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**SITE INVESTIGATION AND REMEDIAL EXCAVATION  
REPORT**

**Former Chevron Service Station Site 9-1026  
3701 Broadway  
Oakland, Alameda County, California**

January 22, 2007

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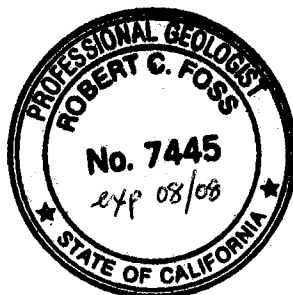
*Submitted to:*

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Alameda County Environmental Health Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

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*Dan Allen for*

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## 1 INTRODUCTION

On behalf of Chevron Environmental Management Company (Chevron), Cambria Environmental Technology, Inc. (Cambria) has prepared this report documenting recent investigation and remedial excavation activities at the site of former Chevron Service Station #9-1026, located at 3701 Broadway in Oakland, California (Figure 1). This work was performed in general accordance with Cambria's May 24, 2006 *Proposed Kaiser Development Plan (PKDP)* and Cambria's June 23, 2006 *Soil and Groundwater Management Plan (SGMP)*. Alameda County Environmental Health Services (ACEHS) approved this plan with additional technical comments in a letter dated June 13, 2006 (Attachment A).



As detailed in the PKDP, prior to excavation activities an additional investigation was conducted to delineate the vertical extent of hydrocarbons in the subsurface, pre-characterize soil for disposal and collect sidewall samples that could not be obtained during excavation due to the use of interlocking shoring.

As outlined in the SGMP, Cambria proposed to remediate the site by removing soil containing residual hydrocarbons above environmental screening levels (ESLs) designated for commercial land use, and to allow for natural attenuation of remaining in situ hydrocarbons. In the SGMP, Cambria proposed to excavate petroleum hydrocarbon-impacted soil to depths of approximately 18-21 feet below grade (fbg). Hydrocarbons had previously been identified to these depths during the subsurface investigations documented above. To the extent feasible, these residual hydrocarbons were to be excavated during the Kaiser Permanente (Kaiser) redevelopment project. After extensive discussions it was agreed that Chevron would excavate the southern portion of the property and backfill/compact this section to its original grade. Kaiser will excavate the remaining area required for their planned development activities with representatives from Chevron onsite to assist in the identification, handling and disposal of impacted soil, as well as limited overexcavation below Kaiser's construction grade. Figure 3 displays the current excavation boundaries and the proposed future Kaiser development boundaries.

The primary objective of this excavation was the removal of petroleum hydrocarbon impacted soils in areas beyond the perimeter of Kaiser's planned excavation for redevelopment. The following report details the site background, investigation, remedial excavation activities and conclusions and recommendations.



## 2 SITE BACKGROUND

### 2.1 Site Description

The site is a former Chevron gasoline service station located on the northwest corner of Broadway and MacArthur Boulevard in Oakland, California. Based on aerial photographs and Sanborn Fire Insurance Maps the site appears to have been an active gas station prior to 1939. All structures were removed in 1988 when station operations ceased. Aerial photographs and Sanborn Fire Insurance Maps are included as Attachment B.



The former station facilities consisted of a station building and six dispenser islands beneath two canopies. There are two documented generations of underground storage tanks (USTs) at the site. The first generation service station consisted of three gasoline USTs, a used oil UST (located in a common pit in the northwestern section of the property) and two dispenser islands (located along the eastern and southern edges of the property). The installation date of the first generation USTs are unknown, however, the USTs were replaced in 1982 with the second generation USTs. Three fiberglass gasoline USTs and one used oil UST were installed in the same location as the former USTs. An additional product recovery UST was installed on the northeastern section of the site. The two dispenser islands remained in the same location as the original configuration. The second generation USTs, the dispenser islands and all other improvements were removed in 1988. Figure 2 displays the first and second generation gas station.

The current landowner, Kaiser Permanente, plans to develop the former Chevron station and three additional parcels as part of a multi story medical office building. According to construction plans provided by Kaiser, the planned development will cover approximately 75% of the site and will be constructed at approximately 15 fbg.

**Subsurface Lithology:** During the investigation and excavation, soils at the site were noted to be comprised of a light brown, firm, low permeable silt to the total depth explored. Soil staining and odor were evident at approximately 5 fbg. During shoring installation, it was observed that the silt became very stiff at approximately 16 fbg. Borings logs are attached as Attachment C

**Hydrology:** Groundwater at the site is encountered between 15 and 18 fbg and flows predominantly to the southwest at a rate of 0.02 feet per foot. The First Semi-Annual 2006 Groundwater Monitoring Report is included as Attachment D.

## 2.2 Site Environmental History

In 1977, a fuel filter rusted at the eastern pump island resulting in a subsurface release of gasoline. About two years later, gasoline odors were detected in Mosswood Park (across MacArthur Boulevard) and in the motel adjacent to the site.

IT Enviroscience (IT) prepared *Progress Report #1* on April 28, 1982 which detailed a site inspection and operator interview conducted to evaluate the major factors relating to groundwater impact at the site. During the evaluation they encountered existing wells which IT designated as monitoring wells 5 through 7. According to the station manager, George Bowers, the wells were installed in approximately 1979. According to the April 1982, *Progress Report # 1*, monitor wells 1 through 4 were installed in March 1982 and wells A through F were installed in April 1982.

IT prepared a *Progress Report #2* on May 18, 1982 which confirmed that gasoline impacted groundwater detected in onsite monitor wells was associated with the Chevron service station. The report documents light non aqueous phase liquids (LNAPL) encountered in the monitor wells with a thickness of 0.08 to 5.7 feet, with the exception of monitoring well 4 which did not contain LNAPL.

In March 1984, the United States Environmental Protection Agency notified several gasoline retailers that fuel was entering Lake Merritt through the Glen Echo Creek storm drain. Chevron conducted gas chromatography fingerprinting of samples from the storm drain, from the wells and dispensers on the Chevron site, and from Rainbow Carwash located directly north (upgradient) of the site. The results indicated that the fuel in the storm drain did not originate from the Chevron site, but most likely from the Rainbow Carwash site.

Blaine Tech Services, Inc. removed the second generation USTs from the site in April 1988. Holes were not observed in the fuel or used oil USTs, but 1/8 inch of LNAPL was observed on groundwater in the gasoline/used oil UST pit. Approximately 2,800 gallons of liquid was removed from the excavation prior to collection of compliance soil samples. Hydrocarbon impacted soil was visibly evident within the excavation. The excavation was extended to the north and east to remove visibly contaminated soil. A product recovery UST was damaged during removal causing a release of hydrocarbons into groundwater within the excavation. Approximately 1/4 inch of SPH was measured on the groundwater surface. Approximately 700 gallons of liquid was removed from the excavation prior to collection of compliance samples. Soil samples collected from the sidewalls of this excavation did not contain hydrocarbons.

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In April 1988, E. A. Engineering installed offsite monitoring wells EA-1 and EA-2.

In November 1988, Groundwater Technology, Inc. (GTI) conducted a soil investigation at the site which included drilling 19 sample points and collecting 23 soil samples for analysis. The results indicated that soil beneath the site has been impacted by gasoline hydrocarbons.

Weiss Associates (Weiss) submitted a well destruction report on June 25, 1991 for monitor wells B-6 and B-7 (named wells 6 and 7 above). The wells were reportedly destroyed utilizing pressure grout technology. Monitor well B was reconstructed during this time by installing a 4-inch PVC casing within the existing 12-inch corrugated steel pipe and was screened between 15 and 35 fbg. The previous well B was constructed to 20 fbg.

GTI prepared an *Environmental Assessment Report* on January 19, 1993 which concluded that groundwater samples from on-site well B-4 had the highest hydrocarbon concentrations.

In March 2006, Secor International Inc. (Secor) prepared a *Phase II Environmental Site Assessment Report* (Phase II ESA) for Kaiser Foundation Health Plan (Kaiser). Secor found that soil from approximately 10 to 20 fbg in the vicinity of the former USTs and from approximately 2 to 20 fbg in the vicinity of the former fuel dispensers was impacted with elevated concentrations of petroleum hydrocarbons and related constituents. Additionally, groundwater in the vicinity of the former USTs appears to be impacted with hydrocarbons.

A total of 14 groundwater monitoring wells have been installed to date. Currently there are only two active monitoring wells associated with the site (monitoring wells EA-1 and EA-2), located in the median on Broadway. In June 1991, wells B-6 and B-7 were destroyed, and well B was reconstructed. Wells E, F, and B-1 were reconstructed in October 1992. Wells E and F have been paved over but are scheduled for reconstruction in December 2006. There is no information regarding wells B-5 and C and it is assumed they have been abandoned or destroyed. In order to facilitate excavation activities onsite wells A, B, B-1, B-2, B-3 and B-4 were destroyed by pressure grouting in June 2006. There are no onsite wells.

## **2.3 Remediation History**

A routine gauging and pumping of monitoring wells with LNAPL was conducted between 1983 and 1987 by Enviro and Gettler-Ryan Inc. Over 200 gallons of LNAPL/water mixture were removed from the wells during this period. LNAPL removal resumed between June 1993 and March 1995, and an additional 32 gallons of LNAPL was removed from wells B, B-2 and B-3.

In 1992, a soil vapor extraction (SVE) pilot test was performed at the site by Weiss Associates (WA). The data suggested that SVE would not be effective at this site based on a relatively high vacuum required to induce small flow rates.

During the 1998 UST removal by Blaine Tech Services, Inc. approximately 3,500 gallons of liquid were removed from the excavation. In May 2001, product skimmers were installed in wells B and B-2, and were maintained monthly by Gettler-Ryan until the wells were destroyed in 2006.

## **3 PRE EXCAVATION SITE INVESTIGATION AND ANALYTIC RESULTS**

### **3.1 Geophysical Survey**

On June 15, 2006 Norcal Geophysical Consultants, Inc. (Norcal) conducted a geophysical survey at the site to identify underground utility locations, and possible unknown UST locations or product piping left in place. The survey was conducted using a combination of vertical magnetic gradient, hand-held metal detection, ground penetrating radar, and electromagnetic line locating methods. The report summarized that there were buried water, sewer and electrical lines across the site as well as other unknown lines. Additionally, an area in the northwest corner of the site appears to be comprised of buried debris. No in place USTs were identified during this investigation. The Norcal July 19, 2006 report documenting the geophysical investigation is included as Attachment E.

### **3.2 Vertical Delineation of Hydrocarbons in the Subsurface**

Cambria advanced 22 soil borings (CSB-1 through CSB-22) to a maximum depth of 23 fbg using a direct push drill rig within the proposed excavation limits to delineate the vertical extent of hydrocarbon impact to the subsurface. Borings were advanced at locations where previous concentrations were detected above San Francisco Regional Water Quality Control Board (SF RWQCB) environmental screen levels (ESLs) at depths greater than 18 feet below grade (fbg).

These boring locations are illustrated on Figure 3. Soil samples were collected between 18 and 23 fbg at five-foot intervals or where odor and/or staining were indicative of hydrocarbon impact. Samples were collected and submitted for analysis for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA method 8015; and benzene, toluene, ethylbenzene, and total xylenes (BTEX) by EPA method 8260B.

Secor, working on behalf of Kaiser, generated a report titled, *Site Characterization Report, March 6, 2006*, indicating that lead was detected at 1,500 mg/kg in a sample collected from SB-38 at 4.5 fbg. Therefore, CSB-16 through CSB-18 were additionally sampled for total lead by EPA method 6010.



### *Analytic Results*

The former Chevron service station is to be developed as part of a medical office building with out-patient services only. Therefore, analytic results were compared to the SF RWQCB ESLs for Shallow Soils (less than 3 meters), for commercial land use where groundwater is not considered a current or potential source of drinking water.


Hydrocarbons above ESLs were encountered in two borings beneath the planned excavation depth. For reference, tables documenting the established SFBRWQCB ESLs are included as Attachment F. Boring CSB-4 located downgradient of the former eastern dispenser islands, encountered hydrocarbons above ESLs for TPHg of 510 mg/kg and xylenes of 19 mg/kg at 23 fbg. A deeper sample collected from 24.5 fbg was not analyzed. Boring CSB-8, located in the vicinity of the former southern distributor islands, encountered hydrocarbons above ESLs at 8,600 mg/kg TPHg, 9.5 mg/kg benzene, 11 mg/kg toluene and 91 mg/kg xylenes at 20 fbg. A sample collected from CSB-8 at 21.5 fbg exceeded ESLs for benzene only at 0.61 mg/kg; all other constituents were below ESLs. Table 1 details the analytic data from the vertical soil profiling investigation. Analytic reports are included as Attachment G.

### **3.3 Waste Profile Soil Sampling**

Additional samples were collected from borings CSB-1 through CSB-21 between 0-20 fbg to profile soils for disposal during the excavation. Four samples from each boring were collected, two samples between 0-10 fbg and two samples between 10-20 fbg. These samples were combined to create four-point composites for each depth interval, and submitted to the laboratory as waste profile samples. Samples were analyzed for TPHg by modified method 8015, BTEX by method 8260B, and total lead

by method 6010. Analytic results from this investigation indicated that soil between 0 and 10 fbg could be disposed of at the Class III Richmond Landfill. Soil between 10 and 18 fbg, contained hydrocarbon concentrations slightly above acceptable levels for disposal at the Richmond Landfill and would necessitate disposal at Forward Landfill. Analytic data for soil profile samples is summarized on Table 2. Analytic reports are included as Attachment G.

### **3.4 Alternative to Sidewall Sampling**



To facilitate calculation of hydrocarbon mass left in soil beyond the site perimeter after excavation, Cambria advanced 16 soil borings to 20 fbg along the excavation boundaries. This alternative to sidewall sampling was approved by Barney Chan in the ACEHS letter dated June 13, 2006. SWW samples were collected from the western most portion of the site, along the property boundary next to the hotel, the Westwind Lodge. SWS samples were collected along the southern property boundary along MacArthur Blvd. SWE samples were collected along the eastern property boundary along Broadway. Borings were advanced approximately every 20 linear feet and sampled at five-foot intervals. Samples were submitted to the laboratory to be analyzed for TPHg by modified method 8015 and BTEX by method 8260B. Sidewall sampling locations are depicted on Figure 2 and sidewall analytic data is summarized on Table 3. Analytic reports are included as Attachment G.

### **3.5 Well Destruction**


All onsite wells were destroyed prior to excavation activities. Onsite wells A, B, B-1, B-2, B-3 and B-4 were pressure grouted with Portland type I/II cement. Wells were kept under pressure of 5 pounds per square inch (PSI) for a minimum of five minutes to allow grout to fill the filter pack. Well destruction logs are included as Attachment H.

## **4 REMEDIAL EXCAVATION ACTIVITIES**

Original remediation excavation plans included overexcavation of the site during Kaiser's redevelopment of the property. Due to proposed development plans provided by Kaiser, Chevron determined that excavation beyond the proposed building footprint would be beneficial in removing residual hydrocarbon concentrations in the subsurface. Therefore, Chevron volunteered to excavate the 25-foot strip along the southern most section of the site adjacent to MacArthur Boulevard, prior to Kaiser's construction activities (Figure 2). Additional over excavation within the building footprint

will be conducted during Kaiser's development activities. Photographs of the excavation are included as Attachment I. The following documents the excavation of the 25-foot section.

## 4.1 Shoring Installation



Interlocking shoring was installed to 28 fbg at the site to facilitate excavation down to the originally proposed 18 fbg and to limit groundwater flow into the excavation. Prior to driving shoring with a hydraulic sheet driver which vibrates the sheet into place, a pre-trench was dug along the proposed shoring boundaries down to 15 fbg. The pre-trench excavation was performed to mitigate vibrational disturbances to nearby residences and the adjacent motel. The pre-trench was then backfilled with soil to 4 fbg and steel beams were placed in the four foot trenches and welded into place. Each sheet of shoring (approximately 30 feet long) was placed along the steel beams and vibrated into place approximately 28 fbg. The next sheet would then be locked into and leveled against the prior sheet and advanced. Pedestrian traffic along MacArthur Boulevard was held while shoring sheets were being lifted into place and until the sheets were driven to a depth that they would support themselves. This was done as an additional safety measure in the unlikely event of a shoring sheet breaking loose from its lifting chain.

## 4.2 Excavation


Soil excavation began on August 24, 2006, encompassing the 25 foot wide strip along the southern end of the site (Figure 2). The excavation limits were approximately 25-feet wide, by 147-feet long and 20-feet deep. An approximate total of 2,800 cubic yards (yd<sup>3</sup>) (3,500 tons) of hydrocarbon impacted soil was removed from the excavation. Confirmation soil samples were collected from 10 locations along the bottom of the excavation (Figure 4) between 18 and 20 fbg. The total depth of the excavation was 18 fbg with portions extending down to 20 fbg in areas where staining or analytic data suggested deeper impacts. Waste disposal documents are included as Attachment J.

## 4.3 Groundwater Treatment and Disposal

Groundwater was encountered at approximately 18 fbg in the vicinity of former monitoring well B. A sump area was dug around the northwest corner of the excavation to provide a drainage area for the water to run into. The water was then pumped from the sump into a 21,000 gallon storage tank. The water was treated through two 50 micron filter bags and then treated through two 2000 lb carbon vessels. Prior to discharge influent and effluent groundwater samples were collected from the system.

Influent water contained TPHd at 590 ug/L, TPHg at 200 ug/L, benzene at 370 ug/L, toluene at 58 ug/L and methyl chloride at 36 ug/L. The analytic report for the effluent sample documented concentrations of 860 ug/L TPHd, 110 ug/L TPHg, 1.4 ug/L chloroethane and 0.55 ug/L chloromethane (Table 5). A total of 5,306 gallons of treated groundwater were discharged to the sanitary sewer under East Bay Mud Special Discharge Permit Number 50596681 (Attachment K).

#### **4.4 Product Piping Removal**



While attempting to locate a sanitary sewer line for groundwater disposal, product distribution lines were encountered in the vicinity of the former eastern distributor island. These lines were previously unrecognized due to their proximity to a water line utility trench as indicated on the Norcal Geophysical Survey (Attachment E). These lines appeared to run from the former eastern dispenser islands toward the former UST pit located on the western portion of the site. During their removal it was found that the product piping ended in the middle of the site (Figure 2), apparently having been partially removed along with the USTs in 1988. No other former product lines were encountered during the course of the excavation. Approximately 95 linear feet of abandoned steel product lines were transported offsite and appropriately disposed. Per standard Cambria/Chevron protocol soil samples were collected from beneath the former product lines at approximately 20 foot intervals

#### **4.5 Backfill and Compaction**

After the petroleum hydrocarbon-impacted soil was removed from the site, the excavations were backfilled using a layer of ¾-inch Class II aggregate baserock to bridge the water table and provide a consistent layer of base material. The baserock was placed from the bottom of the excavations to approximately 10 fbg. Geotextile filter fabric was placed atop the baserock. Three-inch minus engineered fill was imported to the site, placed atop the filter fabric, and compacted in approximately 12- to 18-inch inch lifts with a sheepfoot roller until the desired finished grades were achieved.

Bay Area Geotechnical Group, of Palo Alto, California was retained by the excavation contractor to provide observation and compaction testing services during the project. A representative of URS, Kaiser's engineering contractor, was also onsite during compaction activities to ensure that compaction was performed in a manner compliant with Kaiser's construction requirements. A copy of the compaction testing report is presented as Attachment L.



## 5 CURRENT HYDROCARBON DISTRIBUTION IN SOIL

This excavation was designed specifically to remove hydrocarbon impacts from onsite soils outside of the proposed Kaiser development area. Hydrocarbon impacted soil within Kaiser's excavation boundaries will be addressed during Kaiser's development.

Direct push samples were collected in lieu of sidewall samples along the south, east and western extents of the excavation to determine hydrocarbons that would remain in place beneath the sidewalks along MacArthur and Broadway and the hotel after completion of the Chevron excavation. SWS-1 through SWS-7 and SWW-1 and SWW-5 are indicative of hydrocarbons left in place after this initial excavation. Additional sidewall samples were collected along the eastern and western boundaries. These samples will suffice as sidewall samples for the Kaiser portion of the excavation and will not be used for analysis in this report as referenced previously in section 3.4. Bottom samples were collected to document hydrocarbons which were not removed due to shoring and depth constraints.

Cambria designated impacted soils using past soil analytic results, photo ionization detector (PID) readings, visual observations and confirmation samples. Sidewall samples were collected prior to excavation activities utilizing direct push technology. Borings were placed at approximately 20 foot intervals along the property boundary. Samples were collected at five foot intervals within the subsurface. The samples were trimmed, capped with Teflon tape and plastic end caps, labeled, placed on ice, and transported under chain-of-custody to a state certified laboratory.

Bottom confirmation samples were collected roughly 20 feet apart along the excavation bottom. Confirmation samples were collected by inserting a 6-inch brass tube into soil brought to the surface from the appropriate location in the excavation bucket.

Selected samples were analyzed for:

- TPHg by modified EPA Method 8015M,
- TPHd by modified EPA Method 8015M,
- BTEX by EPA Method 8260B and
- Lead by EPA Method 6010C.

The former Chevron service station is to be developed as part of a medical office building with out-patient services only. Therefore, analytic results were compared to the SFRWQCB ESLs for Deep Soils (greater than 3 meters), for commercial land use where groundwater is not considered a current or potential source of drinking water. Soil sample results, representing residual hydrocarbons at the sidewalls and base of the excavations, are presented in Tables 3 and 4, respectively.

### *Analytic Results for Sidewall Samples*

Sidewall samples associated with this portion of the excavation were collected about 2 feet in from the property boundary and designated SWS-1 through SWS-7, SWW-1 and SWE-5. These boring locations are illustrated on Figure 3 and represent sidewall south (SWS), sidewall west (SWW) and sidewall east (SWE), respectively. TPHg and xylenes were detected above ESLs in borings SWS-4, SWS-5, SWS-6 and SWW-1 at 15 fbg and in SWE-5 at 20 fbg. TPHg was detected at a maximum concentration of 1,400 mg/kg in SWS-4 at 15 fbg. Xylenes were detected at a maximum concentration of 24 mg/kg in SWE-5 at 20 fbg. Sidewall confirmation samples did not contain concentrations of benzene, toluene or ethylbenzene above ESLs. Table 3 summarizes analytic results for sidewall samples.

### *Analytic Results for Bottom Samples*

Confirmation sample EX-2 collected at 19 fbg contained hydrocarbons above ESLs for TPHg and xylenes at 1,300 mg/kg and 140 mg/kg, respectively. Although the location EX-2 was excavated an additional foot to 20 fbg, a deeper sample was not available in this location due to groundwater influx into the excavation. Confirmation sample EX-8 contained TPHg above ESLs at 900 mg/kg at 18 fbg. The location EX-8 was excavated an additional two feet and sampled again at 20 feet. The EX-8 at 20 foot sample contained hydrocarbon constituents above ESLs for TPHg and benzene of 970 mg/kg and 1,300 mg/kg, respectively. Confirmation sample EX-9 at 18 fbg did not contain hydrocarbons above ESLs, however the location did appear stained therefore the area was excavated an additional two feet to 20 fbg. The 20 foot sample from location EX-9 reported hydrocarbons above ESLs for TPHg and benzene at 850 mg/kg and 430 mg/kg, respectively. Confirmation sample EX-10 collected at 20 fbg reportedly contained benzene above ESLs at 100 mg/kg.

## *Distribution Pipe Compliance Sampling*

Samples PP-1 through PP-4 were collected from beneath the former product piping removed September 19, 2006. Hydrocarbons were detected at maximum concentrations in the location PP-3 (Figure 5) with concentrations of 320 mg/kg TPHd, 200 mg/kg TPHg, 69.3 mg/kg lead, and BTEX constituents at 0.08 mg/kg benzene, 0.08 mg/kg toluene, 0.4 mg/kg ethylbenzene, and 1.3 mg/kg xylenes. These detections are below the ESLs for this project. However, this area is scheduled to be excavated during the Kaiser proposed redevelopment phase. Hydrocarbon concentrations below the product piping are presented on Table 4.



## **6 FUTURE EXCAVATION**

Kaiser has recently received approval from the City of Oakland for their planned development of the property and the excavation to facilitate redevelopment is currently planned to begin in April 2007. Kaiser's plan indicates that approximately 75% of the remainder of the site will be excavated to approximately 15 fbg to facilitate the construction of the medical office building. Neither development plans nor soil conditions necessitate the excavation of a 30 ft by 70 ft section along the western property line. This will be the only area to remain intact and not remediated by excavation. Chevron and Kaiser have been conducting discussions regarding deeper excavation in select areas to remove additional impacted soil and the logistics that it will entail. Once these discussions have been finalized, Chevron will discuss the remediation plan for the remainder of the site with ACEHS.

## **7 CONCLUSIONS AND RECOMMENDATIONS**

Approximately 2,800 yd<sup>3</sup> (3,500 tons) of petroleum hydrocarbon-impacted soil were removed from the site and transported to a Chevron-approved landfill for proper disposal. Future development plans for the site include a multi story medical office building to be used for out patient services only. Once site development is completed Chevron will re-install monitoring wells onsite for the purpose of monitoring hydrocarbon attenuation in the subsurface for the period of one year. If hydrocarbon concentrations in groundwater exhibit an attenuating trend over the course of that one year timeframe, Chevron will submit for a case closure regarding the site.

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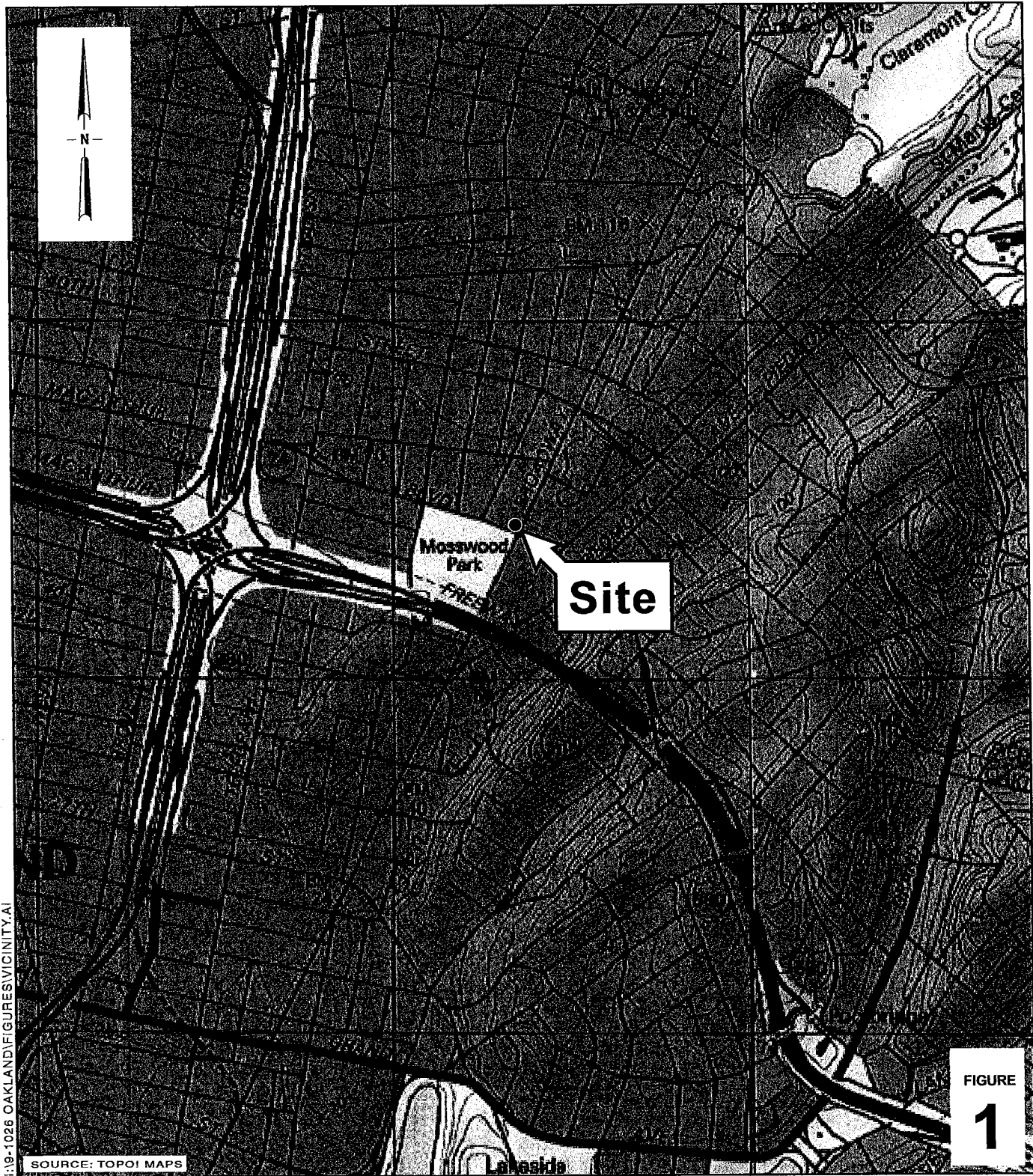
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Jay Asercion, Kaiser Foundation, 1100 San Leandro Blvd. Ste 200, San Leandro, CA  
Greg Hoehn, Secor International, 57 Lafayette Circle, 2<sup>nd</sup> Floor, Lafayette, CA



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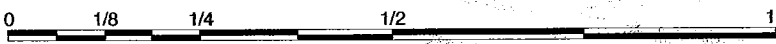


**FIGURES**



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SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

### Former Chevron Station 9-1026

3701 Broadway  
Oakland, California



C A M B R I A

### Vicinity Map

EXPLANATION	
A	Monitoring well pressure grouted June 2006
SB-1	Soil boring location (Secor 2006)
CSB-1	Soil boring location (Cambria 2006)
SWW-1	Side Wall West (Cambria 2006)
SWS-1	Side Wall South (Cambria 2006)
SWE-1	Side Wall East (Cambria 2006)

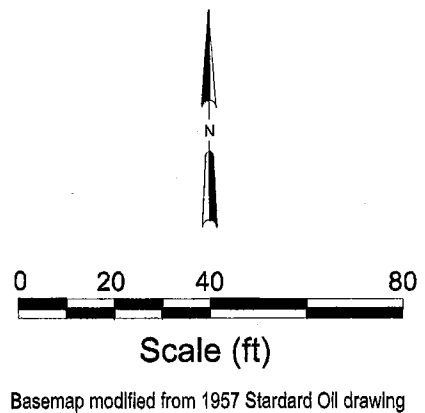


FIGURE  
**2**

SB-1026 OAKLANDFIGURES-1026\_EXP-SITEPLAN.DWG

Extended Site Plan

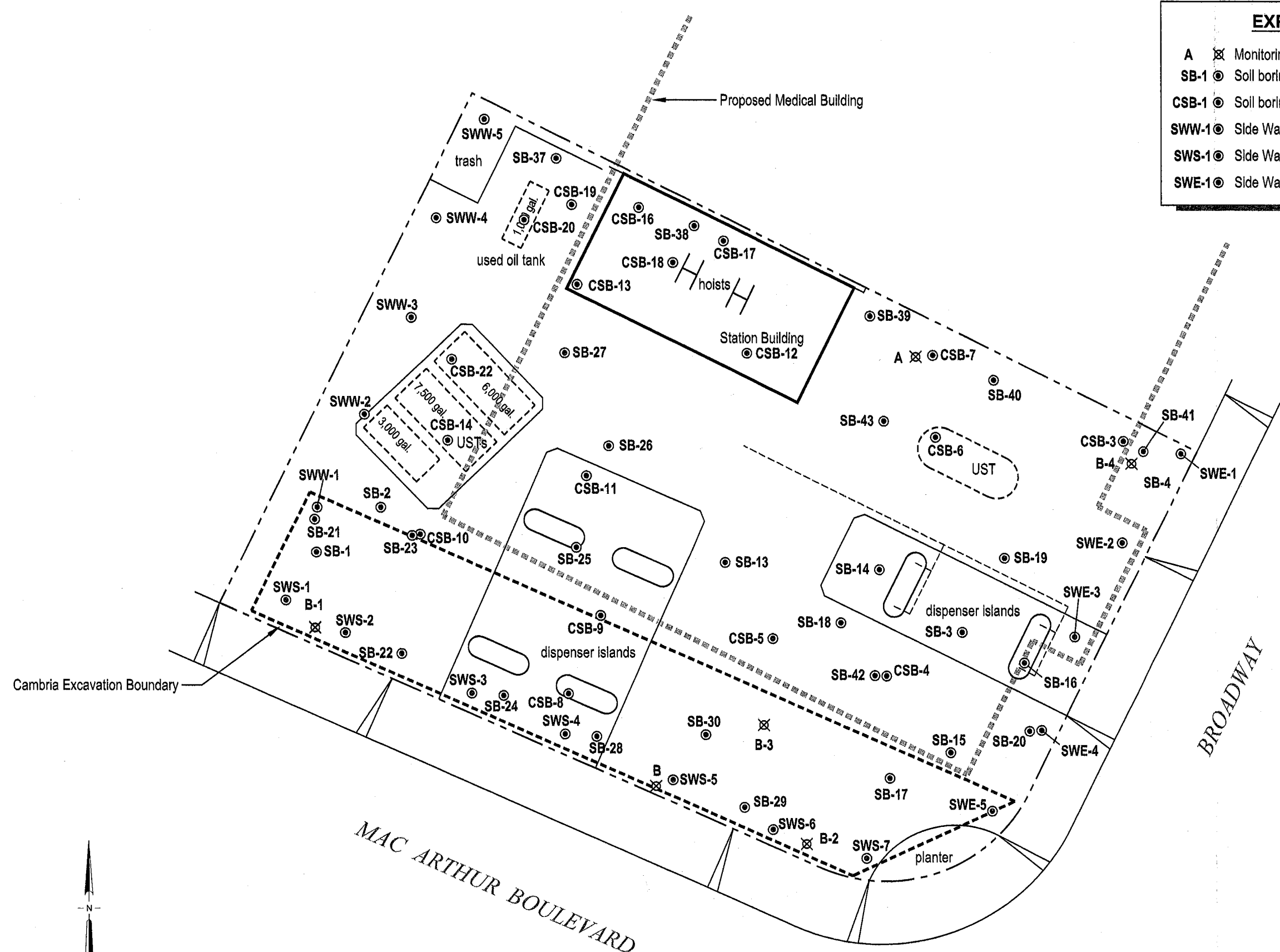


C A M B R I A

Chevron Service Station 9-1026

3701 Broadway  
Oakland, California

EXPLANATION	
A	⊗ Monitoring well pressure grouted June 2006
SB-1	⊙ Soil boring location (Secor 2006)
CSB-1	⊙ Soil boring location (Cambria 2006)
SWW-1	⊙ Side Wall West (Cambria 2006)
SWS-1	⊙ Side Wall South (Cambria 2006)
SWE-1	⊙ Side Wall East (Cambria 2006)



Site Plan with  
Excavation Boundaries



Chevron Service Station 9-1026  
3701 Broadway  
Oakland, California

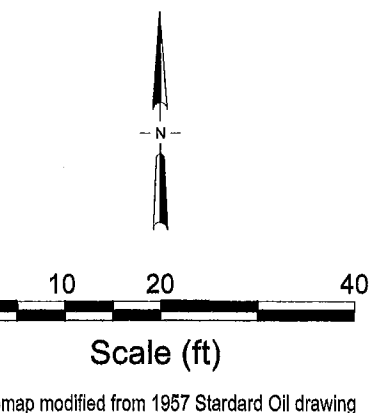


FIGURE  
**3**



CSB-20							
12.0'	13.5'	15.0'	19.5'	20.0'	20.5'	22.0'	23.0'
<1.0	24	1.0	<1.0	44	53	<1.0	<1.0
<0.0005	<0.002	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	<0.0005
<0.001	<0.005	<0.001	<0.001	0.004	<0.001	<0.001	<0.001

CSB-22			
5.0'	10.0'	15.0'	20.0'
<1.0	56	420	290
<0.0005	<0.0005	<0.0063	0.28
<0.001	0.001	7.7	20

CSB-19	
11.0'	14.0'
<1.0	<1.0
<0.0005	<0.0005
<0.001	<0.001

CSB-16	
9.0'	15.0'
<1.0	<1.0
0.0007	0.0009
0.002	<0.001

CSB-18		
3.0'	9.0'	18.0'
<1.0	1.7	<1.0
<0.0005	0.0006	<0.0005
<0.001	<0.001	<0.001

CSB-17	
11.5'	16.0'
<1.0	1.5
<0.0005	<0.0005
<0.001	<0.001

CSB-13	
14.0'	27'
<0.002	<0.005

CSB-12	
19.5'	<1.0
<0.0005	<0.001

CSB-7	
22.0'	<1.0
<0.0005	<0.001

CSB-3	
22.0'	<1.0
0.001	<0.001

CSB-6	
22.0'	<1.0
0.0008	<0.001

CSB-11	
22.0'	2.0
0.006	0.030

CSB-10	
22.0'	<1.0
0.005	0.006

CSB-9	
23.0'	2.6
0.43	0.015

CSB-5	
22.0'	<1.0
0.002	<0.001

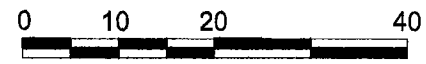
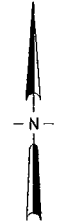
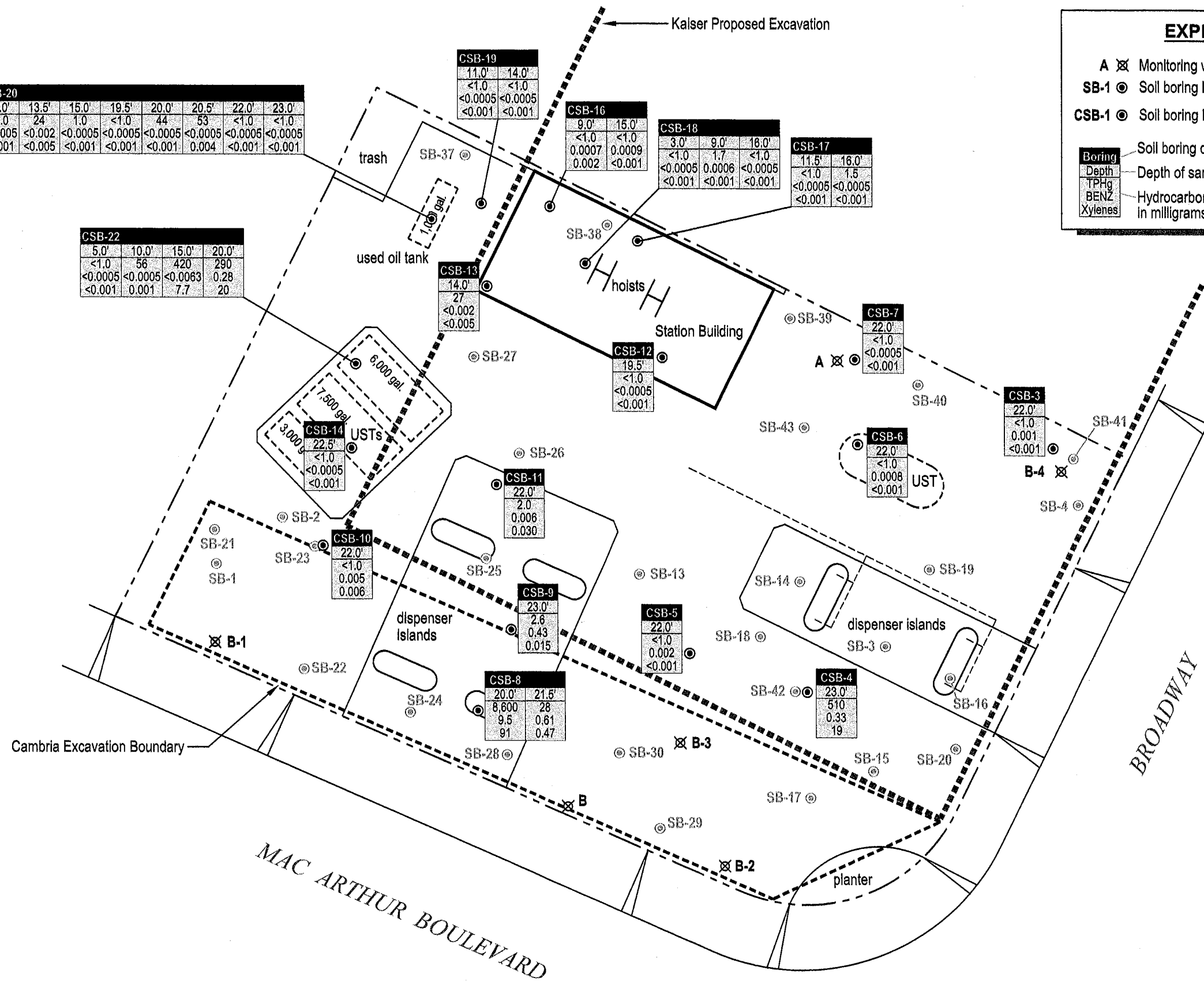
CSB-8	
20.0'	21.5'
8,600	28
9.5	0.61
91	0.47

CSB-4	
23.0'	510
0.33	19

**EXPLANATION**

- A ⊗ Monitoring well pressure grouted June 2006
- SB-1 ⊙ Soil boring location (Secor 2006)
- CSB-1 ⊙ Soil boring location (Cambria 2006)

Boring	Soil boring designation
Depth	Depth of sample
TPHg	Hydrocarbon concentrations in soil in milligrams per kilogram (mg/kg)
BENZ	
Xylenes	



Scale (ft)

Basemap modified from 1957 Standard Oil drawing

FIGURE

4



**EXPLANATION**

**SWW-1** Side Wall West (Cambria 2006)  
**SWS-1** Side Wall South (Cambria 2006)  
**SWE-1** Side Wall East (Cambria 2006)

**Boring** — Soil boring designation  
**Depth** — Depth of sample  
**TPHg** — Hydrocarbon concentrations in soil in milligrams per kilogram (mg/kg)  
**BENZ**  
**Xylenes**

SWW-5				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	1,700	<1.0	
<0.0005	<0.0005	<0.063	<0.0005	
0.002	<0.001	65	<0.001	

SWW-3					
5.0'	10.0'	15.0'	20.0'	23.0'	
<1.0	1.8	4.0	6.1	<1.0	
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
<0.001	0.004	0.001	0.063	0.002	

SWW-2					
5.0'	12.0'	16.0'	20.0'	23.0'	
<1.0	2.1	2.3	1.9	<1.0	
<0.0005	<0.0005	<0.0005	<0.0005	<0.0005	
<0.001	0.001	0.004	0.005	0.005	

SWW-1				
5.0'	11.0'	15.0'	20.0'	
<1.0	18	530	140	
<0.0005	<0.0005	<0.063	<0.063	
<0.001	0.008	2.4	1.5	

SWS-1				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	260	2.2	
<0.0005	0.001	0.28	0.012	
<0.001	<0.001	2.7	0.001	

SWE-1				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	1.7	290	
<0.0005	<0.0005	<0.0005	<0.063	
<0.001	<0.001	<0.001	0.22	

SWE-2				
5.0'	10.0'	15.0'	20.0'	
<1.0	1.1	160	1,500	
<0.0005	0.002	<0.062	0.075	
<0.001	0.008	1.4	28	

SWE-3				
5.0'	10.0'	15.0'	20.0'	
350	220	4	790	
<0.062	<0.062	<0.0005	4.9	
2.7	3.0	0.001	260	

SWE-4				
5.0'	10.0'	16.0'	20.0'	
<1.0	1.2	720	3.1	
<0.0005	0.18	0.58	0.31	
<0.001	0.007	24	<0.001	

SWE-5				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	42	940	
<0.0005	0.001	<0.062	0.25	
<0.001	0.002	8.6	24	

SWS-2				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	2.7	25	
<0.0005	0.003	0.0009	0.001	
<0.001	0.002	<0.001	0.22	

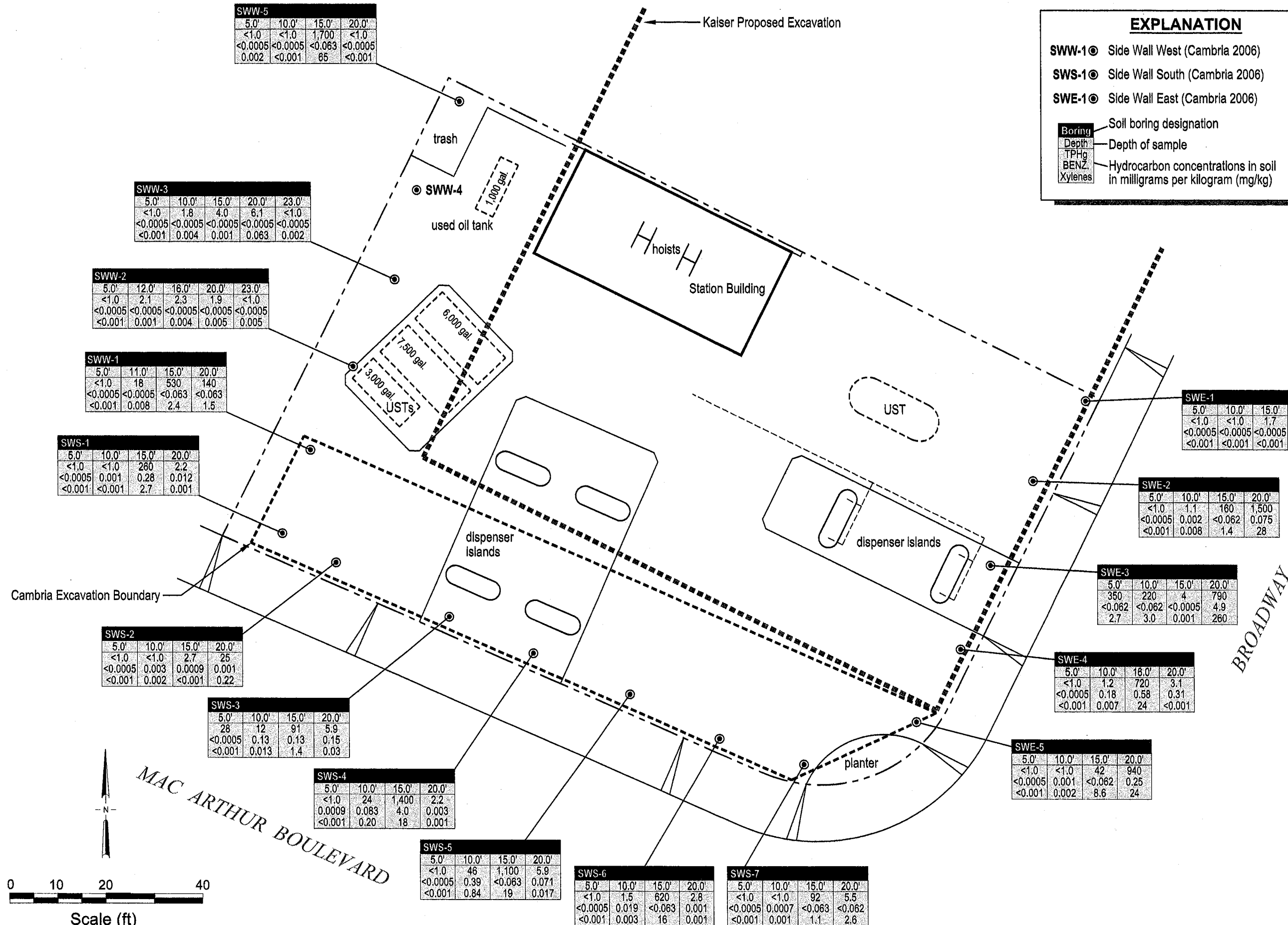
SWS-3				
5.0'	10.0'	15.0'	20.0'	
28	12	91	5.9	
<0.0005	0.13	0.13	0.15	
<0.001	0.013	1.4	0.03	

SWS-4				
5.0'	10.0'	15.0'	20.0'	
<1.0	24	1,400	2.2	
0.0009	0.083	4.0	0.003	
<0.001	0.20	18	0.001	

SWS-5				
5.0'	10.0'	15.0'	20.0'	
<1.0	46	1,100	5.9	
<0.0005	0.39	<0.063	0.071	
<0.001	0.84	19	0.017	

SWS-6				
5.0'	10.0'	15.0'	20.0'	
<1.0	1.5	620	2.8	
<0.0005	0.019	<0.063	0.001	
<0.001	0.003	16	0.001	

SWS-7				
5.0'	10.0'	15.0'	20.0'	
<1.0	<1.0	92	5.5	
<0.0005	0.0007	<0.063	<0.062	
<0.001	0.001	1.1	2.6	



Scale (ft)

0 10 20 40

Basemap modified from 1957 Standard Oil drawing

FIGURE 5



**EXPLANATION**

- PP1 ■ Product line confirmation sample location
- EX-1 ■ Excavation bottom sample location

Sample	Soil sample designation
Depth	Depth of sample
TPHig	Hydrocarbon concentrations in soil in milligrams per kilogram (mg/kg)
BENZ	
Xylenes	

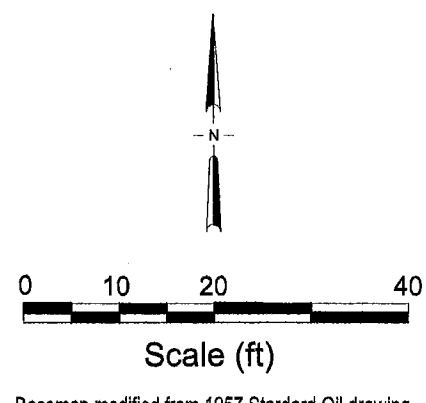
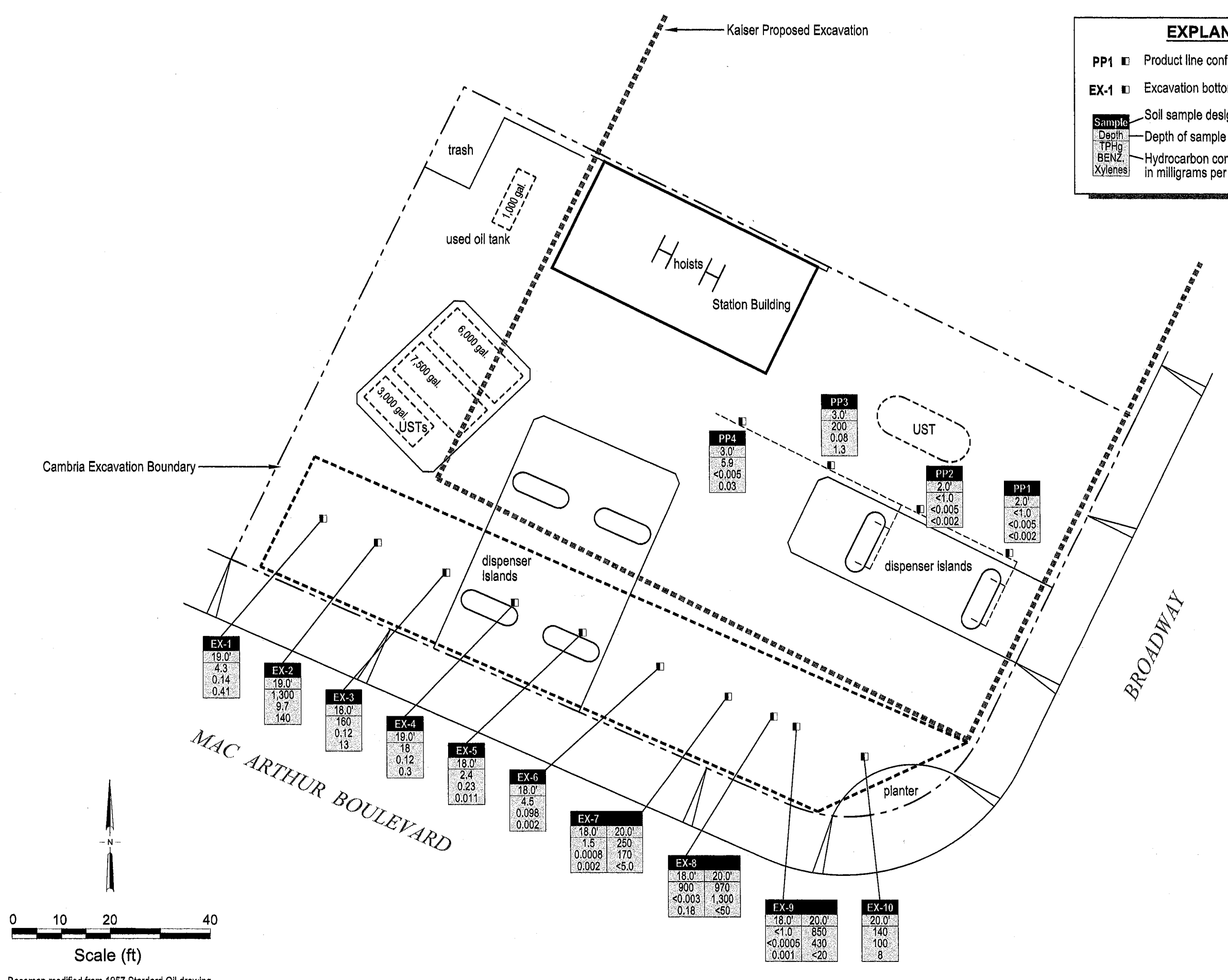


FIGURE  
**6**

PS-1026 OAKLANDFIGURES9-1026 HC-BOTTOM-SOIL.DWG

C A M B R I A



**TABLES**

# CAMBRIA

**Table 1. Analytic Results for Vertical Delineation of Hydrocarbons in the Subsurface - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	(concentrations reported in mg/kg)						Lead
					Benzene	Toluene	Ethyl benzene	Xylenes	TOG	Lead	
CSB-1	6/22/06	19.5	HOLD								
CSB-1	6/22/06	22	3.7	--	0.41	0.06	0.04	0.031	--	--	
CSB-3	6/22/06	19.5	HOLD								
CSB-3	6/22/06	22	<1.0	--	0.001	<0.001	<0.001	<0.001	--	--	
CSB-4	6/22/06	20.5	HOLD								
CSB-4	6/22/06	23	<b>510</b>	--	0.33	0.47	4.0	<b>19</b>	--	--	
CSB-4	6/22/06	24.5	HOLD								
CSB-5	6/22/06	20	HOLD								
CSB-5	6/22/06	22	<1.0	--	0.002	<0.001	<0.001	<0.001	--	--	
CSB-6	6/22/06	20	HOLD								
CSB-6	6/22/06	22	<1.0		0.0008	<0.001	<0.001	<0.001	--	--	
CSB-7	6/23/06	19.5	HOLD								
CSB-7	6/23/06	22	<1.0	<10	<0.0005	<0.001	<0.001	<0.001	<330	4.96	
CSB-8	6/23/06	20	<b>8600</b>	--	<b>9.5</b>	<b>11</b>	17	<b>91</b>	--	--	
CSB-8	6/23/06	21.5	28	--	<b>0.61</b>	0.092	0.089	0.47	--	--	
CSB-8	6/23/06	23	HOLD								
CSB-9	6/23/06	21	HOLD								
CSB-9	6/23/06	23	2.6	--	0.43	0.005	0.004	0.015	--	--	
CSB-10	6/24/06	19	HOLD								
CSB-10	6/24/06	22	<1.0	--	0.005	<0.001	0.002	0.006	--	--	
CSB-11	6/23/06	20	HOLD								
CSB-11	6/23/06	22	2.0	--	0.006	0.016	0.005	0.030	--	--	
CSB-12	6/23/06	19.5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
CSB-13	6/24/06	14	27	--	<0.002	<0.005	0.018	<0.005	--	--	
CSB-13	6/24/06	17	HOLD								
CSB-13	6/24/06	18	HOLD								
CSB-14	6/23/06	20	HOLD								
CSB-14	6/23/06	22.5	<1.0		<0.0005	<0.001	<0.001	<0.001	--	--	
CSB-16	6/20/06	3	HOLD								<b>74.4</b>
CSB-16	6/24/06	9	<1.0	<10	0.0007	0.003	<0.001	0.002	<330	6.26	
CSB-16	6/24/06	14	HOLD								4.97
CSB-16	6/24/06	15	<1.0	<10	0.0009	<0.001	<0.001	<0.001	<330	4.79	

# CAMBRIA

**Table 1. Analytic Results for Vertical Delineation of Hydrocarbons in the Subsurface - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	(concentrations reported in mg/kg)					Lead
					Benzene	Toluene	Ethyl benzene	Xylenes	TOG	
CSB-17	6/20/06	3	--	--	--	--	--	--	--	446
CSB-17	6/20/06	6	--	--	--	--	--	--	--	43.1
CSB-17	6/24/06	11.5	<1.0	<10	<0.0005	<0.001	<0.001	<0.001	<330	9.55
CSB-17	6/24/06	13	HOLD	--	--	--	--	--	--	--
CSB-17	6/24/06	16	1.5	<10	<0.0005	<0.001	<0.001	<0.001	<330	9.97
CSB-18	6/20/06	3	<1.0	<10	<0.0005	<0.001	0.003	<0.001	<330	97.1
CSB-18	6/20/06	6	--	--	--	--	--	--	--	26.3
CSB-18	6/23/06	9	1.7	75	0.0006	<0.001	<0.001	<0.001	<330	7.29
CSB-18	6/23/06	13	--	--	--	--	--	--	--	--
CSB-18	6/23/06	15	--	--	--	--	--	--	--	--
CSB-18	6/23/06	16	<1.0	<10	<0.0005	<0.001	0.003	<0.001	<330	4.88
CSB-18	6/23/06	19	--	--	--	--	--	--	--	--
CSB-19	6/20/06	5	--	--	--	--	--	--	--	--
CSB-19	6/24/06	11	<1.0	<10	<0.0005	<0.001	<0.001	<0.001	<330	14.3
CSB-19	6/24/06	14	<1.0	<10	<0.0005	<0.001	<0.001	<0.001	<330	--
CSB-20	6/20/06	5	--	--	--	--	--	--	--	12.4
CSB-20	6/28/06	12	<1.0	--	<0.0005	<0.001	<0.001	<0.001	<330	5.93
CSB-20	6/28/06	13.5	24	--	<0.002	<0.005	0.007	<0.005	<330	9.79
CSB-20	6/28/06	15	1.0	--	<0.0005	<0.001	<0.001	<0.001	<330	9.04
CSB-20	6/28/06	19.5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	<330	8.22
CSB-20	6/28/06	20	44	--	<0.0005	<0.001	<0.001	<0.001	<330	9.64
CSB-20	6/28/06	20.5	53	--	<0.0005	<0.001	0.002	0.004	<330	7.97
CSB-20	6/28/06	22	<1.0	--	<0.0005	<0.001	<0.001	<0.001	<330	4.30
CSB-20	6/28/06	23	<1.0	--	<0.0005	<0.001	<0.001	<0.001	<330	3.00
CSB-22	6/28/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
CSB-22	6/28/06	10	56	--	<0.0005	<0.001	<0.001	0.001	--	--
CSB-22	6/28/06	15	420	--	<0.0063	<0.13	1.7	7.7	--	--
CSB-22	6/28/06	20	290	--	0.28	0.14	3.9	20	--	--
ESL's			400	500	0.51	9.3	32	11	1000	50

# CAMBRIA

**Table 1. Analytic Results for Vertical Delineation of Hydrocarbons in the Subsurface - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Xylenes	TOG	Lead
-----------	-------------	---------------------	------	------	---------	---------	---------------	---------	-----	------

← (concentrations reported in mg/kg) →

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed using modified EPA Method 8015M.

Total petroleum hydrocarbons as diesel (TPHd) analyzed using modified EPA Method 8015M.

Benzene, toluene, ethylbenzene, xylenes (BTEX) and Volatile Organic Compounds (VOCs) analyzed using EPA Method 8260B.

mg/kg = milligrams per kilogram.

<n = Results not detected above method detection limits.

- = Not Analyzed

ESLs = Regional Water Quality Control Boards Environmental Screening Levels for Deep Soils >3 meters, for commercial

# CAMBRIA

**Table 2. Analytic Results for Composite Soil Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Xylenes	TOG	Lead	
			←————— (concentrations reported in mg/kg) —————→								
Comp-1	6/21/06		<1.0	--	0.025	0.001	<0.001	0.001	--	9.82	
Comp-2	6/21/06		1.8	--	0.044	<0.001	0.022	0.013	--	7.77	
Comp-3	6/21/06		<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	5.44	
Comp-5	6/21/06		32	--	0.010	<0.005	0.042	0.078	--	<b>115</b>	
Comp-6	6/21/06		38	--	<0.0005	<0.001	0.001	<0.001	--	12.3	
Comp-7	6/21/06		210	--	0.028	0.096	0.26	0.92	--	4.57	
Comp-8	6/21/06		<b>630</b>	--	0.88	<0.12	2.4	6.3	--	<b>150</b>	
Comp-9	6/21/06		<b>640</b>	--	<b>5.7</b>	<b>29</b>	17	<b>92</b>	--	6.29	
Comp-10	6/21/06		91	--	<b>1.1</b>	2.4	1.5	8.8	--	5.97	
Comp-11	6/21/06		<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	44.8	
Comp-13	6/21/06		7.8	--	0.11	0.55	0.18	0.65	510	7.03	

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed using modified EPA Method 8015M.

Total petroleum hydrocarbons as diesel (TPHd) analyzed using modified EPA Method 8015M.

Benzene, toluene, ethylbenzene, xylenes (BTEX) and Volatile Organic Compounds (VOCs) analyzed using EPA Method 8260B.

mg/kg = milligrams per kilogram.

<n = Results not detected above method detection limits.

-- = Not Analyzed



# CAMBRIA

**Table 3. Analytic Results Residual Hydrocarbon in Sidewall Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	Benzene	Toluene	Ethyl benzene	Xylenes	TOG	Lead
			← (concentrations reported in mg/kg) →							
<i>Sidewall Sampling West</i>										
SWW-1	6/20/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWW-1	6/21/06	11	18	--	<0.0005	<0.001	0.017	0.008	--	--
SWW-1	6/21/06	15	<b>530</b>	--	<0.063	<0.13	1.8	2.4	--	--
SWW-1	6/21/06	20	140	--	<0.063	<0.13	0.50	1.5	--	--
SWW-2	6/20/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWW-2	6/21/06	12	2.1	--	<0.0005	<0.001	<0.001	0.001	--	--
SWW-2	6/21/06	16	2.3	--	<0.0005	<0.001	<0.001	0.004	--	--
SWW-2	6/21/06	20	1.9	--	<0.0005	<0.001	<0.001	0.005	--	--
SWW-2	6/21/06	23	<1.0	--	<0.0005	<0.001	<0.001	0.005	--	--
SWW-3	6/20/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWW-3	6/21/06	10	1.8	--	<0.0005	<0.001	<0.001	0.004	--	--
SWW-3	6/21/06	15	4.0	--	<0.0005	<0.001	0.078	0.001	--	--
SWW-3	6/21/06	20	6.1	--	0.0008	<0.001	0.011	0.063	--	--
SWW-3	6/21/06	23	<1.0	--	<0.0005	<0.001	<0.001	0.002	--	--
SWW-5	6/20/06	5	<1.0	--	<0.0005	<0.001	<0.001	0.002	--	--
SWW-5	6/22/06	10	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWW-5	6/22/06	15	<b>1700</b>	--	<0.063	1.1	11	<b>65</b>	--	--
SWW-5	6/22/06	20	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
<i>Sidewall Sampling South</i>										
SWS-1	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWS-1	6/24/06	10	<1.0	--	0.001	<0.001	<0.001	<0.001	--	--
SWS-1	6/24/06	15	260	--	0.28	0.20	1.2	2.7	--	--
SWS-1	6/24/06	20	2.2	--	0.012	<0.001	<0.001	0.001	--	--
SWS-2	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWS-2	6/28/06	10	<1.0	--	0.003	0.006	<0.001	0.002	--	--
SWS-2	6/28/06	15	2.7	--	0.0009	0.003	<0.001	<0.001	--	--
SWS-2	6/28/06	20	25	--	0.001	0.009	0.042	0.22	--	--
SWS-3	6/21/06	5	28	--	<0.0005	<0.001	<0.001	<0.001	--	--
SWS-3	6/24/06	10	12	--	0.13	<0.005	0.76	0.013	--	--
SWS-3	6/24/06	15	91	--	0.13	<0.13	0.51	1.4	--	--

# CAMBRIA

**Table 3. Analytic Results Residual Hydrocarbon in Sidewall Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	(concentrations reported in mg/kg)					TOG	Lead
					Benzene	Toluene	Ethyl benzene	Xylenes			
SWS-3	6/24/06	20	5.9	--	0.15	0.009	0.011	0.03	--	--	
SWS-4	6/21/06	5	<1.0	--	0.0009	<0.001	<0.001	<0.001	--	--	
SWS-4	6/24/06	10	24	--	0.083	0.009	0.078	0.20	--	--	
SWS-4	6/24/06	15	<b>1400</b>	--	4.0	0.49	3.4	18	--	--	
SWS-4	6/24/06	20	2.2	--	0.003	<0.001	<0.001	0.001	--	--	
SWS-5	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWS-5	6/24/06	10	46	--	0.39	0.77	0.18	0.84	--	--	
SWS-5	6/24/06	15	<b>1100</b>	--	<0.063	2.1	3.1	<b>19</b>	--	--	
SWS-5	6/24/06	20	5.9	--	0.071	0.002	0.008	0.017	--	--	
SWS-6	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWS-6	6/28/06	10	1.5	--	0.019	0.004	0.002	0.003	--	--	
SWS-6	6/28/06	15	<b>620</b>	--	<0.063	2.6	3.0	<b>16</b>	--	--	
SWS-6	6/28/06	20	2.8	--	0.001	0.003	<0.001	0.001	--	--	
SWS-7	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWS-7	6/28/06	10	<1.0	--	0.0007	0.002	<0.001	0.001	--	--	
SWS-7	6/28/06	15	92	--	<0.063	0.15	0.15	1.1	--	--	
SWS-7	6/28/06	20	5.5	--	<0.062	<0.12	0.39	2.6	--	--	
<i>Sidewal Sampling East</i>											
SWE-1	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-1	6/28/06	10	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-1	6/28/06	15	1.7	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-1	6/28/06	20	290	--	<0.063	<0.13	<0.13	0.22	--	--	
SWE-2	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-2	6/28/06	10	1.1	--	0.002	0.009	0.002	0.008	--	--	
SWE-2	6/28/06	15	160	--	<0.062	0.21	0.22	1.4	--	--	
SWE-2	6/28/06	20	<b>1500</b>	--	0.075	7.1	5.1	<b>28</b>	--	--	
SWE-3	6/21/06	5	350	--	<0.062	<0.012	0.22	2.7	--	--	
SWE-3	6/21/06	10	220	--	<0.062	0.17	0.36	3.0	--	--	
SWE-3	6/28/06	15	4	--	<0.0005	<0.001	0.078	0.001	--	--	
SWE-3	6/28/06	20	<b>790</b>	--	<b>4.9</b>	<b>100</b>	<b>46</b>	<b>260</b>	--	--	
SWE-4	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-4	6/22/06	10	1.2	--	0.18	0.003	0.008	0.007	--	--	

# CAMBRIA

**Table 3. Analytic Results Residual Hydrocarbon in Sidewall Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	(concentrations reported in mg/kg)					TOG	Lead
					Benzene	Toluene	Ethyl benzene	Xylenes			
SWE-4	6/22/06	16	<b>720</b>	--	<b>0.58</b>	8.2	4.2	<b>24</b>	--	--	
SWE-4	6/22/06	20	3.1	--	0.31	<0.001	<0.001	<0.001	--	--	
SWE-5	6/21/06	5	<1.0	--	<0.0005	<0.001	<0.001	<0.001	--	--	
SWE-5	6/28/06	10	<1.0	--	0.001	0.004	<0.001	0.002	--	--	
SWE-5	6/28/06	15	42	--	<0.062	1.3	1.2	8.6	--	--	
SWE-5	6/28/06	20	<b>940</b>	--	0.25	6.5	3.8	<b>24</b>	--	--	
ESL's			<b>400</b>	<b>500</b>	<b>0.51</b>	<b>9.3</b>	<b>32</b>	<b>11</b>	<b>1000</b>	<b>50</b>	

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed using modified EPA Method 8015M.

Total petroleum hydrocarbons as diesel (TPHd) analyzed using modified EPA Method 8015M.

Benzene, toluene, ethylbenzene, xylenes (BTEX) and Volatile Organic Compounds (VOCs) analyzed using EPA Method 8260B.

mg/kg = milligrams per kilogram.

<n = Results not detected above method detection limits.

-- = Not Analyzed

ESLs = Regional Water Quality Control Boards Environmental Screening Levels for Deep Soils >3 meters, for commercial

# CAMBRIA

**Table 4. Analytic Results for Soil Excavation Bottom Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	Sample Depth (feet)	TPHg	TPHd	(concentrations reported in mg/kg)					
					Benzene	Toluene	Ethyl benzene	Xylenes	MtBE	Lead
EX-1-S-19	9/5/06	19	4.3	NA	0.14	0.022	0.068	0.41	<0.003	NA
EX-2-S-19*	9/5/06	19	<b>1,300</b>	NA	9.7	24	25	<b>140</b>	<0.062	NA
EX-3-S-18	9/6/06	18	160	NA	0.18	1.1	2.1	<b>13</b>	<0.062	NA
EX-4-S-19	9/6/06	19	18	NA	0.12	0.011	0.12	0.3	<0.0005	NA
EX-5-S-18	9/7/06	18	2.4	11	0.23	0.001	0.014	0.011	<0.0005	NA
EX-6-S-18	9/7/06	18	4.5	<10	0.098	0.002	0.043	0.002	0.018	NA
EX-7-S-18*	9/8/06	18	1.5	NA	0.0008	0.002	<0.001	0.002	<0.0005	NA
EX-7-S-20	9/11/06	20	250	1.4	<b>170</b>	<5.0	<5.0	<5.0	NA	<5.0
EX-8-S-18*	9/8/06	18	<b>900</b>	NA	<0.003	<0.005	0.018	0.18	<0.003	NA
EX-8-S-20	9/11/06	20	<b>970</b>	1.5	<b>1300</b>	<50	100	<50	NA	<5.0
EX-9-S-18*	9/8/06	18	<1.0	NA	<0.0005	0.001	<0.001	0.001	<0.0005	NA
EX-9-S-20	9/11/06	20	<b>850</b>	1.5	430	<20	<20	<20	NA	5.8
EX-10-S-20	9/11/06	20	140	1.3	100	<5.0	12	8	NA	9.8
PP-1	9/19/06	2	<1.0	100	<0.005	<0.005	<0.005	<0.002	<0.05	20.3
PP-2	9/19/06	2	<1.0	<10	<0.005	<0.005	<0.005	<0.002	<0.05	12.4
PP-3	9/19/06	3	200	320	<b>0.08</b>	0.08	0.4	1.3	<0.5	69.3
PP-4	9/19/06	3	5.9	<10	<0.005	<0.005	0.009	0.03	<0.05	12.2
ESL's			<b>400</b>	<b>500</b>	<b>0.51</b>	<b>9.3</b>	<b>32</b>	<b>11</b>		<b>50</b>

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed using modified EPA Method 8015M.

Total petroleum hydrocarbons as diesel (TPHd) analyzed using modified EPA Method 8015M.

Benzene, toluene, ethylbenzene, xylenes (BTEX) and Volatile Organic Compounds (VOCs) analyzed using EPA Method 8260B.

mg/kg = milligrams per kilogram.

<n = Results not detected above method detection limits.

- = Not Analyzed

ESLs = Regional Water Quality Control Boards Environmental Screening Levels for Deep Soils >3 meters, for commercial land use where groundwater is not considered a current or potential source of drinking water.

# CAMBRIA

**Table 5. Analytic Results for Groundwater Discharge Samples - Former Chevron Service Station 9-1026, 3701 Broadway, Oakland, California**

Sample ID	Sample Date	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	Lead	
		← (concentrations reported in µg/L) →							
INF	9/5/06	200	590	370	58	<12	-	<0.1	
EFF	9/5/06	110	860	<0.5	<0.5	<0.5	-	<0.1	
INF	9/29/06	<50	86	<0.5	<0.5	<0.5	<0.5	<6.9	
EFF	9/29/06	<50	<50	<0.5	<0.5	<0.5	<0.5	<6.9	

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed using modified EPA Method 8015M.

Total petroleum hydrocarbons as diesel (TPHd) analyzed using modified EPA Method 8015M.

Benzene, toluene, ethylbenzene, xylenes (BTEX) analyzed using EPA Method 8260B.

µg/L = micrograms per liter.

- = Not Analyzed

C A M B R I A



**ATTACHMENT A**

**Regulatory Correspondence**

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



FEB - 7 2006

January 31, 2006

Mr. Tim Havel  
Director, Western Environmental, Health and Safety Service Hub  
Kaiser Permanente  
100 S. Los Robles, Ste. 410  
Pasadena, CA 91188

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

Mr. Mark Inglis  
Chevron  
6001 Bollinger Canyon Rd., Rm K2256  
San Ramon, CA 94583-2324

Dear Messrs. Havel and Inglis:

Subject: Fuel Leak Cases RO500 and RO205, 3701 and 3741 Broadway, Oakland,  
CA 94611 (Proposed Kaiser Development)

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the properties, 3701 Broadway (RO0000500) and 3741 Broadway (RO0000205), the two County sites within the proposed Kaiser development and the Secor December 22, 2005 *Additional Characterization Work Plan*. This work plan follows up the February 10, 2004 *Secor Phase II Environmental Site Assessment Report*. As you are aware, our office is working with Chevron with their investigation at their former service station at 3701 Broadway as well as overseeing the releases observer on 3735-3737 and 3741 Broadway. Ideally, the information proposed in the *Secor Additional Characterization Work Plan* will identify those areas, which may need further assessment/remediation and this work can be done expeditiously to facilitate Kaiser's site redevelopment plans. Thank you for the opportunity to review the proposed work plan. Our office is responsible for the oversight of environmental releases and their impact to human health and the environment. It is within this context that we offer the following technical comments to the Secor work plan. Please consider the following comments when performing the proposed work and submit the technical reports requested below.

#### TECHNICAL COMMENTS

1. 3701 Broadway- Multiple borings are proposed at this site to a maximum depth of 20 feet. We recommend that borings be advanced to depths necessary to determine the vertical extent of contamination and that samples be analyzed from areas of apparent impact indicated by screening instruments, with a minimum of two samples being tested. Because of the absence of wells in strategic locations, it would be advantageous to collect grab groundwater samples from some of the proposed samples to better characterize the petroleum release, both the dissolved and free product. I recommend you contact Chevron to jointly determine the borings where groundwater should be collected. Your investigation report should include figures indicating the current estimated TPH iso-concentration contours and free product area(s). Although the proposed work is limited to on-site, off-site investigation may

be required to delineate the dissolved or free product release. Once the data from your report is obtained, it would be appropriate for Chevron to provide a remedial action plan for these releases and for plume delineation, as necessary.

2. 3741 Broadway- This address is the area identified on the Val Strough Honda lot where the main sales office, storage room with a door covering the floor and a floor drain were located. The prior Secor investigation identified elevated levels of TPHmo, TPHd and heavy metals in soil samples. Six borings are proposed for sampling in this area, at depths of 2 and 6', to determine the limits of this contamination. Again, we recommend the vertical extent of these contaminants be determined to whatever depths necessary. Based on your results, please determine the potential impact to groundwater from this release and consider taking a grab groundwater sample from this area.
3. 3735-3737 Broadway- This address is the area where the former Rainbow Car Wash, sump and three underground storage tanks had been located. Based on the limited sampling of the initial Secor investigation (B6), it appears that a significant release to groundwater has occurred from the former underground tanks. We recommend additional sampling be done to determine the limits of this release to groundwater. Minimally, borings up and down-gradient of SB-6 should be proposed for groundwater sampling and possibly within the former tank pit given the limited data obtained from the original tank removal.

#### TECHNICAL REPORT REQUEST

Please submit the technical information according to the following schedule:

- March 1, 2006- Figure indicating groundwater sampling locations at 3701 Broadway and proposed boring locations to investigate release near boring SB-6.
- 90 days after soil and groundwater investigation- Soil and groundwater report
- 90 days after soil and groundwater investigation- Remedial Action Plan from Chevron

#### ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years,



Messrs. Havel and Inglis  
January 31, 2006  
Page 3 of 3

responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at [barney.chan@acgov.org](mailto:barney.chan@acgov.org).

#### PERJURY STATEMENT

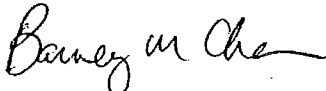
All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or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

#### PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

If you have any questions, please call me at (510) 567-6765.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: files, D. Drogos

Mr. B. Scarbrough, Secor, 57 Lafayette Circle, 2<sup>nd</sup> Floor, Lafayette, CA 94549

Mr. Bob Foss, Cambria, 5900 Hollis Street, Suite A, Emeryville, CA 94608

1\_31\_06 3701 Broadway

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY  
DAVID J. KEARS, Agency Director



MAY - 4 2006

May 1, 2006

Mr. Mark Inglis  
Chevron  
6001 Bollinger Canyon Rd., Rm K2256  
San Ramon, CA 94583-2324

Mr. Tim Havel  
Director, Western Environmental, Health and Safety Service Hub  
Kaiser Permanente  
100 S. Los Robles, Ste. 410  
Pasadena, CA 91188

Dear Messrs. Inglis and Havel:

Subject: Fuel Leak Cases RO500 and RO205, 3701 and 3741 Broadway, Oakland,  
CA 94611 (Proposed Kaiser Development)

Alameda County Environmental Health (ACEH) staff has reviewed the March 6, 2006 Soil Characterization Report Kaiser Oakland MOB 3701-3757 Broadway Oakland, California prepared by Secor, Cambria's April 13, 2006, Waste Profile for Disposal Workplan and Cambria's April 18, 2006 Soil and Groundwater Management Plan Planned Site Excavation for 3701 Broadway. As you are aware, our office is working with Chevron with their investigation at their former service station at 3701 Broadway as well as overseeing the releases observed on 3735-3737 and 3741 Broadway, properties owned by Kaiser. We previously offered comment to the Secor December 22, 2005 *Additional Characterization Work Plan* in the County's 1/31/06 letter. That work plan followed up the February 10, 2004 Secor *Phase II Environmental Site Assessment Report*. Unfortunately, it appears our comments were not incorporated in the recent investigation. Although the investigation was helpful with Chevron's evaluation of soil impacts at 3701 Broadway, it appears that there are still data gaps to address prior to concurrence for redevelopment or site closure. We recommend Chevron and Kaiser work together to address the following technical comments and submit the technical reports requested below.

#### TECHNICAL COMMENTS

1. 3701 Broadway- Multiple borings and soil samples on this property were analyzed and reported in Secor's March 6, 2006 report. Although we previously recommended sampling to depths necessary to define the vertical extent of contamination and the sampling of groundwater, this was not done. Chevron's Soil and Groundwater Management Plan (SGMP) proposes to excavate the entire site, to the extent possible, to a maximum depth of ~18' bgs. A drainage system is proposed to direct groundwater to a sump basin that will then be pumped to a holding tank for proper disposal. Please address the following questions/concerns:

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

- How will the vertical extent of contamination be determined, particularly in the locations where concentrations appear to be increasing with depth and where these concentrations exceed cleanup levels?
  - The inability to collect sidewall confirmation samples poses a problem when attempting to estimate risk to occupants of the proposed subsurface building. There is a potential that the floor confirmation samples will underestimate actual residual concentrations. An attempt to estimate sidewall samples should be done, possibly at some intermediate stage of the excavation. Please provide a supplemental sampling proposal.
  - Please provide a diagram of the proposed drainage system. Please indicate how the source areas were identified and how they will be treated by the drainage system. How and with what frequency will groundwater be sampled? Will the system allow preferential drainage from specific areas? What will determine the duration of the groundwater removal system?
  - Please clarify the specific site development planned for the 3701 Broadway site and the other properties by providing our office a copy of these plans. The SGMP states that a subsurface building at a depth of 15' bgs is proposed. Will a moisture vapor barrier be used?
  - Please provide proposed cleanup levels for soil and groundwater at the site. Those of Chevron appear to differ from those proposed by Secor in behalf of Kaiser.
  - We concur that a risk assessment should be performed and approved prior to site development.
  - The Waste Profile for Disposal Workplan proposes 13 soil borings advanced to approximately 20' bg to characterize the residual concentrations. Shallower samples will characterize soil for disposal purposes. Given the amount of information already known at the site, the locations of these samples should be selected authoritatively not randomly. Please provide a sampling plan and sampling rationale. As mentioned, all efforts should be taken to define contaminants vertically to below cleanup levels. As noted in the SGMP, some soil samples should also be analyzed for TPHd and TPHmo in addition to TPHg, BTEX and lead.
2. Please provide a copy of the Phase I investigation for the other properties of this site ie 3741, 3735-3737 and 3751-3757 Broadway. This information is necessary to determine the adequacy of the sampling performed at these sites.
  3. 3741 Broadway- This address is the area identified on the Val Strough Honda lot where the main sales office, storage room with a door covering the floor and a floor drain were located. The prior Secor investigation identified elevated levels of TPHmo, TPHd and heavy metals in soil samples. Based on the results of the 1/06 investigation the extent of TPH and metals contamination appears limited to near SB-12 and SB-32. Will these areas be excavated prior to development?
  4. 3735-3737 Broadway- This address is the area where the former Rainbow Car Wash, sump and three underground storage tanks had been located. Based the limited sampling of the initial Secor investigation, results from boring B6 indicate a significant release to groundwater may have occurred from the former underground tanks. We recommended additional sampling be done to determine the limits of this release to groundwater. Since no sampling was performed in the 1/06 investigation

Messrs. Inglis and Havel

May 1, 2006

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it is unclear to what extent the 3701 Broadway site has been impacted by this release. The former USTs on this site must be further investigated. Please provide a work plan to determine the extent of soil and groundwater contamination from this area. In the absence of any tank removal data, we recommend sampling the former tank pit area. It is also noted that elevated petroleum contamination was detected in soil samples on the 3701 Broadway site along the boundary with this site. It is unclear which site(s) are the source(s) of the contamination, however, additional soil and groundwater characterization on the 3735-3737 Broadway property is required to delineate this detected contamination. We require Chevron and Kaiser work together and include this investigation in the requested work plan.

5. 3751-3757 Broadway- This address is indicated as where repair and service occurred. Two additional samples were taken in the 1/06 investigation. It appears that there may be localized TPH mo and TPHd as reported in SB-48. Please determine if this result is consistent with your Phase I results or whether additional sampling is warranted.

#### TECHNICAL REPORT REQUEST

Please submit the technical information according to the following schedule:

- July 3, 2006- Written response to above items, sampling plan for sidewalls, diagram for drainage system, copy of development plans, proposed cleanup levels, post-excavation sampling plan, sampling plan for 3735-3737 Broadway and Phase I reports.
- 90 days after soil and groundwater investigation- Risk Assessment

#### ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program ftp site are provided on the attached "Electronic Report Upload (ftp) Instructions." Please do not submit reports as attachments to electronic mail.

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responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

Messrs. Inglis and Havel  
May 1, 2006  
Page 4 of 4

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at [barney.chan@acgov.org](mailto:barney.chan@acgov.org).

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

If you have any questions, please call me at (510) 567-6765.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions (Messrs. Foss & Hoehn)

cc: files, D. Drogos

✓ Mr. Greg Hoehn, Secor, 57 Lafayette Circle, 2<sup>nd</sup> Floor, Lafayette, CA 94549  
✓ Mr. Bob Foss, Cambria, 5900 Hollis Street, Suite A, Emeryville, CA 94608  
Mr. Jay Asercion, Kaiser Permanente, 1100 San Leandro Blvd., Suite 200,  
San Leandro, CA 94577

ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director



June 13, 2006

Mr. Mark Inglis  
Chevron  
6001 Bollinger Canyon Rd., Rm K2256  
San Ramon, CA 94583-2324

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

Mr. Tim Havel  
Director, Western Environmental, Health and Safety Service Hub  
Kaiser Permanente  
100 S. Los Robles, Ste. 410  
Pasadena, CA 91188

JUN 16 2006

Dear Messrs. Inglis and Havel:

Subject: Fuel Leak Cases RO500 and RO205, 3701 and 3741 Broadway, Oakland,  
CA 94611 (Proposed Kaiser Development)

Alameda County Environmental Health (ACEH) staff has reviewed the May 24, 2006 Proposed Kaiser Development and the June 12, 2006 Well Destruction Workplan by Cambria and the January 12, 2004 Phase I Environmental Site Assessment Report and the May 26, 2006 response letter report by Secor, all responding to the County's May 1, 2006 letter. It appears that the County concerns have been adequately addressed. We have the following observations and technical report requests.

TECHNICAL COMMENTS

1. 3701 Broadway-

- Vertical Delineation of Hydrocarbons will be addressed by advancing borings in locations where prior results exceeded environmental screening levels. The borings will be advanced to a maximum depth of 30' to determine the vertical extent of contamination. In addition, an area around SB-38, where elevated lead was detected will also be sampled for this analyte.
- Sidewall sampling approximately every 20 linear feet along the excavation, sampled at five-foot intervals will be performed.
- The drainage system proposed will be done to facilitate the excavation and not as a remediation method since the rate and amount of water removed is unknown. After completion of the excavation, please provide an estimate of the amount of hydrocarbons removed from the dewatering in your excavation report.
- A set of the requested design drawings for the development will be provided from Kaiser as soon as available. Kaiser states that a moisture vapor barrier is presumed to be included.
- It appears that there still is a difference in the cleanup levels proposed by Chevron and Kaiser. Site cleanup levels must be consistent with the future use of the property and site closure will be recommended based upon your meeting the appropriate cleanup levels. Your risk assessment should verify this.
- Three borings located within the excavation limits of the former waste oil tank will be analyzed for TPHd and TPHmo in addition to TPHg, BTEX and lead.
- The monitoring well decommissioning work plan for the six on-site wells is approved to accommodate the proposed site excavation. The off-site wells must either be sampled or properly decommissioned. Wells E and F have been paved over and not sampled since 3/03. It is uncertain whether these wells monitor the extent of the

plume since free product on-site and non-detectable concentrations off-site have been reported for years. Please include a proposal for wells E & F and a discussion of the extent of plume delineation in your well decommissioning report.

2. A copy of the Phase I investigation for the other properties of this site ie 3741, 3735-3737 and 3751-3757 Broadway has been provided by Secor. Based upon this report no additional areas of chemical concern were identified.
3. 3741 Broadway- This address is the area identified on the Val Strough Honda lot where the main sales office, storage room with a door covering the floor and a floor drain were located. The areas near SB-12 and SB-32 with elevated TPH and metals contamination will be excavated and re-sampled according to a soil management plan. Please submit the plan prior to excavation.
4. 3735-3737 Broadway- This address is the area where the former Rainbow Car Wash, sump and three underground storage tanks had been located. Kaiser will provide a work plan to complete investigation of soil and groundwater impacts associated with the former USTs at this site.
5. 3751-3757 Broadway- The localized TPH mo and TPHd contamination reported in SB-48 will be excavated and re-sampled according to the referenced soil management plan.

#### TECHNICAL REPORT REQUEST

Please submit the technical information according to the following schedule:

- 90 days after excavation of 3701 Broadway- Confirmation soil sampling (Excavation) report, design drawings for development, risk assessment, monitoring well decommissioning report and extent of plume discussion.
- 30 prior to hot spot excavation- Soil Management Plan and work plan for soil and groundwater investigation of 3735-3737 Broadway.

#### ELECTRONIC SUBMITTAL OF REPORTS

Effective **January 31, 2006**, the Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities. Please do not submit reports as attachments to electronic mail.

Submission of reports to the Alameda County ftp site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. Submission of reports to the Geotracker website does not fulfill the requirement to submit documents to the Alameda County ftp site. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for groundwater cleanup programs. For several years,

responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitor wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, electronic submittal of a complete copy of all necessary reports was required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements ([http://www.swrcb.ca.gov/ust/cleanup/electronic\\_reporting](http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting)).

Messrs. Inglis and Havel  
June 13, 2006  
Page 3 of 3

In order to facilitate electronic correspondence, we request that you provide up to date electronic mail addresses for all responsible and interested parties. Please provide current electronic mail addresses and notify us of future changes to electronic mail addresses by sending an electronic mail message to me at [barney.chan@acgov.org](mailto:barney.chan@acgov.org).

PERJURY STATEMENT

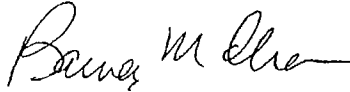
All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

If you have any questions, please call me at (510) 567-6765.

Sincerely,



Barney M. Chan  
Hazardous Materials Specialist

cc: files, D. Drogos

- ✓ Mr. Greg Hoehn, Secor, 57 Lafayette Circle, 2<sup>nd</sup> Floor, Lafayette, CA 94549
- ✓ Mr. Bob Foss, Cambria, 5900 Hollis Street, Suite A, Emeryville, CA 94608
- Mr. Jay Asercion, Kaiser Permanente, 1100 San Leandro Blvd., Suite 200,  
San Leandro, CA 94577



C A M B R I A



**ATTACHMENT B**

**Historical Documentation**

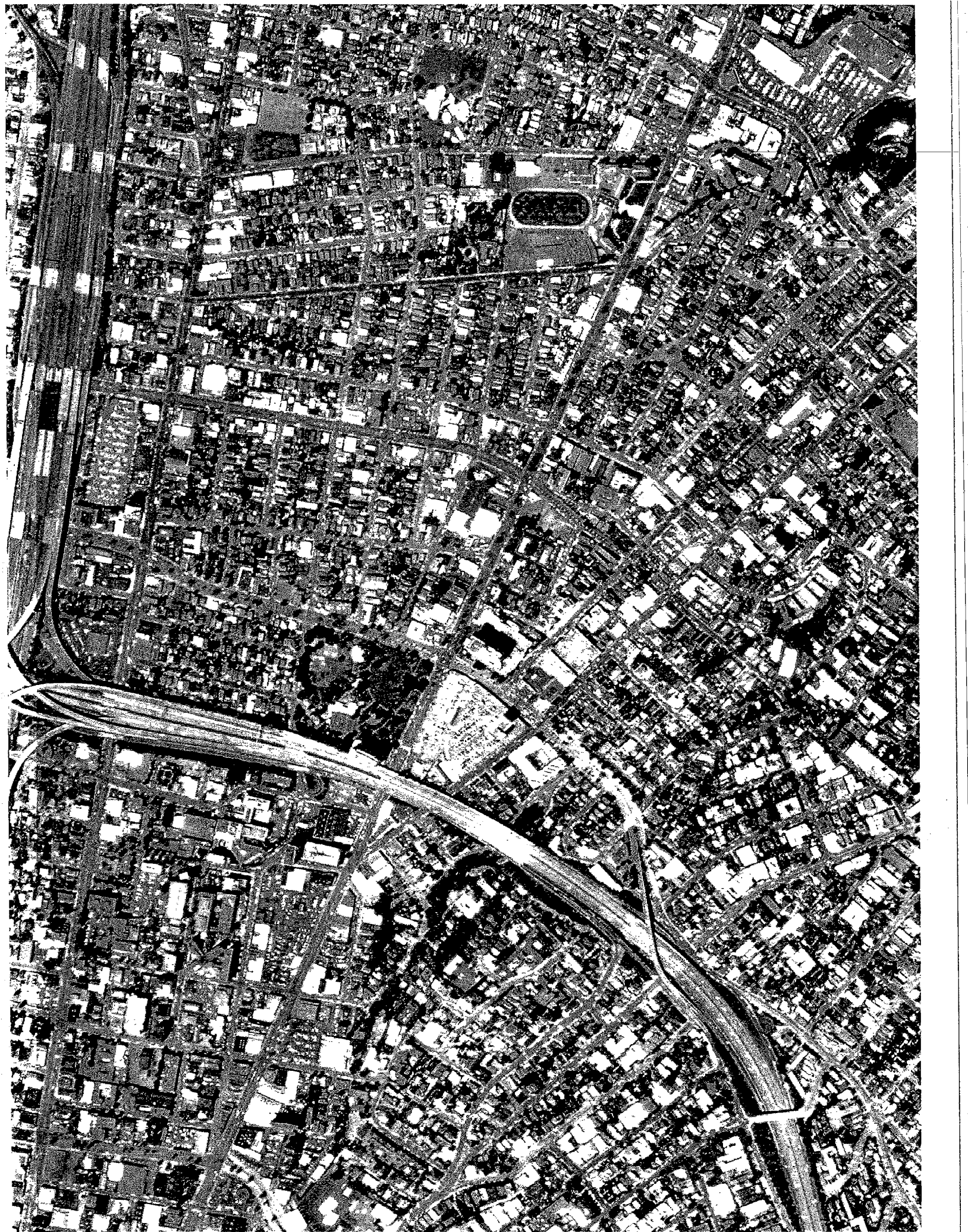
Inquiry # 1070745-S

Year : 1993

Flyer : USGS

Scale : 1" = 666'

N↑



INQUIRY # 10767458  
YEAR: 1982  
FLYER: WESTERN STATE AERIAL  
SCALE: 1"=690'





Inquiry# 1076745.8  
Year: 1965  
Flyer: Cartwright  
Scale: 1"=333'

N↑





Inquiry # 1076745.8  
Year: 1959  
Flyer: Cartwright  
Scale: 1"=833'

N↑





Inquiry # 10767455

Year: 1946

Flyer: Jack Ammann

N↑

Scale: 1"=655'



Inquiry # 10267458

Year: 1939

Flyer: Fairchild

Scale: 1"=555'

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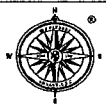
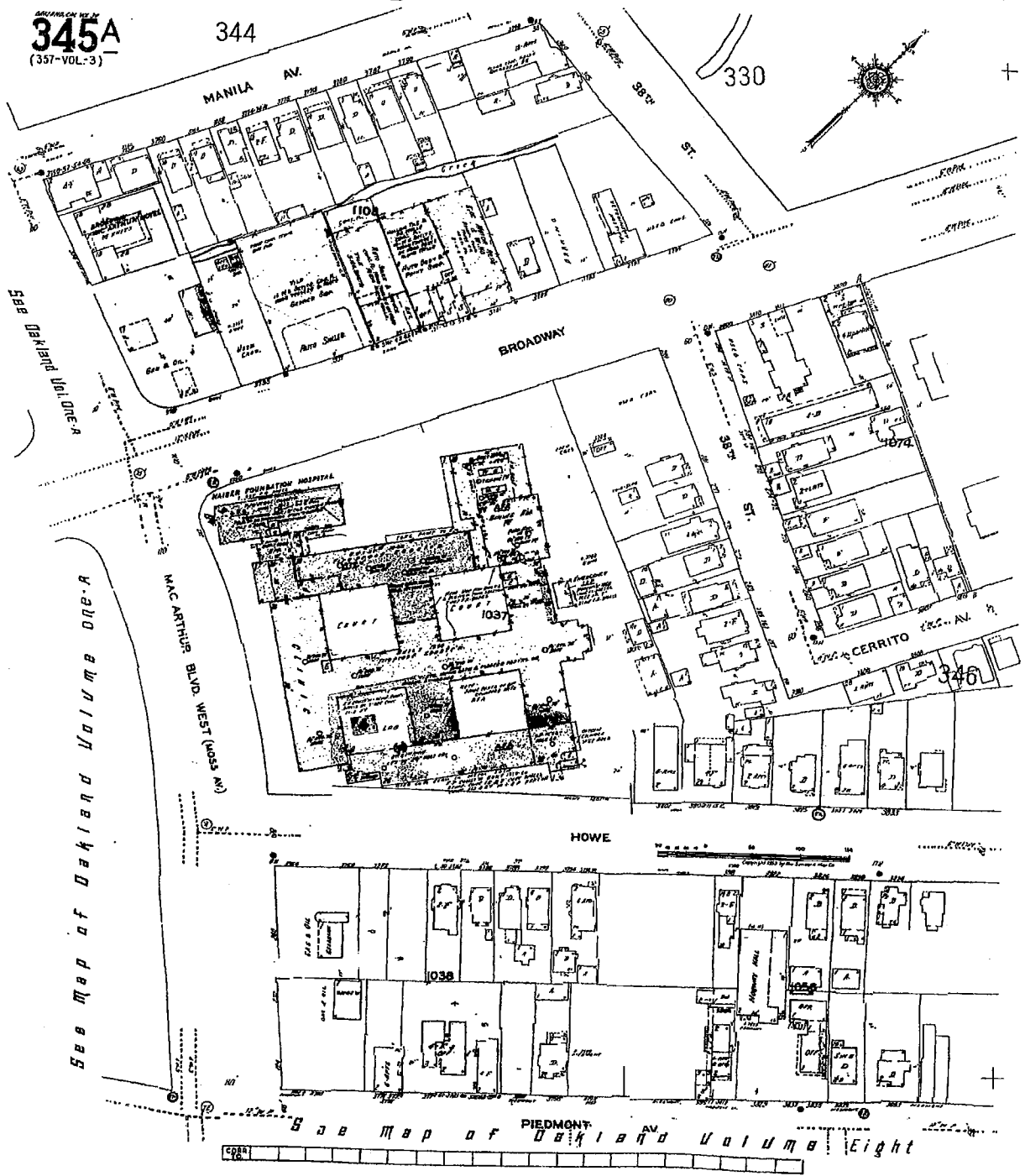




SECTION OF MAP  
**345A**  
(357-VOL-3)

344

330



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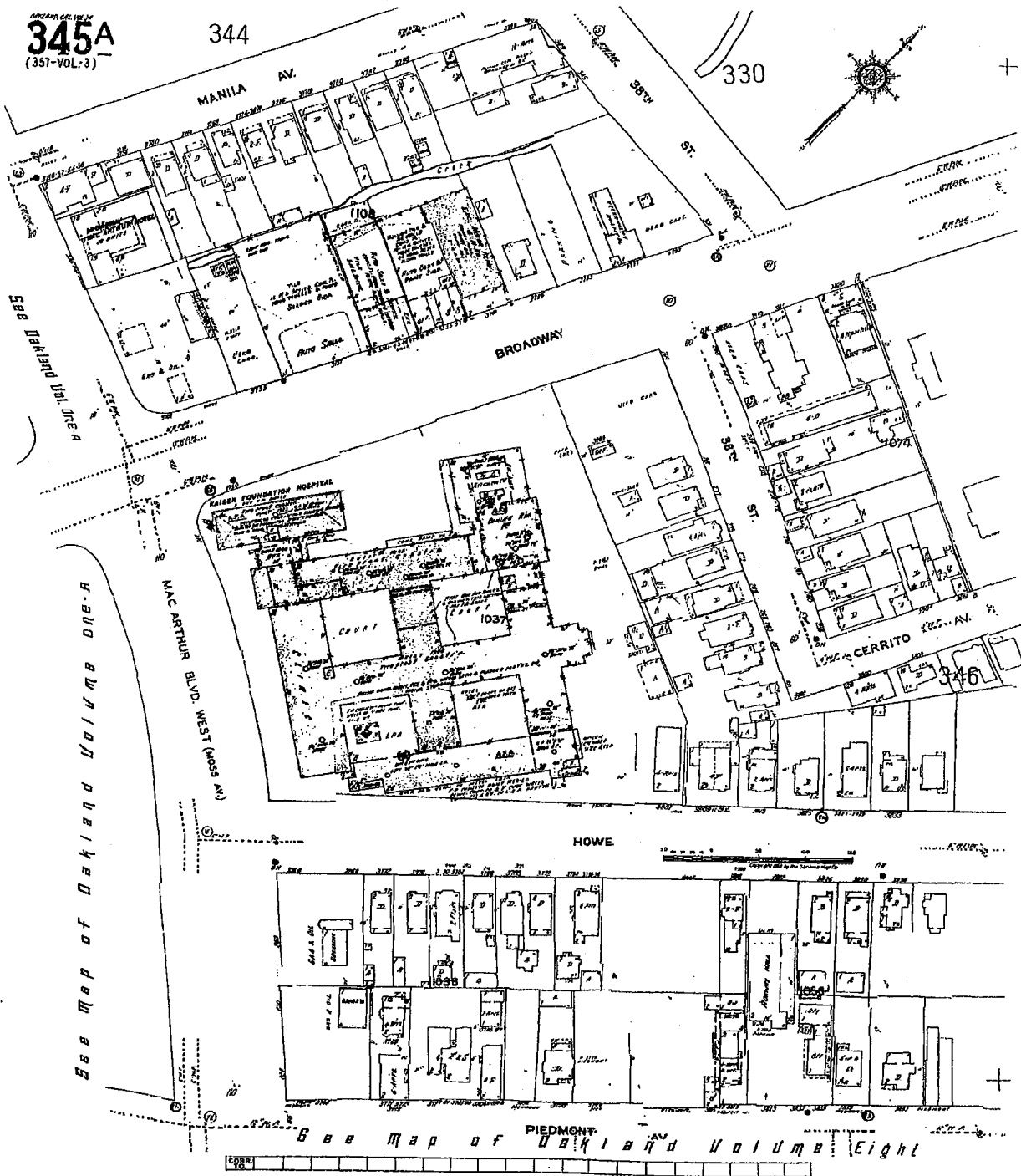
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Year EDR Research Associate

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345A  
(357-VOL-3)

344

330



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345A  
(357-VOL-3)

344

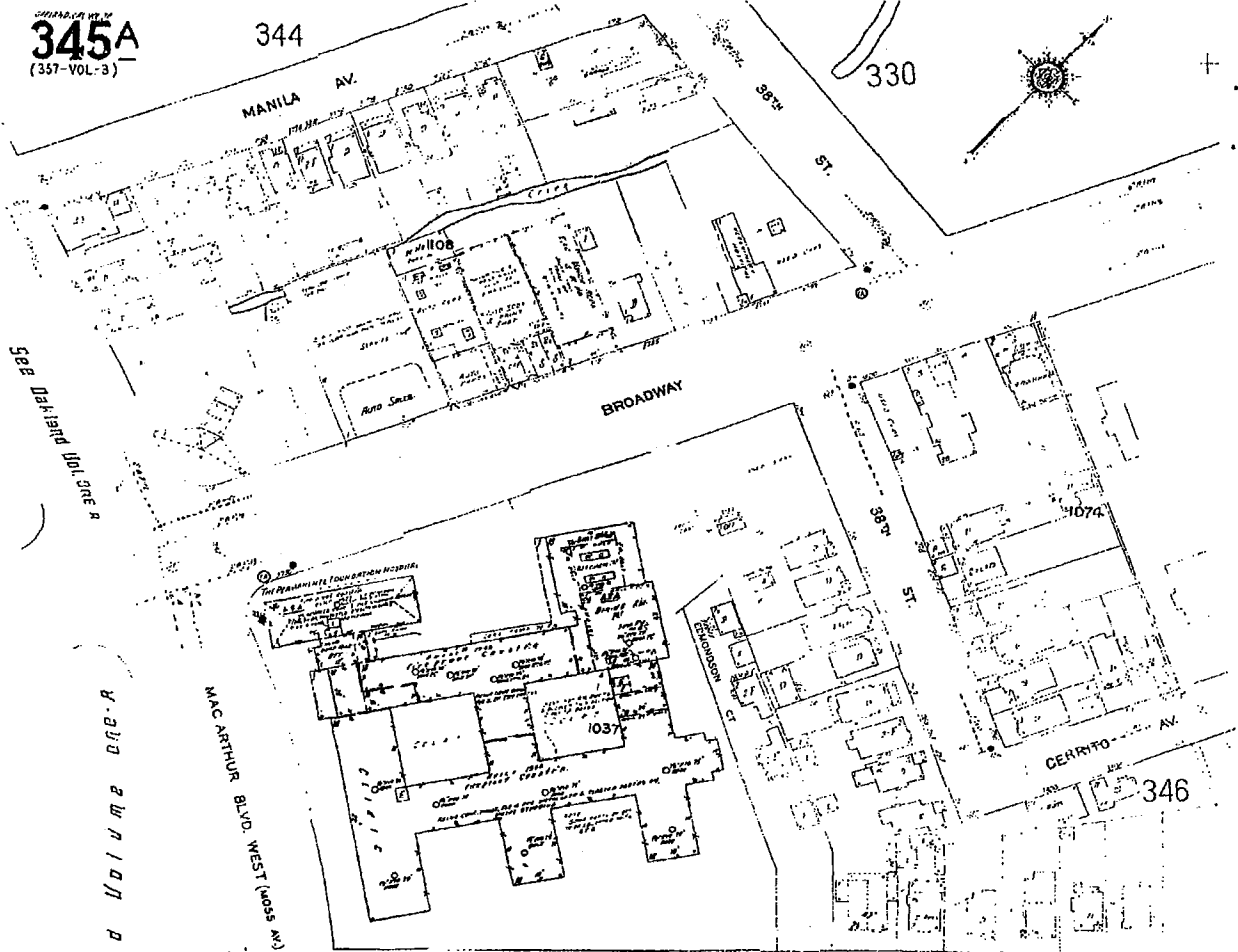
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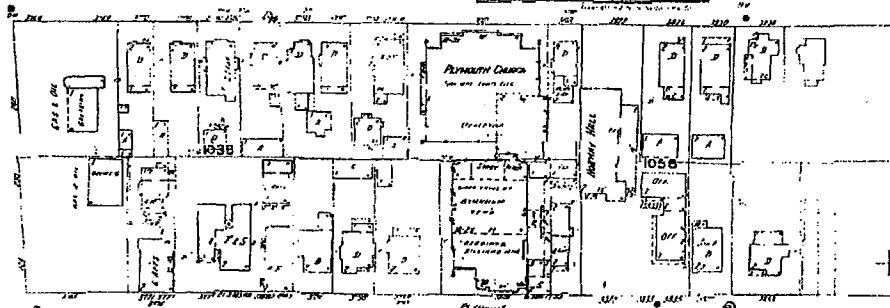
See Oakland Vol. One A

See Map of Oakland Volume One A

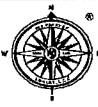
MACARTHUR BLVD. WEST (LOSS AV.)



HOWE



See Map of Oakland Volume Eight



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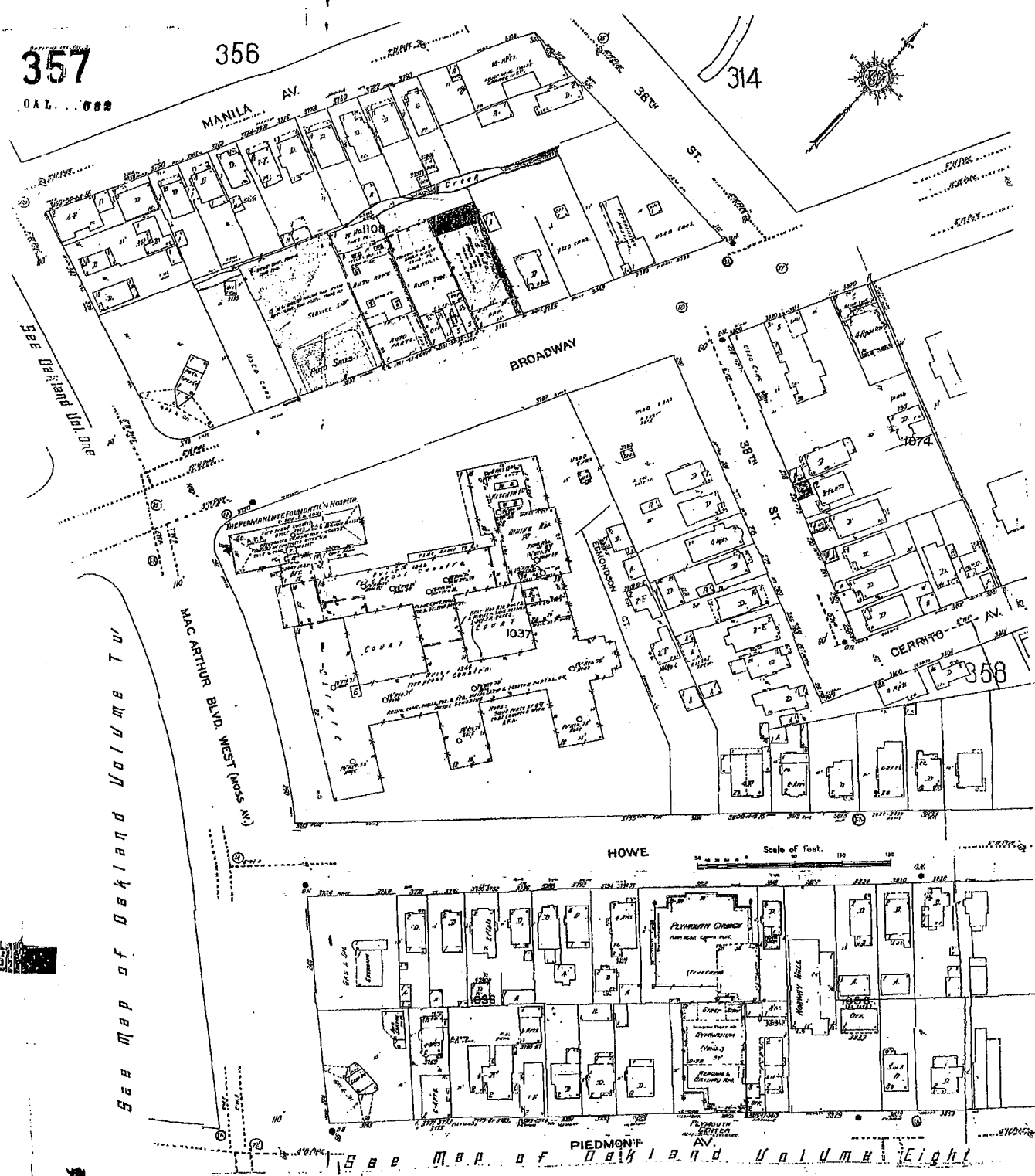
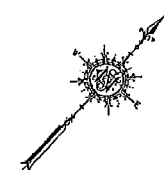


357

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See Map of Oakland Volume T U

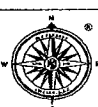
MAC ARTHUR BLVD WEST (ROSS X)

HOWE

Scale of feet.

PIEDMONT AV

See Map of Oakland Volume Eight

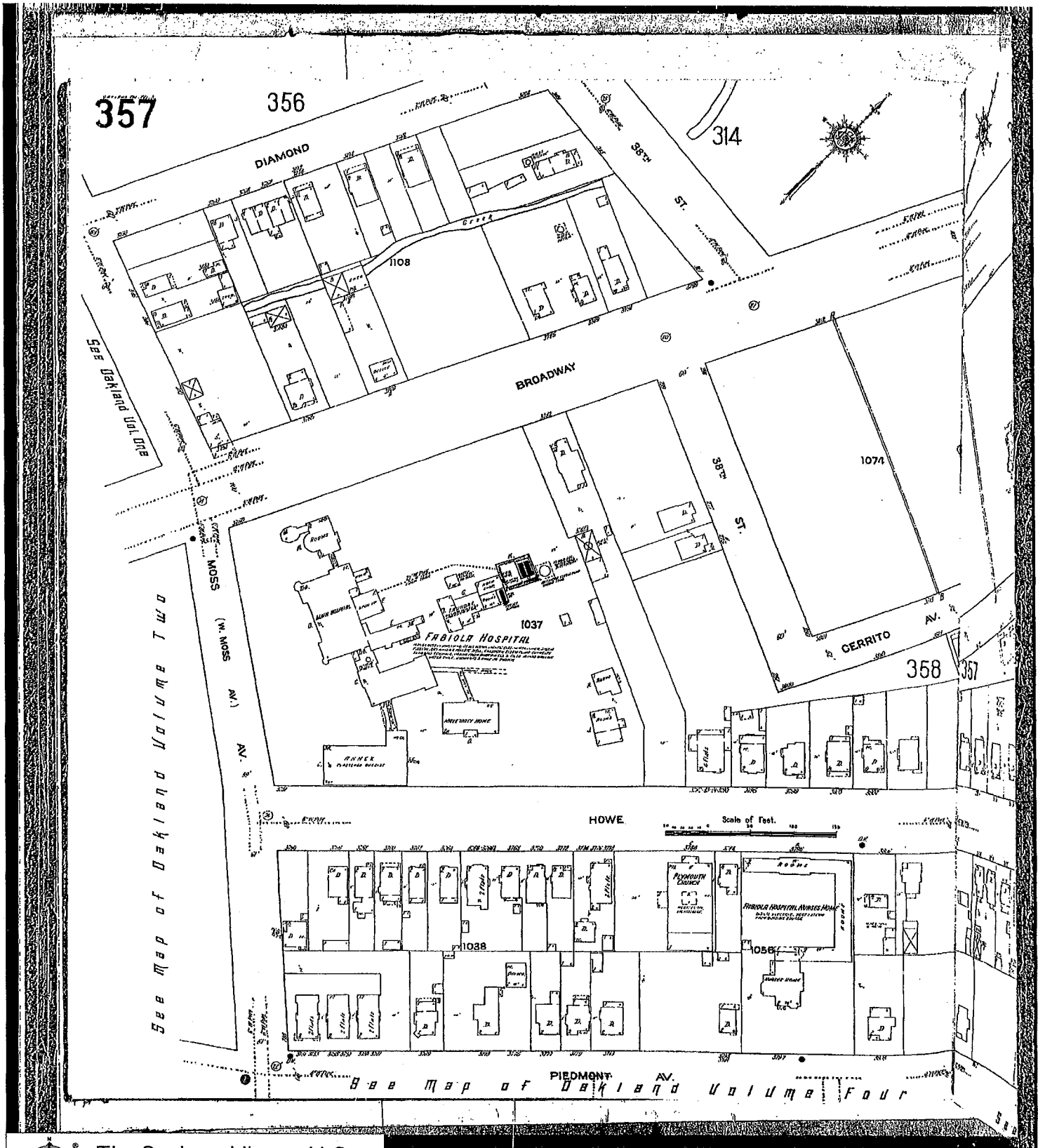


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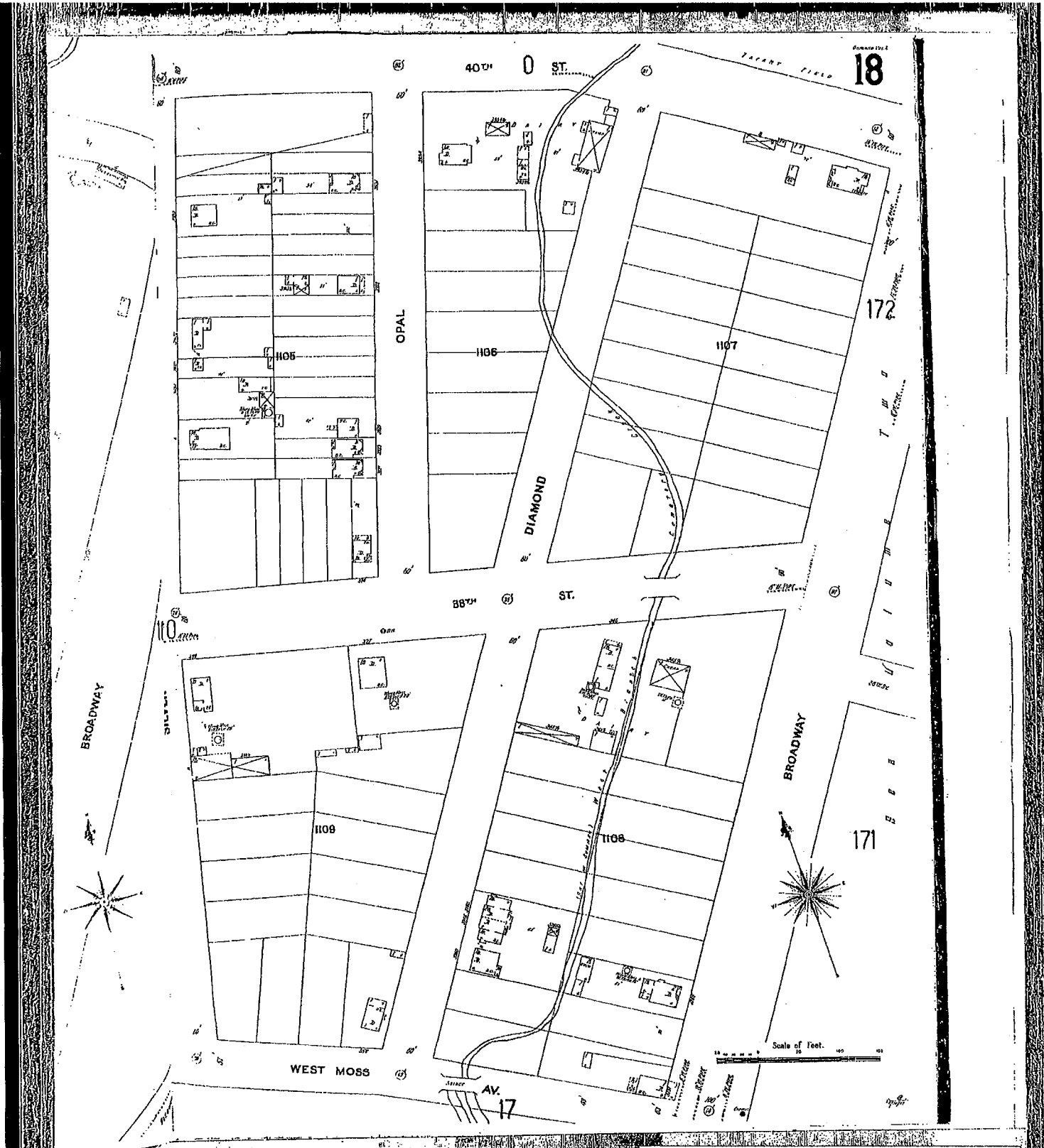


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C A M B R I A



**ATTACHMENT C**

**Boring Logs**



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	Chevron Environmental Management Company	BORING/WELL NAME	CSB-10
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	4.0 fbgNA
LOGGED BY	L. Geinin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5		Asphalt		0.5	
			3.0	GC	<b>Sandy GRAVEL</b> : Light brown; dry; 85% gravel, 15% sand; high estimated permeability.	3.0		
			5.0	CL	<b>Gravelly CLAY with silt</b> : Greenish gray; wet; 75% clay, 15% gravel, 10% silt; medium to high estimated plasticity; low estimated permeability.	5.0		
			8.0	SP	<b>Fine grained SAND</b> : Olive green; loose; wet; 100% sand; high estimated permeability.	8.0		
148			10.0	GC	<b>Clayey GRAVEL with sand and silt</b> : Olive green; dense; moist; 40% gravel, 40% clay 10% sand 10% silt; moderate estimated plasticity; low estimated permeability.	10.0		
			12.5	CL	<b>Silty CLAY</b> : Olive green; hard; damp; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	12.5		
			15.0	ML	<b>Clayey SILT</b> : Olive green; hard; damp; 55% silt, 40% clay, 5% sand; low estimated plasticity; low estimated permeability.	15.0		
238			18.0			18.0		
186		CSB-10-S-19	20.0	CL	<b>Silty CLAY</b> : Tan to olive green; stiff; moist; 50% clay, 45% silt, 5% sand; medium estimated plasticity; low estimated permeability.	20.0		
			20.5	SP	<b>Fine grained SAND</b> : Olive green; loose; wet; 85% sand, 15% silt; high estimated permeability.	20.5		
		CSB-10-S-22	21.0	ML	<b>Clayey SILT</b> : Brown; stiff; moist; 65% silt, 30% clay, 5% sand; low estimated plasticity; low estimated permeability.	21.0		
			22.0			22.0		

WELL LOG (PID) I:19-1026-1\GINT19-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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	Chevron Environmental Management Company	BORING/WELL NAME	CSB-11
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	8.0 fbgNA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.5		Asphalt		0.5	
				5.0	SP	<b>Fine grained SAND</b> : Light olive green; loose; moist; 100% sand; high estimated permeability.			
				5.0	GC	<b>Sandy clayey GRAVEL</b> : Dark olive green; stiff; damp; 50% gravel, 35% sand, 15% silt, 10% clay; low estimated plasticity; moderate to high estimated permeability.			
				8.0	GW	<b>GRAVEL</b> : Dark gray-green; loose; wet; 40% gravel, 20% sand, 20% silt, 20% clay; high estimated permeability.			
				10.0	ML	<b>Clayey SILT</b> : Tan; damp; very stiff; 60% silt, 35% clay, 5% sand; low estimated plasticity; low estimated permeability. Color change to dark gray-green.			
				16.0	SM	<b>Sand SILT</b> : Dark gray-green; moist; dense; 40% silt, 40% sand, 20% clay; very low estimated plasticity; moderate estimated permeability.			
				18.0	CL	<b>Silty CLAY</b> : Dark gray; damp; very stiff; 50% clay, 50% silt; medium estimated plasticity; very low estimated permeability.			
		CSB-11-S-20		20.0	SM	<b>Silty SAND</b> : Green; wet; loose; 60% sand, 30% silt, 10% clay; high estimated permeability.			
		CSB-11-S-22		21.0	ML	<b>Clayey SILT</b> : Tan; damp; very stiff; 60% silt, 30% clay, 10% sand; low estimated plasticity; very low estimated permeability.			
				22.0					

WELL LOG (PID) 1:19-1026-11GINT19-1026 INVESTIGATION GPJ DEFAULT.GDT 1/23/07



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	Chevron Environmental Management Company	BORING/WELL NAME	CSB-12
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L. Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Asphalt	0.5	<p>Portland Type I/II Cement</p>
			5	ML		<u>Clayey SILT</u> : Black; damp; 65% silt, 35% clay; high estimated plasticity; low estimated permeability.		
0			8.0	CL		<u>Silty CLAY</u> : Black; moist; 55% clay, 40% silt, 5% sand; high estimated plasticity; low to moderate estimated permeability.	8.0	
0			9.0			<u>Clayey SILT</u> : Upper contact gradational; black; damp; 48% clay, 48% silt 4% sand; medium estimated plasticity; low estimated permeability.	9.0	
			15	ML				
7			18.0				18.0	
0		CSB-1 2-S-20	20	CL		<u>CLAY</u> : Upper contact gradational; olive green; stiff; damp; 70% silt, 30% clay; medium to high estimated plasticity; low estimated permeability.	20.0	
			20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\9-1026-1\GINT\9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-13
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Concrete and rebar.	1.0	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 18 fbg</p>
				GM		<b>Graveley SILT</b> : Dark brown; loose, soft; moist; 35% silt, 25% gravel, 20% sand, 20% clay; low-medium estimated plasticity; low to moderate estimated permeability.	4.0	
0		CSB-13-S-5	5	SM		<b>Clayey SILT with sand</b> : Dark brown; soft; moist; 55% silt, 35% clay, 10% sand; high estimated plasticity; low estimated permeability.		
				ML		<b>Silty CLAY</b> : Very dark brown; moist; 95% silt, 5% clay.	12.5	
		CSB-13-S-14		GW		<b>Sandy GRAVEL</b> : Dark brown; wet; 40% gravel, 40% sand, 15% silt, 5% clay; high estimated permeability.	15.0	
				ML		<b>Clayey SILT</b> : Olive green; very stiff; moist; 75% silt, 25% clay; high estimated plasticity; low estimated permeability.	15.5	
0		CSB-13-S-17.5 CSB-13-S-18		MH		<b>Sandy SILT with clay</b> : Olive green; soft; moist; 60% silt, 35% sand, 5% clay; moderate estimated permeability; low estimated plasticity.	17.5 18.0	

WELL LOG (PID) I:\9-1026-1\GINT9-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07





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	Chevron Environmental Management Company	BORING/WELL NAME	CSB-14
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				0.5		Asphalt		0.5	
				5	SP	<p><b>Fine grained SAND</b> : Light olive green; loose; damp; 100% sand; high estimated permeability.</p> <p>At 2.5' moist.</p>	5.5		
				8.0	CL	<p><b>Sandy CLAY with gravel</b> : Olive brown; soft; moist; 60% clay, 20% silt, 10% sand, 10% gravel; medium estimated plasticity; low estimated permeability.</p>	8.0		
				10		<p><b>GRAVEL with silt and clay</b> : Gray; loose; wet; 70% gravel 0.5-2cm angular clasts, 10% coarse grained sand, 10% silt, 10% clay; high estimated permeability.</p>	18.0		
				15	GW				
				20	ML	<p><b>Clayey SILT with sand</b> : Olive green; very stiff; damp; 60% silt, 30% clay, 10% fine grained sand; low estimated plasticity; very low estimated permeability.</p>	24.0		
594		CSB-1 4-S-20		20					
		CSB-1 4-S-22.5		22.5			Change in color to tan.		

WELL LOG (PID) 1:19-1026-1(GINT)9-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-16
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Concrete	0.5	
		CSB-16-S-3	5	ML		Clayey SILT : Brown; dry; 70% silt, 30% clay; medium estimated plasticity; moderate to low estimated permeability.		
		CSB-16-S-9	8.0	GC		Sandy GRAVEL with silt and clay : Brick fragments; light brown; dry; 40% gravel, 30% sand, 15% silt, 15% clay; high estimated permeability.	8.0	
		CSB-16-S-14	14.0	ML		Clayey SILT : Light olive brown; hard; dry; 60% silt, 40% clay; low estimated plasticity; very low estimated permeability.	14.0	
		CSB-16-S-15	18.0	CL		Silty CLAY : Light brown; stiff; damp; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	18.0	
			18.5				18.5	Bottom of Boring @ 18.5 fbg

WELL LOG (PID) I:\9-1026-1\GINTY9-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-17
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	3	SCREENED INTERVALS	NA
LOGGED BY	L Genin	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss PG #7445	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
			0.5			Concrete	0.5	<p>Portland Type I/II Cement</p>
			2.0	SM		<b>Silty SAND</b> : Light brown; dry; 70% sand, 30% silt; low estimated permeability.	2.0	
		CSB-17-S-3	3.0					
			5.0	ML		<b>Clayey SILT</b> : Black; stiff; dry; 70% silt, 20% clay, 10% sand; medium estimated plasticity; low estimated permeability.	5.0	
		CSB-17-S-6	6.0					
			8.0				8.0	
			10.0	CL		<b>Silty CLAY</b> : Black; soft; moist; 60% clay, 40% silt; high estimated plasticity; low estimated permeability.	10.0	
		CSB-17-S-11.5	11.5				12.0	
		CSB-17-S-13	13.0					
			15.0	ML		<b>Clayey SILT</b> : Olive brown with green mottling; hard; dry; 60% silt, 40% clay; low estimated plasticity; low estimated permeability.	15.0	
		CSB-17-S-16	16.0					
			18.0				18.0	
			20.0	CL		<b>Silty CLAY</b> : Olive green; stiff; moist; 50% clay, 50% silt; medium estimated plasticity; low estimated permeability.	20.0	
			21.0	SW		<b>SAND</b> : Fine to medium grained; brown; loose; wet; 80% sand, 20% silt; high estimated permeability.	21.0	

WELL LOG (PID) I:\9-1026-1\GINT\9-1026 2006 INVESTIGATION.GPJ\_DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-18
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Concrete	0.5	
		CSB-1 8-S-3	5	ML		<b>SILT with clay</b> : Dark brown; dry; 70% silt, 10% clay, 10% sand, 10% gravel; high estimated plasticity; low estimated permeability.		
		CSB-1 8-S-6					8.0	
		CSB-1 8-S-9	10			<b>Silty CLAY</b> : Black; soft; damp; 60% clay, 40% silt; high to medium estimated plasticity; low estimated permeability.		
		CSB-1 8-S-13						
		CSB-1 8-S-15	15	CL		Change in color to grey.		
		CSB-1 8-S-16						
		CSB-1 8-S-19	20					
			20.5				20.5	

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-19
JOB/SITE NAME	9-1026	DRILLING STARTED	24-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
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	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 16.5 fbg</p>
				SW		<b>Gravelly SAND</b> : Light olive green; dry; 85% sand, 15% gravel; high estimated permeability.	2.0	
				ML		<b>Clayey SILT</b> : Brown; moist; 75% silt, 25% clay; medium estimated plasticity; moderate to low estimated permeability.	3.0	
				SM		<b>Silty SAND</b> : Light brown; dry; 60% sand 40% silt; low estimated plasticity; moderate to high estimated permeability.	4.0	
		CSB-19-S-5	5	ML		<b>Clayey SILT with sand</b> : Dark brown; damp; 75% silt, 10% sand, 10% gravel, 5% clay; medium estimated plasticity; low estimated permeability.	5.0	
				SP		At 7' Silt with gravel and sand; 75% silt, 10% sand, 10% silt, 5% clay; medium estimated plasticity; moderate estimated permeability.	8.0	
				CL		<b>SAND</b> : Dark brown; loose; moist; 50% sand, 30% gravel, 20% silt; high estimated permeability.	9.0	
		CSB-19-S-11	10	GW		<b>CLAY</b> : Dark Brown; soft; moist; 50% clay, 45% silt, 5% sand; high estimated plasticity; low to moderate estimated permeability.	10.0	
				GW		<b>Sandy GRAVEL</b> : Dard brown; loose; moist; 50% gravel, 40% sand, 10% silt; high estimated permeability.	12.0	
		CSB-19-S-14	15	ML		<b>Clayey SILT</b> : Dark brown; hard; damp; 65% silt, 35% clay; low estimated plasticity; low estimated permeability.	15.0	
							16.5	

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-20
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	20-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Asphalt	0.5	
		CSB-2 0-S-5	5	SW		<b>SAND with gravel</b> : Dark gray-green; moist; 50% medium to fine grained sand, 30% silt, 15% coarse gravel, 5% clay; moderate estimated permeability.		
		CSB-2 0-S-12	13.0			<b>Clayey SILT</b> : Brown; 70% silt, 30% clay; medium estimated plasticity; low estimated permeability.	13.0	
		CSB-2 0-S-13.5	15.0	ML		<b>Silty CLAY</b> : Brown; stiff; 60% clay, 40% silt; moderate estimated plasticity; low estimated permeability.	15.0	
		CSB-2 0-S-15	16.0	CL		<b>Sandy SILT with gravel</b> : Black; moist; 40% silt, 30% sand, 20% gravel, 10% clay; moderate to high permeability.	16.0	
			18.0	ML		<b>Clayey SILT</b> : Brown; soft; moist; 70% silt, 30% clay; moderate estimated plasticity; low estimated permeability.	18.0	
		CSB-2 0-S-20	20.0			Blue staining to 20'		
		CSB-2 0-S-22	22.0	MH				
		CSB-2 0-S-23	23.0					
			24.0				24.0	
								Bottom of Boring @ 24 fbg

WELL LOG (PID) 119-1026-11GIN19-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-22
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	20-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS \_\_\_\_\_

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
				SW		<b>Medium grained SAND</b> : Brown; moist; 100% sand; high estimated permeability.		<p>Portland Type I/II Cement</p>
		CSB-2 2-S-5	5				6.0	
				GP		<b>GRAVEL</b> : Dark gray-green; moist to wet; 75% gravel, 15% sand, 10% silt; high estimated permeability.		
		CSB-2 2-S-10	10					
				MH		<b>Clayey SILT</b> : Olive green; wet; 85% silt, 15% clay; low to medium plasticity; low permeability.	14.0	
				GP		<b>GRAVEL</b> : Dark gray-green; moist to wet; 75% gravel, 15% sand, 10% silt; high estimated permeability.	15.0	
							18.0	
				ML		<b>Clayey SILT</b> : Brown/green with staining; moist; 85% silt, 15% clay; medium estimated plasticity; low estimated permeability.		
		CSB-2 2-S-20	20				24.0	
								Bottom of Boring @ 24 fbg

WELL LOG (PID) I:\9-1026-1\GINT19-1026 2006 INVESTIGATION GP.J DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-3
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0			Asphalt with fill-sand/gravel.	1.0	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 22 fbg</p>
			5	MH		<b>Clayey SILT with sand</b> : Brown; moist; 70% silt, 20% clay, 10% sand; high estimated plasticity, low estimated permeability.	8.0	
			10	ML		<b>Clayey SILT with sand</b> : Tan; moderately stiff; damp; 60% silt, 30% clay, 10% sand; low estimated plasticity; very low estimated permeability.	17.0	
			15	SM		<b>Sand SILT</b> : Olive green; moderately stiff; moist; 60% silt, 20% clay, 20% sand; low estimated plasticity; low estimated permeability.	19.0	
		CSB-3 -S-19.5	20	ML		<b>Clayey SILT with sand</b> : Olive brown; stiff; moist; 70% silt, 30% clay; low estimated plasticity; very low estimated permeability.	22.0	
8		CSB-3 -S-22						

WELL LOG (PID) 1.19-1026-1\GINT19-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07





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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-4
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	17.0 fbgNA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

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	
				CL		<b>Silty CLAY</b> : Olive brown; dry; 60% clay, 30% silt, 10% sand; high estimated plasticity; low estimated permeability.	3.0	
			5	SM		<b>Sandy SILT</b> : Olive brown; dry; 60% silt, 25% sand, 15% clay; high estimated plasticity; moderate estimated permeability.	8.0	
			10	ML		<b>Clayey SILT with trace sand</b> : Tan; very stiff; dry; 65% silt, 30% clay, 5% sand; medium estimated plasticity; low estimated permeability.	17.0	
53				ML			18.0	
247				SM		<b>SAND with silt</b> : Gray; loose; wet; 75% sand, 25% silt; no plasticity; high estimated permeability.	20.5	
				ML		<b>Clayey SILT with trace sand</b> : Tan; very stiff; dry; 65% silt, 30% clay, 5% sand; medium estimated plasticity; low estimated permeability.	21.0	
455		CSB-4 -S-20.5	20	SP		<b>SAND with silt</b> : Gray; loose; wet; 75% sand, 25% clay; no plasticity; high estimated permeability.		
				ML		<b>Clayey SILT with trace sand</b> : Tan with mottled staining; very stiff; dry; 65% silt, 35% clay; low estimated plasticity; low estimated permeability.		
17		CSB-4 -S-23						
							24.5	
		CSB-4 -S-24.5						Bottom of Boring @ 24.5 fbg

WELL LOG (PID) I:\9-1026-1\GINT\9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/29/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-5
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L. Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt and fill sand/gravel.	1.0	<p>Portland Type I/II Cement</p>
			5	ML		<p><b>Clayey SILT</b> : Grey-green; dry; very stiff; 70% silt, 30% clay; high estimated plasticity; low estimated permeability.</p>		
			15	CL		<p><b>Clayey SILT</b> : Tan; dry; 60% silt, 40% clay; very low estimated plasticity; low estimated permeability.</p>		
489 674			15.0 16.0	CL		<p><b>Silty CLAY</b> : Light olive; very stiff; dry; 60% clay, 40% silt; very low estimated plasticity; very low estimated permeability.</p> <p><b>Clayey SILT</b> : Green; very stiff; dry; 60% silt, 40% clay; very low estimated plasticity; low estimated permeability.</p>		
503		CSB-5-S-20	20	ML		Change in color to tan.		
83 0		CSB-5-S-22 CSB-5-S-22.5	22.5				22.5	Bottom of Boring @ 22.5 fbg

WELL LOG (PID) I:19-1026-1(GINT)9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-6
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L Geinin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0			Asphalt and graveley sand with silt.	1.0	
			1.0			<u>Pea GRAVEL</u> : 90% gravel, 10% sand.		
			18.0			<u>Sandy clayey SILT</u> : Dark gray; wet; soft; 50% silt, 25% clay, 25% sand; low estimated plasticity; moderate estimated permeability.	18.0	
		CSB-6 -S-20	20.0	SM		<u>SILT</u> : Dark gray-green; stiff; moist; 65% silt, 35% clay; low estimated plasticity; low estimated permeability.	20.0	
		CSB-6 -S-22	22.0	ML			22.0	

WELL LOG (PID) 1:19-1026-1GINT9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	CSB-7
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	19.0 fbgNA
LOGGED BY	L Genin and C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt and fill sand-gravel.	1.0	
				GM		<b>Graveley SILT</b> : Dark brown; dry; 65% silt, 25% gravel, 10% sand; low plasticity; high estimated permeability.	4.0	
			5	ML		<b>Sandy SILT with clay</b> : Brown, moist, 70% silt, 20% sand, 10% clay; medium estimated plasticity; moderate estimated permeability.	7.0	
				GM		<b>Silty Sandy GRAVEL</b> : Light brown; dry; 50% gravel, 30% silt, 20% sand; high estimated plasticity; moderate estimated permeability.	9.0	
			10	CL		<b>CLAY</b> : Dark gray; hard; dry; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	12.0	
					Brick			
				ML		<b>Clayey SILT</b> : Tan; very stiff; dry; 60% silt, 35% clay, 5% sand; low estimated plasticity; low estimated permeability.	16.0	
90				CL		<b>Silty CLAY</b> : Green; stiff; damp; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	18.5	
90		CSB-6 -S-20	20	SM		<b>Silty SAND</b> : Green; fine grained; loose; wet; 60% sand, 40% silt; no plasticity; high estimated permeability.	19.3	
29				CL		<b>Silty CLAY</b> : Green; stiff; damp; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	22.0	
0		CSB-6 -S-22						
								Bottom of Boring @ 22 fbg

WELL LOG (PID) (19-1026-1)GINT9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-8
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans and L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0			Asphalt and fill.	1.0	<p>Portland Type I/II Cement</p>
			2.5	GW		<b>GRAVEL with sand</b> : Well graded 0.5-2 cm clasts; dark red-brown; loose; dry; 60% gravel, 30% sand, 10% silt; no plasticity; high estimated permeability.	2.5	
			4.5	CL		<b>CLAY with sand</b> : Dark gray; stiff; damp; 60% clay, 35% silt, 5% sand; low estimated plasticity; low estimated permeability.	4.5	
			5	GM		<b>Silty SAND with cobbles</b> : Dark gray; stiff; 40% gravel, 30% sand, 20% silt, 10% clay.	7.5	
			7.5			<b>SAND</b> : Medium grained; olive green/dark gray; 60% sand, 30% silt, 10% clay.	7.5	
			10	SM			12.0	
			12.0			<b>Clayey SILT</b> : Olive green-brown; damp; 60% silt, 30% clay, 10% sand; high estimated plasticity; low estimated permeability.	12.0	
			15	MH		<b>Clayey SILT with sand</b> : Fine grained clasts as sand; olive green/dark grey; stiff; damp; 60% silt, 35% clay, 5% sand; high estimated plasticity; low-moderate estimated permeability.	19.5	
132		CSB-8 -S-20	20	SM		<b>Silty fine grained SAND</b> : Dark green; loose; wet; 75% sand, 20% silt, 5% clay; high estimated permeability.	20.0	
18		CSB-8 -S-21.5				<b>Sandy SILT</b> : Olive green; dense; moist; 50% silt, 25% sand, 25% clay; medium estimated plasticity; low to moderate estimated permeability.	24.0	
		CSB-8 -S-23		ML			24.0	
								Bottom of Boring @ 24 fbg

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	CSB-9
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	27-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	5.0 fbgNA
LOGGED BY	L Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Concrete	1.0	
				SP		<u>Fine grained SAND</u> : Dark brown; loose; moist; 100% sand; high estimated permeability.		
0			5	CL		<u>CLAY with sand</u> : Dark green; wet; 70% clay, 20% silt, 10% sand; low estimated plasticity; low estimated permeability.	5.0	
				SM		<u>Silty SAND with clay</u> : Very dark brown; wet; loose; 60% sand, 30% silt, 10% clay; high estimated permeability.	8.0	
				ML		<u>SILT with sand</u> : Dark green; very stiff; damp; 70% silt, 10% sand, 10% clay; low estimated plasticity; low estimated permeability.	11.0	
						Staining		
				CL		<u>Silty CLAY</u> : Dark green; hard; damp; 65% clay, 30% silt, 5% sand; low estimated plasticity; very low estimated permeability.	16.0	
				SM		<u>Silty SAND</u> : Dark green; soft; moist; 50% sand, 50% silt; moderate estimated permeability.	20.0	
32		CSB-9 -S-21	20				21.5	
				ML		<u>Clayey SILT</u> : Tan; hard; damp; 60% silt, 40% clay; low estimated plasticity; very low estimated permeability.	24.0	
								Bottom of Boring @ 24 fbg

WELL LOG (PID) 1:9-1026-11GINTY9-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWE-1
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	3	SCREENED INTERVALS	NA
LOGGED BY	C Evans	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss PG #7445	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
			0			Asphalt and fill.	1.0	
			4.0	ML		<u>SILT</u> : Light brown; dry; 80% silt, 10% clay, 10% silt; high estimated plasticity; low estimated permeability.		
		SWE-1-S-5	5	SM		<u>Silty SAND</u> : Light brown; dry; 55% sand, 40% silt, 5% clay; low estimated plasticity; moderate estimated permeability.		
		SWE-1-S-10	10			<u>Clayey SILT</u> : Light brown and black streaks with slight green staining; stiff; damp; 75% silt, 20% clay, 5% sand; high estimated plasticity; low estimated permeability.		
		SWE-1-S-15	15	MH		Green staining		
		SWE-1-S-20	20				20.0	

WELL LOG (PID) I:\9-1026-1\GINT19-1026 2006 INVESTIGATION.GPJ\_DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SWE-2
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt and baserock	1.0	
				ML		<b>Sandy Clayey SILT</b> : Light brown; stiff; dry; 50% silt, 30% sand, 20% clay; low estimated plasticity; very low estimated permeability.	3.0	
		SWE-2-S-5	5	SM		<b>Silty SAND</b> : Light brown; loose; damp; 60% sand, 35% silt, 5% clay; moderate estimated permeability.		
		SWE-2-S-10	10			<b>Clayey SILT with sand</b> : Brown; very stiff; dry; 50% silt, 30% clay, 20% sand; high estimated plasticity; low estimated permeability.	8.0	
		SWE-2-S-15	15	ML				
		SWE-2-S-20	20				20.0	Bottom of Boring @ 20 fbg

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWE-3
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Concrete with rebar and fill.	1.0	
				SP		<b>Silty SAND</b> : Light brown; dry; 60% sand, 30% silt, 10% clay; medium estimated plasticity; high estimated permeability.	2.0	
				SW		<b>SAND</b> : Light brown; dry; 85% fine sand, 10% silt, 5% clay; high estimated permeability.	3.0	
		SWE-3-S-5	5	SP		<b>Silty SAND</b> : Light brown; dry; 60% sand, 30% silt, 10% clay; medium estimated plasticity; high estimated permeability.	8.0	
0		SWE-3-S-10	10			<b>Sandy SILT</b> : Brown; stiff; damp; 65% silt, 25% sand, 10% clay; high estimated plasticity; low estimated permeability.		
						45% silt, 30% clay, 15% gravel, 10% sand.		
78		SWE-3-S-15	15	MH		Green staining; very stiff; 70% silt, 30% clay.		
17		SWE-3-S-20	20			Olive green; 90% silt, 10% clay.	20.0	
								Bottom of Boring @ 20 fbg

WELL LOG (PID) I:19-1026--1GINT19-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SWE-4/ CSB-1
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L. Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt and fill	1.0	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 22 fbg</p>
		SWE-4 -S-5 COMP-1	5	SM		<u>Silty SAND with clay</u> : Light brown; dry; 60% sand, 30% silt, 10% clay; medium to low estimated plasticity; moderate estimated permeability.	7.0	
				ML		<u>Clayey SILT with sand</u> : Brown; very stiff; dry; 60% silt, 35% clay, 5% sand; low estimated plasticity; very low estimated permeability.	9.0	
		SWE-4 -S-10 COMP-1	10	SC		<u>Clayey SAND with silt</u> : Brown; very stiff; dry; 60% silt, 20% clay, 20% sand; very low estimated plasticity; very low estimated permeability.	11.0	
				ML		<u>Clayey SILT with sand</u> : Brown; very stiff; dry; 65% silt, 30% clay, 5% sand; low estimated plasticity; low estimated permeability.	16.0	
584 114		COMP-13 SWE-4 -S-16	15	SM		<u>Silty SAND with clay</u> : Tan with gray staining; moderately stiff; moist; 50% silt, 30% clay, 20% fine grained sand; medium estimated plasticity; low estimated permeability.	20.0	
43		CSB-1 -S-19.5 SWE-4 -S-20	20	ML		<u>Clayey SILT</u> : Green; hard; dry; 70% silt, 30% clay; low estimated permeability.	22.0	
19		CSB-1 -S-22						

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWE-5
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0			Asphalt and fill.	1.0	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 20 fbg</p>
		SWE-5-S-5	5	SM		<b>Silty SAND</b> : Light brown; dry; 60% sand, 20% silt, 20% clay; high estimated plasticity; moderate estimated permeability.		
		SWE-5-S-10	10	ML		<b>Clayey SILT with sand</b> : Brown; very stiff; dry; 70% silt, 20% clay, 10% sand; high estimated plasticity; low estimated permeability.	9.0	
			12.0	MH		<b>Sandy SILT with gravel</b> : Brown; dry; 50% silt, 20% sand, 20% clay, 10% gravel; medium estimated permeability.	12.0	
		SWE-5-S-15	15	ML		<b>Clayey SILT with sand</b> : Brown; very stiff; dry; 70% silt, 20% clay, 10% sand; high estimated plasticity; low estimated permeability. Green staining; moist.	15.0	
		SWE-5-S-20	20				20.0	

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWS-1
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	21-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
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	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 20 fbg</p>
				SM		SAND and GRAVEL Fill Clayey SILT: Dark Brown to Black: 55% Silt, 40% Clay, 5% Sand. Stiff, Dry, High Plasticity, Low Permeability.	1.0	
				ML		SILT : Olive-Green; 80% silt, 10% clay, 10% sand; moist; moderate estimated plasticity; moderate estimated permeability.	3.0	
				CL		Silty CLAY : Olive-green; 60% clay, 35% silt, 5% sand; very stiff; dry; high estimated plasticity; low estimated permeability.	4.0	
		SWS-1 -S-5	5	ML			5.0	
				SP			6.0	
				CL		SAND : Light-brown; 65% sand, 20% silt, 10% clay, 5% gravel; moist; moderate estimated plasticity, moderate estimated permeability.	7.0	
						CLAY : Light brown; 75% clay, 20% silt, 5% sand; dry; high estimated plasticity; low estimated permeability.		
						Sandy Silt : Light brown; 60% silt, 30% fine-grained sand; 10% clay; hard; dry; very low permeability.		
		SWS-1 -S-10	10	SM			13.0	
						SILT : Brown; 65% sand, 20% silt, 10% clay, 5% gravel; hard; dry; low plasticity; very low permeability.		
						Olive green		
		SWS-1 -S-15	15	ML			20.0	
		SWS-1 -S-20	20					

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SWS-2
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt	1.0	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 20 fbg</p>
						Fill	2.0	
				ML		<b>SILT</b> : Dark olive-green; 90% silt, 10% sand; moist; moderate estimated plasticity; moderate estimated permeability.	4.0	
		SWS-2-S-5	5	SP SM		<b>Silty SAND</b> : Brown; 60% silt, 35% sand, 5% clay; moist; low estimated plasticity; high estimated permeability.	7.0	
				GM		<b>Gravelly SAND</b> : Olive-green; 60% sand, 40% gravel; moist; low estimated plasticity, high estimated permeability.	9.0	
0		SWS-2-S-10	10	SW SC		<b>Clayey SAND</b> : Dark brown; 65% sand, 15% clay, 10% silt, 10% gravel; moist; low estimated plasticity; high estimated permeability.	12.0	
				ML		<b>Clayey SILT</b> : Light brown to olive green; 70 % silt, 30% clay; moist; high estimated plasticity; low estimated permeability.	14.0	
98		SWS-2-S-15	15	SW SM		<b>Silty SAND</b> : Light brown to olive green; 45% sand, 40% silt, 15% clay; moist; moderate estimated plasticity, moderate estimated permeability.	17.0	
				ML		<b>Clayey SILT</b> : Light brown to olive green; 75% silt, 25% clay; moist; high estimated plasticity, low estimated permeability.	19.0	
		SWS-2-S-20	20	MH		<b>SILT</b> : Light brown to olive green; 90% silt, 10% clay; moist; moderate estimated plasticity, moderate estimated permeability.	20.0	

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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWS-3
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	23-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Asphalt	0.5	
			1.0			SAND and GRAVEL fill	1.0	
		SWS-3 -S-5	5	MH		<b>SILT</b> : Dark brown; 90% silt, 5% clay, 5% sand; high estimated plasticity; low estimated permeability.		
		SWS-3 -S-10	10	ML		<b>Clayey SILT</b> : Olive green; 65% silt, 35% clay, 5% sand; dry; very stiff; low to moderate estimated plasticity; low estimated permeability.	9.0	← Portland Type I/II Cement
		SWS-3 -S-15	15	CL		<b>Silty CLAY</b> : Green; 50% clay, 50% silt; stiff; moist; moderate estimated plasticity; low estimated permeability.	16.0	
			18.0	ML		<b>Clayey SILT</b> : Green; 65% silt, 25% clay, 10%	18.0	
			18.5	SM		fine-grained sand; soft; moist; low estimate plasticity; moderate estimated permeability.	18.5	
		SWS-3 -S-20	20	CL		<b>Silty SAND</b> : Green; 50% sand, 40% silt, 10% clay; loose; wet; high estimated permeability.	19.0	
			20.0			<b>CLAY</b> : Green; 60% clay, 40% silt; stiff; moist; moderate estimated plasticity; low estimated permeability.	20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) I:\9-1026-1\GINT19-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07

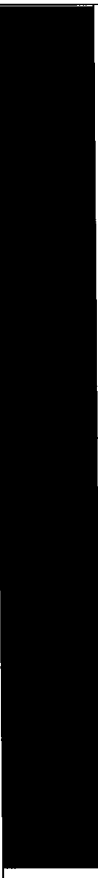









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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SWS-4
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L.Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						6" concrete and 6" fill sand	1.0	 <p>Portland Type I/II Cement</p>
		SWS-4-S-5	5	SP		<b>SAND</b> : Fine Grained; dark gray-green; moist; 60% clay, 35% silt, 5% sand; high estimated plasticity; low estimated permeability.	5.0	
				SM		<b>SAND</b> : Fine Grained; olive green; moist; 50% sand, 45% silt, 5% clay; low estimated plasticity; high estimated permeability.	7.0	
		SWS-4-S-10	10	CL		<b>CLAY</b> : Dark brown; hard; damp; 60% clay, 35% silt, 5% sand; low estimated plasticity; low estimated permeability.	14.0	
		SWS-4-S-15	15	ML		<b>SILT</b> : Dark brown; hard; damp; 60% silt, 40% clay; low estimated plasticity; low estimated permeability.	18.5	
				SM		<b>Silty SAND</b> : Dark green; loose; wet; 50% sand, 30% silt, 10% clay; low estimated plasticity; high estimated permeability.	19.5	
				CL		<b>CLAY</b> : Dark green; stiff; moist; 55% clay, 45% silt; moderate estimated plasticity; low-moderate estimated permeability.	20.0	
		SWS-4-S-20	20	SM		<b>Silty SAND</b> : Dark green; loose; wet; 50% sand, 30% silt, 10% clay; low estimated plasticity; high estimated permeability.		

WELL LOG (PID) I:9-1026-1GINT19-1026 2006 INVESTIGATION.CPJ DEFAULT GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWS-5
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	24-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	L. Genin	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0			Asphalt to gravelly sand with silt.	1.0	
		SWS-5-S-5	5	ML		<u>Clayey SILT</u> : Olive brown; dry; 60% silt, 40% clay; high estimated plasticity; low estimated permeability.		
		SWS-5-S-10	10	ML		<u>Clayey SILT</u> : Brown; very stiff; dry; 70% silt, 30% clay; low estimated plasticity; low estimated permeability.  Light olive green.		
		SWS-5-S-15	15	CL		<u>Silty CLAY</u> : Olive green; stiff; damp; 55% clay, 45% silt; moderate estimated plasticity; low estimated permeability.	15.0	
			17.0	ML		<u>Clayey SILT</u> : Tan with green; hard; dry; 60% silt, 40% clay; low estimated plasticity; low estimated permeability.	17.0	
			18.0	CL		<u>Silty CLAY</u> : Tan; stiff; moist; 60% clay, 40% silt; medium estimated plasticity; low estimated permeability.	18.0	
			20.0				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) H:9-1026-1GINTS-1026 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07





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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	BORING/WELL NAME	SWS-6
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	3	SCREENED INTERVALS	NA
LOGGED BY	C Evans	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss PG #7445	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 and fill.	1.0	
				SP		<b>SAND</b> : Medium grained; damp; 85% sand, 10% silt, 5% clay; low estimated plasticity, high estimated permeability.	4.0	
		SWS-6 -S-5	5	SM		<b>Silty SAND</b> : Light brown; medium grained; 60% sand, 30% silt, 10% clay; medium estimated plasticity; moderate estimated permeability.		
		SWS-6 -S-10	10	CH		<b>Silty CLAY</b> : Light brown; very stiff; moist; 60% clay, 40% silt; high estimated plasticity; low estimated permeability.	9.0	
		SWS-6 -S-15	15	ML		<b>Clayey SILT</b> : Olive green; moderate to soft; moist; 75% silt, 20% clay, 5% sand; high estimated plasticity; low estimated permeability.	13.0	
43		SWS-6 -S-20	20				20.0	

WELL LOG (PID) 1:9-1026-1\GINITY9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWS-7
JOB/SITE NAME	9-1026	DRILLING STARTED	21-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	28-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

REMARKS

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
						Asphalt and fill.	1.0	
		SWS-7-S-5	5	SM		<b>Silty SAND</b> : Light brown; dry; 60% sand, 30% silt, 10% clay; low estimated plasticity; moderate estimated permeability.		
		SWS-7-S-10	10	MH		<b>Clayey SILT</b> : Light brown; soft; moist; 80% silt, 10% clay, 10% sand; high estimated plasticity; low estimated permeability.	9.0	
				CH		<b>Silty CLAY</b> : Light brown; very stiff; moist; 60% clay, 40% silt; high estimated plasticity; low estimated permeability.	11.0	
				MH		<b>Clayey SILT</b> : Light brown; soft; moist; 50% silt, 30% clay, 20% sand; moderate estimated plasticity; moderate estimated permeability.	13.0	
		SWS-7-S-15	15	CH		<b>Silty CLAY</b> : Light brown; moist; 60% clay, 40% silt; high estimated plasticity; low estimated permeability.	14.0	
				MH		<b>Clayey SILT</b> : Olive green; soft; moist; 90% silt, 10% clay; medium estimated plasticity; moderate estimated permeability; gradational contact; expansive clays.	15.0	
		SWS-7-S-20	20				20.0	Bottom of Boring @ 20 fbg

WELL LOG (PID) 1:9-1026-1GINT19-1026 2006 INVESTIGATION.GPJ DEFAULT GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWW-1
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	21-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

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	
						Baserock	1.5	
		SWW-1-S-5	5	ML		<b>Clayey SILT</b> : Dark Reddish Brown; 65% Silt, 30% Clay, 5% Sand. Stiff, Dry, Low Plasticity, Low Permeability. <b>Clayey SILT</b> :Black: 50% Silt, 45% Clay, 5% Sand. Stiff, Moist, Low Plasticity, Low to Moderate Permeability. <b>Clayey SILT</b> :Light Red-Brown with Green Mottling: 60% Silt, 30% Clay, 10% Fine-Grained Sand. Stiff, Damp, Low Plasticity, Low to Moderate Permeability.	6.0	
				SP		<b>Silty Clayey SAND</b> :Light Red-Brown: 60% Sand, 20% Clay, 20% Silt. Damp, Moderate Plasticity, Moderate Permeability.	8.0	
				ML		<b>Clayey SILT</b> :Dark Brown: 65% Silt, 25% Clay, 10% Fine-Grained Sand. Firm, Damp, Moderate Plasticity, Moderate Permeability.	9.0	
		SWW-1-S-11	10	SM		<b>Silty SAND</b> :Olive-Green: 55% Fine-Grained Sand, 35% Silt, 10% Clay. Firm, Dry, Moderate Plasticity, Moderate Permeability; Trace Gravel. <b>Clayey SILT</b> :Olive-Green: 60% Silt, 40% Clay. Stiff, Dry, Low Plasticity, Low Permeability.	10.0	
						<b>Clayey SILT</b> :Olive-Green: 45% Silt, 45% Clay, 10% Sand. Very Stiff, Dry, Low Plasticity, Low Permeability. <b>Clayey SILT</b> :Olive-Green: 50% Silt, 50% Clay. Stiff, Dry, Moderate Plasticity, Low Permeability.		
		SWW-1-S-15	15	ML				
						<b>Clayey SILT</b> :Tan: 50% Silt, 50% Clay. Stiff, Dry, Moderate Plasticity, Low Permeability.		
		SWW-1-S-20	20				20.0	

WELL LOG (PID) I:19-1026-1\GINTY9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWW-2
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	20-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push		
BORING DIAMETER	3	SCREENED INTERVALS	NA
LOGGED BY	C Evans	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Foss PG #7445	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
				0.5		4" Asphalt		0.5	<p>Portland Type I/II Cement</p> <p>Bottom of Boring @ 23 fbg</p>
				2.0	SW		<b>Gravelly SAND:</b> Light Brown: 90% Fine-Grained Sand, 10% Gravel. Dry, High Permeability.	2.0	
				5.0	SP		<b>SAND:</b> Light Olive-Green: 100% Fine-Grained Sand. Damp, High Permeability.	6.0	
		SWW-2-S-5		5.0					
				6.0			<b>Gravelly SILT:</b> Dark Green-Brown: 45% Silt, 25% Gravel, 15% Sand, 15% Clay. Wet, Moderate Plasticity, High Permeability.	6.0	
				10.0					
		SWW-2-S-12		12.0					
				15.0			<b>Clayey SILT:</b> Gray: 65% Silt, 35% Clay. Wet, Low Plasticity, Low Permeability.	15.0	
		SWW-2-S-16		16.0	ML				
				17.5			<b>Silty CLAY:</b> Gray: 50% Clay, 50% Silt. Stiff, Wet, Moderate Plasticity, Low Permeability.	17.5	
				20.0	CL				
				21.0			<b>Sandy SILT:</b> Gray: 50% Silt, 50% Fine-Grained Sand. Stiff, Wet, Moderate Permeability.	21.0	
				22.5	SM				
		SWW-2-S-23		23.0	ML		<b>SILT:</b> Tan: 75% Silt, 25% Clay. Stiff, Damp, Very Low Plasticity, Low Permeability.	23.0	

WELL LOG (PID) I:\9-1026-1\GINT\9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWW-3
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	21-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		

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	
						GRAVEL Fill	1.0	
						<b>SAND</b> : Tan to Brown: 100% Very Clean Sand. Dry, Low Plasticity, High Permeability.		
		SWW-3-S-5	5	SP		<b>SAND</b> : Tan to brown; 100% very clean sand; moist; low plasticity; high permeability.		
						<b>SAND with gravel</b> : Tan to Brown: 80% Very Clean Sand, 20% Gravel. Moist, Low Plasticity, High Permeability.	7.0	
						<b>SAND</b> : Dark Brown to Red-Brown: 35% Silt, 30 % Sand, 20% Gravel, 15% Clay. Wet, Low Plasticity, High Permeability.		
67		SWW-3-S-10	10	SM				
						<b>Clayey SILT</b> : Gray-Green with Brown Mottling: 80% Very Clean Sand, 50% Silt, 45% Clay, 5% Sand. Very Stiff, Dry, Low Plasticity, Low Permeability.	12.0	
45		SWW-3-S-15	15	ML				
						<b>Silty SAND</b> : Gray: 60% Fine-Grained Sand, 40% Silt. Loose, Wet, Medium Permeability.	20.0	
275		SWW-3-S-20	20	SM				
						<b>Clayey SILT</b> : Tan: 60% Silt, 40% Clay. Stiff, Dry.	22.0	
						<b>Silty SAND</b> : Tan: 60% Fine-Grained Sand, 40% Silt. Dense, Moist, Low Permeability.	23.0	
		SWW-3-S-24	24	SM			24.0	
								Bottom of Boring @ 24 fbg

WELL LOG (PID) 119-1026-1(G)INT19-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWW-4
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	21-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Concrete	1.0	Bottom of Boring @ 4 fbg
					ML		Clayey SILT : Very Dark Red-Brown: 60% Silt, 30% Clay, 10% Sand. Dry, Low Plasticity, Low Permeability.	4.0	
							Refusal @ 4 ft. Re-Drill Boring 5 ft East. Refusal on Re-Drill @ 4 ft.		

WELL LOG (PID) 1:9-1026-1\GINT\9-1026 2006 INVESTIGATION.GPJ DEFAULT.GDT 1/23/07



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# BORING/WELL LOG

CLIENT NAME	Chevron Environmental Managment Company	BORING/WELL NAME	SWW-5
JOB/SITE NAME	9-1026	DRILLING STARTED	20-Jun-06
LOCATION	3701 Broadway, Oakland, CA	DRILLING COMPLETED	22-Jun-06
PROJECT NUMBER	31J-1959	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Woodward Drilling Co., C57 #710079	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hydraulic push	SCREENED INTERVALS	NA
BORING DIAMETER	3	DEPTH TO WATER (First Encountered)	NA
LOGGED BY	C Evans	DEPTH TO WATER (Static)	NA
REVIEWED BY	B. Foss PG #7445		
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
			0.5			Concrete	0.5	<p>Portland Type I/II Cement</p>
			1.0			GRAVEL and SAND Fill	1.0	
			5	ML		<u>SILT with sand and gravel</u> : Mottled Brown to Red-Brown: 50% Silt, 20% Sand, 20% Gravel, 10% Clay. Dry, High Plasticity, Moderate Permeability.		
		SWW-5 -S-5	5					
			8.0			<u>SILT with sand and gravel</u> : Mottled Red/Tan/Dark Brown: 50% Silt, 25% Gravel, 15% Sand, 10% Clay. Moist.	8.0	
			10			<u>Sandy SILT</u> : Dark Brown: 45% Silt, 40% Sand, 10% Clay. Soft, Moist, Moderate Plasticity, Moderate Permeability.		
		SWW-5 -S-10	10					
			12.0			<u>Silty CLAY with gravel</u> : Olive Green: 40% Clay, 40% Silt, 10% Sand, 10% Gravel. Very Stiff, Moist, Moderate to High Plasticity, Moderate Permeability.	12.0	
			15	CL				
		SWW-5 -S-15	15					
			17.0			<u>Clayey SILT</u> : Tan: 60% Silt, 30% Clay. Very Stiff, Dry, Low Plasticity, Low Permeability.	17.0	
			20				20.0	
		SWW-5 -S-20	20					
								Bottom of Boring @ 20 fbg

WELL LOG (PID) 119-1026-1GINT19-1026 2006 INVESTIGATION GPJ DEFAULT.GDT 1/23/07

634  
3.6

C A M B R I A



**ATTACHMENT D**

**Gettler-Ryan's  
1<sup>st</sup> Semi-Annual 2006 Groundwater Monitoring Report**





# GETTLER-RYAN INC.

---

## TRANSMITTAL

May 5, 2006  
G-R #385127

TO: Ms. Laura Genin  
Cambria Environmental Technology, Inc.  
5900 Hollis Street, Suite A  
Emeryville, CA 94608

CC: Mr. Mark Inglis  
Chevron Environmental  
Management Company  
P.O. Box 6012, Room K2256  
San Ramon, California 94583

FROM: Deanna L. Harding  
Project Coordinator  
Gettler-Ryan Inc.  
6747 Sierra Court, Suite J  
Dublin, California 94568

RE: **Chevron Service Station  
#9-1026  
3701 Broadway  
Oakland, California  
RO 0000500**

WE HAVE ENCLOSED THE FOLLOWING:

---

COPIES	DATED	DESCRIPTION
1	May 5, 2006	Groundwater Monitoring and Sampling Report First Semi-Annual - Event of March 31, 2006 And Monthly Site Visits

---

### COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to **May 22, 2006**, at which time the final report will be distributed to the following:

CC: Mr. Barney Chan, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 (No Hard Copy-UPLOAD TO ALAMEDA CO.)  
Mr. W. Bruce Bercovich, Kay & Merkel, (*address pending*)

Enclosures



**J. Mark Inglis**  
Project Manager

**Retail & Terminal  
Business Unit**  
Chevron Environmental  
Management Company  
6001 Bollinger Canyon Road,  
Room K2256  
San Ramon, CA 94583-2324  
Tel 925 842 1589  
Fax 925 842 8370  
jmark.inglis@chevrontexaco.  
com

May 5, 2006

Alameda County Health Care Services  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

Re: Chevron Service Station # 9-1026

Address: 3701 Broadway, Oakland, California

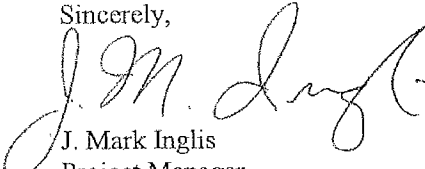
I have reviewed the attached routine groundwater monitoring report dated May 5, 2006.

I agree with the conclusions and recommendations presented in the referenced report. The information in this report is accurate to the best of my knowledge and all local Agency/Regional Board guidelines have been followed. This report was prepared by Gettler-Ryan, Inc., upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct.

Sincerely,

  
J. Mark Inglis  
Project Manager

Enclosure: Report



# GETTLER-RYAN INC.

May 5, 2006  
G-R Job #385127

Mr. Mark Inglis  
Chevron Environmental Management Company  
P.O. Box 6012, Room K2256  
San Ramon, CA 94583

**RE: First Semi-Annual Event of March 31, 2006  
And Monthly Site Visits**  
Groundwater Monitoring & Sampling Report  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

Dear Mr. Inglis:

This report documents the monthly site visits and the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached).

Static groundwater levels were measured and the wells were checked for the presence of separate-phase hydrocarbons. Static water level data, groundwater elevations, and separate-phase hydrocarbon thickness (if any) are presented in the attached Table 1. A Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached.

Please call if you have any questions or comments regarding this report. Thank you.

Sincerely,

Deanna L. Harding  
Project Coordinator

Robert A. Lauritzen  
Senior Geologist, P.G. No. 7504

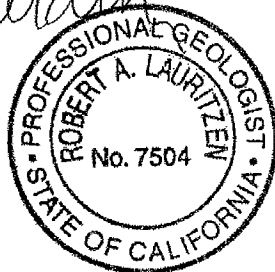
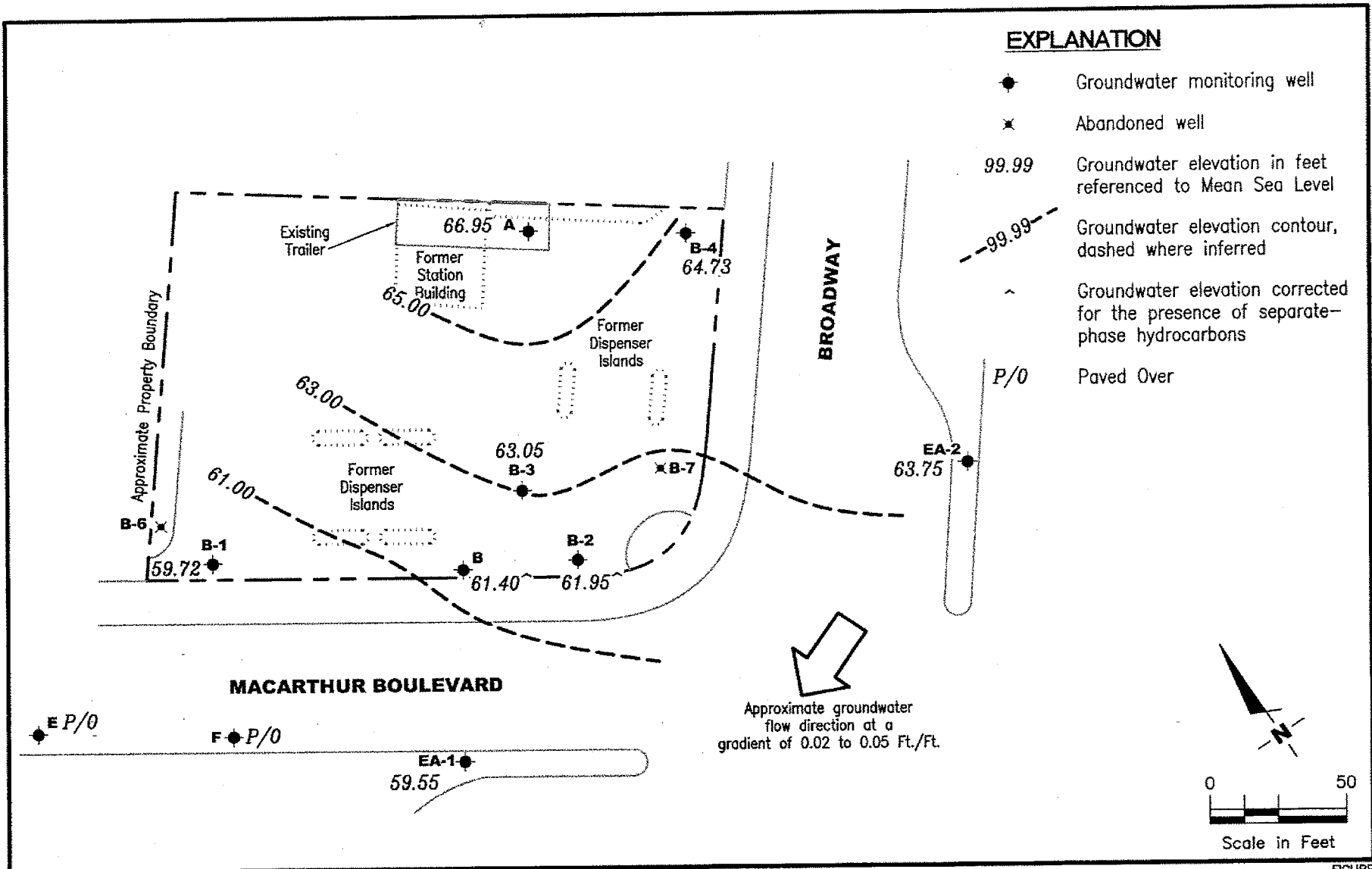


Figure 1: Potentiometric Map  
Table 1: Groundwater Monitoring Data and Analytical Results  
Table 2: Separate Phase Hydrocarbon Thickness/Removal Data  
Table 3: Groundwater Analytical Results - Oxygenate Compounds  
Attachments: Standard Operating Procedure - Groundwater Sampling  
Field Data Sheets  
Chain of Custody Document and Laboratory Analytical Reports



**GETTLER - RYAN INC.**  
 6747 Sierra Court, Suite J  
 Dublin, CA 94568 (925) 551-7555

**POTENTIOMETRIC MAP**  
 Former Chevron Service Station #9-1026  
 3701 Broadway  
 Oakland, California

PROJECT NUMBER  
 385127

REVIEWED BY

DATE  
 March 31, 2006

REVISED DATE

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>A</b>											
05/09/89	75.28	61.36	13.92	--	--	11,000	260	<2.0	94	230	--
08/09/89	75.28	59.66	15.62	--	--	12,000	370	<1.5	100	240	--
11/09/89	75.28	59.33	15.95	--	--	16,000	690	10	180	350	--
02/08/90	75.28	60.55	14.73	--	--	14,000	600	7.0	120	270	--
05/10/90	75.28	59.80	15.48	--	--	16,000	840	4.8	140	340	--
08/09/90	75.28	59.62	15.66	--	--	17,000	510	40	170	280	--
11/13/90	75.28	58.80	16.48	--	--	9000	570	3.1	86	170	--
03/27/91	75.28	--	--	--	--	8000	660	<5.0	110	250	--
04/05/91	75.28	62.06	13.22	--	--	--	--	--	--	--	--
06/19/91	75.28	59.91	15.37	--	--	8900	740	<3.0	120	280	--
08/21/91	75.28	59.29	15.99	--	--	6800	620	23	85	200	--
11/08/91	75.28	59.13	16.15	--	--	4000	640	<5.0	77	160	--
02/13/92	75.28	60.70	14.58	--	--	8000	860	<5.0	120	390	--
05/01/92	75.28	61.02	14.26	--	--	13,000	870	19	220	780	--
11/18/92	75.29	58.91	16.38	--	--	12,000	1500	83	360	530	--
03/19/93	75.29	63.13	12.16	--	--	14,000	820	6.1	180	420	--
06/10/93	75.29	61.04	14.25	--	--	9000	700	13	170	310	--
09/08/93	75.29	--	--	--	--	--	--	--	--	--	--
12/21/93	75.29	--	--	--	--	--	--	--	--	--	--
03/09/94	75.29	61.95	13.34	--	--	9600	860	21	200	390	--
09/21/94	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
12/20/94	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
03/28/95	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
06/22/95	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
09/21/95	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
03/22/96	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
09/25/96	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
03/06/97	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
09/12/97	75.29	60.73	14.56	--	--	2600	460	<10	70	11	67
04/02/98	75.29	66.54	8.75	--	--	1,700 <sup>2</sup>	130	1.7	44	42	<2.5
09/15/98	75.29	--	--	--	--	--	--	--	--	--	--
03/09/99	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
03/14/00	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--
08/28/00	75.29	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/22/01	75.29	INACCESSIBLE		--	--	--	--	--	--	--	--

**Table I**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>A (cont)</b>											
09/04/01	75.29	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/18/02	75.29	INACCESSIBLE - DUE TO TRAILER PARKED OVER WELL			--	--	--	--	--	--	--
09/23/02	75.29	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/25/03	75.29	INACCESSIBLE - DUE TO TRAILER PARKED OVER WELL			--	--	--	--	--	--	--
09/23/03	75.29	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/17/04	75.29	INACCESSIBLE - DUE TO TRAILER PARKED OVER WELL			--	--	--	--	--	--	--
09/16/04	75.29	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/31/05 <sup>12</sup>	75.29	66.74	8.55	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/26/05	75.29	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/31/06 <sup>12</sup>	75.29	66.95	8.34	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>B</b>											
05/09/89	73.39	59.58**	13.97	0.20	--	--	--	--	--	--	--
08/09/89	73.39	57.86**	15.69	0.20	--	--	--	--	--	--	--
11/09/89	73.39	58.16**	15.29	0.08	--	--	--	--	--	--	--
02/08/90	73.39	58.93	14.46	--	--	--	--	--	--	--	--
05/10/90	73.39	58.32	14.07	--	--	--	--	--	--	--	--
08/09/90	73.39	58.27	15.12	--	--	--	--	--	--	--	--
11/13/90	73.39	57.63	15.76	--	--	--	--	--	--	--	--
04/05/91	73.39	60.01	13.38	--	--	--	--	--	--	--	--
06/19/91	73.39	58.25	15.14	--	--	26,000	7100	370	430	1000	--
08/21/91	73.39	57.81	15.58	--	--	16,000	4900	270	390	640	--
11/08/91	73.39	57.68	15.71	--	--	11,000	2400	48	280	160	--
02/13/92	73.39	58.73	14.66	--	--	6800	2400	60	220	140	--
05/01/92	73.39	58.89	14.50	Sheen	--	16,000	6000	180	370	460	--
11/18/92	73.39	57.79	15.60	--	--	28,000	2200	150	920	4300	--
03/19/93	73.39	60.12**	13.29	0.03	--	--	--	--	--	--	--
06/10/93	73.39	59.11**	14.30	0.03	--	--	--	--	--	--	--
09/08/93	73.39	58.25**	15.33	0.24	--	--	--	--	--	--	--
12/21/93	73.39	58.76**	14.73	0.12	--	--	--	--	--	--	--
03/09/94	73.39	59.35**	14.07	0.04	--	--	--	--	--	--	--
09/21/94	73.39	57.91**	15.50	0.02 <sup>1</sup>	--	--	--	--	--	--	--
12/20/94	73.39	59.74**	13.75	0.12	--	--	--	--	--	--	--
3/28/952	73.39	--	--	--	--	--	--	--	--	--	--

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Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>B (cont)</b>											
06/22/95	73.39	58.92**	14.56	0.11	1.000	--	--	--	--	--	--
09/21/95	73.39	58.41**	15.88	1.12	2.000	--	--	--	--	--	--
03/22/96	73.39	61.19**	13.02	1.02	2.000	--	--	--	--	--	--
09/25/96	73.39	58.81**	15.76	1.47	1.500	--	--	--	--	--	--
03/06/97	73.39	59.95**	14.30	1.08	2.000	--	--	--	--	--	--
09/12/97	73.39	59.32**	14.61	0.68	3.000	--	--	--	--	--	--
04/02/98	73.39	61.04**	12.50	0.19	3.000	--	--	--	--	--	--
09/15/98	73.39	59.60**	14.87	1.35	5.000	--	--	--	--	--	--
03/09/99	73.39	60.41**	13.41	0.54	0.132	--	--	--	--	--	--
09/29/99	73.39	58.56**	15.80	1.21	0.130	--	--	--	--	--	--
03/14/00	73.39	61.70**	12.80	1.39	0.400	--	--	--	--	--	--
08/28/00	73.39	58.96**	15.29	1.07	0.26 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
03/22/01	73.39	60.52**	13.26	0.49	0.26 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
06/25/01 <sup>7</sup>	73.39	58.95**	15.30	1.08	0.00	--	--	--	--	--	--
07/09/01 <sup>8</sup>	73.39	59.02**	15.15	0.97	0.26 <sup>5</sup>	--	--	--	--	--	--
08/06/01 <sup>8</sup>	73.39	58.86**	15.31	0.98	1.04 <sup>5</sup>	--	--	--	--	--	--
09/04/01 <sup>8</sup>	73.39	58.58**	15.46	0.81	0.00	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
10/08/01 <sup>8</sup>	73.39	58.33**	15.68	0.77	0.06 <sup>5</sup>	--	--	--	--	--	--
11/12/01 <sup>8</sup>	73.39	58.56**	15.45	0.78	1.50 <sup>5</sup>	--	--	--	--	--	--
12/26/01 <sup>8</sup>	73.39	60.87**	12.98	0.58	4.39 <sup>5</sup>	--	--	--	--	--	--
01/25/02 <sup>8</sup>	73.39	60.74**	12.71	0.08	0.13 <sup>5</sup>	--	--	--	--	--	--
02/05/02 <sup>8</sup>	73.39	60.30**	13.16	0.09	2.63 <sup>5</sup>	--	--	--	--	--	--
03/18/02 <sup>8</sup>	73.39	60.63**	12.79	0.04	2.03 <sup>5</sup>	--	--	--	--	--	--
04/27/02 <sup>8</sup>	73.39	59.73	13.66	0.00	0.26 <sup>10</sup>	--	--	--	--	--	--
05/20/02 <sup>8</sup>	73.39	59.61	13.78	0.00	0.26 <sup>10</sup>	--	--	--	--	--	--
06/17/02 <sup>8</sup>	73.39	59.28**	14.34	0.29	3.39 <sup>5</sup>	--	--	--	--	--	--
07/01/02 <sup>8</sup>	73.39	59.05**	14.78	0.55	2.26 <sup>5</sup>	--	--	--	--	--	--
08/19/02 <sup>8</sup>	73.39	58.75**	15.03	0.49	6.53 <sup>5</sup>	--	--	--	--	--	--
09/23/02 <sup>8</sup>	73.39	58.61**	15.13	0.44	0.40 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
10/21/02 <sup>8</sup>	73.39	58.50**	15.21	0.40	0.33 <sup>5</sup>	--	--	--	--	--	--
11/26/02 <sup>8</sup>	73.39	58.51**	15.17	0.36	0.26 <sup>5</sup>	--	--	--	--	--	--
12/26/02 <sup>8</sup>	73.39	60.50**	13.06	0.21	0.13 <sup>5</sup>	--	--	--	--	--	--
02/05/03 <sup>8</sup>	73.39	60.24**	13.33	0.22	0.07 <sup>5</sup>	--	--	--	--	--	--
03/01/03 <sup>11</sup>	73.39	60.18**	13.31	0.13	0.07 <sup>5</sup>	--	--	--	--	--	--
03/25/03	73.39	60.08**	13.41	0.13	0.03 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH					X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)		
<b>B (cont)</b>											
04/21/03	73.39	60.27**	13.20	0.10	0.07 <sup>5</sup>	--	--	--	--	--	--
05/26/03	73.39	59.76**	13.70	0.09	0.07 <sup>5</sup>	--	--	--	--	--	--
06/16/03	73.39	59.44**	14.04	0.11	0.07 <sup>5</sup>	--	--	--	--	--	--
07/17/03	73.39	59.25**	14.36	0.27	0.13	--	--	--	--	--	--
08/11/03	73.39	59.02**	14.61	0.30	0.13 <sup>5</sup>	--	--	--	--	--	--
09/23/03	73.39	58.63**	14.96	0.25	0.59 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--
10/13/03	73.39	58.54**	14.99	0.18	0.39	--	--	--	--	--	--
11/24/03	73.39	58.64**	14.85	0.12	0.07	--	--	--	--	--	--
12/15/03	73.39	59.10**	14.39	0.12	0.07	--	--	--	--	--	--
01/12/04	73.39	60.42**	13.06	0.11	0.13	--	--	--	--	--	--
02/10/04	73.39	60.00**	13.46	0.09	0.01 <sup>5</sup>	--	--	--	--	--	--
03/17/04 <sup>11</sup>	73.39	60.60**	12.85	0.08	0.01 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--
04/09/04 <sup>11</sup>	73.39	59.87**	13.54	0.02	1.51 <sup>5</sup>	--	--	--	--	--	--
05/11/04 <sup>11</sup>	73.39	59.80**	13.60	0.01	-- <sup>13</sup>	--	--	--	--	--	--
06/21/04 <sup>11</sup>	73.39	58.99**	14.46	0.07	0.03	--	--	--	--	--	--
07/09/04 <sup>11</sup>	73.39	58.83**	14.58	0.02	1.02 <sup>5</sup>	--	--	--	--	--	--
08/10/04 <sup>11</sup>	73.39	58.54**	14.87	0.02	0.51 <sup>5</sup>	--	--	--	--	--	--
09/16/04 <sup>13</sup>	73.39	58.56**	14.85	0.03	0.52 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--
10/12/04 <sup>11</sup>	73.39	58.21**	15.28	0.13	0.03 <sup>5</sup>	--	--	--	--	--	--
11/12/04	73.39	58.66**	14.75	0.02	0.52 <sup>5</sup>	--	--	--	--	--	--
12/08/04	73.39	58.73**	14.68	0.02	0.53 <sup>5</sup>	--	--	--	--	--	--
01/25/05	73.39	59.16**	14.25	0.02	0.53 <sup>5</sup>	--	--	--	--	--	--
02/11/05	73.39	59.11**	14.30	0.02	0.52 <sup>5</sup>	--	--	--	--	--	--
03/31/05	73.39	61.34**	12.07	0.03	1.03 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--
04/26/05	73.39	61.31**	12.10	0.02	1.02 <sup>5</sup>	--	--	--	--	--	--
05/13/05	73.39	60.93**	12.48	0.02	1.02 <sup>5</sup>	--	--	--	--	--	--
06/28/05	73.39	61.04**	12.37	0.03	1.02 <sup>5</sup>	--	--	--	--	--	--
07/15/05	73.39	60.16**	13.25	0.02	1.52 <sup>5</sup>	--	--	--	--	--	--
08/19/05	73.39	59.65**	13.76	0.02	1.02 <sup>5</sup>	--	--	--	--	--	--
09/26/05	73.39	58.98**	14.43	0.02	1.02 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--
10/17/05	73.39	58.94**	14.47	0.02	1.01 <sup>5</sup>	--	--	--	--	--	--
11/18/05	73.39	58.61**	14.80	0.02	1.52 <sup>5</sup>	--	--	--	--	--	--
12/12/05	73.39	59.60**	13.81	0.02	1.01 <sup>5</sup>	--	--	--	--	--	--
01/24/06	73.39	59.70**	13.70	0.01	1.01 <sup>5</sup>	--	--	--	--	--	--
02/10/06	73.39	59.62**	13.78	0.01	1.01 <sup>5</sup>	--	--	--	--	--	--
03/31/06	73.39	61.40**	12.01	0.02	1.51 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--



**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>B-1</b>											
05/09/89	71.77	59.19		--	--	16,000	2300	260	81	740	--
08/09/89	71.77	57.68	14.09	--	--	12,000	2600	340	100	870	--
11/09/89	71.77	57.71	14.06	--	--	17,000	340	140	110	760	--
02/08/90	71.77	59.12	12.65	--	--	5500	70	19	17	150	--
05/10/90	71.77	58.15	13.62	--	--	18,000	770	110	73	600	--
08/09/90	71.77	57.90	13.87	--	--	82,000	750	66	95	980	--
11/13/90	71.77	57.39	14.38	--	--	43,000	1300	120	74	760	--
03/27/91	71.77	--	--	--	--	18,000	580	92	94	770	--
04/05/91	71.77	60.04	11.73	--	--	--	--	--	--	--	--
06/19/91	71.77	58.21	13.56	--	--	21,000	910	56	96	810	--
08/21/91	71.77	57.87	13.90	--	--	50,000	2400	610	300	1800	--
11/08/91	71.77	57.72	14.05	--	--	540,000	3600	1500	1900	5900	--
02/13/92	71.77	59.09	12.68	--	--	20,000	500	100	150	920	--
05/01/92	71.77	58.85	12.92	Sheen	--	27,000	2800	200	310	1900	--
11/18/92	72.30	58.00	14.30	--	--	300	9.7	3.4	2.3	21	--
03/19/93	72.30	60.02	12.28	--	--	130	23	0.9	<0.5	5.6	--
06/10/93	72.30	59.26	13.04	--	--	170	21	1.1	0.8	6.6	--
09/08/93	72.30	58.46**	13.88	0.05	--	--	--	--	--	--	--
12/21/93	72.30	58.77	13.53	--	--	<50	6.7	0.5	<0.5	1.2	--
03/09/94	72.30	59.65	12.65	--	--	1300	520	8.8	2.4	53	--
09/21/94	72.30	57.90	14.40	--	--	390	130	2.7	2.4	7.7	--
12/20/94	72.30	59.95	12.35	--	--	1600	520	9.9	8.9	34	--
03/28/95	72.30	61.54	10.76	--	--	160	38	2.1	1.4	5.4	--
06/22/95	72.30	59.70	12.60	--	--	340	73	3.1	2.4	7.5	--
09/21/95	72.30	58.65	13.65	--	--	140	19	1.0	1.2	6.1	--
03/22/96	72.30	61.36	10.94	--	--	200	<0.5	0.6	2.1	2.2	<5.0
09/25/96	72.30	58.54	13.76	--	--	690	5.4	1.2	1.6	6.8	<5.0
03/06/97	72.30	60.22	12.08	--	--	420	31	1.0	2.5	4.3	5.9
09/12/97	72.30	58.76	13.54	--	--	170	31	1.4	1.6	4.6	11
04/02/98	72.30	61.57	10.73	--	--	670 <sup>2</sup>	91	4.2	8.7	17	<2.5
09/15/98	72.30	59.49	12.81	--	--	<50	1.5	<0.5	<0.5	<0.5	<10
03/09/99	72.30	60.69	11.61	--	--	1200	570	5.3	5.6	48	<25
09/29/99	72.30	58.67	13.63	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/14/00	72.30	61.91	10.39	--	--	225	78.5	1.49	1.88	4.17	<5.0
08/28/00	72.30	59.16	13.14	0.00	0.00	290 <sup>3</sup>	42	1.9	4.3	6.3	21

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>B-1 (cont)</b>											
03/22/01	72.30	60.62	11.68	0.00	0.00	1,690 <sup>5</sup>	181	7.94	20.4	17.4	56.9
06/25/01	72.30	58.59	13.71	0.00	0.00	--	--	--	--	--	--
07/09/01	72.30	59.11	13.19	0.00	0.00	--	--	--	--	--	--
09/04/01	72.30	58.73	13.57	0.00	0.00	130	6.4	0.58	0.74	<1.5	<2.5/ <sup>9</sup>
03/18/02	72.30	60.81	11.49	0.00	0.00	410	77	3.0	4.9	10	6.6
09/23/02	72.30	58.72	13.58	0.00	0.00	51	1.9	0.82	<0.50	<1.5	<2.5
03/25/03	72.30	59.46	12.84	0.00	0.00	58	0.74	<0.50	<0.50	<1.5	<2.5
09/23/03 <sup>12</sup>	72.30	58.57	13.73	0.00	0.00	<50	<0.5	0.7	<0.5	<0.5	<0.5
03/17/04 <sup>12</sup>	72.30	60.83	11.47	0.00	0.00	110	3	<0.5	<0.5	<0.5	<0.5
09/16/04 <sup>12</sup>	72.30	58.23	14.07	0.00	0.00	200	29	<0.5	<0.5	0.7	<0.5
03/31/05 <sup>12</sup>	72.30	59.45	12.85	0.00	0.00	340	18	<0.5	2	1	<0.5
09/26/05 <sup>12</sup>	72.30	58.60	13.70	0.00	0.00	570	71	1	<0.5	5	<0.5
03/31/06 <sup>12</sup>	72.30	59.72	12.58	0.00	0.00	520	23	1	0.8	2	<0.5
<b>B-2</b>											
05/09/89	74.51	59.93	14.58	--	--	170,000	30,000	8400	2300	12,000	--
08/09/89	74.51	58.45	16.06	--	--	60,000	29,000	8700	2400	12,000	--
11/09/89	74.51	57.56	16.95	--	--	110,000	32,000	5500	2800	12,000	--
02/08/90	74.51	58.95	15.56	--	--	67,000	28,000	5900	2300	11,000	--
05/10/90	74.51	58.57	15.94	--	--	69,000	24,000	4800	2000	11,000	--
08/09/90	74.51	58.54	15.97	--	--	100,000	33,000	4000	2100	12,000	--
11/13/90	74.51	57.81	16.70	--	--	110,000	33,000	4300	2900	13,000	--
03/27/91	74.51	--	--	--	--	160,000	26,000	3200	2600	15,000	--
04/05/91	74.51	60.31	14.20	--	--	--	--	--	--	--	--
06/19/91	74.51	58.68	15.83	--	--	100,000	22,000	2500	2000	11,000	--
08/21/91	74.51	58.20	16.31	--	--	80,000	28,000	2800	2400	12,000	--
11/08/91	74.51	57.91	16.60	--	--	94,000	29,000	1900	2200	11,000	--
02/13/92	74.51	58.58	15.93	--	--	280,000	34,000	2500	4600	23,000	--
05/01/92	74.51	59.57	14.94	Sheen	--	29,000	1700	300	1100	4300	--
11/18/92	74.52	57.81	16.71	--	--	26,000	11,000	170	870	950	--
03/19/93	74.52	60.46	14.06	--	--	110,000	28,000	1200	2200	12,000	--
06/10/93	74.52	59.64	14.88	--	--	140,000	15,000	930	1900	8800	--
09/08/93	74.52	58.52**	16.03	0.04	--	--	--	--	--	--	--
12/21/93	74.52	58.91	15.61	--	--	980,000	21,000	30,000	9100	71,000	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>B-2 (cont)</b>											
03/09/94	74.52	59.99	14.53	Sheen	--	110,000	23,000	920	1300	7800	--
9/21/945	74.52	INACCESSIBLE		--	--	--	--	--	--	--	--
12/20/94	74.52	59.86	14.65	--	--	70,000	25,000	710	920	5300	--
03/28/95	74.52	62.22	12.30	--	--	76,000	20,000	920	1200	5200	--
06/22/95	74.52	60.30	14.22	--	--	89,000	21,000	38,000	1500	6800	--
09/21/95	74.52	58.72	15.80	--	--	84,000	24,000	2900	1800	9800	--
03/22/96	74.52	61.69**	12.85	0.02	0.250	--	--	--	--	--	--
09/25/96	74.52	58.56**	15.98	0.03	0.250	--	--	--	--	--	--
03/06/97	74.52	60.43**	14.11	0.02	0.000	--	--	--	--	--	--
09/12/97	74.52	59.19**	15.35	0.03	1.500	--	--	--	--	--	--
04/02/98	74.52	61.74**	13.07	0.36	2.000	--	--	--	--	--	--
09/15/98	74.52	59.48**	15.50	0.58	0.500	--	--	--	--	--	--
03/09/99	74.52	61.56**	13.29	0.41	0.079	--	--	--	--	--	--
09/29/99	74.52	58.69**	16.34	0.64	0.080	--	--	--	--	--	--
03/14/00	74.52	62.02**	12.65	0.19	0.040	--	--	--	--	--	--
08/28/00	74.52	59.11**	15.80	0.49	0.26 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
03/22/01	74.52	60.99**	13.77	0.30	0.07 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
07/09/01 <sup>7</sup>	74.52	58.50**	16.12	0.13	0.21 <sup>5</sup>	--	--	--	--	--	--
08/06/01 <sup>8</sup>	74.52	58.31**	16.23	0.02	0.00	--	--	--	--	--	--
09/04/01 <sup>8</sup>	74.52	58.26**	16.28	0.03	0.00	NOT SAMPLED DUE TO THE PRESENCE OF SPH				--	--
10/08/01 <sup>8</sup>	74.52	57.97**	16.57	0.03	0.01 <sup>5</sup>	--	--	--	--	--	--
11/12/01 <sup>8</sup>	74.52	58.07**	16.46	0.01	0.00	--	--	--	--	--	--
12/26/01 <sup>8</sup>	74.52	61.12	13.40	0.00	0.00	--	--	--	--	--	--
01/25/02 <sup>8</sup>	74.52	60.17	14.35	0.00	0.00	--	--	--	--	--	--
02/05/02 <sup>8</sup>	74.52	60.05	14.47	0.00	0.00	--	--	--	--	--	--
03/18/02 <sup>8</sup>	74.52	60.38	14.14	0.00	0.00	110,000	24,000	2,500	2,500	9,200	<30
04/27/02 <sup>8</sup>	74.52	59.46	15.06	0.00	0.26 <sup>10</sup>	--	--	--	--	--	--
05/20/02 <sup>8</sup>	74.52	59.06	15.46	0.00	0.26 <sup>10</sup>	--	--	--	--	--	--
06/17/02 <sup>8</sup>	74.52	58.82	15.70	0.00	0.13 <sup>10</sup>	--	--	--	--	--	--
07/01/02 <sup>8</sup>	74.52	58.75	15.77	0.00	0.00	--	--	--	--	--	--
08/19/02 <sup>8</sup>	74.52	58.34	16.18	0.00	0.00	--	--	--	--	--	--
09/23/02 <sup>8</sup>	74.52	58.22**	16.31	0.01	0.00	90,000	23,000	2,200	2,400	8,600	<500
10/21/02 <sup>8</sup>	74.52	58.08**	16.45	0.01	0.00	--	--	--	--	--	--
11/26/02 <sup>8</sup>	74.52	58.04	16.48	0.00	0.00	--	--	--	--	--	--
12/26/02 <sup>8</sup>	74.52	59.46	15.06	0.00	0.00	--	--	--	--	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH							MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)		
<b>B-2 (cont)</b>												
02/05/03 <sup>8</sup>	74.52	59.65	14.87	0.00	0.00	--	--	--	--	--	--	--
03/01/03 <sup>11</sup>	74.52	59.57	14.95	0.00	0.00	--	--	--	--	--	--	--
03/25/03	74.52	60.22	14.30	0.00	0.00	130,000	28,000	2,600	3,000	15,000	<500	--
04/21/03	74.52	60.76	13.76	0.00	0.00	--	--	--	--	--	--	--
05/26/03	74.52	60.12	14.40	0.00	0.00	--	--	--	--	--	--	--
06/16/03	74.52	59.77	14.75	0.00	0.00	--	--	--	--	--	--	--
07/17/03	74.52	59.38	15.14	0.00	0.00	--	--	--	--	--	--	--
08/11/03	74.52	59.16	15.36	0.00	0.00	--	--	--	--	--	--	--
09/23/03 <sup>12</sup>	74.52	58.82	15.70	0.00	0.00	160,000	29,000	2,500	3,300	15,000	220	--
10/13/03	74.52	58.59	15.93	0.00	0.00	--	--	--	--	--	--	--
11/24/03	74.52	58.62	15.90	0.00	0.00	--	--	--	--	--	--	--
12/15/03	74.52	58.97	15.55	0.00	0.00	--	--	--	--	--	--	--
01/12/04	74.52	60.48	14.04	0.00	0.00	--	--	--	--	--	--	--
02/10/04	74.52	60.50	14.02	0.00	0.00	--	--	--	--	--	--	--
03/17/04 <sup>11,12</sup>	74.52	61.08	13.44	0.00	0.00	95,000	18,000	1,400	2,000	9,300	170	--
04/09/04 <sup>11</sup>	74.52	60.48	14.04	0.00	0.00	--	--	--	--	--	--	--
05/11/04 <sup>11</sup>	74.52	60.44	14.08	0.00	0.00	--	--	--	--	--	--	--
06/21/04 <sup>11</sup>	74.52	59.17	15.35	0.00	0.00	--	--	--	--	--	--	--
07/09/04 <sup>11</sup>	74.52	59.05	15.47	0.00	0.00	--	--	--	--	--	--	--
08/10/04 <sup>11</sup>	74.52	58.80	15.72	0.00	0.00	--	--	--	--	--	--	--
09/16/04 <sup>11,12</sup>	74.52	58.52	16.00	0.00	0.00	81,000	21,000	1,000	1,900	8,100	220	--
10/12/04 <sup>11</sup>	74.52	58.35	16.17	0.00	0.00	--	--	--	--	--	--	--
11/12/04	74.52	58.91	15.61	0.00	0.00	--	--	--	--	--	--	--
12/08/04	74.52	59.23	15.29	0.00	0.00	--	--	--	--	--	--	--
01/25/05	74.52	59.49	15.03	0.00	0.00	--	--	--	--	--	--	--
02/11/05	74.52	59.51	15.01	0.00	0.00	--	--	--	--	--	--	--
03/31/05 <sup>12</sup>	74.52	61.78	12.74	0.00	0.00	64,000	15,000	910	880	4,900	130	--
04/26/05	74.52	61.76	12.76	0.00	0.00	--	--	--	--	--	--	--
05/13/05	74.52	61.42	13.10	0.00	0.00	--	--	--	--	--	--	--
06/28/05	74.52	61.56	12.96	0.00	0.00	--	--	--	--	--	--	--
07/15/05	74.52	60.82	13.70	0.00	0.00	--	--	--	--	--	--	--
08/19/05	74.52	60.24	14.28	0.00	0.00	--	--	--	--	--	--	--
09/26/05 <sup>12</sup>	74.52	58.85	15.67	0.00	0.00	74,000	24,000	1,200	2,000	8,500	170	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH						
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>B-2 (cont)</b>											
10/17/05	74.52	58.87	15.65	0.00	0.00	--	--	--	--	--	--
11/18/05	74.52	58.75	15.77	0.00	0.00	--	--	--	--	--	--
12/12/05	74.52	60.26	14.26	0.00	0.00	--	--	--	--	--	--
01/24/06	74.52	60.48	14.04	0.00	0.00	--	--	--	--	--	--
02/10/06	74.52	60.43	14.09	0.00	0.00	--	--	--	--	--	--
03/31/06 <sup>12</sup>	74.52	61.95	12.57	0.00	0.00	72,000	17,000	770	1,500	5,000	130
<b>B-3</b>											
05/09/89	74.12	60.01	14.02	--	--	70,000	12,000	9500	400	8900	--
08/09/89	74.12	58.74	15.38	--	--	--	--	--	--	--	--
11/09/89	74.12	58.61**	15.55	0.05	--	--	--	--	--	--	--
02/08/90	74.12	59.44	14.68	<0.01	--	--	--	--	--	--	--
05/10/90	74.12	58.99**	15.15	0.02	--	--	--	--	--	--	--
08/09/90	74.12	58.85	15.27	<0.01	--	--	--	--	--	--	--
11/13/90	74.12	58.13**	16.04	0.06	--	--	--	--	--	--	--
04/05/91	74.12	60.82	13.30	<0.01	--	--	--	--	--	--	--
06/19/91	74.12	58.96	15.16	--	--	260,000	20,000	9000	2200	16,000	--
08/21/91	74.12	58.51	15.61	--	--	70,000	28,000	11,000	1800	11,000	--
11/08/91	74.12	58.35	15.77	--	--	150,000	29,000	9700	2200	13,000	--
02/13/92	74.12	59.24	14.88	--	--	100,000	27,000	9906	2000	11,000	--
05/01/92	74.12	59.93**	14.20	0.01	--	--	--	--	--	--	--
11/18/92	74.13	58.47**	15.68	0.03	--	--	--	--	--	--	--
03/19/93	74.13	61.24**	13.75	1.08	--	--	--	--	--	--	--
06/10/93	74.13	60.04**	14.79	0.87	--	--	--	--	--	--	--
09/08/93	74.13	58.81**	15.38	0.08	--	--	--	--	--	--	--
12/21/93	74.13	59.39	14.74	--	--	1,100,000	18,000	29,000	8900	59,000	--
03/09/94	74.13	60.60	13.53	--	--	130,000	11,000	20,000	1700	15,000	--
09/21/94	74.13	58.45**	15.70	0.02 <sup>1</sup>	--	--	--	--	--	--	--
12/20/94	74.13	60.67**	13.48	0.03	--	--	--	--	--	--	--
03/28/95	74.13	--	--	1.54	2.000	--	--	--	--	--	--
06/22/95	74.13	60.86**	14.25	1.23	0.500	--	--	--	--	--	--
09/21/95	74.13	59.12**	15.25	0.30	0.500	--	--	--	--	--	--
03/22/96	74.13	62.97**	11.46	0.37	0.250	--	--	--	--	--	--
09/25/96	74.13	60.13**	14.82	1.02	1.000	--	--	--	--	--	--

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**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH							MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)		
<b>B-3 (cont)</b>												
03/06/97	74.13	61.23**	13.12	0.28	0.500	--	--	--	--	--	--	--
09/12/97	74.13	59.56**	14.67	0.13	2.000	--	--	--	--	--	--	--
04/02/98	74.13	62.93	11.20	Sheen	--	160,000	27,000	26,000	2500	14,000	--	<500
09/15/98	74.13	60.12**	14.05	0.05	0.500	--	--	--	--	--	--	--
03/09/99	74.13	62.77**	11.41	0.06	0.053	--	--	--	--	--	--	--
09/29/99	74.13	59.23**	15.00	0.13	0.070	--	--	--	--	--	--	--
03/14/00	74.13	63.15	10.98	--	--	177,000	15,000	22,000	2910	17,000	--	<1250
08/28/00	74.13	59.74**	14.41	0.02	0.26 <sup>5</sup>	NOT SAMPLED DUE TO THE PRESENCE OF SPH					--	--
03/22/01	74.13	62.06	12.07	0.00	0.00	366,000 <sup>3</sup>	28,200	31,500	5,460	29,600	--	<2,500
09/04/01	74.13	58.66	15.47	0.00	0.00	140,000	34,000	14,000	2,300	11,000	--	<200/<25 <sup>9</sup>
03/18/02	74.13	62.07	12.06	0.00	0.00	150,000	33,000	16,000	2,500	12,000	--	<30
09/23/02	74.13	59.17	14.96	0.00	0.00	130,000	31,000	13,000	2,200	11,000	--	<60
03/25/03	74.13	61.16	12.97	0.00	0.00	150,000	36,000	17,000	2,500	13,000	--	<130
09/23/03 <sup>12</sup>	74.13	59.32	14.81	0.00	0.00	160,000	37,000	19,000	3,800	17,000	--	<500
03/17/04 <sup>12</sup>	74.13	62.03	12.10	0.00	0.00	100,000	15,000	9,900	1,500	9,400	--	<10
09/16/04 <sup>12</sup>	74.13	59.04	15.09	0.00	0.00	98,000	21,000	14,000	2,000	9,400	--	11
03/31/05 <sup>12</sup>	74.13	63.01	11.12	0.00	0.00	120,000	24,000	15,000	1,400	9,500	--	<13
09/26/05 <sup>12</sup>	74.13	59.44	14.69	0.00	0.00	110,000	29,000	17,000	2,100	12,000	--	<25
03/31/06 <sup>12</sup>	74.13	63.05	11.08	0.00	0.00	130,000	24,000	15,000	1,500	8,400	--	7
<b>B-4</b>												
05/09/89	76.43	61.50	14.93	--	--	3600	840	34	120	200	--	--
08/09/89	76.43	59.78	16.65	--	--	<500	4200	130	370	260	--	--
11/09/89	76.43	--	--	--	--	5000	4200	83	400	250	--	--
02/08/90	76.43	59.44	16.99	--	--	14,000	6000	70	530	300	--	--
05/10/90	76.43	60.38	16.05	--	--	12,000	5400	130	460	320	--	--
08/09/90	76.43	59.94	16.49	--	--	16,000	7400	120	530	350	--	--
11/13/90	76.43	59.79	16.64	--	--	21,000	7000	100	550	320	--	--
03/27/91	76.43	59.01	17.42	--	--	17,000	8500	120	500	300	--	--
04/05/91	76.43	61.77	14.66	--	--	14,000	7700	75	610	210	--	--
06/19/91	76.43	59.95	16.48	--	--	16,000	7800	110	550	340	--	--
08/21/91	76.43	59.43	17.00	--	--	18,000	11,000	110	450	340	--	--
11/08/91	76.43	59.05	17.38	--	--	18,000	6800	98	500	620	--	--
02/13/92	76.43	60.01	16.42	--	--	15,000	9100	86	570	350	--	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>B-4 (cont)</b>											
05/01/92	76.43	60.93	15.50	--	--	36,000	16,000	180	990	690	--
03/19/93	76.43	62.32	14.11	--	--	26,000	15,000	150	900	790	--
06/10/93	76.43	60.99	15.44	--	--	35,000	14,000	180	940	590	--
09/08/93	76.43	59.78	16.65	--	--	34,000	15,000	170	1100	870	--
12/21/93	76.43	59.98	16.45	--	--	30,000	12,000	74	610	340	--
03/09/94	76.43	61.55	14.88	--	--	37,000	15,000	140	1000	580	--
09/21/94	76.43	59.29	17.14	--	--	32,000	14,000	110	660	190	--
12/20/94	76.43	61.44	14.99	--	--	23,000	8400	97	640	530	--
03/28/95	76.43	65.10	11.33	--	--	27,000	9900	120	880	540	--
06/22/95	76.43	61.84	14.59	--	--	33,000	12,000	84	650	150	--
09/21/95	76.43	60.24	16.19	--	--	20,000	12,000	72	540	68	--
03/22/96	76.43	64.43	12.00	--	--	29,000	10,000	72	560	170	400
09/25/96	76.43	60.15	16.28	--	--	53,000	11,000	<50	160	74	<500
03/06/97	76.43	62.87	13.56	--	--	<5,000	17,000	<50	<50	<50	<500
09/12/97	76.43	60.41	16.02	--	--	7600	8100	65	520	38	300
04/02/98	76.43	64.58	11.85	--	--	28,000 <sup>2</sup>	9700	59	760	220	<250
09/15/98	76.43	61.08	15.35	--	--	25,000	12,000	200	900	<200	<1000
03/09/99	76.43	64.11	12.32	--	--	21,000	11,000	<100	770	270	800
09/29/99	76.43	60.31	16.12	--	--	8610	9500	32.1	1160	88.2	260
03/14/00	76.43	65.86	10.57	--	--	29,100	11,000	223	1010	556	<500
08/28/00 <sup>4</sup>	76.43	60.78	15.65	0.00	0.00	13,000 <sup>3</sup>	8,600	96	920	74	400
03/22/01	76.43	63.57	12.86	0.00	0.00	14,400 <sup>6</sup>	6,770	<50.0	224	112	345
09/04/01	76.43	60.19	16.24	0.00	0.00	23,000	9,900	61	340	71	<50/<3 <sup>9</sup>
03/18/02	76.43	63.57	12.86	0.00	0.00	26,000	8,400	71	550	300	<15
09/23/02	76.43	60.16	16.27	0.00	0.00	21,000	7,600	51	250	43	<10
03/25/03	76.43	62.35	14.08	0.00	0.00	21,000	7,100	42	330	78	<50
09/23/03 <sup>12</sup>	76.43	60.29	16.14	0.00	0.00	21,000	77,000	370	2,500	500	<250
03/17/04 <sup>12</sup>	76.43	63.35	13.08	0.00	0.00	16,000	5,500	30	320	110	4
09/16/04 <sup>12</sup>	76.43	60.17	16.26	0.00	0.00	28,000	5,900	3,800	470	2,800	<5
03/31/05 <sup>12</sup>	76.43	64.55	11.88	0.00	0.00	12,000	3,300	26	350	150	<3
09/26/05 <sup>12</sup>	76.43	60.48	15.95	0.00	0.00	16,000	6,100	28	220	68	<5
03/31/06 <sup>12</sup>	76.43	64.73	11.70	0.00	0.00	9,200	2,100	17	220	120	0.6

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**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH						MTBE (ppb)	
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)		
<b>E</b>												
11/18/92	70.07	57.87	12.20	--	--	280	2.7	2.4	3.0	12	--	
03/19/93	70.07	60.10	9.97	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	
06/10/93	70.07	59.09	10.98	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	
09/08/93	70.07	58.29**	11.80	0.03	--	--	--	--	--	--	--	
12/21/93	70.07	58.82	11.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
03/09/94	70.07	59.40	10.67	--	--	<50	<0.5	0.7	<0.5	0.7	--	
09/21/94	70.07	57.78	12.29	--	--	<50	2.5	<0.5	1.0	<0.5	--	
12/20/94	70.07	54.54	15.53	--	--	<50	0.5	<0.5	<0.5	<0.5	--	
03/28/95	70.07	61.62	8.45	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
06/22/95	70.07	59.50	10.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
09/21/95	70.07	58.48	11.59	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/22/96	70.07	61.05	9.02	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
03/06/97	70.07	57.75	12.32	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	
09/12/97	70.07	--	--	--	--	--	--	--	--	--	--	
04/02/98	70.07	61.64	8.43	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
09/15/98	70.07	--	--	--	--	--	--	--	--	--	--	
03/09/99	70.07	60.65	9.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
03/14/00	70.07	61.58	8.49	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
08/28/00	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/22/01	70.07	60.45	9.62	0.00	0.00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	
09/04/01	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/18/02	70.07	60.57	9.50	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>9</sup>	
09/23/02	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/25/03	70.07	60.08	9.99	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
09/23/03	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/17/04	70.07	INACCESSIBLE - PAVED OVER				--	--	--	--	--	--	--
09/16/04	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/31/05	70.07	INACCESSIBLE - PAVED OVER				--	--	--	--	--	--	--
09/26/05	70.07	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	--
03/31/06	70.07	INACCESSIBLE - PAVED OVER				--	--	--	--	--	--	--
<b>F</b>												
05/09/89	72.01	53.31	18.70	--	--	<500	<0.5	<0.5	0.6	1.0	--	
08/09/89	72.01	52.98	19.03	--	--	--	--	--	--	--	--	



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Former Chevron Service Station #9-1026  
3701 Broadway  
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WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPH							MTBE (ppb)
				SPHT (ft.)	REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	
<b>F (cont)</b>											
11/09/89	72.01	52.99	19.02	--	--	--	--	--	--	--	--
02/08/90	72.01	53.31	18.70	--	--	<50	0.4	<0.3	0.3	<0.6	--
05/10/90	72.01	53.03	18.98	--	--	--	--	--	--	--	--
08/09/90	72.01	53.06	18.95	--	--	--	--	--	--	--	--
11/13/90	72.01	52.91	19.10	--	--	--	--	--	--	--	--
03/27/91	72.01	--	--	--	--	64	<0.5	<0.5	<0.5	1.0	--
06/19/91	72.01	53.06	18.95	--	--	--	--	--	--	--	--
08/21/91	72.01	<52.07	>19.94	--	--	--	--	--	--	--	--
11/08/91	72.01	<52.07	>19.94	--	--	--	--	--	--	--	--
02/13/92	72.01	53.41	18.60	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
05/01/92	72.01	--	Dry	--	--	--	--	--	--	--	--
11/18/92	71.72	56.87	14.85	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/19/93	71.72	57.47	14.25	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	71.72	57.80	13.92	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/08/93	71.72	56.95**	14.80	0.04	--	--	--	--	--	--	--
12/21/93	71.72	58.41	13.31	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/09/94	71.72	58.73	12.99	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/21/94	71.72	55.42	16.30	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/20/94	71.72	59.15	12.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/28/95	71.72	62.77	8.95	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/22/95	71.72	57.95	13.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/21/95	71.72	58.27	13.45	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/22/96	71.72	60.56	11.16	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/06/97	71.72	60.34	11.38	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/12/97	71.72	--	--	--	--	--	--	--	--	--	--
04/02/98	71.72	58.60	13.12	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/15/98	71.72	--	--	--	--	--	--	--	--	--	--
03/09/99	71.72	58.05	13.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/14/00	71.72	58.37	13.35	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/28/00	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/22/01	71.72	60.25	11.47	0.00	0.00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
09/04/01	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/18/02	71.72	60.03	11.69	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>9</sup>
09/23/02	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/25/03	71.72	58.40	13.32	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5

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WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>F (cont)</b>											
09/23/03	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/17/04	71.72	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--	--	--
09/16/04	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/31/05	71.72	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--	--	--
09/26/05	71.72	MONITORED/SAMPLED ANNUALLY		--	--	--	--	--	--	--	--
03/31/06	71.72	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--	--	--
<b>EA-1</b>											
05/09/89	73.94	59.38	14.56	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
08/09/89	73.94	57.85	16.09	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
11/09/89	73.94	58.10	15.84	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
02/08/90	73.94	58.89	15.05	--	--	<50	<0.3	<0.3	<0.3	<0.6	--
05/10/90	73.94	58.29	15.65	--	--	<50	1.0	0.3	<0.3	<0.6	--
08/09/90	73.94	58.27	15.67	--	--	<50	<0.3	<0.3	<0.3	<0.6	--
11/13/90	73.94	57.62	16.32	--	--	<50	<0.4	<0.3	<0.3	<0.4	--
03/27/91	73.94	--	--	--	--	<50	0.7	0.5	<0.5	<0.5	--
04/05/91	73.94	59.91	14.03	--	--	--	--	--	--	--	--
06/19/91	73.94	58.38	15.56	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
08/21/91	73.94	57.95	15.99	--	--	<50	<0.4	<0.3	<0.3	<0.4	--
11/08/91	73.94	57.81	16.13	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/13/92	73.94	58.84	15.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
05/01/92	73.94	55.14	18.80	--	--	<50	2.7	<0.5	<0.5	<0.5	--
11/18/92	71.85	55.88	15.97	--	--	<10	<0.3	<0.3	<0.3	<0.5	--
03/19/93	71.85	58.19	13.66	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	71.85	57.14	14.71	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/08/93	71.85	56.33**	15.58	0.08	--	--	--	--	--	--	--
12/21/93	71.85	56.83	15.02	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/09/94	71.85	57.47	14.38	--	--	<50	<0.5	1.0	<0.5	<0.5	--
09/21/94	71.85	55.73	16.12	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/20/94	71.85	57.80	14.05	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/28/95	71.85	59.80	12.05	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/22/95	71.85	57.50	14.35	--	--	<50	2.0	<0.5	<0.5	<0.5	--
09/21/95	71.85	56.49	15.36	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/22/96	71.85	59.14	12.71	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/06/97	71.85	57.97	13.88	--	--	<50	2.8	<0.5	<0.5	0.8	<5.0

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WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH							MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)		
<b>EA-1 (cont)</b>												
09/12/97	71.85	--	--	--	--	--	--	--	--	--	--	
04/02/98	71.85	59.16	12.69	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
09/15/98	71.85	--	--	--	--	--	--	--	--	--	--	
03/09/99	71.85	58.85	13.00	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	
03/14/00	71.85	59.76	12.09	--	--	<50	<0.5	<0.5	<0.5	<0.5	6.65	
08/28/00	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/22/01	71.85	58.55	13.30	0.00	0.00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	
09/04/01	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/18/02	71.85	58.64	13.21	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2 <sup>9</sup>	
09/23/02	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/25/03	71.85	58.11	13.74	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	
09/23/03	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/17/04 <sup>12</sup>	71.85	58.67	13.18	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	0.6	
09/16/04	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/31/05 <sup>12</sup>	71.85	59.34	12.51	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
09/26/05	71.85	MONITORED/SAMPLED ANNUALLY				--	--	--	--	--	--	
03/31/06 <sup>12</sup>	71.85	59.55	12.30	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5	
<b>EA-2</b>												
05/09/89	75.24	59.29	15.95	--	--	760	<0.5	<0.5	1.1	<0.5	--	
08/09/89	75.24	57.79	17.45	--	--	<500	<0.5	<0.5	<0.5	<0.5	--	
11/09/89	75.24	57.83	17.41	--	--	<500	<0.5	1.0	<0.5	<0.5	--	
02/08/90	75.24	58.67	16.57	--	--	190	<0.3	<0.3	<0.3	<0.6	--	
05/10/90	75.24	58.12	17.12	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	
08/09/90	75.24	58.04	17.20	--	--	120	<0.3	<0.3	<0.3	<0.6	--	
11/13/90	75.24	57.36	17.88	--	--	160	<0.4	1.0	<0.3	<0.4	--	
03/27/91	75.24	--	--	--	--	110	<0.5	<0.5	<0.5	<0.5	--	
04/05/91	75.24	59.70	15.54	--	--	--	--	--	--	--	--	
06/19/91	75.24	58.17	17.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
08/21/91	75.24	57.78	17.46	--	--	70	0.8	1.4	<0.3	<0.4	--	
11/08/91	75.24	57.66	17.58	--	--	<50	<0.5	0.7	<0.5	<0.5	--	
02/13/92	75.24	58.55	16.69	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
05/01/92	75.24	59.08	16.16	--	--	340	<0.5	2.6	0.7	<0.5	--	
11/18/92	76.24	58.63	17.61	--	--	450	<0.5	3.3	<0.5	0.8	--	

**Table I**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
<b>EA-2 (cont)</b>											
03/19/93	76.24	61.24	15.00	--	--	450	<0.5	2.3	0.6	<1.5	--
06/10/93	76.24	60.16	16.08	--	--	250	<0.5	1.3	<0.5	<1.5	--
09/08/93	76.24	59.17	17.07	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/21/93	76.24	59.64	16.60	--	--	170	<0.5	1.3	<0.5	<0.5	--
03/09/94	76.24	60.41	15.83	--	--	200	1.8	1.4	<0.5	<0.5	--
09/21/94	76.24	58.64	17.60	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/20/94	76.24	60.71	15.53	--	--	950	31	15	1.7	<0.5	--
03/28/95	76.24	62.96	13.28	--	--	71	2.0	0.6	<0.5	<0.5	--
06/22/95	76.24	60.62	15.62	--	--	300	<0.5	3.7	<0.5	0.6	--
09/21/95	76.24	59.46	16.78	--	--	170	<0.5	<0.5	<0.5	<0.5	--
03/22/96	76.24	62.36	13.88	--	--	90	<0.5	<0.5	<0.5	<0.5	<5.0
03/06/97	76.24	61.18	15.06	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/12/97	76.24	--	--	--	--	--	--	--	--	--	--
04/02/98	76.24	62.51	13.73	--	--	230 <sup>2</sup>	0.99	<0.5	<0.5	<0.5	<2.5
09/15/98	76.24	--	--	--	--	--	--	--	--	--	--
03/09/99	76.24	62.03	14.21	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/14/00	76.24	62.93	13.31	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/28/00	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/22/01	76.24	61.71	14.53	0.00	0.00	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
09/04/01	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/18/02	76.24	61.84	14.40	0.00	0.00	97	0.54	<0.50	<0.50	<1.5	<2.5/<2 <sup>9</sup>
09/23/02	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/25/03	76.24	61.18	15.06	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/23/03	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/17/04 <sup>12</sup>	76.24	61.83	14.41	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	0.7
09/16/04	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/31/05 <sup>12</sup>	76.24	62.53	13.71	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/26/05	76.24	MONITORED/SAMPLED ANNUALLY			--	--	--	--	--	--	--
03/31/06 <sup>12</sup>	76.24	63.75	12.49	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5	<0.5
<b>B-6</b>											
05/09/89	72.66	60.55	12.11	--	--	26,000	120	110	250	1300	--
08/09/89	72.66	57.94	14.72	--	--	19,000	470	150	440	1400	--
11/09/89	72.66	58.81	13.85	--	--	13,000	70	36	36	440	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH		B (ppb)	T (ppb)	E (ppb)	X (ppb)	MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)					
<b>B-6 (cont)</b>											
02/08/90	72.66	64.93	7.73	--	--	2900	16	5.0	10	58	--
05/10/90	72.66	--	--	--	--	--	--	--	--	--	--
08/09/90	72.66	58.15	14.51	--	--	14,000	55	3.0	130	500	--
11/13/90	72.66	57.80	14.86	--	--	--	--	--	--	--	--
04/05/91	72.66	62.23	10.43	--	--	--	--	--	--	--	--
ABANDONED											
<b>B-7</b>											
05/09/89	75.40	60.67	14.73	--	--	210,000	13,000	19,000	2000	20,000	--
08/09/89	75.40	59.04	16.36	--	--	672,000	87,000	17,000	2700	30,000	--
11/09/89	75.40	58.76	16.64	--	--	150,000	7000	12,000	1800	16,000	--
02/08/90	75.40	59.71	15.69	--	--	41,000	2500	6900	1100	11,000	--
05/10/90	75.40	--	--	--	--	--	--	--	--	--	--
08/09/90	75.40	59.09	16.31	--	--	50,000	1100	3900	640	7200	--
11/13/90	75.40	58.31	17.09	--	--	--	--	--	--	--	--
04/05/91	75.40	61.04	14.36	--	--	--	--	--	--	--	--
ABANDONED											
<b>TRIP BLANK</b>											
05/09/89	--	--	--	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
08/09/89	--	--	--	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
11/09/89	--	--	--	--	--	<500	<0.5	<0.5	<0.5	<0.5	--
02/08/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--
05/10/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--
08/09/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--
11/13/90	--	--	--	--	--	<50	<0.4	<0.3	<0.3	<0.4	--
03/27/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/19/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
08/21/91	--	--	--	--	--	<50	<0.4	<0.3	<0.3	<0.4	--
11/08/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/13/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
05/01/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
11/18/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/19/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/10/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/08/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	SPHT (ft.)	SPH						MTBE (ppb)
					REMOVED (gallons)	TPH-G (ppb)	B (ppb)	T (ppb)	E (ppb)	X (ppb)	
<b>TRIP BLANK (cont)</b>											
12/21/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/09/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/21/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/20/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/28/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/22/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/21/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/22/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/25/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
03/06/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
04/02/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<10
09/15/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/09/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/29/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/14/00	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/28/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
03/22/01	--	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50
09/04/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
<b>QA</b>											
03/18/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/23/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/25/03	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/23/03 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/17/04 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/16/04 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/31/05 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/26/05 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/31/06 <sup>12</sup>	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5

**Table 1**  
**Groundwater Monitoring Data and Analytical Results**  
 Former Chevron Service Station #9-1026  
 3701 Broadway  
 Oakland, California

**EXPLANATIONS:**

Groundwater monitoring data and laboratory analytical results prior to August 28, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing (ft.) = Feet	TPH-G = Total Petroleum Hydrocarbons as Gasoline	(ppb) = Parts per billion
GWE = Groundwater Elevation (msl) = Mean sea level	B = Benzene	-- = Not Measured/Not Analyzed
DTW = Depth to Water	T = Toluene	ND = Not Detected
SPHT = Separate Phase Hydrocarbon Thickness	E = Ethylbenzene	QA = Quality Assurance/Trip Blank
	X = Xylenes	
	MTBE = Methyl tertiary butyl ether	

\* TOC elevation referenced to msl.

\*\* GWE was corrected for the presence of SPH: correction factor:  $[(TOC - DTW) + (SPHT \times 0.80)]$ .

<sup>1</sup> Approximate thickness; equipment not functioning properly.

<sup>2</sup> Chromatogram pattern indicated an unidentified hydrocarbon.

<sup>3</sup> Laboratory report indicates gasoline C6-C12.

<sup>4</sup> Laboratory report indicates sample was analyzed outside of the EPA recommended holding time.

<sup>5</sup> Product + water removed.

<sup>6</sup> Laboratory report indicates unidentified hydrocarbons C6-C12.

<sup>7</sup> Skimmer installed May of 2001.

<sup>8</sup> Skimmer in well.

<sup>9</sup> MTBE by EPA Method 8260.

<sup>10</sup> Water removed from skimmer: no product.

<sup>11</sup> Skimmer removed for repair.

<sup>12</sup> BTEX and MTBE by EPA Method 8260.

<sup>13</sup> 0.5 ounces of product removed from well.

**Table 2**  
**Separate Phase Hydrocarbon Thickness/Removal Data**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID	DATE	DTW (ft.)	SPH Thickness (ft.)	Amount Bailed (Product + Water) (gallons)
B	08/28/00	15.29	1.07	0.26
	03/22/01	13.26	0.49	0.26
	06/25/01 <sup>1</sup>	15.30	1.08	0.00
	07/09/01 <sup>2</sup>	15.15	0.97	0.26
	08/06/01 <sup>2</sup>	15.31	0.98	1.04
	09/04/01 <sup>2</sup>	15.46	0.81	0.00
	10/08/01 <sup>2</sup>	15.68	0.77	0.06
	11/12/01 <sup>2</sup>	15.45	0.78	1.50
	12/26/01 <sup>2</sup>	12.98	0.58	4.39
	01/25/02 <sup>2</sup>	12.71	0.08	0.13
	02/05/02 <sup>2</sup>	13.16	0.09	2.63
	03/18/02 <sup>2</sup>	12.79	0.04	2.03
	04/27/02 <sup>2</sup>	13.66	0.00	0.26 <sup>3</sup>
	05/20/02 <sup>2</sup>	13.78	0.00	0.26 <sup>3</sup>
	06/17/02 <sup>2</sup>	14.34	0.29	3.39
	07/01/02 <sup>2</sup>	14.78	0.55	2.26
	08/19/02 <sup>2</sup>	15.03	0.49	6.53
	09/23/02 <sup>2</sup>	15.13	0.44	0.40
	10/21/02 <sup>2</sup>	15.21	0.40	0.33
	11/26/02 <sup>2</sup>	15.17	0.36	0.26
	12/26/02 <sup>2</sup>	13.06	0.21	0.13
	02/05/03 <sup>2</sup>	13.33	0.22	0.07
	03/01/03 <sup>4</sup>	13.31	0.13	0.07
	03/25/03	13.41	0.13	0.03
	04/21/03	13.20	0.10	0.07
	05/26/03	13.70	0.09	0.07
	06/16/03	14.04	0.11	0.07
	07/17/03	14.36	0.27	0.13 <sup>5</sup>
	08/11/03	14.61	0.30	0.13
	09/23/03	14.96	0.25	0.59
	10/13/03	14.99	0.18	0.39 <sup>5</sup>
	11/24/03	14.85	0.12	0.07 <sup>5</sup>
	12/15/03	14.39	0.12	0.07 <sup>5</sup>
	01/12/04	13.06	0.11	0.13 <sup>5</sup>
	02/10/04	13.46	0.09	0.01
	03/14/04 <sup>4</sup>	12.85	0.08	0.01
	04/09/04 <sup>4</sup>	13.54	0.02	1.51
	05/11/04 <sup>4</sup>	13.60	0.01	-- <sup>6</sup>
	06/21/04 <sup>4</sup>	14.46	0.07	0.03 <sup>5</sup>
	07/09/04 <sup>4</sup>	14.58	0.02	1.02
	08/10/04 <sup>4</sup>	14.87	0.02	0.51
	09/16/04 <sup>4</sup>	14.85	0.03	0.52
	10/12/04 <sup>4</sup>	15.28	0.13	0.03
	11/12/04	14.75	0.02	0.52
	12/08/04	14.68	0.02	0.53
	01/25/05	14.25	0.02	0.53
	02/11/05	14.30	0.02	0.52
	03/31/05	12.07	0.03	1.03



**Table 2**  
**Separate Phase Hydrocarbon Thickness/Removal Data**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID	DATE	DTW (ft.)	SPH Thickness (ft.)	Amount Bailed (Product + Water) (gallons)
B (cont)	04/26/05	12.10	0.02	1.02
	05/13/05	12.48	0.02	1.02
	06/28/05	12.37	0.03	1.02
	07/15/05	13.25	0.02	1.52
	08/19/05	13.76	0.02	1.02
	09/26/05	14.43	0.02	1.02
	10/17/05	14.47	0.02	1.01
	11/18/05	14.80	0.02	1.52
	12/12/05	13.81	0.02	1.01
	01/24/06	13.70	0.01	1.01
	02/10/06	13.78	0.01	1.01
	03/31/06	12.01	0.02	1.51
	B-2	08/28/00	15.80	0.49
03/22/01		13.77	0.30	0.07
07/09/01 <sup>1</sup>		16.12	0.13	0.21 <sup>4</sup>
08/06/01 <sup>2</sup>		16.23	0.02	0.00
09/04/01 <sup>2</sup>		16.28	0.03	0.00
10/08/01 <sup>2</sup>		16.57	0.03	0.01
11/12/01 <sup>2</sup>		16.46	0.01	0.00
12/26/01 <sup>2</sup>		13.40	0.00	0.00
01/25/02 <sup>2</sup>		14.35	0.00	0.00
02/05/02 <sup>2</sup>		14.47	0.00	0.00
03/18/02 <sup>2</sup>		14.14	0.00	0.00
04/27/02 <sup>2</sup>		15.06	0.00	0.26 <sup>3</sup>
05/20/02 <sup>2</sup>		15.46	0.00	0.26 <sup>3</sup>
06/17/02 <sup>2</sup>		15.70	0.00	0.13 <sup>3</sup>
07/01/02 <sup>2</sup>		15.77	0.00	0.00
08/19/02 <sup>2</sup>		16.18	0.00	0.00
09/23/02 <sup>2</sup>		16.31	0.01	0.00
10/21/02 <sup>2</sup>		16.45	0.01	0.00
11/26/02 <sup>2</sup>		16.48	0.00	0.00
12/26/02 <sup>2</sup>		15.06	0.00	0.00
02/05/03 <sup>2</sup>		14.87	0.00	0.00
03/01/03 <sup>4</sup>		14.95	0.00	0.00
03/25/03		14.30	0.00	0.00
04/21/03		13.76	0.00	0.00
05/26/03		14.40	0.00	0.00
06/16/03		14.75	0.00	0.00
07/17/03		15.14	0.00	0.00
08/11/03		15.36	0.00	0.00
09/23/03		15.70	0.00	0.00
10/13/03		15.93	0.00	0.00
11/24/03		15.90	0.00	0.00
12/15/03	15.55	0.00	0.00	
01/12/04	14.04	0.00	0.00	
02/10/04	14.02	0.00	0.00	

**Table 2**  
**Separate Phase Hydrocarbon Thickness/Removal Data**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID	DATE	DTW (ft.)	SPH Thickness (ft.)	Amount Bailed (Product + Water) (gallons)
B-2 (cont)	03/17/04 <sup>4</sup>	13.44	0.00	0.00
	04/09/04 <sup>4</sup>	14.04	0.00	0.00
	05/11/04 <sup>4</sup>	14.08	0.00	0.00
	06/21/04 <sup>4</sup>	15.35	0.00	0.00
	07/09/04 <sup>4</sup>	15.47	0.00	0.00
	08/10/04 <sup>4</sup>	15.72	0.00	0.00
	09/16/04 <sup>4</sup>	16.00	0.00	0.00
	10/12/04 <sup>4</sup>	16.17	0.00	0.00
	11/12/04	15.61	0.00	0.00
	12/08/04	15.29	0.00	0.00
	01/25/05	15.03	0.00	0.00
	02/11/05	15.01	0.00	0.00
	03/31/05	12.74	0.00	0.00
	04/26/05	12.76	0.00	0.00
	05/13/05	13.10	0.00	0.00
	06/28/05	12.96	0.00	0.00
	07/15/05	13.70	0.00	0.00
	08/19/05	14.28	0.00	0.00
	09/26/05	15.67	0.00	0.00
	10/17/05	15.65	0.00	0.00
	11/18/05	15.77	0.00	0.00
	12/12/05	14.26	0.00	0.00
	01/24/06	14.04	0.00	0.00
	02/10/06	14.09	0.00	0.00
	03/31/06	12.57	0.00	0.00
B-3	08/28/00	14.41	0.02	0.26
	03/22/01	12.07	0.00	0.00
	09/04/01	15.47	0.00	0.00
	03/18/02	12.06	0.00	0.00
	09/23/02	14.96	0.00	0.00
	03/25/03	12.97	0.00	0.00
	09/23/03	14.81	0.00	0.00
	03/17/04	12.10	0.00	0.00
	09/16/04	15.09	0.00	0.00
	03/31/05	11.12	0.00	0.00
	09/26/05	14.69	0.00	0.00
	03/31/06	11.08	0.00	0.00

**Table 2**  
**Separate Phase Hydrocarbon Thickness/Removal Data**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

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**EXPLANATIONS:**

DTW = Depth to Water

(ft.) = Feet

SPH = Separate Phase Hydrocarbons

- <sup>1</sup> Skimmer installed May of 2001.
- <sup>2</sup> Skimmer in well.
- <sup>3</sup> Water removed from skimmer; no product.
- <sup>4</sup> Skimmer removed for repair.
- <sup>5</sup> Pure product; no water.
- <sup>6</sup> 0.5 ounces of product removed from well.

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
B-1	09/04/01	<500	<100	<2	<2	<2	<2	<2	<2
	09/23/03	--	--	<0.5	--	--	--	--	--
	03/17/04	--	--	<0.5	--	--	--	--	--
	09/16/04	--	--	<0.5	--	--	--	--	--
	03/31/05	--	--	<0.5	--	--	--	--	--
	09/26/05	--	--	<0.5	--	--	--	--	--
	03/31/06	--	--	<0.5	--	--	--	--	--
B-2	09/23/03	--	--	220	--	--	--	--	--
	03/17/04	--	--	170	--	--	--	--	--
	09/16/04	--	--	220	--	--	--	--	--
	03/31/05	--	--	130	--	--	--	--	--
	09/26/05	--	--	170	--	--	--	--	--
	03/31/06	--	--	130	--	--	--	--	--
B-3	09/04/01	<2,500	890	<25	<25	<25	<25	720	<25
	09/23/03	--	--	<500	--	--	--	--	--
	03/17/04	--	--	<10	--	--	--	--	--
	09/16/04	--	--	11	--	--	--	--	--
	03/31/05	--	--	<13	--	--	--	--	--
	09/26/05	--	--	<25	--	--	--	--	--
	03/31/06	--	--	7	--	--	--	--	--
B-4	09/04/01	<500	560	<3	<3	<3	<3	200	<3
	09/23/03	--	--	<250	--	--	--	--	--
	03/17/04	--	--	4	--	--	--	--	--
	09/16/04	--	--	<5	--	--	--	--	--
	03/31/05	--	--	<3	--	--	--	--	--
	09/26/05	--	--	<5	--	--	--	--	--
	03/31/06	--	--	0.6	--	--	--	--	--
A	09/23/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/17/04	INACCESSIBLE - DUE TO TRAILER PARKED OVER WELL		--	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

WELL ID	DATE	ETHANOL (ppb)	TBA (ppb)	MTBE (ppb)	DIPE (ppb)	ETBE (ppb)	TAME (ppb)	1,2-DCA (ppb)	EDB (ppb)
A (cont)	03/31/05	--	--	<0.5	--	--	--	--	--
	03/31/06	--	--	<0.5	--	--	--	--	--
B	09/23/03	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
	03/17/04	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
	09/16/04	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
	03/31/05	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
	09/26/05	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
	03/31/06	NOT SAMPLED DUE TO SPH		--	--	--	--	--	--
E	03/18/02	<500	<100	<2	<2	<2	<2	<2	<2
	09/23/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/17/04	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--
	03/31/05	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--
F	03/18/02	<500	<100	<2	<2	<2	<2	<2	<2
	09/23/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/17/04	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--
	03/31/05	INACCESSIBLE - PAVED OVER		--	--	--	--	--	--
EA-1	03/18/02	<500	<100	<2	<2	<2	<2	<2	<2
	09/23/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/17/04	--	--	0.6	--	--	--	--	--
	03/31/05	--	--	<0.5	--	--	--	--	--
	03/31/06	--	--	<0.5	--	--	--	--	--
EA-2	03/18/02	<500	<100	<2	<2	<2	<2	<2	<2
	09/23/03	SAMPLED ANNUALLY		--	--	--	--	--	--
	03/17/04	--	--	0.7	--	--	--	--	--
	03/31/05	--	--	<0.5	--	--	--	--	--
	03/31/06	--	--	<0.5	--	--	--	--	--

**Table 3**  
**Groundwater Analytical Results - Oxygenate Compounds**  
Former Chevron Service Station #9-1026  
3701 Broadway  
Oakland, California

**EXPLANATIONS:**

TBA = Tertiary butyl alcohol  
MTBE = Methyl tertiary butyl ether  
DIPE = Di-isopropyl ether  
ETBE = Ethyl tertiary butyl ether  
TAME = Tertiary amyl methyl ether  
1,2-DCA = 1,2-Dichloroethane  
EDB = 1,2-Dibromoethane  
(ppb) = Parts per billion  
-- = Not Analyzed  
SPH = Separate Phase Hydrocarbons

**ANALYTICAL METHOD:**

EPA Method 8260 for Oxygenate Compounds

## STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. Prior to sample collection, the type of analysis to be performed is determined. Loss prevention of volatile compounds is controlled and sample preservation for subsequent analysis is maintained.

Prior to sampling, the presence or absence of free-phase hydrocarbons is determined using an interface probe. Product thickness, if present, is measured to the nearest 0.01 foot and is noted in the field notes. In addition, all depth to water level measurements are collected with a static water level indicator and are also recorded in the field notes, prior to purging and sampling any wells.

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, suction, Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging. Purging continues until these parameters stabilize.

Groundwater samples are collected using disposable bailers. The water samples are transferred from the bailer into appropriate containers. Pre-preserved containers, supplied by analytical laboratories, are used when possible. When pre-preserved containers are not available, the laboratory is instructed to preserve the sample as appropriate. Duplicate samples are collected for the laboratory to use in maintaining quality assurance/quality control standards. The samples are labeled to include the job number, sample identification, collection date and time, analysis, preservation (if any), and the sample collector's initials. The water samples are placed in a cooler, maintained at 4°C for transport to the laboratory. Once collected in the field, all samples are maintained under chain of custody until delivered to the laboratory.

The chain of custody document includes the job number, type of preservation, if any, analysis requested, sample identification, date and time collected, and the sample collector's name. The chain of custody is signed and dated (including time of transfer) by each person who receives or surrenders the samples, beginning with the field personnel and ending with the laboratory personnel.

A laboratory supplied trip blank accompanies each sampling set. For sampling sets greater than 20 samples, 5% trip blanks are included. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

As requested by Chevron Environmental Management Company, the purge water and decontamination water generated during sampling activities is transported by IWM to Chemical Waste Management located in Kettleman Hill, California.

***CHEVRON SERVICE STATION #9-1026***  
***Oakland, California***

***MONTHLY MONITORING EVENT***  
***Of October 17, 2005***





# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 10.17.05 (inclusive)  
 City: Oakland, CA Sampler: Su

Well ID: B Date Monitored: 10.17.05 Well Condition: o.k.  
 Well Diameter: 4 in.  
 Total Depth: 34.26 ft.  
 Depth to Water: 14.47 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1235 (2400 hrs)  
 Time Completed: 1252 (2400 hrs)  
 Depth to Product: 14.45 ft  
 Depth to Water: 14.47 ft  
 Hydrocarbon Thickness: 0.02 ft  
 Visual Confirmation/Description:  
Dark colored product  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: 2 ounces gal  
 Water Removed: 1 gal  
 Product Transferred to: G/P yard

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 10-17-05 (inclusive)  
 City: Oakland, CA Sampler: Sec

Well ID: B-2 Date Monitored: 10-17-05 Well Condition: O.K.

Well Diameter: 2 in.  
 Total Depth: 19.07 ft.  
 Depth to Water: 15.65 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (u mhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-2					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

***CHEVRON SERVICE STATION #9-1026***  
***Oakland, California***

***MONTHLY MONITORING EVENT***  
***Of November 18, 2005***



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 11-18-05 (inclusive)  
 City: Oakland, CA Sampler: Soe

Well ID: B Date Monitored: 11-18-05 Well Condition: OK

Well Diameter: 4 in.  
 Total Depth: 34.26 ft.  
 Depth to Water: 14.80 ft.

Volume	3/4" = 0.02	1" = 0.04	2" = 0.17	3" = 0.38
Factor (VF)	4" = 0.66	5" = 1.02	6" = 1.60	12" = 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume = Estimated Purge Volume: \_\_\_\_\_ gal.

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1135 (2400 hrs)  
 Time Completed: 1213 (2400 hrs)  
 Depth to Product: 14.78 ft  
 Depth to Water: 14.80 ft  
 Hydrocarbon Thickness: 0.02 ft  
 Visual Confirmation/Description:  
Dark colored product  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_  
 Amt Removed from Well: 3 ounces gal  
 Water Removed: 1.5 gal  
 Product Transferred to: GPR spend

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity ( $\mu$ mhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B</u>					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 11-18-05 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: B-2 Date Monitored: 11-18-05 Well Condition: OK

Well Diameter: 2 in.  
 Total Depth: 19.07 ft.  
 Depth to Water: 15.77 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	_____ ft
Visual Confirmation/Description:	_____
Skimmer / Absorbant Sock (circle one)	_____
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 11-18-05 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-2					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

***CHEVRON SERVICE STATION #9-1026  
Oakland, California***

***MONTHLY MONITORING EVENT  
Of December 12, 2005***



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 12-12-05 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: B Date Monitored: 12-12-05 Well Condition: o.k.  
 Well Diameter: 4 in.  
 Total Depth: 3426 ft.  
 Depth to Water: 1381 ft.  
 xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume = Estimated Purge Volume: \_\_\_\_\_ gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1300 (2400 hrs)  
 Time Completed: 1325 (2400 hrs)  
 Depth to Product: 1379 ft  
 Depth to Water: 1381 ft  
 Hydrocarbon Thickness: 0.02 ft  
 Visual Confirmation/Description:  
Dark colored product  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: 2000 gal  
 Water Removed: 1 gal  
 Product Transferred to: G/R gear

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026  
 Site Address: 3701 Broadway  
 City: Oakland, CA

Job Number: 385127  
 Event Date: 12-12-05 (inclusive)  
 Sampler: Joe

Well ID: B-2 Date Monitored: 12-12-05 Well Condition: OK

Well Diameter: 2 in.  
 Total Depth: 19.07 ft.  
 Depth to Water: 14.26 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 12-12-05 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-2					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



***CHEVRON SERVICE STATION #9-1026***  
***Oakland, California***

***MONTHLY MONITORING EVENT***  
***Of January 24, 2006***



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 1-29-06 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: B Date Monitored: 1-29-06 Well Condition: o.l.c.

Well Diameter: 4 in.  
 Total Depth: 34.26 ft.  
 Depth to Water: 13.70 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

Purge Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1510 (2400 hrs)  
 Time Completed: 1530 (2400 hrs)  
 Depth to Product: 13.69 ft  
 Depth to Water: 13.70 ft  
 Hydrocarbon Thickness: 0.01 ft  
 Visual Confirmation/Description:  
Dark colored product  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: 1.5 ounces gal  
 Water Removed: 1 gal gal  
 Product Transferred to: G/R yard

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026  
 Site Address: 3701 Broadway  
 City: Oakland, CA

Job Number: 385127  
 Event Date: 1-24-06 (inclusive)  
 Sampler: Joc

Well ID: B-2  
 Well Diameter: 2 in.  
 Total Depth: 19.07 ft.  
 Depth to Water: 14.02 ft.

Date Monitored: 1-24-06 Well Condition: O.K.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started:	_____ (2400 hrs)
Time Completed:	_____ (2400 hrs)
Depth to Product:	_____ ft
Depth to Water:	_____ ft
Hydrocarbon Thickness:	<u>0</u> ft
Visual Confirmation/Description:	
Skimmer / Absorbant Sock (circle one)	
Amt Removed from Skimmer:	_____ gal
Amt Removed from Well:	_____ gal
Water Removed:	_____ gal
Product Transferred to:	_____

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: \_\_\_\_\_ Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-2					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

***CHEVRON SERVICE STATION #9-1026***  
***Oakland, California***

***MONTHLY MONITORING EVENT***  
***Of February 10, 2006***



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 2-10-06 (inclusive)  
 City: Oakland, CA Sampler: Joc

Well ID: B Date Monitored: 2-10-06 Well Condition: O.K.

Well Diameter: 4 in.  
 Total Depth: 34.26 ft.  
 Depth to Water: 13.78 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1505 (2400 hrs)  
 Time Completed: 1530 (2400 hrs)  
 Depth to Product: 13.77 ft  
 Depth to Water: 13.78 ft  
 Hydrocarbon Thickness: 0.01 ft  
 Visual Confirmation/Description:  
Dark smelly product  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: 1.5 ounce gal  
 Water Removed: 1 gal gal  
 Product Transferred to: 0/R yard

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #9-1026  
 Site Address: 3701 Broadway  
 City: Oakland, CA

Job Number: 385127  
 Event Date: 2-10-06 (inclusive)  
 Sampler: Joe

Well ID: B-2  
 Well Diameter: 2 in.  
 Total Depth: 19.07 ft.  
 Depth to Water: 14.09 ft.

Date Monitored: 2-10-06 Well Condition: OK

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description:  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
B-2					

COMMENTS: MONTHLY PRODUCT GUAGING & BAILING

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

***CHEVRON SERVICE STATION #9-1026  
Oakland, California***

***QUARTERLY MONITORING  
& SAMPLING EVENT  
Of March 31, 2006***



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: 501

Well ID: A Date Monitored: 3-31-06 Well Condition: o.k.  
 Well Diameter: 214 in. Volume Factor (VF): 

3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

  
 Total Depth: 20.05 ft.  
 Depth to Water: 8.34 ft.  
11.71 xVF 0.17 = 1.99 x3 case volume= Estimated Purge Volume: 6 gal.

**Purge Equipment:**  
 Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0650 Weather Conditions: showers  
 Sample Time/Date: 0730 13-31-06 Water Color: clear Odor: none  
 Purging Flow Rate: 0.5 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>0705</u>	<u>2</u>	<u>6.96</u>	<u>1210</u>	<u>61.0</u>	_____	_____
<u>0710</u>	<u>4</u>	<u>7.16</u>	<u>1234</u>	<u>60.8</u>	_____	_____
<u>0715</u>	<u>6</u>	<u>7.20</u>	<u>1231</u>	<u>60.9</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>A</u>	<u>6 x voa vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_





# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Joc

Well ID: B Date Monitored: 3-31-06 Well Condition: OK

Well Diameter: 2 1/4 in.  
 Total Depth: 34.25 ft.  
 Depth to Water: 12.01 ft.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: 1130 (2400 hrs)  
 Time Completed: 1200 (2400 hrs)  
 Depth to Product: 11.99 ft  
 Depth to Water: 12.01 ft  
 Hydrocarbon Thickness: 0.02 ft  
 Visual Confirmation/Description:  
Pink colored product  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: 2 ounces gal  
 Water Removed: 1.5 gal  
 Product Transferred to: C/P guard

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3.31.06 (inclusive)  
 City: Oakland, CA Sampler: Joc

Well ID: B-1 Date Monitored: 3.31.06 Well Condition: o.k.  
 Well Diameter: 21(4) in.  
 Total Depth: 33.25 ft.  
 Depth to Water: 12.58 ft.  
20.67 xVF 0.66 = 13.64 x3 case volume = Estimated Purge Volume: 40 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump  \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer  \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0912 Weather Conditions: Showers  
 Sample Time/Date: 0940 13.31.06 Water Color: clean Odor: yes  
 Purging Flow Rate: 2.4 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
<u>0920</u>	<u>13</u>	<u>6.55</u>	<u>995</u>	<u>67.0</u>	_____	_____
<u>0925</u>	<u>26</u>	<u>6.57</u>	<u>1018</u>	<u>67.4</u>	_____	_____
<u>0930</u>	<u>40</u>	<u>6.59</u>	<u>1012</u>	<u>67.6</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-1</u>	<u>6</u> x vva vial	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: B-2 Date Monitored: 3-31-06 Well Condition: OK  
 Well Diameter: 21.4 in.  
 Total Depth: 19.08 ft.  
 Depth to Water: 12.57 ft.  
6.51 xVF 0.17 = 1.11 x3 case volume = Estimated Purge Volume: 3.5 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

**Purge Equipment:**  
 Disposable Bailer   
 Stainless Steel Bailer   
 Stack Pump   
 Suction Pump   
 Grundfos   
 Other:

**Sampling Equipment:**  
 Disposable Bailer   
 Pressure Bailer   
 Discrete Bailer   
 Other:

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_ gal  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 1025 Weather Conditions: cloudy/rain  
 Sample Time/Date: 1045 / 3-31-06 Water Color: clear Odor: yes  
 Purging Flow Rate: 0.5 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1034</u>	<u>1</u>	<u>6.72</u>	<u>896</u>	<u>60.9</u>	_____	_____
<u>1038</u>	<u>2</u>	<u>6.59</u>	<u>429</u>	<u>61.2</u>	_____	_____
<u>1042</u>	<u>3.5</u>	<u>6.64</u>	<u>931</u>	<u>61.0</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-2</u>	<u>6 x vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_  
 Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Soc

Well ID: B-3 Date Monitored: 3-31-06 Well Condition: OK  
 Well Diameter: (2) 4 in.  
 Total Depth: 79.96 ft.  
 Depth to Water: 11.08 ft.  
8.88 x VF 0.17 = 1.51 x3 case volume = Estimated Purge Volume: 4.5 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:  
 Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 1056 Weather Conditions: Rain  
 Sample Time/Date: 1115 133106 Water Color: clear Odor: yes  
 Purging Flow Rate: 0.5 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (u mhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>1100</u>	<u>1.5</u>	<u>6.77</u>	<u>1156</u>	<u>61.2</u>	_____	_____
<u>1104</u>	<u>3</u>	<u>6.82</u>	<u>1150</u>	<u>61.7</u>	_____	_____
<u>1108</u>	<u>4.5</u>	<u>6.81</u>	<u>1107</u>	<u>61.4</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-3</u>	<u>6 x vov vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_  
 Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER - RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Joe

Well ID: B-4 Date Monitored: 3-31-06 Well Condition: OK  
 Well Diameter: 214 in.  
 Total Depth: 19.61 ft.  
 Depth to Water: 11.70 ft.  
7.91 xVF 0.17 = 1.34 x3 case volume = Estimated Purge Volume: 4 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

### Purge Equipment:

Disposable Bailer   
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer   
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_

Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0950 Weather Conditions: cloudy  
 Sample Time/Date: 1015 3-31-06 Water Color: clean Odor: yes  
 Purging Flow Rate: 0.5 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C/F)	D.O. (mg/L)	ORP (mV)
<u>0958</u>	<u>1.5</u>	<u>6.85</u>	<u>1304</u>	<u>60.9</u>	_____	_____
<u>1003</u>	<u>3</u>	<u>6.81</u>	<u>1295</u>	<u>61.0</u>	_____	_____
<u>1008</u>	<u>4</u>	<u>6.75</u>	<u>1293</u>	<u>61.2</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>B-4</u>	<u>6 x vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_

Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: JD

Well ID: E Date Monitored: \_\_\_\_\_ Well Condition: \_\_\_\_\_  
 Well Diameter: 2 / 4 in.  
 Total Depth: \_\_\_\_\_ ft.  
 Depth to Water: \_\_\_\_\_ ft.  
 \_\_\_\_\_ xVF \_\_\_\_\_ = \_\_\_\_\_ x3 case volume= Estimated Purge Volume: \_\_\_\_\_ gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: Well still paved over

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Soc

Well ID: F Date Monitored: \_\_\_\_\_ Well Condition: \_\_\_\_\_  
 Well Diameter: 2 1/4 in.  
 Total Depth: \_\_\_\_\_ ft.  
 Depth to Water: \_\_\_\_\_ ft.  
 \_\_\_\_\_ xVF = \_\_\_\_\_ x3 case volume = Estimated Purge Volume: \_\_\_\_\_ gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

**Purge Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

**Sampling Equipment:**  
 Disposable Bailer \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: \_\_\_\_\_ ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): \_\_\_\_\_ Weather Conditions: \_\_\_\_\_  
 Sample Time/Date: 1 Water Color: \_\_\_\_\_ Odor: \_\_\_\_\_  
 Purging Flow Rate: \_\_\_\_\_ gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
	x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)

COMMENTS: well still purged

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_



# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Jo-

Well ID: EA-1 Date Monitored: 3-31-06 Well Condition: o.k  
 Well Diameter: 21(4) in.  
 Total Depth: 27.80 ft.  
 Depth to Water: 12.30 ft.  
15.50 xVF 0.66 = 10.23 x3 case volume = Estimated Purge Volume: 30 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

### Purge Equipment:

Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump  \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

### Sampling Equipment:

Disposable Bailer  \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_

Skimmer / Absorbent Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0742 Weather Conditions: cloudy  
 Sample Time/Date: 0815 / 3-31-06 Water Color: clear Odor: none  
 Purging Flow Rate: 2.3 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (u mhos/cm)	Temperature (C/E)	D.O. (mg/L)	ORP (mV)
<u>0755</u>	<u>10</u>	<u>7.61</u>	<u>1085</u>	<u>65.9</u>	_____	_____
<u>0759</u>	<u>20</u>	<u>7.64</u>	<u>967</u>	<u>66.2</u>	_____	_____
<u>0804</u>	<u>30</u>	<u>7.60</u>	<u>962</u>	<u>66.4</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>EA-1</u>	<u>6 x vva vial</u>	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_





# GETTLER-RYAN INC.

## WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: Chevron #9-1026 Job Number: 385127  
 Site Address: 3701 Broadway Event Date: 3-31-06 (inclusive)  
 City: Oakland, CA Sampler: Joc

Well ID: EA-2 Date Monitored: 3-31-06 Well Condition: o.k.  
 Well Diameter: 2 1/4 in.  
 Total Depth: 30.15 ft.  
 Depth to Water: 12.49 ft.  
17.66 xVF 0.66 = 11.66 x3 case volume = Estimated Purge Volume: 35 gal.

Volume	3/4"= 0.02	1"= 0.04	2"= 0.17	3"= 0.38
Factor (VF)	4"= 0.66	5"= 1.02	6"= 1.50	12"= 5.80

Purge Equipment:  
 Disposable Bailer \_\_\_\_\_  
 Stainless Steel Bailer \_\_\_\_\_  
 Stack Pump \_\_\_\_\_  
 Suction Pump  \_\_\_\_\_  
 Grundfos \_\_\_\_\_  
 Other: \_\_\_\_\_

Sampling Equipment:  
 Disposable Bailer  \_\_\_\_\_  
 Pressure Bailer \_\_\_\_\_  
 Discrete Bailer \_\_\_\_\_  
 Other: \_\_\_\_\_

Time Started: \_\_\_\_\_ (2400 hrs)  
 Time Completed: \_\_\_\_\_ (2400 hrs)  
 Depth to Product: \_\_\_\_\_ ft  
 Depth to Water: \_\_\_\_\_ ft  
 Hydrocarbon Thickness: 0 ft  
 Visual Confirmation/Description: \_\_\_\_\_  
 Skimmer / Absorbant Sock (circle one)  
 Amt Removed from Skimmer: \_\_\_\_\_ gal  
 Amt Removed from Well: \_\_\_\_\_ gal  
 Water Removed: \_\_\_\_\_  
 Product Transferred to: \_\_\_\_\_

Start Time (purge): 0833 Weather Conditions: cloudy  
 Sample Time/Date: 0900 13-31-06 Water Color: clear Odor: none  
 Purging Flow Rate: 2.21 gpm. Sediment Description: \_\_\_\_\_  
 Did well de-water? \_\_\_\_\_ If yes, Time: \_\_\_\_\_ Volume: \_\_\_\_\_ gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (u mhos/cm)	Temperature (C/KP)	D.O. (mg/L)	ORP (mV)
<u>0842</u>	<u>12</u>	<u>7.10</u>	<u>1095</u>	<u>67.0</u>	_____	_____
<u>0848</u>	<u>25</u>	<u>7.15</u>	<u>1104</u>	<u>66.7</u>	_____	_____
<u>0852</u>	<u>35</u>	<u>7.17</u>	<u>1108</u>	<u>66.3</u>	_____	_____

### LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
<u>EA-2</u>	<u>6</u> x vovial	<u>YES</u>	<u>HCL</u>	<u>LANCASTER</u>	<u>TPH-G(8015)/BTEX+MTBE(8260)</u>

COMMENTS: \_\_\_\_\_

Add/Replaced Lock: \_\_\_\_\_ Add/Replaced Plug: \_\_\_\_\_ Size: \_\_\_\_\_

# Chevron California Region Analysis Request/Chain of Custody



For Lancaster Laboratories use only  
 Acct. #: 11904 Sample #: 4741765-76 SCR#: \_\_\_\_\_

033106-08 <sup>KV 3-31-06</sup>

96983959

Facility #: SS#9-1026-OML G-R#385127 Global ID#T0600100334  
 Site Address: 3701 BROADWAY, OAKLAND, CA  
 Chevron PMM: \_\_\_\_\_ Lead Consultant: CAMBRIALG  
 Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, Ca. 94568  
 Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)  
 Consultant Phone: #925-551-7555 Fax #: 925-551-7899  
 Sampler: JOE ATEMIAN  
 Service Order #: \_\_\_\_\_  Non SAR:

Matrix	Analyses Requested										
	Preservation Codes										
<input type="checkbox"/> Potable <input type="checkbox"/> NPDES <input type="checkbox"/> Soil <input type="checkbox"/> Water <input type="checkbox"/> Oil <input type="checkbox"/> Air	Total Number of Containers										
	2	6	6	6	6	6	6	6	6	6	6
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Preservative Codes**  
 H = HCl      T = Thiosulfate  
 N = HNO<sub>3</sub>    B = NaOH  
 S = H<sub>2</sub>SO<sub>4</sub>    O = Other

J value reporting needed  
 Must meet lowest detection limits possible for 8260 compounds

8021 MTBE Confirmation  
 Confirm highest hit by 8260  
 Confirm all hits by 8260  
 Run \_\_\_ oxy s on highest hit  
 Run \_\_\_ oxy s on all hits

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8260	8021	TPH 8015 MOD	GRO	TPH 8015 MOD DRO	Silica Gel Cleanup	8260 full scan	Oxygenates	Lead 7420	7421	
QA	—	—	✓			✓			2	✓	✓	✓	✓							
A	3-31-06	0730							6	✓		✓	✓							
B-1		0940							6	✓		✓	✓							
B-2		1045							6	✓		✓	✓							
B-3		1115							6	✓		✓	✓							
B-4		1015							6	✓		✓	✓							
EA-1		0815							6	✓		✓	✓							
EA-2	✓	0900	✓			✓			6	✓		✓	✓							

**Comments / Remarks**

**Turnaround Time Requested (TAT) (please circle)**

STD. TAT	72 hour	48 hour
24 hour	4 day	5 day

**Data Package Options (please circle if required)**

QC Summary      Type I — Full  
 Type VI (Raw Data)       Coelt Deliverable not needed      **EDF/EDD**  
 WIP (RWQCB)  
 Disk

Relinquished by: <u>[Signature]</u>	Date: <u>3-31-06</u>	Time: _____	Received by: <u>[Signature]</u>	Date: <u>3-31-06</u>	Time: <u>12:05</u>
Relinquished by: <u>[Signature]</u>	Date: <u>3/31/06</u>	Time: <u>1530</u>	Received by: <u>[Signature]</u>	Date: <u>3/31/06</u>	Time: _____
Relinquished by: _____	Date: _____	Time: _____	Received by: _____	Date: _____	Time: _____
Relinquished by Commercial Carrier: _____	UPS	FedEx	Other: <u>OHL</u>	Received by: <u>[Signature]</u>	Date: <u>3/31/06</u>
Temperature Upon Receipt: <u>33.2, 21.0 °C 91.0°</u>			Custody Seals Intact? <u>Yes</u>	No	



# Analysis Report

2425 New Holland Pike, PO Box 12425, Lancaster, PA 17605-2425 • 717-656-2300 Fax: 717-656-2681 • www.lancasterlabs.com

## ANALYTICAL RESULTS

Prepared for:

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

925-842-8582

Prepared by:

Lancaster Laboratories  
2425 New Holland Pike  
Lancaster, PA 17605-2425

RECEIVED  
GETTLER RYAN INC  
GENERAL CONTRACTORS INC

## SAMPLE GROUP

The sample group for this submittal is 983959. Samples arrived at the laboratory on Saturday, April 01, 2006. The PO# for this group is 0015002176 and the release number is INGLIS.

<u>Client Description</u>		<u>Lancaster Labs Number</u>
QA-T-060331	NA Water	4741765
A-W-060331	Grab Water	4741766
B-1-W-060331	Grab Water	4741767
B-2-W-060331	Grab Water	4741768
B-3-W-060331	Grab Water	4741769
B-4-W-060331	Grab Water	4741770
EA-1-W-060331	Grab Water	4741771
EA-2-W-060331	Grab Water	4741772

ELECTRONIC  
COPY TO

Cambria c/o Gettler-Ryan

Attn: Cheryl Hansen



## **Analysis Report**

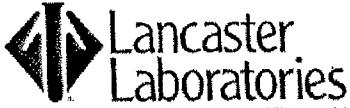
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Questions? Contact your Client Services Representative  
Lynn M Frederiksen at (717) 656-2300

Respectfully Submitted,

A handwritten signature in black ink, appearing to read "Elizabeth A. Smith".

**Elizabeth A. Smith**  
Senior Specialist



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741765

QA-T-060331 NA Water  
Facility# 91026 Job# 385127 GRD  
3701 Broadway-Oakland T0600100334 QA  
Collected: 03/31/2006

Account Number: 10904

Submitted: 04/01/2006 09:25  
Reported: 04/11/2006 at 15:49  
Discard: 05/12/2006

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

### BRDTB

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	N.D.	50.	ug/l	1
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

### Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/03/2006 20:41	Steven A Skiles	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 14:50	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/03/2006 20:41	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 14:50	Ginelle L Feister	1



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741766

A-W-060331 Grab Water  
 Facility# 91026 Job# 385127 GRD  
 3701 Broadway-Oakland T0600100334 A  
 Collected: 03/31/2006 07:30 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
 Reported: 04/11/2006 at 15:49  
 Discard: 05/12/2006

Chevron  
 6001 Bollinger Canyon Rd L4310  
 San Ramon CA 94583

BRD-A

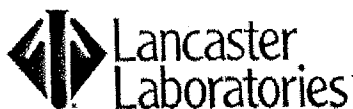
CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.	n.a.	N.D.	50.	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/03/2006 20:52	Steven A Skiles	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 15:14	Ginelle L Peister	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/03/2006 20:52	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 15:14	Ginelle L Peister	1



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741767

B-1-W-060331 Grab Water  
Facility# 91026 Job# 385127 GRD  
3701 Broadway-Oakland T0600100334 B-1  
Collected: 03/31/2006 09:40 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
Reported: 04/11/2006 at 15:49  
Discard: 05/12/2006

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

BRDB1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.	n.a.	520.	50.	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	23.	0.5	ug/l	1
05407	Toluene	108-88-3	1.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	0.8	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	2.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/03/2006 21:03	Steven A Skiles	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 15:38	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/03/2006 21:03	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 15:38	Ginelle L Feister	1



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741768

B-2-W-060331 Grab Water  
Facility# 91026 Job# 385127 GRD  
3701 Broadway-Oakland T0600100334 B-2  
Collected: 03/31/2006 10:45 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
Reported: 04/11/2006 at 15:49  
Discard: 05/12/2006

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

BRDB2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.	n.a.	72,000.	2,500.	ug/l	50
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	130.	3.	ug/l	5
05401	Benzene	71-43-2	17,000.	50.	ug/l	100
05407	Toluene	108-88-3	770.	3.	ug/l	5
05415	Ethylbenzene	100-41-4	1,500.	10.	ug/l	20
06310	Xylene (Total)	1330-20-7	5,000.	10.	ug/l	20

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/04/2006 16:21	Steven A Skiles	50
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 16:02	Ginelle L Feister	5
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 16:26	Ginelle L Feister	20
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/10/2006 23:43	Dawn M Harle	100
01146	GC VOA Water Prep	SW-846 5030B	1	04/04/2006 16:21	Steven A Skiles	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 16:02	Ginelle L Feister	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	04/09/2006 16:26	Ginelle L Feister	20
01163	GC/MS VOA Water Prep	SW-846 5030B	3	04/10/2006 23:43	Dawn M Harle	100





# Analysis Report

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Lancaster Laboratories Sample No. WW 4741769

B-3-W-060331 Grab Water  
 Facility# 91026 Job# 385127 GRD  
 3701 Broadway-Oakland T0600100334 B-3  
 Collected: 03/31/2006 11:15 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
 Reported: 04/11/2006 at 15:50  
 Discard: 05/12/2006

Chevron  
 6001 Bollinger Canyon Rd L4310  
 San Ramon CA 94583

BRDB3

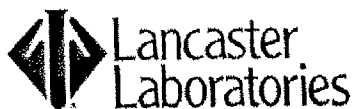
CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	130,000.	2,500.	ug/l	50
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	7.	3.	ug/l	5
05401	Benzene	71-43-2	24,000.	100.	ug/l	200
05407	Toluene	108-88-3	15,000.	100.	ug/l	200
05415	Ethylbenzene	100-41-4	1,500.	10.	ug/l	20
06310	Xylene (Total)	1330-20-7	8,400.	10.	ug/l	20

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/04/2006 16:10	Steven A Skiles	50
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 16:50	Ginelle L Feister	5
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 17:14	Ginelle L Feister	20
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/11/2006 07:39	Dawn M Harle	200
01146	GC VOA Water Prep	SW-846 5030B	1	04/04/2006 16:10	Steven A Skiles	50
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 16:50	Ginelle L Feister	5
01163	GC/MS VOA Water Prep	SW-846 5030B	2	04/09/2006 17:14	Ginelle L Feister	20
01163	GC/MS VOA Water Prep	SW-846 5030B	3	04/11/2006 07:39	Dawn M Harle	200



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741770

B-4-W-060331 Grab Water  
 Facility# 91026 Job# 385127 GRD  
 3701 Broadway-Oakland T0600100334 B-4  
 Collected: 03/31/2006 10:15 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
 Reported: 04/11/2006 at 15:50  
 Discard: 05/12/2006

Chevron  
 6001 Bollinger Canyon Rd L4310  
 San Ramon CA 94583

BRDB4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters	n.a.	9,200.	250.	ug/l	5
	The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.					
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	0.6	0.5	ug/l	1
05401	Benzene	71-43-2	2,100.	10.	ug/l	20
05407	Toluene	108-88-3	17.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	220.	3.	ug/l	5
06310	Xylene (Total)	1330-20-7	120.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/04/2006 16:43	Steven A Skiles	5
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 13:51	Ginelle L Feister	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 14:14	Ginelle L Feister	5
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/11/2006 00:31	Dawn M Harle	20
01146	GC VOA Water Prep	SW-846 5030B	1	04/04/2006 16:43	Steven A Skiles	5
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 13:51	Ginelle L Feister	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	04/09/2006 14:14	Ginelle L Feister	5
01163	GC/MS VOA Water Prep	SW-846 5030B	3	04/11/2006 00:31	Dawn M Harle	20



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741771

EA-1-W-060331 Grab Water  
Facility# 91026 Job# 385127 GRD.  
3701 Broadway-Oakland T0600100334 EA-1  
Collected: 03/31/2006 08:15 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
Reported: 04/11/2006 at 15:50  
Discard: 05/12/2006

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

BRDE1

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.	n.a.	N.D.	50.	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/03/2006 21:46	Steven A Skiles	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 14:38	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	04/03/2006 21:46	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	04/09/2006 14:38	Ginelle L Feister	1



# Analysis Report

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Lancaster Laboratories Sample No. WW 4741772

EA-2-W-060331 Grab Water  
Facility# 91026 Job# 385127 GRD  
3701 Broadway-Oakland T0600100334 EA-2  
Collected: 03/31/2006 09:00 by JA

Account Number: 10904

Submitted: 04/01/2006 09:25  
Reported: 04/11/2006 at 15:50  
Discard: 05/12/2006

Chevron  
6001 Bollinger Canyon Rd L4310  
San Ramon CA 94583

BRDE2

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Waters The reported concentration of TPH-GRO does not include MTBE or other gasoline constituents eluting prior to the C6 (n-hexane) TPH-GRO range start time.	n.a.	N.D.	50.	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

All QC is compliant unless otherwise noted. Please refer to the Quality Control Summary for overall QC performance data and associated samples.

## Laboratory Chronicle

CAT No.	Analysis Name	Method	Analysis		Analyst	Dilution Factor
			Trial#	Date and Time		
01728	TPH-GRO - Waters	N. CA LUFT GRO	1	04/03/2006 21:57	Steven A Skiles	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	04/09/2006 15:02	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030E	1	04/03/2006 21:57	Steven A Skiles	1
01163	GC/MS VOA Water Prep	SW-846 5030E	1	04/09/2006 15:02	Ginelle L Feister	1

## Quality Control Summary

 Client Name: Chevron  
 Reported: 04/11/06 at 03:50 PM

Group Number: 983959

Matrix QC may not be reported if site-specific QC samples were not submitted. In these situations, to demonstrate precision and accuracy at a batch level, a LCS/LCSD was performed, unless otherwise specified in the method.

### Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: 06093A20A TPH-GRO - Waters	N.D.	50.	Sample number(s): 4741766, 4741772 ug/l	118	121	70-130	3	30
Batch number: 06093A20B TPH-GRO - Waters	N.D.	50.	Sample number(s): 4741768, 4741770 ug/l	118	121	70-130	3	30
Batch number: 06093B20A TPH-GRO - Waters	N.D.	50.	Sample number(s): 4741765, 4741767, 4741771 ug/l	112	121	70-130	7	30
Batch number: 06093B20B TPH-GRO - Waters	N.D.	50.	Sample number(s): 4741769 ug/l	112	121	70-130	7	30
Batch number: Z060973AB Methyl Tertiary Butyl Ether	N.D.	0.5	Sample number(s): 4741765-4741769 ug/l	93	94	73-119	1	30
Benzene	N.D.	0.5	ug/l	86	86	85-117	1	30
Toluene	N.D.	0.5	ug/l	90	92	85-115	2	30
Ethylbenzene	N.D.	0.5	ug/l	91	94	82-119	3	30
Xylene (Total)	N.D.	0.5	ug/l	91	94	83-113	3	30
Batch number: Z060974AB Methyl Tertiary Butyl Ether	N.D.	0.5	Sample number(s): 4741770-4741772 ug/l	99		73-119		
Benzene	N.D.	0.5	ug/l	86		85-117		
Toluene	N.D.	0.5	ug/l	97		85-115		
Ethylbenzene	N.D.	0.5	ug/l	93		82-119		
Xylene (Total)	N.D.	0.5	ug/l	93		83-113		
Batch number: Z061004AA Benzene	N.D.	0.5	Sample number(s): 4741768-4741770 ug/l	91		85-117		
Toluene	N.D.	0.5	ug/l	100		85-115		

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
 Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 06093A20A TPH-GRO - Waters	111		63-154			UNSPK: P741160			
Batch number: 06093A20B TPH-GRO - Waters	111		63-154			UNSPK: P741160			
Batch number: 06093B20A TPH-GRO - Waters	113		63-154			UNSPK: P741159			

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

## Quality Control Summary

Client Name: Chevron  
Reported: 04/11/06 at 03:50 PM

Group Number: 983959

### Sample Matrix Quality Control

Unspiked (UNSPK) = the sample used in conjunction with the matrix spike  
Background (BKG) = the sample used in conjunction with the duplicate

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 06093B20B TPH-GRO - Waters	Sample number(s): 4741769 UNSPK: P741159 113 63-154								
Batch number: Z060973AB Methyl Tertiary Butyl Ether	Sample number(s): 4741765-4741769 UNSPK: P741119								
Benzene	97		69-127						
Toluene	94		83-128						
Ethylbenzene	99		83-127						
Xylene (Total)	99		82-129						
	98		82-130						
Batch number: Z060974AB Methyl Tertiary Butyl Ether	Sample number(s): 4741770-4741772 UNSPK: P740910								
Benzene	110	110	69-127	0	30				
Toluene	97	96	83-128	1	30				
Ethylbenzene	105	106	83-127	1	30				
Xylene (Total)	102	103	82-129	1	30				
	100	102	82-130	2	30				
Batch number: Z061004AA Benzene	Sample number(s): 4741768-4741770 UNSPK: P743656								
Toluene	101	104	83-128	3	30				
	104	105	83-127	1	30				

### Surrogate Quality Control

Surrogate recoveries which are outside of the QC window are confirmed unless attributed to dilution or otherwise noted on the Analysis Report.

Analysis Name: TPH-GRO - Waters  
Batch number: 06093A20A  
Trifluorotoluene-F

4741766	86
4741772	87
Blank	86
LCS	118
LCSD	117
MS	115

Limits: 63-135

Analysis Name: TPH-GRO - Waters  
Batch number: 06093A20B  
Trifluorotoluene-F

4741768	92
4741770	102
Blank	85
LCS	118
LCSD	117
MS	115

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

## Quality Control Summary

 Client Name: Chevron  
 Reported: 04/11/06 at 03:50 PM

Group Number: 983959

### Surrogate Quality Control

Limits: 63-135

 Analysis Name: TPH-GRO - Waters  
 Batch number: 06093B20A  
 Trifluorotoluene-F

4741765	98
4741767	104
4741771	96
Blank	100
LCS	120
LCSD	123
MS	120

Limits: 63-135

 Analysis Name: TPH-GRO - Waters  
 Batch number: 06093B20B  
 Trifluorotoluene-F

4741769	110
Blank	100
LCS	120
LCSD	123
MS	120

Limits: 63-135

 Analysis Name: BTEX+MTBE by 8260B  
 Batch number: Z060973AB  
 Dibromofluoromethane

		1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4741765	93	84	89	86
4741766	94	84	90	87
4741767	91	81	90	88
4741768	86	79	92	90
4741769	89	81	87	90
Blank	93	84	90	86
LCS	92	85	90	91
LCSD	91	85	90	92
MS	92	84	90	92

Limits: 80-116

77-113

80-113

78-113

 Analysis Name: BTEX+MTBE by 8260B  
 Batch number: Z060974AB  
 Dibromofluoromethane

		1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4741770	91	86	97	88
4741771	100	93	96	82
4741772	99	94	97	82
Blank	94	88	94	83
LCS	95	89	98	87
MS	94	91	96	90
MSD	95	91	96	89

Limits: 80-116

77-113

80-113

78-113

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.

## Quality Control Summary

Client Name: Chevron  
Reported: 04/11/06 at 03:50 PM

Group Number: 983959

### Surrogate Quality Control

Analysis Name: 8260 Master Scan (water)  
Batch number: Z061004AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
Blank	88	82	91	85
LCS	86	81	91	88
MS	87	86	91	88
MSD	86	84	90	88
Limits:	80-116	77-113	80-113	78-113

\*- Outside of specification

- (1) The result for one or both determinations was less than five times the LOQ.
- (2) The background result was more than four times the spike added.



## Lancaster Laboratories Explanation of Symbols and Abbreviations

The following defines common symbols and abbreviations used in reporting technical data:

<b>N.D.</b>	none detected	<b>BMQL</b>	Below Minimum Quantitation Level
<b>TNTC</b>	Too Numerous To Count	<b>MPN</b>	Most Probable Number
<b>IU</b>	International Units	<b>CP Units</b>	cobalt-chloroplatinate units
<b>umhos/cm</b>	micromhos/cm	<b>NTU</b>	nephelometric turbidity units
<b>C</b>	degrees Celsius	<b>F</b>	degrees Fahrenheit
<b>Cal</b>	(diet) calories	<b>lb.</b>	pound(s)
<b>meq</b>	milliequivalents	<b>kg</b>	kilogram(s)
<b>g</b>	gram(s)	<b>mg</b>	milligram(s)
<b>ug</b>	microgram(s)	<b>l</b>	liter(s)
<b>ml</b>	milliliter(s)	<b>ul</b>	microliter(s)
<b>m3</b>	cubic meter(s)	<b>fib &gt;5 um/ml</b>	fibers greater than 5 microns in length per ml
<b>&lt;</b>	less than – The number following the sign is the <u>limit of quantitation</u> , the smallest amount of analyte which can be reliably determined using this specific test.		
<b>&gt;</b>	greater than		
<b>ppm</b>	parts per million – One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.		
<b>ppb</b>	parts per billion		
<b>Dry weight basis</b>	Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.		

### U.S. EPA data qualifiers:

Organic Qualifiers	Inorganic Qualifiers		
<b>A</b>	TIC is a possible aldol-condensation product	<b>B</b>	Value is <CRDL, but ≥IDL
<b>B</b>	Analyte was also detected in the blank	<b>E</b>	Estimated due to interference
<b>C</b>	Pesticide result confirmed by GC/MS	<b>M</b>	Duplicate injection precision not met
<b>D</b>	Compound quantitated on a diluted sample	<b>N</b>	Spike amount not within control limits
<b>E</b>	Concentration exceeds the calibration range of the instrument	<b>S</b>	Method of standard additions (MSA) used for calculation
<b>J</b>	Estimated value	<b>U</b>	Compound was not detected
<b>N</b>	Presumptive evidence of a compound (TICs only)	<b>W</b>	Post digestion spike out of control limits
<b>P</b>	Concentration difference between primary and confirmation columns >25%	<b>*</b>	Duplicate analysis not within control limits
<b>U</b>	Compound was not detected	<b>+</b>	Correlation coefficient for MSA <0.995
<b>X,Y,Z</b>	Defined in case narrative		

Analytical test results for methods listed on the laboratories' accreditation scope meet all requirements of NELAC unless otherwise noted under the individual analysis.

Tests results relate only to the sample tested. Clients should be aware that a critical step in a chemical or microbiological analysis is the collection of the sample. Unless the sample analyzed is truly representative of the bulk of material involved, the test results will be meaningless. If you have questions regarding the proper techniques of collecting samples, please contact us. We cannot be held responsible for sample integrity, however, unless sampling has been performed by a member of our staff. This report shall not be reproduced except in full, without the written approval of the laboratory.

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C A M B R I A



**ATTACHMENT E**  
**Geophysical Survey**



July 19, 2006

Laura Genir  
Cambria Environmental  
5900 Hollis Street  
Emeryville, CA 94608

NORCAL Project No. 06-462.28

Subject : Geophysical Survey  
Former Chevron Station No. 9-1026  
3701 Broadway  
Oakland, California

Dear Ms. Genir,

The purpose of this letter report is to document the geophysical investigation conducted by NORCAL Geophysical Consultants, Inc. at the subject facility in Oakland, California. The investigation was conducted by NORCAL Geophysicist David Bissiri and Field Technician Travis Black on June 15, 2006. Background information was provided by Ms. Laura Genir of Cambria Environmental.

## **I SITE DESCRIPTION and PURPOSE**

The site is a vacant lot located at the southwest corner of Broadway and West MacArthur Boulevard in Oakland. It is comprised of a roughly 140- by 100-foot rectangular parking lot enclosed by a chain-link fence on the west, south, and east sides and a concrete-block wall on the north side. The site is paved primarily with asphalt, however there are several irregularly-shaped concrete pads of various sizes throughout the site as well (see Plate 1). The investigation area, as designated by Cambria Environmental, consisted of the accessible portions of the site within the fences and wall.

According to information provided by Cambria Environmental, the site was formerly the location of a gasoline service station dating from at least the 1940's. The service station was demolished in the late 1980's and the underground storage tanks (USTs) were reportedly removed at that time. However, it is not known if all the piping or other underground utilities associated with the gasoline station were removed or abandoned in place. The purpose of the survey, therefore, was to determine if subsurface objects associated with the former station, such as piping and utilities, are still present.

## **II METHODS**

We conducted the investigation using a combination of vertical magnetic gradient (VMG), hand-held metal-detection (MD), ground penetrating radar (GPR), and electromagnetic line locating (EMLL) methods. Descriptions of these methods, the equipment used, and their limitations are provided in Appendix A. A summary of our field activities and findings is presented below.



### III DATA ACQUISITION

The first task undertaken by NORCAL was to establish a survey grid within the investigation area in order to provide horizontal control. The grid consisted of a series of north-south lines spaced 5-foot apart with data stations placed at 5-foot intervals along the lines. We collected VMG data along the lines by pausing at each data station while VMG measurements were taken. Following the VMG data collection, the data were uploaded to a field computer and processed to produce a VMG contour map. This map was evaluated for VMG variations indicative of subsurface ferrous material. Areas identified on the contour map as having anomalous VMG variations were then investigated further with the MD and GPR methods. This follow-up work consisted of systematically operating the MD instrument along multiple bi-directional traverses centered over the identified VMG anomalies. The traverses ranged in length from 20 to 50 feet and were spaced approximately 3 feet apart. The apparent outlines and/or orientations of detected subsurface objects were then painted on the ground with pink spray paint. In addition to investigating specific VMG anomalies, the MD was also used to conduct a general reconnaissance of the survey area. This reconnaissance consisted of carrying the MD instrument along the same north-south grid lines used for the VMG survey and along intersecting east-west lines spaced five-feet apart. Additional MD lines were located in the portions of the site where reliable VMG data could not be obtained, such as between the limits of the VMG survey area and the fences.

The follow-up work with the GPR consisted of obtaining GPR data along multiple bidirectional traverses centered over identified MD anomalies. The length of the GPR traverses ranged from 30 to 80 feet, as depicted on Plate 1 by the solid purple lines. The resulting GPR profiles were examined for reflection patterns suggestive of utilities or debris and the apparent locations of detected objects compared to those obtained with the other survey methods.

### IV RESULTS

The findings of our investigation is presented on Plates 1 and 2. Plate 1 is a site map showing the locations of pertinent above-ground objects, interpreted subsurface features, and the locations of the GPR traverses. Plate 2 is a VMG contour map depicting the lateral variations in the magnetic field. Overlain on this map are the same pertinent features displayed on Plate 1.

Examination of the VMG contour map reveals a number of closely spaced and convoluted contour closures, or variations, within the investigation area. These variations indicate the presence of ferrous material and are located, in large part, in the vicinity of the concrete pads. The shape and extent of the magnetic variations are somewhat irregular, which suggests that multiple magnetic sources are present. The follow-up investigation with the MD corroborated this interpretation for several metallic objects were detected at or near the center of many of the VMG anomalies. Based on the response of the metal-detector instrument, the metallic objects consist of essentially two types. The first type consist of several broad, sheet-like objects roughly coincident with the concrete pads. We interpret these objects as representing mats of rebars or wire-mesh imbedded within the concrete pads. The second type of feature detected with the MD consisted of several elongate



Cambria Environmental  
July 19, 2006  
Page 3

metallic objects within the asphalt-paved portion of the site. We interpret these objects as being buried utilities. Most of these utilities appear to be abandoned and are depicted on the plates as the dashed lines labeled "-E-" (electric), "-W-" (water), "-uu-" (undifferentiated utility), etc. However there is one area, or zone, of anomalous VMG variations that does not coincide closely with either the concrete pads or the suspected utilities. This zone is depicted on the plates as the hachured red figure located in the northwest portion of the survey area. While the magnitude of the VMG variations in the vicinity of the zone suggests that a significant amount of ferrous material may be buried nearby, no notable metallic object was detected with the metal-detector. This suggests that the variations are due to either a single object with limited horizontal cross-sectional area, such as a cut-off sign post or flag pole, or are due to an accumulation of relatively small metal objects that cannot be readily detected with the MD.

The follow-up work of the MD anomalies with GPR, was inconclusive. While the GPR profiles clearly displayed reflection patterns consistent with the presence of rebars in the concrete pads and disturbed soil underneath the asphalt, none of the profiles displayed reflection patterns typical of either the detected utilities or possible buried debris. This suggests that the effective depth of GPR signal penetration was limited to the upper two feet of the subsurface and perhaps insufficient to image objects below this depth.

#### **V STANDARD CARE and WARRANTY**

The scope of NORCAL's services for this project consisted of using geophysical methods to assess the area of investigation for buried metal objects. The accuracy of our findings is subject to specific site conditions and limitations inherent to the techniques used. The services were performed in a manner consistent with the standard of care ordinarily exercised by members of the profession currently employing similar methods. No warranty, with respect to the services or products delivered under this agreement, expressed or implied, is made by NORCAL.

We appreciate having the opportunity to provide you with this information.

Respectfully,

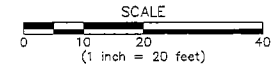
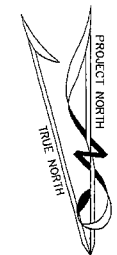
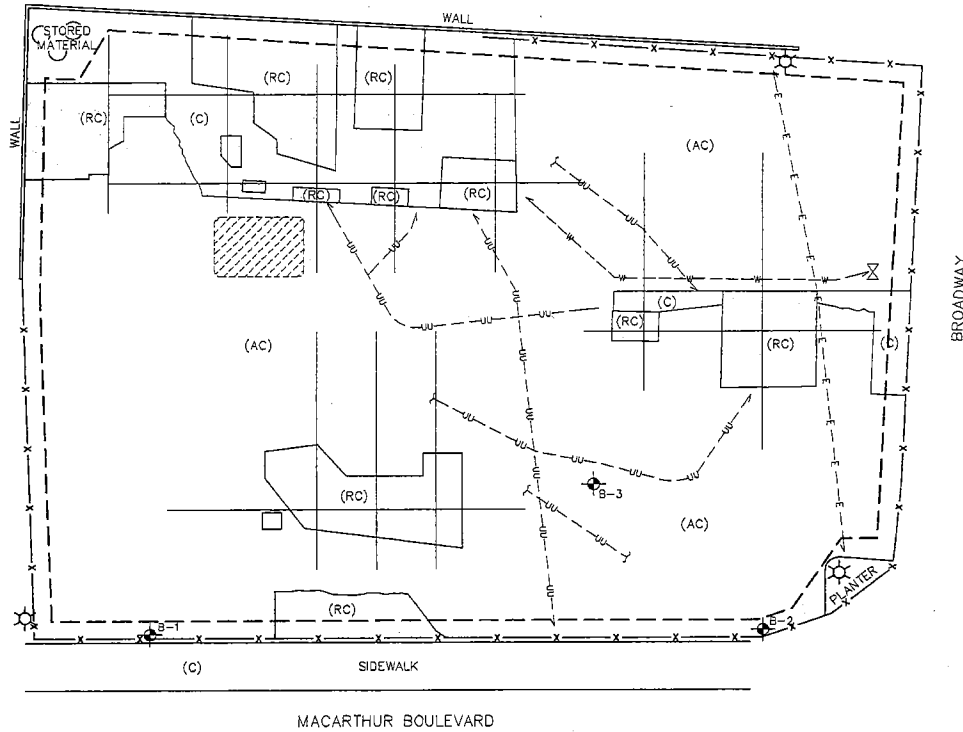
NORCAL Geophysical Consultants, Inc.

A handwritten signature in black ink, appearing to read "David Bissiri".


David Bissiri  
Geophysicist GP - 1009

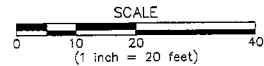
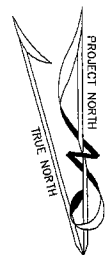
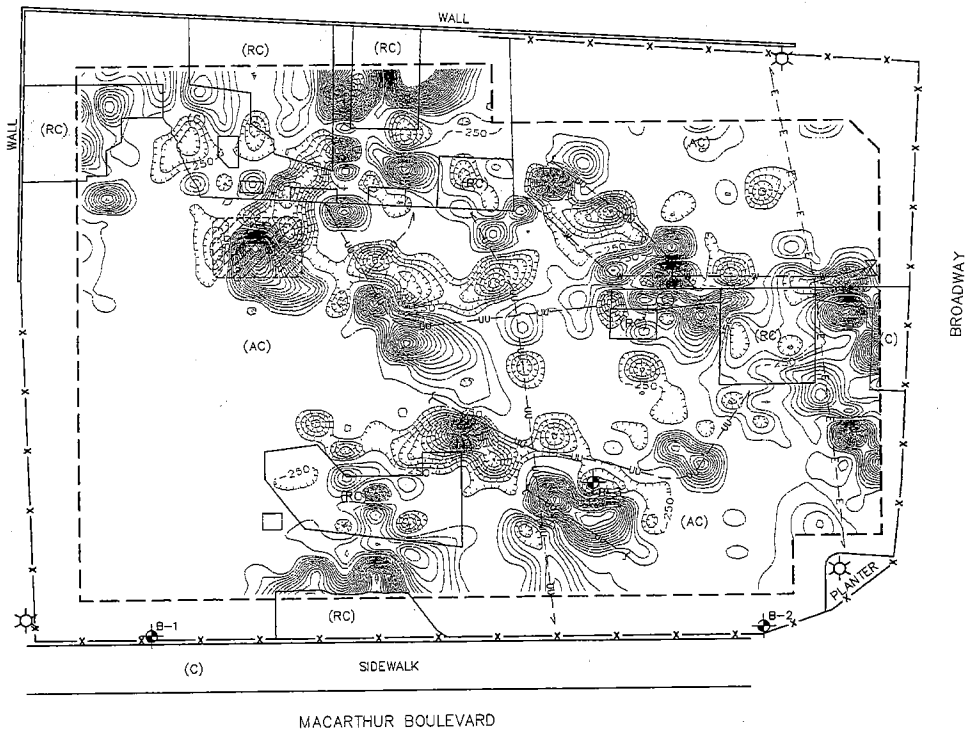
DJB/KGB/tt

Enclosures: Plate 1 - Site Map  
Plate 2 - VMG Map  
Appendix A - Geophysical Instrumentation, Methods, and Data Interpretation



LEGEND	
---	APPROXIMATE LIMITS OF GEOPHYSICAL SURVEY
---	GPR TRAVERSE
▨	SUSPECTED ZONE OF BURIED DEBRIS
-E-	ELECTRIC LINE
-U-	UNDIFFERENTIATED UTILITY LINE
-W-	WATER LINE
-x-	FENCE
☼	LIGHT STANDARD
⋈	WATER VALVE
⊕	WELL
(AC)	ASPHALT
(C)	CONCRETE
(RC)	REINFORCED CONCRETE

	<b>SITE MAP</b> <b>CHEVRON STATION 9-1026</b>	
	LOCATION: OAKLAND, CALIFORNIA CLIENT: CAMBRIA	
JOB #: 06-462.28 DATE: JUN. 2006	NORCAL GEOPHYSICAL CONSULTANTS INC. DRAWN BY: G.RANDALL	APPROVED BY: DJB <div style="text-align: center; border: 1px solid black; padding: 5px;"> <b>PLATE</b>  <b>1</b> </div>



LEGEND	
---	LIMITS OF VERTICAL MAGNETIC GRADIENT SURVEY
—o—	VERTICAL MAGNETIC GRADIENT CONTOUR (CONTOUR INTERVAL = 250 nT/m)
▨	SUSPECTED ZONE OF BURIED DEBRIS
—E—	ELECTRIC LINE
—U—	UNDIFFERENTIATED UTILITY LINE
—W—	WATER LINE
—x—	FENCE
☼	LIGHT STANDARD
⊗	WATER VALVE
⊕	WELL
(AC)	ASPHALT
(C)	CONCRETE
(RC)	REINFORCED CONCRETE



VERTICAL MAGNETIC GRADIENT  
CONTOUR MAP  
CHEVRON STATION 9-1026

LOCATION: OAKLAND, CALIFORNIA	PLATE <b>2</b>
CLIENT: CAMBRIA	
JOB #: 05-462.28	NORCAL GEOPHYSICAL CONSULTANTS INC.
DATE: JUN. 2006	DRAWN BY: G.RANDALL APPROVED BY: DJB



## **Appendix A**

### **Geophysical Methodology, Instrumentation, Data Analysis, and Limitations**





## Vertical Magnetic Gradient (VMG)

### VMG Methodology

VMG is a method commonly used to detect ferrous objects. This is accomplished by measuring the lateral variations of the earth's magnetic field. Since the magnetic field at any given point on the earth's surface is the vector sum of the earth's field combined with the magnetic fields of nearby metal objects, by removing or suppressing the earth's field the local magnetic variations due to ferrous objects may be detected. The basis for vertical magnetic gradient surveying starts with measuring the total intensity of the magnetic field. These are referred to as total field measurements (TF) and are recorded in units of nanoTesla (nT). In environmental and engineering investigations it is often more useful to measure the vertical rate of change of the total field magnetic intensity. This is referred to as the vertical magnetic gradient (VMG) and is measured in units of nanoTesla/meter (nT/m).

While both TF and VMG measurements are related to the same phenomena (i.e. the magnetic field), each has certain advantages over the other. However, the VMG method is often chosen for environmental/engineering investigations because of the following:

- 1) VMG measurements are generally less affected by nearby *above* ground objects, especially objects to the side of the instrument. This reduces magnetic interference caused by such objects.
- 2) VMG measurements are not affected by temporal (diurnal) variations in the earth's magnetic field, unlike TF measurements. This eliminates one more variable from the data.
- 3) VMG effects attenuate more rapidly with increasing distance from magnetic sources, thus allowing more precise determination of a buried object's location.

It should be noted, however, that because the VMG method is very sensitive, the effects of small near surface objects can be amplified and be more of a source of noise in VMG data than in TF data.

### Instrumentation

A vertical magnetic gradiometer is the device that is used to obtain the VMG data. The instrument typically used by NORCAL is a Geometrics 858 Cesium-vapor magnetometer. This instrument operates on the "optical pumping" principle and consists of a console and two total field magnetic sensors that are mounted on a vertical staff. One sensor is mounted at about shoulder-height and the other sensor is mounted at about knee-height. The magnetometer console features a built-in computer that stores the raw TF data, calculates the VMG values, and records survey grid information. The instrument obtains the VMG values by simultaneously measuring the total magnetic field intensity at the two sensors, taking their difference in magnetic intensity, and then dividing by their separation distance. The resulting survey information is later uploaded to a field computer for further processing.



### Computer Processing

The uploaded data are converted into a format suitable for contouring using the program SURFER from Golden Software. This program calculates an evenly spaced array of values (data grid) based on the measured field data. These gridded values are then contoured to produce VMG contour maps for interpretation. In most cases the VMG data are processed in the field on a portable computer and used to produce a preliminary data contour map.

### Contour Map Interpretation

Generally speaking, in a region with fairly uniform magnetic conditions the VMG values will vary smoothly from one area to another and display contour lines that are usually spaced far apart. In contrast, in those areas where VMG variations are stronger, the contours are more closely spaced. In some cases the variations are so strong that the contours become highly contorted and convoluted, forming roughly concentric circles, tightly wound loops and whorls, or elongated parallel lines. Actual magnitude and shape of the contour lines is dependent on several factors, the most important being the relative position and size of the magnetic object with respect to the location of the magnetic sensors, the orientation of the object within the earth's field, and the magnetic susceptibility of the material comprising the object .

Roughly concentric circles that look like bull's-eyes are generally referred to as monopoles. Monopoles that are roughly limited in extent to the data point spacing of the sampling grid are often caused by relatively small, near surface objects with limited cross-section. These typically consist of well caps, pull boxes, balls of wire, etc. On the other hand, larger monopoles that extend across an area of several data points are typically associated with larger, deeper objects such as well casings, reinforced concrete footers, ends of pipelines, etc. In other cases, two monopoles, one positive and one negative, may be in close proximity and form a paired of high-low closures known as a dipole. Dipoles are often, but not always, attributed to larger objects such as USTs, vaults, buried ordnance, etc. that have a substantial diameter or width. A series of parallel contours typically indicates that an elongate object such as a building wall, fence, or underground pipeline is the magnetic source. Irregular patterns of loops and whorls are often indicative of several magnetic objects being present with variable shape, mass, and distribution. These VMG patterns are the most difficult to interpret. Past experience has shown that such patterns are usually associated with debris fields, landfills, and demolition sites.

Regardless of whether the contours form monopoles, dipoles, or irregular whorls, if there are no obvious nearby above ground sources that could cause such magnetic variations, then subsurface objects are suspected. Contours are typically considered anomalous when large differences in data readings (on the order of several hundred to several thousands of nT/m) from one data station to the next are displayed. The anomalous variations are called VMG anomalies.



### Limitations

Buried ferrous metal objects produce localized variations in the earth's magnetic field. The magnetic intensity associated with these objects depends on the mass of the metal and the distance the metal object is from the magnetometer sensor. As a general rule, anomaly magnitude typically decreases and anomaly width increases as distance (depth) to the source increases, thereby making detection more difficult. In addition, the ability to detect a buried metal object is based on the intensity of these variations in contrast to the intensity of background variations. The intensity of background variations is based on the amount of above and below ground metal that is present within the survey area. Cultural features such as chain-link fences, buildings, debris, railroad spurs, utilities, above ground electric lines, etc. typically produce magnetic variations with high intensities. These variations may mask the magnetic effects from buried metal objects and thus make it very difficult to determine whether the magnetic variations are associated with below ground metal or above/below ground cultural features.

## **Metal Detection (MD)**

### MD Methodology

This method uses the principle of electromagnetic induction to detect shallowly buried metal objects such as USTs, metal utility conduits, rebar in concrete, manhole covers, and various metallic debris. This is done by carrying a hand-held radio transmitter-receiver unit above the ground and continuously scanning the surface. A primary coil broadcasts a radio signal from a transmitter which induces secondary electrical currents in metal objects. These secondary currents in turn produce a magnetic field which is detected by the receiver.

### Instrumentation

The MD instrument that we typically use for shallow subsurface investigations is a Fisher TW-6 pipe and cable locator. This instrument is expressly designed to detect metallic pipes, cables, USTs, manhole covers, and other large, shallowly buried metallic objects. The instrument operates by generating both a meter reading (unitless) and an audible response when near a metal object. The peak instrument response usually occurs when the unit is directly over the object. The TW-6 does not provide a recordable data output that can be used for later computer processing. Results are generally limited to marking the interpreted outlines of detected objects in the field and mapping their locations.

### Limitations

In general, the response of the MD instrument is roughly proportional to the horizontal surface area of near surface buried objects (typically in the upper three or four feet). This relationship can be used to advantage in discriminating between metal debris, reinforced concrete pads, and pipelines. However, in the presence of above ground metal objects such as fences, walls, parked cars, and metal debris, this is no longer valid. In some instances, the presence of such objects can make it very difficult to determine whether the instrument responses are associated with below ground targets or above ground cultural features. When multiple sources are present it may not be possible to identify individual targets. Also, relatively large objects that have a limited horizontal cross-section such as well casing and fence posts are sometimes difficult to detect.



## **Ground Penetrating Radar (GPR)**

### GPR Methodology

Ground penetrating radar is a method that provides a continuous, high resolution graphical cross-section of the shallow subsurface. The method entails repeatedly radiating an electromagnetic pulse into the ground from an antenna as it is moved along a traverse. Reflected signals are received by an antenna (often the same one used to generate the signal) and sent to a control unit for processing. The control unit then converts the varying amplitude of reflected radar signals as a function of time into a cross-sectional image showing signal amplitude as a function of depth.

GPR is particularly sensitive to variations of two electrical properties. One property is conductivity (the ability of a material to conduct a charge when a field is applied) and the other is permittivity (the ability of a material to hold a charge when a field is applied). These two properties determine how far a signal can propagate. They also determine the strength of reflected signals that can be generated at material boundaries.

Most soil and earthen-like materials such as concrete are electrically resistive and have a relatively low permittivity. As a result, they are relatively transparent to electromagnetic energy. This means that only a portion of the radar signal incident upon them is reflected back to the surface. On the other hand, when the signal encounters an object composed of a material that has the opposite electrical properties, especially one with a high permittivity (such as metal) much of the incident energy is reflected.

### Instrumentation

We typically perform GPR surveys using a Geophysical Survey Systems, Inc. SIR-2000 Subsurface Interface Radar System equipped with a 500 megahertz (MHz) transducer. This unit is comprised of a combined control/data recording console that is connected by a telemetry cable to the antenna. This system is often chosen for investigating environmental sites since it usually provides both the resolution and depth penetration needed for characterizing the upper three to four feet of the subsurface.

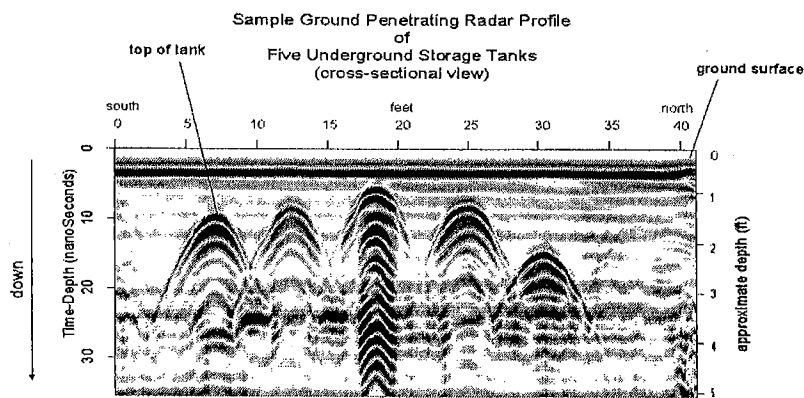
### Data Interpretation

The interpretation of GPR data involves examining the graphical records for reflections from buried objects. GPR records display changes in reflected signal strength and arrival time with changes in horizontal position.

Strong signals appear dark and weak reflections appear light. Reflections that arrive earlier in time are placed in the upper portions of the record and reflections that arrive later are placed lower, towards the bottom of the records. Horizontal position is across the top of the record.

In areas with relatively uniform conditions, with no buried objects producing reflections, the records typically appear as a series of alternating dark and light horizontal bands. In areas where there are subsurface objects producing reflections, the horizontal banding is disrupted. Discrete objects typically produce reflections having the appearance of inverted "U"s, forming what are known as "hyperbolic reflections". Metallic objects often produce markedly strong reflections, in many cases forming multiple reflections appearing as a series of inverted U's cascading down the record. Non-metallic objects can produce similar reflections, but the multiples are typically much weaker.

A sample profile from a different site with five adjacent steel USTs is presented below:



*Note: the "Time Depth" of 35 nanoSeconds at the bottom of this profile corresponds to a true depth of approximately 5 feet for this example only. Actual depth to bottom of other profiles may be different.*

An object's burial depth may also be estimated from GPR profiles. As mentioned above, GPR measures signal amplitude as a function of time. However, the translation of the radar signal's travel time (technically known as time-depth) to an actual distance (true depth) is not always a simple one. Strictly speaking, in order to translate from time-depth to true depth the signal velocity within each time interval must be known. Since this is not routinely determined in the field, estimated velocities are often used for determining the approximate depth to a reflector. The empirical values for GPR signal propagation velocities within commonly encountered soils are obtained from published tables.

#### Limitations

The ability to detect subsurface targets is dependent on specific site conditions. These conditions include depth of burial, the size or diameter of the target, the condition of the specific target in question, the type of backfill material associated with the target, and the surface conditions over the target. Typically, the depth of detection will be reduced as the clay and/or moisture content in the subsurface increases. As a result, depths of detection (using a 500 Mhz antenna) typically range from as deep as six feet to as little as a few inches.



## **Electromagnetic Line Location (EMLL)**

### EMLL Methodology

This method uses radio signals that are emitted by conductive utility lines to trace out their alignments. Under certain conditions, metallic utility conduits and pipelines can act as radio antennas. Energized utilities like electric, telephone, and grounded water lines often carry electrical currents. Radio signals are radiated from the lines as a result of these currents. These types of signals are referred to as "passive signals" since only a receiver tuned to the appropriate frequency is required to trace them. Other utilities like natural gas lines, drain lines, cathodic protection lines, etc. are not normally energized and thus require a radio signal placed on them in order to be traced. These types of signals are referred to as "active signals" and are placed on the lines by a radio transmitter, either by induction or by directly connecting a lead to them.

Whether the radio signal is passive or active, the surface trace of a line is determined the same way. A specialized radio receiver is carried along a series of traverses and the strength of the emitted signal noted. In most cases, the line is located below the point where the signal is strongest. After a series of traverses have been completed and the position of strongest signal strength has been determined, the alignment of the utility becomes apparent.

### EMLL Instrument

The EMLL instrument used for this investigation was a Radio Detection RD 400. This instrument consists of a specialized radio receiver and a separate transmitter. The receiver is a multi-frequency, multiple antenna device that is capable of determining the relative strength and direction of signals broadcast from buried pipes and cables. The receiver generates both a meter reading (unitless) and an audible response when near an energized line. It does not provide any recordable output. The receiver is usually capable of tracing a line buried to a depth of about ten feet. The transmitter is a multi-frequency device with variable power output. In most cases, the highest power setting is sufficient to trace out a line for several hundred feet.

### EMLL Limitations

The EMLL works by detecting radio signals. In many cases, the sources of these signals are from isolated known subsurface utility lines. In some cases however, other signals may be present. These other signals may be emitted by overhead electric and telephone lines, grounded water lines, and commercial radio towers. These other signals may distort or completely mask the primary signal of interest. In other cases, the primary signal may actually "jump" from one underground conductor to another, leading to erroneous results. Finally, traceable currents can only be detected as long as there is electrical continuity. Metal conduits having insulating joints and non-metallic utilities cannot be traced with EMLL.

C A M B R I A



**ATTACHMENT F**

**ESL Tables**

Chemical Parameter	Table A. Shallow Soil ( $\leq 3m$ bgs) and Groundwater ESLs (Groundwater IS a current or potential source of drinking Water)			Table B. Shallow Soil ( $\leq 3m$ bgs) and Groundwater ESLs (Groundwater is NOT a current or potential source of drinking Water)		
	Surface Soils		Groundwater	Surface Soils		Groundwater
	Residential Land Use Permitted (mg/kg)	Commercial/Industrial Land Use Only (mg/kg)	Assumes potential discharge to freshwater, marine or estuary surface water system (ug/L)	Residential Land Use Permitted (mg/kg)	Commercial/Industrial Land Use Only (mg/kg)	Assumes potential discharge to freshwater, marine or estuary surface water system (ug/L)
Benzene	0.044	0.044	1.0	0.18	0.38	46
Ethylbenzene	3.3	3.3	30	32	32	290
Toluene	2.9	2.9	40	9.3	9.3	130
Xylenes	2.3	2.3	20	11	11	100
TPH (gasoline)	100	100	100	100	400	500
TPH (middle distillates)	100	100	100	100	500	640
TPH (residual fuels)	500	1000	100	500	1,000	640
Methyl tert butyl ether	0.023	0.023	5.0	2.0	5.6	1,800
Tert butyl alcohol	0.073	0.073	12	57	110	18,000
Lead	150	750	2.5	150	750	2.5
Chemical Parameter	Table C. Deep Soil ( $> 3m$ bgs) and Groundwater ESLs (Groundwater IS a current or potential source of drinking Water)			Table D. Deep Soil ( $> 3m$ bgs) and Groundwater ESLs (Groundwater is NOT a current or potential source of drinking Water)		
	Subsurface Soils		Groundwater	Subsurface Soils		Groundwater
	Residential Land Use Permitted (mg/kg)	Commercial/Industrial Land Use Only (mg/kg)	Assumes potential discharge to freshwater, marine or estuary surface water system (ug/L)	Residential Land Use Permitted (mg/kg)	Commercial/Industrial Land Use Only (mg/kg)	Assumes potential discharge to freshwater, marine or estuary surface water system (ug/L)
Benzene	0.044	0.044	1.0	0.18	0.51	46
Ethylbenzene	3.3	3.3	30	32	32	290
Toluene	2.9	2.9	40	9.3	9.3	130
Xylenes	2.3	2.3	20	11	11	100
TPH (gasoline)	100	100	100	400	400	500
TPH (middle distillates)	100	100	100	500	500	640
TPH (residual fuels)	1,000	1,000	100	1,000	1,000	640
Methyl tert butyl ether	0.023	0.023	5.0	2.0	5.6	1,800
Tert butyl alcohol	0.073	0.073	12	110	110	18,000
Lead	750	750	2.5	750	750	2.5

Source: SF Bay Regional Water Quality Control Board's *Screening For Environmental Concerns At Sites With Contaminated Soil and Groundwater*, Volume 1, Summary Tier 1 Lookup Tables, Interim Final February 2005.

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