteristics, as they relate to the site, is discussed below.

The Leak Has Stopped and Ongoing Sources, Including Free Product, Have Been Removed

All potential sources of petroleum hydrocarbon related releases at this site (the single former first generation fuel UST, the three former second generation fuel UST's, the former WOT, the four dispensers and product piping, the former OWS, and the three former hydraulic lifts) were removed from the site during the site demolition that occurred between 1988 and 1992. Further, during the removal of the former second generation fuel UST's, approximately 500 cubic yards of source-area soils were excavated from the vicinity of these UST's and disposed of at an approved offsite facility. In addition, during the removal of the OWS and the three hydraulic lifts, approximately 90 cubic yards of soils were excavated from the vicinity of these features and disposed of at an approved offsite facility. SPH has not been detected at this site since 1991.

The Site Has Been Adequately Characterized

Based data from 22 well and soil borings, and 27 soil samples collected during the removal the former Shell service station facilities, former fuel system features, and soil over-excavation activities, the majority of the residual hydrocarbon impact to soil at the site was found to be at the southwest corner of the site in the vicinity of, and downgradient of, the former second generation fuel UST's, and in the vicinity of the former WOT. Soil impact extends vertically to groundwater, but does not appear to be laterally extensive.

Based on the more recent soil sampling activities performed in 2004 and 2006, the predominant hydrocarbon constituent in the soils at the site appears to be TPHg. Benzene and MTBE do not appear to be chemicals of concern in the soils.

Eleven groundwater monitoring wells have been historically installed and sampled in all directions from the former source areas to investigate the extent of hydrocarbons in groundwater. The predominant hydrocarbon constituent in the groundwater at the site appears to be TPHg, and to a lesser extent benzene, with MTBE not appearing to be a chemical of concern in site groundwater. Currently only onsite source area well S-3R and offsite and downgradient wells S-6 and S-8 are being monitored on a quarterly basis. During the Second Quarter 2008 groundwater monitoring event, concentrations of TPHg were reported in wells S-3R, S-6, and S-8 at 450, 1,400, and 1,200 µg/l, respectively. Concentration vs. time graphs for TPHg in S-3R, S-6, and S-8 (Graphs 1, 2 and 3, respectively) show the decreasing trends of TPHg in these wells, and support a shrinking TPHg. Based on the non-detectable to very low concentrations of TPHg historically reported in onsite well S-1 and offsite wells S-10, S-7, S-9, S-11, S-4 and S-5, the horizontal extent of the TPHg plume has been delineated by these wells in their respective directions. During the Second Quarter 2008 groundwater monitoring event the only well that reported a detectable concentration of benzene was S-6, at 2.0 µg/l, with concentrations of benzene reported below minimum detection limits of < 0.50 µg/l in wells S-2 and S-8. The decreasing trends in the benzene plume is demonstrated in the concentration vs. time graph for benzene in S-6 shown in Graph 4, which also demonstrate a shrinking benzene plume. Given that only offsite well S-6 reported any detectable benzene at 2.0 µg/l, the benzene plume is delineated to the immediate vicinity of well S-2 by the surrounding wells.

The Dissolved Hydrocarbon Plume Is Not Migrating

The residual dissolved hydrocarbon plumes are decreasing based on over twenty years of data from site monitoring wells. TPHg concentrations are fluctuating but are decreasing overall (Graphs 1 through 3). Benzene, was reported in only one site well (S-6) in the Second Quarter of 2008 (at 2.0 µg/l), and has

decreased to below laboratory detection limits in other site wells. Graph 4 demonstrates the declining benzene plume in S-6.

No Water Wells, Deeper Drinking Water Aquifers, Surface Water, or Other Sensitive Receptors are Likely to be Impacted.

A utility survey was performed for the site in 2001 and identified a storm drain, water main, and a sanitary sewer line in the vicinity of the site in Telegraph Avenue at depths of approximately 7, 8, and 9 fbg, respectively. Given that depths to water at the site typically range from 6 to 10 fbg, there are times when the water table intersects some of these utilities, particularly at the upper end of its range. During a 2004 site investigation, Cambria attempted to collect samples from the vicinity of these utilities to further evaluate the potential for migration of contaminants to occur via these utility conduits, particularly the storm drain which has a drop inlet in the vicinity of former well S-3 that intersects the deeper utility trenches in Telegraph Avenue. However, due to the fact the presence of numerous multiple underground utilities beneath Telegraph Avenue presented real safety concerns, Cambria was unable to collect samples from the vicinity of the underground utilities identified in Telegraph Avenue. Although Cambria was unable to collect specific soil and water samples adjacent to or beneath targeted utilities, Cambria concluded that historical site data has shown that the groundwater flow direction is consistent regardless of the depth to water or season, and a review of historical isoconcentration contour maps for TPHg and benzene available at that time showed a consistent plume shape, regardless of the depth to groundwater or season. Therefore, there is no evidence that the utility conduits are acting as preferential pathways of contaminant migration. Further, during that site investigation utility vault boxes for the storm drain, electrical, and natural gas lines, as well as the storm drain drop inlet were accessed screened for organic vapors with a photo-ionization detector (PID) and none of these indicated the presence of any volatile constituents.

Cambria also performed a sensitive receptor survey to determine if any municipal or private water producing wells were located within a half-mile radius of the site by reviewing Department of Water Resources (DWR) files. No municipal or private water producing wells were determine to exist within a half-mile radius of the site (Figure 1). The closest surface water body is Lake Merritt, a tidal lake, located over a ½ mile to the southeast of the site. No other sensitive receptors were identified in the vicinity of the site. Given the lack of sensitive receptors identified within ½ mile radius of the site, and the fact that the hydrocarbon concentrations in the site wells are decreasing, there is little to no risk to water wells, deeper aquifers, surface waters, or other sensitive receptors in the vicinity.

The Site Presents No Significant Risk to Human Health or the Environment

The nearest receptor offsite is Lake Merritt, a tidal lake, located over a ½ mile to the southeast of the site. The site is a commercial property bounded by predominantly commercial businesses mixed with some residential uses, and it is unlikely that the subject property use, or local land use, will change from commercial to residential use in the foreseeable future. Although groundwater in this area cannot be precluded from being a potential future source of drinking water, it is not currently a source of drinking water. Given the mostly commercial nature of the local land use, the proximity to the tidal influenced lake Merrit, the Oakland Inner Harbor and San Francisco Bay, and the shallow groundwater depth, it is unlikely that the first water-bearing zone would be used as a source of drinking water in the foreseeable future. Further, in accordance with the June 1999 California Regional Water Quality Control Board, San Francisco Bay Region Groundwater Committee "East Bay Plain Groundwater Basin Beneficial Use Evaluation Report for Alameda and Contra Costa Counties, CA", the City of Oakland (among other cities) does not have plans to develop local groundwater resources for drinking water purposes, because of existing or potential saltwater intrusion, contamination, or poor or limited quantity.

In order to evaluate potential risks to human health and the environment posed by the residual soil and groundwater impacts at the site, Table A below compares the maximum concentrations of constituents in the most recent 2006 vadose zone soil data collected from the site and the most current groundwater samples from the Second Quarter 2008 sample event to the ESL's published in SFBRWQCB's *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater* (Interim Final – November 2007 [revised May 2008]). For the reasons presented above, site data is compared with the ESL's for sites where groundwater is not a source of drinking water.

TABLE A

Constituent of Concern	Recent Vadose Zone Soil Sample Maximum Concentrations Units in mg/kg [Boring S-3R, 8.5 fbg, March 2006]	ESL's for Shallow Soils Where Groundwater is Not Source of Drinking Water, Commercial Land Use (Table B) Units in mg/kg	Current Maximum Concentrations in Site Groundwater Units in µg/l [Well ID and Date]	ESL's for Groundwater In Shallow Soils Where Groundwater is Not a Source of Drinking Water, (Table B) Units in µg/l
TPHg	60	180	**1,400** [S-6, 5/28/08]	210
Benzene	<0.97	0.27	2.0 [S-6, 5/28/08]	46
Toulene	<0.97	9.3	1.3 [S-6, 5/28/08]	130
Ethylbenzene	<0.97	4.7	1.1 [S-3R, 5/28/08]	43
Xylenes	<1.9	11	3.4 [S-8, 5/28/08]	100
MTBE	Not Analyzed	8.4	<1.0 [S-3R, 9/17/07]	1,800
TBA	Not Analyzed	110	<10 [S-3R, 9/17/07]	18,000

The recent vadose zone soil results do not exceed the ESL's, and therefore, residual impacted soils do not pose a significant risk to human health or the environment. Natural attenuation of the contaminants in soil is expected to continue. Of the recent groundwater monitoring results, only TPHg (in all three remaining wells) exceed the non-drinking water ESL 210 µg/l. Further, a comparison with the drinking water ESL's shows that benzene in well S-6 exceeds the drinking water ESL of 1.0 µg/l, and all three remaining wells exceed the drinking water ESL of 100 µg/l for TPHg.

Although concentrations of TPHg in wells S-3R, S-6, and S-8, and concentrations of benzene in well S-6, exceed the ESL's for site where groundwater is a current or potential drinking water resource, Graphs 1 through 4 show decreasing concentration consistently for the past few years. In order to further evaluate the protection of the groundwater as drinking water resource, trend-line analysis extrapolation

calculations were performed on the graphs in order to estimate when the concentrations of TPHg in wells S-3R, S-6, and S-8, and concentrations of benzene in well S-6, would meet the respective drinking water ESL's. The results of the trend-line analysis and associated extrapolation calculations are presented in Table B, below.

TABLE B – Summary of Estimated Attenuation Rates

Well ID	Constituents of Concern	2Q08 Concentration Units in µg/l	Drinking Water ESL's (Table A)	Estimated Date to Reach ESL (Month/Year)	Years to Reach Drinking Water ESL's
S-3R	TPHg	450	100	April, 2009	1
S-6	TPHg	1,400	100	February, 2014	6
S-8	TPHg	1,200	100	July, 2012	4
S-6	Benzene	2.0	1.0	December, 2009	1

Based on the trend-line analysis extrapolation calculations from these graphs, the site groundwater should naturally attenuate to drinking water standards in less than 10 years.

Risk Evaluation Summary: The subject property is currently developed as commercial use and is expected to remain so for the foreseeable future. The residual soil and groundwater impact remaining at the site appears limited to vicinity at the southwestern corner of the property, with the groundwater impact continuing offsite in the southwest and downgradient direction. The residual soil and groundwater impact is mainly that of TPHg concentrations, with benzene virtually absent, and MTBE no longer present at the site. TPHg concentrations in groundwater during the Second Quarter 2008 sample event were reported in all three remaining wells at the site (S-3R, S-6, and S-8), but concentrations trends are decreasing, indicative of a shrinking hydrocarbon plume undergoing natural attenuation. Benzene concentrations in groundwater has decreased to below laboratory detection limits in all wells except offsite well S-2 which reported 2.0 µg/l during the Second Quarter 2008 sample event.

Given the,

- the concentrations of residual soil and groundwater impact that remain on the site,
- the decreasing concentration trends and shrinking groundwater plumes,
- the fact that natural attenuation is occurring and should continue to occur at the site,
- the risk evaluations and discussions presented above,
- and that drinking water ESLs will be met within a reasonable time frame,

CRA concludes that the residual petroleum hydrocarbon impact at the site poses very little, or no risk to human health or the environment currently, or in the foreseeable future .

RECOMMENDATION FOR CASE CLOSURE

Based on the site conditions and analytical data presented above, this site meets the RWQCB criteria for a low-risk fuel site. Petroleum impacts have been adequately delineated and the risk evaluation effectively demonstrates that the residual petroleum impacted soil and groundwater at the site do not pose a threat to human health or the environment currently, or in the foreseeable future. Natural attenuation is occurring at this site and is expected to continue to reduce residual concentrations of petroleum constituents. Therefore, additional investigation and monitoring at this site are no longer warranted. **CRA recommends that the ACHCSA consider granting case closure. Since additional monitoring is not warranted and would not provide new data for the site, CRA recommends that the monitoring program be suspended during the agency's review of this submittal and consideration of closure.** To assist with the closure review, a Site Closure Summary Form is included in Attachment D, for reference.

CLOSING

We appreciate your assistance with this project. Please call Dennis Baertschi at (707) 268-3813 if you have any questions or comments.

Sincerely,
Conestoga-Rovers & Associates, Inc.

Dennis Baertschi
Project Manager

Ana Friel, PG

Figures:
1- Site Vicinity and Well Location Map
2 - Site Plan
3 - System Removal and Soil Excavation Soil Sample Location Map
4 - Depth to Water and Chemical Concentration Map (May 28, 2008)

Tables:
1 - Historical Soil Analytical Data Table

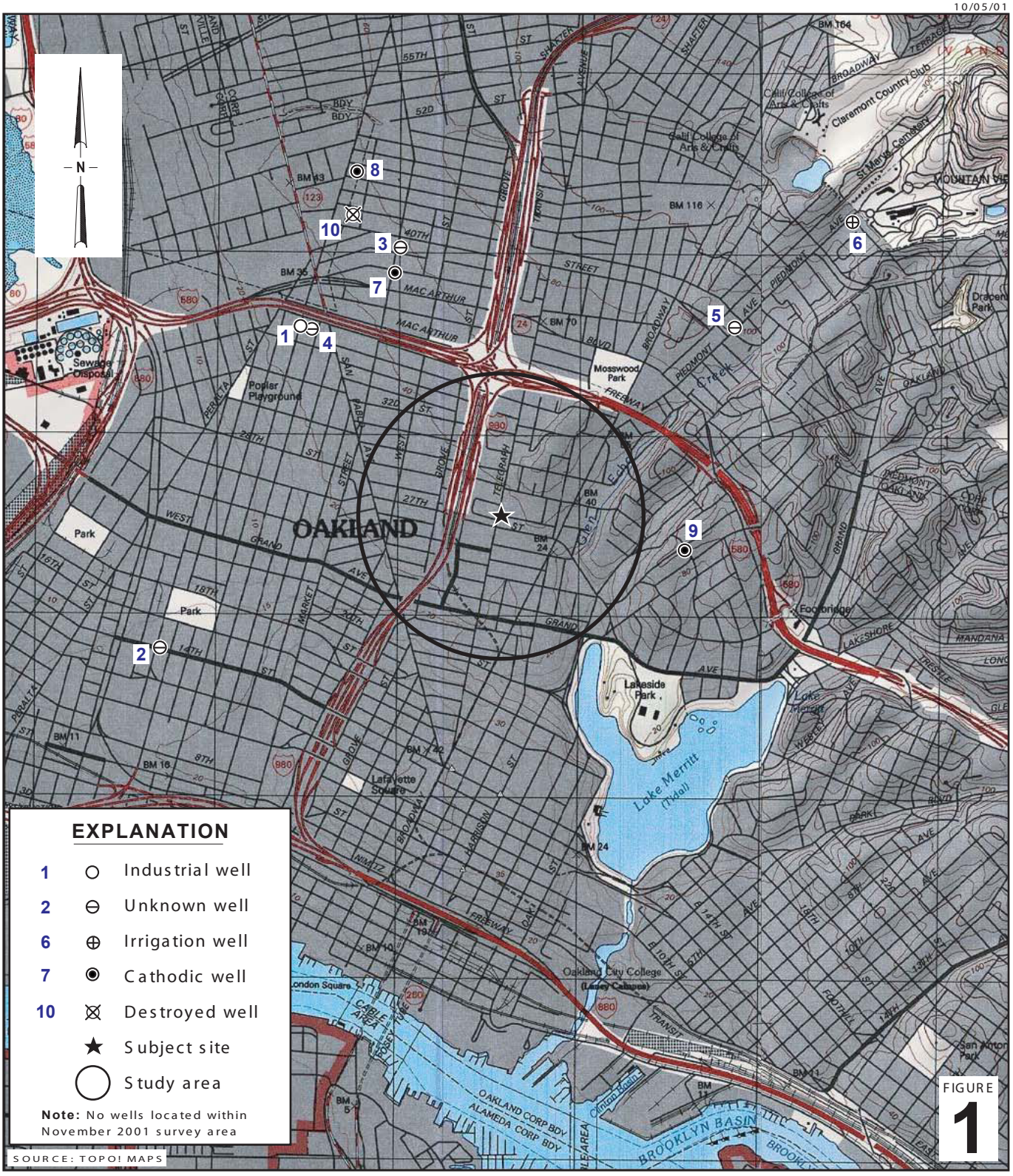
Graphs:
1 - S-3R TPHg Concentration Trend Graph
2 - S-6 TPHg Concentration Trend Graph
3 - S-8 TPHg Concentration Trend Graph
4 - S-6 Benzene Concentration Trend Graph

Attachments:
A - Site History and Previous Work
B - Boring Logs
C - Historical Groundwater Analytical Data Tables
D - Site Closure Summary Form

cc:
Denis Brown, Shell Oil Products US
Harmon Management Corporation

I:\Sonoma.Shell\Oakland 2800 Telegraph\REPORTS\2008 Closure Documents\Risk Eval & Closure Request.doc

10/05/01



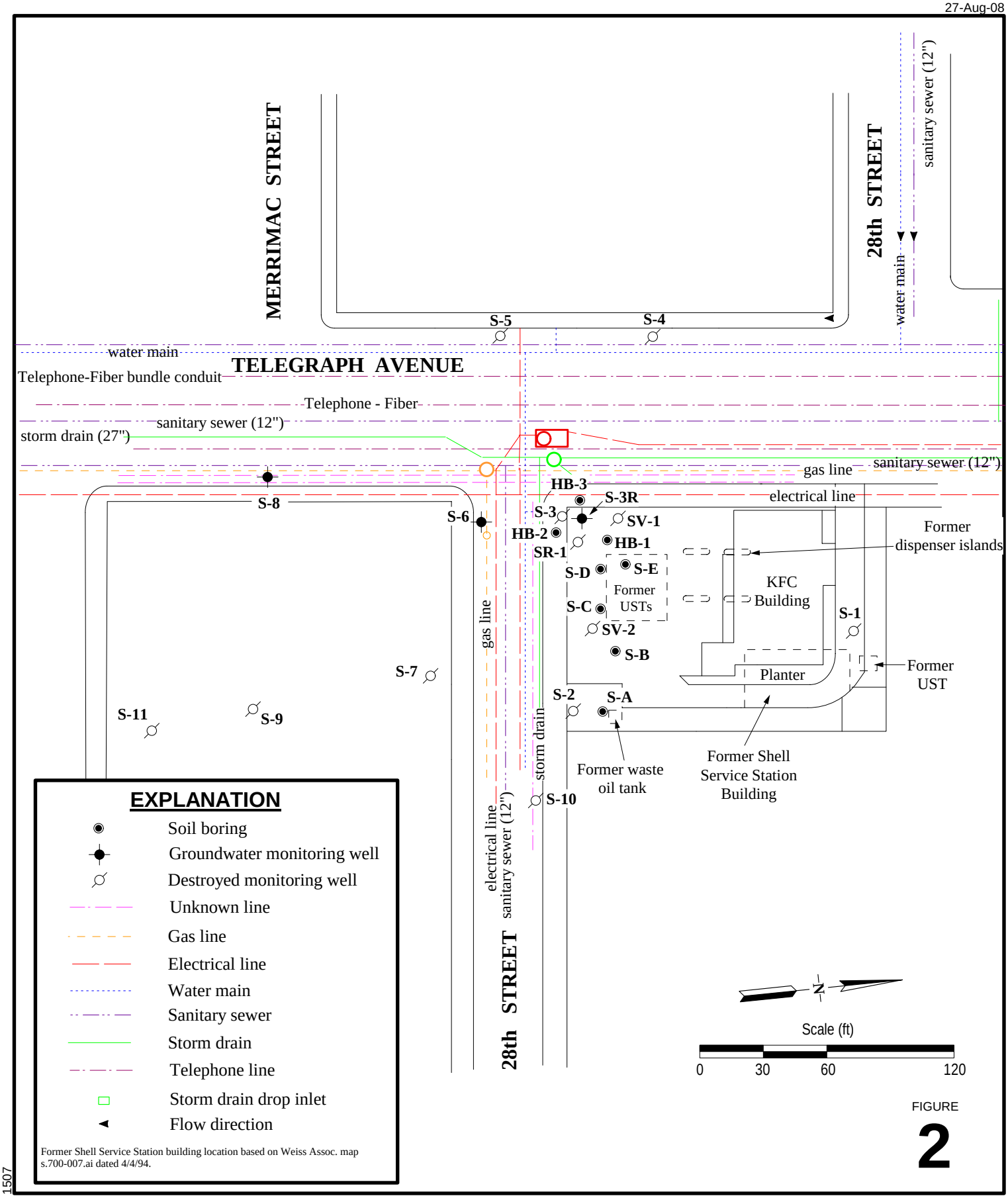
Former Shell Service Station / Current KFC Restaurant

2800 Telegraph Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Site Vicinity and Well Location Map

(1/2 Mile Radius)



FIGURE

2

1507

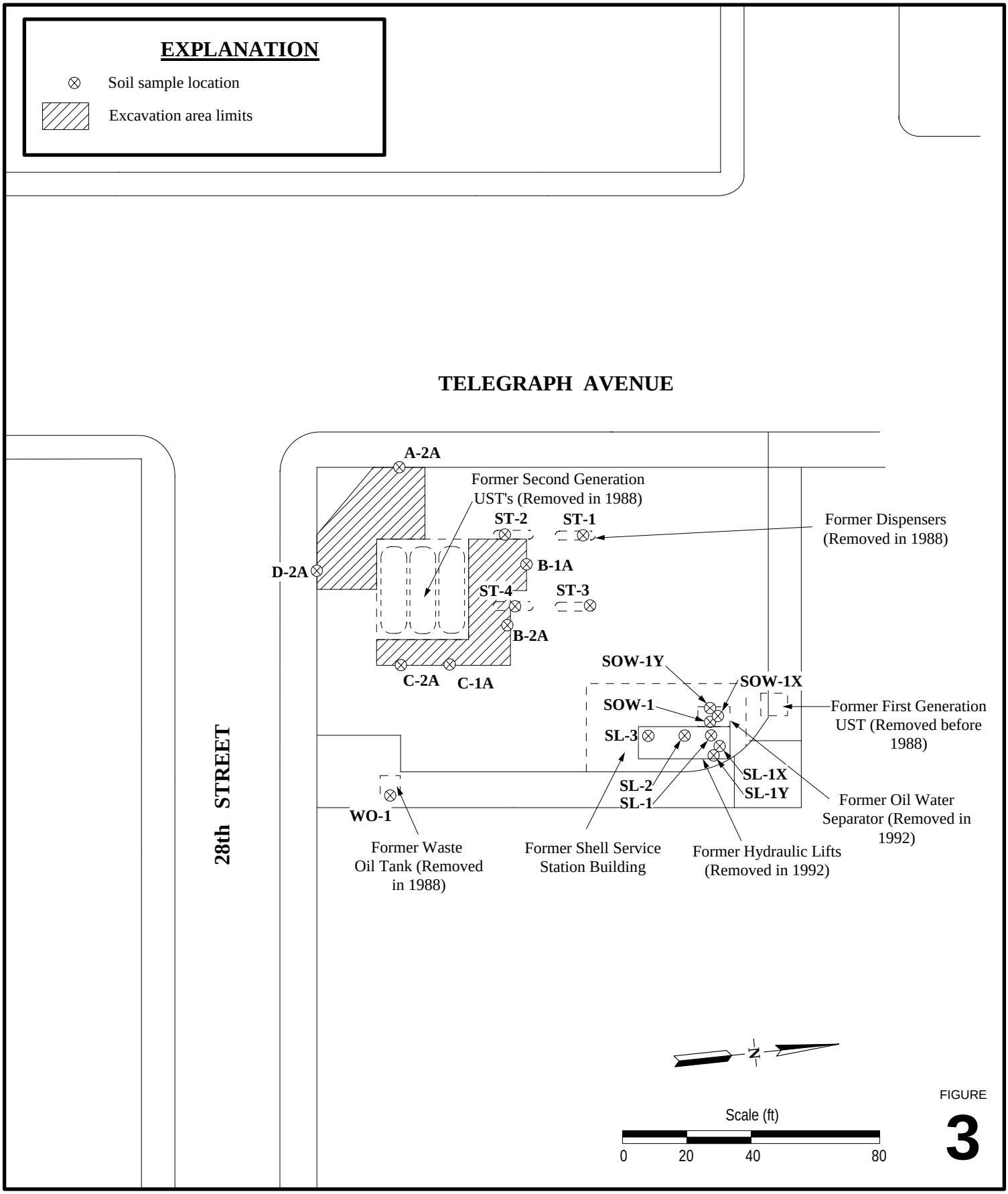
Former Shell Service Station

2800 Telegraph Avenue
Oakland, California

Site Plan

CONESTOGA-ROVERS & ASSOCIATES

27-Aug-08



I:\SONOMA.SHELL\OAKLAND 2800 TELEGRAPH\GRAPHICS MISC\SYS REMOVAL SOIL SAMPLE LOC MAP-AUG08.MCD

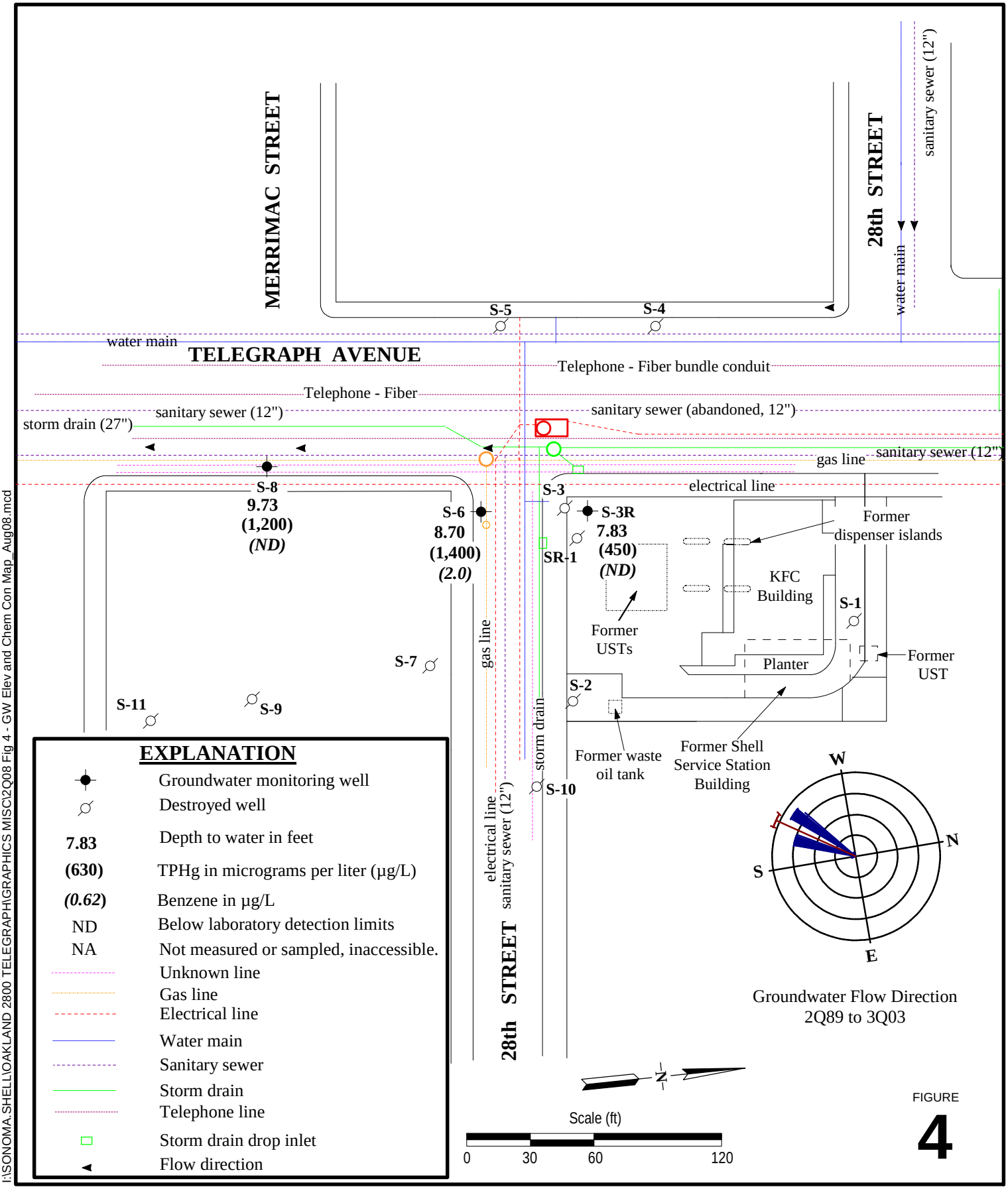
FIGURE

3

Shell-branded Service Station
2800 Telegraph Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

System Removal and Soil Excavation Soil Sample Location Map



I:\SONOMA.SHELL\OAKLAND 2800 TELEGRAPH\GRAPHICS MISC\2Q08 Fig 4 - GW Elev and Chem Con Map_Aug08.mcd

FIGURE

4

Former Shell Service Station

2800 Telegraph Avenue
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

Depth to Water and Chemical Concentrations Map

May 28, 2008

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 2800 Telegraph Avenue, Oakland, California

Sample	Depth (fbg)	Date Sampled	TPHg (mg/kg)	TPHd (mg/kg)	TPH-MO (mg/kg)	Oil & Grease (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	Total Lead (mg/kg)
S-3R-5.5	5.5	10-Mar-06	<0.85	NA	NA	NA	<0.0043	<0.0043	<0.0043	<0.0085	NA	NA	NA	NA
S-3R-8.5	8.5	10-Mar-06	60	NA	NA	NA	<0.97	<0.97	<0.97	<1.9	NA	NA	NA	NA
S-3R-10	10	10-Mar-06	1,100	NA	NA	NA	<0.87	<0.87	3.7	<1.7	NA	NA	NA	NA
S-3R-13.5	13.5	10-Mar-06	<0.94	NA	NA	NA	<0.0047	<0.0047	<0.0047	<0.0094	NA	NA	NA	NA
HB-1	5	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
HB-1	8	21-May-04	<50	NA	NA	NA	<0.50	1.4	<0.50	2.1	<0.50	<0.50	<0.50	NA
HB-1	10	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
HB-1	15	21-May-04	510	NA		NA	<0.50	2.2	9.4	53	<0.50	<0.50	<0.50	NA
HB-2	5	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
HB-2	8	21-May-04	16	NA	NA	NA	<0.025	<0.025	0.34	0.46	<0.025	<0.025	<0.025	NA
HB-2	12	21-May-04	2.6	NA	NA	NA	<0.0050	<0.0050	0.020	0.030	<0.0050	<0.0050	<0.0050	NA
HB-2	15	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	0.0051	<0.0050	<0.0050	<0.0050	NA
HB-2	17.5	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
HB-3	5	21-May-04	<1.0	NA	NA	NA	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	NA
HB-3	7	21-May-04	4,900	NA	NA	NA	<5.0	9.3	81	490	<5.0	<5.0	<5.0	NA
HB-3	11	21-May-04	4.8	NA	NA	NA	<0.0050	<0.0050	0.034	0.17	<0.0050	<0.0050	<0.0050	NA
HB-3	13.5	21-May-04	120	NA	NA	NA	<0.50	<0.50	2.3	12	<0.50	<0.50	<0.50	NA
SOIL SAMPLES COLLECTED BETWEEN 1987 AND 1992														
Hydraulic Lifts Sampling														
SL-1	7.5	18-Aug-92	NA	40	580	NA	NA	NA	NA	NA	NA	NA	NA	NA
SL-1X	10	14-Jul-92	NA	27	340	NA	NA	NA	NA	NA	NA	NA	NA	NA
SL-1Y	10.5	18-Aug-92	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
SL-2	8	18-Jun-92	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
SL-3	8	18-Jun-92	NA	<1.0	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA
Oil Water Separator Sampling.														
SOW-1	5.5	18-Jun-92	<1.0	<1.0	<1.0	68	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	5.1
SOW-1X	10	09-Jul-92	6.4	1.2	NA	59	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	<5
SOW-1Y	10.5	20-Aug-92	<1.0	<1.0	NA	<50	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA
Under Dispenser & Pipping Sampling														
ST-1	3	18-Jun-92	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	<5
ST-2	3	18-Jun-92	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	13
ST-3	3	18-Jun-92	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	6.2
ST-4	3	18-Jun-92	<1.0	NA	NA	NA	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	7.7

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 2800 Telegraph Avenue, Oakland, California

Sample	Depth (fbg)	Date Sampled	TPHg (mg/kg)	TPHd (mg/kg)	TPH-MO (mg/kg)	Oil & Grease (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	Total Lead (mg/kg)
SV-1	8	11-Nov-91	920	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
SV-2	8	11-Nov-91	130	NA	NA	NA	0.93	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-11	5.5	03-Oct-89	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-11	10.5	03-Oct-89	560	NA	NA	NA	3.9	2.1	17	85	NA	NA	NA	NA
SR-1	5.5	03-Oct-89	75	NA	NA	NA	<0.2	<0.3	0.60	2.0	NA	NA	NA	NA
SR-1	10.5	03-Oct-89	550	NA	NA	NA	1.3	20	14	82	NA	NA	NA	NA
S-8	10	24-Jul-89	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-8	15	24-Jul-89	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-9	5	24-Jul-89	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-9	10	24-Jul-89	220	NA	NA	NA	<0.2	<0.4	1.3	7.0	NA	NA	NA	NA
S-10	10	24-Jul-89	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
Second Generatuion UST Overexcavtion Sampling.														
A-2A	9	19-Jan-89	7.6	NA	NA	NA	1.3	0.42	0.35	1.3	NA	NA	NA	NA
B-1A	9	19-Jan-89	4.3	NA	NA	NA	0.063	<0.1	0.17	0.31	NA	NA	NA	NA
B-2A	9	19-Jan-89	140	NA	NA	NA	0.084	0.27	0.98	5.1	NA	NA	NA	NA
C-1A	9	19-Jan-89	130	NA	NA	NA	1.5	7.0	3.5	20	NA	NA	NA	NA
C-2A	9	19-Jan-89	48	NA	NA	NA	0.89	1.2	1.4	5.8	NA	NA	NA	NA
D-2A	9	19-Jan-89	130	NA	NA	NA	0.64	0.62	3.11	8.0	NA	NA	NA	NA
Second Generation UST Cavity Sampling														
A1	9	07-Dec-88	96	NA	NA	NA	<0.05	2.5	2.1	12	NA	NA	NA	NA
A2	9	07-Dec-88	2,800	NA	NA	NA	<0.05	12	26	160	NA	NA	NA	NA
B1	9	07-Dec-88	540	NA	NA	NA	<0.05	11	17	84	NA	NA	NA	NA
B2	9	07-Dec-88	220	NA	NA	NA	0.14	2.8	2.8	17	NA	NA	NA	NA
C1	9	07-Dec-88	170	NA	NA	NA	0.18	1.6	4.3	23	NA	NA	NA	NA
C2	9	07-Dec-88	150	NA	NA	NA	0.85	5.4	3.2	17	NA	NA	NA	NA
D1	9	07-Dec-88	71	NA	NA	NA	0.098	2.6	1.6	8.4	NA	NA	NA	NA
D2	9	07-Dec-88	1,400	NA	NA	NA	<0.050	1.1	7.9	57	NA	NA	NA	NA
Waste Oil Tank Sampling														
WO-1	9	07-Dec-88	NA	<1.0	NA	4	<0.05	<0.05	<0.05	<0.05	NA	NA	NA	NA

Table 1. Historical Soil Analytical Data, Former Shell Service Station, 2800 Telegraph Avenue, Oakland, California

Sample	Depth (fbg)	Date Sampled	TPHg (mg/kg)	TPHd (mg/kg)	TPH-MO (mg/kg)	Oil & Grease (mg/kg)	B (mg/kg)	T (mg/kg)	E (mg/kg)	X (mg/kg)	MTBE (mg/kg)	EDB (mg/kg)	EDC (mg/kg)	Total Lead (mg/kg)
S-4	9	01-Nov-88	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-5	9	01-Nov-88	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-6	9	01-Nov-88	4,800	NA	NA	NA	24	20	150	790	NA	NA	NA	NA
S-6	14	01-Nov-88	<5	NA	NA	NA	0.5	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-6	19	01-Nov-88	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-7	9	01-Nov-88	250	NA	NA	NA	0.8	<2.0	4.0	19	NA	NA	NA	NA
S-7	14	01-Nov-88	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-7	19	01-Nov-88	<5	NA	NA	NA	<0.05	<0.1	<0.1	<0.3	NA	NA	NA	NA
S-2	5	23-Apr-88	1,400	NA	NA	NA	4	36	230	230	NA	NA	NA	NA
S-2	10	23-Apr-88	1,100	NA	NA	NA	4	8	150	150	NA	NA	NA	NA
S-3	5	23-Apr-88	5	NA	NA	NA	<0.5	0.1	<0.4	<0.4	NA	NA	NA	NA
S-3	10	23-Apr-88	4,800	NA	NA	NA	38	400	870	870	NA	NA	NA	NA
S-A	10.5	1987	1,000	<10	<10	NA	15	110	240	240	NA	NA	NA	NA
S-B	10.5	1987	4,400	<10	<10	NA	26	170	1,100	1,100	NA	NA	NA	NA
S-C	5	1987	2,700	<10	<10	NA	24	280	700	700	NA	NA	NA	NA
S-D	8	1987	33	<10	<10	NA	0.05	<0.1	1.0	1.0	NA	NA	NA	NA
S-E	14	1987	<5	<10	<10	NA	0.09	<0.1	<0.4	<0.4	NA	NA	NA	NA
***SFBRWQCB lowest ESLs for soils where groundwater is a current or potential drinking water source:**														
ESL for Shallow Soils (<3 meters)			83	83	2,500	2,500	0.044	2.9	3.3	2.3	0.023	0.00033	0.0045	750
ESL for Deep Soils (>3 meters)			83	83	5,000	5,000	0.044	2.9	3.3	2.3	0.023	0.00033	0.0045	750
****SFBRWQCB lowest ESLs for soils where groundwater is not a current or potential drinking water source:**														
ESL for Shallow Soils (<3 meters)			180	180	2,500	2,500	0.27	9.3	4.7	11	8.4	0.044	0.48	750
ESL for Deep Soils (>3 meters)			180	180	5,000	5,000	2.0	9.3	4.7	11	8.4	1	1.8	750

Abbreviations:

fbg = Feet below grade

mg/kg = Milligrams per kilogram (parts per million)

<x = Not detected at reporting limit x.

NA = Not analyzed or not available

NOTE: For samples S-A through S-E, and from borings S-2 and S-3, analysis for ethylbenzene and xylenes were reported as "combined"

NOTE: EPA analytical methods for samples collected prior to May 21, 2004, were 8105, 8020, and 5030.

For the samples collected in 2004 and 2006, the following constituents were analyzed by EPA Method 8260:

TPHg = Total petroleum hydrocarbons as gasoline

BTEX = Benzene, toluene, ethylbenzene, and xylenes

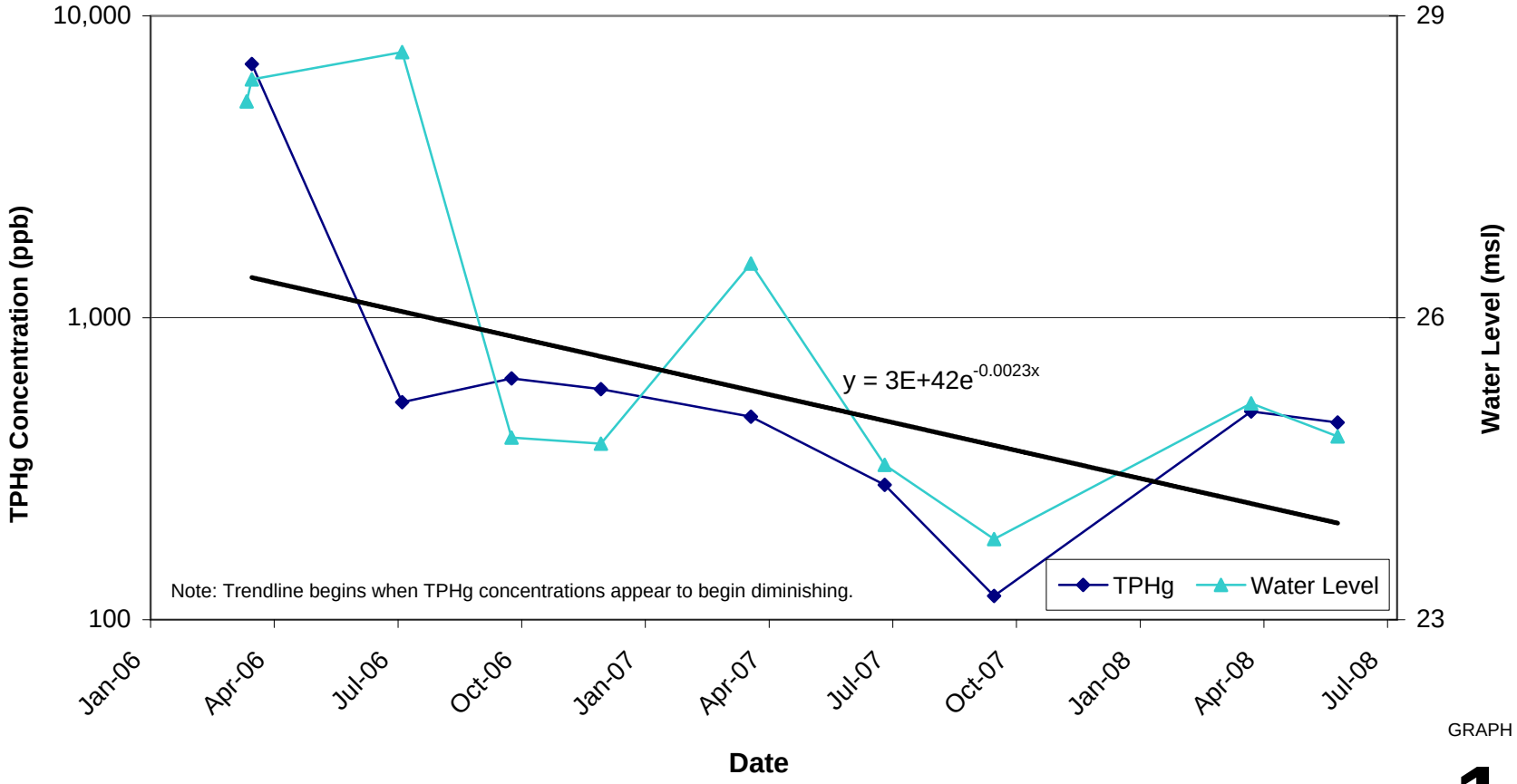
MTBE = Methyl tertiary butyl ether

EDB = Ethylene dibromide

EDC = Ethylene dichloride

* From Table A and Table C of SFBRWQCB ESLs. Ref: Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater - Interim Final - November 2007 (Revised May, 2008).

** From Table B and Table D of SFBRWQCB ESLs. Ref: Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater - Interim Final - November 2007 (Revised May, 2008).



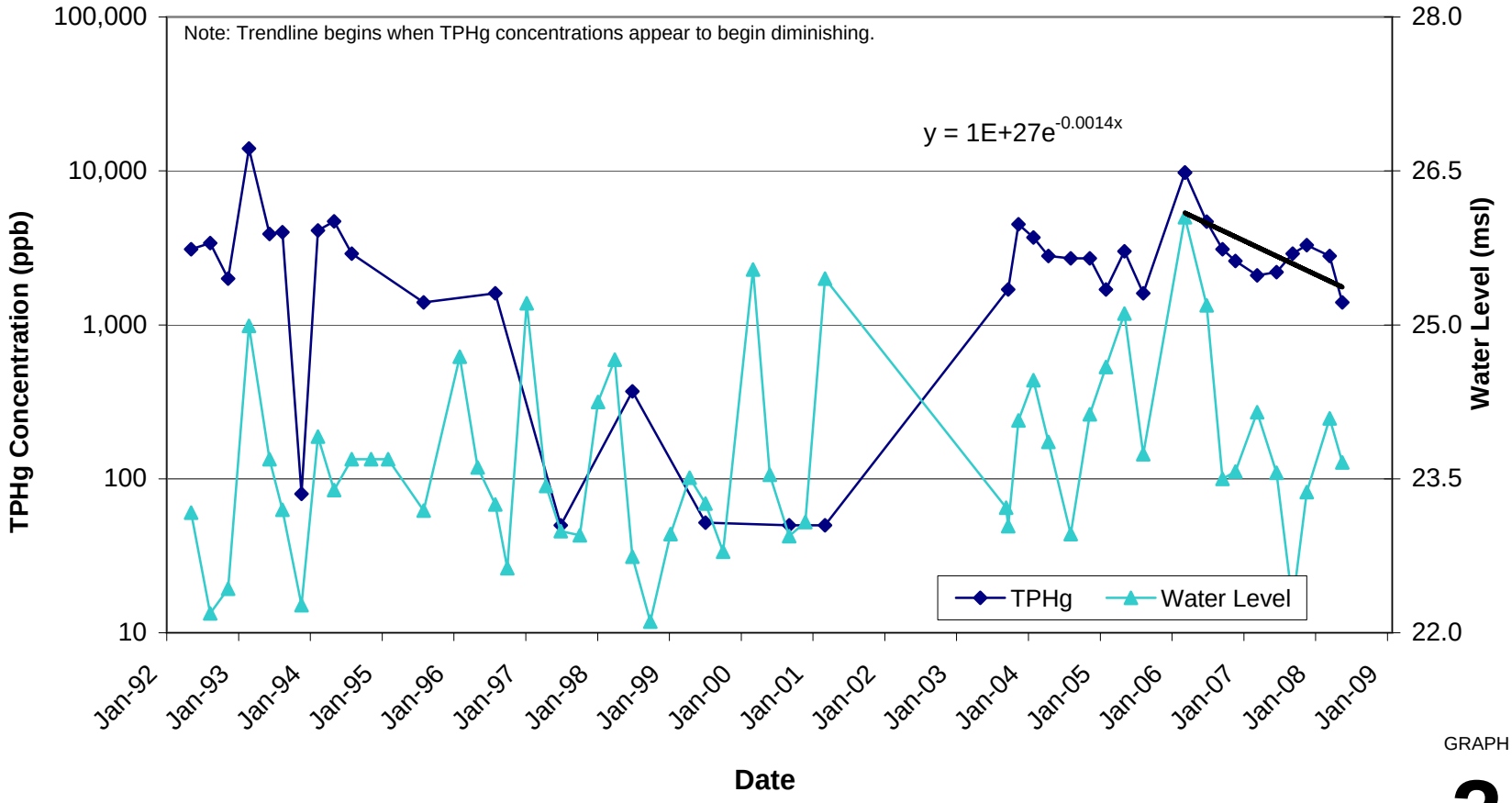
GRAPH

1

Shell-branded Service Station
2800 Telegraph
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

S-3R TPHg Groundwater Concentrations



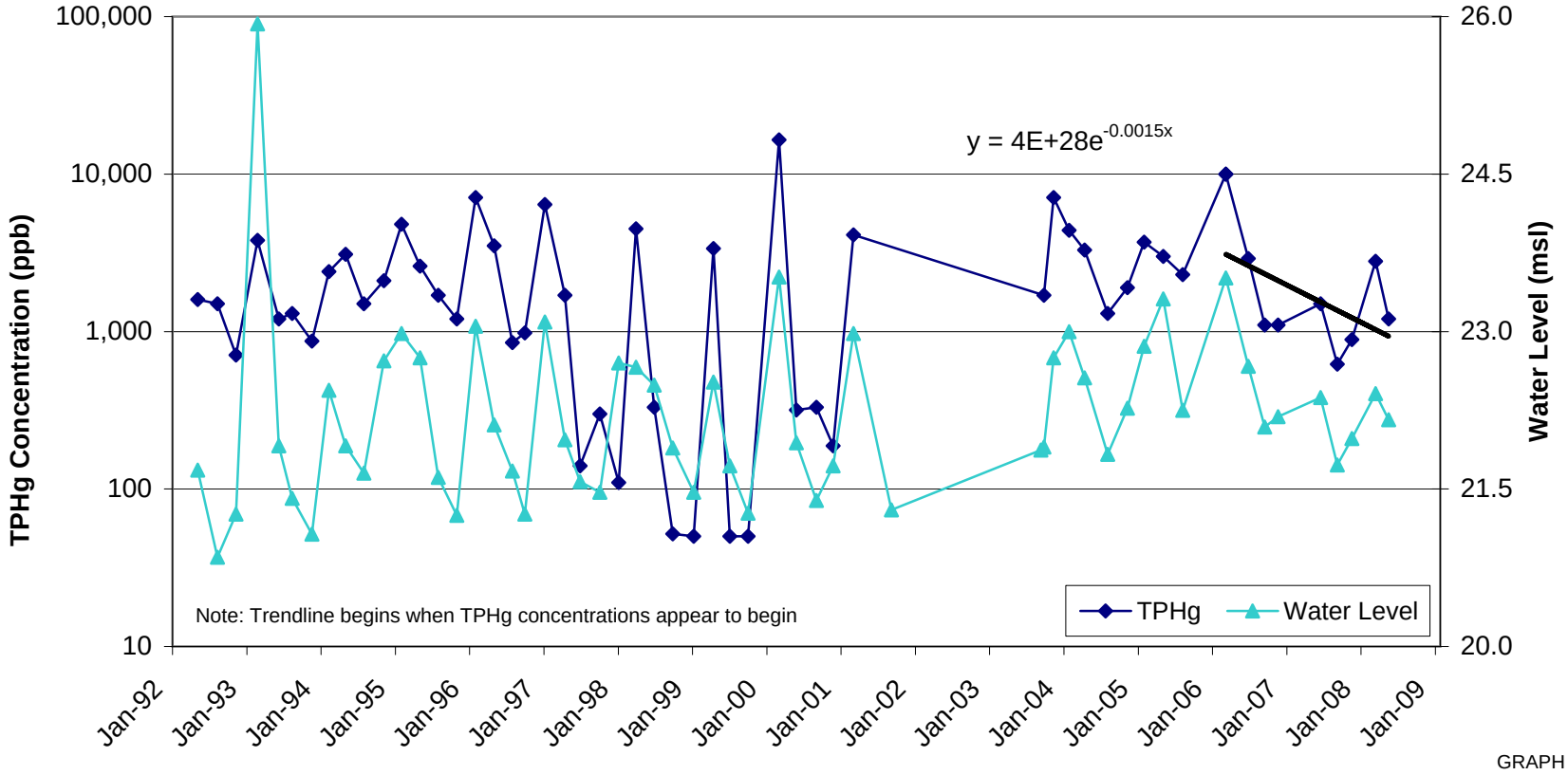
GRAPH

2

Shell-branded Service Station
2800 Telegraph
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

S-6 TPHg Groundwater Concentrations



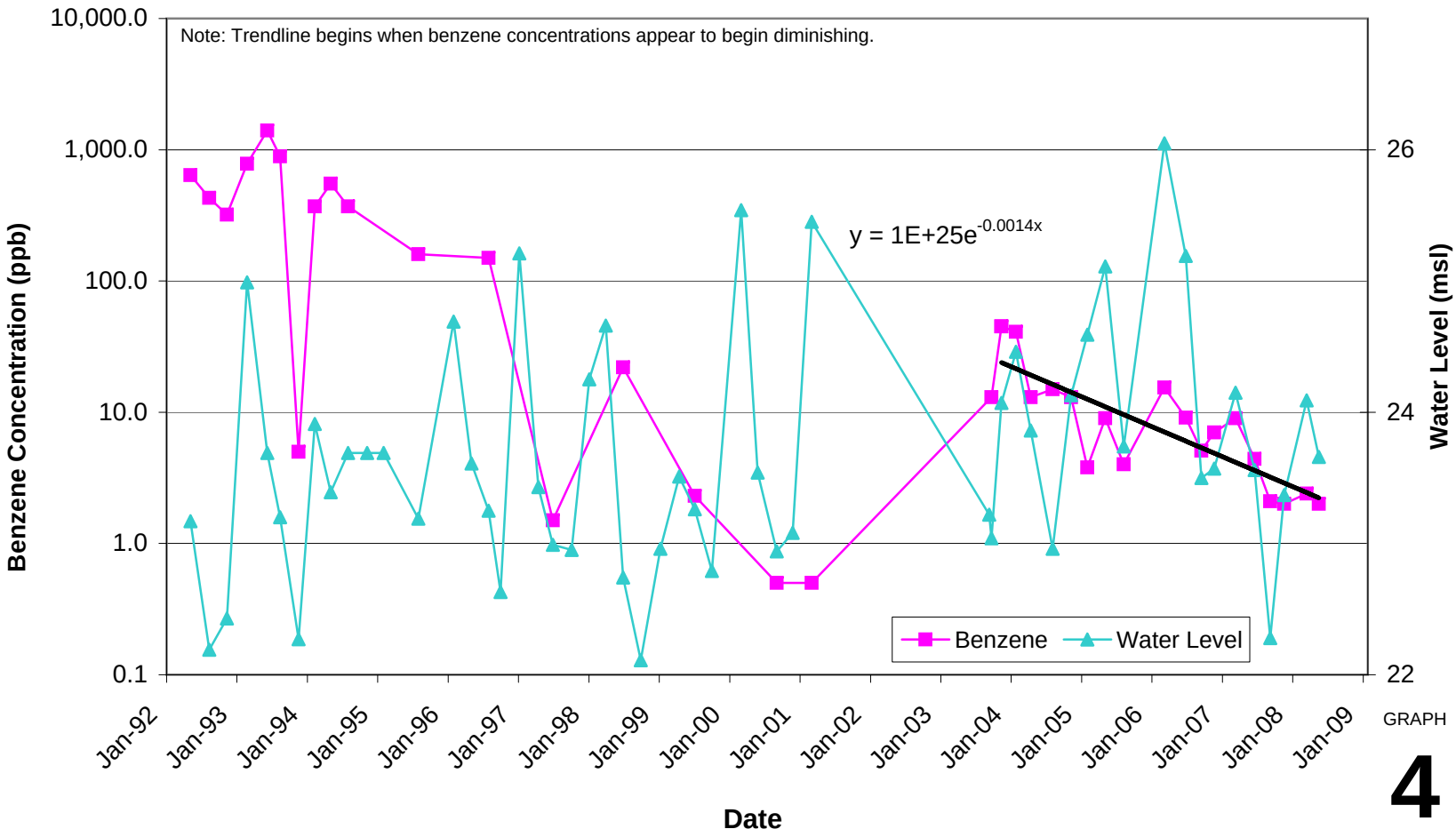
GRAPH

3

Shell-branded Service Station
2800 Telegraph
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

S-8 TPHg Groundwater Concentrations



GRAPH

4

Shell-branded Service Station
2800 Telegraph
Oakland, California

CONESTOGA-ROVERS & ASSOCIATES

S-6 Benzene Groundwater Concentrations

ATTACHMENT A

Site History and Previous Work

Site History and Previous Work

Former Shell Service Station
Current Kentucky Fried Chicken
2800 Telegraph
Oakland, California

Pre-1988 Soil Boring Installations: Some time prior to April of 1988, five soil borings (S-A, S-B, S-C, S-D, and S-E) were drilled and sampled in the vicinity the former second generation underground storage tank (UST) cavity. Although Conestoga Rovers & Associates (CRA) could not find any documentation, or any report, associated with the installation of these soil borings, CRA believes that these borings were installed in 1987, and CRA did find soil analytical results for soil samples collected from these borings in a data table on file. Soil samples were collected from borings S-A, S-B, S-C, S-D, and S-E at 10.5, 10.5, 5, 8, and 14, feet below grade (fbg), respectively, and were analyzed for total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), total petroleum hydrocarbons as motor oil (TPHmo), benzene, toluene, ethylbenzene, and xylenes (BTEX). Maximum concentrations of petroleum hydrocarbons were reported in the soil samples at 4,400 milligrams per kilogram (mg/kg) TPHg in S-B, 26 mg/kg benzene in S-B, 280 mg/kg toluene in S-C, 1,100 mg/kg ethylbenzene in S-B, and 1,100 mg/kg xylenes in S-B. None of the samples reported any concentrations of TPHd or TPHmo above the minimum detections limits of <10 mg/kg.

April 1988 Subsurface Investigation: Woodward-Clyde Consultants (WCC) installed onsite groundwater monitoring wells S-1, S-2, and S-3 in April of 1988. At that time the service station was no longer in operation and the fenced site contained a service station building, three second generation fuel UST's, a waste oil tank (WOT), two service islands with four fuel dispensers. A single former first generation fuel UST had previously been removed from the northeast corner of the site. Soil samples were collected from borings S-2 and S-3 at 5 and 10 fbg, and were analyzed for TPHg and BTEX. No soil samples were collected from boring S-1. Maximum concentrations of petroleum hydrocarbons were reported in the soil samples at 4,800 mg/kg TPHg, 38 mg/kg benzene, 400 mg/kg toluene, 870 mg/kg ethylbenzene, and 870 mg/kg xylenes (all in the soil sample from S-3 at 10 fbg). The wells were properly developed and were initially gauged and sampled on April 26, 1988. Based on the gauging of the wells, the groundwater flow direction was determined to be flowing toward the south west and well S-3. Maximum concentrations of petroleum hydrocarbons were reported in the initial groundwater samples in the downgradient well S-3 at 46,000 micrograms per liter (µg/l) TPHg, 2,700 µg/l benzene, 10,000 µg/l toluene, 10,000 µg/l ethylbenzene, and 10,000 µg/l xylenes. The groundwater sample in well S-1, located adjacent to and downgradient from the WOT was also analyzed for TPHd and TPHmo, which were reported below minimum detections limits of <100 and <500 µg/l, respectively. The details of this investigation were reported in WCC's June 17, 1988 *Environmental Assessment Report.*

November 1988 Subsurface Investigation: WCC installed offsite ground water monitoring wells S-4, S-5, S-6, and S-7 in November of 1988. Soil samples were collected from borings S-4 and S-5 at 9 fbg, and from borings S-6 and S-7 at 9, 14, and 19 fbg, and were analyzed for TPHg and BTEX. Detectable concentrations of TPHg were reported in two of the soil samples (S-6 at 9 fbg and S-7 at 9 fbg) at 4,800 mg/kg and 250 mg/kg, respectively. Detectable concentrations of benzene, ethylbenzene, and xylenes were reported in the same two soil samples at maximum concentrations of 24 mg/kg benzene, 150 mg/kg ethylbenzene, and 790 mg/kg xylenes (all in S-6). Toluene was reported in one soil sample (S-6 at 9 fbg) at 20 mg/kg. None of the other soil samples reported any detectable concentrations of TPHg or BTEX. The wells were properly developed and were initially gauged and sampled on November 8, 1988. Detectable concentrations of TPHg and BTEX were reported in the groundwater samples collected from wells S-6 and S-7, with maximum concentrations reported at 5,500 µg/l TPHg (S-6), 1,700 µg/l benzene (S-6), 430 µg/l toluene (S-7), 86 µg/l ethylbenzene (S-7), and 430 µg/l xylenes (S-7). No detectable TPHg or BTEX was reported in the initial groundwater samples from wells S-4 or S-5. The details of this investigation were reported in WCC's March 20, 1989 *Interim Environmental Assessment Report.*

December 1988 Fuel System Removal Sampling and Soil Over-excavation Activities: Kaprealian Engineering, Inc. (KEI) removed the three second generation fuel UST's, the single WOT, and the product dispensers and piping from the site in December of 1988. The four tanks were made of fiberglass and no apparent holes or cracks were observed in any of the tanks. Eight soil samples (A1, A2, B1, B2, C1, C2, D1, and D2) were collected from the sidewalls of the UST cavity at 9 fbg, (just above the water table of 9.5 fbg), and were analyzed for TPHg and BTEX. Although CRA could not find any documentation, report, or figure showing the locations of these samples, soil analytical results for soil samples were found in a data table on file. Concentrations of TPHg were reported in all eight samples ranging from 71 to 2,800 mg/kg. Concentrations of benzene were reported in four of the eight samples (B2, C1, C2, and D1) ranging from 0.098 to 0.85 mg/kg. Concentrations of toluene were reported in all eight samples ranging from 1.1 to12 mg/kg. Concentrations of ethylbenzene were reported in all eight samples ranging from 1.6 to 26 mg/kg. Concentrations of xylenes were reported in all eight samples ranging from 8.4 to 160 mg/kg.

One soil sample (WO-1) was collected from beneath the former WOT and was analyzed for TPHd, oil & grease (O&G), and BTEX. The WOT sample reported 4.0 mg/kg O&G, but was below detection limits for TPHd and BTEX.

Following the initial samples collected from the former first generation UST cavity, KEI returned to site to perform lateral soil excavation of the tank pit sidewalls from grade to the depth to water of approximately 9.5 fbg. Approximately 500 cubic yards of material was excavated from the vicinity of the former first generation UST cavity and disposed of at an approved offsite facility. Following the soil over-excavation activities, six additional soil samples (A-2A, B-1A, B-2A, C-1A, C-2A, and

D-2A) were collected from the sidewalls at 9 fbg, at select locations from the over-excavation boundaries. The samples were analyzed for TPHg and BTEX. Concentrations of TPHg were reported in all six samples ranging from 4.3 to 140 mg/kg. Concentrations of benzene were reported all six samples ranging from 0.063 to 1.5 mg/kg. Concentrations of toluene were reported in five of the six samples ranging from 0.27 to 7.0 mg/kg. Concentrations of ethylbenzene were reported in all six samples ranging from 0.17 to 3.5 mg/kg. Concentrations of xylenes were reported in all six samples ranging from 0.31 to20 mg/kg.

The details of the over-excavation and over-excavation sampling activities were reported in KEI's February 23, 1989 *Soil Sampling Report.*

July 1989 Subsurface Investigation: GeoStratigies, Inc. (GSI) installed offsite groundwater monitoring wells S-8, S-9, and S-10 in July of 1989. Soil samples were collected from boring S-8 at 10 and 15 fbg, from boring S-9 at 5 and 10 fbg, and from boring S-10 at 10 fbg, and were analyzed for TPHg and BTEX. Detectable concentrations of TPHg, ethylbenzene, and xylenes were reported in the soil sample from S-9 at 10 fbg at 220, 1.3 and 7 mg/kg, respectively. None of the other soil samples reported any detectable concentrations of TPHg or BTEX. The wells were properly developed and were initially gauged and sampled on August 3, 1989. Detectable concentrations of TPHg and BTEX were reported in the groundwater sample collected from well S-9 at concentrations of 1,600, 32, 120, 52, and 250 µg/l, respectively. No detectable TPHg or BTEX was reported in the initial groundwater samples from wells S-8 or S-10. The details of this investigation were reported in GSI's September 22, 1989 *Monitoring Well Installation Report.*

October and November 1990 Subsurface Investigation: GeoStratigies, Inc. (GSI) installed offsite groundwater monitoring well S-11 and onsite product recovery well SR-1 in October and November of 1990. Soil samples were collected from borings S-11 and SR-1 at 5.5 and 10.5 fbg, and were analyzed for TPHg and BTEX. Detectable concentrations of TPHg were reported in the soil samples from S-11 at 10.5 fbg, SR-1 at 5.5 fbg, and SR-1 at 10.5 fbg at concentrations of 560, 75, and 560 mg/kg, respectively. Detectable concentrations of benzene and toluene were reported in the soil samples from S-11 at 10.5 fbg and SR-1 at 10.5 fbg at concentrations of 3.9 and 1.3 mg/kg, and 2.1 and 20 mg/kg, respectively. Detectable concentrations of ethylbenzene and xylenes were reported in the soil samples from S-11 at 10.5 fbg, SR-1 at 5.5 fbg, and SR-1 at 10.5 fbg at concentrations of 17, 0.6, and 14 mg/kg, and 85, 2.0, and 82 mg/kg, respectively.

September and November 1991 Soil Vapor Extraction Well Installations, Soil Vapor Extraction Feasibility Test, and Remedial Action Plan: GeoStratigies, Inc. (GSI) installed onsite soil vapor extraction wells SV-1 and SV-2 on September 11, 1991. Soil samples were collected from borings SV-1 and SV-2 at 8 fbg, and were analyzed for TPHg and BTEX. TPHg was reported in the soil samples from SV-1 and SV-2 at 920 and 130 mg/kg, respectively, and benzene was detected reported

in the soil sample from SV-2 at 0.93 mg/kg. No groundwater samples were collected from either of these two vapor extraction wells. GSI implemented a soil vapor extraction pilot study on these two wells on September 24, 1991. The vapor extraction test results indicated that there was minimal well influence and low vapor recovery concentrations and concluded that soil vapor extraction was not a feasible remedial alternative to remove residual hydrocarbons for the soils at the site. Instead, a groundwater extraction and onsite treatment system was proposed as a potential feasible remedial alternative for the site. The details of the soil vapor extraction well installations, soil vapor extraction pilot test, and proposed groundwater extraction system alternative were reported in GSI's draft November 6, 1991 *Remediation Action Plan.*

June through August 1992 Oil Water Separator and Hydraulic Lift Removals, and Soil Excavation Activities: Prior to June of 1992 the site was demolished and the former service station building, the dispenser islands, and dispenser canopy were removed from the site. Between June and August of 1992, GSI observed the removal of the oil water separator (OWS) and the three hydraulic lifts that where formerly located inside the service station building, and collected soil samples at locations beneath the former OWS and hydraulic lifts, and at locations beneath the four former dispensers.

Four soil samples (ST-1, ST-2, ST-3 and ST-4) were collected at 3 fbg from beneath the product piping at each dispenser and were analyzed for TPHg, BTEX, and total lead. Total lead was reported in samples ST-2, ST-3, and ST-4 at 13, 6.2, and 7.7 mg/kg, respectively. No concentrations of TPHg or BTEX were reported in any of these four soil samples above the minimum detection limit.

One soil sample (SOW-1) was initially collected from the bottom of the OWS at 5.5 fbg and was analyzed for TPHg, TPHd, TPHmo, OG, BTEX, and total lead. Concentrations of O&G at 68 mg/kg and total lead at 5.1 mg/kg were reported in sample SOW-1, but none of the other constituents were reported above the minimum detection limits. Following receipt of the analytical data for sample SOW-1, additional soil in the vicinity was excavated both laterally and vertically and sample SOW-1X was collected from the bottom of the excavation at 10 fbg. Concentrations of TPHg at 6.4 mg/kg, TPHd at 1.2 mg/kg, and O&G at 59 mg/kg were reported in sample SOW-1, but none of the other constituents were reported above the minimum detection limits. A second stage of lateral and vertical excavation then occurred in this vicinity and sample SOW-1Y was collected from the bottom of the excavation at between 10.5 to 11.5 fbg. All the constituents analyzed in sample SOW-1Y were below the minimum detection limits.

Three soil samples (SL-1, SL-2, and SL-3) were initially collected from beneath each of the former three hydraulic lifts at 7.5 to 8. fbg, and were analyzed for TPHd and TPHmo. Concentrations of TPHd and TPHmo were reported in sample SL-1 at 40 and 580 mg/kg, respectively, but were reported below minimum detection limits in samples SL-2 and SL-3. Following receipt of the analytical data for sample SL-1, additional soil in the vicinity of sample SL-1 was excavated both laterally and

vertically and sample SL-1X was collected from the bottom of the excavation at 10 fbg. Concentrations of TPHd and TPHmo were reported in sample SL-1X at 27 and 340 mg/kg, respectively. A second stage of lateral and vertical excavation then occurred in this vicinity and sample SL-1Y was collected from the bottom of the excavation at between 10.5 to 11.5 fbg. No detectable concentrations of TPHd or TPHmo were reported in sample SL-1Y.

The overexcavation performed in the vicinity of the former OWS and hydraulic lifts resulted in the removal of approximately 90 cubic yards of impacted soil fro the site. Groundwater was encountered in this cavity and a grab groundwater sample (SH-1) was collected and analyzed for TPHg, TPHd, O&G, and BTEX. Concentrations of TPHg at 110 µg/l were reported in groundwater sample SH-1, but none of the other constituents were reported above the minimum detection limits.

The details of these sampling ands soil overexcavtion activities were reported in GSI's November 30, 1992 *Soil Sampling and Excavation Report.*

Fate of Onsite Groundwater Monitoring Wells S-2 and S-3, and Soil Vapor Extraction Wells SV-1 and SV-2: Although CRA could not find any documentation, or any report, associated with fate of onsite groundwater monitoring wells S-2 and S-3, and the soil vapor extraction wells SV-1 and SV-2, it appears that well S-2 was destroyed in April of 1993, that the downgradient well S-3 was either paved-over or covered, or otherwise 'lost' sometime around August of 1992, and that SV-1 and SV-2 was destroyed on some unknown date.

November 1999 Well Destructions: Cambria Environmental Technology, Inc. (Cambria) destroyed the offsite wells S-7, S-9 and S-11 on November 19, 1999 to accommodate the further development of the offsite parcel on which they were located. The well destruction activities were reported in Cambria's January 14, 2000 *Monitoring Well Destruction Report.*

June 2001 Sensitive Receptor Survey, Utility Conduit Survey, and Closure Request: Cambria performed a sensitive receptor survey to determine if any municipal or private water producing wells were located within a half-mile radius of the site by reviewing Department of Water Resources (DWR) files. No municipal or private water producing wells were determine to exist within a half-mile radius of the site. A utility conduit study was performed by Cambria to identify if any potential preferential pathways existed in the vicinity of the site. The utility survey included a review of utility maps and plans obtained from the City of Oakland, East Bay Municipal Utility District, and Pacific Gas and Electric Company to identify the locations of sanitary sewer, storm drain, water, natural gas, and electrical utility lines in the vicinity. Cambria concluded that the sanitary sewer, storm drain, and water lines may at times be deeper than site groundwater, thus could at times affect groundwater flow.

Cambria evaluated the site for potential case closure in the early 2001. Based on the First Quarter 2001 groundwater monitoring data, which reported that:

- Benzene and methyl tertiary butyl ether (MTBE) were reported at low concentrations in offsite well S-8, but were below detection limits in the other active site wells, S-1, S-4, S-5, S-6, S-10 and SR-1.

- TPHg was reported in moderate concentrations in offsite well S-8, but was the reflection of a seasonal fluctuation historically observed at the site was typically reported in this well at low concentrations, and was below detection limits in the other active site wells, S-1, S-4, S-5, S-6, S-10 and SR-1.

- Wells S-5 and S-10 had not contained TPHg, BTEX, or MTBE since construction in 1992.

- Wells S-1 and S-4 had not contained TPHg, BTEX or MTBE since 1993.

- Well S-6 had not contained TPHg, BTEX or MTBE since the third quarter 2000.

In conjunction with the fact that no municipal and private wells were identified within a half-mile radius of the site during the well survey, Cambria concluded that based on the lack of significant subsurface impact and the lack of any known receptors, that no further action was warranted at the site, and that the site be granted case closure by the Alameda County Health Care Services Agency (ACHCSA) and the Regional Water Quality Control Board (RWQCB).

The details of the sensitive receptor survey, utility conduit survey, and closure request were reported in Cambria's June 4, 2001 *First Quarter 2001 Monitoring Report, Sensitive Receptor Survey and Closure Request.*

October 2001 and October 2002 Closure Request Follow-up: Cambria submitted closure request follow-up letters to the ACHCSA dated October 24, 2001 and October 31, 2002, to request the status of the ACHCSA's review of the *First Quarter 2001 Monitoring Report, Sensitive Receptor Survey and Closure Request,* and the status of closing the environmental case at the site. Groundwater monitoring at the site was suspended during the period that ALCHCSA was reviewing the case closure request.

ALCHCSA September 2003 Response to Case Closure Request: Shell received a letter from ACHCSA dated September 3, 2003, which responded to Cambria's June 4, 2001 *First Quarter 2001 Monitoring Report, Sensitive Receptor Survey and Closure Request.* Citing the increase in petroleum hydrocarbons concentrations reported in offsite well S-8 during the First Quarter 2001 monitoring event as compared to the lower concentrations reported in this well during the Fourth Quarter 2000

monitoring event, ACHCSA denied the case closure request, and among other items, requested that the quarterly monitoring resume at the site, and requested further assessment regarding the potential for the utility conduits in the vicinity to act as preferential pathways.

May 2004 Subsurface Investigation: In response to ACHCSA request to Shell to further assess the potential for the utility conduits in the vicinity to act as preferential pathways, Cambria prepared and submitted a November 7, 2003 *Agency Response and Utility Conduit Investigation Work Plan*, which proposed three onsite and five offsite soil borings. Three onsite borings (HB-1, HB-2, and HB-3) were proposed in the vicinity of the "missing" downgradient well S-3, where separate phase hydrocarbons (SPH) had previously been reported in this well, and in what is considered the onsite source area, and five offsite borings (HB-4 through HB-7) were proposed at various locations on Telegraph Avenue to determine if migration of petroleum hydrocarbons was occurring along utility trenches. During the implementation of the work plan, only the onsite borings were able to be installed and sampled. Because of the numerous utilities that exist under Telegraph Avenue, Cambria was unable to find locations for the offsite borings that were not in conflict with a utility conduit or did not pose significant safety or utility damage concerns.

Cambria drilled and sampled onsite soil borings HB-1, HB-2, and HB-3 in May of 2004, which were extended to 16, 18, and 14 fbg, respectively. Soil samples were collected from each boring at various depths between 5 and 17.5 fbg, and were analyzed for TPHg, BTEX, MTBE, ethylene dibromide (EDB), and ethylene dichloride (EDC). Concentrations of TPHg were reported in all three borings ranging from 2.6 mg/kg to 4,900 mg/kg (HB-3 at 7 fbg). Concentrations of toluene were reported in borings HB-1 and HB-3 ranging from 1.4 to 9.3 mg/kg. Concentrations of ethylbenzene were reported in all three borings ranging from 0.020 mg/kg to 81 mg/kg. Concentrations of xylenes were reported in all three borings ranging from 0.0051 mg/kg to 490 mg/kg. No detectable concentrations of benzene, MTBE, EDB, or EDC were reported in the soil samples collected from either of these three borings.

A grab groundwater sample was collected from each of the three borings, and the groundwater samples were analyzed for TPHg, BTEX, MTBE, tertiary butyl ether (TBA), tertiary amyl methyl ether (TAME), ethyl tertiary butyl ether (ETBE), di-isopropyl ether (DIPE), EDB, and EDC. Concentrations of TPHg were reported in the groundwater sample from borings HB-1, HB-2, and HB-3 at 70,000, 2,500, and 86,000 µg/l, respectively. Concentrations of toluene were reported in groundwater in borings HB-1 and HB-3 at 1,300 µg/l. Concentrations of ethylbenzene were reported in the groundwater sample from borings HB-1, HB-2, and HB-3 at 3,200, 110, 4,300 µg/l, respectively. Concentrations of xylenes were reported in the groundwater sample from borings HB-1, HB-2, and HB-3 at 15,000, 200, and 21,000 µg/l, respectively. No detectable concentrations of benzene, MTBE, TBA, TAME, ETBE, DIPE, EDB, or EDC were reported in any of the three groundwater samples.

During the site investigation three offsite adjacent utility vaults (for the storm drain, the electrical, and the natural gas lines), the storm drain inlet immediately adjacent to boring HB-3, and the well vault boxes and well casings for onsite well SR-1 and offsite wells S-6 and S-8 were screened with a photo-ionization detector (PID) for organic vapors. With the exception of 13.8 parts per million recorded from with the well casing at S-8, none of the other sample points indicated the presence of any detectable concentrations of vapors.

The details of the investigation were reported in Cambria's November 30, 2004 *Groundwater Monitoring Report – Second and Third Quarter 2004 and Dote Investigation Report.*

December 2005 Well Destructions: Cambria destroyed the two onsite wells S-1 and SR-1, and the three offsite wells S-4, S-5, and S-10, on November 11, 2005. During the field activities attempts were made to locate the "missing" onsite well S-3 by use of a geophysical survey. Well S-3 was finally located buried in the planter adjacent to the sidewalk along 28th Street, and was found to be completely full of debris and soil. The well destruction activities were reported in Cambria's December 20, 2005 *Monitoring Well Destruction Report.*

March 2006 Well Destruction and Well Installation: In March of 2006 Cambria destroyed well S-3 and replaced it with well S-3R in the approximate same vicinity. Onsite down gradient well S-3R is considered the onsite source area well, and is being monitored quarterly with the offsite and downgradient wells S-6 and S-8. Four soil samples were collected from boring S-3R at 5.5, 8.5, 10, and 13.5 fbg, and were analyzed for TPHg and BTEX. Concentrations of TPHg were reported in the soil sample from 8.5 fbg and the soil sample from 10fbg at 60 and 1,100 mg/kg, respectively, and concentrations of ethylbenzene were reported in the sample from 10 fbg at 3.7 mg/kg. No detectable concentrations of benzene, toluene, or xylenes were reported in any of the soil samples. The details of the well destruction and well replacement activities were reported in Cambria's May 15, 2006 *Well Destruction, Well Installation and Groundwater Monitoring Report-First Quarter 2006.*

Groundwater Monitoring: With the exception of the period between the second quarter of 2001 through the second quarter of 2003, groundwater monitoring has been performed at the site since May of 1988. Free product was historically observed and measured in onsite well S-3 between October 1990 and July 1991. Maximum historical concentrations of select petroleum hydrocarbons have been reported in the wells at the site at 47,000 µg/l TPHg (onsite well S-3, May 1989), 3,700 µg/l benzene (offsite well S-6, May 1989), and 229 µg/l MTBE (offsite well S-8, March, 2000, EPA Method 8020). Currently only onsite source well S-3R, and offsite and downgradient wells S-6 and S-8 are being monitored quarterly. During the most recent Second Quarter 2008 sample event, wells S-3R, S-6, and S-8 reported 450, 1,400, and 1,200 µg/l TPHG, respectively, only well S-6 reported benzene at a concentrations of 2.0 µg/l, and MTBE was below minimum detection limits in all three wells.

ATTACHMENT B

Boring Logs

Table 1. Well/Boring Data, Former Shell Service Station, 2800 Telegraph, Oakland, California

Well/ Boring ID	Boring Type	Completion Date	TOC Elev (ft msl)	Total Depth (fbg)	Soil Sample Interval or Depths Ft)	GW Depth First Encountered	Screen Diam. (In)	Screen Depth (ft) Top	Bottom	Comments
S-1	Well HSA	22-Apr-88	35.31	28.5	5	12	3	3.5	27.5	Well Destroyed on 11/11/05
S-2	Well HSA	22-Apr-88	33.91	28.5	5	12	3	3.5	27.5	Well Destroyed in 1993
S-3	Well HSA	22-Apr-88	33.56	28.5	5	12	3	3.5	27.5	Well Destroyed on 3/10/06
*S-4	Well HSA	31-Oct-88	34.08	30.5	--	--	--	--	--	Well Destroyed on 11/11/05
*S-5	Well HSA	31-Oct-88	33.42	30.5	--	--	--	--	--	Well Destroyed on 11/11/05
*S-6	Well HSA	31-Oct-88	32.59	22.0	--	--	--	--	--	
*S-7	Well HSA	31-Oct-88	33.33	30.5	--	--	--	--	--	Well Destroyed on 11/11/05
S-8	Well HSA	24-Jul-89	31.97	19.5	5	16	3	9.5	19.5	
S-9	Well HSA	17-Jul-89	31.86	32.0	5	14	3	14.0	29.5	Well Destroyed on 11/19/99
S-10	Well HSA	24-Jul-89	32.95	30.5	5	14	3	12.0	24.0	Well Destroyed on 11/11/05
S-11	Well HSA	03-Oct-89	30.78	30.5	5	14	3	9.0	19.0	Well Destroyed on 11/19/99
SR-1	Recovery Well HSA	03-Oct-89	32.59	35.0	5	14	6	10.0	35.0	Well Destroyed on 11/11/05
SV-1	Vadose Well HSA	11-Sep-91	NA	9.9	4, 7, 9	9	2	3.0	8.0	Unknown Date of Destruction
SV-2	Vadose Well HSA	11-Sep-91	NA	8.0	4, 7	NA	2	3.0	8.0	Unknown Date of Destruction
S-3R	Well HSA	10-Mar-06	32.65	14	C	9	4	5.0	14.0	This well replaced S-3 as onsite source well

Abbreviations:

TOC = Top of Casing referenced to mean sea level (msl)

Elev = Elevation

GW = Groundwater

ft = feet

ft msl = Feet referenced to mean sea level

fbg = Feet below grade

C = Continuous

Diam. = Diameter

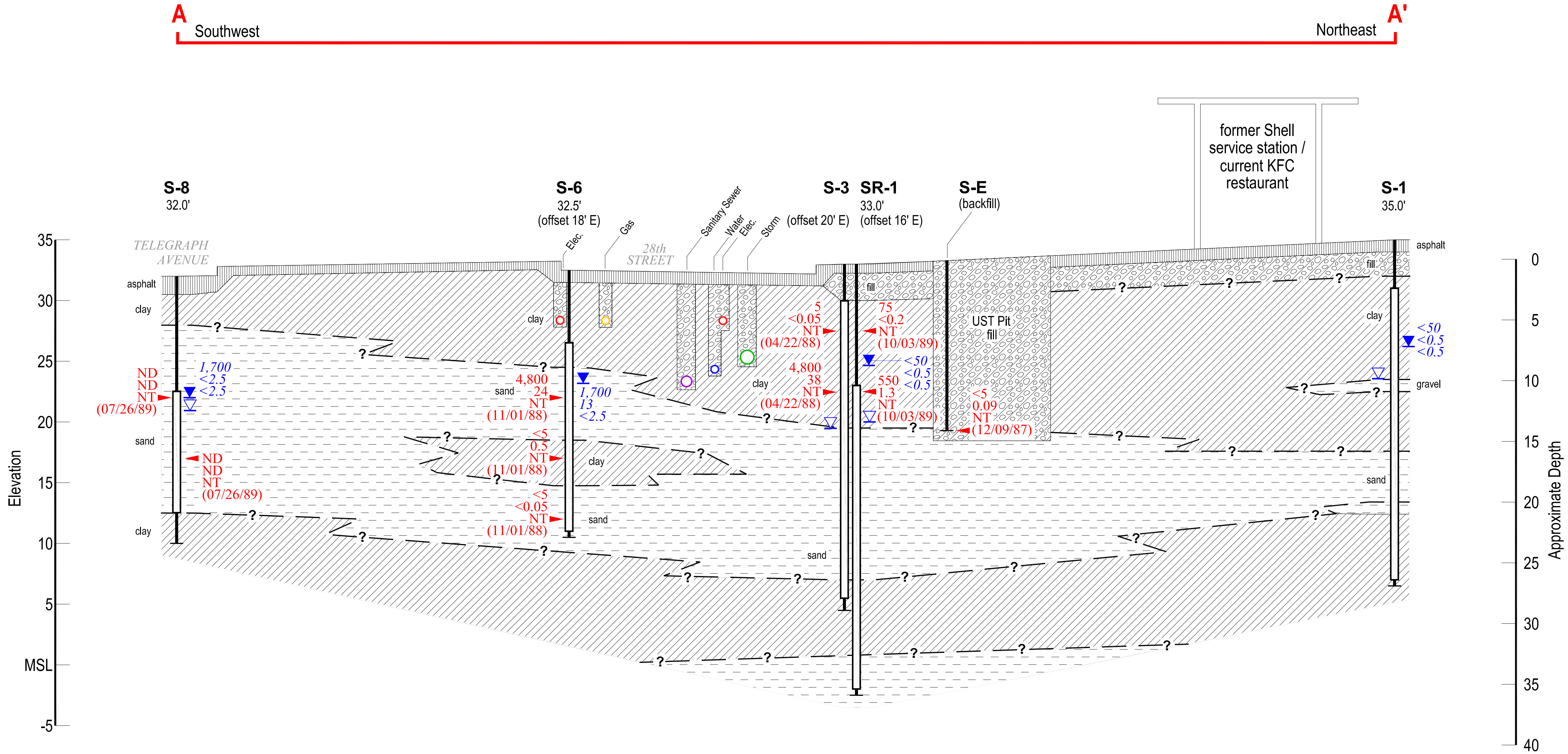
In = inches

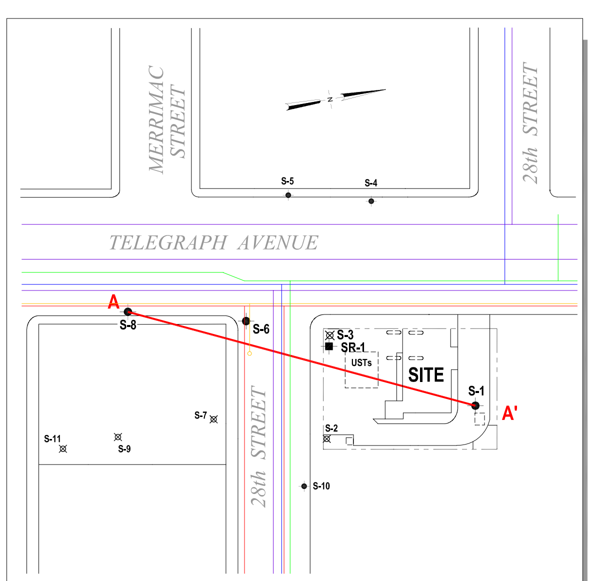
HSA = Hollow-stem auger

NA = Data not available

First encountered groundwater in fbg measured on drilling date

*S-4, etc... = No boring logs available for construction specifications or other details





EXPLANATION

= Moderate Permeability Soils - Silts and Clays

= High Permeability Soils - Sands and Gravels

= Fill (Tank Pit)

Approximate sample location

TPHg / Benzene / MTBE — Hydrocarbon concentrations in Soil, in parts per million

ND — Analyte not detected

NT — Analyte not tested

Well ID — Well Designation

Elev. — Top of Casing Elevation

Groundwater Monitoring Well

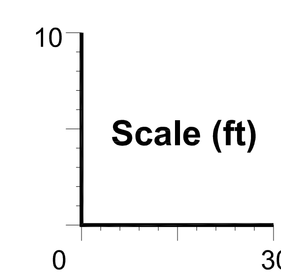
Well Screen Interval

Bottom of boring

Initial Groundwater level

Depth to Groundwater on 09/29/03

TPHg / Benzene / MTBE — Hydrocarbon concentrations in Groundwater, in parts per billion on 09/29/03



FIGURE

3

Geologic Cross Section A-A'

CAMBRIA

Former Shell Service Station / Current KFC Restaurant

2800 Telegraph Avenue
Oakland, California

G:\OAKLAND 2800 TELEGRAPH\FIGURES\X-SECTION-A.DWG

Woodward-Clyde Consultants

PROJECT NAME GETTLER RYAN NO. 5820011A

MONITORING WELL LOCATION 2800 Telegraph Avenue, Oakland CA: S-1		ELEVATION AND DATUM	
DRILLING AGENCY Bay Land Drilling	DRILLER	DATE STARTED / DATE FINISHED 4/22/88	
DRILLING EQUIPMENT CME - 55 Truckmount		COMPLETION DEPTH 28.5'	SAMPLER Modified California Sampler
DRILLING METHOD 8" HSA	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. 5	UNDIST.
SIZE AND TYPE OF CASING 3" PVC		WATER LEVEL FIRST 12'	COMPL. N/A / 24 HRS. —
TYPE OF PERFORATION 0.020" slotted	FROM 27.5 TO 2.5 FT.	LOGGED BY: S. Bluestone	CHECKED BY: M. Borkowski
SIZE AND TYPE OF PACK 12/20 Monterey Sand	FROM 28.5 TO 2.0 FT.		
TYPE OF SEAL NO. 1 Bentonite Pellets	FROM 2.0 TO 1.5 FT.		
NO. 2 Concrete Grout	FROM 1.5 TO G.S. FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALT		
			SILTY SAND (Cuttings) dark brown, with fine to medium sand grains, little coarse sand, moist, loose	SM	
5	1	pushed abt 300 psi	SILTY CLAY light olive gray and brown mottled, little fine sand, low plasticity, soft, moist, appears to be interbedded with thin layers (0.5' - 1' thick) of Silty Sand, trace to little black organic debris — H Nu = 0 No Hydrocarbon odor	CL	
10	2	4 4 13	CLAY light brown to olive gray mottled, little fine sand, medium plasticity, stiff, wet — H Nu = 0 No Hydrocarbon odor	CL	
			CLAYEY GRAVEL? (Cuttings) (according to driller)	GC(?)	
15	3	4 9 25	CLAYEY SAND to SANDY CLAY light brown and gray mottled, little coarse sand, some medium to fine sand, little gravel to 1.5", moderate plasticity, medium dense — H Nu = 0 No Hydrocarbon odor	SC-CL	
20	4	5 7 10	CLAYEY GRAVEL to CLAYEY SAND with interbeds of SANDY CLAY to abt. 5" & SILTY SAND light brown to gray mottled, moderate plasticity saturated, medium dense, saturated — H Nu = 0 No Hydrocarbon odor	GC-SC, CL, SM	
			GRAVEL (according to driller)		
25	5	4 6 8	CLAYEY SAND to SANDY CLAY olive gray to light brown mottled, fine to medium sand, moderate plasticity, stiff (or med. dense), saturated — H Nu = 0 No Hydrocarbon odor	SC-CL	
30			Bottom of Well: 28.5 feet		
35					

LOG OF MONITORING WELL NO. S-1 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME GETTLER RYAN NO. 8820011A

MONITORING WELL LOCATION 2800 Telegraph Avenue, Oakland CA; S-2		ELEVATION AND DATUM	
DRILLING AGENCY Bay Land Drilling	DRILLER	DATE STARTED / DATE FINISHED 4/22/88	
DRILLING EQUIPMENT CME - 55 Truckmount		COMPLETION DEPTH 28.5'	SAMPLER Modified California Sampler
DRILLING METHOD 8" HSA	DRILL BIT CME Carbide	NO. OF SAMPLES DIST. 5	UNDIST.
SIZE AND TYPE OF CASING 3" PVC		WATER LEVEL FIRST ATD 12'	COMPL. N/A 24 HRS.
TYPE OF PERFORATION 0.020" slotted	FROM 27.5 TO 3.5 FT.	LOGGED BY: S. Bluestone	CHECKED BY: M. Bonkowski
SIZE AND TYPE OF PACK 12/20 Monterey Sand	FROM 28.5 TO 2.0 FT.		
TYPE OF SEAL NO. 1 Bentonite Pellets	FROM 2.0 TO 1.5 FT.		
NO. 2 Concrete Grout	FROM 1.5 TO G.S. FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALT		
			FILL - CLAYEY SAND to SILTY SAND (Cuttings) dark brown, with little coarse sand, fine grained, moist, loose, brick fragments, little organics	SC-SM	
5	1	pushed	CLAYEY SAND to SANDY SILT olive gray, fine grained, low plasticity, loose (soft), moist, little organic debris — H Nu = 450 Strong Hydrocarbon odor	SC-ML	
			dark gray about 8 - 9'		
10	2	3, 4, 8	SANDY CLAY to SANDY SILT light brown to brown, moderate plasticity, stiff, wet — H Nu = 375 ppm Strong Hydrocarbon odor	CL-ML	
15	3	6, 16, 18	SILTY SAND to SAND medium brown to medium gray, fine grained to very coarse grained with little gravels (fining upwards), medium dense, saturated, (interbedded graded sands from abt. 2" to abt. 1.5') — H Nu = 30 ppm Weak Hydrocarbon odor	SM-SW	
20	4	13, 12, 6	overall increase in grain size, little gravels, angular, trace to little clay, medium dense, saturated — H Nu = 250 ppm Moderate Hydrocarbon odor		
			driller reports thin gravel layers about 2" to 4" thick to 26.5' below grade		
25	5	3, 6, 7	SILTY CLAY olive - brown, little fine sand, medium plasticity, stiff, saturated — H Nu = 0 No Hydrocarbon odor	CL	
30			Bottom of Well: 28.5 feet		
35					

LOG OF MONITORING WELL NO. S-2 SHEET 1 OF 1

Woodward-Clyde Consultants

PROJECT NAME GETTLER RYAN NO. 8820011A

MONITORING WELL LOCATION	2800 Telegraph Avenue, Oakland CA; S-3	ELEVATION AND DATUM	
DRILLING AGENCY	Bay Land Drilling / DRILLER	DATE STARTED / DATE FINISHED	4/22/88
DRILLING EQUIPMENT	CME - 55 Truckmount	COMPLETION DEPTH 28.5'	SAMPLER Modified California Sampler
DRILLING METHOD	8" HSA / DRILL BIT CME Carbide	NO. OF SAMPLES DIST. 5	UNDIST. —
SIZE AND TYPE OF CASING	3" PVC	WATER LEVEL FIRST 12'	COMPL. 8.8 / 24 HRS. —
TYPE OF PERFORATION	0.020" slotted — FROM 27.5 TO 3.5 FT.	LOGGED BY: S. Bluestone	CHECKED BY: M. Bonkowski
SIZE AND TYPE OF PACK	12/20 Monterey Sand — FROM 28.5 TO 2.0 FT.		
TYPE OF SEAL NO. 1	Bentonite Pellets — FROM 2.0 TO 1.5 FT.		
TYPE OF SEAL NO. 2	Concrete Grout — FROM 1.5 TO G.S. FT.		

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALT		
			FILL - CLAYEY SAND (Cuttings) dark brown, medium grained, little gravel/brick fragments, moist, loose	SC	
			CLAYEY SILT	ML	
5	1	pushed	gray to very dark gray, little fine sand & gravels to about 0.7" diameter, locally moderate plasticity, moist, soft — H Nu = N/A* Strong Hydrocarbon odor		
			? ? ?		
			SILTY SAND to CLAYEY SAND	SM-SC	
10	2	4, 7, 8	light gray to olive, fine grained with some medium grained sand, medium dense, moist — H Nu = 500 ppm Strong Hydrocarbon odor		
			▼		
15	3	8, 12, 20	H Nu = 175 ppm Moderate Hydrocarbon odor		
			local slight increase in grain size to medium coarse, wet		
			? ? ? gradational		
			SILTY CLAY to SANDY SILT	CL-ML	
20	4	4, 10, 12	light brown to brown, interbedded silty clay with sparse fine sand & Sandy Silt with little fine to medium sand, moderate plasticity very stiff, saturated — H Nu = 45 ppm Weak Hydrocarbon odor		
25					
			CLAYEY GRAVEL to SILTY SAND	GC-SM	
	5	5, 7, 6	medium brown to light brown, fine to coarse grained sand, gravel to about 2" diameter, loose, saturated — H Nu = 50 ppm Weak Hydrocarbon odor		
30			Bottom of Well: 28.5 feet		
35			* Note: The weather was overcast and raining. Therefore, H Nu readings are questionable due to the probable affect of humidity and moisture within the instrument.		

Field location of boring:	Project No.: 7610	Date: 07/24/89	Boring No:
(See Plate 1)	Client: Shell Oil Company		S-8
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 1
	Logged by: J. Vargas	Driller: Bayland	of 2
	Casing installation data:		
Drilling method: Hollow-Stem Auger			
Hole diameter: 8-inches	Top of Box Elevation: 25.97		Datum: Mean Sea-Level

	Water Level	10.5'			
	Time				
	Date	7/24/89			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								PAVEMENT SECTION - Asphalt/Concrete/Base Rock
				1				
				2				SILTY CLAY (CL) - very dark grayish brown (2.5Y 3/2),
								stiff, damp; 70% clay; 20% silt; trace - 10% very fine to
				3				fine sand; low plasticity, roots, trace coarse angular
								sand; no chemical odor.
				4				
	150	S&H						
0	150	push		5				CLAYEY SAND (SC) - olive (5Y 5/4), loose to medium
	150		S-8-5					dense, damp; 60-70% very fine to fine sand; 20-30%
				6				clay; 10% silt; trace subrounded coarse sand; no
								chemical odor.
				7				
				8				
				9				CLAYEY SAND (SC) - olive (5Y 5/4), loose, damp; 70%
								fine subrounded sand; 10-20% clay; trace fine gravel;
	100	S&H		10				slight chemical odor.
0	100	push	S-8-10			▼		
				11				
				12				
				13				
				14				
	2	S&H						no chemical odor at 14.0 feet.
0	6			15				
	12		S-8-15			▽		CLAYEY SAND (SC) - olive (5Y 4/3), medium dense,
				16				saturated; 70% medium to fine sand; 20% clay; 10%
								angular gravel; no chemical odor.
				17				
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. S-8

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	amp CEG 1262	9/89		

Field location of boring:

(See Plate 1)

Project No.:	7610	Date: 07/24/89	Boring No: S-8
Client:	Shell Oil Company		
Location:	2800 Telegraph Avenue		
City:	Oakland, California		Sheet 2 of 2
Logged by:	J. Vargas	Driller: Bayland	

Casing installation data:

Drilling method: Hollow-Stem Auger

Hole diameter: 8-Inches

Top of Box Elevation: 25.97 | Datum: Mean Sea-Level

Water Level	10.5'			
Time				
Date	7/24/89			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	5	S&H						
0	6			20				SANDY CLAY (CL) - light olive brown (2.5Y 5/4), stiff, damp; 70% clay; 30% fine to medium sand; low plasticity, brown/gray mottling black organics, interbeds of thin gravel; no chemical odor.
	7							
	5	SPT		21				
	6							
	4			22				
				23				Bottom of boring at 19.5 feet.
								Bottom of sample at 22.0 feet.
				24				07/24/89
				25				
				26				
				27				
				28				
				29				
				30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				

Remarks:

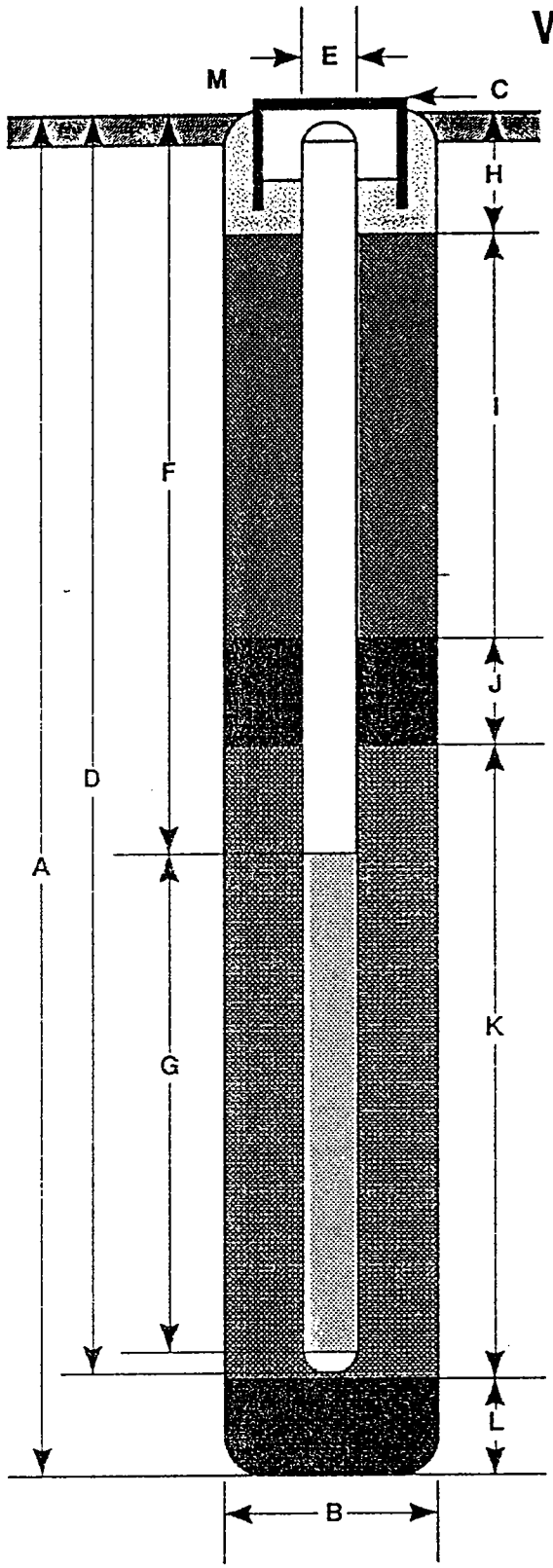
GeoStrategies Inc.

Log of Boring

BORING NO. S-8

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CEG 1262	9/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 22 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow-Stem Auger

C Top of Box Elevation 25.97 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 19.5 ft.
Material Schedule 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 9.5 ft.

G Perforated Length 10 ft.
Perforated Interval from 19.5 to 9.5 ft.
Perforation Type Machine Slot
Perforation Size 0.02 in.

H Surface Seal from 0.5 to 0 ft.
Seal Material Concrete

I Backfill from 5.5 to 0.5 ft.
Backfill Material Concrete

J Seal from 7.5 to 5.5 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 19.5 to 7.5 ft.
Pack Material 2/12 Lonestar Sand

L Bottom Seal 2.5 ft.
Seal Material Natural Clay

M Christy Box with locking well cap and lock

GeoStrategies Inc.

Well Construction Detail

WELL NO.
S-8

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 1262	9/89		

Field location of boring: (See Plate 1)	Project No.: 7610	Date: 07/17/89	Boring No: S-9
	Client: Shell Oil Company		
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 2
	Logged by: J. Vargas	Driller: Bayland	
Drilling method: Hollow-Stem Auger	Casing installation data:		
Hole diameter: 8-Inches - Reamed with 12-Inches	Top of Box Elevation: 25.86		Datum: Mean Sea-Level

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level / Time / Date	Description
									PAVEMENT SECTION - Asphalt, Base Rock
				1					
				2					SILTY CLAY (CL) - black (7.5YR 2/0), stiff, damp; 70% clay; 10-20% silt; 0-10% fine to medium sand; low plasticity, roots, trace coarse angular sand; no chemical odor.
				3					
				4					
	150	S&H							
1.5	150	push		5					color change at 4.5 feet to very dark grayish brown (2.5Y 3/2).
	150		S-9-5						
				6					CLAYEY SAND (SC) - very dark grayish brown (2.5Y 3/2), loose, damp; 50-60% medium to coarse angular sand; 40-50% clay; no chemical odor.
				7					
				8					
				9					
	150	S&H							CLAYEY SAND (SC) - olive gray (5Y 5/2), medium stiff, damp; 65% very fine to fine subangular sand; 35% clay; roots, green staining, trace fine gravels, gradational contact with above unit; moderate chemical odor.
230	150	push		10					
	150		S-9-10						
				11					
				12					
				13					SANDY CLAY (CL) - olive gray (5Y 5/2), medium stiff, damp; 50% clay; 40-50% fine sand; 0-10% silt; no chemical odor.
				14		▽			
	14	S&H							
0	18			15					SANDY GRAVEL (GW) - light olive brown (2.5Y 5/4), dense, saturated; 60% fine angular gravel; 30% fine to coarse sand; 10% clay; trace coarse gravel; no chemical odor.
	16		S-9-15						
				16					
				17					
				18					
				19					

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. S-9

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CEG 1262	9/89		

Field location of boring:	Project No.: 7610	Date: 07/17/89	Boring No:
(See Plate 1)	Client: Shell Oil Company		S-9
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 2
	Logged by: J. Vargas	Driller: Bayland	of 2
	Casing installation data:		
Drilling method: Hollow-Stem Auger			
Hole diameter: 8-Inches - Reamed with 12-Inches	Top of Box Elevation: 25.86		Datum: Mean Sea-Level

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	7	S&H		20				
0	13							
	14		S-9-20					becoming medium dense; no chemical odor.
				21				
				22				
				23				
				24				increasing coarse gravel to 20%; no chemical odor.
	8	S&H						
0	14			25				
	9							
				26				
				27				
				28				
				29				
	4	S&H						GRAVELLY CLAY (CL) - light olive brown (2.5Y 5/4), very
	6			30				stiff, damp; 50% clay; 40% fine gravel; 10% fine sand;
	18							low plasticity; no chemical odor.
	5	SPT		31				
	7							gradational contact at 30.5 feet.
	11			32				
								CLAY with SAND (CL) - light olive brown (2.5Y 5/4), very
				33				stiff, damp; 70% clay; 20% fine sand; 0-10% fine
								subangular gravel; trace medium to coarse sand, brown
				34				mottling; no chemical odor.
				35				Bottom of boring at 30.0 feet.
								Bottom of sample at 32.0 feet.
				36				07/17/89
				37				

Remarks:

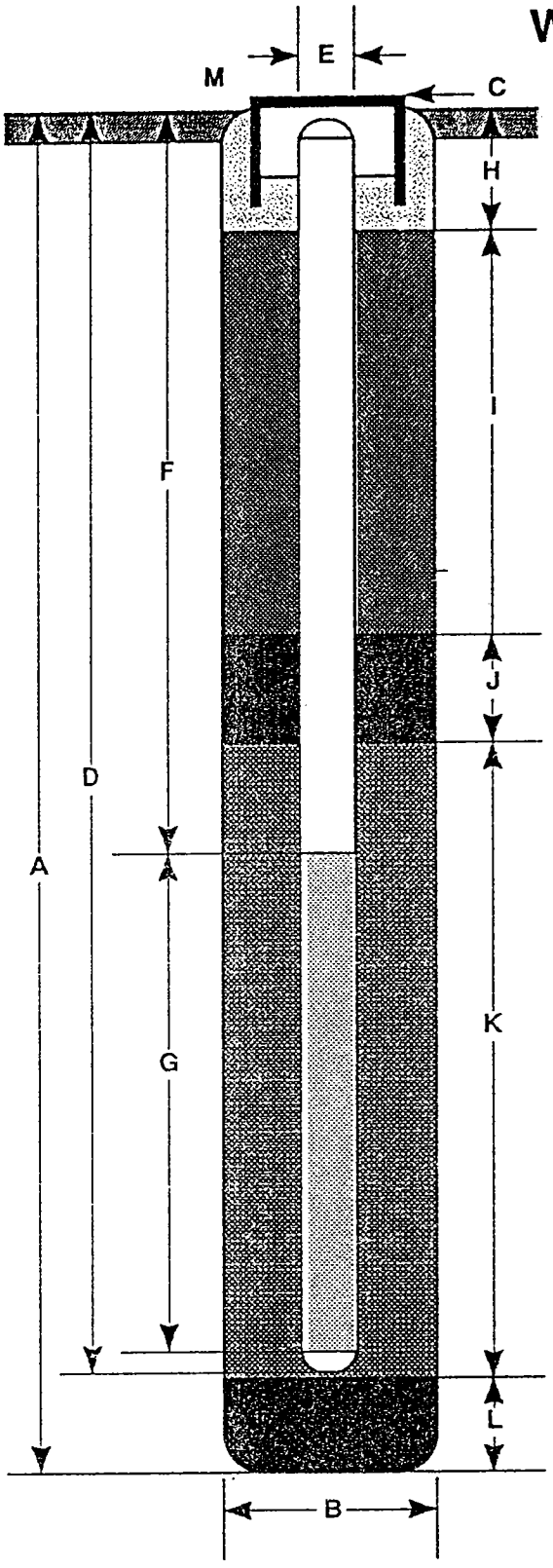
GeoStrategies Inc.

Log of Boring

BORING NO. S-9

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 12/62	9/89		

WELL CONSTRUCTION DETAIL



A	Total Depth of Boring: 32	ft.
B	Diameter of Boring: 12	in.
	Drilling Method: Hollow-Stem Auger	
C	Top of Box Elevation: 25.86	ft.
	[X] Referenced to Mean Sea Level	
	[ ] Referenced to Project Datum	
D	Casing Length: 30	ft.
	Material: Schedule 40 PVC	
E	Casing Diameter: 3	in.
F	Depth to Top Perforations: 14	ft.
G	Perforated Length: 15.5	ft.
	Perforated Interval from: 29.5 to 14.0	ft.
	Perforation Type: Machine Slot	
	Perforation Size: 0.02	in.
H	Surface Seal from: 0.5 to 0	ft.
	Seal Material: Concrete	
I	Backfill from: 11.0 to 0.5	ft.
	Backfill Material: Concrete	
J	Seal from: 13.0 to 11.0	ft.
	Seal Material: Bentonite Pellets	
K	Gravel Pack from: 30.0 to 13.0	ft.
	Pack Material: 2/12 Lonestar Sand	
L	Bottom Seal: 2	ft.
	Seal Material: Natural Clay	
M	Christy Box with locking well cap and lock	

GeoStrategies Inc.

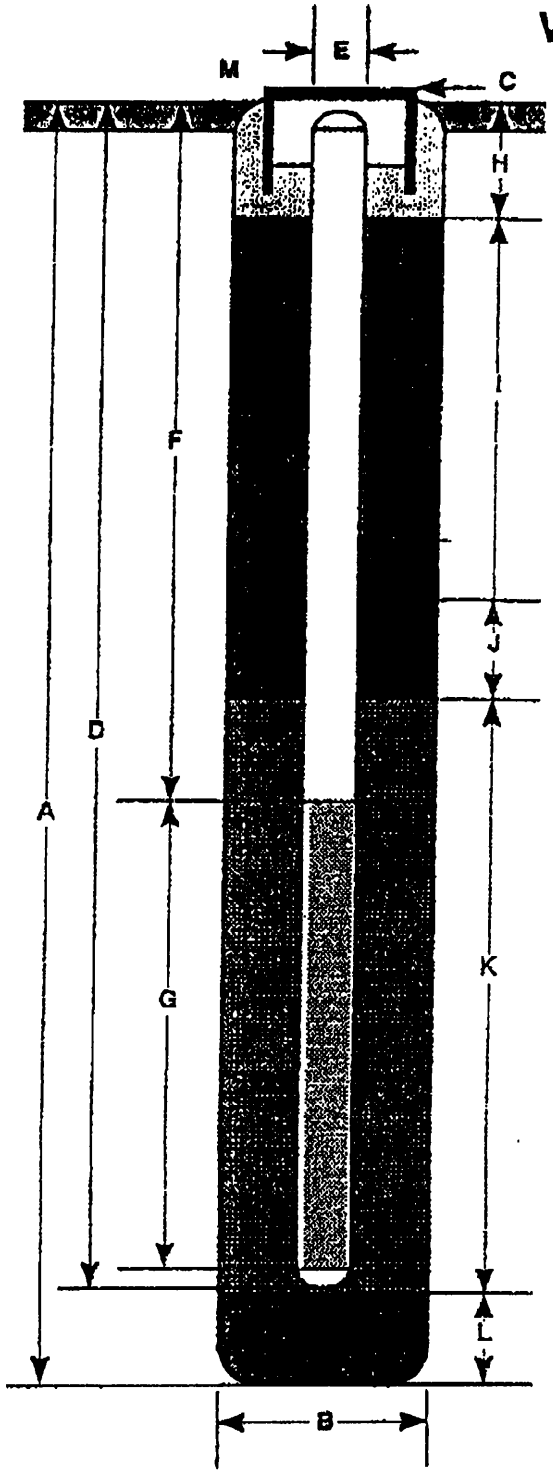
Well Construction Detail

WELL NO.

S-9

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 12/92	9/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 30.5 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow-Stem Auger

C Top of Box Elevation 26.95 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 24 ft.
Material Schedule 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 12 ft.

G Perforated Length 12 ft.
Perforated Interval from 24 to 12 ft.
Perforation Type Machine Slot
Perforation Size 0.02 in.

H Surface Seal from 0.5 to 0 ft.
Seal Material Concrete

I Backfill from 8.0 to 0.5 ft.
Backfill Material Concrete

J Seal from 10.0 to 8.0 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 24.0 to 10.0 ft.
Pack Material 2/12 Lonestar Sand

L Bottom Seal 6.5 ft.
Seal Material Bentonite Pellets

M Christy Box with locking well cap and lock

GeoStrategies Inc.

Well Construction Detail

WELL NO. S-10

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	Cmp CEG 12/6/7	9/89		

Field location of boring: (See Plate 1)

Project No.: 7610 | Date: 07/24/89 | Boring No: S-10

Client: Shell Oil Company

Location: 2800 Telegraph Avenue

City: Oakland, California | Sheet 1 of 2

Logged by: J. Vargas | Driller: Bayland

Casing installation data:

Drilling method: Hollow-Stem Auger

Hole diameter: 8-inches

Top of Box Elevation: 26.95 | Datum: Mean Sea-Level

Water Level / Time / Date

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								PAVEMENT SECTION - Concrete/Base Rock/Sand
				1				
				2				FILL - sand (SP), loose, moist, 95% fine to medium sand; 5% clay; trace concrete and debris
				3				
				4				
	150	S&H						
0	150	push	S-10-5	5				SANDY CLAY (CL) - very dark gray (5Y 3/1), medium stiff, damp; 60% clay; 30% fine sand; 10% silt; medium plasticity, roots, brown oxidation, trace subrounded coarse sand; no chemical odor.
				6				
				7				
				8				
				9				
	150	S&H						
0	150	push		10				CLAYEY SAND to SANDY CLAY (CL/SC) - gray (5Y 5/1), medium stiff, moist; 40-50% fine sand; 40-50% clay; trace coarse subrounded sand, brown oxidation stains; no chemical odor.
	150		S-10-10					
				11				
				12				
				13				
				14		▽		
	12	S&H						
0	16			15				GRAVEL with CLAY and SAND (GP-GC) - olive brown (2.5Y 4/4), dense, saturated; 50-60% fine angular gravel; 30-40% fine to coarse sand; trace - 10% clay; no chemical odor.
	30		S-10-15					
				16				
				17				
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. S-10

JOB NUMBER	REVIEWED BY PG/CEG	DATE	REVISED DATE	REVISED DATE
7610	PMP 12/6/89	9/89		

Field location of boring: (See Plate 1)

Project No.: 7610	Date: 07/24/89	Boring No: S-10	
Client: Shell Oil Company			
Location: 2800 Telegraph Avenue			
City: Oakland, California		Sheet 2 of 2	
Logged by: J. Vargas	Driller: Bayland		

Casing installation data:

Drilling method: Hollow-Stem Auger

Hole diameter: 8-Inches

Top of Box Elevation: 26.95 Datum: Mean Sea-Level

Water Level			
Time			
Date			

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	8	S&H		20				
0	13							interbedded fine to medium sand lamina at 19.5 feet.
	9		S-10-20					
				21				
				22				
				23				
								SANDY CLAY (CL) - yellowish brown (10YR 5/4),
				24				medium stiff, moist; 60-70% clay; 30% fine sand; trace
	6	S&H						silt, medium plasticity, interbedded fine gravel lamina
	3			25				which are saturated, trace subangular coarse gravels,
	7							worm burrows, brown oxidation; no chemical odor.
				26				
				27				
				28				
				29				
	6	S&H						becoming damp, increased brown staining.
	7			30				
	9							
				31				Bottom of boring at 29.0 feet.
								Bottom of sample at 30.5 feet.
				32				07/24/89
				33				
				34				
				35				
				36				
				39				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. S-10

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CEG 1262	9/89		

Field location of boring: (See Plate 2)	Project No.: 7610	Date: 10/03/89	Boring No: S-11
	Client: Shell Oil Company		
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 2
	Logged by: T.J.W.	Driller: Bayland	
Drilling method: Hollow-Stem Auger	Casing installation data: (See Well Completion Detail)		
Hole diameter: 8-Inch	Top of Box Elevation: 24.78	Datum: MSL	

Water Level								
Time								
Date								

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
								PAVEMENT SECTION - 3 inches
				1				FILL - Clay with Silt (CL) - very dark brown (10YR 2/2);
				2				no chemical odor.
				3				
				4				CLAYEY SAND (SC) - very dark grayish brown (2.5Y
	100	S&H						3/2), medium dense, damp , 45% clay; no chemical odor
7	150	push	S-11-	5				
	200		5.5					
				6				
				7				
				8				weak chemical odor at 7.0 feet.
				9				
	100	S&H						
400	150	push	S-11-	10				COLOR CHANGE to light olive brown (2.5Y 5/4); strong
	150		10.5					chemical odor.
				11				
				12				
				13				
				14		▽		
	12	S&H						
70	22		S-11-	15				SAND with GRAVEL (SW) - olive yellow (2.5Y 6/6),
	13		15.5					dense, saturated; 50-60% fine to coarse sand; 20-25%
				16				subangular fine gravel; weak chemical odor.
				17				CLAYEY SAND (SC) - yellowish brown (10YR 5/6),
								dense, saturated; 20% clay; no chemical odor.
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. S-11

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CWP CEG 1262	10/89		

Field location of boring: (See Plate 2)	Project No.: 7610	Date: 10/03/89	Boring No.: S-11
	Client: Shell Oil Company		
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 2 of 2
	Logged by: T.J.W.	Driller: Bayland	
Drilling method: Hollow-Stem Auger	Casing installation data: (See Well Completion Detail)		
Hole diameter: 8-Inch	Top of Box Elevation: 24.78	Datum: MSL	

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	4	S&H						SANDY SILT (ML) - dark yellowish brown (10YR 4/6),
N/A	8		S-11-	20				mottled with light brownish gray (10YR 6/2), medium stiff,
	14		20.5					saturated; 65-75% silt; 25-30% very fine sand; no
				21				chemical odor.
								interbedded saturated lens of silty sand; 40-60% fine
				22				sand; 40-50% silt.
								GRAVEL with SAND (GW) - yellowish brown (10YR 5/8),
				23				loose, saturated; 70-75% fine gravel; 20-25% coarse to
								fine sand; no chemical odor.
				24				SILTY SAND (SM) - yellowish brown (10YR 5/8), loose,
	5	S&H						saturated; 60-70% medium to fine sand.
N/A	5		S-11-	25				SANDY SILT (ML) - yellowish brown (10YR 5/8), medium
	6		25					stiff, saturated; 30% fine sand; no chemical odor.
				26				SILTY SAND (SM) - brownish yellow (10YR 6/8), medium
								dense, saturated; 60-70% very fine sand; 20-30% silt;
				27				trace clay; no chemical odor.
				28				
				29				SILT with CLAY (ML) - grayish brown (10YR 5/2), stiff,
	6	S&H						damp; 70-80% silt; 10-20% clay; low plasticity; trace
N/A	10		S-11-	30				sand; no chemical odor.
	17		30.5					
				31				Bottom of boring at 30.5 feet.
								Bottom of sample at 30.5 feet.
				32				10/03/89
				33				
				34				
				35				
				36				
				37				
				38				
				39				

Remarks:

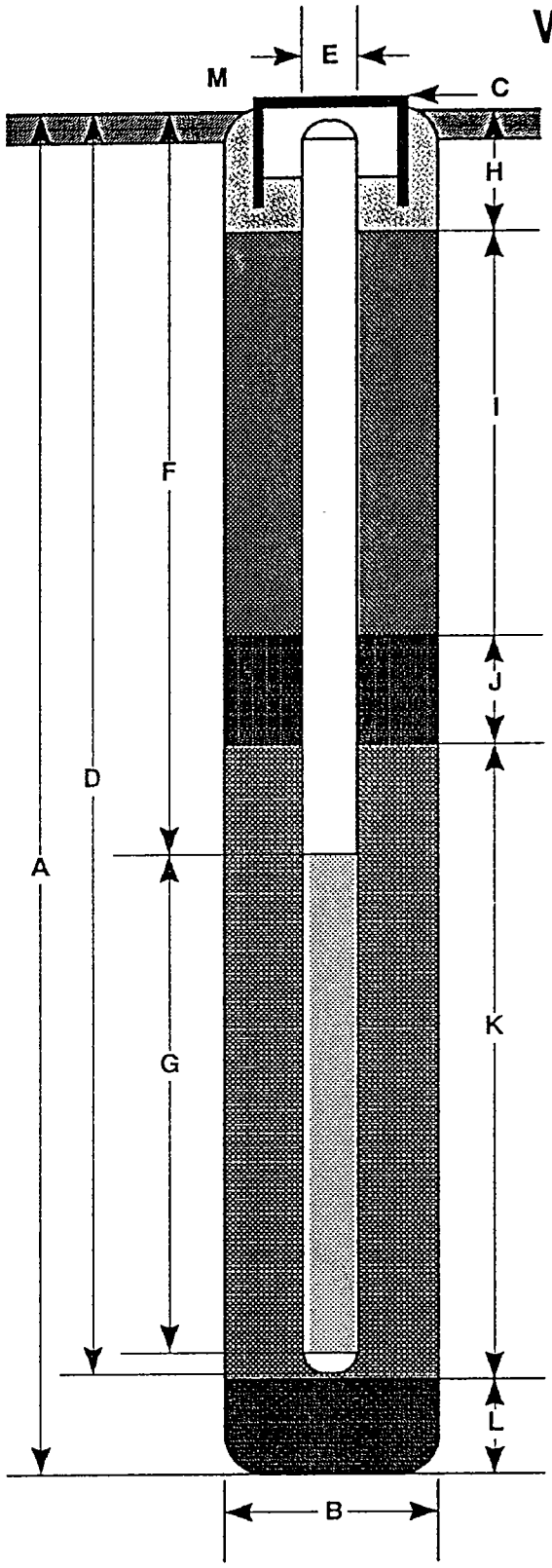
GeoStrategies Inc.

Log of Boring

BORING NO. S-11

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 1262	10/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 30.5 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow-Stem Auger

C Top of Box Elevation 24.78 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 19.0 ft.
Material Schedule 40 PVC

E Casing Diameter 3 in.

F Depth to Top Perforations 9 ft.

G Perforated Length 10 ft.
Perforated Interval from 9 to 19 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.

H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 5 ft.
Backfill Material Cement Grout

J Seal from 5 to 7 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 7 to 19 ft.
Pack Material Lonestar 2/12 Sand

L Bottom Seal 11.5 ft.
Seal Material Bentonite Pellets

M

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO.
S-11

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 12/62	10/89		

Field location of boring: (See Plate 2)	Project No.: 761004	Date: 09/11/91	Boring No: SV-1
	Client: Shell Oil Company		
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 1
	Logged by: T.J.W.	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation:	Datum:	

Water Level	8.5'	
Time	14:40	
Date	09/11/91	

PID (ppm)	Blows/ft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				SILTY SAND (SM) - dark yellowish brown (10YR 4/4), dense, damp; 60% fine to coarse sand; 30% fine gravel; 10% fine. (FILL)
				2				
				3				
0	150			4				CLAYEY GRAVEL (GW) - dark yellowish brown (10YR 4/4), dense, damp; 60% gravel; 30% clay; 10% fine to coarse sand.
	250							
	350			5				
				6				
				7				
	250	S&H	SV-1-					SANDY SILT (ML) - dark yellowish brown (10YR 3/4), very stiff, moist; 70% silt; 30% fine sand.
840	500		8.0	8				
						▽		
	250			9				SILTY SAND (SM) - very dark gray (10YR 3/1), medium dense, saturated; 70% fine to medium sand; 30% fines.
	350	S&H	SV-1-					
560	350		9.5	10				
				11				
								Bottom of boring at 9.9 feet.
				12				09/11/91
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Remarks: Boring backfilled from 8.0 to 9.9 feet with bentonite.
* Converted to equivalent Standard Penetration blows/ft.

GeoStrategies Inc.

Log of Boring

BORING NO. SV-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
761004		09/91		

Field location of boring: (See Plate 2)	Project No.: 761004	Date: 09/11/91	Boring No: SV-2
	Client: Shell Oil Company		
	Location: 2800 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 1
	Logged by: T.J.W.	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation:	Datum:	

Water Level								
Time								
Date								

PID (ppm)	Blows/ft. * or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				SANDY CLAY (CL) - dark yellowish brown (10YR 4/4), medium stiff, damp; 70% clay; 30% fine sand.
				2				
				3				
1.5	250	S&H		4				CLAYEY SAND (SC) - dark brown (10YR 3/3), dense, damp; 60% fine to medium sand; 40% clay.
	250	push						
	250			5				
				6				
75	250	S&H		7				
	250	push	SV-2-					SILT (ML) - very dark gray (5Y 3/1), stiff, moist.
800	250		8.0	8				
				9				
				10				Bottom of boring at 8.0 feet. 09/11/91
				11				
				12				
				13				
				14				
				15				
				16				
				17				
				18				
				19				
				20				

Remarks:

* Converted to equivalent Standard Penetration blows/ft.

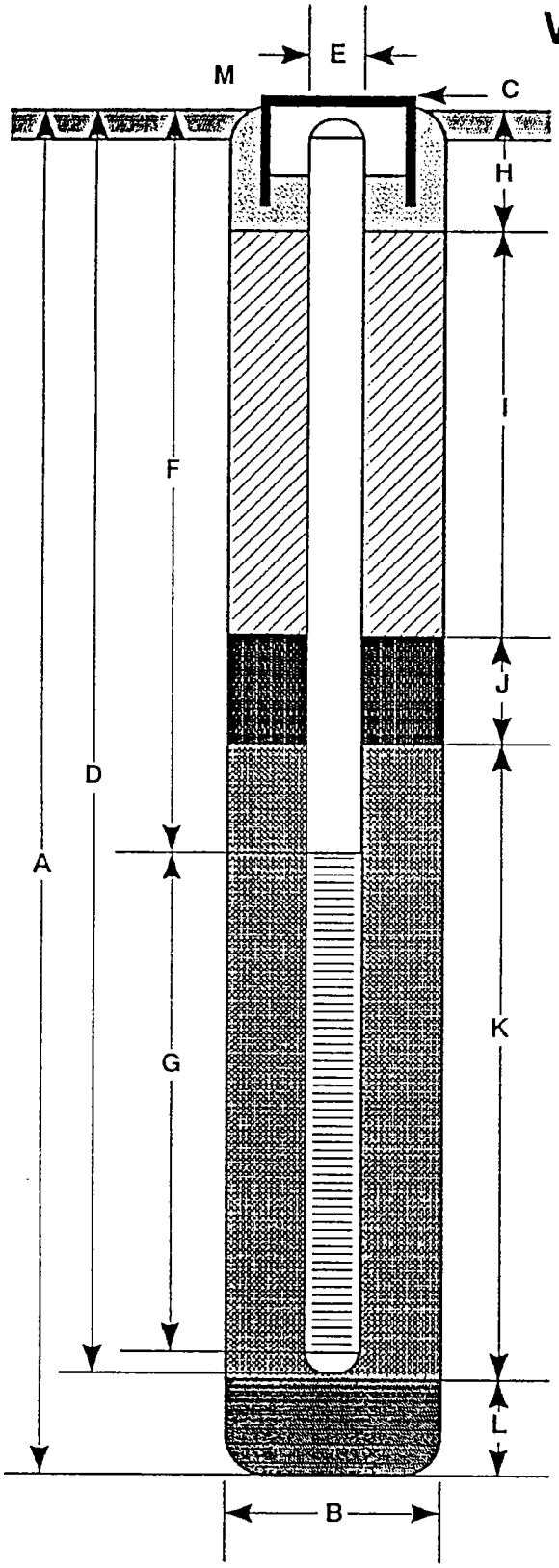
GeoStrategies Inc.

Log of Boring

BORING NO. SV-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
761004		09/91		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 9.9 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation ft.
☐ Referenced to Mean Sea Level
☐ Referenced to Project Datum

D Casing Length 8.0 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 3.0 ft.

G Perforated Length 5.0 ft.
Perforated Interval from 3.0 to 8.0 ft.
Perforation Type Continuous Wrap
Perforation Size 0.020 in.

H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 2.3 ft.
Backfill Material Cement Grout

J Seal from 2.3 to 2.8 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 2.8 to 8.0 ft.
Pack Material Lonestar #2/12 Sand

L Bottom Seal 1.9 ft.
Seal Material Bentonite Pellets

M Underground vault with locking cap and lock.

Note: Depths measured from initial ground surface.

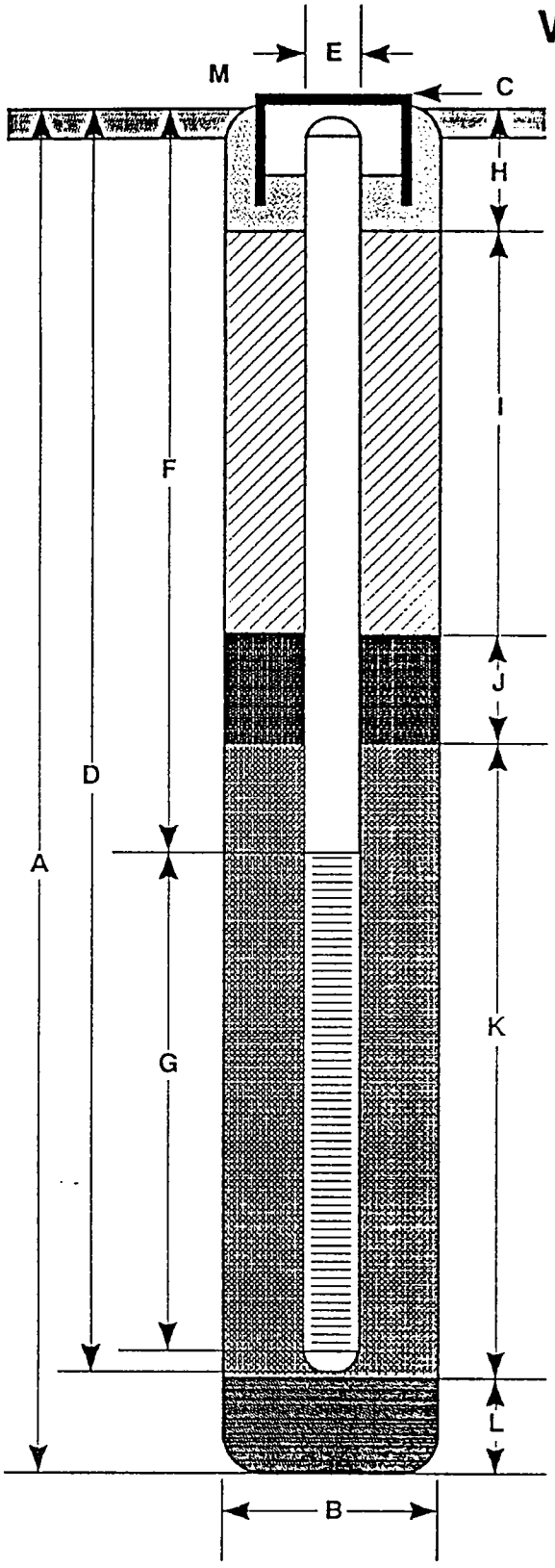
GSI GeoStrategies Inc.

Well Construction Detail

WELL NO.
SV-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
761004		09/91		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 8.0 ft.

B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger

C Top of Box Elevation ft.
☐ Referenced to Mean Sea Level
☐ Referenced to Project Datum

D Casing Length 8.0 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 3.0 ft.

G Perforated Length 5.0 ft.
Perforated Interval from 3.0 to 8.0 ft.
Perforation Type Continuous Wrap
Perforation Size 0.020 in.

H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete

I Backfill from 1.5 to 2.3 ft.
Backfill Material Cement Grout

J Seal from 2.3 to 2.8 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 2.8 to 8.0 ft.
Pack Material Lonestar #2/12 Sand

L Bottom Seal ft.
Seal Material

M Underground vault with locking cap and lock.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO.
SV-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
761004		09/91		

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC dba Shell Oil Products US	**BORING/WELL NAME**	HB-1
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	21-May-04
LOCATION	2800 Telegraph Avenue, Oakland, California	**DRILLING COMPLETED**	21-May-04
PROJECT NUMBER	1507	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	G. Mammini	**DEPTH TO WATER (First Encountered)**	10.0 ft (21-May-04) ▽
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT	0.5	
					ML		**Clayey SILT (ML)** ; dark grayish brown (2.5Y 4/2); moist; 20% clay, 75% silt, 5% medium sand; medium plasticity.	4.5	
0.0		HB-1- 5'		5			**Gravelly Silty SAND (SM)**; dark grayish brown (2.5Y 4/2); moist; 5% clay, 20% silt, 60% medium to coarse sand, 15% fine gravel.		
4.6		HB-1- 8'					@8'- **Silty SAND (SM)** ; dark greenish gray (5GY 4/1); 5% clay, 45% silt, 50% fine sand.		Portland Type I/II
3.5		HB-1- 10'		10	SM		@10'- wet; 5% clay, 30% silt, 60% medium to coarse sand, 5% fine gravel. ▽		
257		HB-1- 15'		15			@15'- dark gray (5Y 4/1); 5% clay, 45% silt, 50% fine sand.	16.0	Bottom of Boring @ 16 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\1507.GPJ DEFAULT.GDT 10/18/04

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC dba Shell Oil Products US	**BORING/WELL NAME**	HB-2
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	21-May-04
LOCATION	2800 Telegraph Avenue, Oakland, California	**DRILLING COMPLETED**	21-May-04
PROJECT NUMBER	1507	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	G. Mammini	**DEPTH TO WATER (First Encountered)**	12.0 ft (21-May-04) ▽
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ftbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ftbg)	WELL DIAGRAM
							CONCRETE	0.5	
							Clayey SILT (ML) ; very dark gray (10YR 3/1); moist; 20% clay, 75% silt, 5% fine sand; medium plasticity.		
					ML				
4.1		HB-2- 5'		5			@4'- **Sandy SILT (ML)** ; yellowish brown (10YR 5/4); 5% clay, 75% silt, 20% fine sand; no plasticity.		
								8.0	
293		HB-2- 8'					**Silty SAND (SM)** ; dark gray (5Y 4/1); very moist; 5% clay, 35% silt, 60% fine sand.		Portland Type I/II
				10			▽		
63.4		HB-2- 12'			SM		@12'- wet; 5% clay, 25% silt, 65% medium to coarse sand, 5% fine gravel.		
7.4		HB-2- 15'		15			@15'- olive gray (5Y 5/2); 5% clay, 35% silt, 60% fine sand.		
0.0		HB-2- 17.5'					@17'- light olive brown (2.5Y 5/3); very moist; 5% clay, 25% silt, 70% medium to coarse sand.	18.0	Bottom of Boring @ 18 ft

WELL LOG (PID) I:\OAKLAN-2\GINT\1507.GPJ DEFAULT.GDT 10/18/04

Cambria Environmental Technology, Inc.
270 Perkins Street
Sonoma, California 95476
Telephone: (707) 935-4850
Fax: (707) 935-6649

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC dba Shell Oil Products US	**BORING/WELL NAME**	HB-3
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	21-May-04
LOCATION	2800 Telegraph Avenue, Oakland, California	**DRILLING COMPLETED**	21-May-04
PROJECT NUMBER	1507	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	3"	**SCREENED INTERVAL**	NA
LOGGED BY	G. Mammini	**DEPTH TO WATER (First Encountered)**	11.0 ft (21-May-04) ▽
REVIEWED BY	A. Friel, RG 6452	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							CONCRETE	0.5	Portland Type I/II
					ML		**Clayey SILT (ML)** ; very dark gray (10YR 3/1); moist; 20% clay, 75% silt, 5% fine sand; medium plasticity.		
0.0									
0.0		HB-3- 5'		5			@4'- **Sandy SILT (ML)** ; yellowish brown (10YR 5/4); 5% clay, 70% silt, 25% fine to medium sand; no plasticity. @5'- **Clayey Sandy SILT (ML)** ; dark yellowish brown (10YR 3/6); very moist; 15% clay, 60% silt, 20% fine sand; low plasticity.	7.0	
613		HB-3- 7'			SM		**Silty SAND (SM)** ; dark greenish gray (5GY 4/1); very moist; 5% clay, 35% silt, 60% fine sand.		
				10			▽	11.0	
645		HB-3- 11'			SP		**Gravelly SAND (SP)** ; dark gray (5Y 4/1); wet; 5% silt, 80% medium to coarse sand, 15% fine gravel.	13.0	
63.5		HB-3- 13.5'			SM		**Silty SAND (SM)** ; dark gray (5Y 4/1); wet; 5% clay, 25% silt, 70% fine sand.	14.0	Bottom of Boring @ 14 ft

WELL LOG (PID) I:\OAKLAN~2\GINT\1507.GPJ DEFAULT.GDT 10/18/04

Field location of boring:

(See Plate 2)

Project No.: 7610	Date: 10/03/89	Boring No.: SR-1	
Client: Shell Oil Company			
Location: 2800 Telegraph Avenue			
City: Oakland, California		Sheet 1 of 2	
Logged by: T.J.W.	Driller: Bayland		

Drilling method: Hollow-Stem Auger
Hole diameter: 8-Inch
Casing installation data: (See Well Completion Detail)
Top of Box Elevation: Datum:

Water Level				
Time				
Date				

PID (ppm)	Blowsft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				FILL - Gravels, Sands, Silts, Clays (GM) - very dark brown (10YR 2/2), stiff, damp; no chemical odor.
96								
				2				
				3				Pea Gravel
				4				
	100	S&H						
130	100	push	SR-1-	5				CLAYEY SILT with SAND (ML) - very dark grayish brown (10YR 3/2), medium stiff, damp; moderate chemical odor.
	150		5.5					
				6				
				7				
				8				
				9				
	100	S&H						
295	100	push	SR-1-	10				COLOR CHANGE to olive (2.5 4/4), medium stiff, damp; mottled with gray; moderate to strong chemical odor.
	100		10.5					
				11				
				12				
				13				
				14				
	5	S&H						SAND (SP) - very dark grayish brown (2.5Y 3/2), medium dense, saturated; medium sand; trace silt; no chemical odor.
19.0	10		SR-1-	15				
	19		15.5					
				16				
				17				
				18				SAND with GRAVEL (SW) - brown (10YR 5/3), medium dense, saturated; 25-30% fine gravel.
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. SR-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CMP CEG 1262	10/89		

Field location of boring: (See Plate 2)

Project No.:	7610
Date:	10/03/89
Client:	Shell Oil Company
Location:	2800 Telegraph Avenue
City:	Oakland, California
Logged by:	T.J.W.
Driller:	Bayland
Boring No.:	SR-1
Sheet	2 of 2

Drilling method: Hollow-Stem Auger
Hole diameter: 8-Inch
Casing installation data: (See Well Completion Detail)
Top of Box Elevation: Datum:

Water Level				
Time				
Date				

PID (ppm)	Blowct. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	7	S&H						
N/A	7		SR-1-	20				
	9		20.5					
				21				
				22				
				23				
				24				
	2	S&H						
N/A	7		SR-1-	25				COLOR CHANGE to yellowish brown (10YR 5/6); 15-25% fine gravel; no chemical odor.
	8		25.5					
				26				
				27				
				28				
				29				
	3	S&H						
N/A	5		SR-1-	30				SILTY SAND (SM) - yellowish brown (10YR 5/4), loose, saturated; very fine sand; 20-30% silt; no chemical odor.
	19		30.5					
				31				
				32				GRAVEL with SAND (GW) - yellowish brown (10YR 5/6), medium dense, saturated; fine gravel; 20-30% fine to coarse sand; no chemical odor.
				33				
				34				
	8	S&H						
N/A	14		SR-1-	35				SAND with SILT and GRAVEL (SW) - brown (10YR 5/3), dense, saturated; 50-60% very fine sand; 15% fine gravel; 15% silt; rootholes contained moisture; trace clay; no chemical odor.
	20		35.5					
				36				
				37				Bottom of boring at 35.5 feet.
								Bottom of sample at 35.5 feet.
				38				10/03/89
				39				

Remarks:

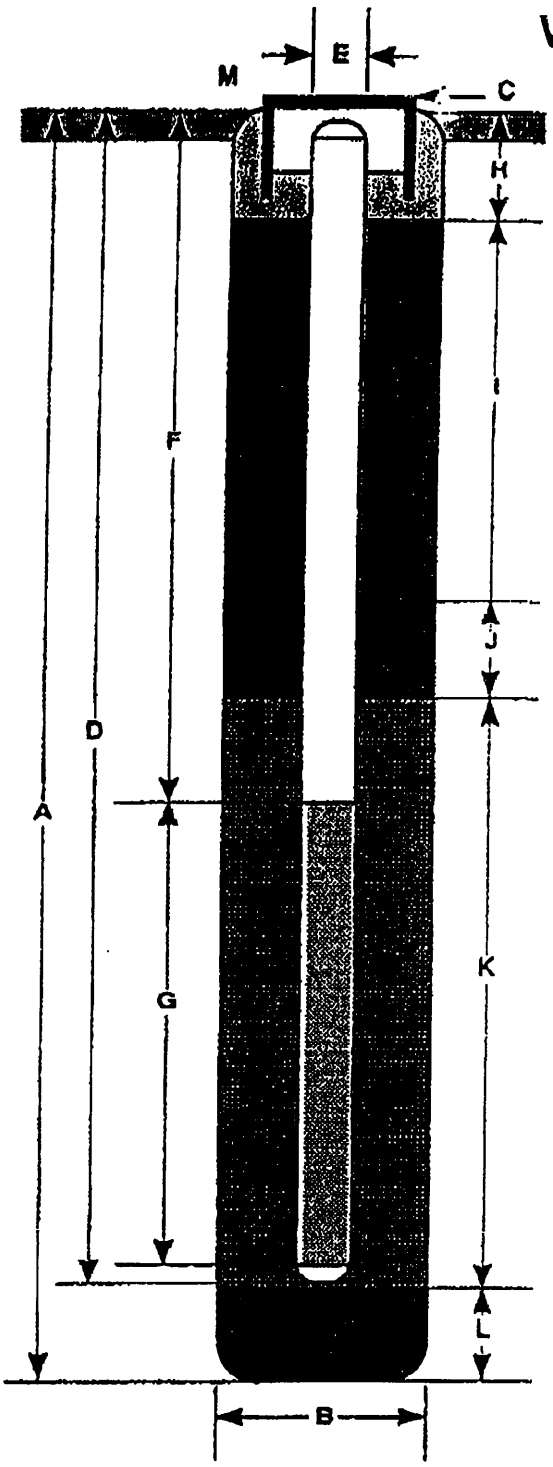
GeoStrategies Inc.

Log of Boring

BORING NO. SR-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	CWP CEG 1262	10/89		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 35 ft.

B Diameter of Boring 20 in.
Drilling Method Bucket Auger

C Top of Box Elevation ft.
☐ Referenced to Mean Sea Level
☐ Referenced to Project Datum

D Casing Length 35 ft.
Material Schedule 40 PVC

E Casing Diameter 6 in.

F Depth to Top Perforations 10 ft.

G Perforated Length 25 ft.
Perforated Interval from 10 to 35 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.

H Surface Seal from 0 to 1 ft.
Seal Material Concrete

I Backfill from 1 to 51/2 ft.
Backfill Material Cement Grout

J Seal from 51/2 to 61/2 ft.
Seal Material Bentonite pellets

K Gravel Pack from 61/2 to 35 ft.
Pack Material Lonestar #2/12 sand

L Bottom Seal ft.
Seal Material

M Christy Box

Note: Depths measured from initial ground surface.

GSI GeoStrategies Inc.

WELL NO.
SR-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7610	RG/CEG 12/02	10/89		

Cambria Environmental Technology, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC dba Shell Oil Products US	**BORING/WELL NAME**	S-3R
JOB/SITE NAME	Former Shell Service Station	**DRILLING STARTED**	10-Mar-05
LOCATION	2800 Telegraph Avenue, Oakland, California	**DRILLING COMPLETED**	10-Mar-06
PROJECT NUMBER	248-1507-006	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling	**GROUND SURFACE ELEVATION**	33.33 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	32.65 ft above msl
BORING DIAMETER	10"	**SCREENED INTERVALS**	5 to 14 fbg
LOGGED BY	B. DeBoer	**DEPTH TO WATER (First Encountered)**	9.0 fbg (10-Mar-06) ▽
REVIEWED BY	D. Baertchie	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Air knife to 5 fbg.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
					GW GM		**Asphalt** **GRAVEL with Sand** (GW-GM); 10YR 2/2; moist; 10% silt, 20% coarse sand, 70% coarse angular gravel; high estimated permiability; lare concrete pieces present.	0.3	Portland Type I/II
							SILT with Gravel (ML); 10YR 2/1; moist; 10% clay, 75% silt, 15% coarse gravel; low estimated permiability; very stiff.	3.0	Bentonite Seal
2.5	5 9 14 2 6 8 6	S-3R- 5.5		5			**SILT** (ML); 10YR 3/6; moist; 15% clay, 75% silt, 10% fine sand; low estimated permiability; stiff.		
18	8 14 7	S-3R- 8.5			ML		**SILT** (ML); GLEY 4/5G; wet; 20% clay, 80% silt; moderate estimated permiability; green mottling and hydrocarbon odor present; very stiff. ▽		Monterey Sand #2/12 4"-diam., 0.020" Slotted Schedule 40 PVC
812	8 12 10 12 12	S-3R- 10		10					
16	6 7 7	S-3R- 13.5					**Sandy SILT** (ML); 10YR 3/2; wet; 10% clay, 50% silt, 30% fine sand, 10% fine gravel; moderate estimated permiability; stiff.	14.0	Bottom of Boring @ 14 fbg

WELL LOG (PID) O:\OAKLAN-2\GINT\1507.GPJ DEFAULT.GDT 5/8/06

ATTACHMENT C

Historical Groundwater Analytical Data Tables

Table 1. Historical Grab Groundwater Analytical Data, Former Shell Service Station, 2800 Telegraph Avenue, Oakland, California

Sample	Depth (fbg)	Date Sampled	TPHg (µg/l)	TPHd (µg/l)	TPHmo (µg/l)	Oil & Grease (µg/l)	B (µg/l)	T (µg/l)	E (µg/l)	X (µg/l)	MTBE (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	TBA (µg/l)	EDB (µg/l)	EDC (µg/l)
*SH-1	11.5	18-Aug-92	110	<5	NA	<500	<5	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA
HB-1	10	21-May-04	70,000	NA	NA	NA	<50	1,300	3,200	15,000	<50	<200	<200	<200	<500	<50	<50
HB-2	12	21-May-04	2,500	NA	NA	NA	<2.5	<2.5	110	200	<2.5	<10	<10	<10	<25	<2.5	<2.5
HB-3	11	21-May-04	86,000	NA	NA	NA	<50	1,300	4,300	21,000	<50	<200	<200	<200	<500	<50	<50

Abbreviations:

fbg = Feet below grade

µg/L = Micrograms per liter (parts per billion)

* Sample SH-1 collected from combined excavtion cavity of the former oil water separator and the former hydraulic lifts - EPA analytical methods for this sample not known.

<x = Not detected at reporting limit x.

NA = Not Analyzed or not available

The following constituents were analyzed by EPA Method 8260:

TPHg = Total petroleum hydrocarbons as gasoline

BTEX = Benzene, toluene, ethylbenzene, and xylenes

MTBE = Methyl tertiary butyl ether

DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether

TAME = Tertiary amyl methyl ether

TBA = Tertiary butanol

EDB = Ethylene dibromide

EDC = Ethylene dichloride

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE
2800 Telegraph Avenue
Oakland, CA

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
02-May-88	S-1	<0.05	0.005	<0.001	----	<0.004	<0.1	<0.5
08-Nov-88	S-1	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
02-May-89	S-1	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Aug-89	S-1	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Oct-89	S-1	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
16-Jan-90	S-1	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
13-Apr-90	S-1	<0.050	<0.0005	0.0006	<0.0005	<0.001	N/A	N/A
05-Jul-90	S-1	<0.05	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Oct-90	S-1	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
22-Jan-91	S-1	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
30-Apr-91	S-1	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
12-Jul-91	S-1	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
02-May-88	S-2	1.6	0.079	0.089	----	0.048	N/A	N/A
08-Nov-88	S-2	0.2	0.022	0.001	0.016	0.008	N/A	N/A
02-May-89	S-2	2.2	0.5	0.052	0.12	0.18	N/A	N/A
03-Aug-89	S-2	0.43	0.073	0.001	0.014	0.007	N/A	N/A
03-Oct-89	S-2	0.37	0.012	0.019	0.013	0.078	N/A	N/A
16-Jan-90	S-2	0.42	0.075	0.0099	0.032	0.052	N/A	N/A
13-Apr-90	S-2	0.34	0.063	0.0025	0.019	0.015	N/A	N/A
05-Jul-90	S-2	0.10	0.01	<0.0005	0.0018	0.002	N/A	N/A
12-Oct-90	S-2	<0.05	0.0020	<0.0005	<0.0005	<0.0005	N/A	N/A
22-Jan-91	S-2	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
30-Apr-91	S-2	0.60	0.060	0.0036	0.016	0.015	N/A	N/A
12-Jul-91	S-2	0.15	0.022	<0.0005	0.0036	0.0027	N/A	N/A
02-May-88	S-3	46.	2.7	10.	----	10.	N/A	N/A
02-May-89	S-3	47.	2.0	6.0	1.7	7.2	N/A	N/A
13-Apr-90	S-3	16.	0.54	2.4	0.81	3.9	N/A	N/A

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE
2800 Telegraph Avenue
Oakland, CA

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
05-Jul-90	S-3	16.	0.42	1.7	0.64	3.1	N/A	N/A
12-Oct-90	S-3	Free Product	0.12 ft					
22-Jan-91	S-3	Free Product	0.15 ft					
30-Apr-91	S-3	Free Product	0.13 ft					
12-Jul-91	S-3	Free Product	0.13 ft					
08-Nov-88	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
22-Feb-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
02-May-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Aug-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Oct-89	S-4	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
16-Jan-90	S-4	<0.050	<0.0005	<0.0005	<0.0005	0.001	N/A	N/A
13-Apr-90	S-4	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
05-Jul-90	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Oct-90	S-4	<0.05	0.0010	0.0047	0.0010	0.0032	N/A	N/A
22-Jan-91	S-4	<0.05	<0.0005	<0.0005	<0.0005	0.0029	N/A	N/A
30-Apr-91	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
12-Jul-91	S-4	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
08-Nov-88	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
22-Feb-89	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
02-May-89	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Aug-89	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Oct-89	S-5	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
16-Jan-90	S-5	<0.050	<0.0005	<0.0005	<0.0005	0.001	N/A	N/A
13-Apr-90	S-5	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
05-Jul-90	S-5	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Oct-90	S-5	<0.05	0.0005	0.0026	0.0005	0.0017	N/A	N/A
22-Jan-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	0.0010	N/A	N/A
30-Apr-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	0.0008	N/A	N/A

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE
2800 Telegraph Avenue
Oakland, CA

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
12-Jul-91	S-5	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
08-Nov-88	S-6	5.5	1.7	0.02	0.02	0.12	N/A	N/A
22-Feb-89	S-6	6.0	2.4	0.05	0.11	0.3	N/A	N/A
02-May-89	S-6	9.1	3.7	0.12	0.28	0.3	N/A	N/A
03-Aug-89	S-6	7.1	2.4	<0.05	0.07	<0.2	N/A	N/A
03-Oct-89	S-6	5.9	1.6	0.033	0.058	0.10	N/A	N/A
16-Jan-90	S-6	5.9	1.8	0.15	0.16	0.41	N/A	N/A
13-Apr-90	S-6	5.9	1.8	0.07	0.02	0.16	N/A	N/A
05-Jul-90	S-6	4.2	1.2	0.02	0.03	0.08	N/A	N/A
12-Oct-90	S-6	1.7	0.39	0.0065	0.0036	0.016	N/A	N/A
22-Jan-91	S-6	2.2	0.44	0.015	<0.01	0.059	N/A	N/A
30-Apr-91	S-6	4.8	0.64	0.15	0.17	0.48	N/A	N/A
12-Jul-91	S-6	2.9	0.66	0.02	0.02	0.08	N/A	N/A
08-Nov-88	S-7	2.6	0.088	0.43	0.086	0.43	N/A	N/A
22-Feb-89	S-7	0.8	0.025	0.027	0.029	0.17	N/A	N/A
02-May-89	S-7	0.8	0.032	0.014	0.021	0.11	N/A	N/A
03-Aug-89	S-7	5.0	0.66	0.38	0.23	0.71	N/A	N/A
03-Oct-89	S-7	0.96	0.11	0.008	0.013	0.046	N/A	N/A
16-Jan-90	S-7	0.23	0.0010	0.0018	0.0031	0.017	N/A	N/A
13-Apr-90	S-7	0.32	0.0051	0.0008	0.0023	0.012	N/A	N/A
05-Jul-90	S-7	0.27	0.0055	0.001	0.0006	0.005	N/A	N/A
12-Oct-90	S-7	0.63	0.043	0.0053	0.0048	0.012	N/A	N/A
22-Jan-91	S-7	1.2	0.077	0.027	0.057	0.16	N/A	N/A
30-Apr-91	S-7	0.24	0.0032	0.0023	0.0036	0.010	N/A	N/A
12-Jul-91	S-7	0.96	0.067	0.0043	0.0068	0.032	N/A	N/A
03-Aug-89	S-8	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Oct-89	S-8	1.6	0.022	0.11	0.053	0.24	N/A	N/A

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE
2800 Telegraph Avenue
Oakland, CA

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
16-Jan-90	S-8	2.0	0.040	0.15	0.090	0.40	N/A	N/A
13-Apr-90	S-8	1.6	0.027	0.071	0.048	0.21	N/A	N/A
05-Jul-90	S-8	1.5	0.025	0.075	0.067	0.25	N/A	N/A
12-Oct-90	S-8	1.0	0.017	0.031	0.034	0.12	N/A	N/A
22-Jan-91	S-8	0.82	0.017	0.037	0.030	0.12	N/A	N/A
30-Apr-91	S-8	2.9	0.046	0.11	0.12	0.33	N/A	N/A
12-Jul-91	S-8	0.82	0.034	0.038	0.041	0.11	N/A	N/A
03-Aug-89	S-9	1.6	0.032	0.12	0.052	0.25	N/A	N/A
03-Oct-89	S-9	<0.05	<0.0005	0.001	<0.001	0.003	N/A	N/A
16-Jan-90	S-9	<0.050	<0.0005	<0.0005	<0.0005	0.001	N/A	N/A
13-Apr-90	S-9	<0.050	0.0007	0.0023	<0.0005	0.003	N/A	N/A
05-Jul-90	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Oct-90	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
22-Jan-91	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
30-Apr-91	S-9	<0.05	<0.0005	<0.0005	<0.0005	0.0006	N/A	N/A
12-Jul-91	S-9	<0.05	<0.0005	<0.0005	<0.0005	<0.0005		
03-Aug-89	S-10	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
03-Oct-89	S-10	<0.05	<0.0005	<0.001	<0.001	<0.003	N/A	N/A
16-Jan-90	S-10	<0.050	<0.0005	<0.0005	<0.0005	0.001	N/A	N/A
13-Apr-90	S-10	<0.050	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
05-Jul-90	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.001	N/A	N/A
12-Oct-90	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
22-Jan-91	S-10	<0.05	0.0007	0.0082	0.0022	0.014	N/A	N/A
30-Apr-91	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	N/A	N/A
12-Jul-91	S-10	<0.05	<0.0005	<0.0005	<0.0005	<0.0005		
16-Oct-89	S-11	0.65	0.042	0.047	0.024	0.16	N/A	N/A
16-Jan-90	S-11	0.35	0.027	0.035	0.020	0.11	N/A	N/A

TABLE 2

HISTORICAL GROUND-WATER QUALITY DATABASE
2800 Telegraph Avenue
Oakland, CA

SAMPLE DATE	SAMPLE POINT	TPH-G (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)	TPH-D (PPM)	OIL (PPM)
13-Apr-90	S-11	0.90	0.057	0.11	0.037	0.24	N/A	N/A
05-Jul-90	S-11	2.0	0.11	0.21	0.093	0.53	N/A	N/A
12-Oct-90	S-11	1.2	0.14	0.10	0.064	0.22	N/A	N/A
22-Jan-91	S-11	1.4	0.085	0.093	0.088	0.30	N/A	N/A
30-Apr-91	S-11	5.4	0.048	0.026	0.080	0.37	N/A	N/A
12-Jul-91	S-11	0.19	0.012	0.0023	0.010	0.044	N/A	N/A

Current Regional Water Quality Control Board Maximum Contaminant Levels
Benzene 0.001 ppm Xylenes 1.750 ppm Ethylbenzene 0.680 ppm

Current DHS Action Levels Toluene 0.1000 ppm

TPH-G = Total Petroleum Hydrocarbons calculated as Gasoline
PPM = Parts Per Million
NOTE: 1. DHS Action levels and MCL's are subject to change pending State of California review.
2. All data shown as <X are reported as ND (none detected).
3. Ethylbenzene and Xylenes were combined prior to May 1989.

BLAINE
TECH SERVICES INC.

GROUNDWATER SAMPLING SPECIALISTS
SINCE 1985

June 18, 2008

Denis Brown
Shell Oil Products US
20945 South Wilmington Avenue
Carson, CA 90810

Second Quarter 2008 Groundwater Monitoring at
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Monitoring performed on May 28, 2008

Groundwater Monitoring Report **080528-BD-1**

This report covers the routine monitoring of groundwater wells at this former Shell facility. In accordance with standard procedures that conform to Regional Water Quality Control Board requirements, routine field data collection includes depth to water, total well depth, thickness of any separate immiscible layer, water column volume, calculated purge volume (if applicable), elapsed evacuation time (if applicable), total volume of water removed (if applicable), and standard water parameter instrument readings. Sample material is collected, contained, stored, and transported to the laboratory in conformance with EPA standards. Purgewater (if applicable) is, likewise, collected and transported to the Martinez Refining Company.

Basic field information is presented alongside analytical values excerpted from the laboratory report in the cumulative table of **WELL CONCENTRATIONS**. The full analytical report for the most recent samples and the field data sheets are attached to this report.

At a minimum, Blaine Tech Services, Inc. field personnel are certified on completion of a forty hour Hazardous Materials and Emergency Response training course per 29 CFR 1910.120. Field personnel are also enrolled in annual eight hour refresher courses.
Blaine Tech Services, Inc. conducts sampling and documentation assignments of this type as an independent third party. Our activities at this site consisted of objective data and sample collection only. No interpretation of analytical results, defining of hydrological conditions or formulation of recommendations was performed.

Please call if you have any questions.

Yours truly,

Mike Ninokata
Project Manager

MN/tm

attachments: Cumulative Table of WELL CONCENTRATIONS
Certified Analytical Report
Field Data Sheets

cc: Dennis Baertschi
Conestoga-Rovers & Associates
19449 Riverside Dr., Suite 230
Sonoma, CA 95476

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-1	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.50	25.81	NA
S-1	08/10/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	10.85	24.46	NA
S-1	11/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	10.34	24.97	NA
S-1	02/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	7.60	27.71	NA
S-1	06/07/1993	<50	2.8	1.3	0.7	3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.63	26.68	NA
S-1	08/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.20	26.11	NA
S-1	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	10.58	24.73	NA
S-1	02/10/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.41	26.90	NA
S-1	05/03/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.09	26.22	NA
S-1	08/01/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.81	26.50	NA
S-1	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.32	25.99	NA
S-1	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	6.98	28.33	NA
S-1	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.35	25.96	NA
S-1	02/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	7.45	27.86	NA
S-1	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.91	26.40	NA
S-1	08/02/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.33	25.98	NA
S-1	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	10.11	25.20	NA
S-1	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	7.93	27.38	NA
S-1	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.94	26.37	NA
S-1	07/01/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.55	25.76	NA
S-1	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.43	25.88	NA
S-1	01/07/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.21	27.10	NA
S-1	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.27	27.04	NA
S-1	07/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.97	26.34	NA
S-1	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.89	25.42	NA
S-1	01/12/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.45	26.86	NA
S-1	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.04	26.27	NA
S-1	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.11	26.20	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-1	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.00	26.31	NA
S-1	03/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	7.31	28.00	NA
S-1	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.85	26.46	NA
S-1	09/08/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	35.31	9.50	25.81	NA
S-1	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.31	10.16	25.15	NA
S-1	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	35.31	8.16	27.15	NA
S-1	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	35.09	8.74	26.35	NA
S-1	09/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	35.09	8.79	26.30	NA
S-1	11/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	35.09	8.43	26.66	NA
S-1	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	35.09	7.34	27.75	NA
S-1	04/21/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	35.09	8.23	26.86	NA
S-1	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	35.09	9.46	25.63	NA
S-1	11/17/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	35.09	8.42	26.67	NA
S-1	02/08/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	35.09	8.28	26.81	NA
S-1	05/13/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	35.09	7.80	27.29	NA
S-2	05/04/1992	1600	190	6.0	240	54	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.91	9.44	24.47	NA
S-2	08/10/1992	<50	4.1	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.91	10.73	23.18	NA
S-2	09/11/1992	84	19	0.7	2.2	4.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.91	NA	NA	NA
S-2	11/09/1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.91	10.29	23.62	NA
S-2	02/23/1993	16000	1600	480	850	1800	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.91	9.04	24.87	NA
S-2	04/08/1993	Well destroyed		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-3	05/04/1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.56	9.22	24.34	NA
S-3	08/10/1992	Well paved over		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-3R	03/13/2006	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	4.50	28.15	NA
S-3R	03/17/2006	6930	1.99	7.79	126	90.2	NA	<0.500	NA	NA	NA	NA	NA	NA	NA	32.65	4.28	28.37	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-3R	07/06/2006	525	<0.500	<0.500	5.67	3.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	4.01	28.64	NA
S-3R	09/25/2006	630	0.62	1.0	4.5	4.5	NA	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA	32.65	7.84	24.81	NA
S-3R	11/30/2006	580	<0.50	0.57	2.8	1.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	7.90	24.75	NA
S-3R	03/21/2007	470	<2.0	<2.0	4.5	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	6.11	26.54	NA
S-3R	06/28/2007	280 d	0.17 e	0.35 e	1.6	0.74 e	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	8.11	24.54	NA
S-3R	09/17/2007	120 d	<0.50	<1.0	<1.0	<1.0	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	32.65	8.85	23.80	NA
S-3R	11/29/2007	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	NA	NA	NA
S-3R	03/25/2008	490	<0.50	<1.0	1.9	<1.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.65	7.50	25.15	NA
S-3R	**05/28/2008**	**450**	**<0.50**	**<1.0**	**1.1**	**<1.0**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**32.65**	**7.83**	**24.82**	**NA**
S-4	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.96	24.12	NA
S-4	08/10/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	11.32	22.76	NA
S-4	11/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	11.29	22.79	NA
S-4	02/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.82	24.26	NA
S-4	06/07/1993	50	9.2	5.5	3.3	14	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.51	23.57	NA
S-4	08/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	11.05	23.03	NA
S-4	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	11.34	22.74	NA
S-4	02/10/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.93	24.15	NA
S-4	05/03/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.40	23.68	NA
S-4	08/01/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.68	23.40	NA
S-4	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.44	24.64	NA
S-4	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.18	24.90	NA
S-4	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.62	23.46	NA
S-4	02/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.23	24.85	NA
S-4	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.37	23.71	NA
S-4	08/02/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.69	23.39	NA
S-4	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.96	23.12	NA
S-4	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.37	24.71	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-4	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.25	23.83	NA
S-4	07/01/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.60	23.48	NA
S-4	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.52	23.56	NA
S-4	01/07/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.79	24.29	NA
S-4	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.56	24.52	NA
S-4	07/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.51	23.57	NA
S-4	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	11.01	23.07	NA
S-4	01/12/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.53	23.55	NA
S-4	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	9.73	24.35	NA
S-4	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.48	23.60	NA
S-4	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.67	23.41	NA
S-4	03/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	8.99	25.09	NA
S-4	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.31	23.77	NA
S-4	09/08/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.77	23.31	NA
S-4	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.08	10.97	23.11	NA
S-4	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	34.08	8.21	25.87	NA
S-4	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	34.01	10.23	23.78	NA
S-4	09/29/2003	<50	<0.50	<0.50	1.9	2.6	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	34.01	10.42	23.59	NA
S-4	11/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	34.01	10.14	23.87	NA
S-4	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	34.01	9.41	24.60	NA
S-4	04/21/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	34.01	9.84	24.17	NA
S-4	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	34.01	10.50	23.51	NA
S-4	11/17/2004	<50 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	34.01	9.83	24.18	NA
S-4	02/08/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	34.01	9.40	24.61	NA
S-4	05/13/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	34.01	8.90	25.11	NA
S-5	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.27	23.15	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-5	08/10/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.68	22.74	NA
S-5	11/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.69	22.73	NA
S-5	02/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.45	23.97	NA
S-5	06/07/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.23	23.19	NA
S-5	08/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.58	22.84	NA
S-5	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.70	22.72	NA
S-5	02/10/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.75	23.67	NA
S-5	05/03/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.19	23.23	NA
S-5	08/01/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.30	23.12	NA
S-5	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.64	23.78	NA
S-5	02/03/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.59	23.83	NA
S-5	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.23	23.90	NA
S-5	02/02/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.51	23.91	NA
S-5	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.15	23.27	NA
S-5	08/02/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.30	23.12	NA
S-5	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.54	22.88	NA
S-5	01/08/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.56	23.86	NA
S-5	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.03	23.39	NA
S-5	07/01/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.23	23.19	NA
S-5	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.25	23.17	NA
S-5	01/07/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.83	23.59	NA
S-5	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.73	23.69	NA
S-5	07/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.04	23.38	NA
S-5	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.91	22.51	NA
S-5	01/12/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.80	23.62	NA
S-5	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.09	24.33	NA
S-5	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.05	23.37	NA
S-5	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.30	23.12	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-5	03/07/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	33.42	9.11	24.31	NA
S-5	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.11	23.31	NA
S-5	09/08/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.37	23.05	NA
S-5	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.42	10.56	22.86	NA
S-5	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	33.42	7.93	25.49	NA
S-5	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.26	9.87	23.39	NA
S-5	09/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	33.26	10.02	23.24	NA
S-5	11/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	33.26	9.77	23.49	NA
S-5	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	33.26	9.28	23.98	NA
S-5	04/21/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	33.26	9.44	23.82	NA
S-5	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	33.26	10.05	23.21	NA
S-5	11/17/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	33.26	9.54	23.72	NA
S-5	02/08/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	33.26	9.39	23.87	NA
S-5	05/13/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	33.26	8.95	24.31	NA
S-6	05/04/1992	3100	640	22	23	97	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.42	23.17	NA
S-6	08/10/1992	3400	430	27	26	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	10.40	22.19	NA
S-6	11/09/1992	2000	320	15	15	100	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	10.16	22.43	NA
S-6	02/23/1993	14000	780	180	380	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.60	24.99	NA
S-6	06/07/1993	3900	1400	56	83	210	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.90	23.69	NA
S-6	08/13/1993	4000a	890	16	<0.5	41	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.39	23.20	NA
S-6	11/18/1993	80	5.0	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	10.32	22.27	NA
S-6	02/10/1994	4100	370	23	21	90	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.68	23.91	NA
S-6	05/03/1994	4700	550	28	85	340	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.20	23.39	NA
S-6	08/01/1994	2900	370	11	11	43	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.90	23.69	NA
S-6	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.32	23.69	NA
S-6	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.04	23.69	NA
S-6	08/02/1995	1400	160	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.26	23.19	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-6	02/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.90	24.69	NA
S-6	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.98	23.61	NA
S-6	08/02/1996	1600	150	9.2	13	23	17	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.34	23.25	NA
S-6	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.96	22.63	NA
S-6	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.38	25.21	NA
S-6	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.16	23.43	NA
S-6	07/01/1997	<50	1.5	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.60	22.99	NA
S-6	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.64	22.95	NA
S-6	01/07/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.34	24.25	NA
S-6	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.93	24.66	NA
S-6	07/02/1998	370	22	0.62	<0.50	<0.50	5.60	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.85	22.74	NA
S-6	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	10.48	22.11	NA
S-6	01/12/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.63	22.96	NA
S-6	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.08	23.51	NA
S-6	07/09/1999	52	2.3	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.33	23.26	NA
S-6	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.80	22.79	NA
S-6	03/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.05	25.54	NA
S-6	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.05	23.54	NA
S-6	09/08/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.65	22.94	NA
S-6	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	9.51	23.08	NA
S-6	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	32.59	7.14	25.45	NA
S-6	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	9.14	23.22	NA
S-6	09/29/2003	1700	13	4.6	<2.5	5.8	NA	<2.5	<10	<10	<10	<25	<2.5	<2.5	<250	32.36	9.32	23.04	NA
S-6	11/20/2003	4500	45	14	36	28	NA	<1.0	<4.0	<4.0	<4.0	<10	<1.0	<1.0	<100	32.36	8.29	24.07	NA
S-6	02/04/2004	3700	41	14	9.1	38	NA	<2.5	<10	<10	<10	<25	<2.5	<2.5	<250	32.36	7.90	24.46	NA
S-6	04/21/2004	2800	13	6.9	5.0	12	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	32.36	8.50	23.86	NA
S-6	08/12/2004	2700	15	4.4	<2.5	<5.0	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	32.36	9.40	22.96	NA
S-6	11/17/2004	2700	13	5.6	8.1	11	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	32.36	8.23	24.13	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-6	02/08/2005	1700	3.8	2.7	26	29	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	32.36	7.77	24.59	NA
S-6	05/13/2005	3000	9.0	6.6	3.7	21	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	32.36	7.25	25.11	NA
S-6	08/17/2005	1600	4.0	2.9	0.71	4.9	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.36	8.62	23.74	NA
S-6	03/17/2006	9760	15.4	9.83	32.9	44.6	NA	<0.500	NA	NA	NA	NA	NA	NA	NA	32.36	6.31	26.05	NA
S-6	07/06/2006	4680	9.09	9.16	3.51	32.6	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	7.17	25.19	NA
S-6	09/25/2006	3100	5.1	4.4	2.8	8.1	NA	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA	32.36	8.86	23.50	NA
S-6	11/30/2006	2600	7.0	4.1	3.4	7.3	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	8.79	23.57	NA
S-6	03/21/2007	2100	9.0	3.1	4.9	9.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	8.21	24.15	NA
S-6	06/28/2007	2200 d	4.4	2.1	0.97 e	3.51 e	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	8.80	23.56	NA
S-6	09/17/2007	2900 d,f	2.1	1.0	0.30 e	1.24 e	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	32.36	10.08	22.28	NA
S-6	11/29/2007	3300 d	2.0	0.97 e	0.41 e	2.21 e	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	8.99	23.37	NA
S-6	03/25/2008	2800	2.4	2.1	<1.0	10.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.36	8.27	24.09	NA
S-6	**05/28/2008**	**1,400**	**2.0**	**1.3**	**<1.0**	**2.3**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**32.36**	**8.70**	**23.66**	**NA**
S-6 (D)	08/01/1994	2600	340	8.8	7.7	33	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	NA	NA	NA
S-6 (D)	08/02/1995	1400	170	<5	<5	<5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	NA	NA	NA
S-7	05/04/1992	180	1.6	<0.5	1.5	3.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.21	22.12	NA
S-7	08/10/1992	190	8.0	1.4	4.7	8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	12.28	21.05	NA
S-7	11/09/1992	280	16	4.0	7.8	21	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.77	21.56	NA
S-7	02/23/1993	210	13	2.2	5.4	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	8.86	24.47	NA
S-7	06/07/1993	90	1.2	2.5	1.0	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	10.58	22.75	NA
S-7	08/13/1993	140	4.0	0.8	<0.5	0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.34	21.99	NA
S-7	11/18/1993	440	43	4.9	0.9	4.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	12.00	21.33	NA
S-7	02/10/1994	250a	<0.5	<0.5	1.8	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	9.88	23.45	NA
S-7	05/03/1994	130	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	10.75	22.58	NA
S-7	08/01/1994	250	4.8	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.05	22.28	NA
S-7	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	9.64	23.69	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-7	02/03/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	8.53	24.80	NA
S-7	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.10	22.23	NA
S-7	02/02/1996	480	2.2	2.4	7.9	25	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	8.58	24.75	NA
S-7	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	10.41	22.92	NA
S-7	08/02/1996	300	20	2.2	3.8	7.9	21	11	NA	NA	NA	NA	NA	NA	NA	33.33	11.18	22.15	NA
S-7	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	12.12	21.21	NA
S-7	01/08/1997	850	16	6.3	20	59	<25	NA	NA	NA	NA	NA	NA	NA	NA	33.33	8.23	25.10	NA
S-7	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	10.75	22.58	NA
S-7	07/01/1997	120	2.4	<0.50	2.9	2.6	3.5	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.40	21.93	NA
S-7	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.50	21.83	NA
S-7	04/19/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	33.33	9.39	23.94	NA
S-7	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.15	22.18	NA
S-7	10/06/1999	216	5.04	<0.500	2.23	4.82	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	33.33	11.65	21.68	NA
S-7	NA	Well abandoned		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-7 (D)	08/02/1996	340	22	2.2	4.4	8.9	20	NA	NA	NA	NA	NA	NA	NA	NA	33.33	NA	NA	NA
S-7 (D)	01/08/1997	840	15	<5.0	21	63	25	NA	NA	NA	NA	NA	NA	NA	NA	33.33	NA	NA	NA
S-7 (D)	07/01/1997	120	2.4	<0.50	2.9	2.6	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	33.33	NA	NA	NA
S-8	05/04/1992	1600	20	420	96	330	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.29	21.68	NA
S-8	08/10/1992	1500	19	37	60	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	11.12	20.85	NA
S-8	11/09/1992	710	5.7	24	28	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.71	21.26	NA
S-8	02/23/1993	3800	40	54	68	260	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	6.04	25.93	NA
S-8	06/07/1993	1200	13	19	65	150	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.06	21.91	NA
S-8	08/13/1993	1300	21	23	49	250	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.56	21.41	NA
S-8	11/18/1993	870	16	5.3	59	230	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.90	21.07	NA
S-8	02/10/1994	2400	11	55	120	530	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.53	22.44	NA
S-8	05/03/1994	3100	12	27	130	370	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.06	21.91	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-8	08/01/1994	1500	20	18	39	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.32	21.65	NA
S-8	11/08/1994	2100	22	38	73	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.25	22.72	NA
S-8	02/03/1995	4800	67	39	130	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	8.99	22.98	NA
S-8	05/04/1995	2600	31	23	71	310	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.22	22.75	NA
S-8	08/02/1995	1700	10	9.1	48	210	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.36	21.61	NA
S-8	11/02/1995	1200	16	13	72	130	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.72	21.25	NA
S-8	02/02/1996	7100	29	140	360	1300	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	8.92	23.05	NA
S-8	05/04/1996	3500	13	27	110	400	<25	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.86	22.11	NA
S-8	08/02/1996	850	9.6	7.4	30	160	11	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.30	21.67	NA
S-8	10/02/1996	980	<5.0	11	13	92	<25	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.71	21.26	NA
S-8	01/08/1997	6400	88	48	190	500	<100	NA	NA	NA	NA	NA	NA	NA	NA	31.97	8.88	23.09	NA
S-8	04/17/1997	1700	23	7.4	34	50	74	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.00	21.97	NA
S-8	07/01/1997	140	2.8	<0.50	<0.50	0.58	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.40	21.57	NA
S-8	10/07/1997	300	2.7	0.63	4.6	8.4	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.50	21.47	NA
S-8	01/07/1998	110	1.2	<0.50	<0.50	1.6	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.27	22.70	NA
S-8	04/02/1998	4500	140	77	140	380	<12	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.31	22.66	NA
S-8	07/02/1998	330	4.2	0.79	1.7	2.3	4.8	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.48	22.49	NA
S-8	10/01/1998	52	0.76	<0.50	<0.50	0.70	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.08	21.89	NA
S-8	01/12/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.50	21.47	NA
S-8	04/19/1999	3360	29.6	24.6	137	398	<100	NA	NA	NA	NA	NA	NA	NA	NA	31.97	9.45	22.52	NA
S-8	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.25	21.72	NA
S-8	10/06/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.70	21.27	NA
S-8	03/07/2000	16500	461	397	665	1240	229	NA	NA	NA	NA	NA	NA	NA	NA	31.97	8.45	23.52	NA
S-8	06/01/2000	317	4.05	0.943	0.595	1.08	29.9	NA	NA	NA	NA	NA	NA	NA	NA	31.97	10.03	21.94	NA
S-8	09/08/2000	330	2.14	1.45	7.21	16.5	39.9	<1.00b	NA	NA	NA	NA	NA	NA	NA	31.97	10.58	21.39	NA
S-8	11/29/2000	188	2.70	<0.500	2.43	1.44	7.27	<1.00b	NA	NA	NA	NA	NA	NA	NA	31.97	10.25	21.72	NA
S-8	03/09/2001	4110	80.1	23.0	90.6	95.0	70.4	NA	NA	NA	NA	NA	NA	NA	NA	31.97	8.99	22.98	NA
S-8	09/12/2001	NA	NA	NA	NA	NA	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	31.97	10.67	21.30	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-8	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	10.02	21.87	NA
S-8	09/29/2003	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	NA	NA	NA
S-8	10/03/2003	1700	<2.5	8.1	53	140	NA	<2.5	<10	<10	<10	<25	<2.5	<2.5	<250	31.89	9.99	21.90	NA
S-8	11/20/2003	7100	110	33	150	290	NA	2.8	<10	<10	<10	<25	<2.5	<2.5	<250	31.89	9.14	22.75	NA
S-8	02/04/2004	4400	41	8.6	37	120	NA	<2.5	<10	<10	<10	<25	<2.5	<2.5	<250	31.89	8.89	23.00	NA
S-8	04/21/2004	3300	11	4.0	39	150	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	31.89	9.33	22.56	NA
S-8	08/12/2004	1300	<2.5	<2.5	18	76	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	31.89	10.06	21.83	NA
S-8	11/17/2004	1900	<1.0	4.5	17	79	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	31.89	9.62	22.27	NA
S-8	02/08/2005	3700	45	5.4	21	39	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	31.89	9.03	22.86	NA
S-8	05/13/2005	3000	8.8	5.7	3.0	20	NA	<2.5	NA	NA	NA	NA	NA	NA	NA	31.89	8.58	23.31	NA
S-8	08/17/2005	2300	<1.0	2.3	6.5	41	NA	<1.0	NA	NA	NA	NA	NA	NA	NA	31.89	9.64	22.25	NA
S-8	03/17/2006	10000	84.0	14.9	65.1	95.8	NA	<0.500	NA	NA	NA	NA	NA	NA	NA	31.89	8.38	23.51	NA
S-8	07/06/2006	2910	3.46	0.560	9.12	47.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	9.22	22.67	NA
S-8	09/25/2006	1100	0.64	1.3	5.9	15	NA	<1.0	<1.0	<1.0	<1.0	<10	NA	NA	NA	31.89	9.80	22.09	NA
S-8	11/30/2006	1100	0.54	1.4	7.2	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	9.70	22.19	NA
S-8	03/21/2007	Well inaccessible		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	NA	NA	NA
S-8	06/28/2007	1500 d	0.30 e	0.76 e	1.7	6.81 e	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	9.52	22.37	NA
S-8	09/17/2007	620 d	<0.50	0.60 e	3.4	6.03 e	NA	<1.0	<2.0	<2.0	<2.0	<10	NA	NA	NA	31.89	10.16	21.73	NA
S-8	11/29/2007	890 d	0.16 e	0.81 e	2.6	9.37 e	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	9.91	21.98	NA
S-8	03/25/2008	2800	1.5	1.2	3.3	13	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.89	9.48	22.41	NA
S-8	**05/28/2008**	**1,200**	**<0.50**	**<1.0**	**<1.0**	**3.4**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**31.89**	**9.73**	**22.16**	**NA**
S-8 (D)	02/10/1994	2400	11	46	100	440	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	05/03/1994	3000	21	25	120	340	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	11/08/1994	2100	20	31	75	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	02/03/1995	3700	53	30	100	240	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	05/04/1995	3300	38	26	89	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	08/02/1995	1200	15	13	70	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-8 (D)	02/02/1996	7800	33	160	400	1500	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	05/04/1996	5100	19	37	190	690	<25	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	10/02/1996	1300	<5.0	10	28	180	<25	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	04/17/1997	1600	25	7.4	30	43	34	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	01/07/1998	150	1.8	0.6	<0.50	2.2	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-8 (D)	07/02/1998	360	4.3	0.89	1.7	2.3	5.7	NA	NA	NA	NA	NA	NA	NA	NA	31.97	NA	NA	NA
S-9	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.45	21.41	NA
S-9	08/10/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	11.52	20.34	NA
S-9	11/09/1992	<50	<0.5	<0.5	<0.5	0.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	11.02	20.84	NA
S-9	02/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	8.00	23.86	NA
S-9	06/07/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.07	21.79	NA
S-9	08/13/1993	140	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.92	20.94	NA
S-9	11/18/1993	170	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	11.19	20.67	NA
S-9	02/10/1994	140	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	9.16	22.70	NA
S-9	05/03/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.03	21.83	NA
S-9	08/01/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.52	21.34	NA
S-9	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	9.08	22.78	NA
S-9	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	8.37	23.49	NA
S-9	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	9.35	22.51	NA
S-9	02/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	7.53	24.33	NA
S-9	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	9.60	22.26	NA
S-9	08/02/1996	<50	<0.50	<0.50	<0.50	<0.50	12	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.46	21.40	NA
S-9	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.66	21.20	NA
S-9	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	7.20	24.66	NA
S-9	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	9.96	21.90	NA
S-9	07/01/1997	<50	<0.50	<0.50	<0.50	<0.50	3.9	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.64	21.22	NA
S-9	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.63	21.23	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-9	04/19/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	31.86	8.69	23.17	NA
S-9	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.45	21.41	NA
S-9	10/06/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	31.86	10.90	20.96	NA
S-9	NA	Well abandoned		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-10	05/04/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.54	24.41	NA
S-10	08/10/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	10.43	22.52	NA
S-10	11/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.14	23.81	NA
S-10	02/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.72	26.23	NA
S-10	06/07/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.08	24.87	NA
S-10	08/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.83	24.12	NA
S-10	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.46	23.49	NA
S-10	02/10/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	7.41	25.54	NA
S-10	05/03/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.16	24.79	NA
S-10	08/01/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.29	24.66	NA
S-10	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	7.02	25.93	NA
S-10	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.79	26.16	NA
S-10	08/02/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.30	24.65	NA
S-10	02/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.49	26.46	NA
S-10	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	7.55	25.40	NA
S-10	08/02/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.25	23.70	NA
S-10	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	10.54	22.41	NA
S-10	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.47	26.48	NA
S-10	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	7.78	25.17	NA
S-10	07/01/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.83	24.12	NA
S-10	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.89	24.06	NA
S-10	01/07/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.97	25.98	NA
S-10	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.96	25.99	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-10	07/02/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.95	10.41	22.54	NA
S-10	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	11.03	21.92	NA
S-10	01/12/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	10.33	22.62	NA
S-10	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.72	23.23	NA
S-10	07/09/1999	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.98	23.97	NA
S-10	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.15	23.80	NA
S-10	03/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.01	26.94	NA
S-10	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	8.13	24.82	NA
S-10	09/08/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.10	23.85	NA
S-10	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.95	9.32	23.63	NA
S-10	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	32.95	6.54	26.41	NA
S-10	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.93	9.13	23.80	NA
S-10	09/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.93	9.26	23.67	NA
S-10	11/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.93	7.15	25.78	NA
S-10	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.93	6.80	26.13	NA
S-10	04/21/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.93	7.71	25.22	NA
S-10	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.93	9.26	23.67	NA
S-10	11/17/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.93	7.44	25.49	NA
S-10	02/08/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.93	6.94	25.99	NA
S-10	05/13/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.93	6.41	26.52	NA
S-11	05/04/1992	1500	55	32	57	190	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.99	20.79	NA
S-11	08/10/1992	750	29	13	43	120	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.92	19.86	NA
S-11	11/09/1992	4100	32	62	120	1100	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.44	20.34	NA
S-11	02/23/1993	760	15	13	37	140	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	7.30	23.48	NA
S-11	06/07/1993	1700	40	16	100	360	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.51	21.27	NA
S-11	08/13/1993	60	0.9	<0.5	0.8	1.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.39	20.39	NA
S-11	11/18/1993	150	7.8	1.0	9.0	12	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.64	20.14	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
S-11	02/10/1994	4400	53	19	160	390	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	8.50	22.28	NA
S-11	05/03/1994	65	1.5	<0.5	0.53	0.59	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.42	21.36	NA
S-11	08/01/1994	240	18	6.7	6.9	18	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.12	20.66	NA
S-11	11/08/1994	490	14	5.2	15	47	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	8.84	21.94	NA
S-11	02/03/1995	380	4.1	0.9	1.4	5.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	7.12	23.66	NA
S-11	05/04/1995	110	1.3	<0.5	1.1	1.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	7.96	22.82	NA
S-11	08/02/1995	230	22	11	13	35	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.88	20.90	NA
S-11	11/02/1995	200	26	10	10	30	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.10	20.68	NA
S-11	02/02/1996	110	2.9	1.0	2.6	6.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	7.33	23.45	NA
S-11	05/04/1996	<50	0.70	0.54	0.82	2.6	7.5	NA	NA	NA	NA	NA	NA	NA	NA	30.78	8.62	22.16	NA
S-11	08/02/1996	200	11	4.6	12	38	10	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.85	20.93	NA
S-11	10/02/1996	290	20	6.2	16	48	8.4	NA	NA	NA	NA	NA	NA	NA	NA	30.78	11.00	19.78	NA
S-11	01/08/1997	56	2.0	<0.50	1.0	5.8	5.2	NA	NA	NA	NA	NA	NA	NA	NA	30.78	6.20	24.58	NA
S-11	04/17/1997	<50	0.88	<0.50	<0.50	<0.50	3.2	NA	NA	NA	NA	NA	NA	NA	NA	30.78	8.81	21.97	NA
S-11	07/01/1997	610	50	5.9	24	110	3.1	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.47	20.31	NA
S-11	10/07/1997	440	43	3.0	13	110	4.9	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.32	20.46	NA
S-11	04/19/1999	<50.0	0.530	<0.500	<0.500	5.22	<5.00	NA	NA	NA	NA	NA	NA	NA	NA	30.78	8.31	22.47	NA
S-11	07/09/1999	53	2.3	<0.50	<0.50	8.5	<2.5	NA	NA	NA	NA	NA	NA	NA	NA	30.78	9.19	21.59	NA
S-11	10/06/1999	1210	39.1	<10.0	26.4	139	<100	NA	NA	NA	NA	NA	NA	NA	NA	30.78	10.25	20.53	NA
S-11	NA	Well Abandoned		NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
S-11 (D)	06/07/1993	1600	51	16	83	300	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	NA	NA	NA
S-11 (D)	08/13/1993	70	2.1	<0.5	0.9	2.1	NA	NA	NA	NA	NA	NA	NA	NA	NA	30.78	NA	NA	NA
S-11 (D)	10/07/1997	360	39	2.0	7.2	74	4.9	NA	NA	NA	NA	NA	NA	NA	NA	30.78	NA	NA	NA
SR-1	05/04/1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.02	NA	NA
SR-1	08/10/1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.29	NA	NA
SR-1	11/09/1992	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.92	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
SR-1	02/22/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.64	NA	NA
SR-1	06/07/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.36	NA	NA
SR-1	08/13/1993	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.96	NA	NA
SR-1	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.02	NA	NA
SR-1	02/10/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SR-1	05/03/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.28	NA	NA
SR-1	08/01/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.98	NA	NA
SR-1	11/08/1994	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.75	NA	NA
SR-1	02/03/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.20	NA	NA
SR-1	05/04/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	4.10	NA	NA
SR-1	08/02/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.31	NA	NA
SR-1	11/02/1995	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.62	NA	NA
SR-1	02/02/1996	90	6.1	6.7	2.8	8.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.30	NA	NA
SR-1	05/04/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.10	NA	NA
SR-1	08/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.10	NA	NA
SR-1	10/02/1996	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.25	NA	NA
SR-1	01/08/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.18	NA	NA
SR-1	04/17/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.01	NA	NA
SR-1	07/01/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.36	NA	NA
SR-1	10/07/1997	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.22	NA	NA
SR-1	01/07/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.45	NA	NA
SR-1	04/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.43	NA	NA
SR-1	07/02/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.87	NA	NA
SR-1	10/01/1998	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.42	NA	NA
SR-1	01/12/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	10.24	NA	NA
SR-1	04/19/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.64	NA	NA
SR-1	07/09/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.40	NA	NA
SR-1	10/06/1999	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.30	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)
SR-1	03/07/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	5.25	NA	NA
SR-1	06/01/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	8.59	NA	NA
SR-1	09/08/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.22	NA	NA
SR-1	11/29/2000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.65	NA	NA
SR-1	03/09/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	NA	NA	NA	NA	NA	NA	NA	NA	6.78	NA	NA
SR-1	09/12/2001	NA	NA	NA	NA	NA	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	NA	9.23	NA	NA
SR-1	09/18/2003	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	32.59	8.02	24.57	NA
SR-1	09/29/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.59	8.35	24.24	NA
SR-1	11/20/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.59	6.85	25.74	NA
SR-1	02/04/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	<2.0	<2.0	<2.0	<5.0	<0.50	<0.50	<50	32.59	6.58	26.01	NA
SR-1	04/21/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.59	6.96	25.63	NA
SR-1	08/12/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.59	8.42	24.17	NA
SR-1	11/17/2004	<50 c	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.59	7.30	25.29	NA
SR-1	02/08/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.59	6.44	26.15	NA
SR-1	05/13/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	NA	NA	NA	NA	NA	NA	NA	32.59	6.33	26.26	NA
SR-1 (D)	11/18/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)

Abbreviations:
TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to September 29, 2003, analyzed by EPA Method 8015.
BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to September 29, 2003, analyzed by EPA Method 8020.
MTBE = Methyl tertiary butyl ether
DIPE = Di-isopropyl ether, analyzed by EPA Method 8260
ETBE = Ethyl tertiary butyl ether, analyzed by EPA Method 8260
TAME = Tertiary amyl methyl ether, analyzed by EPA Method 8260
TBA = Tertiary butyl alcohol, analyzed by EPA Method 8260
1,2-DCA = 1,2-dichloroethane, analyzed by EPA Method 8260
EDB = 1,2-dibromomethane or ethlyene dibromide, analyzed by EPA Method 8260
TOC = Top of Casing Elevation
TOB = Top of Wellbox Elevation
SPH = Separate-Phase Hydrocarbons
GW = Groundwater
ug/L = parts per billion
MSL = Mean sea level
ft. = Feet
<n = Below detection limit
(D) = Duplicate sample
NA = Not applicable

WELL CONCENTRATIONS
Former Shell Service Station
2800 Telegraph Avenue
Oakland, CA

Well ID	Date	TPPH (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)	1,2-DCA (ug/L)	EDB (ug/L)	Ethanol (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)	SPH Thickness (ft.)

Notes:

a = Chromatogram pattern indicated the presence of an unidentified hydrocarbon.

b = This sample analyzed outside of EPA recommended hold time.

c = The concentration reported reflects individual or discrete unidentified peaks not matching a typical fuel pattern.

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

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

f = 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.

Ethanol analyzed by EPA Method 8260B.

Prior to September 18, 2003, depths to water and groundwater elevation referenced to Top of Box elevation.

Active wells surveyed July 29, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

1Q06 Top of Casing elevation for well S-3R provided by Cambria Environmental Technology, Inc.

ATTACHMENT D

Site Closure Summary Form

SITE CLOSURE SUMMARY

I. AGENCY INFORMATION

Date:

Agency Name: Alameda County Health Care Services Agency	Address: 1131 Harbor Bay Parkway, Suite 2501515 Clay Street, Suite 1400
City/State/Zip: Alameda, CA 95402-6577	Phone: (510) 567 -6791
Responsible Staff Person: Mr. Jerry Wickham	Title: Hazardous Material Specialist

II. SITE INFORMATION

Site Facility Name: Former Shell Service Station		
Site Facility Address: 2800 Telegraph, Oakland, California		
RB Case Nos.:	Local or LOP Case No.: RO0000009	Priority:
URF Filing Date: 4/21/89	SWEEPS No.:	
Responsible Parties (include addresses and phone numbers):		
Shell Oil Products, US, 20945 S. Wilmington Avenue, Carson, CA 90810, (707) 865-0251		

Tank No.	Size in Gallons	Contents	Closed In—Place/Removed?	Date
1	Unknown	Gasoline	Believed to have been removed	1987/1988
2	500	Waste Oil Tank	Removed	December, 1988
3	10,000	Gasoline	Removed	December, 1988
4	10,000	Gasoline	Removed	December, 1988
5	10,000	Gasoline	Removed	December, 1988

III. RELEASE AND SITE CHARACTERIZATION INFORMATION

Cause and Type of Release: Petroleum hydrocarbon (gasoline) release from second generation fuel UST' s		
Site characterization complete? YES	Date Approved by Oversight Agency:	
Monitoring wells installed? YES	Number: 13	Proper screened interval? YES
Highest GW Depth Below Ground Surface: 4.01 ft.	Lowest Depth: 10.85 ft.	Flow Direction: Southwest
Most Sensitive Current Use: Commercial		
Drinking water potential: = Unlikely Most Sensitive Potential Use and Probability of Use = Based on the *Final Report, June 1999 East Bay Plain Groundwater Basin Beneficial Use Evaluation Report* by the California Regional Water Quality Control Board San Francisco Bay Region Groundwater Committee, the City of Oakland does not have "any plans to develop local groundwater resources for drinking water purposes, because of existing or potential salt water intrusion, contamination, or poor or limited quantity".		
Are drinking water wells affected? NO	Aquifer Name: NA	
Is surface water affected? NO	Nearest surface water name: Lake Merrit	

Off-Site Beneficial Use Impacts (Addresses/Locations): NONE	
Report(s) on file? YES	Where is report(s) filed? ACHCSA

TREATMENT AND DISPOSAL OF AFFECTED MATERIAL

Material	Amount (Include Units)	Action (Treatment or Disposal w/Destination)	Date
Tank	5 Tanks	Removed and properly disposed of	1987/1988
Piping	Unknown Amount	Removed and properly disposed of	1987/1988
Free Product	NA		
Soil	590 cubic yards	Removed and properly disposed of	1988 & 1992
Groundwater	NA		
Barrels	NA		

MAXIMUM DOCUMENTED POLLUTANT CONCENTRATIONS—BEFORE AND AFTER CLEANUP

POLLUTANT	Soil (ppm)		Water (ppb)		POLLUTANT	Soil (ppm)		Water (ppb)	
	Before (2004)	After (2006)	Before	After		Before (2004)	After (2006)	Before	After
TPHg	4,900	60	46,000 (S-3)	450 (S-3R)	MTBE	<5.0	NA	229 (S-8)	<1.0 (S-8)
Benzene	<5.0	<0.97	3,700 (S-6)	2.0 (S-6)	TBA	NA	NA	<25 (S-6 & S-8)	<10 (S-6 & S-8)
Toluene	9.3	<0.97	10,000 (S-3)	<1.0 (S-3R)					
Ethylbenzene	81	<0.97	10,000 (S-3)	1.1 (S-3R)					
Xylenes	490	<1.9	10,000 (S-3)	<1.0 (S-3R)					

Comments (Depth of Remediation, etc.):

The extent of impact at the site has been delineated and remaining residual soil and groundwater impact does not indicate significant onsite or offsite impact. Site investigations to date have shown that concentrations of petroleum hydrocarbon constituents are continuing to decline through natural attenuation processes. Based on a comparison to applicable environmental screening levels (ESL's), residual concentrations in soil and groundwater pose no threat to current onsite use or future uses, to occasional onsite construction workers, or nearest identified receptor(s). Although the groundwater beneath this site is not considered a current or future source of drinking water, concentrations of some select hydrocarbon constituents (TPHg and benzene) present in groundwater exceed applicable drinking water ESL's. However, based on extrapolation calculations performed on trend-line analysis graphs, the drinking water ESL's will be met within six years through continued natural attenuation processes, which is deemed a reasonable timeframe. Consequently, the residual concentrations in soil and groundwater have been concluded to pose little or no threat to human health or the environment.

IV. CLOSURE

Does completed corrective action protect existing beneficial uses per the Regional Board Basin Plan? YES
Does completed corrective action protect potential beneficial uses per the Regional Board Basin Plan? YES
Does corrective action protect public health for current land use? YES

Site Management Requirements: Destroy remaining three wells upon receipt of Agency approval		
Monitoring Wells Decommissioned: Most-yes	Number Decommissioned: 10	Number Retained: 3
List Enforcement Actions Taken: NA		
List Enforcement Actions Rescinded: NA		

V. TECHNICAL REPORTS, CORRESPONDENCE, ETC., THAT THIS CLOSURE RECOMMENDATION WAS BASED UPON:

See Attachment for 'List of Known Environmental Documents' for this site.

VI. ADDITIONAL COMMENTS, DATA, ETC.

PLEASE INCLUDE/ATTACH THE FOLLOWING AS APPROPRIATE:

1) SITE MAP INDICATING TANK PIT LOCATION, MONITORING WELL LOCATION, GROUNDWATER GRADIENT, ETC.; AND

2) SITE COMMENTS WORTHY OF NOTICE (E.G., AREA OF RESIDUAL POLLUTION LEFT IN PLACE, DEED NOTICES ETC.)

Detailed Site History, Site Maps & Historical Sample Locations Maps, Historical Soil & Groundwater Data Tables, Hydrocarbon Distribution in Soil And Ground Water Summary, Assessments of Chemicals of Concern, Trend-line Graphs for Residual Chemicals of Concern in Site Groundwater, Sensitive Rector Information, and Risk Evaluation Including Estimated Time Frame for Chemicals of Concern to Reach Water Quality Objectives can be found in Conestoga-Rovers & Associates October 29, 2008 *Risk Evaluation and Case Closure Request*, to which this Site Closure Summary Form is attached to.

This document and the related CASE CLOSURE LETTER shall be retained by the lead agency as part of the official site file.

2800 Telegraph Avenue, Oakland, California - List of Known Environmental Documents		
Date	**Title/Subject**	**Company**
17-Jun-88	Environmental Assessment Report	Woodward-Clyde
23-Feb-89	Soil Sampling Report	Kaprealian
20-Mar-89	Interim Environmental Assessment Report	Woodward-Clyde
22-Sep-89	Monitoring Well Installation report	GeoStrategies
15-Feb-90	Well Installation Report	GeoStrategies
12-Jun-91	Aquifer Test Report	GeoStrategies
12-Nov-91	Remedial Action Plan	GeoStrategies
4-Dec-91	Site Update	GeoStrategies
30-Nov-92	Soil Sampling and Excavation Report	GeoStrategies
May '88 to April '99	Quarterly Sampling & Reporting	Various/Unknown
29-Aug-99	Third Quarter 1999 Monitoring Report	Cambria
14-Jan-00	Monitoring Well Destruction Report	Cambria
26-Jan-00	Fourth Quarter 1999 Monitoring Report	Cambria
23-May-00	First Quarter 2000 Monitoring Report	Cambria
11-Jul-00	Second Quarter 2000 Monitoring Report	Cambria
30-Oct-00	Third Quarter 2000 Monitoring Report	Cambria
14-Mar-01	Fourth Quarter 2000 Monitoring Report	Cambrai
04-Jun-01	First Quarter 2001 Monitoring Report, Sensitive Receptor Survey and Closure Request	Cambria
24-Oct-01	Closure Request Follow-up	Cambria
31-Oct-02	Closure Request Follow-up	Cambria
03-Sep-03	Correspondence	ACHCSA
07-Nov-03	Agency Response and Utility Conduit Investigation Work Plan	Cambria
04-Nov-03	Quarterly Monitoring Report - Third Quarter 2003	Cambria
17-Feb-04	Groundwater Monitoring Report - Fourth Quarter 2003	Cambria
17-Mar-04	Notice of Intent to Implement Work Plan	Cambria
03-May-04	Groundwater Monitoring Report - First Quarter 2004	Cambria
30-Nov-04	Groundwater Monitoring Report - Second and Third Quarter 2004 and Site Investigation Report	Cambria
10-Mar-05	Groundwater Monitoring Report - Fourth Quarter 2004 and Notice of Intent to Implement Prior Recommendations	Cambria
26-May-05	Groundwater Monitoirng Report - First Quarter 2005	Cambria
15-Jun-05	Correspondence	ACHCSA
28-Jul-05	Groundwater Monitoring Report - Second Quarter 2005	Cambria
04-Aug-05	Site Investigation Work Plan	Cambria
22-Aug-05	Correspondence	ACHCSA
04-Aug-05	Site Investigation Work Plan	Cambria
13-Oct-05	Groundwater Monitoring Report - Third Quarter 2005	Cambria
20-Dec-05	Monitoring Well Destruction Report	Cambria
15-May-06	Well Destruction, Well Installation and Groundwater Monitoring Report - First Quarter 2006	Cambria
14-Aug-06	Groundwater Monitoring Report - Second Quarter 2006	Cambria
30-Aug-06	Correspondence	ACHCSA
01-Nov-06	Groundwater Monitoirng Report - Third Quarter 2006	Cambria
06-Feb-07	Groundwater Monitoring Report - Fourth Quarter 2006	Cambria
01-Jun-07	Groundwater Monitoring Report - First Quarter 2007	CRA
16-Aug-07	Groundwater Monitoring Report - Second Quarter 2007	CRA
06-Nov-07	Groundwater Monitoring Report - Third Quarter 2007	CRA
12-Feb-08	Groundwater Monitoring Report - Fourth Quarter 2007	CRA
16-May-08	Groundwater Monitoring Report - First Quarter 2008	CRA
11-Aug-08	Groundwater Monitoring Report - Second Quarter 2008	CRA