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Dana Thurman
Project Manager

March 23, 2006
(date)

ChevronTexaco

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

Re: Chevron Service Station # 20-6265

Address: 1520 Powell Street, Emeryville, California

I have reviewed the attached report titled SCM and Request for Closure and dated March 23, 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 Cambria Environmental Technology, 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,

Dana Thurman
Project Manager

Enclosure: Report

Signature Page

CAMBRIA

SITE CONCEPTUAL MODEL AND REQUEST FOR SITE CLOSURE

Former Chevron Asphalt Plant and Terminal #20-6265
1520 Powell Street, Emeryville, California
RO #2535

March 23, 2006

Prepared for:

Mr. Barney Chan
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Prepared by:
Cambria Environmental Technology, Inc.

David W. Herzog, P.G.
Senior Project Geologist

Cambria Environmental Technology, Inc.

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C A M B R I A

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INTRODUCTION

On behalf of Chevron Environmental Management Company (Chevron), Cambria Environmental Technology, Inc. (Cambria) is submitting this report requesting site closure for the former Chevron Asphalt Plant and Terminal located at 1520 Powell Street in Emeryville, California (Vicinity Map). This report contains hyperlinks to figures and attachments at the back of the report. Although this formatting is best viewed with a current version of Microsoft Word, the figures and attachments can be viewed separately without using the hyperlink function. This site is presented for closure as a low-risk fuel site based on the San Francisco Bay Regional Water Quality Control Board (SFBRWQCB) definition as described in their memorandum *"Interim Guidance on Required Cleanup at Low-Risk Fuel Sites,"* dated January 5, 1996. A summary of the site background, site conditions, and the applicability of low-risk fuel site criteria are presented below.

SITE HISTORY

The following site history information was obtained from Chevron, SFBRWQCB, and Alameda County Health Care Services Agency (ACHCSA) project files. Attachment A includes copies of available maps and analytical data for soil sampling events discussed below. Second Semi-Annual 2005 Groundwater Report includes current and historical groundwater data.

The site is a former Chevron bulk asphalt plant and terminal located at 1520 Powell Street, Emeryville, California. The facility was operated from the early 1950s until June 1987. The three-acre site is bordered to the east and south by Landregan and Powell Streets, respectively, and to the west by Southern Pacific Railroad and gas pipeline right-of-ways (Vicinity Map; Plate 4). The northwestern portion of the property was used as a storage and transfer facility for petroleum products. Along the eastern margin of the property were storage, garage, and office buildings. In the southwest corner of the property was an office/laboratory building, in which various pavement products were researched and marketed. A portion of the property was leased by Chevron to a solvent handler during this same period, but information regarding this tenant's use and storage of on-site chemicals is not available. The northern portion of the site has been redeveloped as an Amtrak passenger terminal, and the southern portion of the property has been redeveloped with a parking/residential structure.

In 1985, Chevron's Marketing Department conducted a field investigation to assess potential soil and groundwater contamination at the site. McKesson Environmental Services installed groundwater monitoring wells MW-1 through MW-9 (Plate 4). Several volatile organic compounds (VOCs), including benzene, chlorobenzene, trans-1,2-dichloroethene (t-1,2-DCE), trichloroethene (TCE), and vinyl chloride (VC) were detected in monitoring well MW-1, and polycyclic aromatic hydrocarbons

(PAHs) were detected in MW-5. No VOCs or petroleum hydrocarbons were detected in the other wells.

In October 1987, the above-ground fuel tanks and associated piping were removed to allow for subsurface analysis. Blaine Tech Services Inc. sampled wells MW-1 through MW-8. Well MW-9 could not be located and was determined detectedto have been destroyed earlier during previous construction activities on-site. Chloroethane was reported in monitoring well MW-4, and benzene, t-1,2-DCE, and VC were detected in MW-1. No VOCs or petroleum hydrocarbons were detected in the other wells.

In August 1988, Harding Lawson Associates (HLA) installed on-site wells MW-10 through MW-12. TCE and hydrocarbons were detected in soil and groundwater. HLA also advanced 18 soil borings. No total petroleum hydrocarbons as gasoline, diesel, and kerosene (TPHg, TPHd, and TPHk) were detected in boring soil samples. Soil samples from two of the borings contained TCE at concentrations up to 1.5 ppm.

In August and September 1988, both the loading dock and barrel storage area were removed to allow for further subsurface analysis. Soil samples contained xylenes and TCE as well as petroleum hydrocarbons other than gasoline, diesel and kerosene within C6 to C15 boiling range. Groundwater from well MW-1 contained benzene, 1,2-dichloroethene (1,2-DCE), TCE, VC, barium, molybdenum, nickel and zinc. 1,2-DCE and TCE were detected in the sample from well MW-10. Tetrachloroethene (PCE) was detected in the samples from wells MW-1l and MW-12, and trace concentrations of TCE were detected in well MW-1l. Petroleum hydrocarbons were detected in wells MW-1, MW-4, MW-5 and MW-6.

In September 1988, Western Geologic Resources, Inc. (WGR) advanced 42 soil borings on-site near the old barrel storage area, and off-site to evaluate vertical extent of hydrocarbon impact to shallow soil. Residual fuel hydrocarbons, mainly in the diesel range, were reported at concentrations up to 2,700 ppm in soil from most of the borings. Low concentrations of BTEX were also detected in the soil samples.

In December 1988, Groundwater Technology, Inc. (GTI) advanced 33 additional soil borings to further evaluate the vertical and horizontal extent of fuel hydrocarbons and halocarbons in the unsaturated zone. Halogenated hydrocarbons (halocarbons) were reported in most samples, and less than half of the samples contained fuel range hydrocarbon concentrations.

From April to September 1989, approximately 10,400 cubic yards of soil containing hydrocarbons were excavated to a depth of 6 fbg. Soil was removed until hydrocarbons were no longer detected using a photoionization detector (PID). The excavation was lined with 10-mil Visqueen and

backfilled with 1.5-inch diameter crushed rock and covered at the surface with graded subbase material. During excavation activities, wells MW-4 through MW-6 were removed. An additional 256 cubic yards of hydrocarbon-bearing soil were excavated and removed from four other locations. Three locations were within the southwest office/laboratory building, and the other one was just outside the building area. Soil was removed until halocarbons were no longer detected using a portable gas chromatograph. This excavated area was lined with visqueen sheeting, then backfilled with 1.5-inch diameter clean crushed rock. Excavated soil was transported to the American Rock and Asphalt Facility in Richmond, California.

In February 1990, WGR conducted a 24 hour pump test on well MW-12. A sustained yield of up to 0.26 gallons per minute was achieved during the test, resulting in a calculated transmissivity of 1.48 cubic feet per foot, or 11 gallons per day per foot of drawdown. These results give an estimated downgradient radius of influence of 358 feet with approximately 500 days of pumping required to remove one interstitial volume of groundwater in the downgradient direction. Because the principal compounds of concern downgradient of the site include PCE, TCE, and 1,2-DCE that do not readily desorb from soil, it was concluded that groundwater extraction is too inefficient and would probably not be effective to remediate the site.

In February and March 1990, on-site borings B-1 through B-3 were drilled beyond the perimeter of the excavation, and two of the borings (B-2 and B-3) were completed as monitoring wells MW-13 and MW-14. Additional wells MW-15 through MW-19 were installed off-site. Fuel hydrocarbons were detected in groundwater from the two new on-site wells, and TCE, PCE, and 1,2-DCE were detected in the five wells installed off-site. Four of the newly installed wells located off-site downgradient, across Powell Street had concentrations of dissolved metals in groundwater, but it was discovered that a former machine shop was located in this area across from the Chevron facility, and was the likely source of these metals.

In March and April 1990, 43 shallow soil borings were drilled around the northern edge of the excavated area, and along the western property boundary. Soil from only one boring contained TCE, while soil from a few borings contained low TPHg concentrations. Oil and grease (O&G) was reported in soil from nearly all soil borings, but only five borings had O&G concentrations exceeding 100 ppm. In October 1990, approximately 500 cubic yards of soil was excavated from two locations along the western edge of the property.

The former laboratory building was demolished in 1991. Soil samples were collected from 24 shallow borings beneath the building. Soil samples collected mainly beneath the eastern half of the building contained concentrations of TPH, TCE, benzene, and O&G.

An US Environmental Protection Agency Superfund site owned by Westinghouse is located directly north of the site at 6121 Hollis Street. The site contains soils contaminated with polychlorinated biphenyls (PCBs). The soil is covered with a clay and asphalt cap. A remedial action has been initiated that includes surrounding the contaminated soils with a continuous slurry cutoff wall tied into the underlying bay mud. Groundwater is monitored quarterly at the Westinghouse site and does not show any migration of PCBs into groundwater offsite. This has been verified by historical sampling results for the former Chevron asphalt plant indicating PCBs were not detected.

In 1992, Geraghty & Miller, Inc. prepared a detailed risk assessment report for the Chevron site. The report included a discussion of the extent of soil and groundwater impact, toxicity effects and profiles, exposure pathways, and health-based remediation goals. The executive summary for that report is included in Attachment C. Based on their risk assessment, the levels of constituents of concern in soil and groundwater were below health-based goals, and further remediation was not warranted. On October 16, 1992, the ACHCSA issued a letter concurring with this conclusion.

In April and May 1992, Geraghty & Miller, Inc. collected confirmation soil samples following the removal of a shed/storeroom and garage, including compliance sampling beneath the hydraulic lift and mechanic's pit in the former garage. Low concentrations of TPHd, O&G, VOCs, and metals were detected in the soil samples. Approximately 15 cubic yards of soil was overexcavated beneath the former mechanic's pit. Soil was excavated until PID readings approached zero.

On November 20, 1992, the SFBRWQCB issued a letter indicating that it is their opinion, as well as the opinion of the staff at the ACHCSA, that the soil and groundwater at this site do not pose an undue risk to human health or the environment, and further excavation of soil is not warranted. They allowed the redevelopment of the site.

During the April 1995 groundwater sampling event, a black oily substance was observed in monitoring well MW-2. In addition, this well was observed to be filled in with sandy gravel-type material. The sounded depth during this event was 2.87 feet bgs. It is assumed that the substance inadvertently entered the well during asphalt paving of the newly created parking lot.

On July 29, 1995, Gettler-Ryan, Inc. (GR) abandoned well MW-19. On October 30, 1995, GR installed monitoring well MW-19A, and abandoned well MW-2 by overdrilling to 18 fbg, then constructed well MW-2A in the overdrilled boring. PCE was detected in soil at a concentration of 0.017 ppm in well MW-19A. TPHg, cis-1,2-dichloroethene, TCE, and PCE were detected in groundwater from MW-19A.

On October 27, 1997, Cambria submitted a Site Information Summary for Case Closure report. The report summarized results from previous investigations, and because both the SFBRWQCB and

ACHCSA had indicated that additional soil remediation is not warranted and groundwater conditions continue to improve, this site should be considered for No Further Action status.

In November 1999, GR advanced 64 soil borings to 10 fbg and destroyed five monitoring wells (MW-2A, MW-8, MW-10, MW-11, and MW-13) in preparation for construction of a parking/residential structure at the site. Monitoring wells MW-1 and MW-12 were also scheduled to be destroyed, but could not be located. Two soil samples were collected from each boring, and soil samples collected from every two borings were composited before analysis. Soil boring data were used to pre-profile soil to be excavated and removed from the site during construction. In December 1999, approximately 32,000 cubic yards of soil was removed from the site. This volume of soil equals an excavation approximately 15 feet deep over the area of the proposed garage footprint. Monitoring wells MW-1 and MW-12 were located within the footprint of the new parking/residential structure, and were likely destroyed during excavation activities.

SITE CONCEPTUAL MODEL

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
Regional Setting	**Geology/Stratigraphy** Geologic units are generally divided into two groups: 1) consolidated Late Cretaceous to Late Jurassic bedrock and 2) unconsolidated Pleistocene and Holocene sediments. Bedrock includes lithologic facies of the Novato Quarry terrain, Franciscan Complex, and Great Valley Sequence. Unconsolidated younger sediments vary in thickness up to approximately 1,000 feet thick. The majority of the Emeryville area is underlain by alluvial fan, fluvial, and natural levee deposits, and artificial fill material.		(1) (2)	http://geopubs.wr.usgs.gov			
	Hydrogeology The site is located in the East Bay Plain Subbasin of the Santa Clara Valley Groundwater Basin. The basin is an elongated northwest trending flat alluvial plain occupying approximately 122 square miles. The basin extends to the west beneath the San Francisco Bay, is bounded to the north by San Pablo Bay and by the Hayward fault to the east, and to the south by the Niles Cone Groundwater Basin. The bottom of the basin is the contact between the consolidated and unconsolidated sediments which can occur at maximum depths of 1,000 feet. The East Bay Plain Subbasin consists of a series of alluvial fan and fluvial deposits.		(3)	DWR Bulletin 118, East Bay Plain Subbasin, Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin			

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	Groundwater Pumping According to SWRCB Geotracker database and a DWR well search, there are no water production wells in the vicinity of the site, and groundwater is not used for drinking water.						
	Preferential Pathways Well Survey - A one-half mile DWR well survey identified four wells (4). The wells are located at the adjacent Emeryville Amtrak Station site. Although their use was not identified, their shallow construction suggests they are monitoring wells. Utility Survey – Gas, sanitary sewer, water, storm drain, communication, and electric lines have been identified in the immediate vicinity of the site (5). High-pressure gas lines have been identified within the adjacent Southern Pacific railroad right-of-way. Trenches for the sewer and storm drain can act as preferential pathways, and could possibly explain previously reported HVOC concentrations in cross-gradient well MW-16 at this site. Trenches for the other utilities identified are generally within 3 to 6 feet bgs and likely do not provide preferential pathways at this site.	(4)	(5)				
	Nearby Release Sites LUFT Sites: **Days Inn**, 1603 Powell Street (Closed Case) Diesel Fuel Oil and Additives **Hydraulic Electro Service Corp**, 5812 Hollis Street		(6)	SWRCB Geotracker database			

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	(Open Case) Diesel Fuel Oil and Additives **AJ Trucking**, 5600 Shellmound Street (Open Case) Gasoline SLIC Sites: **Westinghouse Electric Corp**., 4899 Peladeau Street (Open Case)						
Site Setting	**Site Geology** The site is located in Alameda County in the City of Emeryville. The topography in the site vicinity is relatively flat at the elevation of approximately 10 feet above mean sea level. Regionally, the Berkeley Hills lie to the east and grade westerly into flat lands ending at San Francisco Bay. The closest surface water is the San Francisco Bay located approximately one-half mile west of the site, toward which groundwater is migrating. The site is located within the California Coast Ranges. The Coast Ranges have a Franciscan basement composed of graywackes, limestone, shale, and radiolarian chert. The Hayward Fault Zone is located approximately one mile to the east and the San Andreas Fault Zone is approximately five miles to the west. Locally, the site is underlain mainly by silty to sandy clay with sand and gravel laminations. Historical groundwater monitoring data indicate that groundwater is encountered approximately 1 to 8 feet bgs, and groundwater flow is to the south.		(E)	Norris, R. M., and Webb, R. W., 1990, Geology of California: John Wiley and Sons, 537 p.			

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	Groundwater Conditions Cross sections A-A' (7) and B-B' (8) show correlation of shallow subsurface soil across the site. As shown on the cross sections, the shallow subsurface can be divided into three general soil horizons. The upper soil horizon consists of low estimated permeability silt and clay with gravel lying beneath a cap of concrete, asphalt, and fill material. This upper horizon thickens southward, from approximately 3 feet thick at the northern boundary of the site to approximately 7 feet thick near the southern boundary of the site. The middle soil horizon consists of moderate estimated permeability silty clay with thin, interbedded sand and gravels. This middle horizon is generally 5 to 10 feet thick, and dips slightly to the south. Groundwater flow and contaminant migration beneath the site is interpreted to be predominantly within the middle horizon, with flow in a southerly direction. The lower horizon consists of low estimated permeability silt and clay, which becomes moist to damp with depth representing a natural boundary to downward flow and migration.		(7) (8)				
	Source Area Impacted soil in the source areas for petroleum hydrocarbons that appear to have been the former ASTs was excavated in 1989, 1990, and 1992. Approximately 11,000 cubic yards of hydrocarbon-bearing soil were removed from the site. In December 1999, approximately 32,000 cubic yards of additional soil was removed from the site, including soil from the southwest		(A) (9) (10)				

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	corner of the site that contained residual HVOCs.						
	Dissolved plume The aerial photo and site conceptual model present the interpreted extent of the current TCE plume downgradient. This interpretation is based on current TCE extent in groundwater shown on the TCE Isoconcentration Map and fate and transport modeling discussed below. Overall, the TPHg and HVOC plumes are currently defined to relevant ESLs (11), and concentrations are steadily declining. Total petroleum hydrocarbons as gasoline (TPHg) have declined below the ESL of 500 µg/L in all sampled wells (Table 5). The current maximum TPHg concentration was reported in MW-19A at 180 µg/L. HVOCs are also steadily declining. TCE and PCE concentrations recently reported in MW-19A are 77 µg/L and 350 µg/L, respectively. Only PCE currently exceeds its drinking water ESL of 120 µg/L. Concentration trends continue to decline as shown in trend graphs for wells MW-17, MW-18, and MW-19A. As shown in the graphs, natural attenuation appears to be an effective remedial option to achieve background conditions at this site. The presence of cis-1,2-DCE indicate some reductive dehalogenation activity, but historical data from well MW-1 and current data for well MW-19A show the presence of vinyl chloride indicating strong reductive dehalogenation activity. As shown in the aerial photo, the interpreted TCE plume downgradient	(11) (B)	(12) (13) (14) (15) (16) (17) (18)	California Regional Water Quality Control Board San Francisco Bay Region, 2005, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater:* ESL from Table B: Shallow Soil (≤3m bgs) – Water is not a current or potential source of drinking water Newell, C. J., and Conner, J. A., 1998, *Characteristics of Dissolved Petroleum Hydrocarbon Plumes*: American Petroleum Institute, Washington, D.C. McNab, W. W., Rice, D. W., and Tuckfield, C., 2000, *Evaluating*			

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	extent is approximately one-half the average chlorinated ethene plume extent. Plume lengths for sites with strong reductive dehalogenation appear to be significantly smaller by roughly a factor of two, which correlates with the interpreted plume extent.			*Chlorinated Hydrocarbon Plume Behavior Using Historical Case Population Analyses*: Lawrence Livermore National Laboratory, Livermore, CA.			
	Remediation From April to September 1989, approximately 10,400 cubic yards of hydrocarbon-bearing soil were excavated to a depth of 6 fbg. Soil was removed until hydrocarbons were no longer detected using a photoionization detector (PID). An additional 256 cubic yards of contaminated soil were excavated and removed from four other locations. Three locations were within the southwest office/laboratory building, and the other one was just outside the building area. Soil was removed until halocarbons were no longer detected using a portable gas chromatograph. Excavated soil was transported to the American Rock and Asphalt Facility in Richmond, California. In October 1990, approximately 500 cubic yards of soil was excavated from two locations along the western edge of the property. In April and May 1992, the removal of a shed/storeroom and garage, approximately 15 cubic yards of soil was overexcavated beneath the former mechanic's pit. Soil		(9) (10)				

	DESCRIPTION	Data Tables	Graphics	Reference	Data Gaps	Work Necessary to fill data gap	Comments
	was excavated until PID readings approached zero. In December 1999, during construction of a residential/parking structure on the site, approximately 32,000 cubic yards of soil was removed from the site. This volume of soil equals an excavation approximately 15 feet deep over the area of the proposed garage footprint.						
	Evaluation of potential impacts to water supply wells Groundwater in the vicinity of the site is not a source of drinking water. No potential impact.			SWRCB Geotracker database			

FATE AND TRANSPORT MODELING

The following covers the information required for documenting groundwater flow modeling as requested by the California Environmental Protection Agency (CalEPA) in *Ground Water Modeling For Hydrogeologic Characterization*, dated July 1995, and by the State Water Resources Control Board (SWRCB) in *Evaluation of Ground Water Model Applications* (http://www.waterboards.ca.gov/cwphome/land/gw_modeling.html). This documentation follows the general outline of the American Society for Testing and Material's (ASTM) Standard D-5718, Standard Guide for Documenting a Ground-Water Flow Model Application, dated June 1995.

Introduction – *Presents the modeling objectives, the function the model will serve, and a brief general setting of the model area. Identifies the individuals involved with the modeling effort and their roles.*

Modeling Objectives: The objective of this model is to predict the fate of the remaining HVOC plume, which is necessary in order to evaluate future risk to human health and the environment in the vicinity of the site. The objective of this study is to evaluate migration of contaminants in groundwater following release, to evaluate changes in groundwater flow following construction of the on-site parking/residential structure, and to assess the possible fate of the remaining HVOC plume.

Model Function: The model was created from known historical and current hydrogeologic conditions, and was calibrated based on reasonable assumptions in order to obtain the resulting HVOC plume distribution currently observed. Once calibrated to match current conditions, the model was used to predict future fate of the HVOC plume.

General Setting: The site is located in Alameda County in the City of Emeryville. Surrounding land use consists mainly of commercial use with some light industrial and residential use. The topography in the site vicinity is relatively flat at an elevation of approximately 10 feet above mean sea level. Regionally, the Berkeley Hills lie to the east and grade westerly into flat lands ending at San Francisco Bay. The closest surface water is the San Francisco Bay located approximately 1/2 mile west of the site, toward which groundwater is migrating. The site is located within the California Coast Ranges. The Coast Ranges have a Franciscan basement composed of graywackes, limestone, shale, and radiolarian chert (Norris, R. M. and Webb, R. W., 1990, *Geology of California*: John Wiley and Sons, 537 p). The Hayward Fault Zone is located approximately one mile to the east and the San Andreas Fault Zone is approximately five miles to the west. Locally, the site is underlain mainly by silty to sandy clay with sand and gravel interbeds. Historical groundwater monitoring data indicate that groundwater is encountered approximately 1 to 8 feet bgs, and flow is to the south.

Modeling Personnel: David W. Herzog, P.G., Senior Project Geologist, Cambria Environmental Technology, Inc. – Preparation of site conceptual and groundwater flow and transport models.

Conceptual Model – *Presents the conceptual model as a site-specific interpretation (based on collected data) of the characteristics and dynamics of the physical system being studied. Includes discussion of the aquifer system (both geologic and hydrologic aspects), hydrologic boundaries, hydraulic properties, sources and sinks, and a water budget. Presents and discusses data set origins, strengths, and deficiencies, and their effects on the conceptual model.*

Aquifer System: Cross sections A-A' and B-B' show correlation of shallow subsurface soil across the site. As shown on the cross sections, the shallow subsurface can be divided into three general soil horizons. The upper soil horizon consists of low estimated permeability silt and clay with gravel lying beneath a cap of concrete, asphalt, and fill material. This upper horizon thickens southward, from approximately 3 feet thick at the northern boundary of the site to approximately 7 feet thick near the southern boundary of the site. The middle soil horizon consists of moderate estimated permeability silty clay with sand and gravel laminations. This middle horizon is generally 5 to 10 feet thick, and dips slightly to the south. Groundwater flow and contaminant migration beneath the site is interpreted to be predominantly within the middle horizon, with flow in a southerly direction. The lower horizon consists of low estimated permeability silt and clay, which becomes moist to damp with depth representing a natural boundary to downward flow and migration.

Hydrologic Boundaries: Within the limits of the study area as shown on the Flow Model Domain, no natural hydrologic boundaries appear to exist. For the model, groundwater enters the study area along the northern boundary and flows toward the southern boundary parallel to the east and west, no-flow boundaries.

Hydraulic Properties: From a pump test conducted by WGR in 1990, transmissivity was calculated at 1.48 cubic feet per foot of drawdown based on a sustained yield of up to 0.26 gallons per minute. Based on this transmissivity, conductivity is calculated at 241.14 feet per day (0.085 cm/sec), which according to Fetter (1994) is equivalent to well sorted gravel. Based on this elevated hydraulic conductivity, it appears that water produced during this test was from the excavation backfill and not native soil. This conclusion is based on the fact that no native well sorted gravel was identified during assessment work at this site, and the well used for the pump test was located immediately adjacent to the 1989 excavation that was backfilled with uniform 1.5-inch diameter crushed rock,.

Based on soil type observed during drilling, Cambria assumes a native conductivity of 8.5 feet per day (3.0x10-3 cm/sec). With this conductivity, the unconfined aquifer steady-state groundwater velocity is calculated at 0.097 feet per day. Across the limited extent of the study area, these parameters are assumed to be essentially uniform.

Sources and Sinks: No natural sources or sinks were identified within the limited study area,. It is assumed that the majority of surface area is paved and drained, and provides a significant barrier to infiltration, resulting in no effective recharge.

Water Budget: For the model, groundwater is assumed to enter the area along the northern boundary and flow parallel to the east and west lateral no-flow boundaries. Groundwater is assumed to leave the model area across the southern boundary with no change in the volume of water. In the initial model prior to remedial excavation activities, flow is assumed to be uniform, which is reasonable given the limited extent of the study area.

Computer Code Description – *Presents a description of the code used and discusses the selection criteria for the code. If a custom or altered code is used, the vendor name, enhancements to the code, and how the code was tested are listed. Presents the simplifying assumptions inherent to the code, the limitations to the code, and the governing equations that the code solves.*

The program used is Interactive Ground Water version 3.5.6 (IGW 3), which was released by Dr. Shuguang Li and Associates at Michigan State University on February 2, 2004. IGW 3 utilizes a finite difference solution similar to MODFLOW (equation 1) for solving groundwater flow, but has been modified (equation 2) to eliminate the problem caused when anisotropy is strong and its orientation differs significantly from the rectilinear coordinate system, which in MODFLOW can result in unphysical results (Afshari, S., Simard, A., Liao, H., Liu, Q., and Li, S., *An Improved Method for Solving Groundwater Flow Problems in General Anisotropic Media*: Poster H42C-05, American Geophysical Union Spring Meeting, Washington D.C., May 2002 [www.egr.msu.edu/igw]).

The governing partial differential equation describing groundwater flow used in MODFLOW is:

$$S(\partial\Phi/\partial t) = K(\partial^2\Phi/\partial x^2)+r \quad (1)$$

Where:

Φ is the hydraulic head x is global rectilinear coordinate r is a leakage factor

S is specific storage K is the hydraulic conductivity

In IGW 3, equation (1) is rewritten in a two-dimensional coordinate system aligned with major anisotropy as:

$$S(\partial\Phi/\partial t) = K_x(\partial^2\Phi/\partial x^2)+ K_y(\partial^2\Phi/\partial y^2)+r \quad (2)$$

In the rotated coordinate system aligned with major anisotropy, IGW 3 expresses and interpolates non-nodal heads in the resulting numerical expression in term of global nodal heads, which results in a more accurate and physically meaningful solution than the traditional MODFLOW finite difference scheme. IGW 3 uses Successive Over Relaxation (SOR) as its flow solver. The SOR method introduces a relaxation factor to the Gauss-Seidel method, which solves the matrix in a systematic, ordered fashion by exaggerating the head value used in the solution of subsequent head cells within

the same iteration. This method is more efficient than the Gauss-Seidel method with a reasonable relaxation factor.

For solute transport, IGW 3 modifies the classical advection-dispersion equation (Fick's Law) that is used by MT3D (equation 3), which can result in significant unphysical oscillations and negative concentrations when dispersion is strongly anisotropic and deviates significantly from the rectilinear grid orientation. IGW 3 eliminates the numerical difficulty associated with traditional methods by approximating the tensorial dispersion terms in a rotated coordinate system aligned in the direction of flow (Simard, A., Afshari, S., Liao, H., Liu, Q., and Li, S., *An Improved Method for Solving General Anisotropic Dispersion Problems in Non-Uniform Flow*: Poster H42C-07, American Geophysical Union Spring Meeting, Washington D.C., May 2002 [www.egr.msu.edu/igw]).

The governing equation for one-dimensional hydrodynamic dispersion similar to that used in MT3D is:

$$\partial C/\partial t = D_L(\partial^2 C/\partial x^2) - v_x(\partial C/\partial x) \quad (3)$$

Where:

v_x is seepage velocity in the x-direction — x is the rectilinear coordinate

C is the solute concentration — D_L is the longitudinal hydrodynamic dispersion coefficient

Which is the rate of solute accumulation is equal to the net rate of solute inflow due to dispersion minus the net rate of solute inflow due to advection. In IGW 3, the solute inflow term in equation (3) is rewritten in a coordinate system aligned with major anisotropy as:

$$\partial C/\partial t = D_L(\partial^2 C/\partial x^2) + D_T(\partial^2 C/\partial y^2) \quad (4)$$

Where:

D_T is the transverse hydrodynamic dispersion coefficient

IGW 3 uses either the Modified Method of Characteristics (MMOC) or Random Walk methods for solving solute transport. Cambria used the MMOC function for this problem. With MMOC, a modeled plume tends to disperse faster than is observed in the real world, but the results using MMOC more closely match actual site data. Faster plume dispersion may be a function of the strong reductive dehalogenation observed at the site.

A more complete description of the IGW software environment is included in *A New Paradigm for Groundwater Modeling* (www.egr.msu.edu/igw/publications/igw-new-paradigm.pdf) by Shu-Guang Li and Qun Liu of the Department of Civil and Environmental Engineering at Michigan State University.

Model Construction – *Defines the model domain. Defines initial conditions, boundary conditions, and hydraulic conditions, and the validity of their selection. Discusses any simplifying assumptions made to the conceptual model, and how the conceptual model is compatible with the modeling objectives and function.*

Model Domain: The model area depicted in the Flow Model Domain is 2,775 feet by 2,220 feet. Grid size within the model area is approximately 28 feet by 28 feet. The parent zone of the model is shown within the red boundary, in which the direction of anisotropic flow is 78 degrees from horizontal. Because hydrologic and geologic conditions are assumed essentially uniform across the limited area of the parent zone, the uniform grid spacing and size are appropriate for this model. As previously described in the site conceptual model, the majority of flow and contaminant transport is interpreted to be within the middle soil horizon. For this model, in order to maintain uniform flow across the zone, the middle soil horizon is modeled as a single layer with a base that is dipping southward at a constant slope in order for saturated thickness to remain uniform. This representation is similar to actual site conditions showing a slightly southward dipping middle soil horizon. Although soil beneath the middle horizon goes from moist to damp with depth, indicating an aquitard restricting vertical flow, the base of the saturated middle zone is not distinct. For this model, the saturated thickness is assigned based on the thickness of water in well MW-3 on October 28, 1992, which was 8.43 feet, under the assumption that well MW-3 was set to the based of the saturated aquifer. Although this is a single-layer three-dimensional model, vertical dispersion and flow within the middle horizon is believed to be negligible, so the exact thickness of the saturated soil is not critical to the results.

Hydraulic Parameters: In the 1990 pump test conducted by WGR, the resulting conductivity of 241.14 feet per day indicates a well sorted gravel matrix. Since this interpretation of matrix type does not match native soil encounter beneath the site, the results are suspect. The pump test was conducted using well MW-12, which was located immediately adjacent to the area of remedial excavation in 1989. After removing the impacted soil from the excavation, the area was lined with 10-mil Visqueen and backfilled with 1.5-inch diameter crushed rock. The results obtained from the pump test suggest that groundwater was being produced preferentially from crushed rock in the backfilled excavation, and not from the surrounding native soil.

Soil identified at the site in the middle horizon is silty clay with thin sand and gravel interbeds. Assuming that the sand and gravel interbeds are in lateral communication across the site, which appears to be the method of significant contaminant migration downgradient of the site, the soil in this horizon is conservatively interpreted to be similar to well-sorted sands, with a hydraulic conductivity of 10^{-3} to 10^{-1} centimeters per second (Fetter 1994) and an effective porosity of approximately 20 percent. The average linear velocity is calculated at approximately 0.1 feet per day, which is significantly less than that derived from the 1990 WGR pump test results.

Sources and Sinks: No sources or sinks were interpreted within the limited extent of the model domain.

Boundary Conditions: The boundary conditions were set to approximate groundwater flow and gradient observed on October 28, 1992. The parent zone as shown in the Flow Model Domain was oriented in the average direction of historical groundwater flow monitored at this site. The northern and southern boundaries of the parent zone are assigned as constant head boundaries based on depth to groundwater and gradient observed between wells MW-3 and MW-10 on October 28, 1992. The east and west boundaries of the parent zone are assigned no-flow boundaries. The resulting flow model approximates conditions observed historically at this site.

Selection of Calibration Targets and Goals: The model was calibrated based on the current interpreted extent of the HVOC plume. Hydrologic and geologic parameters were adjusted so that the modeled historic migration of the plume from the source approximates its current extent. Given that the resulting hydraulic conductivity and flow rate produce a model approximating reality, a prediction of HVOC plume fate and transport has the possibility of being useful.

Calibration – *Presents and discusses model calibration procedures. Presents the results of the calibration simulation in map form, and compared to hydraulic head and flow data. Discusses comparison of calibration simulations to site-specific information using qualitative and quantitative techniques. Discusses sensitivity analyses and the model verification. Discusses and presents the simulation's overall water budget and mass balance. Discusses additional insight gained from the calibration regarding the conceptual model. Justifies any changes made to the conceptual model.. Documents any pre-processing or post-processing algorithms, and any parameters these algorithms use for processing.*

Qualitative/Quantitative Analysis:

The model was constructed to approximate site-specific data. The reliability of the model was determined based on a qualitative review of the results discussed below under Model Application Verification.

Cambria's modeling approach conforms to SWRCB staff guidelines for groundwater modeling presented in *Evaluation of Groundwater Modeling Applications*. Their approach to groundwater model evaluation is based on the application's ability to adequately represent the ground water system for the purpose of model application.

Sensitivity Analysis:

Because the model was constructed to approximate site-specific data, sensitivity analysis was not significant for model verification. Although not needed, Cambria did test the sensitivity of various parameters in the IGW 3 model. The most sensitive parameter is conductivity. But given the results

of model verification discussed below, Cambria believes that the conductivity value used in the model is appropriate.

Model Application Verification:

Cambria verified the model by approximating historical TCE plume migration downgradient to match current interpreted TCE plume extent. Cambria assumed that starting in 1970, a continuous HVOC source was present in the southern corner of the site, where residual HVOCs were identified in soil. Starting with a model in which the flow system is homogeneous and isotropic with uniform constant head inflow and outflow boundaries and using the calculated soil conductivity and porosity values, which is reasonable given the limited extent of the area modeled around the subject site, the model was run to simulate migration over a 20-year period through 1990. Figure A shows a TCE plume migration downgradient after 20 years that is similar in extent to the existing TCE plume.

In 1990, Chevron's asphalt and terminal operations had already ceased, and significant remedial excavation took place on-site. Because the extent of this excavation penetrates the modeled horizon and was lined with Visqueen prior to being backfilled, this area was added to the model as a no flow zone as shown on Figure B. Also, because Chevron ceased its operations on-site, the HVOC source is no longer considered continuous, and remaining residual impact is treated as an instantaneous source. Figure B shows migration of an instantaneous source on-site over the next ten years, representing the period from 1990 to 2000 prior to construction of the existing residential/parking structure. Based on the extent of TCE plume migration shown in Figures A and B, compared to current monitoring and sampling data, the flow model appears reasonable, verifying the models relevancy to approximating uncertainties in contaminant fate and transport.

The applicability of the IGW 3 model for predictive simulations is verified based on obtaining reasonable comparisons to current and historical data.

Predictive Simulations – *Describes any predictive simulations and how they relate to the study objectives. Details and justifies the changes made to permit the calibrated model to simulate these predictions. Presents results of any predictive simulations in graphical form.*

Figures C and D show predicted TCE and PCE plume migration, respectively. Both transport models start with interpreted dissolved plume extents based on current groundwater monitoring and sampling data as an instantaneous source. Because the existing residential/parking structure penetrates the modeled horizon, and all residual source material was removed from the site in 1999 prior to construction of the existing structure, the aerial extent of the existing structure was added to the model as a no-flow zone. At each step of the simulations shown in Figures C and D, the 5 ug/L contour of the plumes are shown. In IGW 3, the colors shown within the plume are for illustrative purposes and do not represent concentration intervals. Both figures show HVOC plumes migrating

slowly downgradient, but at declining concentrations that approach background conditions within a reasonable period of time. Also, both predictive simulations show that the HVOC plume does not appear to pose any additional threat to potential downgradient receptors.

In addition to historical verification of the predictive simulations discussed above, the decline in PCE and TCE concentrations shown in Figures C and D approximate declining concentration trends shown on trend graphs for wells MW-17, MW-18, and MW-19A.

Summary and Conclusions – *Summarizes the modeling effort and draws conclusions related to the study objectives. Discusses uncertainties inherent to the model and their effects on conclusions derived from the model.*

The results of the groundwater flow and fate and transport modeling suggest that the existing HVOC plume will continue to decline in mass and should not pose a threat to potential downgradient receptors. Because the majority of the current plume is below respective ESLs, no future threat is anticipated, and background conditions should be achieved within a reasonable period of time by natural attenuation processes.

Since the model was constructed to match calculated parameters, possible variations in these values could significantly affect predictive results; although, the results obtained through the verification phase reasonably approximate currently observed groundwater conditions. Cambria believes that the results of the predictive simulations are useful for evaluating risk at this site. In addition, because residual source material has been removed through remedial excavation, no source remains to reverse improving conditions downgradient of the site.

Modeling References – *Provides references for data, computer codes, and modeling procedures used as part of the modeling effort.*

Fetter, C. W., 1994, *Applied hydrogeology*: Macmillan College Publishing Company, New York.

Franke, O. L., Reilly, T. E., and Bennett, G. D., 1987, *Definition of boundary and initial conditions in the analysis of saturated ground-water flow systems—an introduction*: U. S. Geological Survey Techniques of Water-Resources Investigations, Chapter B5, 22 p.

Li, S., and Liu, Q., 2004, *Interactive Groundwater (IGS): An innovative digital laboratory for groundwater education and research*: Wiley Periodicals, Inc. Comput Appl Eng Educ 11: 179 – 202, 2003; Published online in Wiley InterScience (www.interscience.wiley.com); DOI 10.1002/cae.10052.

McNab, W. W., Rice, D. W., and Tuckfield, C., 2000, *Evaluating chlorinated hydrocarbon plume behavior using historical case population analyses*: Lawrence Livermore National Laboratory, UCRL-JC-134501, 33 p.

Paulson, K., and Li, S., 2002, *IGW user's manual for version 3*: Michigan State University College of Engineering, 176 p.

Reilly, T. E., and Harbaugh, A. W., 2004, *Guidelines for evaluating ground-water flow models*: U.S. Geological Survey Scientific Investigations Report 2004-5038, 30 p.

Wiedemeier, T. H., et al., 1998, *Technical protocol for evaluating natural attenuation of chlorinated solvents in groundwater*: U. S. Environmental Protection Agency, EPA/600/R-98/128.

REGULATORY STATUS REVIEW AND RECOMMENDATIONS

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

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

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

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

Hydrocarbon and HVOC sources are no longer present at the site, and all Chevron facilities were removed by 1987. Approximately 43,000 cubic yards of soil have been removed to date from the site during various excavation activities effectively removing all residual source material from the site. Based on low and declining hydrocarbon and HVOC concentrations remaining in groundwater, excavation successfully remediated the site to the point that natural attenuation is sufficient to remediate residual aqueous-phase compounds.

The Site Has Been Adequately Characterized

Numerous soil borings have been advanced on-site to characterize soil, and excavation activities in 1989, 1990, 1992, and 1999 have effectively removed all residual source material from the site. Nineteen monitoring wells have been installed to monitor groundwater in the vicinity of the site, and although the downgradient extent of the existing HVOC plume has not been delineated due to restricted access under buildings and in the railroad right-of-way, remaining dissolved hydrocarbon

and HVOC concentrations in groundwater along the southern extent of the monitoring well network are near or below applicable ESL concentrations (Table 5) and do not appear to pose a threat to downgradient receptors.

The Dissolved Hydrocarbon Plume Is Not Migrating

Concentration trends for the remaining constituents of concern at this site are declining, indicating the mass of the hydrocarbon and HVOC plumes is likely declining due to natural attenuation processes. From the groundwater fate and transport modeling performed and discussed above, the remaining dissolved plume will continue to decline in mass and should not adversely impact potential downgradient receptors. The dissolved plumes are interpreted to continue to shrink and background conditions will be achieved within a reasonable period of time without posing any future threat.

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

Four monitoring wells were identified during the DWR well search at the Amtrak station located north of the site. These wells, if still present, are up-gradient of the site. The San Francisco Bay is approximately 2,000 feet to the west and is not at risk from site hydrocarbons and HVOCs because current concentrations are below their respective marine aquatic ESLs (Table 5), and groundwater fate and transport modeling indicates that the remaining dissolved plumes will not migrate to that extent. Also, groundwater in the vicinity of the site is not a current source of drinking water as identified in the SWRCB Geotracker database. Current dissolved HVOC concentrations downgradient of the site are below their respective indoor inhalation risk levels (Table 5), and to not appear to pose a threat to occupants of the buildings downgradient of the site.

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

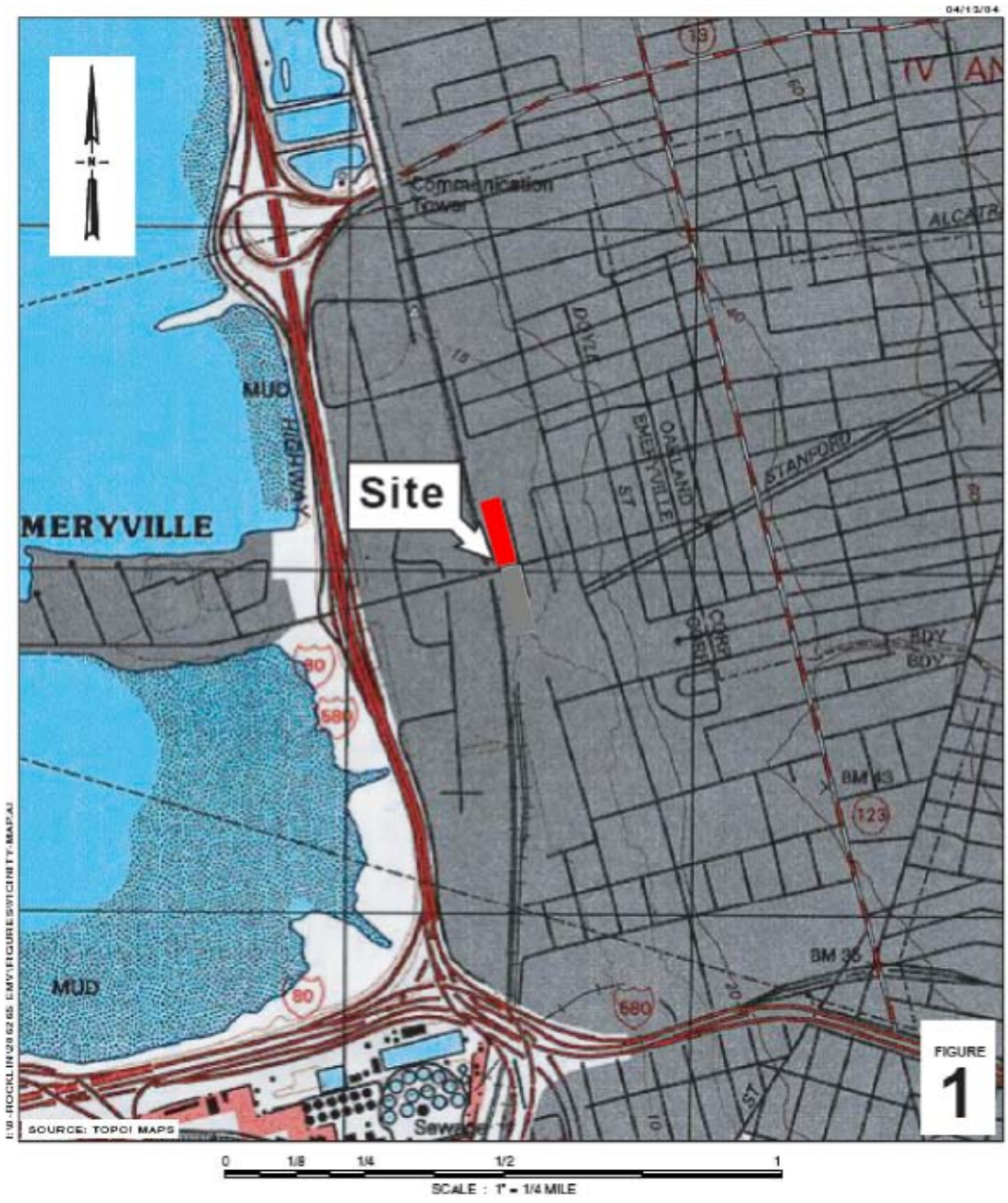
The risk assessment completed by Geraghty and Miller, Inc., July 28, 1992, indicated based on the then current conditions, for all constituents of concern, soil and groundwater concentrations were all below health based target levels for commercial site use. Subsequently, ESLs (Table 5) have been met for all constituents of concern. As confirmed by the ACHCSA in a letter dated April 2, 2002, because of previous removal of impacted soil and the presence of the residential/parking structure on-site, compounds remaining in groundwater does not pose a risk to present and future on-site residents and site use. Therefore, it is Cambria's opinion that there is no risk to human health or the environment by conditions remaining at this site.

CONCLUSIONS AND RECOMMENDATIONS

Based on our review of site conditions and the findings presented above, this site satisfies the criteria for a low-risk fuel case for closure. On behalf of Chevron, Cambria requests case closure and no further action.

FIGURES

Vicinity Map

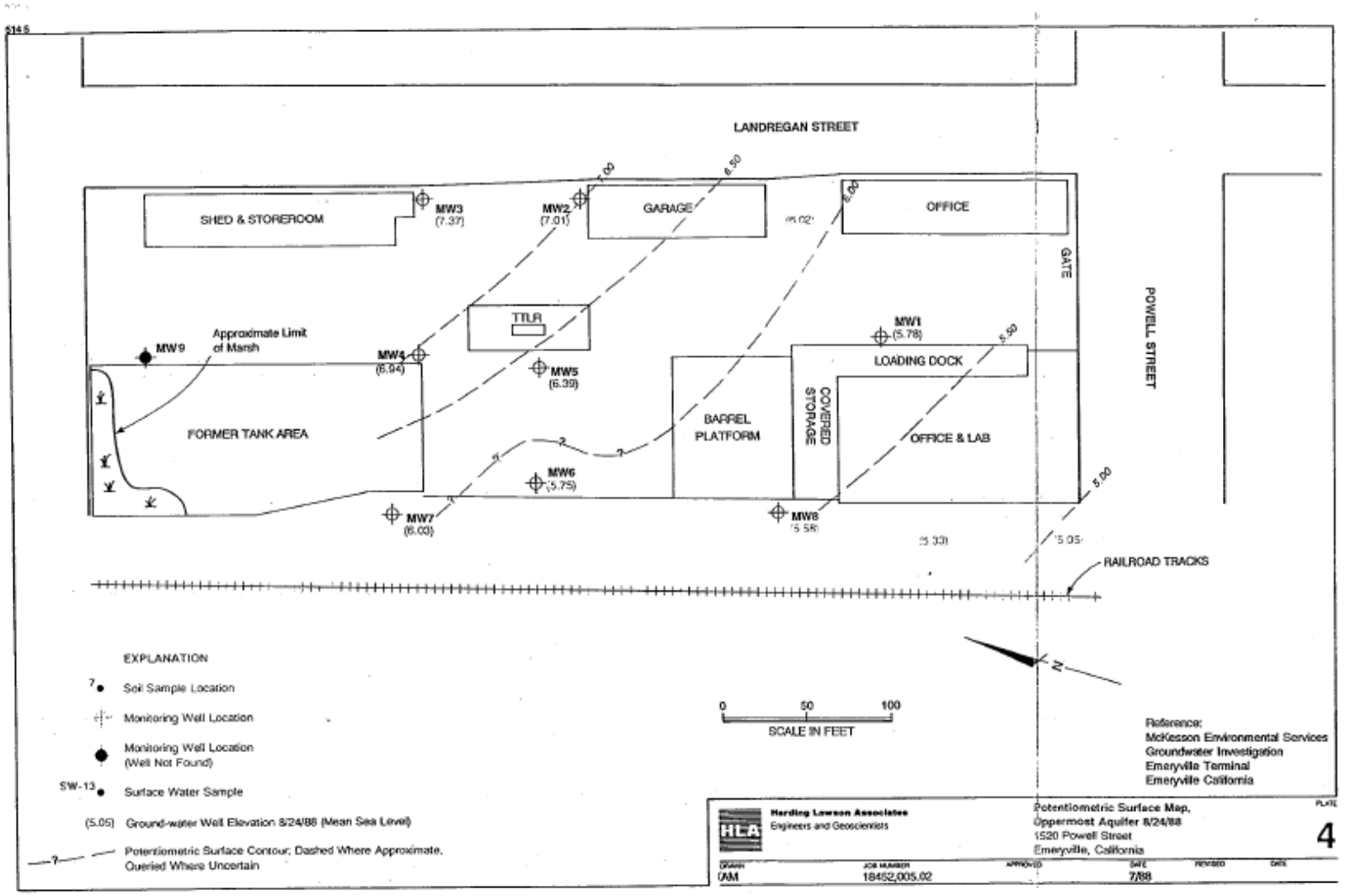


Former Chevron Asphalt Plant 206265
Powell and Landregan
Emeryville, California

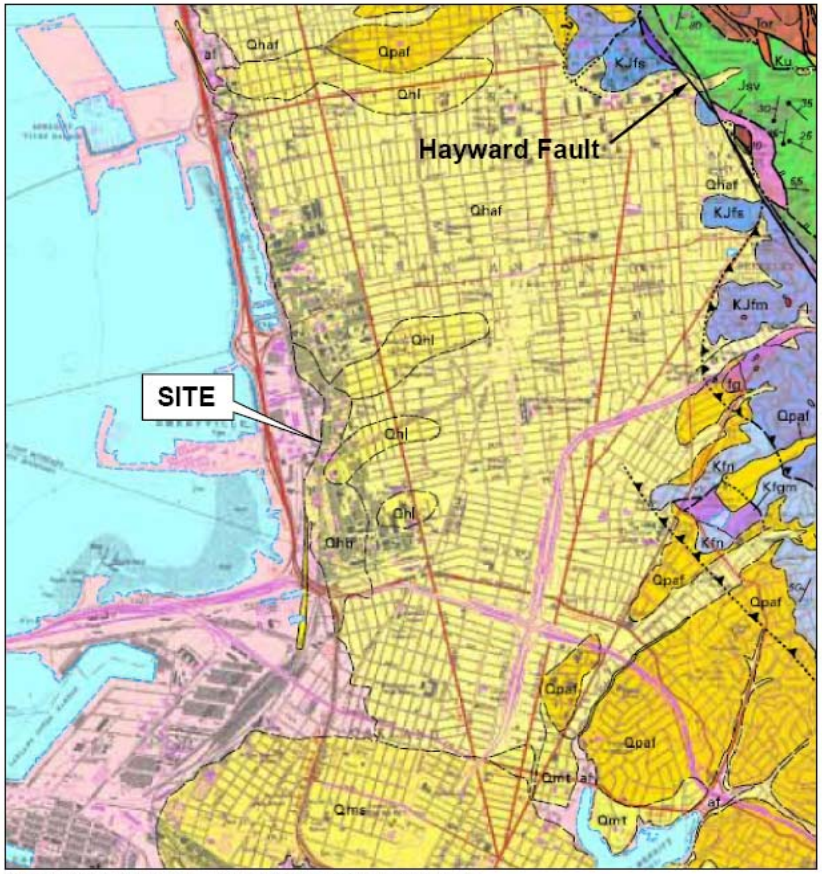
CAMBRIA

Vicinity Map

Plate 4


LANDREGAN STREET
SHED & STOREROOM
MW3 (7.37)
MW2 (7.01)
GARAGE
OFFICE
GATE
POWELL STREET
TTLR
MW9
Approximate Limit of Marsh
MW4 (6.94)
MW5 (6.39)
MW1 (5.78)
LOADING DOCK
FORMER TANK AREA
BARREL PLATFORM
COVERED STORAGE
OFFICE & LAB
MW6 (5.75)
MW7 (6.00)
MW8 (5.58)
RAILROAD TRACKS
EXPLANATION
Soil Sample Location
Monitoring Well Location
Monitoring Well Location (Well Not Found)
SW-13 Surface Water Sample
(5.05) Ground-water Well Elevation 8/24/88 (Mean Sea Level)
Potentiometric Surface Contour; Dashed Where Approximate, Queried Where Uncertain
0 50 100
SCALE IN FEET
N
Reference:
McKesson Environmental Services
Groundwater Investigation
Emeryville Terminal
Emeryville California
Harding Lawson Associates
Engineers and Geoscientists
Potentiometric Surface Map,
Uppermost Aquifer 8/24/88
1520 Powell Street
Emeryville, California
PLATE
4
DRAWN AM
JOB NUMBER 18452,005.02
APPROVED
DATE 7/88
REVISED
DATE

Geologic Map



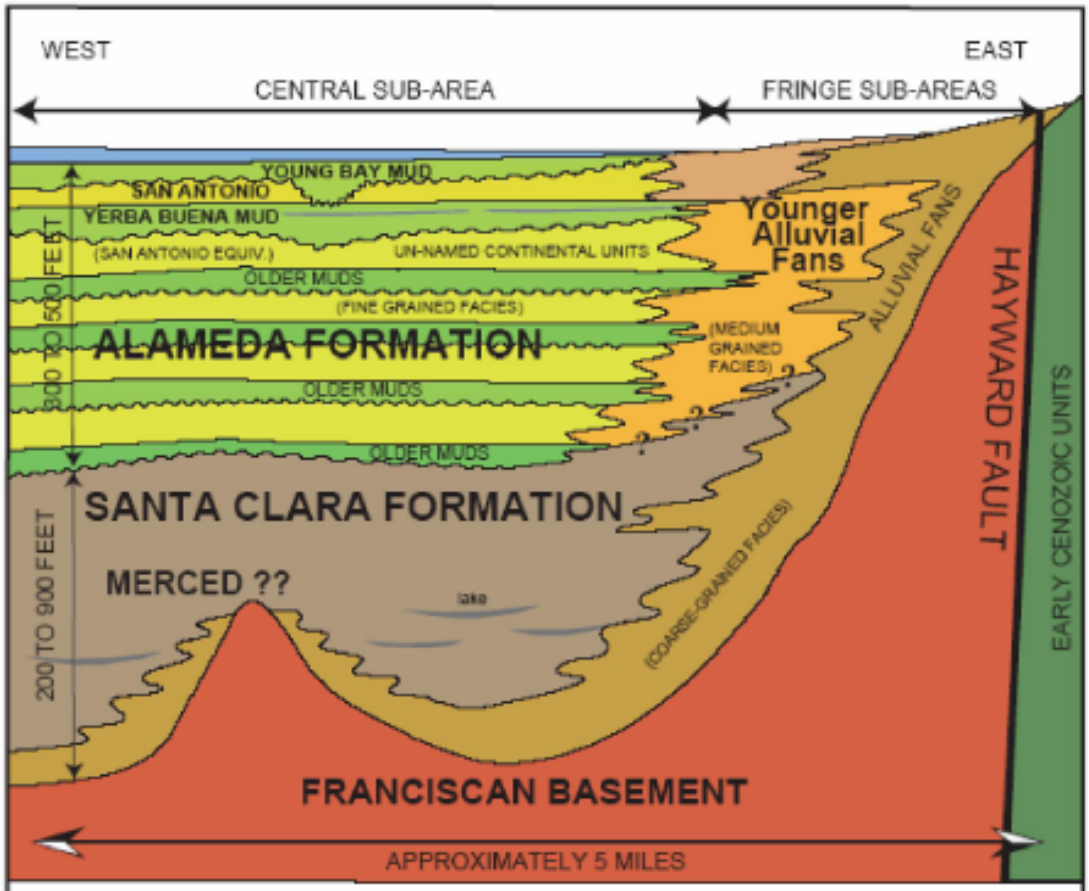
Map Source: http://geopubs.wr.usgs.gov/map-mf/mf2342/mf2342f.pdf

Geologic Legend

af – Artificial fill (Historic)
Qhaf – Alluvial fan and fluvial deposits (Holocene)
Qhb – Basin Deposits (Holocene)
Qhl – Natural levee deposits (Holocene)
Qms – Merrit sand (Holocene and Pleistocene)
Qpaf – Alluvial fan and fluvial deposits (Pleistocene)
Qmt – Marine terrace deposits (Pleistocene)
Tor – Orinda Formation (Late Miocene)
Kfn – Sandstone of the Novato Quarry terrain (Late Cretaceous)
Kfgm – Fine grained quartz diorite (Late Cretaceous (?))
KJfs – Franciscan Complex sandstone (Late Cretaceous to Late Jurassic)
KJfm – Franciscan Complex mélange (Cretaceous to Late Jurassic)
Ku – Undivided Great Valley complex (Cretaceous)
Jsv – Keratophyre and quartz keratophyre (Late Jurassic)

Geologic Map
Emeryville, California Area

East Bay Plain Cross Section



Schematic cross-section of stratigraphic relationships along the east side of the San Francisco Basin (15-20:1 vertical exaggeration). The Alameda Formation is restricted to the marine transgression(s) (including the current transgression), and local names (San Antonio, Yerba Buena Mud, etc.) are members within the Alameda Formation. There were six to eight transgressions of the late Pleistocene seas within the Alameda Formation. The upper two are well defined, but little is known about the earlier transgressions.

The units below the Alameda are likely Santa Clara and possibly Merced formation. The units on the side of the basin are Holocene and late Pleistocene alluvial fans and related deposits. The location of the boundary between the Santa Clara and the Younger fans is unknown.

Basement knobs (hills) are scattered throughout the Basin. Some are exposed (e.g. Yerba Buena Island), but the majority are buried. All basement knobs affected sedimentation patterns laterally and vertically. Basement topography is self replicating through time. The current shape of the bay and the location of the major streams and embayments mimic basement topography.

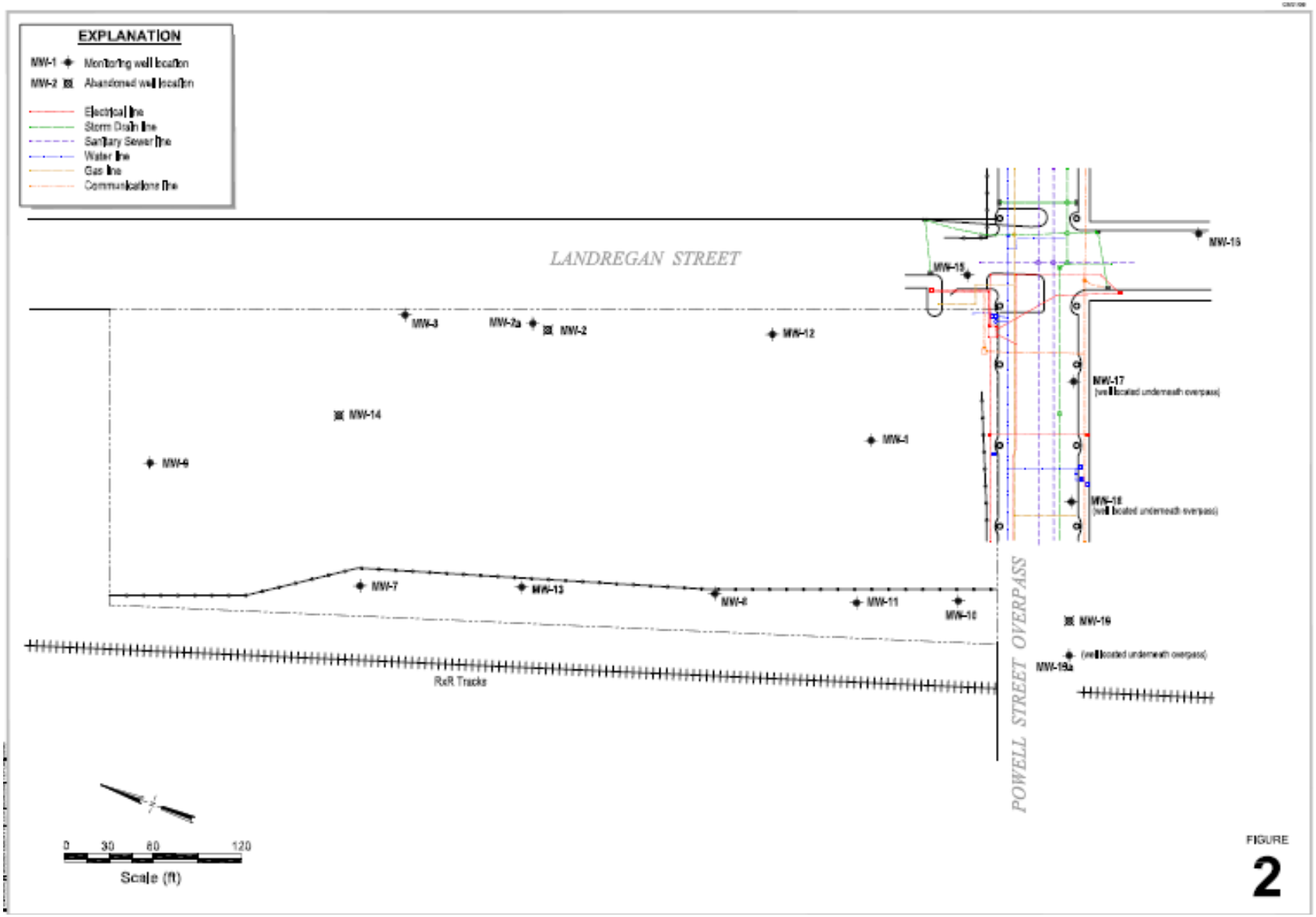
Norfleet Consultants	SCHEMATIC STRATIGRAPHIC SECTION		
	EAST BAY PLAIN BENEFICIAL USE STUDY		
	PROJ NO: 981102	DATE: 6/15/98	FIGURE: 12

San Francisco Bay Area Basin Map

Map Source: DWR Bulletin 118

San Francisco Bay Area Basin Map

Site Plan


EXPLANATION
MW-1 Monitoring well location
MW-2 Abandoned well location
Electrical line
Storm Drain line
Sanitary Sewer line
Water line
Gas line
Communications line
LANDREGAN STREET
POWELL STREET OVERPASS
MW-3
MW-2a
MW-2
MW-12
MW-15
MW-16
MW-17
(well located underneath overpass)
MW-18
(well located underneath overpass)
MW-14
MW-4
MW-9
MW-7
MW-13
MW-8
MW-11
MW-10
MW-19
(well located underneath overpass)
MW-19a
RxR Tracks
0 30 60 120
Scale (ft)
FIGURE
2
Site Plan
Former Chevron Asphalt Plant #206265
Powell & Landregan
Emeryville, California
CAMBRIA

Vicinity Map LUFT & SLIC Sites

Map Source: www.mapquest.com

Legend

LUFT Sites:

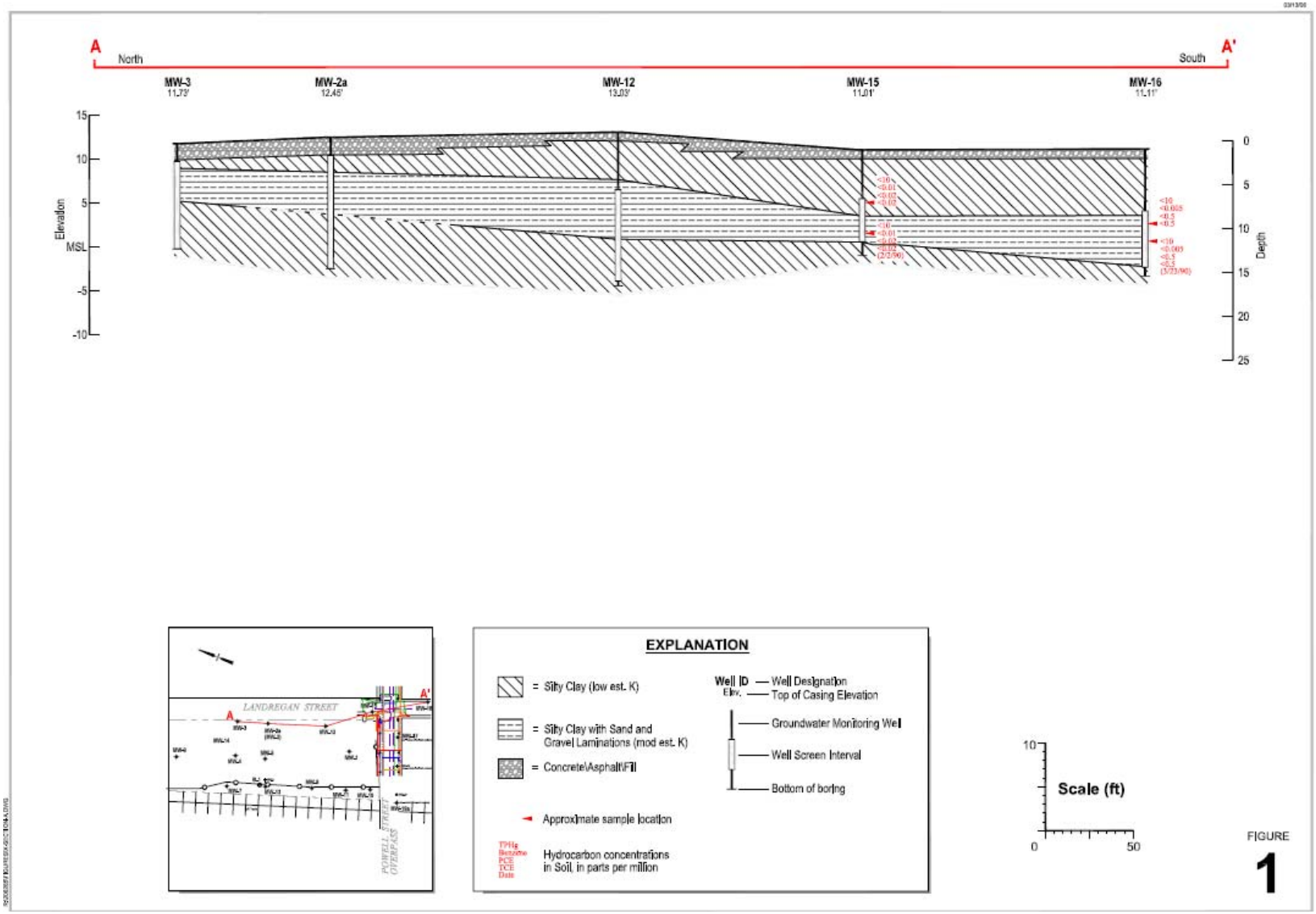
1) Days Inn, 1603 Powell Street
   Diesel Fuel Oil and Additives
2) Hydraulic Electro Service Corp., 5812 Hollis Street
   Diesel Fuel Oil and Additives
3) AJ Trucking, 5600 Shellmound Street
   Gasoline

SLIC Site:

4) Westinghouse Electric Corp., 4899 Peladeau Street

Vicinity Map
LUFT and SLIC Sites
Emeryville, California

Cross Section A-A’



FIGURE

1

Geologic Cross Section A-A’

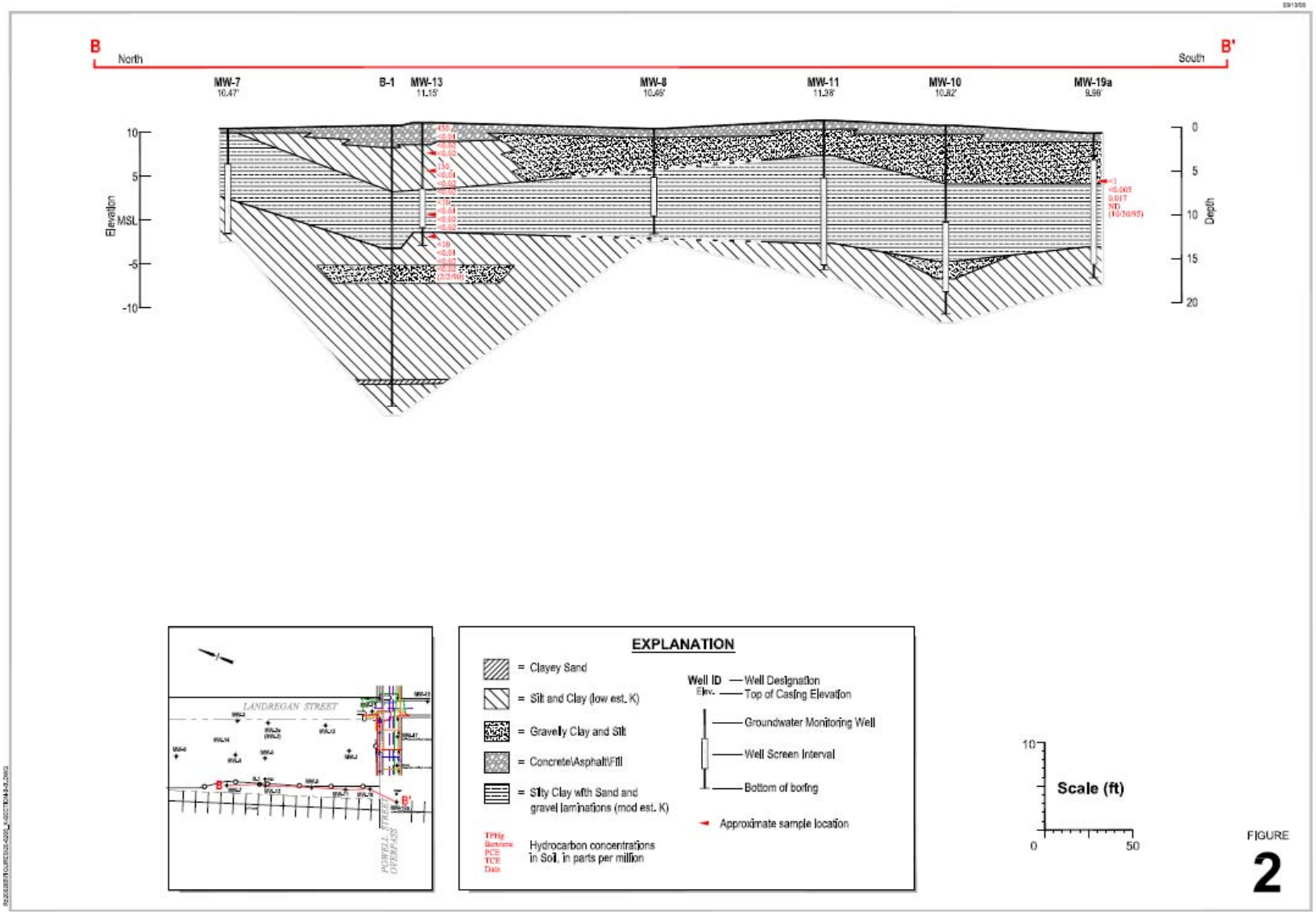
Former Chevron Asphalt Plant #206265

Powell & Landregan

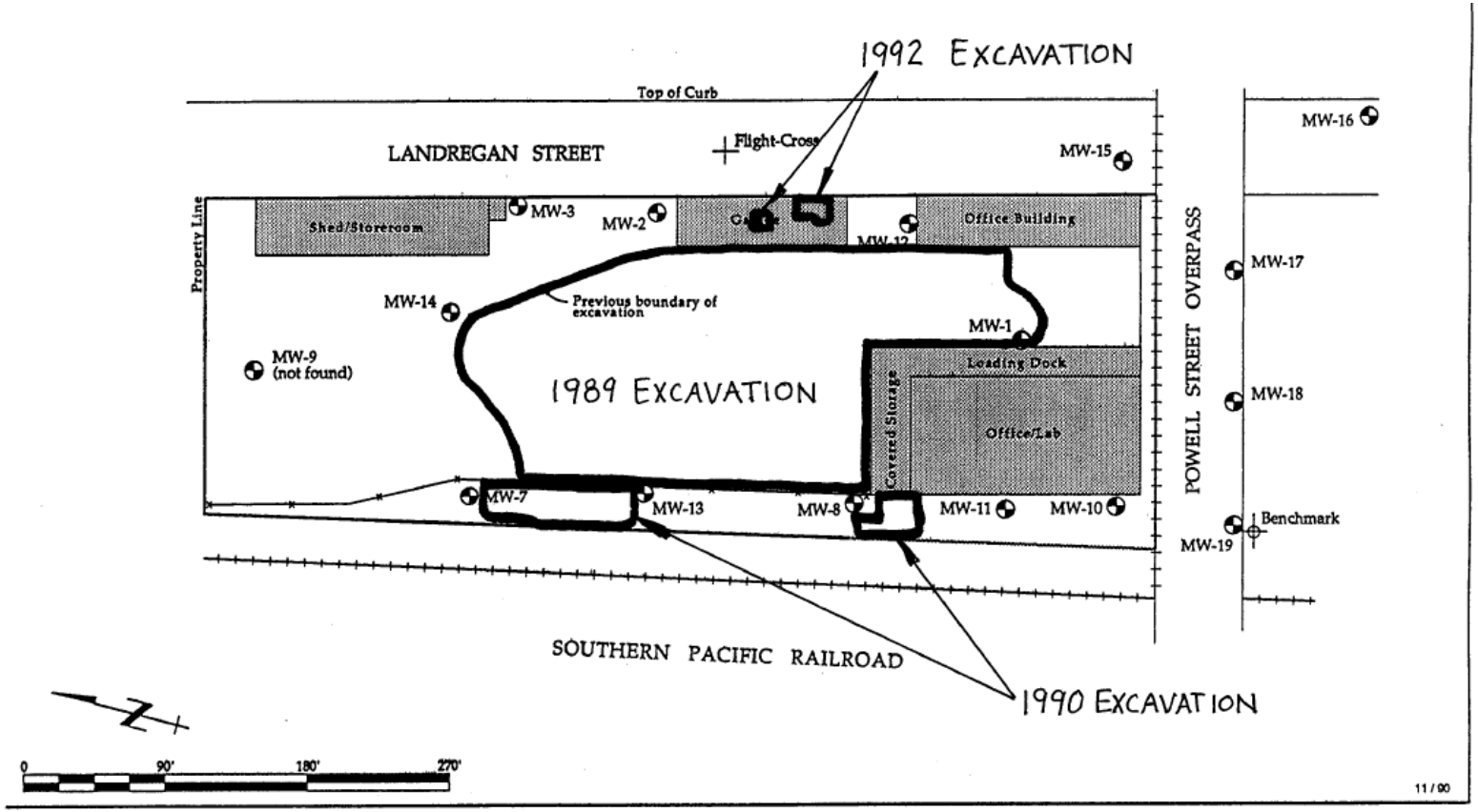
Emeryville, California

CAMBRIA

Cross Section B-B’



1989, 1990, and 1992 Excavation



LEGEND

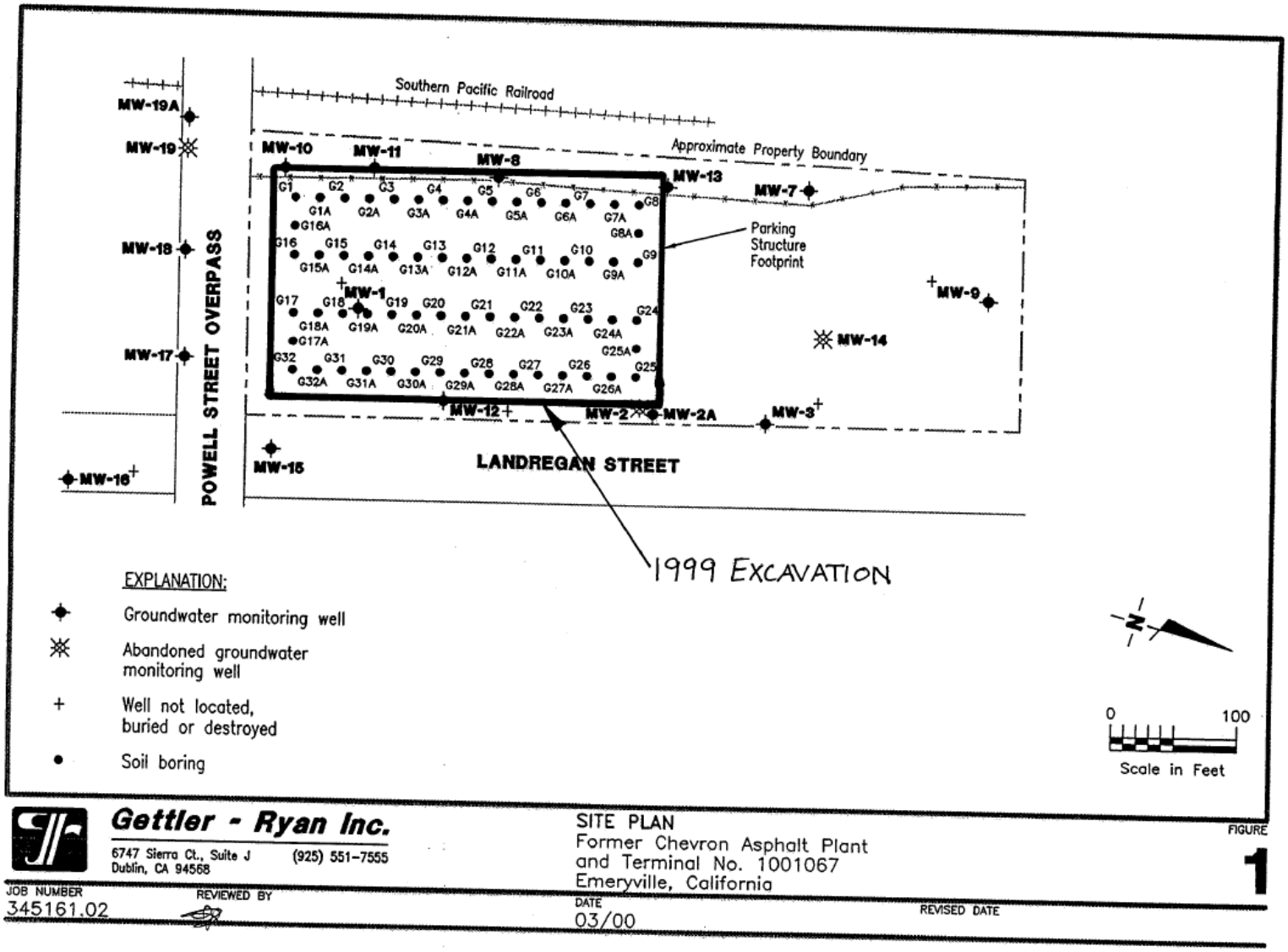
- MW-8 — Monitor Well location
- Additional soil excavation boundary
- Assumed property line

Site Map with Additional Soil Excavation Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 2

WESTERN GEOLOGIC RESOURCES, INC. 1-045.47

1999 Excavation



Gettler - Ryan Inc.
6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

SITE PLAN
Former Chevron Asphalt Plant
and Terminal No. 1001067
Emeryville, California

FIGURE
1

JOB NUMBER
345161.02

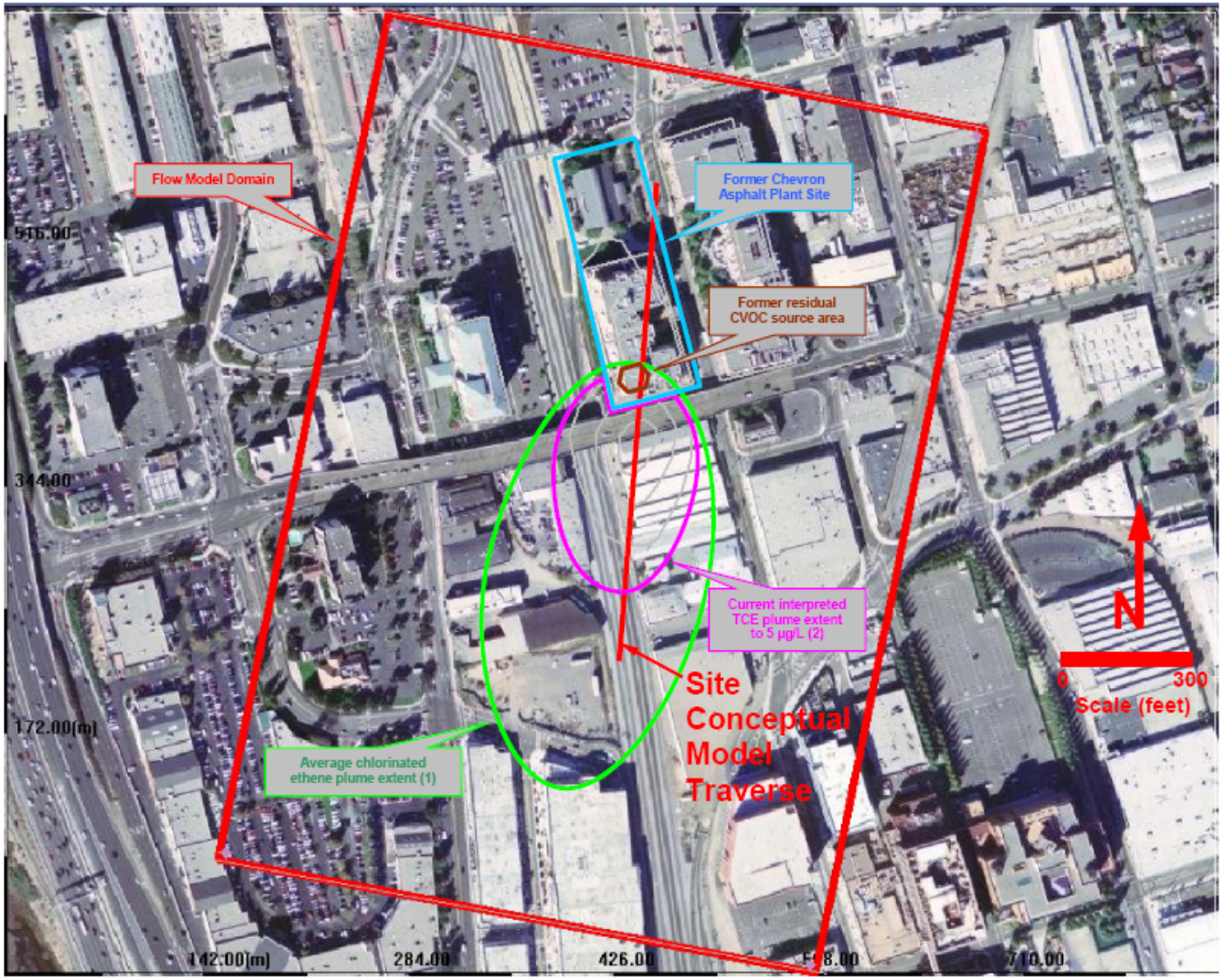
REVIEWED BY

DATE
03/00

REVISED DATE

Aerial Photo

CAMBRIA



Aerial Photo, Former Chevron Asphalt Plant and Terminal #206265, 1520 Powell Street, Emeryville, California

(1) Average chlorinated ethene plume extent from: Newell, C. J., and Conner, J. A., 1998, *Characteristics of dissolved petroleum hydrocarbon plumes*: American Petroleum Institute, Washington, DC. 8 p.
(2) Based on groundwater data reported 2nd quarter 2005.

Site Conceptual Model

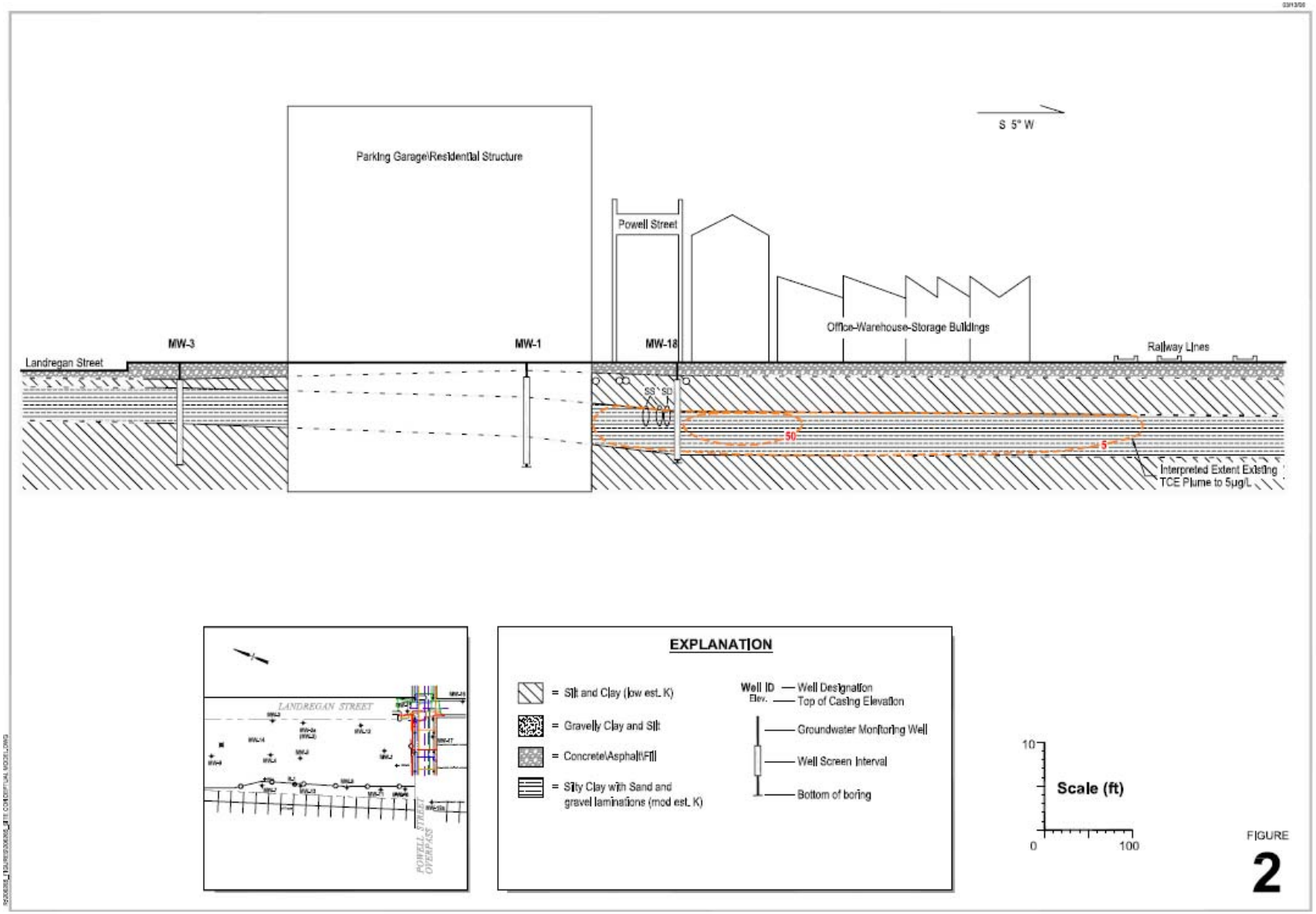


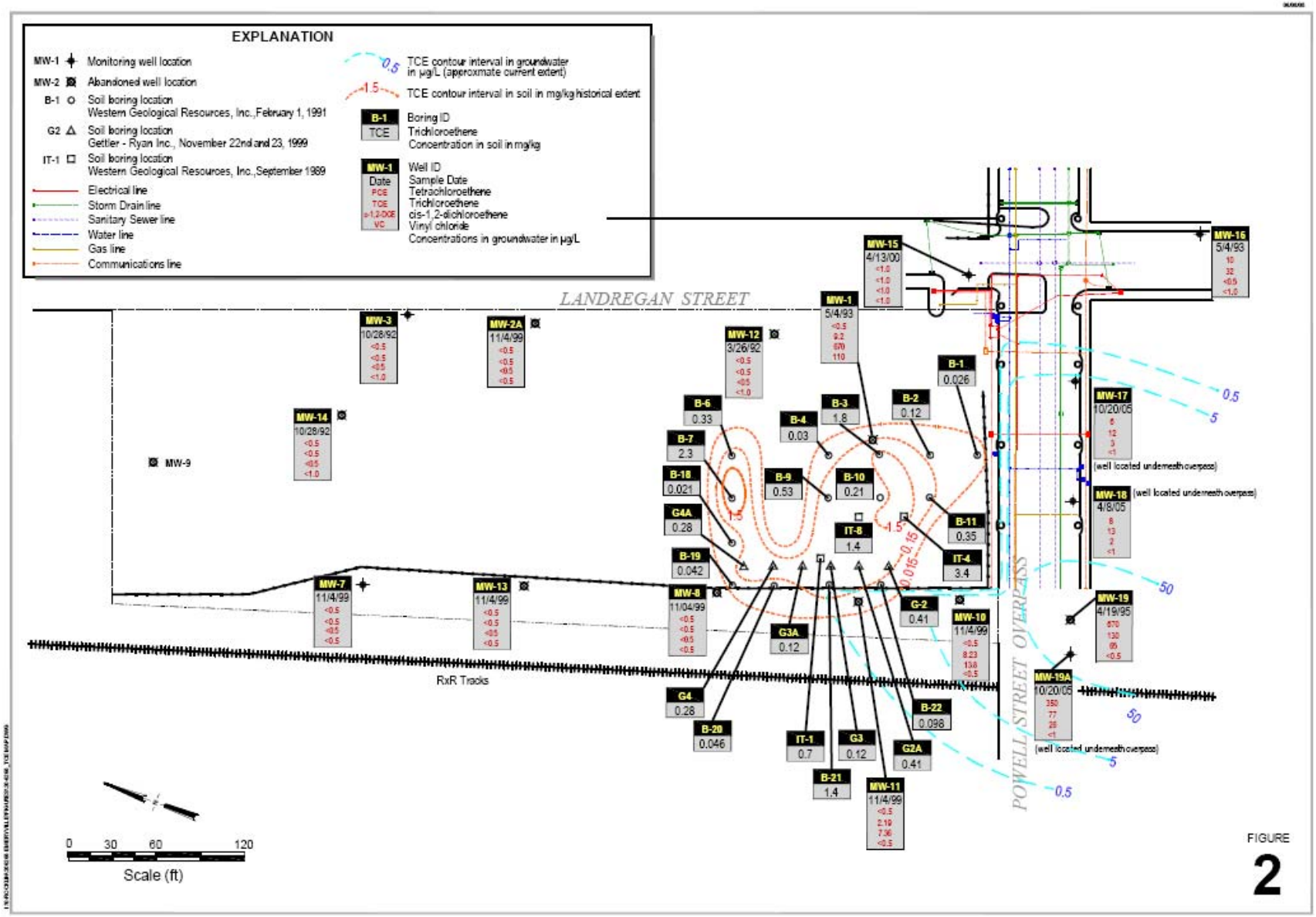
FIGURE
2

Site Conceptual Model

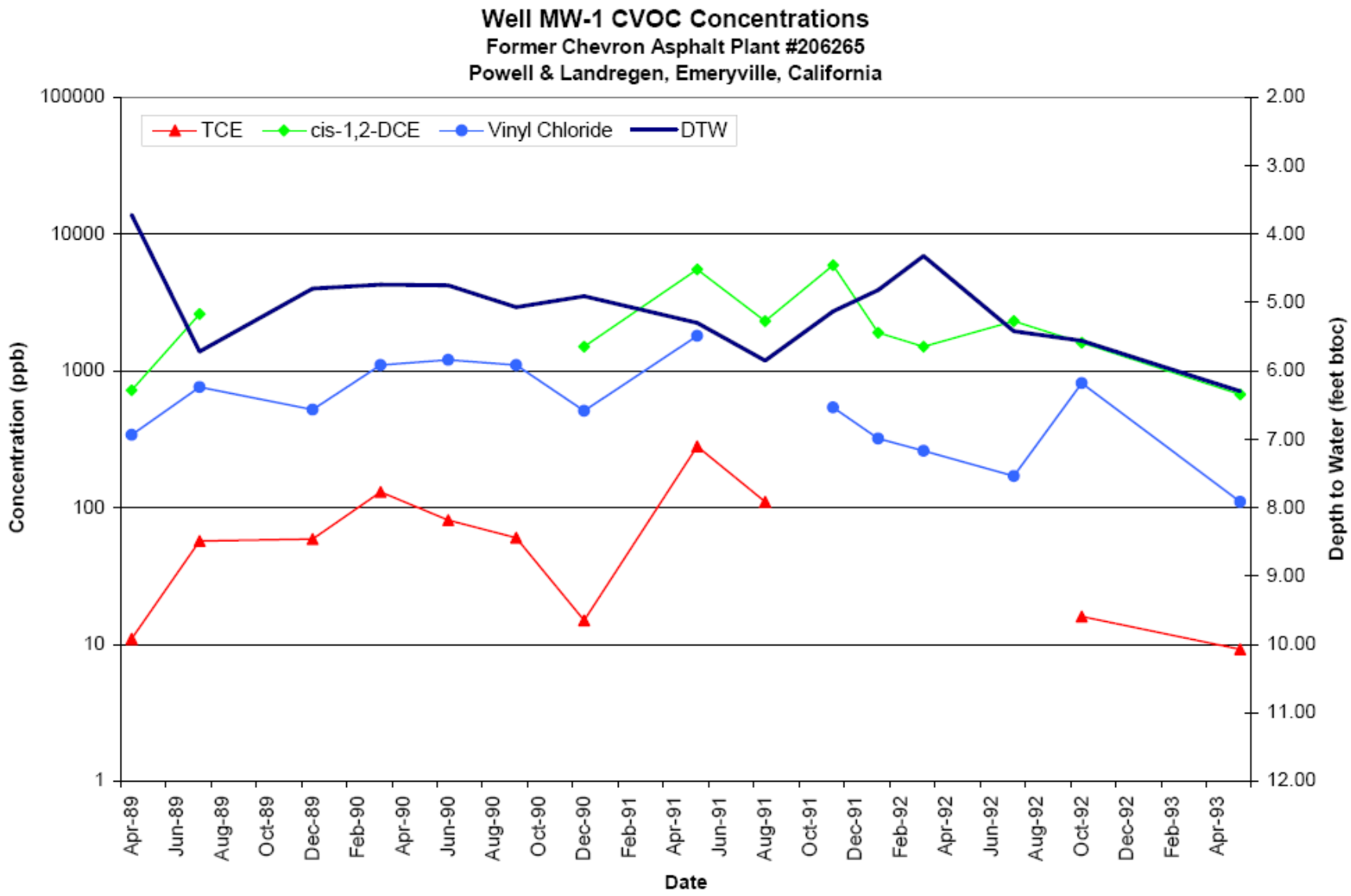
Former Chevron Asphalt Plant #206265
Powell & Landregan
Emeryville, California

CAMBRIA

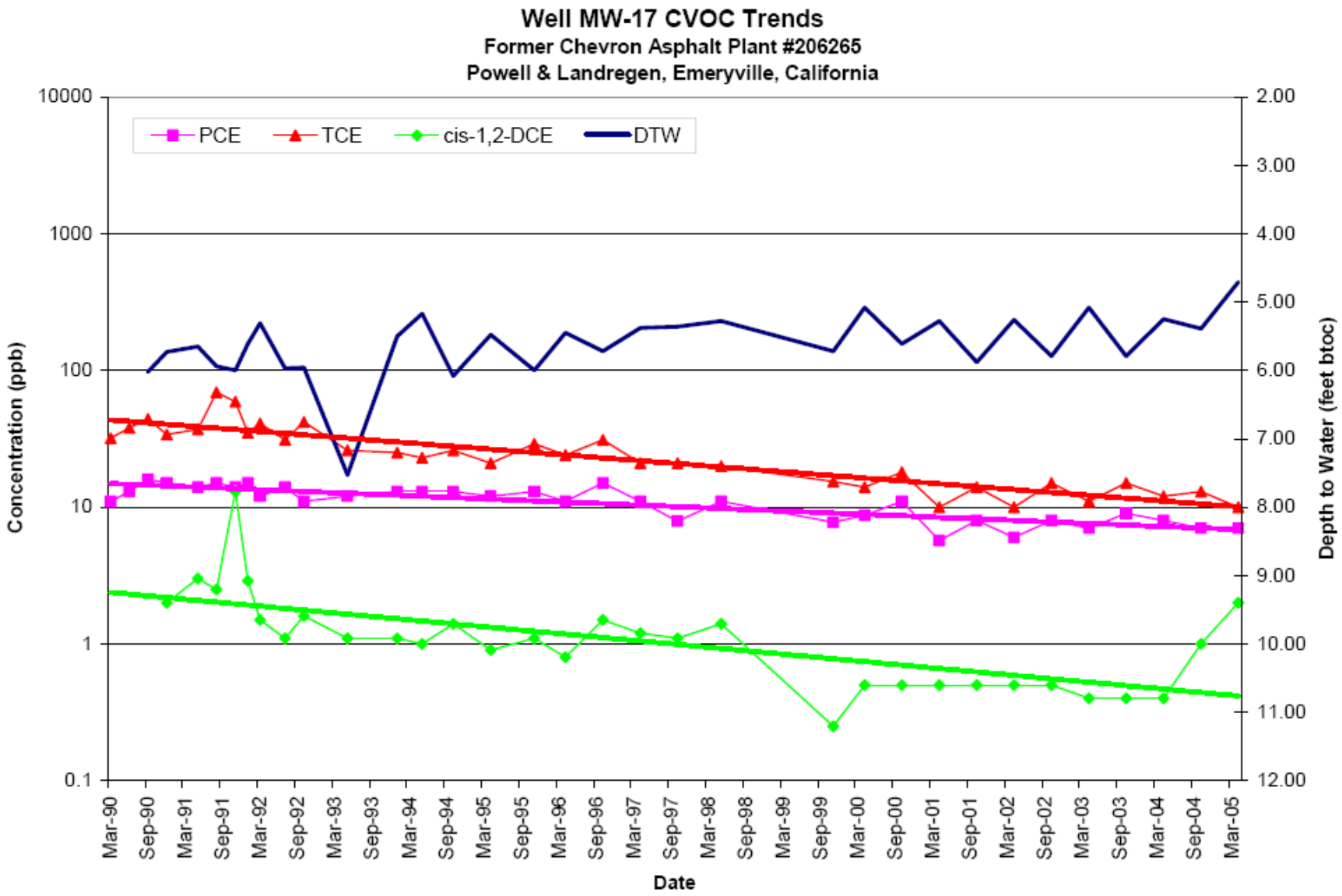
TCE Isoconcentration Map



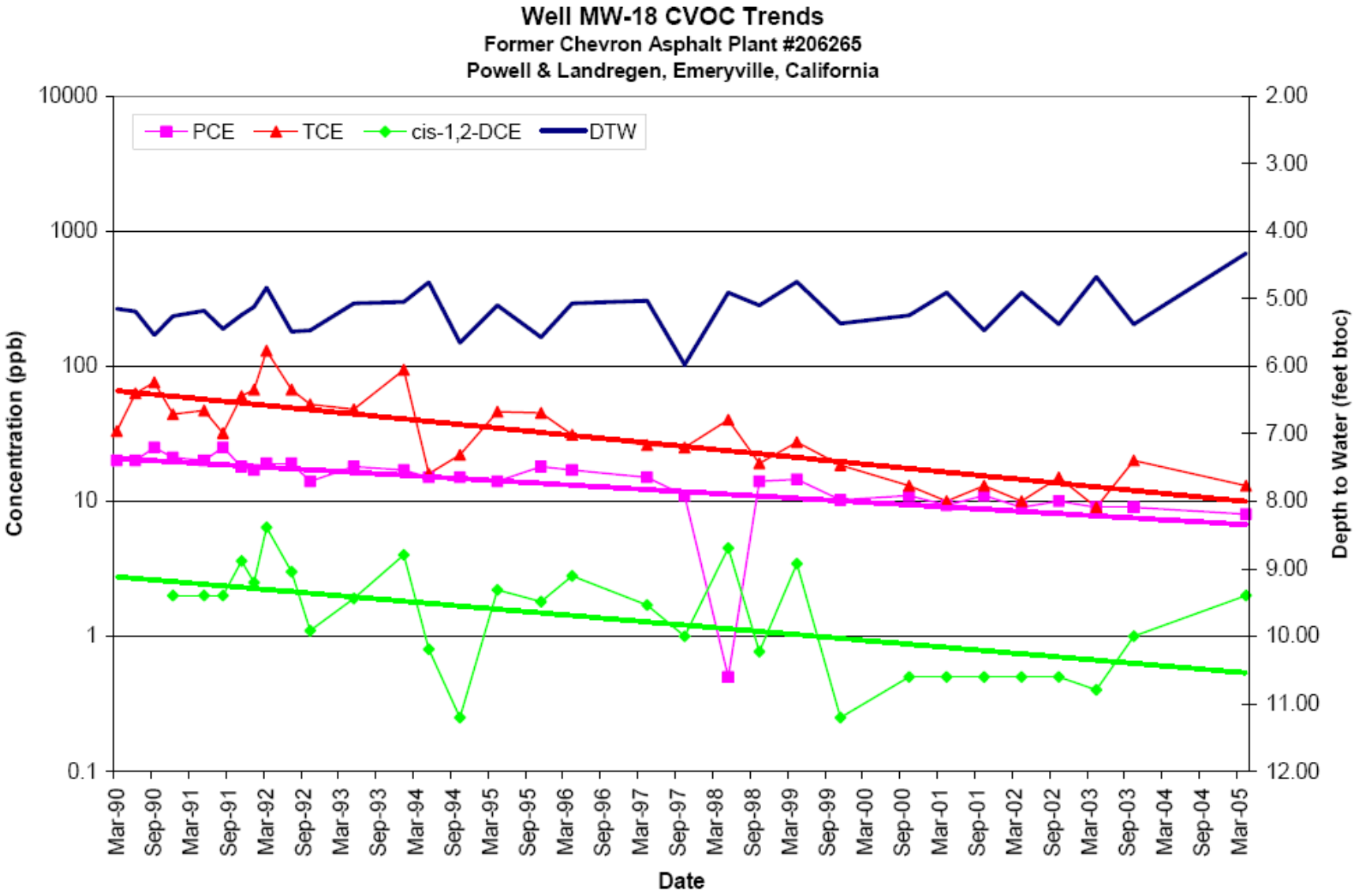
Well MW-1 HVOC Concentrations



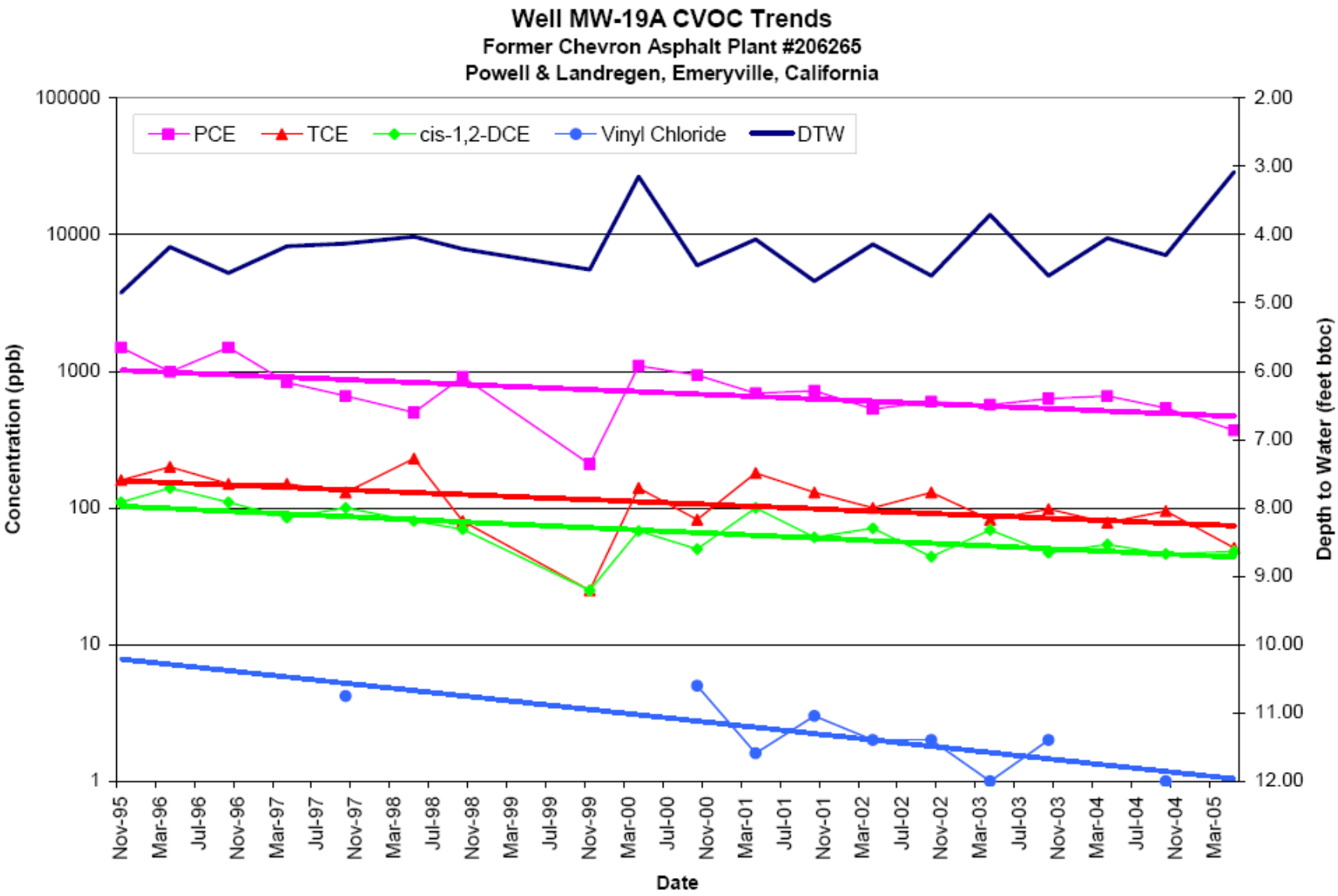
Well MW-17 HVOC Trends



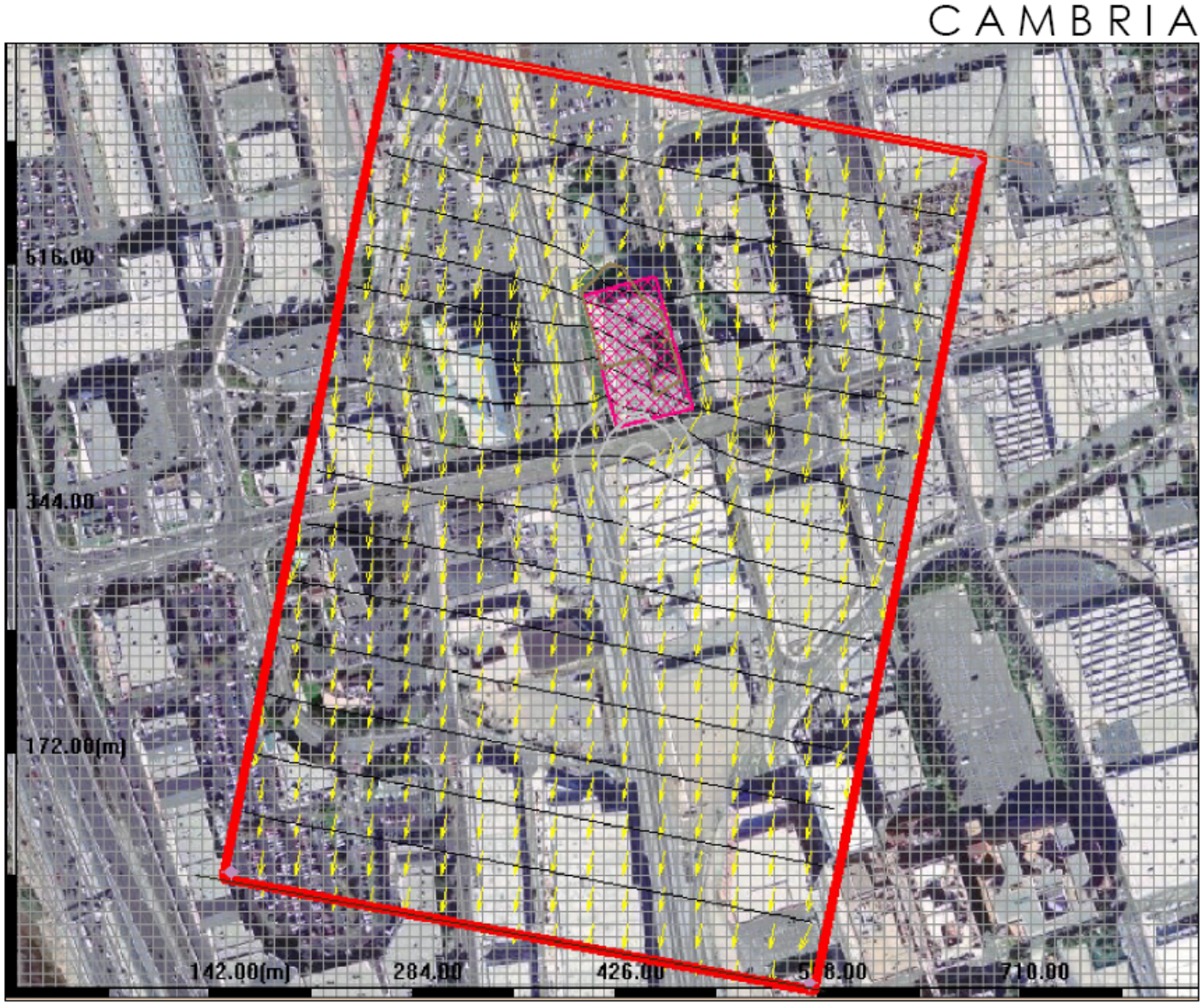
Well MW-18 HVOC Trends



Well MW-19 HVOC Trends



Flow Model Domain



Flow Model Domain

Figure A

CAMBRIA

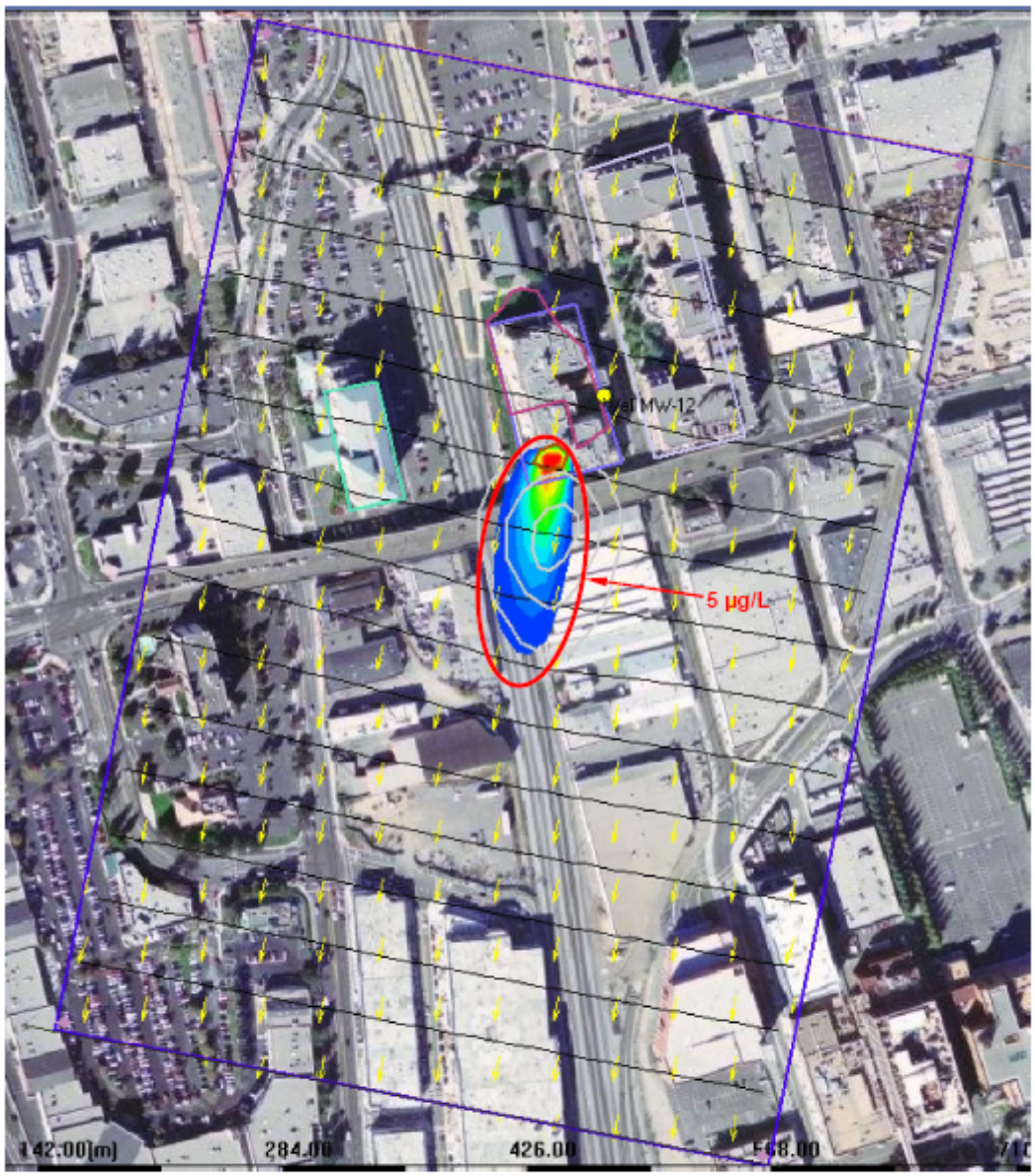


Figure A – TCE Plume Migration from Continuous On-site Source, 1970 to 1990
Former Chevron Asphalt Plant and Terminal #206265
1520 Powell Street, Emeryville, California

Continuous source dissolved TCE concentration 280 µg/L, maximum reported on-site.
Parent Zone: K = 0.01 cm/sec; n_e = 0.25; K_d = 0.00091 m^3/kg; λ = 1/year; dispersivity 1.5L, 0.5T, 0.0V

Figure B

CAMBRIA

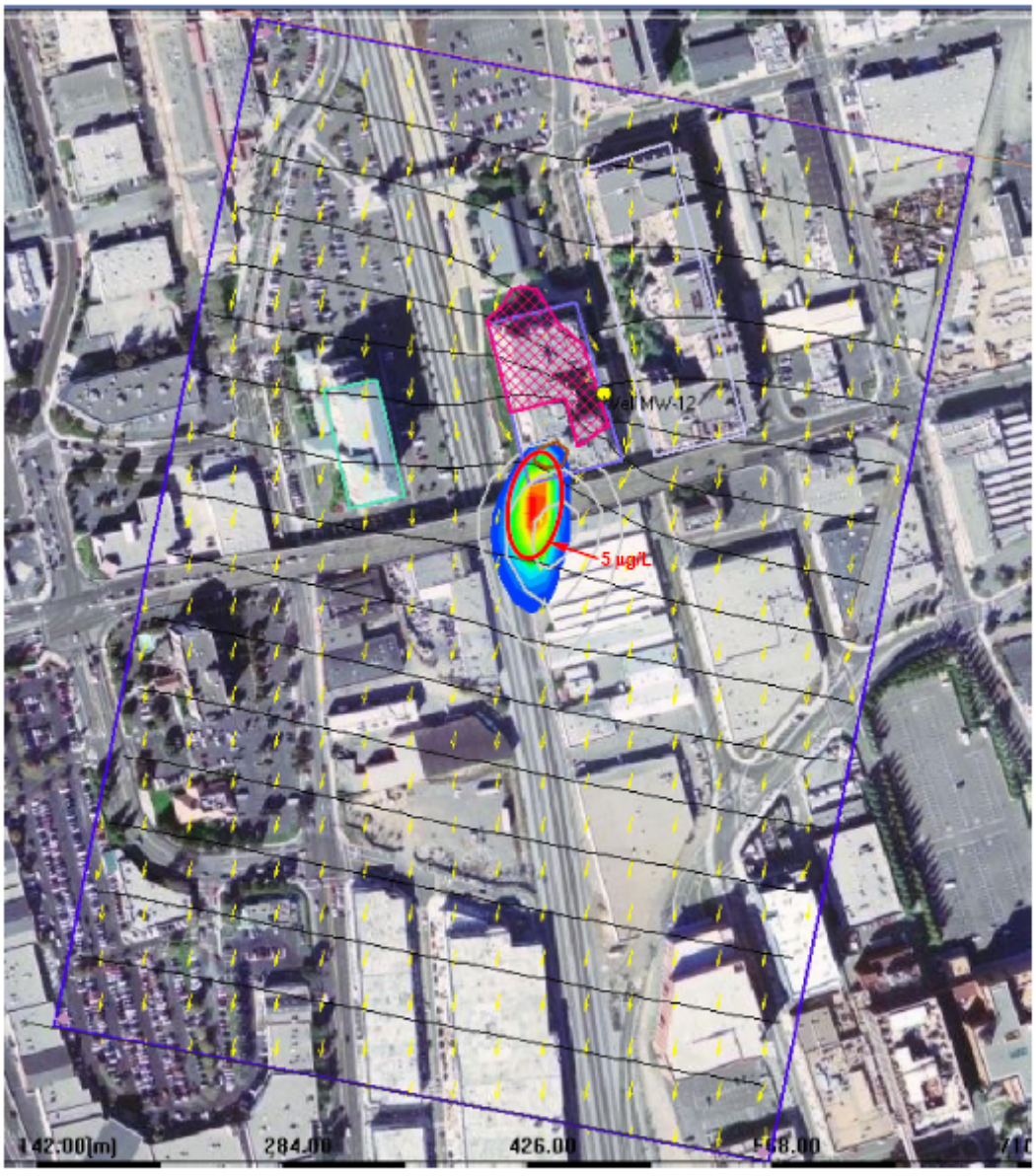
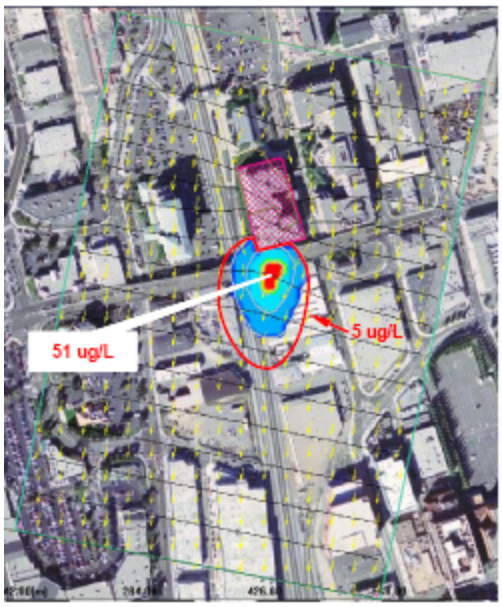


Figure B – TCE Plume Migration from Instantaneous On-site Source, 1990 to 2000
Former Chevron Asphalt Plant and Terminal #206265
1520 Powell Street, Emeryville, California

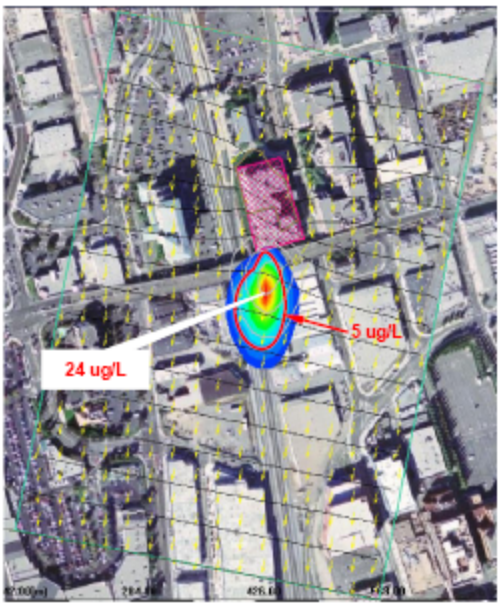
Starting dissolved TCE concentration 280 µg/L, maximum reported on-site.
Parent Zone: K = 0.01 cm/sec; n_e = 0.25; K_d = 0.00091 m^3/kg; λ = 1/year; dispersivity 1.5L, 0.5T, 0.0V
Remedial Excavation Zone (cross-hatched): no-flow zone K = 0.0 cm/sec (based on remedial excavation lined with 10 mil plastic)

Figure C

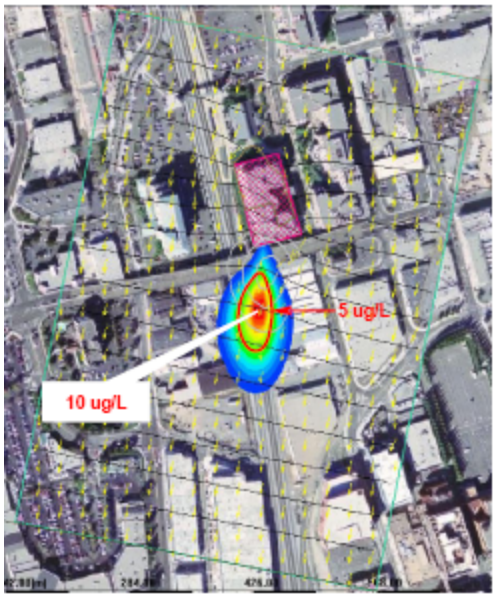
CAMBRIA



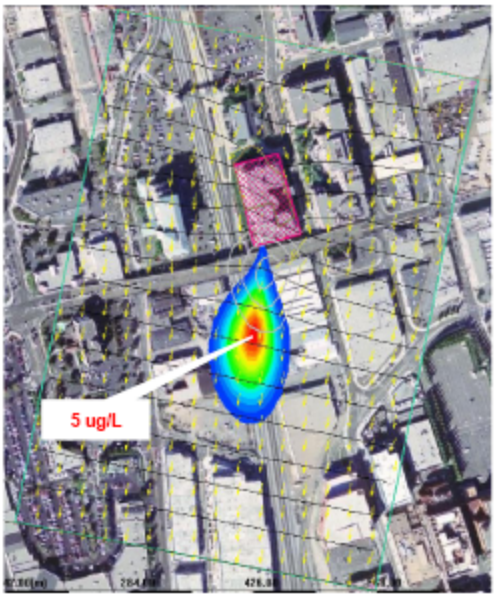
1 – Initial interpreted TCE plume extent



2 – TCE plume after 5 years



3 – TCE plume after 10 years



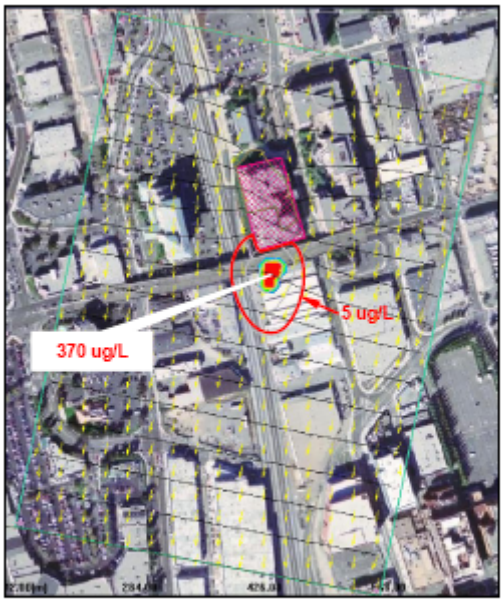
4 – TCE plume after 15 years

Figure C – Predicted TCE Plume Migration
Former Chevron Asphalt Plant and Terminal #206265
1520 Powell Street, Emeryville, California

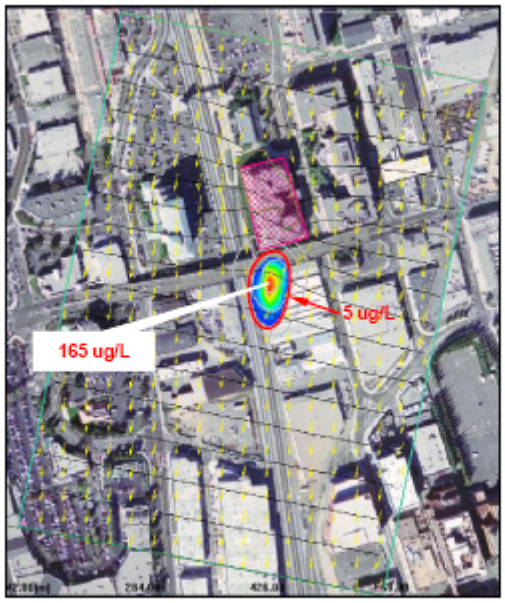
Initial interpreted TCE plume extent based on groundwater data reported 2nd quarter 2005.
Predicted plume migration based on solute transport model calibrated to historical data.
Parent Zone: K = 0.01 cm/sec; n_e = 0.25; K_d = 0.00091 m^3/kg; λ = 1/year; dispersivity 1.5L, 0.5T, 0.0V
Building Basement/Foundation Zones (cross-hatched): no-flow zones K = 0.0 cm/sec.

Figure D

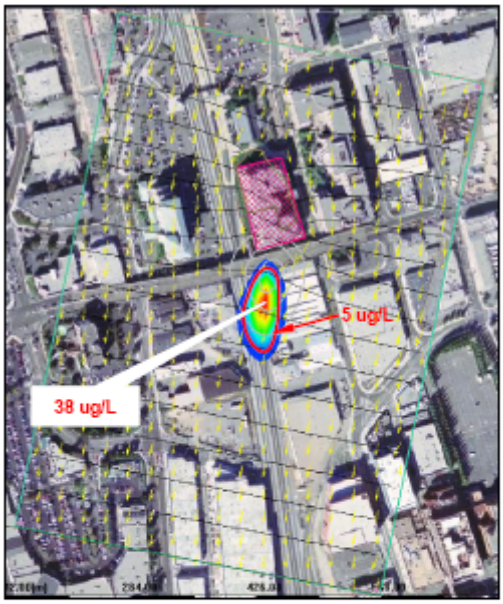
CAMBRIA



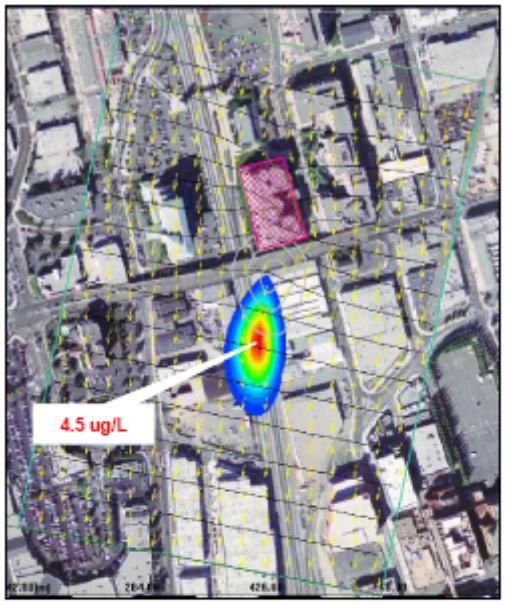
1 – Initial interpreted PCE plume extent



2 – PCE plume after 10 years



3 – PCE plume after 25 years



4 – PCE plume after 50 years

Figure D – Predicted PCE Plume Migration
Former Chevron Asphalt Plant and Terminal #206265, 1520 Powell Street, Emeryville, California

Initial interpreted PCE plume extent based on groundwater data reported 2nd quarter 2005.
Predicted plume migration based on solute transport model calibrated to historical data.
Parent Zone: K = 0.01 cm/sec; n_e = 0.25; K_d = 0.00298 m^3/kg; λ = 2/year; dispersivity 1.5L, 0.5T, 0.0V
Building Basement/Foundation Zones (cross-hatched): no-flow zones K = 0.0 cm/sec.

TABLES

Area Well Survey

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Table 4
Area Well Survey (2,000 Feet Radius)

Former Chevron Asphalt Plant #206265, Powell and Landregan, Emeryville, California

Well ID	Owners Well ID	Owner	Useage	Address/Location	Total Well	Perforation Interval	Date
	P-1	Amtrak	Unknown	Emeryville Amtrak Station	20	5-19	10/7/1992
	P-2	Amtrak	Unknown	Emeryville Amtrak Station	20.5	5-19	10/7/1992
	P-3	Amtrak	Unknown	Emeryville Amtrak Station	20.5	6-19	10/9/1992
	P-4	Amtrak	Unknown	Emeryville Amtrak Station	20.5	6-19	10/12/1992

Well MW-19A Environmental Screening Level Comparison

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Table 5
Well MW-19A Environmental Screening Level* Comparison
Former Chevron Asphalt Plant #206265, Powell and Landregan, Emeryville, California

Constituent	Concentration October 20, 2005 (ug/L)	Maximum Concentration last 4 sampling events (ug/L)	Drinking Water[3] (ug/L)	Groundwater to Indoor Air (low/moderate permeability soil[1]) Residential (ug/L)	Groundwater to Indoor Air (low/moderate permeability soil[1]) Comm./Industrial (ug/L)	Ceiling Level (taste & odor threshold) (ug/L)	Aquatic Biota Impact Fresh Water (ug/L)	Aquatic Biota Impact Marine (ug/L)	Direct Exposure Construction/ Trench Worker (ug/kg)
TPHg	180	260	500	----	----	5,000	500	3,700	23,000,000
PCE	350	660	**120**	520	1,700	3,000	**120**	**230**	37,000
TCE	77	95	360	2,100	6,900	50,000[2]	360	360	150,000
c-1,2-DCE	26	54	590	20,000	55,000	50,000[2]	590	590	350,000
t-1,2-DCE	5	8	590	25,000	69,000	2,600	590	590	570,000
VC	<1	1	3.8	17	57	34,000	780	780	2,400

TPHg = Total petroleum hydrocarbons as gasoline
PCE = Tetrachloroethylene
TCE = Trichloroethylene
c-1,2-DCE = cis-1,2-Dichloroethylene
t-1,2-DCE = trans-1,2-Dichloroethylene
VC = Vinyl chloride
ug/L = micrograms per liter
ug/kg = micrograms per kilogram

* *Screening For Environmental Concerns At Sites with Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, San Francisco Bay Region.

[1] Soil beneath site predominantly fines, with 90-100% silt and clay.

[2] Ceiling level is based on upper limit, not taste & odor threshold.

[3] From Table B, where groundwater IS NOT a current or potential source of drinking water

Bold indicates values exceeded by concentrations reported at the site on October 20, 2005.

Shading indicates not a current or likely future exposure pathway at this site.

ATTACHMENTS

Historical Soil Data and Maps

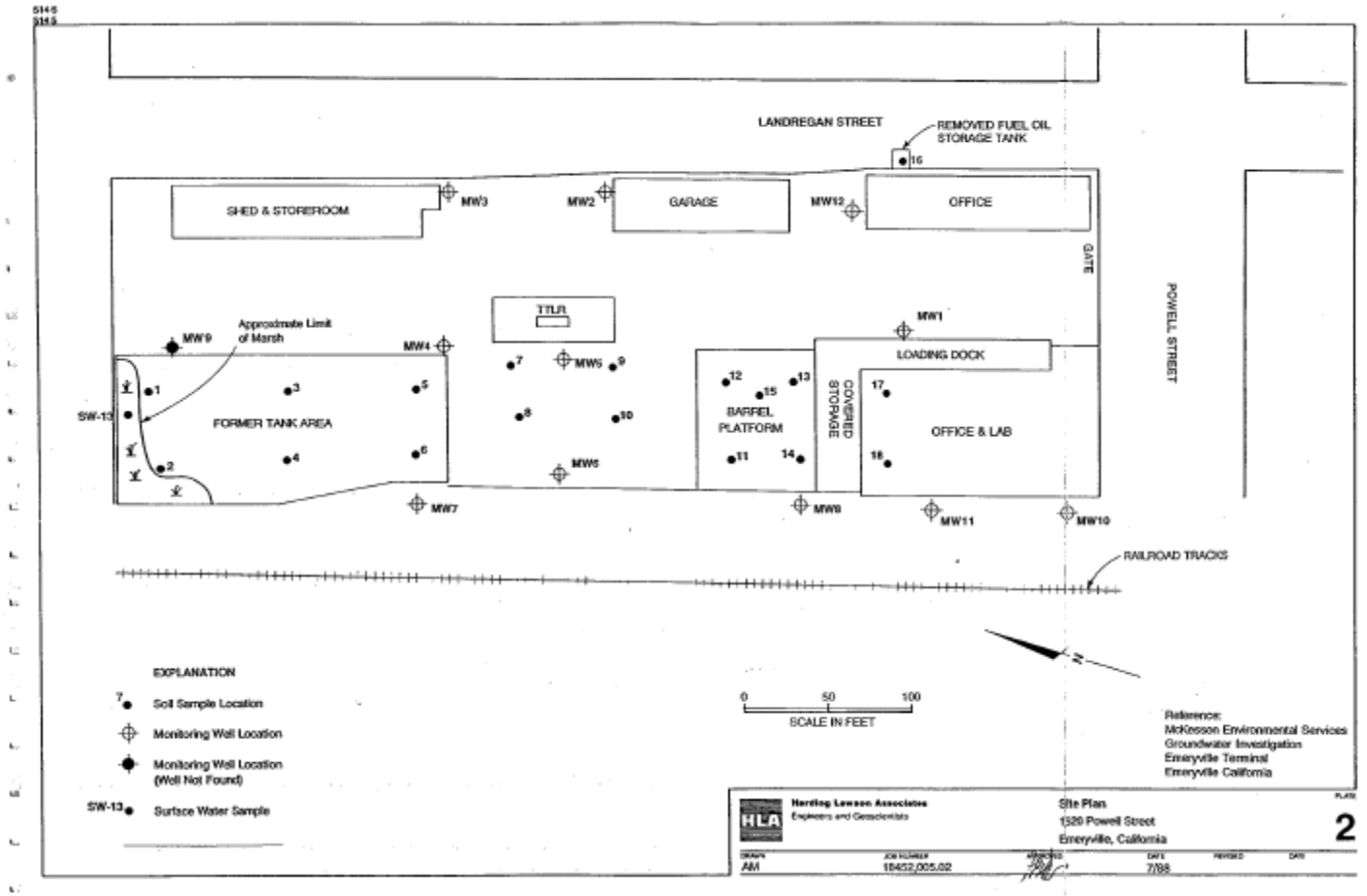


Table 3. Selected 1520 Powell Street Soil Analytical Results[1]

Harding Lawson Associates

Compound	Detection Limit (ppm)	Composite 1 S-1, S-2, S-3 S-4, S-5, S-6 (ppm)	Composite 2 S-7, S-8 S-9, S-10 (ppm)	Composite 3 S-11, S-12 S-13, S-14 (ppm)	S-15 (ppm)	S-17 (ppm)	S-18 (ppm)
		Sample Location					
Volatile Organics in Soil: (EPA Method 8240)							
Trichloroethene	0.5	ND	ND	ND	ND	1.5	1.4
Total Xylenes	0.5	ND	ND	1.1	ND	ND	ND
Total Petroleum Hydrocarbons: (EPA Method 3550/8015)							
Other[2]	10	70	100	840	7,500[3]	ND	ND

1 Analytes and sampling locations presented only where detectable levels were present.

2 Quantification based on largest peaks within C8 to C15 boiling range.

3 Computer generated mass spectral data library search (match probability) identified this sample as: pentane; trans-1,3-dimethyl cyclopentane; methyl cyclohexane; 1,1-dimethyl cyclohexane; 1,4-dimethyl cyclohexane; cis-1-ethyl-2-methyl cyclopentane and 1,1,3-trimethyl cyclohexane.

ND Not detected above detection limit

ppm parts per million (g/l for water and g/kg for soil)

S-1 Surface Soil Sample #1 as shown on Plate 2.

C6447-R

In general, previous soil sample analytical results indicate that the soils at the site have been impacted with gasoline and diesel hydrocarbons, TCE, and a variety of solvent and thinner constituents. The bulk of the significantly hydrocarbon-impacted soils are located in areas 2, 3 and 5. TCE contamination was primarily limited to area 4. Table 1 presents a brief summary of the previous soil sampling results.

TABLE 1

SUMMARY OF SOIL SAMPLE RESULTS AS PREVIOUSLY INVESTIGATED*

LOCATION	DATE	SAMPLE DEPTH (ft)	SAMPLE TYPE	RESULTS/ RANGE OF RESULTS
Area 1	July '88	3.0	Composite	70 ppm TPH
Area 2	July '88	3.0	Composite	100 ppm TPH
Area 3	July '88	3.0	Composite	840 ppm TPH
Area 3-Center	July '88	3.0	Grab	7500 ppm TPH gasoline?
Area 3	Sept '88	3.0	Composites	490 to 1700 ppm - TPH-Diesel
Area 3	Sept '88	5.0	Composites	640 to 2100 ppm - TPH-Diesel
Area 4	Aug '88	3.0	Grab	1400 to 1500 ppb - TCE
Area 5	Oct '88	3.0	Grab	160 to 2000 ppm - TPH-Diesel
Area 5	Oct '88	5.0 - 6.0	Grab	310 to 2700 ppm - TPH-Diesel
Area 5	Oct '88	5.0 - 6.0	Grab	160 ppm TPH

Excavated

ppm = parts per million
ppb = parts per billion
TPH = Total Petroleum Hydrocarbons
TCE = Trichloroethene
* = Data taken from referenced reports.

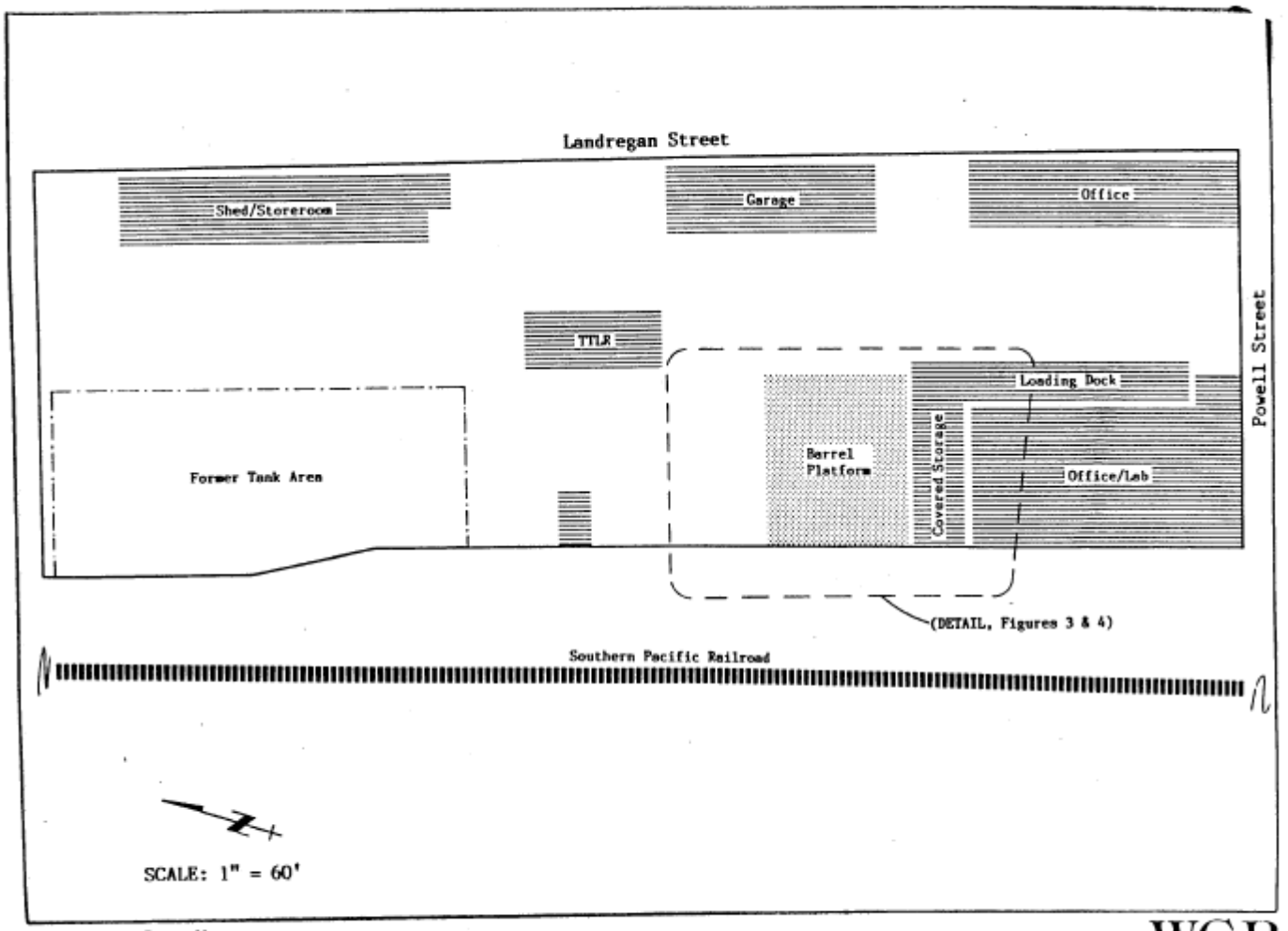


Figure 2. Site Map,
Former Chevron Asphalt Plant
1520 Powell Street, Emeryville, California.

WGR

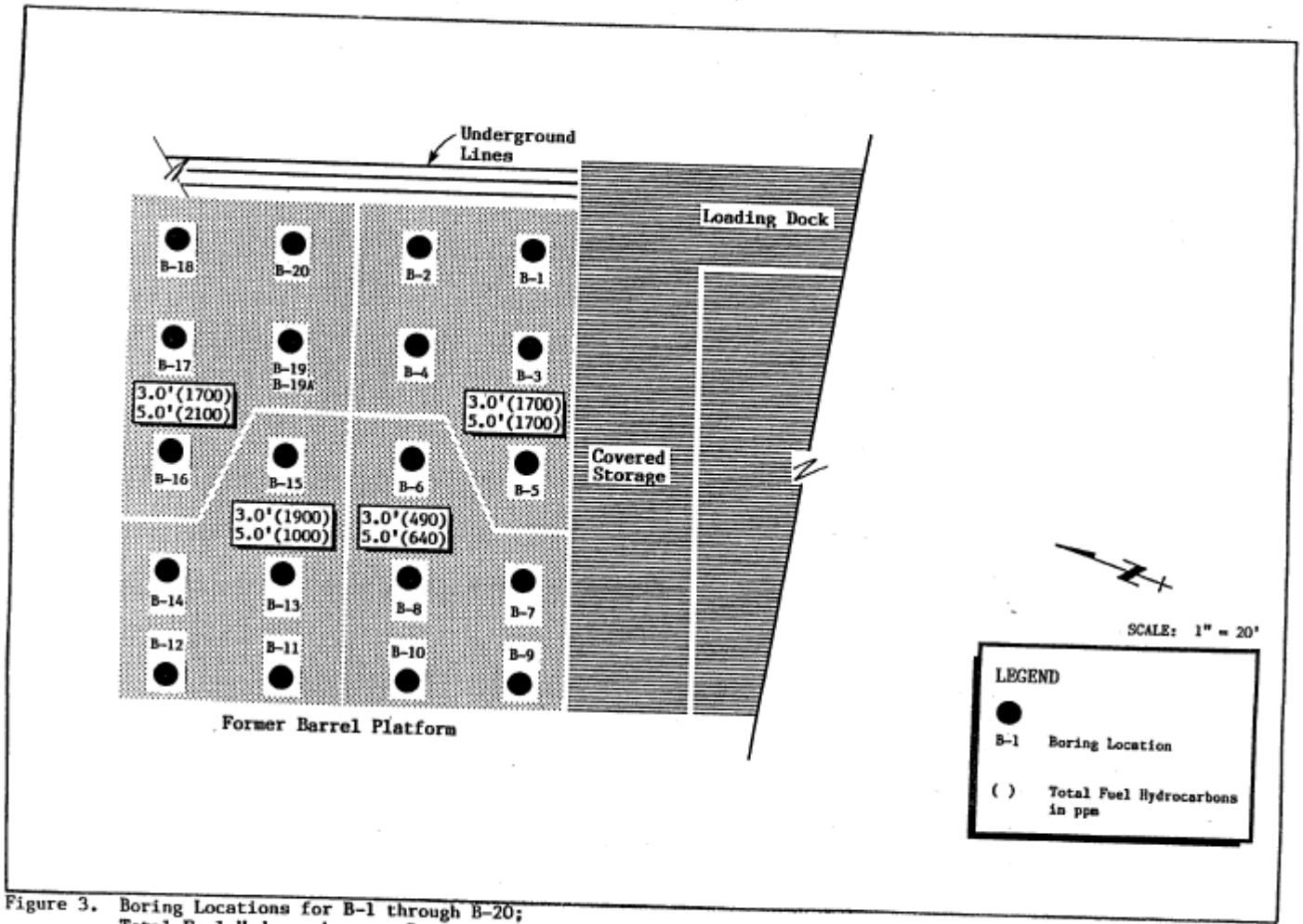


Figure 3. Boring Locations for B-1 through B-20;
Total Fuel Hydrocarbons at Depths in Feet.
Former Chevron Asphalt Plant
1520 Powell Street, Emeryville, California

WGR

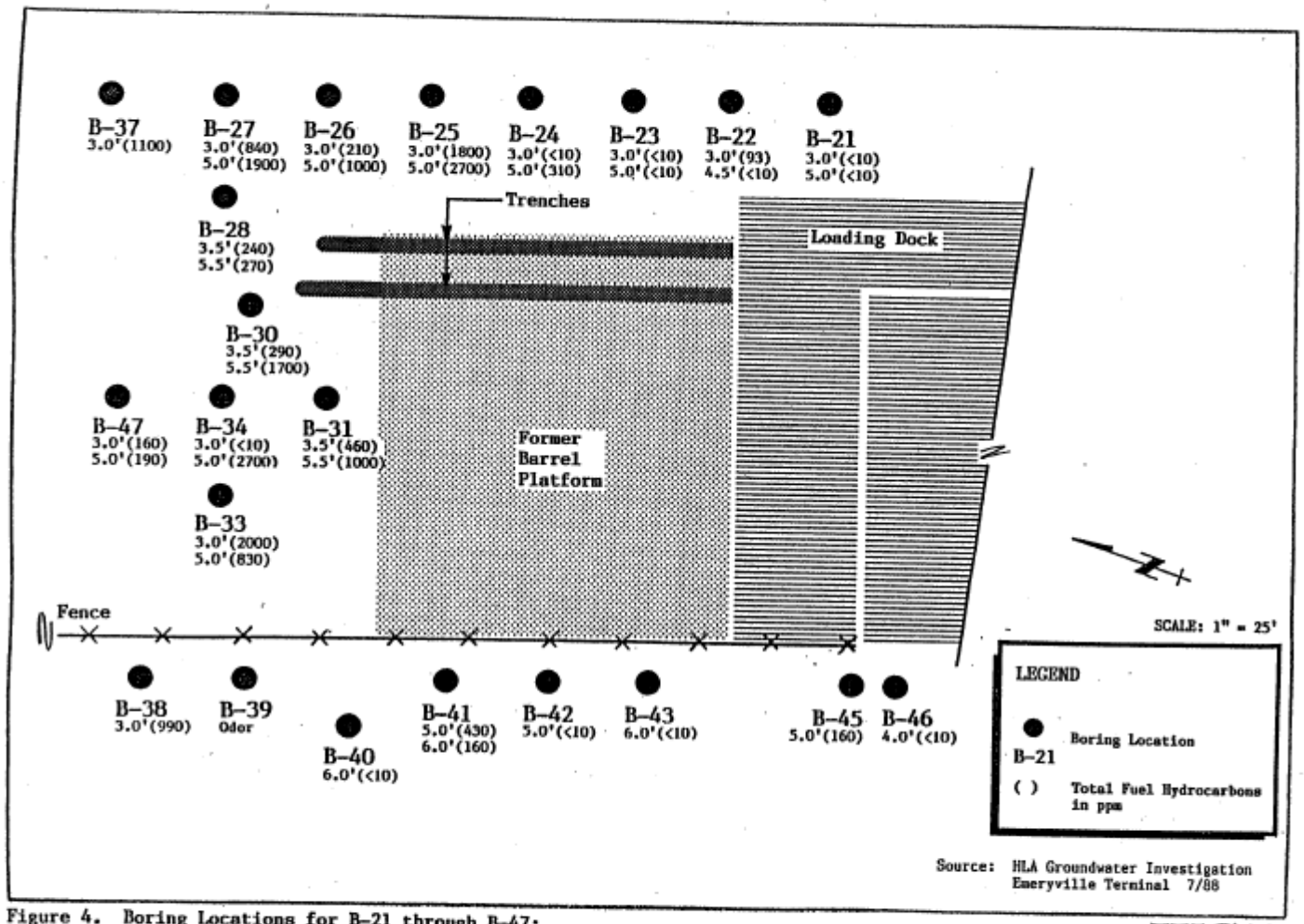


Figure 4. Boring Locations for B-21 through B-47;
Total Fuel Hydrocarbons at Depths in Feet.
Former Chevron Asphalt Plant
1520 Powell Street, Emeryville, California.

WGR

TABLE 1. Analytic Results For Composite Soil Samples
1520 Powell Street
Emeryville, California

Bore Holes	Depth (ft.)	Date	TFH	FC	Benzene	Toluene	Xylenes	E-Benzene
			<----------ppm---------->					
B-1 to B-5	3.0	07 Sep 88	1700	D	<0.3	<0.3	<0.3	<0.3
	5.0	07 Sep 88	1700	D	0.5	0.5	<0.3	0.9
B-6 to B-10	3.0	07 Sep 88	490	D	<0.3	<0.3	<0.3	<0.3
	5.0	07 Sep 88	640	D	0.5	<0.3	<0.3	0.5
B-11 to B-15	3.0	07 Sep 88	1900	D	0.3	<0.3	<0.3	5.4
	5.0	07 Sep 88	1000	D	0.6	1.3	<0.3	3.3
B-16 to B-20	3.0	07 Sep 88	1700	G&D	1.4	6.1	1.4	18
	5.0	07 Sep 88	2100	G&D	1.4	1.3	7.8	13

Notes:
Xylenes = Sum of xylene isomers
E-Benzene = Ethyl benzene
TFH = Total fuel hydrocarbons
FC = Fuel characterization
D = Diesel
O = Oil
G = Gas
--- = Not characterized
METHOD(S) = EPA 8015/8020

TABLE 2 Analytic Results For Soil Samples
1520 Powell Street
Emeryville, California

Bore Hole	Depth (ft.)	Date	TFH	FC	Benzene	Toluene	Xylenes	E-Benzene
			<----------ppm---------->					
B-21	3	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-21	5	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-22	3	30 Sep 88	93	D	<0.3	<0.3	<0.3	<0.3
B-22	4.5	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-23	3	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-23	5	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-24	3	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-24	5	30 Sep 88	310	D	<0.3	<0.3	2	<0.3
B-25	3	30 Sep 88	1800	D	<0.3	<0.3	7	<0.3
B-25	5	30 Sep 88	2700	D	<0.3	<0.3	20	<0.3
B-26	3	30 Sep 88	210	D	<0.3	<0.3	2	<0.3
B-26	5	30 Sep 88	1000	D	<0.3	<0.3	4.2	<0.3
B-27	3	30 Sep 88	840	D	<0.3	<0.3	7.4	<0.3
B-27	5	30 Sep 88	1900	D	<0.3	<0.3	16	<0.3
B-28	3.5	30 Sep 88	240	D	<0.3	<0.3	2.5	<0.3
B-28	5.5	30 Sep 88	270	D	<0.3	<0.3	1.3	<0.3
B-30	3.5	30 Sep 88	290	D	<0.3	<0.3	1.4	<0.3
B-30	5.5	30 Sep 88	1700	D	<0.3	<0.3	6.2	<0.3
B-31	3.5	30 Sep 88	460	D+O	<0.3	<0.3	<0.3	<0.3
B-31	5.5	30 Sep 88	1000	D+O	<0.3	<0.3	2.6	<0.3
B-33	3	30 Sep 88	2000	D+G	0.7	<0.3	9.6	<0.3
B-33	5	30 Sep 88	830	D+G	<0.3	0.9	4.2	<0.3
B-34	3	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-34	5	30 Sep 88	2700	D+G	0.9	<0.3	12	<0.3
B-37	3	30 Sep 88	1100	D	<0.3	<0.3	5.4	<0.3
B-38	3	30 Sep 88	990	D+G	0.5	0.9	2.2	<0.3
B-40	4	30 Sep 88	180	O	<0.3	<0.3	<0.3	<0.3
B-40	6	30 Sep 88	<10	---	<0.3	<0.3	<0.3	<0.3
B-41	5	30 Sep 88	430	G	<0.3	<0.3	4.7	<0.3
B-41	6	30 Sep 88	160	G	<0.3	<0.3	<0.3	<0.3

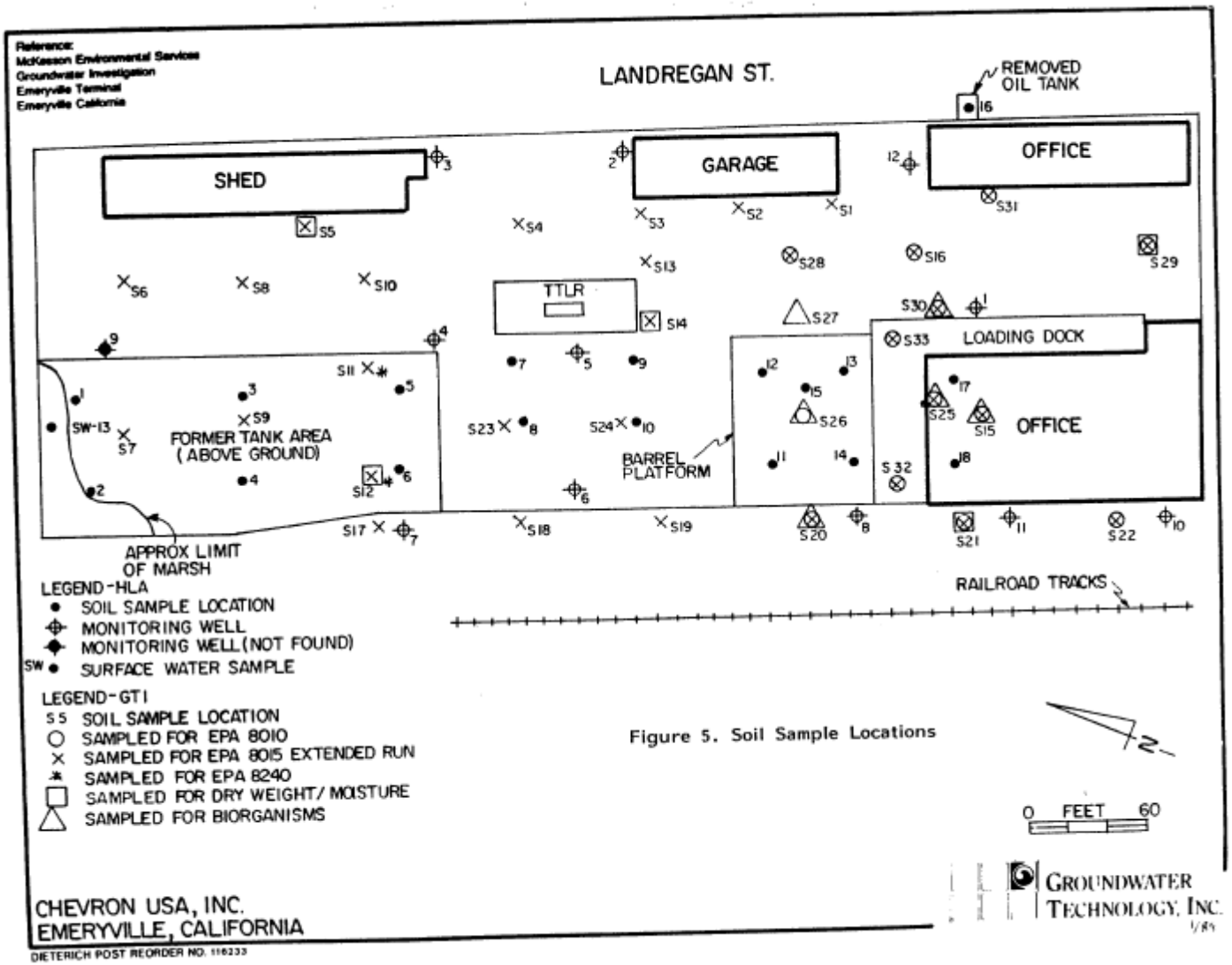


Figure 5. Soil Sample Locations

TABLE 4
SOIL SAMPLE DEPTHS AND REQUESTED ANALYSES

SAMPLE LOCATION	DEPTH (FT)	*8010	*8015 EXTEND	*8240	MOIST/ DRY WT.	BIO-ORGANISMS
S1	3.2		*			
S2	3.2		*			
S3	3.2		*			
S4	3.0		*			
S5	2.8		*		*	
S6	2.8		*			
S7	1.5		*			
S8	2.8		*			
S9	1.5		*			
S10	2.8		*			*
S11	2.8		*		*	
S12	1.5		*			
S13	2.8		*		*	
S14	2.8		*			*
S15	3.0	*	*			*
S15	10.0	*	*			
S16	3.2	*	*			
S16	10.0	*				
S17	3.0		*			
S18	3.0		*			
S19	3.0		*			
S20	1.2	*	*			
S20	10.0	*			*	
S21	1.7	*	*			
S21	10.0	*				
S22	1.7	*	*			
S22	10.0	*				
S23	3.0		*			
S24	3.0		*			*
S25	4.0	*	*			*
S25	10.0	*				*
S26	3.0	*				
S26	10.0	*				*
S27	3.0					
S28	3.0	*	*			
S28	10.0	*				
S29	3.0	*	*		*	
S29	10.0	*				*
S30	3.0	*	*			
S30	10.0	*				
S31	3.0	*	*			
S31	10.0	*				
S32	3.0	*	*			
S32	10.0	*				
S33	3.0	*	*			
S33	10.0	*				

* REFERS TO EPA METHOD

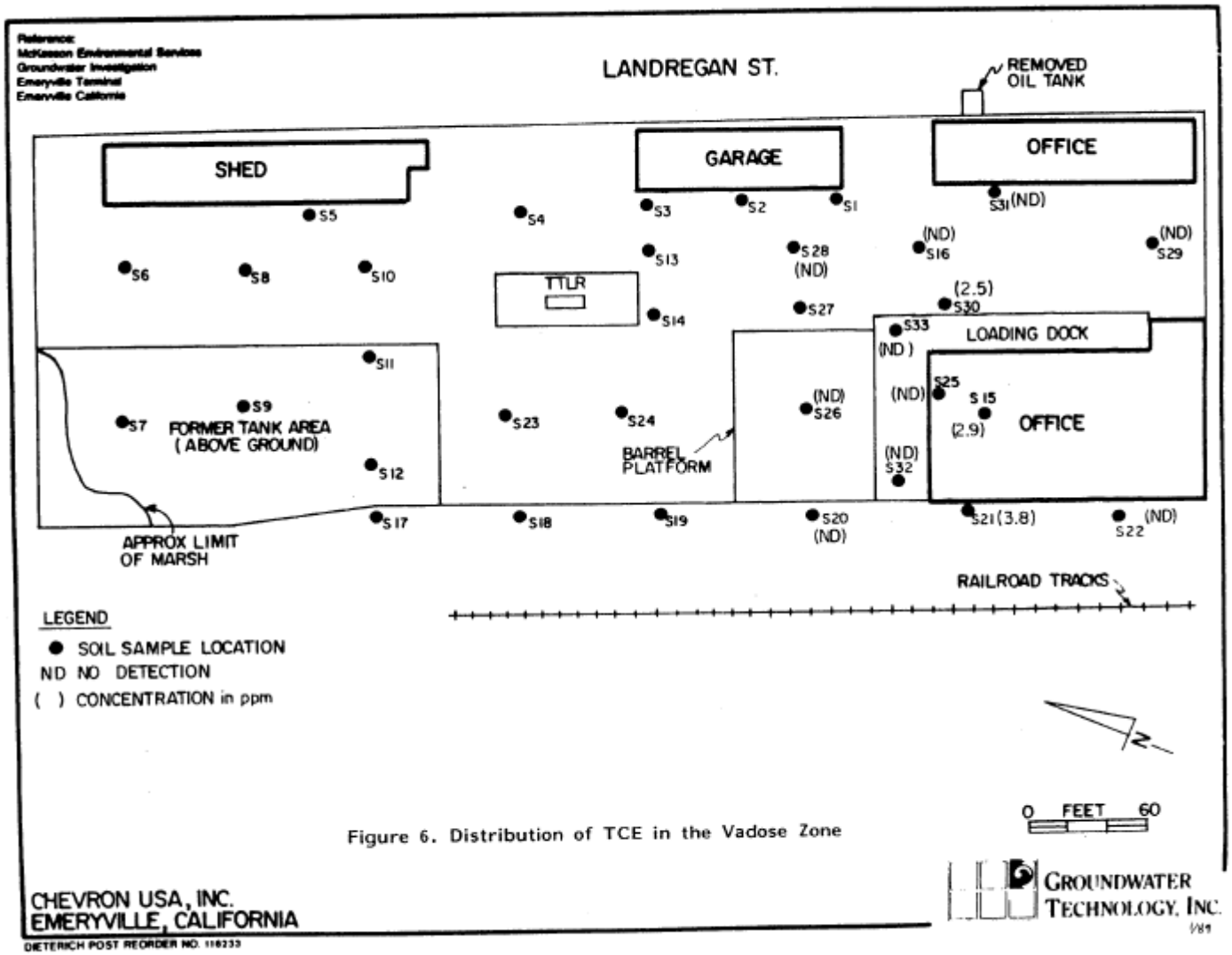


Figure 6. Distribution of TCE in the Vadose Zone

CHEVRON USA, INC.
EMERYVILLE, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

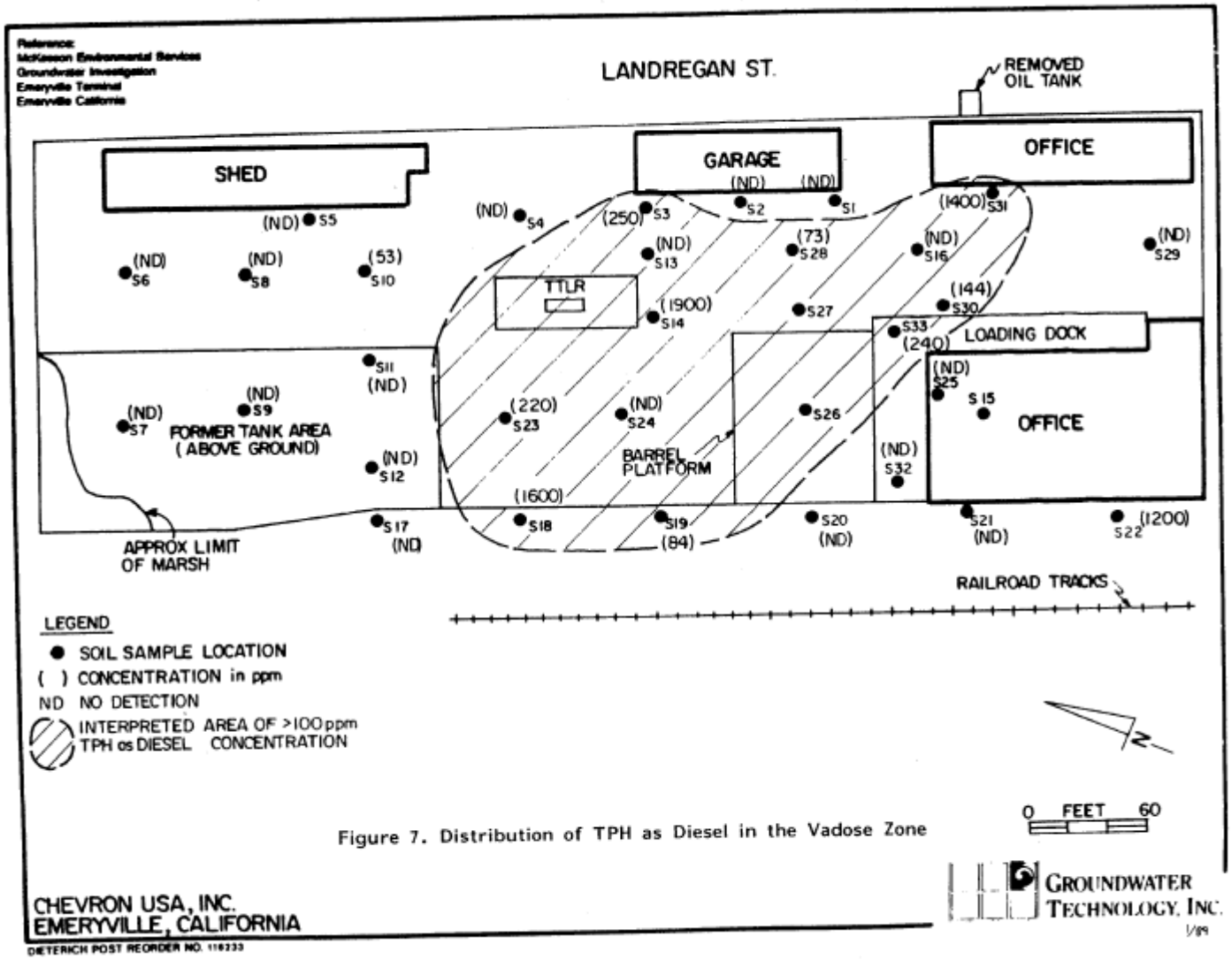


Figure 7. Distribution of TPH as Diesel in the Vadose Zone

CHEVRON USA, INC.
EMERYVILLE, CALIFORNIA

GROUNDWATER TECHNOLOGY, INC.

1/89

DIETERICH POST REORDER NO. 116233

collected from within the same soil horizon. The moisture content of the soils ranged from 32 to 53 percent. Results for all samples analyzed are contained in Appendix I.

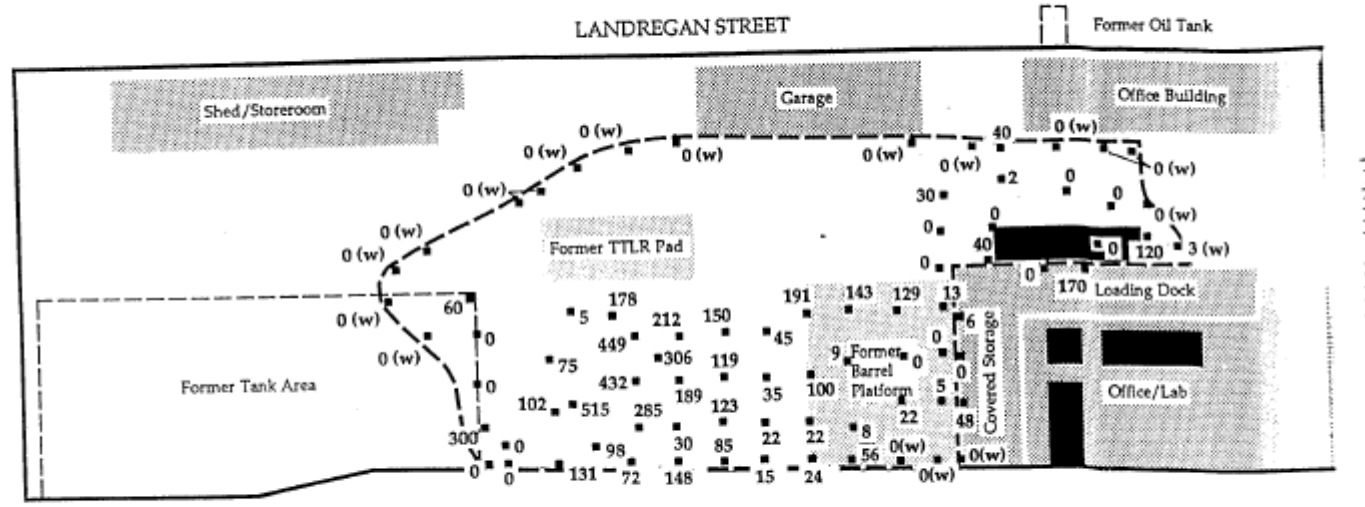
TABLE 5

RESULTS OF SOIL MOISTURE ANALYSES

SAMPLE LOCATION	DRY WT. (%)	H_2O WT. (%)	H_2O VOL. (%)	BULK DENSITY
S21	81.15	23.23	37.24	1.6
S29	78.56	27.29	43.86	1.6
S5	82.91	20.61	32.15	1.6
S12	78.94	26.67	41.53	1.6
S14	73.40	36.24	52.59	1.5

WT. = Weight
Vol. = Volume

Bio-analytical Results. Soil samples for bio-analyses were collected from six locations suspected of being contaminated with TCE. Six samples, S15, S20, S25, S26, S27, and S30, were collected from the unsaturated zone and two samples S15BUG10 and S25BUG10, were collected from the saturated zone (Figure 5). Samples submitted for bio-analyses were prepared three separate ways to enable the growth of indigenous hydrocarbon-utilizing bacteria. Cultures for the plate counting of bacterial colonies were incubated on native mineral media. Additionally, cultures were prepared containing .01 and .1 percent yeast extract.



LEGEND

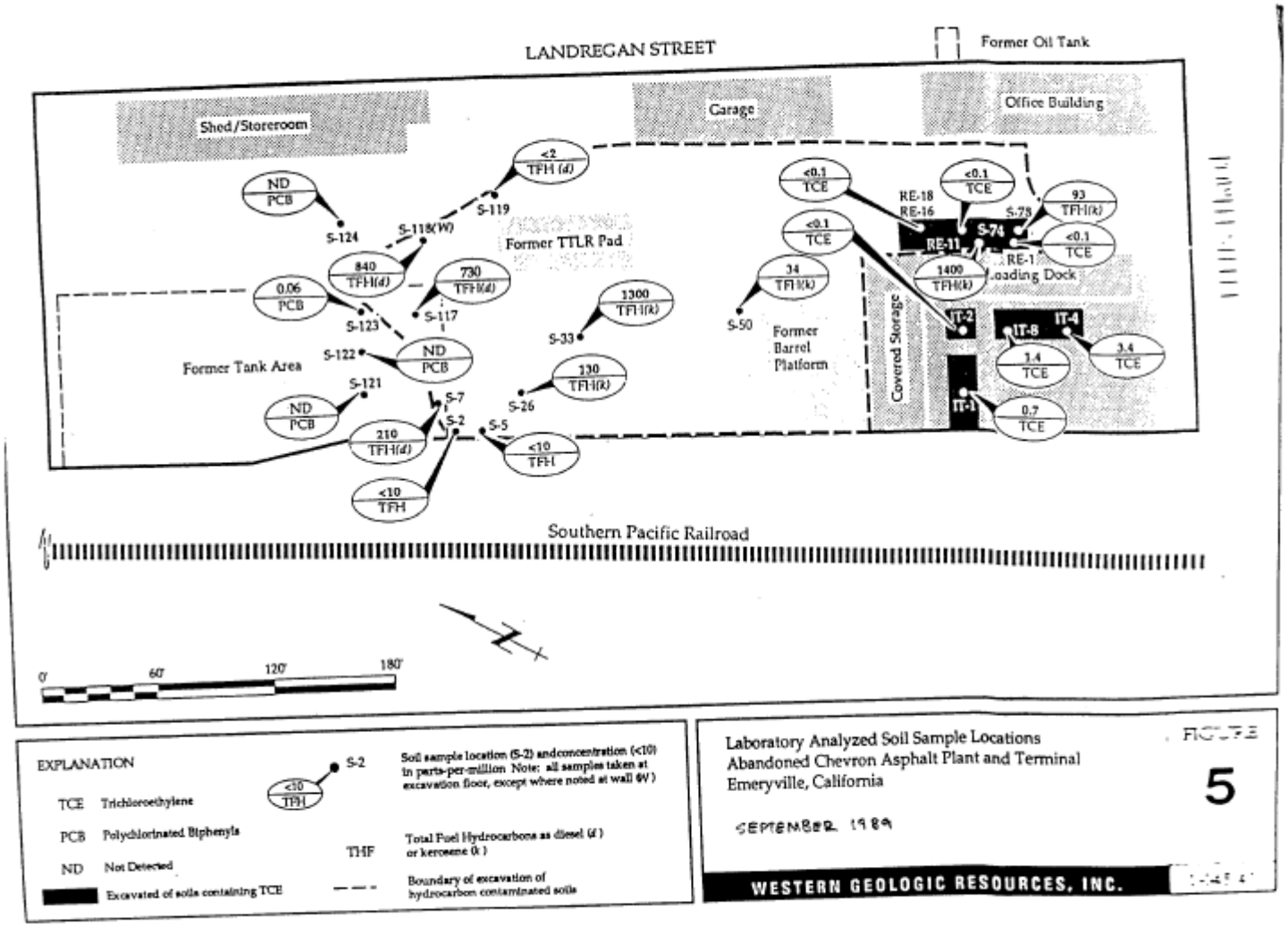
- Boundary of excavation of hydrocarbon contaminated soils
- 0 ■ PID test location on excavation floor / Total Hydrocarbons concentration in parts per million (ppm)
- 0 (w) ■ PID test location on excavation wall / Total Hydrocarbons concentration in ppm
- Excavated area of trichloroethylene (TCE) contaminated soils

Total Hydrocarbons; Photo-ionization Detector (PID) Readings
Former Chevron Asphalt Plant and Terminal
Emeryville, California

September 1989

FIGURE 4

WESTERN GEOLOGIC RESOURCES, INC.



EXPLANATION

TCE Trichloroethylene

PCB Polychlorinated Biphenyls

ND Not Detected

Excavated of soils containing TCE

S-2 <10 TPH — Soil sample location (S-2) and concentration (<10) in parts-per-million Note: all samples taken at excavation floor, except where noted at wall (W)

TPH Total Fuel Hydrocarbons as diesel (d) or kerosene (k)

Boundary of excavation of hydrocarbon contaminated soils

Laboratory Analyzed Soil Sample Locations
Abandoned Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 5

SEPTEMBER 1989

WESTERN GEOLOGIC RESOURCES, INC.

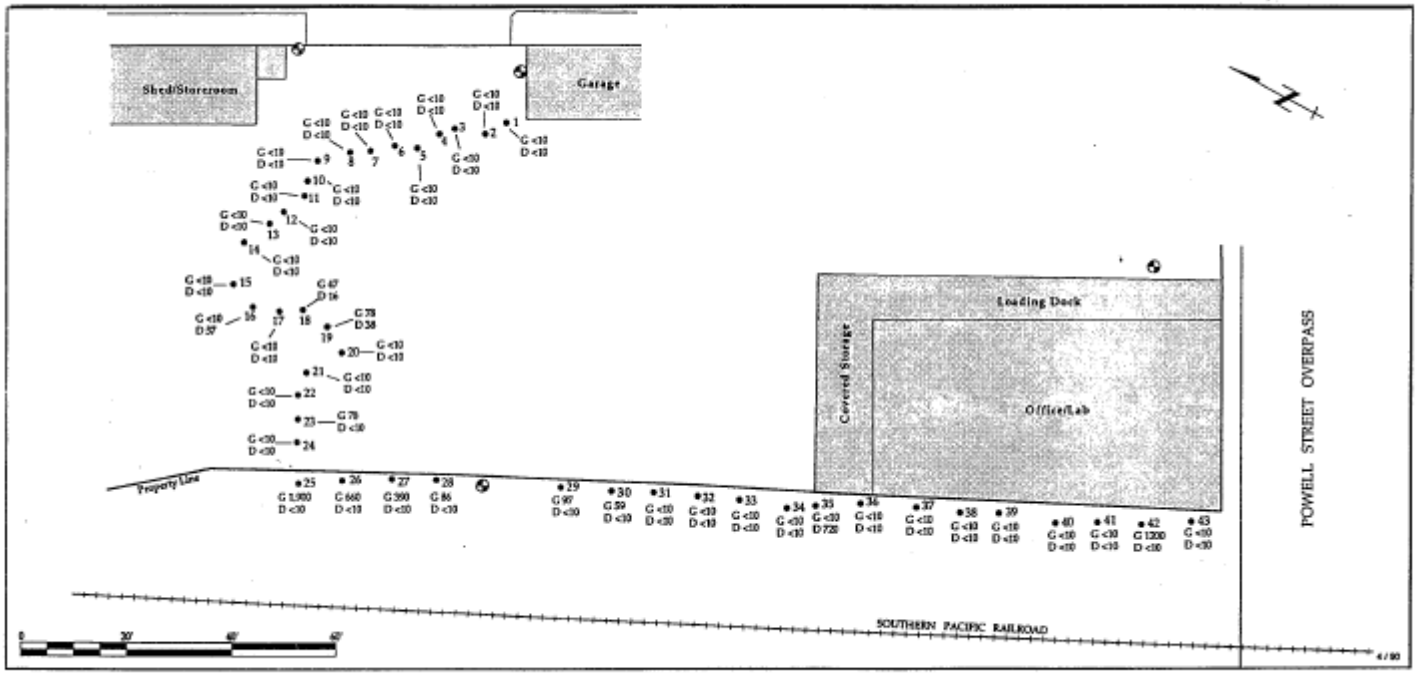
Table 1. Analytic Results: Soil
Former Chevron Asphalt Plant
Emeryville, California
WGR Project #1-045.45

Well/Sample ID#	Date	Depth	EPA	Benzene	Toluene	E-Benzene	Xylenes	TPH(G)	TPH(D)	O&G
				<----------ppm---------->						<-ppm->
B-1	2 Feb 90	18.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
B-1	2 Feb 90	23.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
B-1	2 Feb 90	29.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
MW-13	2 Feb 90	3.5	8240/8015	<0.01	<0.02	<0.02	<0.02	430	870	---
MW-13	2 Feb 90	5.5	8240/8015	<0.01	<0.02	<0.02	<0.02	130	260	---
MW-13	2 Feb 90	10.5	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	11	---
MW-13	2 Feb 90	13.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
MW-14	2 Feb 90	5.5	8240/8015	<0.01	<0.02	<0.02	<0.02	10	60	---
MW-14	2 Feb 90	8.5	8240/8015	<0.01	<0.02	<0.02	<0.02	17	120	---
MW-14	2 Feb 90	11.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
MW-15	2 Feb 90	6.0	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
MW-15	2 Feb 90	9.5	8240/8015	<0.01	<0.02	<0.02	<0.02	<10	<10	---
MW-16	23 Mar 90	8.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-16	23 Mar 90	10.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-17	21 Mar 90	4.8	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-17	21 Mar 90	7.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	220	640
MW-17	21 Mar 90	9.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-17	21 Mar 90	12.8	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-18	22 Mar 90	4.8	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-18	22 Mar 90	7.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-18	22 Mar 90	9.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-18	22 Mar 90	11.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-19	22 Mar 90	5.8	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	17
MW-19	22 Mar 90	8.8	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
MW-19	22 Mar 90	10.3	8020/8015	<0.005	<0.005	<0.005	<0.015	<10	<10	<5
TB	26 Mar 90									

045T4AP0.WP

Table 1. Analytic Results: Soil (continued)
Former Chevron Asphalt Plant
Emeryville, California
WGR Project #1-045.45

Well/Sample ID#	Date	Depth	EPA Method	Acetone	1,2-DCE	1,1-DCE	Chloroform	1,2-DCA	1,1,1-TCA	TCE	PCE
				<--------			ppm				-------->
B-1	2 Feb 90	18.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
B-1	2 Feb 90	23.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
B-1	2 Feb 90	29.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-13	2 Feb 90	3.5	8240	0.15	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-13	2 Feb 90	5.5	8240	0.10	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-13	2 Feb 90	10.5	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-13	2 Feb 90	13.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-14	2 Feb 90	5.5	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-14	2 Feb 90	8.5	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-14	2 Feb 90	11.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-15	2 Feb 90	6.0	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-15	2 Feb 90	9.5	8240	<0.05	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02	<0.02
MW-16	23 Mar 90	8.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-16	23 Mar 90	10.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	21 Mar 90	4.8	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	21 Mar 90	7.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	21 Mar 90	9.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-17	21 Mar 90	12.8	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-18	21 Mar 90	4.8	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-18	21 Mar 90	7.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-18	21 Mar 90	9.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-18	21 Mar 90	11.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-19	22 Mar 90	5.8	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-19	22 Mar 90	8.8	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
MW-19	22 Mar 90	10.3	8010	---	<0.5	<0.2	<0.5	<0.5	<0.5	<0.5	<0.5
TB	26 Mar 90										



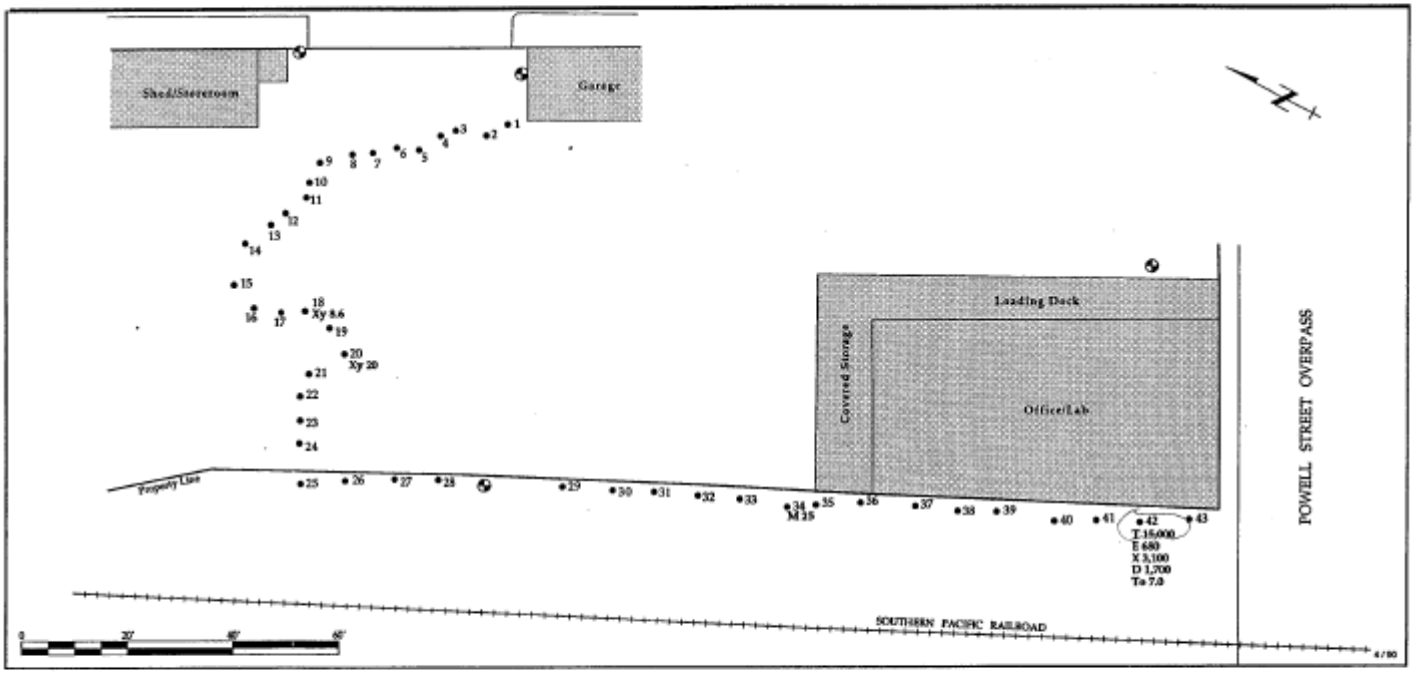
LEGEND

- Monitor Well Location
- ● 17 — Soil Boring Location and Total Petroleum Hydrocarbons as Gas (G) and Diesel (D) Concentrations in parts-per-million
- G <10 D <10

Concentrations of Total Petroleum Hydrocarbons as Gas and Diesel
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 4

WESTERN GEOLOGIC RESOURCES, INC. 1-045.44



LEGEND

Monitor Well Location

34 / M 25 — Soil Boring Location and BTEX and Halocarbons, in parts per billion.

M = Methylene Chloride
D = Trans 1,2 Dichloroethene
E = Ethylbenzene
Xy = Xylene
T = Trichloroethene
To = Toluene
B = Benzene

Concentrations of BTEX and Halocarbons in Soil
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 5

WESTERN GEOLOGIC RESOURCES, INC. 1-045.44

Table 1. Analytic Results: Soil
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	TPH Gasoline	TPH Diesel	Total O&G	Petroleum O&G	Acetone	Methylene Chloride	2-Butanone	1,2-DCE	TCE
		<---------- ppm ---------->				<---------- ppb ---------->				
EPA Method		8015	8015	413.2	418.1	8240	8240	8240	8240	8240
SB-1	26 Mar 90	<10	<10	17	---	<100	<5	<100	<5	<5
SB-2	26 Mar 90	<10	<10	27	---	<100	<5	<100	<5	<5
SB-3	26 Mar 90	<10	<10	5	---	<100	<5	<100	<5	<5
SB-4	26 Mar 90	<10	<10	7	---	<100	<5	<100	<5	<5
SB-5	26 Mar 90	<10	<10	6	---	<100	<5	<100	<5	<5
SB-6	26 Mar 90	<10	<10	6	---	<100	<5	<100	<5	<5
SB-7	26 Mar 90	<10	<10	15	---	<100	<5	<100	<5	<5
SB-8	26 Mar 90	<10	<10	12	---	<100	<5	<100	<5	<5
SB-9	26 Mar 90	<10	<10	8	---	<100	<5	<100	<5	<5
SB-10	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-11	26 Mar 90	<10	<10	420	---	<100	<5	<100	<5	<5
SB-12	26 Mar 90	<10	<10	72	---	<100	<5	<100	<5	<5
SB-13	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-14	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-15	26 Mar 90	<10	<10	8	---	<100	<5	<100	<5	<5
SB-16	26 Mar 90	<10	57	98	---	<100	<5	<100	<5	<5

04516APD.WP

Table 1. Analytic Results: Soil (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	TPH Gasoline (ppm)	TPH Diesel (ppm)	Total O&G (ppm)	Petroleum O&G (ppm)	Acetone (ppb)	Methylene Chloride (ppb)	2-Butanone (ppb)	1,2-DCE (ppb)	TCE (ppb)
EPA Method		8015	8015	413.2	418.1	8240	8240	8240	8240	8240
SB-17	26 Mar 90	<10	<10	1300	530	<100	<5	<100	<5	<5
SB-18	26 Mar 90	47	16	29	400	<100	<5	<100	<5	<5
SB-19	26 Mar 90	78	38	280	420	<100	<5	<100	<5	<5
SB-20	26 Mar 90	<10	<10	450	32	<100	<5	<100	<5	<5
SB-21	26 Mar 90	<10	<10	22	56	<100	<5	<100	<5	<5
SB-22	26 Mar 90	<10	<10	93	57	<100	<5	<100	<5	<5
SB-23	26 Mar 90	78	<10	230	31	<100	<5	<100	<5	<5
SB-24	26 Mar 90	<10	<10	120	76	<100	<5	<100	<5	<5
SB-25 (Excavated 10/90)	26 Mar 90	1900	<10	3900	2300	<100	<5	<100	<5	<5
SB-26	26 Mar 90	660	<10	1100	---	170	<5	<100	<5	<5
SB-27	26 Mar 90	390	<10	110	---	<100	<5	<100	<5	<5
SB-28	26 Mar 90	86	<10	150	---	<100	<5	<100	<5	<5
SB-29	26 Mar 90	97	<10	570	---	<100	<5	220	<5	<5
SB-30	26 Mar 90	59	<10	55	---	150	<5	<100	<5	<5
SB-31	26 Mar 90	<10	<10	64	---	<100	<5	<100	<5	<5
SB-32	26 Mar 90	<10	<10	<5	---	120	<5	<100	<5	<5

045T6AP0.WP

Table 1. Analytic Results: Soil (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	TPH Gasoline	TPH Diesel	Total O&G	Petroleum O&G	Acetone	Methylene Chloride	2-Butanone	1,2-DCE	TCE
		<----------ppm---------->				<----------ppb---------->				
EPA Method		8015	8015	413.2	418.1	8240	8240	8240	8240	8240
SB-33	26 Mar 90	<10	<10	<5	---	100	<5	<100	<5	<5
SB-34	26 Mar 90	<10	<10	<5	---	<100	25	<100	<5	<5
SB-35	26 Mar 90	<10	720	6200	--	<100	<5	<100	<5	<5
SB-36	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-37	26 Mar 90	<10	<10	<5	---	<100	<5	<100	6.6	<5
SB-38	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-39	26 Mar 90	<10	<10	<5	---	200	<5	<100	<5	<5
SB-40	26 Mar 90	<10	<10	<5	---	<100	<5	<100	<5	<5
SB-41	26 Mar 90	<10	<10	8	---	<100	<5	<100	<5	<5
never excavated? SB-42	26 Mar 90	1200	<10	92000	1700	<100	<5	<100	1700	15000
SB-43	26 Mar 90	<10	<10	9	---	<100	<5	<100	<5	<5

045T6APD.WP

Table 2. Analytic Results: Soil
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	Benzene	Toluene	E-Benzene	Xylenes	Total Cadmium	Total Chromium	Total Zinc	Total Lead	Soluble Lead
		<----------	----------	----------	----------	ppb ----------	----------	----------	----------	---------->
EPA Method		8240	8240	8240	8240	3050/6010	3050/6010	3050/6010	3050/6010	1310/6010
SB-1	26 Mar 90	<5	<5	<5	<5	<3	11	41	22	---
SB-2	26 Mar 90	<5	<5	<5	<5	<3	11	41	25	---
SB-3	26 Mar 90	<5	<5	<5	<5	<3	6	24	20	---
SB-4	26 Mar 90	<5	<5	<5	<5	<3	5	20	18	---
SB-5	26 Mar 90	<5	<5	<5	<5	<3	14	27	22	---
SB-6	26 Mar 90	<5	<5	<5	<5	<3	7	18	13	---
SB-7	26 Mar 90	<5	<5	<5	<5	<3	17	31	35	---
SB-8	26 Mar 90	<5	<5	<5	<5	<3	6	13	13	---
SB-9	26 Mar 90	<5	<5	<5	<5	<3	6	15	16	---
SB-10	26 Mar 90	<5	<5	<5	<5	<3	12	23	21	---
SB-11	26 Mar 90	<5	<5	<5	<5	<3	7	22	23	---
SB-12	26 Mar 90	<5	<5	<5	<5	<3	7	16	16	---
SB-13	26 Mar 90	<5	<5	<5	<5	<3	7	12	14	---
SB-14	26 Mar 90	<5	<5	<5	<5	<3	7	14	13	---
SB-15	26 Mar 90	<5	<5	<5	<5	<3	8	43	43	---
SB-16	26 Mar 90	<5	<5	<5	<5	3	11	170	60	---

045T5APO.WP

Table 2. Analytic Results: Soil (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	Benzene	Toluene	E-Benzene	Xylenes	Total Cadmium	Total Chromium	Total Zinc	Total Lead	Soluble Lead
		ppb	ppb	ppb	ppb	ppm	ppm			
EPA Method		8240	8240	8240	8240	3050/6010	3050/6010	3050/6010	3050/6010	1310/6010
SB-17	26 Mar 90	<5	<5	<5	<5	<3	18	90	120	<0.2
SB-18	26 Mar 90	<5	<5	<5	8.6	<3	14	120	190	<0.2
SB-19	26 Mar 90	<5	<5	<5	<5	<3	7	110	150	<0.2
SB-20	26 Mar 90	<5	23	<5	26	4	11	400	880	<0.2
SB-21	26 Mar 90	<5	<5	<5	<5	<3	9	130	150	<0.2
SB-22	26 Mar 90	<5	<5	<5	<5	<3	9	84	130	3
SB-23	26 Mar 90	<5	<5	<5	<5	<3	7	120	120	<0.2
SB-24	26 Mar 90	<5	<5	<5	<5	<3	9	200	180	3
SB-25	26 Mar 90	<5	<5	<5	<5	<3	8	22	17	2
SB-26	26 Mar 90	<5	<5	<5	<5	<3	37	21	13	---
SB-27	26 Mar 90	<5	<5	<5	<5	<3	8	11	12	---
SB-28	26 Mar 90	<5	<5	<5	<5	<3	5	13	15	---
SB-29	26 Mar 90	<5	<5	<5	<5	<3	11	120	110	---
SB-30	26 Mar 90	<5	<5	<5	<5	<3	11	35	34	---
SB-31	26 Mar 90	<5	<5	<5	<5	<3	5	60	30	---
SB-32	26 Mar 90	<5	<5	<5	<5	<3	<5	18	18	---
SB-33	26 Mar 90	<5	<5	<5	<5	<3	<5	26	17	---
SB-34	26 Mar 90	<5	<5	<5	<5	<3	5	8	12	---

045T5APD.WP

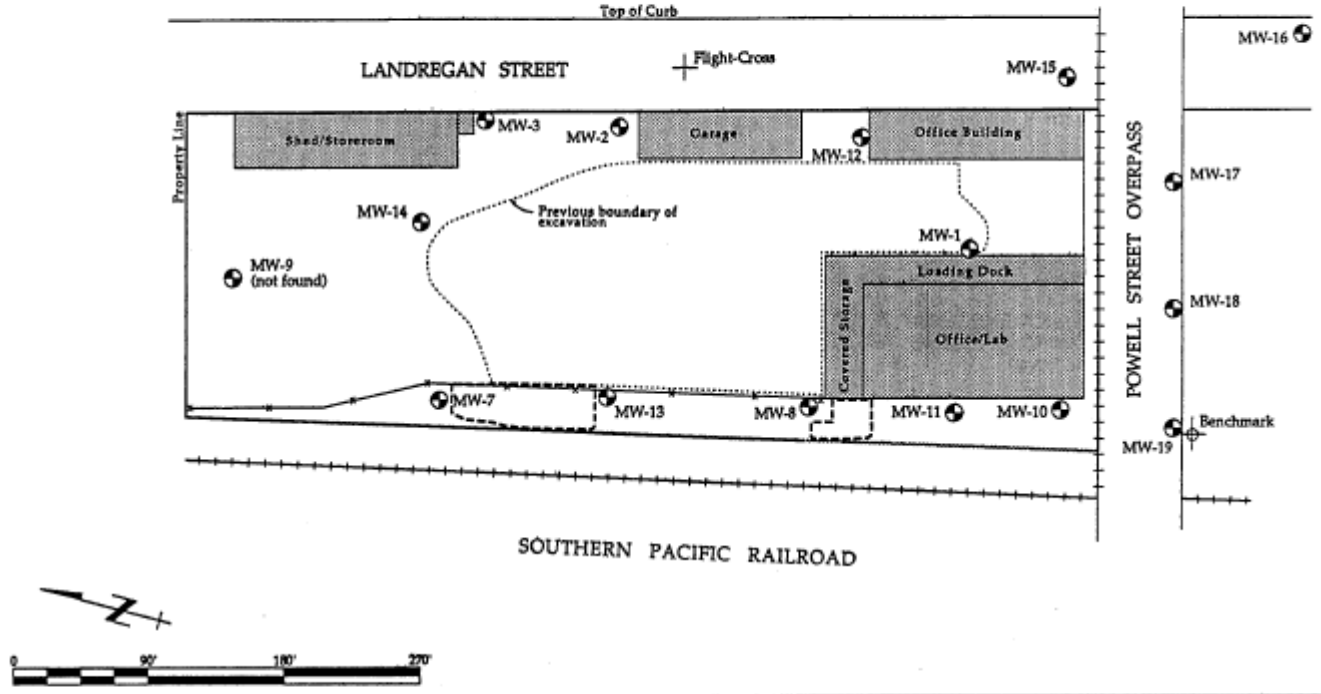
Table 2. Analytic Results: Soil (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID	Date Sampled	Benzene	Toluene	E-Benzene	Xylenes	Total Cadmium	Total Chromium	Total Zinc	Total Lead	Soluble Lead
		<---------- ppb ---------->								
EPA Method		8240	8240	8240	8240	3050/6010	3050/6010	3050/6010	3050/6010	1310/6010
SB-35	26 Mar 90	<5	<5	<5	<5	<3	7	26	30	---
SB-36	26 Mar 90	<5	<5	<5	<5	<3	<5	25	41	---
SB-37	26 Mar 90	<5	<5	<5	<5	<3	6	14	16	---
SB-38	26 Mar 90	<5	<5	<5	<5	<3	<5	5	5	---
SB-39	26 Mar 90	<5	<5	<5	<5	<3	<5	6	6	---
SB-40	26 Mar 90	<5	<5	<5	<5	<3	<5	11	10	---
SB-41	26 Mar 90	<5	<5	<5	<5	<3	<5	6	<10	---
SB-42	26 Mar 90	<5	7.0	680	3100	<3	<9	190	120	1
SB-43	26 Mar 90	<5	<5	<5	<5	<3	5	25	17	---

Notes:

All analyses by Groundwater Technology Environmental Laboratories (GTEL)
ppm = parts-per-million
ppb = parts-per-billion
O&G = Oil and Grease
1,2-DCE = 1,2-Dichloroethene
TCE = Trichloroethene
E-Benzene = Ethylbenzene
< = Less than indicated detection limit
--- = Not Analyzed

045T5AP0.WP



LEGEND

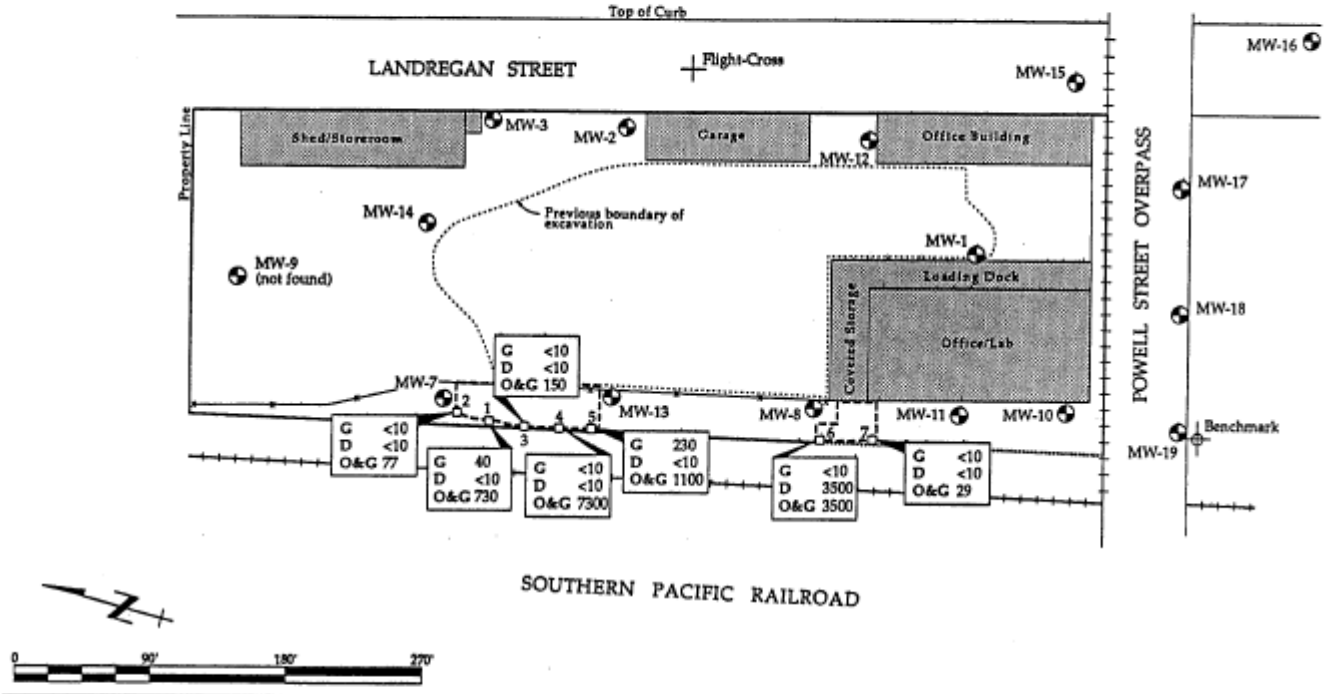
- MW-8 — Monitor Well location
- Additional soil excavation boundary
- Assumed property line

Site Map with Additional Soil Excavation Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.47



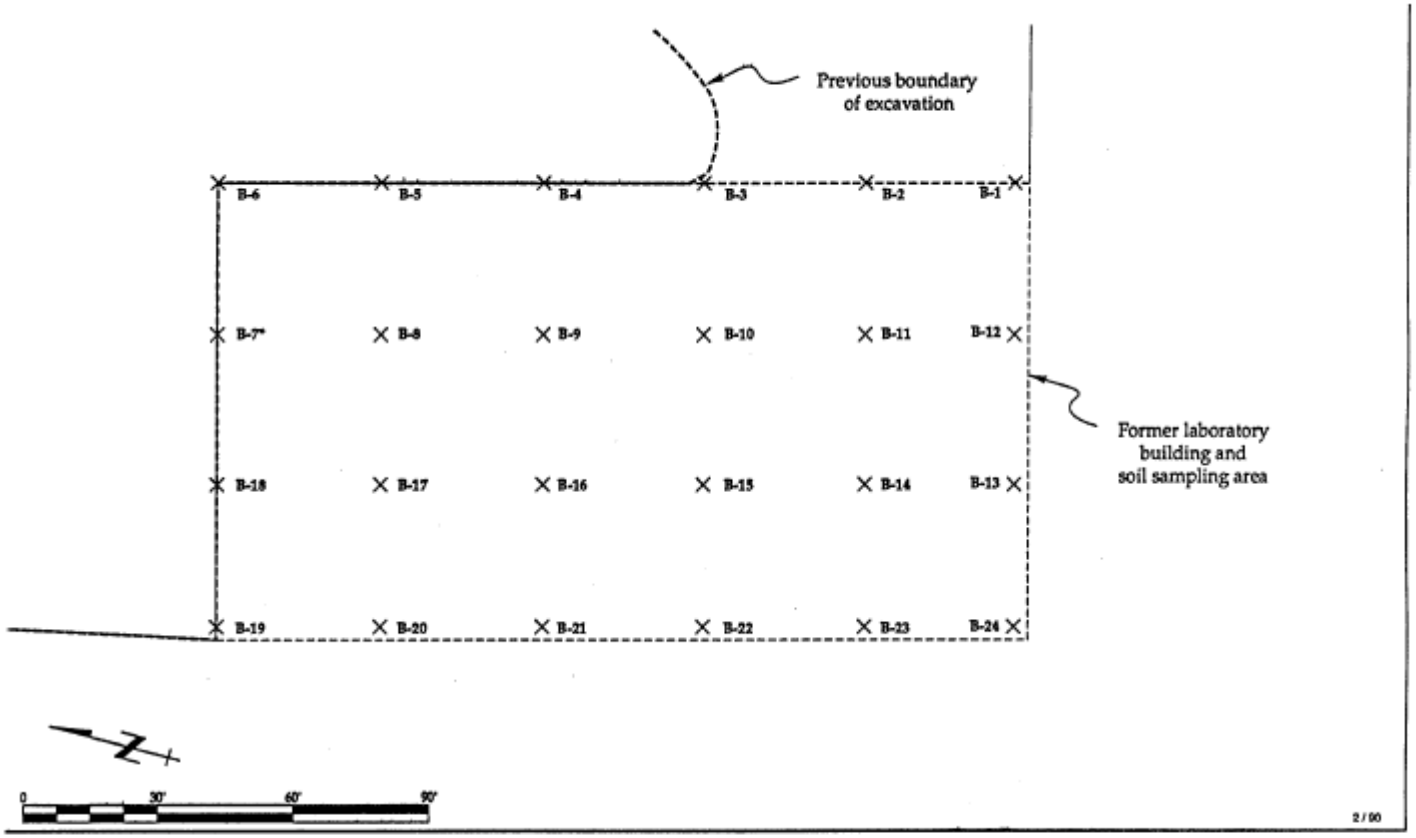
EXPLANATION

- MW-8 — Monitor Well location
- Additional soil excavation boundary
- Assumed property line
- Soil sample location
- 2 — Soil sample location
- G <10 / D <10 / O&G 77 — Gas / Diesel / Total Oil and Grease Concentrations in parts-per-million

Site Map with Soil Excavation Sidewall Sample Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 3

WESTERN GEOLOGIC RESOURCES, INC. 1-045.47



EXPLANATION

X B-21	Boring location, drilled to 3.0 ft. below ground surface
X B-7*	Boring location, drilled to 4.0 ft. below ground surface

Soil Sampling Area and Boring Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.50

TABLE 1. Analytic Results: Soil Samples
Former Chevron Asphalt Plant
Emeryville, California

Boring ID#	Date	Method	Lab	TPH	TCE	Benzene	Toluene	E-Benzene	Xylenes	Chloroform	Acetone	O&G
				<--ppm-->	<----------ppb---------->							<--ppm-->
B-1	01 Feb 91	8015/8240/503E	SAL	<10	26	17	49	<15	78	<15	<50	110
B-2	01 Feb 91	8015/8240/503E	SAL	<10	120	<10	15	<15	<15	<15	<50	56
B-3	01 Feb 91	8015/8240/503E	SAL	<10	1,800	26	<15	<15	<15	22	<50	<50
B-4	01 Feb 91	8015/8240/503E	SAL	70	30	<10	<15	<15	<15	<15	<50	690
B-5	01 Feb 91	8015/8240/503E	SAL	180	<15	<10	<15	<15	<15	<15	<50	160
B-6	01 Feb 91	8015/8240/503E	SAL	250	330	17	66	44	140	<15	120	75
B-7	01 Feb 91	8015/8240/503E	SAL	98	2,300	<10	<15	<15	<15	<15	<50	100
B-8	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-9	01 Feb 91	8015/8240/503E	SAL	<10	530	<10	<15	<15	<15	17	<50	<50
B-10	01 Feb 91	8015/8240/503E	SAL	<10	210	<10	<15	<15	<15	<15	<50	<50
B-11	01 Feb 91	8015/8240/503E	SAL	<10	350	<10	<15	<15	<15	<15	<50	<50
B-12	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-13	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50

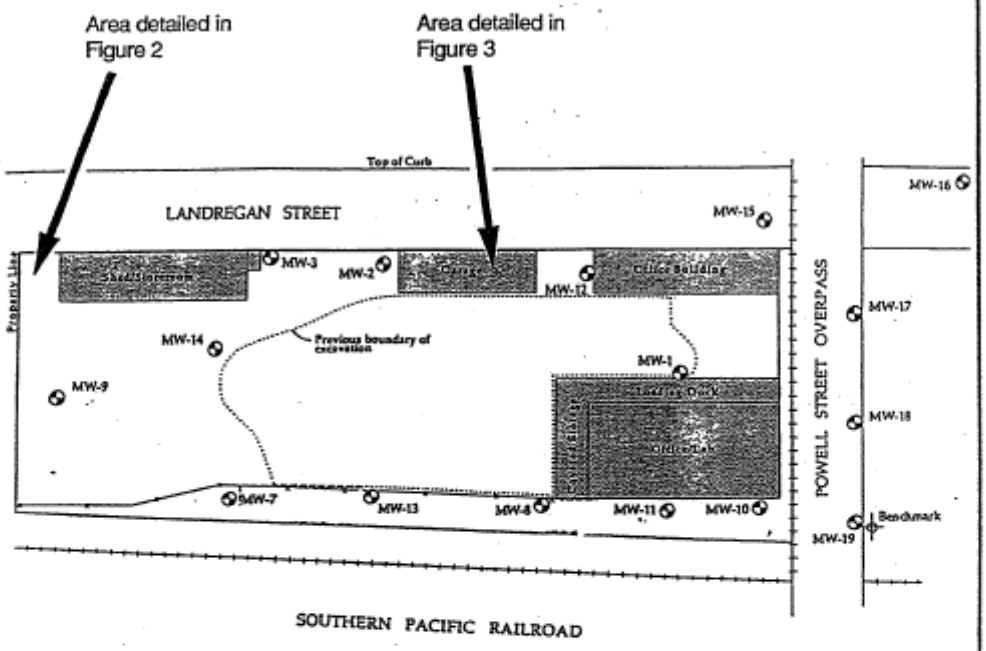
TABLE 1. Analytic Results: Soil Samples (continued)
Former Chevron Asphalt Plant
Emeryville, California

Boring ID#	Date	Method	Lab	TPH	TCE	Benzene	Toluene	E-Benzene	Xylenes	Chloroform	Acetone	O&G
				<--ppm-->	<----------ppb---------->							<--ppm-->
B-14	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-15	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-16	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-17	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	81
B-18	01 Feb 91	8015/8240/503E	SAL	<10	21	<10	<15	<15	<15	<15	<50	<50
B-19	01 Feb 91	8015/8240/503E	SAL	<10	42	<10	<15	<15	<15	<15	<50	50
B-20	01 Feb 91	8015/8240/503E	SAL	<10	46	<10	<15	<15	<15	<15	<50	<50
B-21	01 Feb 91	8015/8240/503E	SAL	<10	1,400	<10	<15	<15	<15	<15	<50	<50
B-22	01 Feb 91	8015/8240/503E	SAL	<10	98	<10	<15	<15	<15	<15	<50	<50
B-23	01 Feb 91	8015/8240/503E	SAL	<10	<15	<10	<15	<15	<15	<15	<50	<50
B-24	01 Feb 91	8015/8240/503E	SAL	18	<15	<10	<15	<15	<15	<15	<50	<50

TABLE 1. Analytic Results: Soil Samples (continued)
Former Chevron Asphalt Plant
Emeryville, California

NOTES:

TPH	= Total Petroleum Hydrocabrons as diesel
TCE	= Trichloroethene
E-Benzene	= Ethylbenzene
O&G	= Oil and Grease
ppm	= parts-per-million
ppb	= parts-per-billion
---	= Not Analyzed
SAL	= Superior Analytical Laboratories



0 90' 180' 270'

Site Plan Obtained From Western Geologic Resources (WGR), Soil Sampling Report, May 17, 1992.

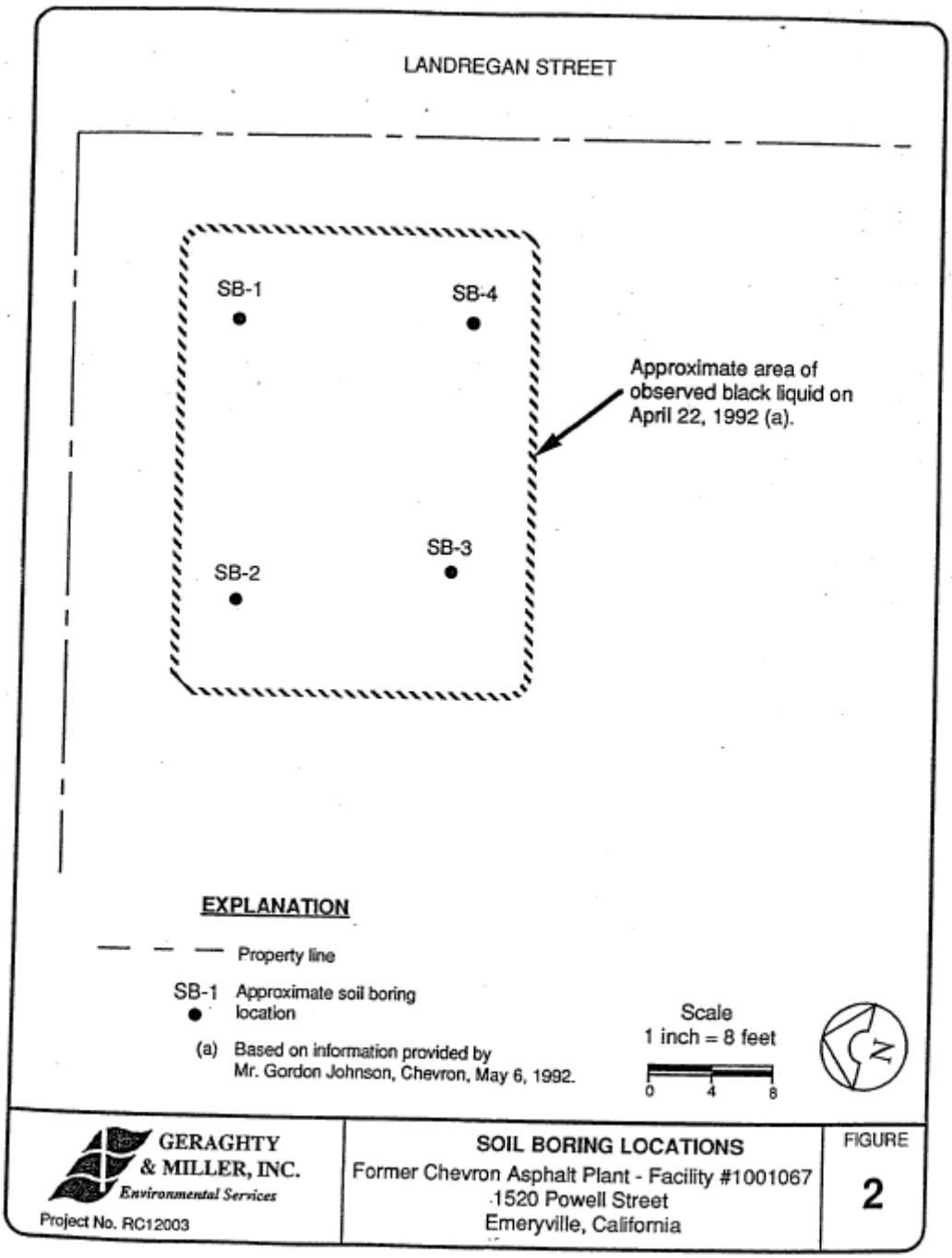
N

GERAGHTY & MILLER, INC.
Environmental Services

Proj. No. RC12003

SITE PLAN
Former Chevron Asphalt Plant - Facility #1001067
1520 Powell Street
Emeryville, California

FIGURE
1

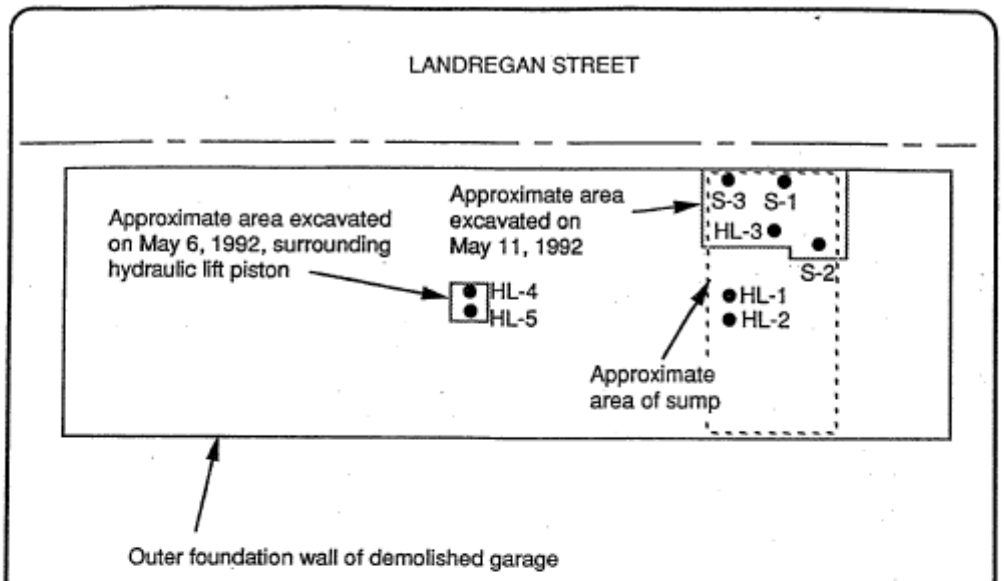


GERAGHTY & MILLER, INC.
Environmental Services

Project No. RC12003

SOIL BORING LOCATIONS
Former Chevron Asphalt Plant - Facility #1001067
1520 Powell Street
Emeryville, California

FIGURE
2



EXPLANATION

Property line

S-1 Approximate soil sample location

Scale
1 inch = 15 feet
0 7.5 15

N

GERAGHTY & MILLER, INC.
Environmental Services

Project No. RC12003

SOIL SAMPLE LOCATIONS
Former Chevron Asphalt Plant - Facility #1001067
1520 Powell Street
Emeryville, California

FIGURE
3

Table 1: Soil Analytical Results - Organics
Former Chevron Asphalt Plant - Facility #1001067
1520 Powell Street, Emeryville, California.

Sample	Date Collected	Approximate Depth (feet)	TPH Diesel (a) (mg/kg)	Oil and Grease (b) (mg/kg)	Volatile Organics (c) (mg/kg)	Polychlorinated Biphenyls (d) (mg/kg)
SB-1-2	6-May-92	2	21 (e)	170	0.350 (f)	ND (0.050)
SB-1-5	6-May-92	5	160 (g)	ND (50)	ND	ND (0.050)
SB-2-2	6-May-92	2	85 (e)	290	0.420 (f)	ND (0.050)
SB-2-5	6-May-92	5	ND (10)	ND (50)	ND	ND (0.050)
SB-3-2	6-May-92	2	84 (e)	430	0.100 (f)	ND (0.050)
SB-4-2	6-May-92	2	17 (e)	250	0.170 (f)	ND (0.050)
HL-4	8-May-92	8	ND (10)	ND (50)	ND	NA
HL-5	8-May-92	9	ND (10)	ND (50)	ND	NA
S-1	11-May-92	9	ND (10)	ND (50)	ND	NA
S-2	11-May-92	12	180 (g)	87	ND	NA
S-3	11-May-92	9	21 (g)	ND (50)	ND	NA

(a) Analyzed by USEPA Method 8015, modified.
(b) Analyzed by USEPA Method 5520F.
(c) Analyzed by USEPA Method 8240.
(d) Analyzed by USEPA Method 8080.
(e) Superior reported the pattern of chromatogram shows heavy hydrocarbons.
(f) Only acetone was detected in Volatile Organic Analysis, acetone levels reported.
(g) Superior reported the pattern observed in the chromatogram was not typical of diesel.

mg/kg Milligrams per kilogram equivalent to parts per million (ppm)
ND (10) Not detected (Detection Limit)
NA Not analyzed

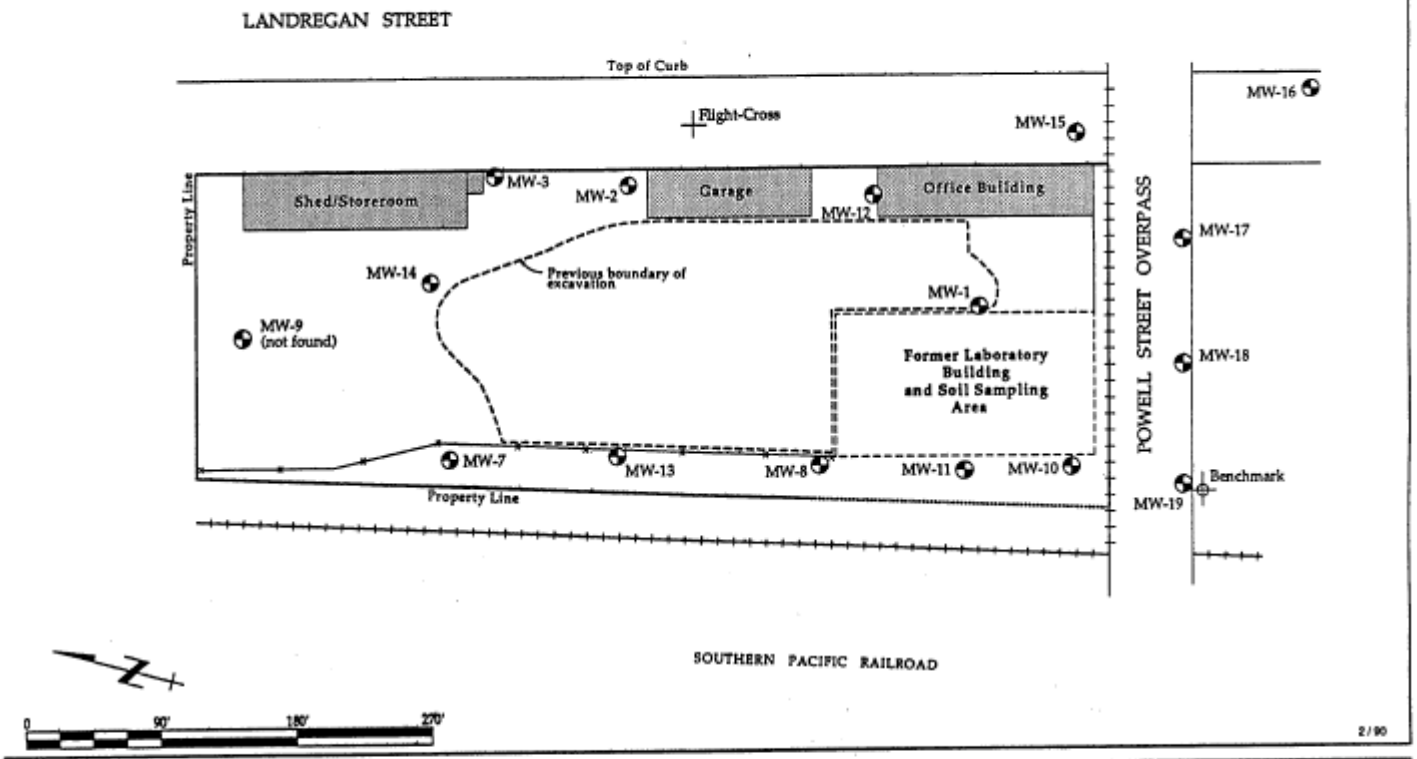
Analysis by Superior Precision Analytical, Inc., Martinez, California.

Table 2: **Soil Analytical Results - Metals**
Former Chevron Asphalt Plant - Facility #1001067
1520 Powell Street, Emeryville, California.

Metal (a)	TTLC (b) (mg/kg)	Sample SB-1-2 (c) (mg/kg)	Sample SB-1-5 (c) (mg/kg)	Sample SB-2-2 (c) (mg/kg)	Sample SB-2-5 (c) (mg/kg)	Sample SB-3-2 (c) (mg/kg)	Sample SB-4-2 (c) (mg/kg)
Antimony	500	6	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)
Arsenic	500	4	4	6	5	5	3
Barium	10,000	110	140	180	170	180	110
Beryllium	75	ND (0.5)	ND (0.5)	0.6	0.5	ND (0.5)	ND (0.5)
Cadmium	100	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Chromium	2,500	12	23	19	19	21	16
Cobalt	8,000	ND (10)	ND (10)	ND (10)	10	10	ND (10)
Copper	2,500	20	20	20	20	40	40
Lead	1,000	44	7	8	13	380	230
Mercury	20	0.4	0.2	1.7	ND (0.1)	1.8	1.4
Molybdenum	3,500	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)	ND (10)
Nickel	2,000	20	20	50	50	30	20
Selenium	100	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)	ND (1)
Silver	500	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)
Thallium	700	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)	ND (5)
Vanadium	2,400	10	30	30	30	20	20
Zinc	5,000	100	30	20	30	310	110

(a) Analyzed by USEPA Method 6010, All results reported in milligrams per kilogram (mg/kg).
(b) Total threshold limit concentrations for toxicity. California Code of Regulations Title 22, Division 4.5, Chapter 11, Article 3, 66261.24 Characteristics of Toxicity.
(c) Collected on May 6, 1992.

mg/kg Milligrams per kilogram (ppm)
ND (10) Not detected (Detection Limit)



EXPLANTAION

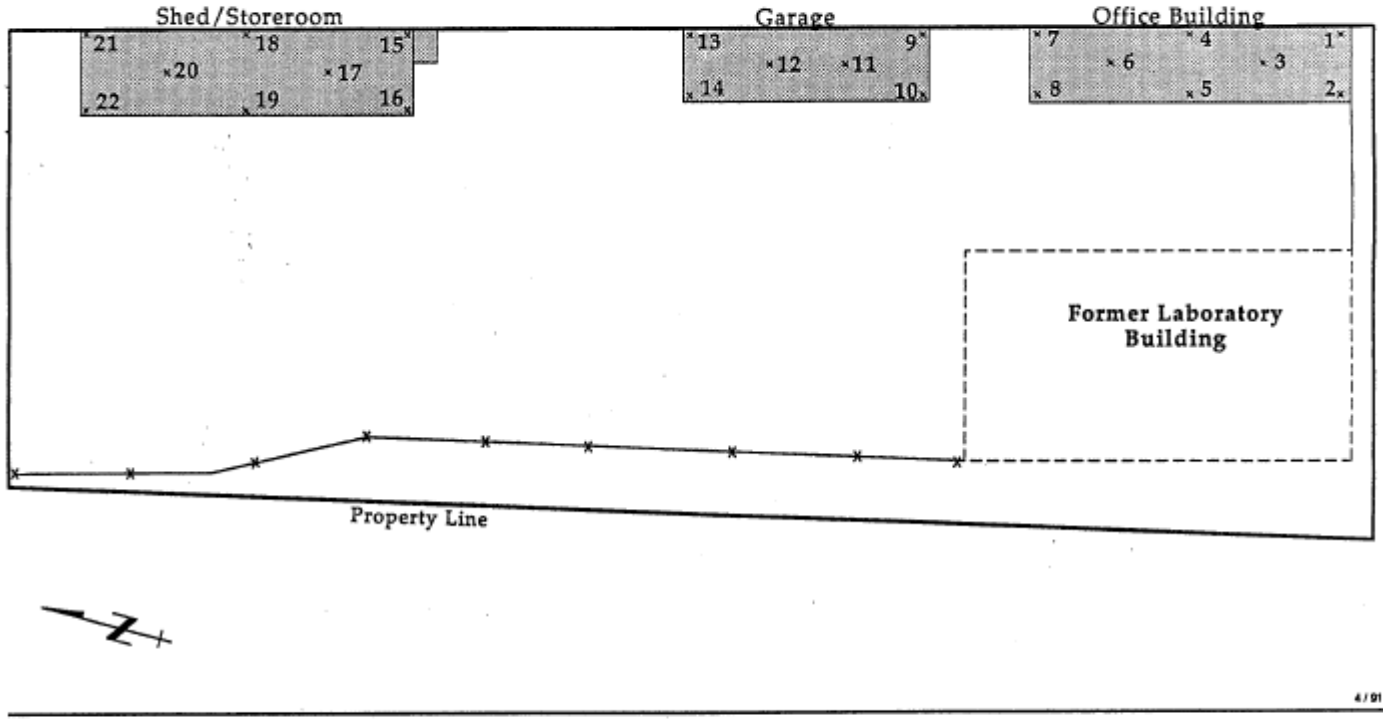
MW-8 Monitor Well location

Site Map with Soil Sampling Area
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
1

WESTERN GEOLOGIC RESOURCES, INC.

1-045.50



NOT TO SCALE

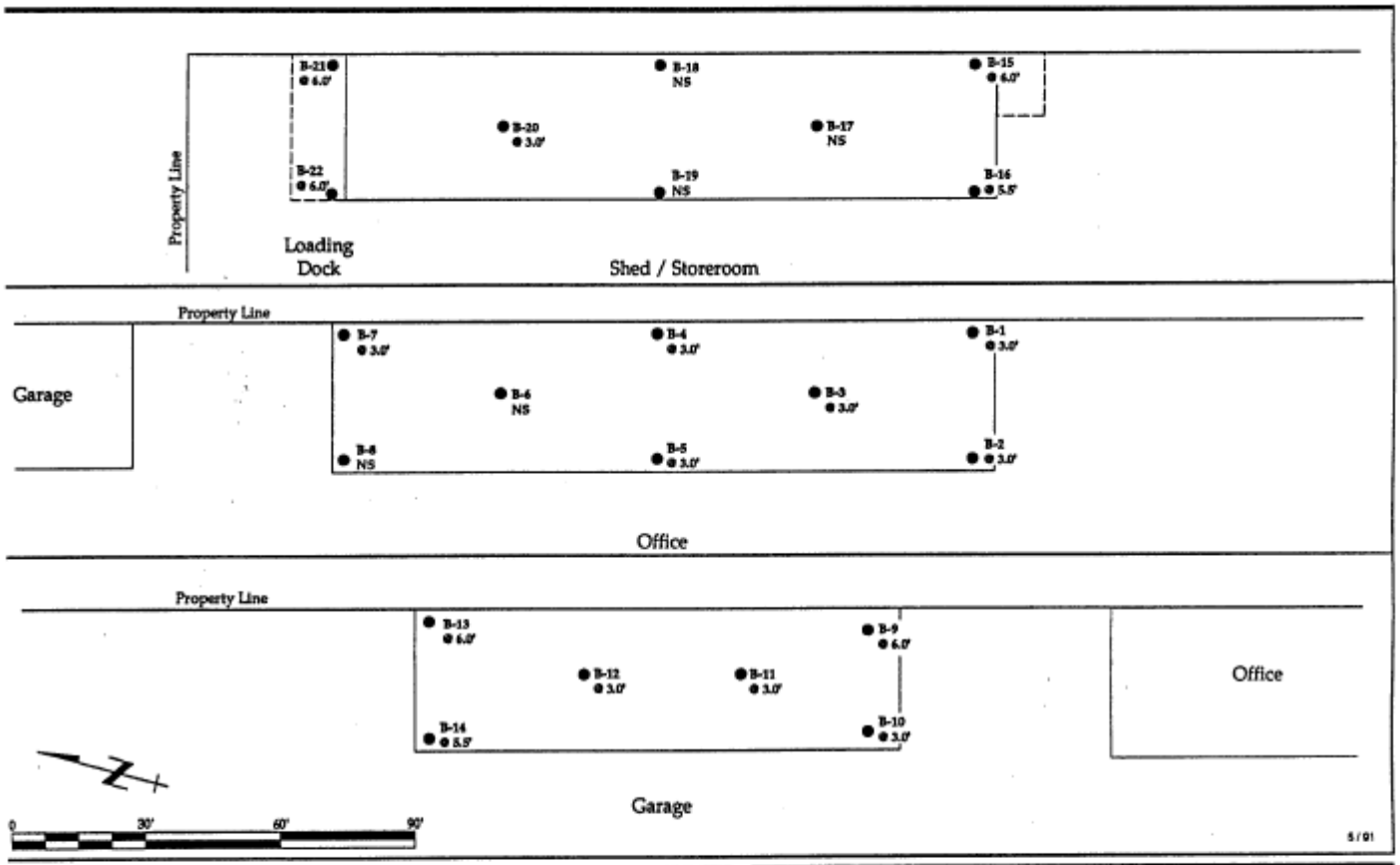
× Designated boring location

Site Map with Accepted Boring Pattern
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE
2

WESTERN GEOLOGIC RESOURCES, INC.

1-045.51



EXPLANATION

B-12 3.0'	Boring location and sample depth below floor
NS	Not Sampled

Actual Boring Locations
Former Chevron Asphalt Plant and Terminal
Emeryville, California

FIGURE 3

WESTERN GEOLOGIC RESOURCES, INC.

1-045.51

TABLE 1. Analytical Results of Soil Samples taken from Underneath the Remaining Structures at Emeryville

Boring	TPPH (Gas)	B	T	E	X	O&G	PCE
		<----------			ppm		---------->
1	<1	<0.005	0.005	<0.005	0.011	<50	<0.005
2	<1	<0.005	0.006	<0.005	0.011	<50	<0.005
3	<1	<0.005	0.005	<0.005	0.010	<50	<0.005
4	<1	<0.005	0.006	<0.005	0.011	<50	<0.005
5	<1	<0.005	0.011	<0.005	0.012	<50	<0.005
6	Not Sampled						
7	<1	<0.005	0.006	<0.005	0.011	<50	<0.005
8	Not Sampled						
9	<1	<0.005	0.006	<0.005	0.022	<50	<0.007
10	<1	<0.005	0.006	<0.005	0.013	<50	<0.005
11	<1	<0.005	0.006	<0.005	0.012	<50	<0.005
12	<1	<0.005	<0.005	<0.005	0.010	<50	<0.005
13	<1	<0.005	0.005	<0.005	0.010	<50	<0.005
14	1	<0.005	<0.005	<0.005	0.016	<50	<0.005
15	<1	<0.005	<0.005	<0.005	0.010	51	<0.005
16	<1	<0.005	0.009	<0.005	0.017	<50	<0.005
17	Not Sampled						
18	Not Sampled						
19	Not Sampled						

TABLE 1. Analytical Results of Soil Samples taken from Underneath the Remaining Structures at Emeryville (continued)

Boring	TPPH (Gas)	B	T	E	X	O&G	PCE
		<----------ppm---------->					
20	1	<0.005	0.006	<0.005	0.014	<50	<0.005
21	53	<0.005	<0.005	<0.005	0.16	<50	<0.005
22	<1	<0.005	<0.005	<0.005	<0.005	260	<0.005

NOTES:

TPPH (Gas) = Total Purgeable Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Total Xylenes
O&G = Oil and Grease
PCE = Tetrachloroethene
ppm = parts-per-million

Table 3. Soil Analytical Results - Former Chevron Bulk Asphalt Terminal at Powell Overpass at Landregan, Emeryville, California

Sample ID	Depth (feet)	Date Method	Analytic	TPHg	B	T	E	X	MTBE	VOCs
				<----------ppm---------->						
MW19A-5.5	5.5	10/30/95	8015/8020/8240	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.0100	0.017*
SP-A,B,C,D	---	10/30/95	8015/8020	230	<0.50	<1.0	<1.0	2.7	---	---

EXPLANATION:

TPHg = Total Petroleum Hydrocarbons as gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl t-butyl ether
VOCs = Volatile Organic Compounds
ppm = Parts per million
* = VOCs were not detected except 0.017 ppm tetrachloroethene
--- = Not analyzed/not applicable

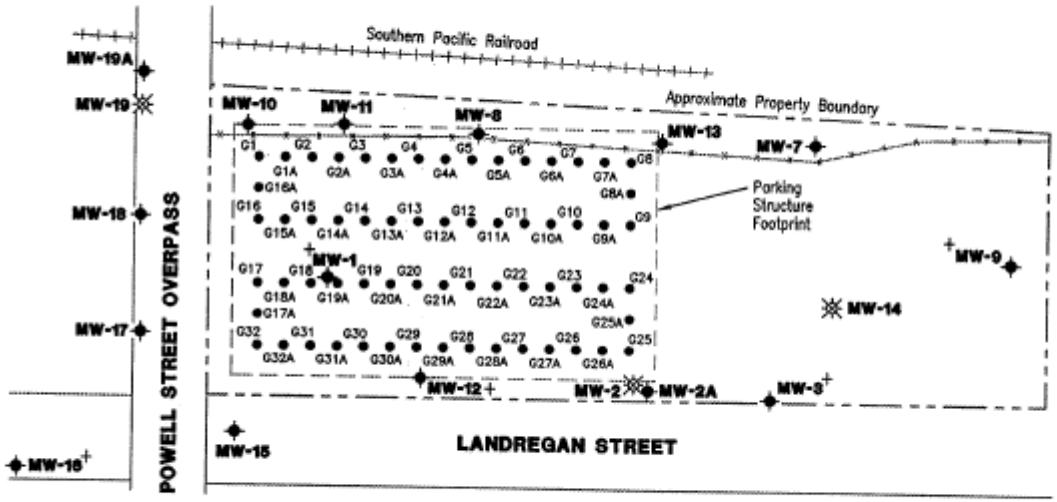
ANALYTICAL METHODS:

8015 = EPA Method 8015 for TPHG
8020 = EPA Method 8020 for BTEX and MTBE
8240 = EPA Method 8240 for VOCs

ANALYTICAL LABORATORY:

GTEL Environmental Laboratories, Inc. of Wichita, Kansas.

5133.01



EXPLANATION:

- ✦ Groundwater monitoring well
- ※ Abandoned groundwater monitoring well
- \+ Well not located, buried or destroyed
- • Soil boring

N

0 100

Scale in Feet

Gettler - Ryan Inc.

6747 Sierra Ct., Suite J
Dublin, CA 94568
(925) 551-7555

SITE PLAN
Former Chevron Asphalt Plant
and Terminal No. 1001067
Emeryville, California

FIGURE
1

JOB NUMBER
345161.02

REVIEWED BY

DATE
03/00

REVISED DATE

SOIL ANALYTICAL RESULTS (32 four point composites)
Former Chevron Asphalt Plant & Terminal #206265
1520 Powell Street
Emeryville, California
Samples Collected on November 22 and 23, 1999

Sample Identification	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TPHd (mg/kg)	TRPH (mg/kg)	Total Lead (mg/kg)	Soluble Lead (mg/l)	VOC (mg/kg)
G1(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.1[10,12]	82	12	---	ND
G2(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	5.9[10,12]	91	10	---	ND[14]
G3(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.6[12]	<50	34	---	ND[15]
G4(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	6.7[10,12]	100	19	---	ND[16]
G5(5,9.5,A5,A9.5)	7.3[2]	<0.0050	0.0089	0.0073	0.049	38[10,4]	310	36	---	---
G6(5,9.5,A5,A9.5)	46[8]	<0.10	<0.10	0.15	0.46	13[4,12]	110	12	---	---
G7(5,9.5,A5,A9.5)	56[8,9]	<0.25	<0.25	<0.25	<0.25	89[4,10,12]	330	34	---	---
G8(5,9.5,A5,A9.5)	39[7]	<0.025	<0.025	0.025	0.14	14[4,10,12]	150	19	---	---
G9(5,9.5,A5,A9.5)	10[7]	<0.050	0.052	<0.050	0.19	10[10,12]	240	14	---	---
G10(5,9.5,A5,A9.5)	5.7[1]	<0.0050	0.0084	0.0060	0.039	16[10,4]	340	13	---	---
G11(5,9.5,A5,A9.5)	11[2]	<0.025	<0.025	<0.025	<0.025	12[10]	160	48	---	---
G12(5,9.5,A5,A9.5)	130[2]	<0.10	<0.10	<0.10	0.48	390[11,4]	310	51	<0.020	---
G13(5,9.5,A5,A9.5)	22[3,4]	<0.10	<0.10	<0.10	0.45	18[10,4]	330	14	---	ND[20]
G14(5,9.5,A5,A9.5)	550[7]	0.35	0.64	0.92	2.4	20[13]	130	6.5	---	ND[17]
G15(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	8.9[10,12]	340	36	---	ND[18]
G16(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	3.1[12]	<50	6.0	---	ND
G17(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.9[10,12]	120	8.5	---	ND
G18(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	1.5[12]	140	9.0	---	ND
G19(5,9.5,A5,A9.5)	7.1[7]	<0.0050	0.0058	0.016	0.075	6.3[10,12]	200	9.0	---	ND
G20(5,9.5,A5,A9.5)	<1.0	<0.0050	0.0061	<0.0050	<0.0050	1.5[10]	57	11	---	ND[19]
G21(5,9.5,A5,A9.5)	<1.0	<0.0050	0.0059	<0.0050	0.0093	3.3[10]	120	12	---	---
G22(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	24[10,4]	750	17	---	---

SOIL ANALYTICAL RESULTS (32 four point composites)
Former Chevron Asphalt Plant & Terminal #206265
1520 Powell Street
Emeryville, California
Samples Collected on November 22 and 23, 1999

Sample Identification	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TPHd (mg/kg)	TRPH (mg/kg)	Total Lead (mg/kg)	Soluble Lead (mg/l)	VOC (mg/kg)
G23(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	25[10,4]	600	13	---	---
G24(5,9.5,A5,A9.5)	<1.0	<0.0050	0.022	0.0070	0.043	4.6[10]	410	19	---	---
G25(5,9.5,A5,A9.5)	15[1]	<0.0050	0.0055	0.011	0.044	19[4,10]	250	17	---	---
G26(5,9.5,A5,A9.5)	14[2]	<0.0050	<0.0050	<0.0050	0.029	6.3[11]	180	29	---	---
G27(5,9.5,A5,A9.5)	5.8[3]	<0.0050	<0.0050	<0.0050	0.013	2.5[10,12]	110	65	<0.020	---
G28(5,9.5,A5,A9.5)	3.3[3]	<0.0050	<0.0050	<0.0050	<0.0050	6.9[10]	95	150	1.6	---
G29(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.2[10,12]	89	10	---	ND
G30(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	3.4[10,12]	<50	10	---	ND
G31(5,9.5,A5,A9.5)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	23[4,10]	230	600	19	ND
A(1,2,3,4)	1.9[7]	<0.0050	<0.0050	<0.0050	0.016	2.2[21]	160	60	1.4	---
B(1,2,3,4)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	120	50[4]	0.76	---
C(1,2,3,4)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	150	60	1.1	---
D(1,2,3,4)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	4.5[22]	190	49	---	---
E(1,2,3,4)	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	2.8[21]	<50	44	---	---
F(1,2,3,4)	7.7[5]	<0.0050	<0.0050	<0.0050	0.018	160[22,23]	600	60	0.89	---
G(1,2,3,4)	6.9[5]	<0.0050	<0.0050	<0.0050	<0.0050	540[23]	1800	90	1.4	---

Notes/Explanation:

[1] Chromatogram pattern: Gasoline C6-C12 + Unidentified hydrocarbon C6-C12
[2] Chromatogram pattern: Gasoline C6-C12 + Unidentified hydrocarbons >C8
[3] Chromatogram pattern: Gasoline C6-C12
[4] The surrogate recovery for this sample is outside the established control limits due to sample matrix effect.

SOIL ANALYTICAL RESULTS (32 four point composites)
Former Chevron Asphalt Plant & Terminal #206265
1520 Powell Street
Emeryville, California
Samples Collected on November 22 and 23, 1999

Sample Identification	TPHg (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethylbenzene (mg/kg)	Xylenes (mg/kg)	TPHd (mg/kg)	TRPH (mg/kg)	Total Lead (mg/kg)	Soluble Lead (mg/l)	VOC (mg/kg)

Notes/Explanation cont.

[5] Chromatogram pattern: Unidentified Hydrocarbon >C8

[6] Unidentified hydrocarbon >C10

[7] Chromatogram pattern: Unidentified Hydrocarbons C6-C12

[8] Unidentified Hydrocarbon >C7

[9] The surrogate recovery for this sample is not available due to sample dilution required from high analyte concentration and/or matrix interference.

[10] Chromatogram pattern: Unidentified hydrocarbons >C16

[11] Chromatogram pattern: Diesel C9-C24 + Unidentified hydrocarbons >C16

[12] Discrete peaks

[13] Chromatogram pattern: Unidentified hydrocarbons <C16

[14] All compounds non-detectable except vinyl acetate (0.10 mg/kg) and trichloroethene (0.41mg/kg)

[15] All compounds non-detectable except trichloroethene (0.12 mg/kg)

[16] All compounds non-detectable except trichloroethene (0.28 mg/kg)

[17] All compounds non-detectable except ethylbenzene (0.34 mg/kg)

[18] All compounds non-detectable except benzene (0.37 mg/kg), toluene (0.42 mg/kg), chlorobenzene (0.40 mg/kg), ethylbenzene (0.39 mg/kg), and xylenes (1.2 mg/kg)

[19] All compounds non-detectable except toluene (0.11 mg/kg)

[20] Reporting limit(s) for this sample have been raised due to high levels of non-target compounds

[21] Chromatogram pattern: Unidentified hydrocarbons >C16

[22] Chromatogram pattern: Unidentified hydrocarbons C9-C24

[23] Surrogate out of control limits because of peak coelution with the sample

mg/kg = milligram/kilogram
mg/l = milligram/liter
TPHg = total petroleum hydrocarbons as gasoline
TPHd = total petroleum hydrocarbons as diesel
TRPH = total recovable petroleum hydrocarbons (5520E&F)
VOC = volatile organic compounds

Second Semi-Annual 2005 Groundwater Report

GETTLER-RYAN INC.

TRANSMITTAL

November 23, 2005
G-R #385161

TO: Mr. Bruce H. Eppler
Cambria Environmental Technology, Inc.
4111 Citrus Avenue, Suite 12
Rocklin, California 95677

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

RE: Former Chevron Asphalt Plant
Terminal #206265 (100-1067)
Powell @ Landregan
Emeryville, California
MTI: 61H-1953

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	November 23, 2005	Groundwater Monitoring and Sampling Report Second Semi-Annual - Event of October 20, 2005

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced report for **your use and distribution to the following:**

Mr. Dana Thurman, ChevronTexaco Company, P.O. Box 6012, Room K2236, San Ramon, CA 94583

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***December 9, 2005,*** 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, 1153 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577
Mr. Geoffrey B. Sears, Wareham Development Group, 1120 Nye Street, Suite 400, San Rafael, CA 94901

Enclosures

trans/206265(100-1067)-DT

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
3140 Gold Camp Drive, Suite 170 • **Rancho Cordova**, CA 95670 • (916) 631-1300 • Fax (916) 631-1317
1364 N. McDowell Blvd., Suite B2 • **Petaluma**, CA 94954 • (707) 789-3255 • Fax (707) 789-3218

GETTLER-RYAN INC.

November 23, 2005
G-R Job #385161

Mr. Dana Thurman
ChevronTexaco Company
P.O. Box 6012, Room 2236
San Ramon, CA 94583

RE: Second Semi-Annual Event of October 20, 2005
Groundwater Monitoring & Sampling Report
Former Chevron Asphalt Plant Terminal #206265 (100-1067)
Powell @ Landregan
Emeryville, California

Dear Mr. Thurman:

This report documents 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 Groundwater Elevation 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,

-FOR-
Deanna L. Harding
Project Coordinator

PROFESSIONAL GEOLOGIST
ROBERT A. LAURITZEN
No. 7504
STATE OF CALIFORNIA

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

Figure 1: Groundwater Elevation Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Groundwater Analytical Results
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

6747 Sierra Court, Suite J • **Dublin**, CA 94568 • (925) 551-7555 • Fax (925) 551-7888
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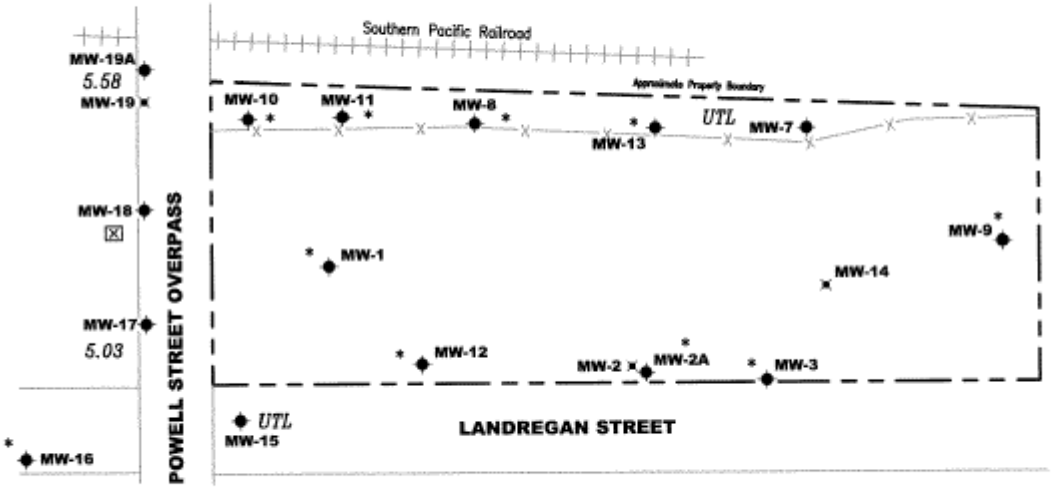

EXPLANATION

- Groundwater monitoring well
- Abandoned well
- Discontinued from monitoring/ sampling program
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level
- UTL — Unable to locate
- ☒ — Inaccessible

0 100

Scale in Feet

Source: Figure modified from drawing provided by RRM

Gettler - Ryan Inc.

6747 Sierra Court, Suite J
Dublin, CA 94568
(925) 551-7555

GROUNDWATER ELEVATION MAP
Former Chevron Asphalt Plant #206265 (100-1067)
Powell @ Landregan
Emeryville, California

FIGURE 1

JOB NUMBER 385161 | REVIEWED BY | DATE October 20, 2005 | REVISED DATE

FILE NAME: P:\Enviro\Chevron\206265\GDS-206265.dwg | Layout Tab: Plot4

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-7												
04/26/85	10.47	--	--	--	--	700	ND	--	--	--	--	--
09/11/87	10.47	--	--	--	--	--	<10	--	--	--	--	--
07/07/88	10.47	--	--	--	--	17,000	<5.0	--	--	--	--	--
04/13/89	10.47	8.57	1.90	--	--	--	--	--	--	--	--	--
04/14/89	10.47	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
07/31/89	10.47	6.23	4.24	--	--	160[1]	<0.1	<0.5	<0.1	<0.2	--	--
07/31/89	10.47	--	--	--	--	100[1]	<0.1	<0.5	<0.1	<0.2	--	--
12/08/89	10.47	7.82	2.65	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	10.47	7.71	2.76	--	--	<50	<0.3	<0.3	<0.3	0.6	--	--
06/19/90	10.47	7.23	3.24	--	--	<50	<0.3	<0.3	<0.3	0.6	--	--
09/20/90	10.47	5.90	4.57	--	--	--	--	--	--	--	--	--
09/21/90	10.47	--	--	--	--	<50	1.5	<0.3	<0.3	<0.6	--	--
12/28/90	10.47	7.35	3.12	--	--	<50	0.7	<0.5	<0.5	0.7	--	--
05/10/91	10.47	6.94	3.53	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	10.47	5.83	4.64	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	10.47	6.81	3.66	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	10.47	7.23	3.24	--	--	<50	<0.5	<0.5	<0.5	0.9	--	--
03/26/92	10.47	7.86	2.61	--	--	<50	<0.5	<0.5	<0.5	0.9	--	--
07/23/92	10.47	6.28	4.19	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	10.47	6.08	4.39	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/04/93	10.47	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	10.47	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	10.47	6.06	4.41	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	10.47	5.44	5.03	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	10.47	5.94	4.53	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	10.47	5.36	5.11	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	10.47	6.07	4.40	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	10.47	5.45	5.02	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/22/97	10.47	5.93	4.54	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	10.47	6.05	4.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	10.47	6.05	4.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	10.47	5.66	4.81	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-7 (cont)												
04/15/99	10.47	6.07	4.40	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/04/99	10.47	5.50	4.97	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/13/00	10.47	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/05/00	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
04/23/01	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
10/04/01	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
04/01/02	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
10/19/02	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
04/16/03	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
10/29/03	10.47	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION						--	--	--	--	--
UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION												
MW-15												
03/21/90	11.01	6.29	4.72	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	11.01	6.23	4.78	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	11.01	6.03	4.98	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	11.01	6.17	4.84	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	11.01	6.43	4.58	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	11.01	5.98	5.03	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	11.01	5.13	5.88	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	11.01	6.19	4.82	--	--	<50	1.9	2.6	0.8	2.6	--	--
03/26/92	11.01	6.66	4.35	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	11.01	5.97	5.04	--	--	<50	<0.5	<0.5	<0.5	0.5	--	--
10/28/92	11.01	5.84	5.17	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/04/93	11.01	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	11.01	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	11.01	6.51	4.50	--	--	110	<0.5	0.7	<0.5	2.0	--	--
10/24/94	11.01	5.84	5.17	--	--	<50	2.3	1.1	<0.5	<0.5	--	--
04/19/95	11.01	6.24	4.77	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	11.01	5.73	5.28	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	11.01	6.41	4.60	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-15 (cont)												
10/10/96	11.01	5.79	5.22	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/22/97	11.01	6.16	4.85	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	11.01	6.19	4.82	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	11.01	7.02	3.99	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	11.01	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/15/99	11.01	5.26	5.75	--	--	--	--	--	--	--	--	--
11/04/99	11.01	4.83	6.18	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/13/00	11.01	4.09	6.92	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/06/00	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
04/23/01	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/04/01	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
04/01/02	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/19/02	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
04/16/03	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/29/03	11.01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION												
MW-17												
03/21/90	10.41	4.80	5.61	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	10.41	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	10.41	4.39	6.02	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	10.41	4.68	5.73	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	10.41	4.76	5.65	--	--	<50	<0.5	<0.5	<0.5	0.8	--	--
08/08/91	10.41	4.47	5.94	--	--	82	1.9	2.5	0.9	5.4	--	--
11/27/91	10.41	4.41	6.00	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	10.41	4.80	5.61	--	--	<50	<0.5	0.9	<0.5	0.5	--	--
03/26/92	10.41	5.10	5.31	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	10.41	4.44	5.97	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	10.41	4.45	5.96	--	--	78	1.0	7.1	1.4	6.5	--	--
05/04/93	10.41	2.88	7.53	--	--	60	0.8	1.7	1.1	3.0	--	--
01/05/94	10.41	4.91	5.50	--	--	<50	<0.5	0.7	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-17 (cont)												
05/13/94	10.41	5.24	5.17	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	10.41	4.33	6.08	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	10.41	4.93	5.48	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	10.41	4.41	6.00	--	--	<50	<0.5	<0.5	<0.5	<5.0	--	--
04/26/96	10.41	4.96	5.45	--	--	<50	<0.5	<0.5	<0.5	<5.0	--	--
10/10/96	10.41	4.69	5.72	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/22/97	10.41	5.03	5.38	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	10.41	5.05	5.36	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	10.41	5.13	5.28	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	10.41	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/15/99	10.41	INACCESSIBLE		--	--	--	--	--	--	--	--	--
11/04/99	10.41	4.69	5.72	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/13/00	10.41	5.33	5.08	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/05/00	10.41	4.80	5.61	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
04/23/01	10.41	5.13	5.28	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/04/01	10.41	4.53	5.88	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/01/02	10.41	5.15	5.26	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
10/19/02	10.41	4.62	5.79	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/16/03	10.41	5.33	5.08	0.00	0.00	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/29/03[12]	10.41	4.62	5.79	0.00	0.00	<50	<0.5	<0.5	<0.5	<1	<0.5	--
04/01/04[12]	10.41	5.16	5.25	0.00	0.00	<50	<0.5	<0.5	<0.5	<1	<0.5	--
10/01/04[12]	10.41	5.02	5.39	0.00	0.00	<50	<0.5	<0.7	<0.8	<1.6	<0.5	--
04/08/05[12]	10.41	5.70	4.71	0.00	0.00	<50	<0.5	<0.5	<0.5	<1.0	<0.5	--
10/20/05[12]	**10.41**	**5.03**	**5.38**	**0.00**	**0.00**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<1.0**	**<0.5**	**--**
MW-18												
03/21/90	9.80	4.65	5.15	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	9.80	4.61	5.19	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	9.80	4.26	5.54	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	9.80	4.54	5.26	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	9.80	4.62	5.18	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-18 (cont)												
08/08/91	9.80	4.35	5.45	--	--	52	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	9.80	4.56	5.24	--	--	<50	0.6	1.5	0.6	2.1	--	--
01/29/92	9.80	4.68	5.12	--	--	67	3.7	5.2	1.5	5.0	--	--
03/26/92	9.80	4.96	4.84	--	--	80	<0.5	<0.5	<0.5	0.8	--	--
07/23/92	9.80	4.31	5.49	--	--	50	1.3	2.1	0.5	3.0	--	--
10/28/92	9.80	4.33	5.47	--	--	54	<0.5	1.3	<0.5	1.1	--	--
05/04/93	9.80	4.73	5.07	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/05/94	9.80	4.75	5.05	--	--	<50	<0.5	0.5	<0.5	0.6	--	--
05/13/94	9.80	5.04	4.76	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	9.80	4.15	5.65	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	9.80	4.70	5.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	9.80	4.23	5.57	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	9.80	4.73	5.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	9.80	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	9.80	4.77	5.03	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	9.80	3.82	5.98	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	9.80	4.89	4.91	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--[4]
10/27/98	9.80	4.70	5.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/15/99	9.80	5.05	4.75	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/04/99	9.80	4.43	5.37	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/13/00	9.80	5.16	4.64	0.00	0.00	INACCESSIBLE[8]		--	--	--	--	--
10/05/00	9.80	4.55	5.25	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
04/23/01	9.80	4.89	4.91	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/04/01	9.80	4.33	5.47	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/01/02	9.80	4.89	4.91	0.00	0.00	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
10/19/02	9.80	4.42	5.38	0.00	0.00	<50	<0.50	<0.50	<0.50	1.6	<2.5	--
04/16/03	9.80	5.12	4.68	0.00	0.00	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/29/03[12]	9.80	4.42	5.38	0.00	0.00	<50	<0.5	1	<0.5	0.7	1	--
04/01/04	9.80	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--
10/01/04	9.80	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--
04/08/05[12]	9.80	5.47	4.33	0.00	0.00	<50	<0.5	<0.5	<0.5	<1.0	<0.5	--
10/20/05	**9.80**	**INACCESSIBLE - VEHICLE PARKED OVER WELL**				--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-19A												
11/06/95	9.96	5.11	4.85	--	--	420	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	9.96	5.78	4.18	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	9.96	5.40	4.56	--	--	610[2]	<0.5	<0.5	<0.5	<0.5	21	--
04/22/97	9.96	5.79	4.17	--	--	43[2]	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	9.96	5.83	4.13	--	--	380	<0.5	<0.5	<0.5	<0.5	22	--
05/04/98	9.96	5.93	4.03	--	--	200[3]	<0.5	<0.5	<0.5	<0.5	--	--
05/04/98	9.96	5.93	4.03	--	--	--	--	--	--	--	<2.0	--
10/27/98	9.96	5.75	4.21	--	--	170[2]	<0.5	<0.5	<0.5	<0.5	12/<2.0[7]	--
04/15/99	9.96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
11/04/99	9.96	5.45	4.51	--	--	290	<0.5	<0.5	<0.5	<0.5	26.8/<0.5[5,7]	--
04/13/00	9.96	6.81	3.15	0.00	0.00	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/05/00	9.96	5.51	4.45	0.00	0.00	130[10]	<0.50	<0.50	<0.50	<0.50	26/<2.0[9]	--
04/23/01	9.96	5.89	4.07	0.00	0.00	100[10]	<0.50	<0.50	<0.50	<0.50	3.4/<2.0[11]	--
10/04/01	9.96	5.28	4.68	0.00	0.00	380	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/01/02	9.96	5.82	4.14	0.00	0.00	310	<0.50	<0.50	<0.50	<1.5	<2.5	--
10/19/02	9.96	5.36	4.60	0.00	0.00	300	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/16/03	9.96	6.25	3.71	0.00	0.00	280	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/29/03[12]	9.96	5.36	4.60	0.00	0.00	330	<0.5	<0.5	<0.5	<1	<0.5	--
04/01/04[12]	9.96	5.91	4.05	0.00	0.00	260	<0.5	<0.5	<0.5	<1	<0.5	--
10/01/04[12]	9.96	5.66	4.30	0.00	0.00	260	<0.5	<0.7	<0.8	<1.6	<0.5	--
04/08/05[12]	9.96	6.88	3.08	0.00	0.00	190	<0.5	<0.5	<0.5	<1.0	<0.5	--
10/20/05[12]	**9.96**	**5.58**	**4.38**	**0.00**	**0.00**	**180**	**<0.5**	**<0.5**	**<0.5**	**<1.0**	**<0.5**	**--**
MW-1												
04/26/85	10.67	--	--	--	--	--	99	--	--	6.0	--	--
09/11/87	10.67	--	--	--	--	--	63	--	--	--	--	--
07/07/88	10.67	--	--	--	--	<100	55	--	--	--	--	--
04/13/89	10.67	6.95	3.72	--	--	--	--	--	--	--	--	--
04/14/89	10.67	--	--	--	--	<5,000	34	<5.0	<5.0	<10	--	--
07/31/89	10.67	4.95	5.72	--	--	7,000	57	1.2	<0.2	1.6	--	--
12/08/89	10.67	5.87	4.80	--	--	--	26	0.4	0.9	2.0	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-1 (cont)												
03/21/90	10.67	5.93	4.74	--	--	3,500	120	9.0	3.0	3.0	--	--
06/19/90	10.67	5.92	4.75	--	--	2,700	100	<0.3	<0.3	7.0	--	--
09/20/90	10.67	5.60	5.07	--	--	--	--	--	--	--	--	--
09/21/90	10.67	--	--	--	--	2,200	120	2.0	2.0	0.79	--	--
12/28/90	10.67	5.76	4.91	--	--	720	44	2.0	<0.5	9.0	--	--
05/10/91	10.67	5.37	5.30	--	--	530	47	2.0	0.5	8.0	--	--
08/08/91	10.67	4.82	5.85	--	--	1,400	37	8.3	3.7	12	--	--
11/27/91	10.67	5.54	5.13	--	--	840	16	7.1	4.5	11	--	--
01/29/92	10.67	5.85	4.82	--	--	350	18	9.3	3.7	7.7	--	--
03/26/92	10.67	6.35	4.32	--	--	420[2]	19	2.2	1.2	4.0	--	--
07/23/92	10.67	5.25	5.42	--	--	4,000[2]	50	82	40	160	--	--
10/28/92	10.67	5.11	5.56	--	--	980	36	6.7	3.0	10	--	--
05/04/93	10.67	4.37	6.30	--	--	650	9.4	2.4	1.2	4.5	--	--
01/05/94	10.67	INACCESSIBLE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED												
MW-2												
04/26/85	13.78	--	--	--	--	--	<10	--	--	--	--	--
09/11/87	13.78	--	--	--	--	--	--	--	--	--	--	--
07/07/88	13.78	--	--	--	--	<100	<5.0	--	--	--	--	--
04/13/89	13.78	11.16	2.62	--	--	--	--	--	--	--	--	--
04/14/89	13.78	--	--	--	--	<100	<0.2	<0.2	<0.2	<0.4	--	--
07/31/89	13.78	9.15	4.63	--	--	<100	<0.2	<1.0	<0.2	<0.4	--	--
12/08/89	13.78	7.80	5.98	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	13.78	7.93	5.85	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	13.78	7.83	5.95	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	13.78	6.92	6.86	--	--	--	--	--	--	--	--	--
09/21/90	13.78	--	--	--	--	<50	<1.5	<1.5	<1.5	<4.5	--	--
12/28/90	13.78	7.44	6.34	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	13.78	7.82	5.96	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	13.78	6.12	7.66	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	13.78	5.74	8.04	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-2 (cont)												
01/29/92	13.78	7.77	6.01	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	13.78	7.68	6.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	13.78	6.39	7.39	--	--	<50	<0.5	<0.5	<0.5	0.8	--	--
10/28/92	13.78	6.27	7.51	--	--	55	1.3	6.9	1.1	5.1	--	--
05/04/93	13.78	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	13.78	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/24/94	13.78	DRY	--	--	--	--	--	--	--	--	--	--
04/19/95	13.78	11.28	2.51	0.01	--	--	--	--	--	--	--	--
ABANDONED												
MW-2A												
11/06/95	12.45	7.94	4.51	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	12.45	8.35	4.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	12.45	7.13	5.32	--	--	60[2]	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/22/97	12.45	8.50	3.95	--	--	<50	0.8	<0.5	<0.5	<0.5	<5.0	--
10/16/97	12.45	7.77	4.68	--	--	80	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	12.45	8.91	3.54	--	--	96[2]	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	12.45	7.31	5.14	--	--	170[2]	<0.5	<0.5	<0.5	9.6	44/<2.0[7]	--
04/15/99	12.45	9.83	2.62	--	--	116	0.609	<0.5	<0.5	<0.5	<5.0	--
11/04/99	12.45	7.38	5.07	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
NOT MONITORED/SAMPLED												
MW-3												
04/26/85	11.73	--	--	--	--	--	<10	--	--	--	--	--
09/11/87	11.73	--	--	--	--	--	<0.5	--	--	--	--	--
07/07/88	11.73	--	--	--	--	<100	<5.0	--	--	--	--	--
04/13/89	11.73	9.39	2.34	--	--	--	--	--	--	--	--	--
04/14/89	11.73	--	--	--	--	<100	<0.2	<0.2	<0.2	<0.4	--	<3,000,000
07/31/89	11.73	6.94	4.79	--	--	<100	<0.2	<1.0	<0.2	<0.4	--	--
12/08/89	11.73	8.70	3.03	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	11.73	9.18	2.55	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	11.73	8.97	2.76	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	11.73	7.30	4.43	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-3 (cont)												
09/21/90	11.73	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	11.73	8.06	3.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	11.73	8.90	2.83	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	11.73	6.64	5.09	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	11.73	6.36	5.37	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	11.73	8.27	3.46	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	11.73	9.63	2.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	11.73	7.13	4.60	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	11.73	6.66	5.07	--	--	92	1.8	12	2.0	10	--	--
05/04/93	11.73	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	11.73	INACCESSIBLE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED												
MW-4												
04/26/85	--	--	--	--	--	3,100	<10	--	--	--	--	--
09/11/87	--	--	--	--	--	--	<0.5	--	--	--	--	--
07/07/88	--	--	--	--	--	<100	<5.0	--	--	--	--	--
04/13/89	--	--	2.12	--	--	--	--	--	--	--	--	--
04/14/89	--	--	--	--	--	380[1]	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
NOT MONITORED/SAMPLED												
MW-5												
04/26/85	--	--	--	--	--	1,600	<100	--	--	--	--	--
09/11/87	--	--	--	--	--	--	<10	--	--	--	--	--
07/07/88	--	--	--	--	--	<100	<5.0	--	--	--	--	--
04/13/89	--	--	2.79	--	--	--	--	--	--	--	--	--
04/14/89	--	--	--	--	--	4,300[1]	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
NOT MONITORED/SAMPLED												
MW-6												
04/26/85	--	--	--	--	--	580	<100	--	--	--	--	--
09/11/87	--	--	--	--	--	--	<10	--	--	--	--	--
07/07/88	--	--	--	--	--	8,000	<5.0	--	--	--	--	--
04/13/89	--	--	1.90	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-6 (cont)												
04/14/89	--	--	--	--	--	3,300[1]	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
NOT MONITORED/SAMPLED												
MW-8												
04/26/85	10.46	--	--	--	--	--	ND	--	--	--	--	--
09/11/87	10.46	--	--	--	--	--	<10	--	--	--	--	--
07/07/88	10.46	--	--	--	--	20,000	<5.0	--	--	--	--	--
04/13/89	10.46	7.66	2.80	--	--	--	--	--	--	--	--	--
04/14/89	10.46	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<3,000	<3,000,000
07/31/89	10.46	4.76	5.70	--	--	<50	<0.1	<0.5	<0.1	<0.2	--	--
12/08/89	10.46	6.33	4.13	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	10.46	6.39	4.07	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	10.46	6.21	4.25	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	10.46	5.47	4.99	--	--	--	--	--	--	--	--	--
09/21/90	10.46	--	--	--	--	<50	6.0	<0.3	<0.3	<0.6	--	--
12/28/90	10.46	6.07	4.39	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	10.46	6.33	4.13	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	10.46	4.93	5.53	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	10.46	5.87	4.59	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	10.46	5.16	5.30	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	10.46	6.87	3.59	--	--	<50	<0.5	<0.5	<0.5	0.7	--	--
07/23/92	10.46	5.40	5.06	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/04/93	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	10.46	4.87	5.59	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/19/95[3]	10.46	--	--	--	--	--	--	--	--	--	--	--
11/06/95	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/26/96	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	10.46	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	10.46	4.67	5.79	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-8 (cont)												
10/16/97	10.46	5.14	5.32	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	10.46	4.91	5.55	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	10.46	4.49	5.97	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/15/99	10.46	5.21	5.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/04/99	10.46	4.04	6.42	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
NOT MONITORED/SAMPLED												
MW-9												
04/26/85	--	--	--	--	--	--	--	--	--	--	--	--
09/11/87	--	--	--	--	--	--	--	--	--	--	--	--
07/07/88	--	--	--	--	--	400	--	--	--	--	--	--
05/10/91	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED												
MW-10												
07/07/88	10.82	--	--	--	--	--	<5.0	--	--	--	--	--
04/14/89	10.82	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
07/31/89	10.82	--	--	--	--	<50	<0.1	<0.5	<0.1	<0.2	--	--
12/08/89	10.82	--	--	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	10.82	6.22	4.60	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	10.82	5.93	4.89	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	10.82	5.05	5.77	--	--	--	--	--	--	--	--	--
09/21/90	10.82	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	10.82	5.83	4.99	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	10.82	5.02	5.80	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	10.82	4.96	5.86	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	10.82	5.43	5.39	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	10.82	5.38	5.44	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	10.82	5.86	4.96	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	10.82	5.02	5.80	--	--	<50	<0.5	1.8	0.5	1.9	--	--
10/28/92	10.82	4.76	6.06	--	--	<50	0.6	0.7	<0.5	1.2	--	--
05/04/93	10.82	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	10.82	4.90	5.92	--	--	<50	<0.5	<0.5	<0.5	0.6	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-10 (cont)												
05/13/94	10.82	5.73	5.09	--	--	140	<0.5	<0.5	<0.5	1.3	--	--
10/24/94	10.82	4.58	6.24	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	10.82	5.56	5.26	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	10.82	4.57	6.25	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	10.82	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	10.82	4.72	6.10	--	--	<50	<0.5	<0.5	<0.5	0.6	34/<5.0[3]	--
04/22/97	10.82	5.32	5.50	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	10.82	5.74	5.08	--	--	<50	<0.5	<0.5	<0.5	<0.5	34	--
05/04/98	10.82	5.81	5.01	--	--	<50	<0.5	<0.5	<0.5	<0.5	--[4]	--
10/27/98	10.82	5.30	5.52	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/15/99	10.82	6.27	4.55	--	--	<50	<0.5	<0.5	<0.5	<0.5	9.45	--
11/04/99	10.82	4.61	6.21	--	--	<50	<0.5	<0.5	<0.5	<0.5	21	--
NOT MONITORED/SAMPLED												
MW-11												
07/07/88	11.38	--	--	--	--	--	<5.0	--	--	--	--	--
04/14/89	11.38	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	<3,000	--
07/31/89	11.38	--	--	--	--	<100	<0.2	<0.2	<0.2	<0.2	--	--
12/08/89	11.38	--	--	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	11.38	6.56	4.82	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	11.38	6.24	5.14	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	11.38	5.27	6.11	--	--	--	--	--	--	--	--	--
09/21/90	11.38	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	11.38	6.22	5.16	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	11.38	3.55	7.83	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	11.38	5.06	6.32	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	11.38	5.71	5.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	11.38	5.55	5.83	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	11.38	7.29	4.09	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	11.38	5.19	6.19	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	11.38	4.87	6.51	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/04/93	11.38	INACCESSIBLE		--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-11 (cont)												
01/05/94	11.38	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	11.38	5.71	5.67	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	11.38	4.59	6.79	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	11.38	5.69	5.69	--	--	58[2]	0.6	<0.5	<0.5	0.5	--	--
11/06/95	11.38	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/26/96	11.38	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	11.38	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	11.38	5.44	5.94	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	11.38	5.90	5.48	--	--	<50	<0.5	<0.5	<0.5	<0.5	18	--
05/04/98	11.38	5.86	5.52	--	--	<50	<0.5	<0.5	<0.5	<0.5	--[4]	--
10/27/98	11.38	5.23	6.15	--	--	<50	<0.5	<0.5	<0.5	<0.5	12/<2.0[7]	--
04/15/99	11.38	6.38	5.00	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
11/04/99	11.38	4.69	6.69	--	--	<50	<0.5	<0.5	<0.5	<0.5	9.88	--
NOT MONITORED/SAMPLED												
MW-12												
07/07/88	13.03	--	--	--	--	<100	<5.0	--	--	--	--	--
04/14/89	13.03	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	--	<3,000,000
07/31/89	13.03	--	--	--	--	<100	<0.1	<0.5	<0.1	<0.2	--	--
12/08/89	13.03	--	--	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	13.03	6.27	6.76	--	--	<50	<0.3	<0.3	<0.3	<0.3	--	--
06/19/90	13.03	6.41	6.62	--	--	<50	<0.3	<0.3	<0.3	<0.3	--	--
09/20/90	13.03	8.03	5.00	--	--	--	--	--	--	--	--	--
09/21/90	13.03	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.3	--	--
12/28/90	13.03	6.41	6.62	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	13.03	6.55	6.48	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	13.03	5.02	8.01	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	13.03	5.08	7.95	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	13.03	5.35	7.68	--	--	<50	<0.5	<0.5	<0.5	1.0	--	--
03/26/92	13.03	6.43	6.60	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	13.03	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED												

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-13												
03/21/90	11.15	7.07	4.08	--	--	480	<0.3	<0.3	1.0	5.0	--	--
06/19/90	11.15	6.81	4.34	--	--	180	<0.3	<0.3	0.8	3.0	--	--
09/20/90	11.15	5.84	5.31	--	--	150	<0.3	<0.3	<0.3	0.54	--	--
12/28/90	11.15	6.36	4.79	--	--	160	<0.5	<0.5	<0.5	1.0	--	--
05/10/91	11.15	6.95	4.20	--	--	110	<0.5	<0.5	<0.5	2.0	--	--
08/08/91[1]	11.15	6.02	5.13	--	--	220	<0.5	<0.5	<0.5	1.8	--	--
11/27/91	11.15	6.43	4.72	--	--	70	<0.5	<0.5	<0.5	1.2	--	--
01/29/92	11.15	6.46	4.69	--	--	150	<0.5	<0.5	3.1	7.1	--	--
03/26/92	11.15	7.11	4.04	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	11.15	6.03	5.12	--	--	190	<0.5	<0.5	<0.5	2.1	--	--
10/28/92	11.15	5.85	5.30	--	--	190	<0.5	<0.5	<0.5	2.0	--	--
05/04/93	11.15	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	11.15	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	11.15	5.87	5.28	--	--	220	<0.5	1.2	<0.5	1.7	--	--
10/24/94	11.15	5.11	6.04	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	11.15	5.78	5.37	--	--	140[2]	<0.5	<0.5	<0.5	1.2	--	--
11/06/95	11.15	5.02	6.13	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	11.15	5.93	5.22	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	11.15	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	11.15	5.69	5.46	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	11.15	5.98	5.17	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	11.15	5.94	5.21	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	11.15	5.44	5.71	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/15/99	11.15	INACCESSIBLE		--	--	--	--	--	--	--	--	--
11/04/99	11.15	5.09	6.06	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
NOT MONITORED/SAMPLED												
MW-14												
03/21/90	9.78	8.87	0.91	--	--	170	<0.3	<0.3	<0.4	2.0	--	--
06/19/90	9.78	8.75	1.03	--	--	77	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	9.78	7.25	2.53	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	9.78	8.17	1.61	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
MW-14 (cont)												
05/10/91	9.78	8.56	1.22	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	9.78	7.33	2.45	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	9.78	7.19	2.59	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	9.78	8.68	1.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	9.78	9.04	0.74	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	9.78	7.48	2.30	--	--	<50	0.6	<0.5	<0.5	0.8	--	--
10/28/92	9.78	7.02	2.76	--	--	56	0.7	4.0	0.8	3.8	--	--
ABANDONED												
MW-16												
03/21/90	11.11	5.27	5.84	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	11.11	5.21	5.90	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	11.11	4.75	6.36	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	11.11	5.13	5.98	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91	11.11	5.22	5.89	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	11.11	4.83	6.28	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	11.11	5.49	5.62	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	11.11	5.23	5.88	--	--	65	3.6	6.2	1.9	6.6	--	--
03/26/92	11.11	5.55	5.56	--	--	270	21	27	9.5	41	--	--
07/23/92	11.11	4.82	6.29	--	--	<50	<0.5	<0.5	<0.5	0.7	--	--
10/28/92	11.11	4.82	6.29	--	--	<50	0.9	1.4	<0.5	1.1	--	--
05/04/93	11.11	5.36	5.75	--	--	51	<0.5	1.0	0.6	1.7	--	--
01/05/94	11.11	INACCESSIBLE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED												
MW-19												
03/21/90	8.45	3.45	5.00	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	8.45	3.39	5.06	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/20/90	8.45	3.20	5.25	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	8.45	3.38	5.07	--	--	66	<0.5	<0.5	<0.5	<0.5	--	--
05/10/91[3]	8.45	3.43	5.02	--	--	60	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	8.45	3.28	5.17	--	--	58	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	8.45	3.39	5.06	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)
Powell @ Landregan
Emeryville, 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)	TOG (ppb)
MW-19 (cont)												
01/29/92	8.45	3.52	4.93	--	--	<50	1.7	2.6	0.7	2.1	--	--
03/26/92	8.45	3.66	4.79	--	--	80	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	8.45	3.23	5.22	--	--	70	0.6	0.5	<0.5	1.5	--	--
10/28/92	8.45	3.29	5.16	--	--	170	4.3	28	5.1	24	--	--
05/04/93	8.45	3.52	4.93	--	--	120	2.0	4.7	2.8	8.1	--	--
01/05/94	8.45	3.54	4.91	--	--	<50	2.0	1.4	1.7	2.5	--	--
05/13/94	8.45	4.27	4.18	--	--	<50	<0.5	0.9	<0.5	<0.5	--	--
10/24/94	8.45	3.60	4.85	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	8.45	4.25	4.20	--	--	270[2]	<0.5	<0.5	<0.5	<0.5	--	--
ABANDONED												
BAILER BLANK												
05/10/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/08/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/04/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/05/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/13/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
TRIP BLANK												
04/14/89	--	--	--	--	--	<50	<0.5	<1.0	<1.0	<1.0	--	--
07/31/89	--	--	--	--	--	<50	<0.1	<0.5	<0.5	<0.2	--	--
12/08/89	--	--	--	--	--	--	<0.3	<0.3	<0.3	<0.6	--	--
03/21/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
03/26/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
06/19/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
09/21/90	--	--	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--
12/28/90	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.6	--	--
05/10/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, 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)	TOG (ppb)
TRIP BLANK (cont)												
08/08/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/27/91	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
01/29/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
03/26/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
07/23/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/28/92	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/04/93	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
01/05/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/13/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/24/94	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
04/19/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/06/95	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/26/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/10/96	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/22/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
10/16/97	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
05/04/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/27/98	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/15/99	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
04/13/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/05/00	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
04/23/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/04/01	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/01/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
QA												
10/19/02	--	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
04/16/03	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
10/29/03[12]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/01/04[12]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/01/04[12]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
04/08/05[12]	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
10/20/05[12]	--	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

EXPLANATIONS:

Groundwater monitoring data and laboratory results prior to April 13, 2000, were compiled from reports prepared by Blaine Tech. Services, Inc.

TOC = Top of Casing
(ft.) = Feet
GWE = Groundwater Elevation
(msl) = Mean sea level
DTW = Depth to Water
SPHT = Separate Phase Hydrocarbon Thickness
SPH = Separate Phase Hydrocarbons

TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
TOG = Total Oil and Grease

(ppb) = Parts per billion
-- = Not Measured/Not Analyzed
ND = Not Detected
QA = Quality Assurance/Trip Blank

1 TPH was reported as Diesel #2.
2 Chromatogram pattern indicates an unidentified hydrocarbon.
3 Monitoring well was destroyed during soil excavation in 1989.
4 Sample has chlorinated hydrocarbon pattern, needs GCMS confirmation of MTBE.
5 Sample was analyzed outside the EPA recommended holding time.
6 Unable to sample due to car parked over the well.
7 Confirmation run.
8 MTBE by EPA Method 8240.
9 MTBE by EPA Method 8260.
10 Laboratory report indicates discrete peaks.
11 MTBE by EPA Method 8260 was analyzed outside the EPA recommended holding time.
12 BTEX and MTBE by EPA Method 8260.

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-7											
04/14/89	<1.0	<1.0	--	--	1.0	1.0	<1.0	<1.0	<2.0	<1.0	--
07/31/89	<0.1	0.3	--	--	0.3	4.5	<0.1	<0.1	<0.5	<0.1	ND[7]
07/31/89	<0.1	0.4	--	--	0.2	2.6	<0.1	<0.1	<0.5	<0.1	ND[7]
12/08/89	<0.2	<0.5	--	--	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	--
03/21/90	<0.2	<0.5	--	--	<0.5	1.4	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	0.9	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
10/24/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
04/19/95	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11/06/95	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
04/26/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	<0.5-<5.0
10/10/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
04/22/97	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<0.5	ND
05/04/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
04/15/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
04/13/00	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/05/00	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
04/23/01	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
10/04/01	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-7 (cont)											
04/01/02	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
10/19/02	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
04/16/03	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
10/29/03	UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION					--	--	--	--	--	--
UNABLE TO LOCATE - WELL BURIED DURING CONSTRUCTION											
MW-15											
03/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/20/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND[11]
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
10/24/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	3.1	<0.5	3.8	<0.5	<0.5-<1.0
04/19/95	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11/06/95	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
04/26/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	<0.5-<5.0
10/10/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
04/22/97	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<0.5	ND
05/04/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
04/13/00	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	--[21]
10/06/00	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-15 (cont)											
04/23/01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/04/01	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
04/01/02	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/19/02	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
04/16/03	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
10/29/03	UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION						--	--	--	--	--
UNABLE TO LOCATE - CEMENTED OVER DURING CONSTRUCTION											
MW-17											
03/21/90	<0.2	5.2	--	--	0.7	1.3	32	11	1.1	<1.0	--
06/19/90	<0.2	3.1	--	--	<0.5	1.0	38	13	1.2	<1.0	--
09/20/90	<0.2	2.4	--	--	<0.5	1.4	44	16	2.8	<1.0	--
12/28/90	<0.5	--	<0.5	2.0	<0.5	0.6	34	15	2.0	<1.0	--
05/10/91	<0.5	--	<0.5	3.0	<0.5	0.6	37	14	1.0	<1.0	ND
08/08/91	<0.5	--	<0.5	2.5	<0.5	<0.5	69	15	0.9	<1.0	ND
11/27/91	<0.5	--	<0.5	13	<0.5	<0.5	59	14	2.4	<1.0	ND
01/29/92	<0.5	--	<0.5	2.9	<0.5	0.8	35	15	1.1	<1.0	ND
03/26/92	<0.5	--	<0.5	1.5	<0.5	0.7	41	12	0.6	<1.0	ND
07/23/92	<0.5	--	<0.5	1.1	<0.5	<0.5	31	14	0.8	<0.5	<0.5
10/28/92	<0.5	--	<0.5	1.6	<0.5	<0.5	42	11	0.8	<1.0	ND
05/04/93	<0.5	--	<0.5	1.1	<0.5	<0.5	26	12	0.6	<1.0	<0.5
01/05/94	<0.5	--	<0.5	1.1	<0.5	<0.5	25	13	0.8	<1.0	<0.5
05/13/94	<0.5	--	<0.5	1.0	<0.5	0.6	23	13	<0.5	<0.5	<0.5-<1.0
10/24/94	<0.5	--	<0.5	1.4	<0.5	<0.5	26	13	<0.5	<0.5	<0.5-<1.0
04/19/95	<0.5	--	<0.5	0.9	<0.5	1.1	21	12	1.2	<0.5	<0.5
11/06/95	<1.0	--	<1.0	1.1	<1.0	<1.0	29	13	<1.0	<1.0	ND
04/26/96	<0.5	--	<0.5	0.8	<0.5	1.2	24	11	0.6	<0.8	<0.5-<5.0
10/10/96	<0.5	--	<0.5	1.5	<0.5	0.9	31	15	0.6	<0.8	ND
04/22/97	<0.5	--	<0.5	1.2	<0.5	1.7	21	11	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	1.1	<1.0	1.2	21	7.9	<1.0	<0.5	ND
05/04/98	<0.5	--	<0.5	1.4	<0.5	2.1	20	11	0.58	<1.0	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	15.4	7.75	<0.5	<0.5	ND

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)
Powell @ Landregan
Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-17 (cont)											
04/13/00	<1.0	--	<1.0	<1.0	<1.0	<1.0	14	8.7	<1.0	<1.0	--[23]
10/05/00	<1.0	--	<1.0	<1.0	<1.0	<1.0	18	11	<1.0	<1.0	--[23]
04/23/01	<1.0	--	<1.0	<1.0	<1.0	<1.0	10	5.7	<1.0	<1.0	--[24]
10/04/01	<1	--	<1	<1	<1	<1	14	8	<1	<1	--[23]
04/01/02	<1	--	<1	<1	<1	<1	10	6	<1	<1	--[24]
10/19/02	<1	--	<1	<1	<1	<1	15	8	<1	<1	<1-<2.0
04/16/03	<0.8	--	<0.8	<0.8	<1	<0.8	11	7	<0.8	<1	<0.8-<2
10/29/03	<0.8	--	<0.8	<0.8	<1	<0.8	15	9	<0.8	<1	<0.5-<2
04/01/04	<0.8	--	<0.8	<0.8	<1	<0.8	12	8	<0.8	<1	<0.5-<2
10/01/04	<0.8	--	<0.8	1	<1	<0.8	13	7	0.9	<1	<0.5-<2
04/08/05	<0.8	--	<0.8	2	<1	<0.8	10	7	<0.8	<1	<0.5-<2
10/20/05	**<0.8**	**--**	**<0.8**	**3**	**<0.5**	**<0.8**	**12**	**6**	**0.9**	**<1**	**<0.5-<2**
MW-18											
03/21/90	<0.2	1.7	--	--	<0.5	2.4	33	20	0.9	<1.0	--
06/19/90	<0.2	2.7	--	--	<0.5	0.9	63	20	0.73	<1.0	--
09/20/90	<0.2	3.3	--	--	<0.5	1.6	76	25	1.7	<1.0	--
12/28/90	<0.5	--	<0.5	2.0	<0.5	0.8	44	21	1.0	<1.0	--
05/10/91	<0.5	--	<0.5	2.0	<0.5	0.7	47	20	2.0	<1.0	ND
08/08/91	<0.5	--	<0.5	2.0	<0.5	0.7	32	25	1.0	<1.0	ND
11/27/91	<0.5	--	<0.5	3.6	<0.5	0.5	60	18	1.5	<1.0	ND
01/29/92	<5.0	--	<5.0	<5.0	<5.0	<5.0	67	17	<5.0	<10	ND
03/26/92	<1.2	--	<1.2	6.4	<1.2	<1.2	130	19	1.7	<2.5	ND
07/23/92	<0.5	--	<0.5	3.0	<0.5	0.5	67	19	0.8	<0.5	<0.5
10/28/92	<0.5	--	<0.5	1.1	<0.5	<0.5	52	14	0.8	<1.0	ND
05/04/93	<0.5	--	<0.5	1.9	<0.5	0.7	48	18	2.5	<1.0	ND[14]
01/05/94	<0.5	--	<0.5	4.0	<0.5	0.8	94	17	1.0	<1.0	<0.5
05/13/94	<0.5	--	<0.5	0.8	<0.5	0.8	16	15	0.8	<0.5	<0.5-<1.0
10/27/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	22	15	1.2	<0.5	<0.5-<1.0
04/19/95	<0.5	--	<0.5	2.2	<0.5	1.3	46	14	1.1	<0.5	ND[15]
11/06/95	<1.0	--	<1.0	1.8	<1.0	1.2	45	18	<1.0	<1.0	ND
04/26/96	<0.5	--	0.9	2.8	<0.5	3.0	31	17	0.6	<0.8	<0.5-<5.0

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-18 (cont)											
10/10/96	PAVED OVER		--	--	--	--	--	--	--	--	--
04/22/97	<0.5	--	<0.5	1.7	<0.5	3.2	26	15	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	1.0	<1.0	2.2	25	11	<1.0	<0.5	ND
05/04/98	1.1	--	1.7	4.5	2.5	3.1	40	<1.0	<1.0	<2.0	ND
10/27/98	<0.5	--	<0.5	0.77	<0.5	1.7	19	14	<0.5	<1.0	ND
04/15/99	<0.625	--	1.78	3.45	<0.625	2.29	27.4	14.5	0.908	<1.25	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	1.51	18.5	10.2	<0.5	<0.5	ND
10/05/00	<1.0	--	<1.0	<1.0	<1.0	<1.0	13	11	<1.0	<1.0	--[21]
04/23/01	<1.0	--	<1.0	<1.0	<1.0	<1.0	10	9.3	<1.0	<1.0	--[21]
10/04/01	<1	--	<1	<1	<1	<1	13	11	<1	<1	--[21]
04/01/02	<1	--	<1	<1	<1	<1	10	9	<1	<1	--[21]
10/19/02	<1	--	<1	<1	<1	<1	15	10	<1	<1	<1-<2.0
04/16/03	<0.8	--	<0.8	<0.8	<1	<0.8	9	9	<0.8	<1	<0.8-<2
10/29/03	<0.8	--	<0.8	1	<1	<0.8	20	9	<0.8	<1	<0.5-<2
04/01/04	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--
10/01/04	INACCESSIBLE - VEHICLE PARKED OVER WELL				--	--	--	--	--	--	--
04/08/05	<0.8	--	<0.8	2	<1	<0.8	13	8	3	<1	<0.5-<2
10/20/05	**INACCESSIBLE - VEHICLE PARKED OVER WELL**				--	--	--	--	--	--	--
MW-19A											
11/06/95	1.0	--	<1.0	110	<1.0	<1.0	160	1,500	<1.0	<1.0	ND
04/26/96	<5.0	--	<5.0	140	<5.0	<5.0	200	990	<5.0	<8.0	<5.0-<50
10/10/96	<10	--	<10	110	<10	<10	150	1,500	<10	<16	ND
04/22/97	<5.0	--	7.1	85	9.1	<5.0	150	830	<5.0	<8.0	ND
10/16/97	1.6	--	6.9	100	5.5	<1.0	130	660	<1.0	4.2	ND[17]
05/04/98	<10	--	13	80	<10	<10	230	500	<10	<20	ND
10/27/98	<25	--	<25	70	<25	<25	80	910	<25	<50	ND
11/04/99	<50	--	<50	<50	<50	<50	<50	209	<50	<50	ND
04/13/00	<25	--	<25	68	<25	<25	140	1,100	<25	<25	--[21]
10/05/00	2.5	--	9.5	50	5.5	1.0	82	940	<1.0	5.0	--[22]
04/23/01	1.6	--	9.9	100	5.2	<1.0	180	690	<1.0	1.6	--[21]
10/04/01	2	--	11	61	4	<1	130	720	<1	3	--[25]

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-19A (cont)											
04/01/02	<1	--	7	71	2	<1	100	530	<1	2	--[24]
10/19/02	<1	--	8	44	1	<1	130	600	<1	2	<1-<3.0[25]
04/16/03	<0.8	--	6	69	<1	<0.8	82	570	<0.8	1	<0.8-2[26]
10/29/03	<0.8	--	8	47	1	<0.8	98	630	<0.8	2	<0.5-<2[26]
04/01/04	<0.8	--	5	54	<1	<0.8	78	660	<0.8	<1	<0.5-<2
10/01/04	<0.8	--	8	46	<1	<0.8	95	540	<0.8	1	<0.5-<2[27]
04/08/05	<0.8	--	4	48	<1	<0.8	51	370	<0.8	<1	<0.5-<2[28]
10/20/05	**<0.8**	**--**	**5**	**26**	**<1**	**<0.8**	**77**	**350**	**2**	**<1**	**<0.5-<2[29]**
MW-1											
04/14/89	<5.0	--	19	720	<5.0	<5.0	11	<5.0	<20	340	ND[1]
07/31/89	6.8	--	54	2,600	2.7	7.2	57	<0.2	<1.0	760	ND[2]
12/08/89	4.3	2,700	--	--	1.7	1.4	59	<0.5	<0.5	520	--
03/21/90	7.1	7,000	--	--	2.1	1.1	130	<0.5	<0.5	1,100	--
06/19/90	12	6,100	--	--	3.1	<0.5	81	<0.5	<0.5	1,200	--
09/21/90	1.8	2,400	--	--	2.2	1.7	60	<0.5	<0.5	1,100	ND[3]
12/28/90	2.0	--	28	1,500	1.0	0.6	15	<0.5	<0.5	510	ND[4]
05/10/91	10	--	69	5,500	2.0	<0.5	280	<0.5	<0.5	1,800	ND[5]
08/08/91	2.9	--	45	2,300	1.5	<0.5	110	<0.5	<0.5	<1.0	ND[6]
11/27/91	<25	--	<25	5,900	<25	<25	<25	<25	<25	540	<25
01/29/92	<25	--	26	1,900	<25	<25	<25	<25	<25	320	<25
03/26/92	<50	--	<50	1,500	<50	<50	<50	<50	<50	260	<50
07/23/92	<50	--	<50	2,300	<50	<50	<50	<50	<50	170	<50
10/28/92	4.2	--	30	1,600	3.6	<0.5	16	<0.5	<0.5	810	ND
05/04/93	1.0	--	16	670	0.5	<0.5	9.2	<0.5	<0.5	110	<0.5
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	PAVED OVER		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED											
MW-2											
04/14/89	<0.2	<0.2	--	--	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	--
07/31/89	<0.2	<0.2	--	--	<0.4	0.5	<0.2	<0.2	<1.0	<0.2	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)
Powell @ Landregan
Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-2 (cont)											
12/08/89	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
03/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/24/94	DRY	--	--	--	--	--	--	--	--	--	--
ABANDONED											
MW-2A											
11/06/95	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
04/26/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	<0.5-<5.0
10/10/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
04/22/97	<2.5	--	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<2.5	<4.0	ND
10/16/97	<1.0	--	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<0.5	ND
05/04/98	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
04/15/99	<1.25	--	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<1.25	<2.50	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
NOT MONITORED/SAMPLED											
MW-3											
04/14/89	<0.2	<0.2	--	--	<0.2	<0.2	<0.2	<0.2	<1.0	<0.2	--
07/31/89	<0.2	<0.2	--	--	<0.4	0.5	<0.2	<0.2	<1.0	<0.2	--
12/08/89	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-3 (cont)											
03/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED											
MW-4											
04/14/89	<1.0	<1.0	--	--	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
NOT MONITORED/SAMPLED											
MW-5											
04/14/89	<1.0	<1.0	--	--	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
NOT MONITORED/SAMPLED											
MW-6											
04/14/89	<1.0	<1.0	--	--	2.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
NOT MONITORED/SAMPLED											
MW-8											
04/14/89	<1.0	<1.0	--	--	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
07/31/89	<0.1	--	0.6	1.9	1.7	1.7	0.4	<0.1	<0.5	1.2	ND
12/08/89	<0.2	0.53	--	--	<0.5	0.84	<0.5	<0.5	<0.5	<1.0	--
03/21/90	<0.2	0.96	--	--	<0.5	0.72	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	0.59	--	--	<0.5	0.67	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-8 (cont)											
12/28/90	<0.5	--	<0.5	<0.5	<0.5	2.0	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
10/24/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/19/95	INACCESSIBLE		--	--	--	--	--	--	--	--	--
11/06/95	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/26/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<0.5	ND
05/04/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
04/15/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
NOT MONITORED/SAMPLED											
MW-9											
05/10/91	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED											
MW-10											
04/14/89	<1.0	15	--	--	2.0	<1.0	5.0	<1.0	<2.0	<1.0	--
07/31/89	0.7	--	6.3	27	2.9	<0.1	5.3	<0.1	<0.5	<0.1	ND
12/08/89	<0.2	24	--	--	3.1	<0.5	4.9	<0.5	0.6	<1.0	--
03/21/90	0.7	30	--	--	2.5	<0.5	3.5	<0.5	<0.5	<1.0	--
06/19/90	0.3	33	--	--	2.6	<0.5	6.3	<0.5	<0.5	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-10 (cont)											
09/21/90	<0.2	32	--	--	5.0	<0.5	5.9	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	6.0	19	2.0	<0.5	5.0	<0.5	<0.5	<1.0	--
05/10/91	0.6	--	7.0	24	2.0	<0.5	6.0	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	7.0	33	3.1	<0.5	6.2	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	6.8	100	<0.5	<0.5	8.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	9.1	30	2.8	<0.5	7.4	<0.5	<0.5	<1.0	ND
03/26/92	0.7	--	9.2	29	2.5	<0.5	6.8	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	6.1	21	1.5	<0.5	4.7	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	4.3	16	2.1	<0.5	4.1	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	<0.5	--	1.3	5.2	0.5	1.0	0.8	<0.5	<0.5	<1.0	<0.5
05/13/94	<0.5	--	12	31	2.7	<0.5	4.8	<0.5	<0.5	<0.5	<0.5-<1.0
10/24/94	<10	--	13	44	<10	<10	<10	<10	<10	<10	<10-<20
04/19/95	0.7	--	14	36	<0.5	<0.5	9.2	<0.5	<0.5	<0.5	<0.5
11/06/95	1.0	--	19	41	1.4	<1.0	14	<1.0	<1.0	<1.0	ND
04/26/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	0.7	--	17	38	0.8	<0.5	14	<0.5	<0.5	<0.8	ND
04/22/97	<0.5	--	12	27	0.5	<0.5	13	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	11	23	<1.0	<1.0	<10	<1.0	<1.0	0.7	ND
05/04/98	<0.5	--	6.5	16	<0.5	<0.5	7.6	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	7.7	18	0.54	<0.5	9.6	<0.5	<0.5	<1.0	ND
04/15/99	<0.5	--	8.32	19.1	0.603	<0.5	11.3	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	5.17	13.8	<0.5	<0.5	8.23	<0.5	<0.5	<0.5	ND
NOT MONITORED/SAMPLED											
MW-11											
04/14/89	<1.0	120	--	--	<1.0	<1.0	4.0	<1.0	<2.0	10	--
07/31/89	0.9	--	40	110	2.2	1.4	2.9	<0.2	<0.2	<0.2	ND
12/08/89	0.5	120	--	--	2.1	1.2	4.1	<0.5	<0.5	2.4	--
03/21/90	1.3	150	--	--	1.2	1.7	3.5	<0.5	<0.5	4.3	ND[8]
06/19/90	0.068	140	--	--	1.3	<0.5	5.0	<0.5	<0.5	1.0	--
09/21/90	<0.2	100	--	--	1.1	<0.5	3.8	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	23	43	0.9	0.7	3.0	<0.5	<0.5	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-11 (cont)											
05/10/91	0.9	--	44	110	0.5	<0.5	5.0	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	29	77	0.9	<0.5	2.4	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	34	240	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<5.0	--	33	91	<5.0	<5.0	<5.0	<5.0	<5.0	<10	ND
03/26/92	<2.5	--	21	51	<2.5	<2.5	<2.5	<2.5	<2.5	<5.0	ND
07/23/92	<0.5	--	18	46	0.6	<0.5	1.4	<0.5	<0.5	<0.5	<0.5
10/28/92	0.5	--	36	80	<0.5	<0.5	4.6	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	<0.5	--	62	82	<0.5	<0.5	7.9	<0.5	<0.5	1.7	<0.5-<1.0
10/24/94	<10	--	28	75	<10	<10	<10	<10	<10	<10	<10-<20
04/19/95	<0.5	--	18	39	<0.5	<0.5	6.5	<0.5	1.0	<0.5	ND[9]
11/06/95	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/26/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
10/10/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	<0.5	--	4.7	12	<0.5	<0.5	3.0	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	5.1	24	<1.0	<1.0	<10	<1.0	<1.0	3.7	ND
05/04/98	<0.5	--	4.2	12	<0.5	<0.5	2.8	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	2.7	8.3	<0.5	<0.5	1.8	<0.5	<0.5	<1.0	ND
04/15/99	<0.5	--	3.29	10.1	<0.5	<0.5	2.87	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	2.29	7.36	<0.5	<0.5	2.19	<0.5	<0.5	<0.5	ND
NOT MONITORED/SAMPLED											
MW-12											
04/14/89	<1.0	1.0	--	--	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
07/31/89	<0.1	1.7	--	--	<0.1	<0.1	0.8	<0.1	<0.5	<0.1	ND
12/08/89	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
03/21/90	<0.2	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	0.9	<1.0	ND

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-12 (cont)											
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	UNABLE TO LOCATE		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED											
MW-13											
03/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/20/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND[19]
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	INACCESSIBLE		--	--	--	--	--	--	--	--	--
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
10/24/94	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5-<1.0
04/19/95	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
11/06/95	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND
04/26/96	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	<0.5-<5.0
10/10/96	INACCESSIBLE		--	--	--	--	--	--	--	--	--
04/22/97	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.8	ND
10/16/97	<1.0	--	<1.0	<1.0	<1.0	<1.0	<10	<1.0	<1.0	<0.5	ND
05/04/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
10/27/98	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/04/99	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	ND
NOT MONITORED/SAMPLED											

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-14											
03/21/90	<2.0	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<2.0	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/20/90	<2.0	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
ABANDONED											
MW-16											
03/21/90	<0.2	0.8	--	--	<0.5	<0.5	27	8.0	2.0	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	35	7.0	2.0	<1.0	--
09/20/90	<0.2	0.9	--	--	<0.5	<0.5	49	15	4.1	<1.0	--
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	29	18	4.0	<1.0	ND[12]
05/10/91	<0.5	--	<0.5	0.5	<0.5	<0.5	32	10	4.0	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	35	13	1.9	<1.0	ND
11/27/91	<0.5	--	<0.5	1.3	<0.5	<0.5	47	12	1.8	<1.0	ND[13]
01/29/92	<0.5	--	<0.5	0.9	<0.5	<0.5	31	11	1.8	<1.0	ND
03/26/92	<0.8	--	<0.8	<0.8	<0.8	<0.8	24	8.5	1.7	<1.7	<0.8-<1.7
07/23/92	<0.5	--	<0.5	0.9	<0.5	<0.5	37	12	1.0	<0.5	<0.5
10/28/92	<0.5	--	<0.5	1.7	<0.5	<0.5	39	14	1.1	<1.0	ND
05/04/93	<0.5	--	<0.5	<0.5	<0.5	<0.5	32	10	1.1	<1.0	<0.5
01/05/94	INACCESSIBLE		--	--	--	--	--	--	--	--	--
05/13/94	PAVED OVER		--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED											
MW-19											
03/21/90	<0.2	10	--	--	<0.5	2.5	41	53	3.2	<1.0	--
06/19/90	<0.2	13	--	--	<0.5	1.5	46	47	2.8	<1.0	--
09/20/90	<0.2	5.8	--	--	<0.5	2.5	39	32	3.1	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
MW-19 (cont)											
12/28/90	<0.5	--	0.8	22	<0.5	1.0	40	44	3.0	<1.0	--
05/10/91	<0.5	--	2.0	12	<0.5	1.0	47	47	3.0	<1.0	ND
08/08/91	<0.5	--	1.1	4.8	<0.5	1.1	41	35	2.8	<1.0	ND
11/27/91	<0.5	--	1.9	29	<0.5	0.9	59	31	2.7	<1.0	ND
01/29/92	<5.0	--	<5.0	8.9	<5.0	<5.0	51	44	3	<10	ND
03/26/92	<1.2	--	1.7	23	<1.2	1.5	68	130	1.4	<2.5	ND[16]
07/23/92	1.1	--	1.4	5.6	<0.5	1.0	61	38	3.3	<0.5	<0.5
10/28/92	<0.5	--	0.9	5.3	<0.5	1.1	46	24	2.2	<1.0	ND
05/04/93	<0.5	--	2.5	8.7	0.5	1.1	69	32	3.9	<1.0	<0.5
01/05/94	<0.5	--	1.7	1.7	<0.5	16	49	46	<0.5	<1.0	<0.5
05/13/94	<0.5	--	1.8	22	<0.5	0.7	40	58	<0.5	<0.5	<0.5-<1.0
10/24/94	<50	--	110	54	<50	<50	98	300	<50	<50	<50-<100
04/19/95	<0.5	--	<0.5	65	<0.5	<0.5	130	670	<0.5	<0.5	<0.5
ABANDONED											
BAILER BLANK											
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND[18]
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5
TRIP BLANK											
04/14/89	<1.0	<0.5	--	--	<1.0	<1.0	<1.0	<1.0	<2.0	<1.0	--
07/31/89	<0.1	<0.5	--	--	<0.1	<0.1	<0.1	<0.1	<0.5	<0.1	--
12/08/89	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
03/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
03/26/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
06/19/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
09/21/90	<0.2	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

WELL ID/ DATE	1,1-DCE (ppb)	1,2-DCE (ppb)	t-1,2-DCE (ppb)	c-1,2-DCE (ppb)	1,1-DCA (ppb)	1,1,1-TCA (ppb)	TCE (ppb)	PCE (ppb)	CF (ppb)	VC (ppb)	HVOCs (ppb)
TRIP BLANK (cont)											
12/28/90	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	--
05/10/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
08/08/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND[10]
11/27/91	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND[20]
01/29/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
03/26/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
07/23/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
10/28/92	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	ND
05/04/93	<0.5	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<1.0	<0.5
11/06/95	<1.0	--	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	ND

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

EXPLANATIONS:

Groundwater laboratory analytical results prior to April 13, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

1,1-DCE = 1,1-Dichloroethene
1,2-DCE = 1,2-Dichloroethene
t-1,2-DCE = trans-1,2-Dichloroethene
c-1,2-DCE = cis-1,2-Dichloroethene
1,1-DCA = 1,1-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane
TCE = Trichloroethene
PCE = Tetrachloroethene
CF = Chloroform
VC = Vinyl Chloride
HVOCs = Halogenated Volatile Organic Compounds
ND = Not Detected
-- = Not Measured/Not Analyzed

1 6 ppb 1,2-dichloropropane detected; other HVOCs not detected.
2 0.6 ppb 1,2-dichloroethane detected; other HVOCs not detected.
3 63 ppb chloromethane and 0.6 ppb methylene chloride detected; other HVOCs not detected; sample contained 1,250 ppb total dissolved solids.
4 0.9 ppb trans-1,3-dichloropropane detected; other HVOCs not detected; sample contained 810 ppb total dissolved solids.
5 0.9 ppb trichlorofluoromethane and 1 ppb trans-1,3-dichloropropane detected; other HVOCs not detected.
6 11 ppb trans-1,3-dichloropropane detected; other HVOCs not detected.
7 0.1 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
8 1.8 ppb 1,2-dichloroethane detected; other HVOCs not detected
9 Chloromethane was detected at 2.4 ppb. Other HVOCs not detected at detection limits of 0.5 ppb.
10 3 ppb 1,1,2,2-tetrachloroethane detected; other HVOCs not detected.
11 0.9 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
12 0.5 ppb 1,2-dichloroethane detected; other HVOCs not detected.
13 0.9 ppb 1,2-dichloroethane detected; other HVOCs not detected.
14 Dichloromethane detected at 6.2 ppb. Other HVOCs not detected at detection limits of 0.5 ppb.
15 Chloromethane was detected at 0.6 ppb. Other HVOCs not detected at detection limits of 0.5 ppb.
16 1,1,2,2-Tetrachloroethane detected at 1.8 ppb; other HVOCs not detected at detection limits of 1.2 to 2.5 ppb.
17 Laboratory report indicates 1,1,2,2-Tetrachloroethane was detected at 3.8 ppb. Reported values for cis-1,2-dichloroethene; trichloroethene and tetrachloroethene are from 50X dilution sample re-analysis.
18 Trace concentrations of trihalomethane compounds detected in bailer blank.
19 3.1 ppb 1,2-dichlorobenzene detected; other HVOCs not detected.
20 Trace concentrations of trihalomethane compounds detected in bailer blank.
21 Laboratory report indicates all other HVOCs were ND; See specific laboratory analytical report.
22 Laboratory report indicates all other HVOCs were ND, except for Freon 113 was detected at 2.3 ppb and 1,1,2,2-Tetrachloroethane was 3.9 ppb.
23 Laboratory report indicates all other HVOCs were ND, except for Freon 113 detected at 5 ppb and 1,1,2,2,-Tetrachloroethane at 3 ppb; See specific laboratory analytical report.
24 Laboratory report indicates all other HVOCs were ND, except for 1,1,2,2,-Tetrachloroethane detected at 4 ppb; See specific laboratory analytical report.
25 Laboratory report indicates all other HVOCs were less than the reporting limit, except for 1,1,2,2-Tetrachloroethane was detected at 2 ppb, and Freon 113 was detected at 4 ppb.

Table 2

Groundwater Analytical Results

Former Chevron Asphalt Plant Terminal #206265 (100-1067)

Powell @ Landregan

Emeryville, California

EXPLANATIONS:

[26] Laboratory report indicates all other HVOCs were ND, except for Freon 113 was detected at 3 ppb and 1,1,2,2-Tetrachloroethane was 3 ppb.

[27] Laboratory report indicates all other HVOCs were ND, except for Freon 113 was detected at 5 ppb and 1,1,2,2-Tetrachloroethane was 2 ppb.

[28] Laboratory report indicates all other HVOCs were ND, except 1,1,2,2-Tetrachloroethane was 2 ppb.

[29] Laboratory report indicates all other HVOCs were ND, except 1,1,2,2-Tetrachloroethane was 1 ppb.

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 ChevronTexaco Company, the purge water and decontamination water generated during sampling activities is transported by IWM to McKittrick Waste Management located in McKittrick, California.

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #206265 Job Number: 385161
Site Address: Powell @ Landregan Event Date: 10-20-05 (inclusive)
City: Emeryville, CA Sampler: FT

Well ID MW-17 Date Monitored: 10-20-05 Well Condition: ok'
Well Diameter 2 in.
Total Depth 11.85 ft.
Depth to Water 5.38 ft.
6.47 xVF .17 = 1.09 x3 case volume= Estimated Purge Volume: 3.0 gal.

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

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): 1630 Weather Conditions: SUNNY
Sample Time/Date: 1647 / 10-20-05 Water Color: LT. BRN. Odor: NO
Purging Flow Rate: / gpm. Sediment Description: S. SILTY
Did well de-water? NO If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (F)	D.O. (mg/L)	ORP (mV)
1633	1.0	7.12	159	18.5		
1636	2.0	7.09	151	18.6		
1639	3.0	7.01	147	18.5		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-7	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	3 x voa vial	YES	HCL	LANCASTER	HVOC'S(8260)

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #206265 Job Number: 385161
Site Address: Powell @ Landregan Event Date: 10.20.05 (inclusive)
City: Emeryville, CA Sampler: FT

Well ID MW-18 Date Monitored: NA Well Condition: "INACCESSIBLE"
Well Diameter 2 in.
Total Depth 10.80 ft.
Depth to Water NA ft.

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

xVF .17 = _____ 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: _____
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 (umhos/cm)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)

LABORATORY INFORMATION

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

COMMENTS: CAN PARKED OVER THIS WELL
TRIED TO LOCATE OWNER WITHOUT SUCCESS. Barricades & no parking signs moved from well area prior to arriving at site.

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Size: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility #: ChevronTexaco #206265 Job Number: 385161
Site Address: Powell @ Landregan Event Date: 10.20.05 (inclusive)
City: Emeryville, CA Sampler: FS

Well ID: MW-19A Date Monitored: 10.20.05 Well Condition: OK
Well Diameter: 2 in.
Total Depth: 14.95 ft.
Depth to Water: 4.38 ft.
10.57 x VF .17 = 1.79 x3 case volume= Estimated Purge Volume: 5.0 gal.

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

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): 1700 Weather Conditions: SUNNY
Sample Time/Date: 1720 / 10.20.05 Water Color: CLEAR Odor: NO
Purging Flow Rate: 1 gpm. Sediment Description:
Did well de-water? NO If yes, Time: Volume: gal.

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (umhos/cm)	Temperature (°F)	D.O. (mg/L)	ORP (mV)
1704	1.5	6.81	132	18.0		
1708	3.0	6.78	130	18.2		
1712	5.0	6.75	129	18.4		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-19A	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	3 x voa vial	YES	HCL	LANCASTER	HVOC'S(8260)

COMMENTS:

Add/Replaced Lock: Add/Replaced Plug: Size:

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

102405-04 Acct. #: 10904 For Lancaster Laboratories use only Sample #: 4031694-96 SCR#: Group# 964521

Cambria MTI Project #: 61H-1953

Facility #: SS#206265 G-R#385161 Global ID#SLT2007076
Site Address: POWELL @ LANDREGAN, EMERYVILLE, CA
Chevron PM: MTI Lead Consultant: CAMBRIABE
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: FRANK TERRIONI
Service Order #: ☐ Non SAR:

Analyses Requested / Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: 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 ☐	HVOCs (8260)
QA	10.20.05					W		2	X	X					
MW-17	↓	1647	X			↓		9	X	X					X
MW-19A	↓	1720	X			↓		9	X	X					X

Preservative Codes
H = HCl T = Thiosulfate
N = HNO_3 B = NaOH
S = H_2SO_4 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

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) ☐ Cost Deliverable not needed **EDF/EDD**
WIP (RWQCB)
Disk

	Relinquished by:	Date	Time	Received by:	Date	Time
1	Frank Terrioni	10.20.05		Driver	10/21/05	
2	Driver	10/21/05	1335	Andrea Amaya	10/21/05	1335
3	Andrea Amaya	10/21/05	1530	Fed Ex	10/21/05	
	Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	10/25/05	0920
	Temperature Upon Receipt 6 coolers @ 1.4° - 4.0°			Custody Seals Intact? Yes No		0958

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

Analysis Report

ANALYTICAL RESULTS

Prepared for:

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

916-630-1855

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 964521. Samples arrived at the laboratory on Tuesday, October 25, 2005. The PO# for this group is 99011184 and the release number is MTI.

Client Description			Lancaster Labs Number
QA-T-051020	NA	Water	4631694
MW-17-W-051020	Grab	Water	4631695
MW-19A-W-051020	Grab	Water	4631696

1 COPY TO	Cambria C/O Gettler- Ryan	Attn: Deanna L. Harding
ELECTRONIC COPY TO	Gettler-Ryan	Attn: Cheryl Hansen

Lancaster Laboratories

Analysis Report

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

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

Respectfully Submitted,

Michele M. Turner

Michele M. Turner
Director

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4631694

QA-T-051020 NA Water
Facility# 206265 Job# 385161 MTI# 61H-1953 GRD
Powell@Landregan-Emeryv SLT2O07076 QA
Collected:10/20/2005

Submitted: 10/25/2005 09:20
Reported: 11/04/2005 at 16:39
Discard: 12/05/2005

Account Number: 10904

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

PONQA

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/26/2005 19:30	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	10/27/2005 14:51	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/26/2005 19:30	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/27/2005 14:51	Ginelle L Feister	n.a.

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4631695

MW-17-W-051020 Grab Water
Facility# 206265 Job# 385161 MTI# 61R-1953 GRD
Powell@Landregan-Emeryv SLT2007076 MW-17
Collected:10/20/2005 16:47 by PT

Account Number: 10904

Submitted: 10/25/2005 09:20
Reported: 11/04/2005 at 16:39
Discard: 12/05/2005

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

POW17

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.					
05382	EPA SW846/8260 (water)					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	N.D.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	3.	0.8	ug/l	1
05396	Chloroform	67-66-3	0.9	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	0.5	ug/l	1
05403	Trichloroethene	79-01-6	12.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	6.	0.8	ug/l	1
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
05416	m+p-Xylene	1330-20-7	N.D.	0.5	ug/l	1
05417	o-Xylene	95-47-6	N.D.	0.5	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	N.D.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	EPA SW 846/8260 - Water					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4631695

MW-17-W-051020 Grab Water
Facility# 206265 Job# 385161 MTI# 61M-1953 GRD
Powell@Landregan-Emeryv SLT2O07076 MW-17
Collected:10/20/2005 16:47 by FT

Account Number: 10904

Submitted: 10/25/2005 09:20
Reported: 11/04/2005 at 16:39
Discard: 12/05/2005

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

POW17

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	N.D.	2.	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/27/2005 03:41	Kathie J Bowman	1
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/26/2005 14:55	Nicholas R Rossi	1
08202	EPA SW 846/8260 - Water	SW-846 8260B	1	10/26/2005 14:55	Nicholas R Rossi	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/27/2005 03:41	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/26/2005 14:55	Nicholas R Rossi	n.a.

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 4631696

MW-19A-W-051020 Grab Water
Facility# 206265 Job# 385161 MTI# 61H-1953 GRD
Powell@Landregan-Emeryv SLT2007076 MW-19A
Collected:10/20/2005 17:20 by PT

Account Number: 10904

Submitted: 10/25/2005 09:20
Reported: 11/04/2005 at 16:39
Discard: 12/05/2005

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

POW19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO - Water	n.a.	180.	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.					
05382	EPA SW846/8260 (water)					
05385	Chloromethane	74-87-3	N.D.	1.	ug/l	1
05386	Vinyl Chloride	75-01-4	N.D.	1.	ug/l	1
05387	Bromomethane	74-83-9	N.D.	1.	ug/l	1
05388	Chloroethane	75-00-3	N.D.	1.	ug/l	1
05389	Trichlorofluoromethane	75-69-4	N.D.	2.	ug/l	1
05390	1,1-Dichloroethene	75-35-4	N.D.	0.8	ug/l	1
05391	Methylene Chloride	75-09-2	N.D.	2.	ug/l	1
05392	trans-1,2-Dichloroethene	156-60-5	5.	0.8	ug/l	1
05393	1,1-Dichloroethane	75-34-3	N.D.	1.	ug/l	1
05395	cis-1,2-Dichloroethene	156-59-2	26.	0.8	ug/l	1
05396	Chloroform	67-66-3	2.	0.8	ug/l	1
05398	1,1,1-Trichloroethane	71-55-6	N.D.	0.8	ug/l	1
05399	Carbon Tetrachloride	56-23-5	N.D.	1.	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05402	1,2-Dichloroethane	107-06-2	N.D.	0.5	ug/l	1
05403	Trichloroethene	79-01-6	77.	1.	ug/l	1
05404	1,2-Dichloropropane	78-87-5	N.D.	1.	ug/l	1
05406	Bromodichloromethane	75-27-4	N.D.	1.	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05408	1,1,2-Trichloroethane	79-00-5	N.D.	0.8	ug/l	1
05409	Tetrachloroethene	127-18-4	350.	4.	ug/l	5
05411	Dibromochloromethane	124-48-1	N.D.	1.	ug/l	1
05413	Chlorobenzene	108-90-7	N.D.	0.8	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
05416	m+p-Xylene	1330-20-7	N.D.	0.5	ug/l	1
05417	o-Xylene	95-47-6	N.D.	0.5	ug/l	1
05419	Bromoform	75-25-2	N.D.	1.	ug/l	1
05421	1,1,2,2-Tetrachloroethane	79-34-5	1.	1.	ug/l	1
05432	1,3-Dichlorobenzene	541-73-1	N.D.	1.	ug/l	1
05433	1,4-Dichlorobenzene	106-46-7	N.D.	1.	ug/l	1
05435	1,2-Dichlorobenzene	95-50-1	N.D.	1.	ug/l	1
08202	EPA SW 846/8260 - Water					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1

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Analysis Report

Lancaster Laboratories Sample No. WW 4631696

MW-19A-W-051020 Grab Water
Facility# 206265 Job# 385161 MTI# 61H-1953 GRD
Powell@Landregan-Emeryv SLT2007076 MW-19A
Collected:10/20/2005 17:20 by PT

Account Number: 10904

Submitted: 10/25/2005 09:20
Reported: 11/04/2005 at 16:39
Discard: 12/05/2005

ChevronTexaco c/o Cambria
Suite 12
4111 Citrus Avenue
Rocklin CA 95677

POW19

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06306	trans-1,3-Dichloropropene	10061-02-6	N.D.	1.	ug/l	1
06307	cis-1,3-Dichloropropene	10061-01-5	N.D.	1.	ug/l	1
08203	Freon 113	76-13-1	5.	2.	ug/l	1

State of California Lab Certification No. 2116

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	N. CA LUFT Gasoline Method	1	10/28/2005 02:32	Kathie J Bowman	1
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/26/2005 15:19	Nicholas R Rossi	1
05382	EPA SW846/8260 (water)	SW-846 8260B	1	10/26/2005 21:00	Nicholas R Rossi	5
08202	EPA SW 846/8260 - Water	SW-846 8260B	1	10/26/2005 15:19	Nicholas R Rossi	1
01146	GC VOA Water Prep	SW-846 5030B	1	10/28/2005 02:32	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	10/26/2005 15:19	Nicholas R Rossi	n.a.
01163	GC/MS VOA Water Prep	SW-846 5030B	2	10/26/2005 21:00	Nicholas R Rossi	n.a.

Quality Control Summary

Client Name: ChevronTexaco c/o Cambria
Reported: 11/04/05 at 04:39 PM

Group Number: 964521

Laboratory Compliance Quality Control

Analysis Name	Blank Result	Blank MDL	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	113		77-127		
Benzene	N.D.	0.5	ug/l	100		85-117		
Toluene	N.D.	0.5	ug/l	102		85-115		
Ethylbenzene	N.D.	0.5	ug/l	104		82-119		
Xylene (Total)	N.D.	0.5	ug/l	102		83-113		

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: 05299A08A	Sample number(s): 4631694-4631695								
TPH-GRO - Waters	125		63-154						
Batch number: 05300A08A	Sample number(s): 4631696								
TPH-GRO - Waters	107		63-154						
Batch number: W052972AB	Sample number(s): 4631695-4631696								
Methyl Tertiary Butyl Ether	107	105	69-134	1	30				
Chloromethane	105	104	69-155	1	30				
Vinyl Chloride	110	109	81-150	1	30				
Bromomethane	113	109	59-143	4	30				
Chloroethane	111	108	63-142	3	30				
Trichlorofluoromethane	139	131	77-177	6	30				
1,1-Dichloroethene	117	118	87-145	1	30				
Methylene Chloride	105	100	79-119	5	30				
trans-1,2-Dichloroethene	107	108	82-133	1	30				
1,1-Dichloroethane	112	114	85-135	1	30				
cis-1,2-Dichloroethene	110	106	83-126	4	30				
Chloroform	120	115	82-131	5	30				
1,1,1-Trichloroethane	126	122	81-142	4	30				
Carbon Tetrachloride	130	123	79-155	5	30				
Benzene	99	112	83-128	4	30				
1,2-Dichloroethane	128	120	70-143	6	30				
Trichloroethene	120	119	83-136	1	30				
1,2-Dichloropropane	109	108	83-129	1	30				
Bromodichloromethane	123	117	80-129	6	30				
Toluene	102	105	83-127	2	30				
1,1,2-Trichloroethane	129*	128*	77-125	1	30				
Tetrachloroethene	109	106	78-133	3	30				
Dibromochloromethane	104	98	82-119	6	30				
Chlorobenzene	104	103	83-120	1	30				
Ethylbenzene	99	108	82-129	5	30				
m+p-Xylene	99	106	82-130	5	30				
o-Xylene	103	103	82-130	0	30				
Bromoform	81	78	64-119	4	30				
1,1,2,2-Tetrachloroethane	93	91	69-128	2	30				
1,3-Dichlorobenzene	102	101	79-123	1	30				
1,4-Dichlorobenzene	100	101	81-122	1	30				
1,2-Dichlorobenzene	101	100	82-117	1	30				
trans-1,3-Dichloropropene	100	98	77-123	2	30				
cis-1,3-Dichloropropene	105	102	80-126	3	30				
Freon 113	126	119	73-146	5	30				

*- 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

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Analysis Report

Quality Control Summary

Client Name: ChevronTexaco c/o Cambria
Reported: 11/04/05 at 04:39 PM

Group Number: 964521

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: 05299A08A	Sample number(s): 4631694-4631695							
TPH-GRO - Waters	N.D.	50.	ug/l	101	106	70-130	2	30
Batch number: 05300A08A	Sample number(s): 4631696							
TPH-GRO - Waters	N.D.	50.	ug/l	108	112	70-130	4	30
Batch number: W052972AB	Sample number(s): 4631695-4631696							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	104		77-127		
Chloromethane	N.D.	1.	ug/l	94		66-139		
Vinyl Chloride	N.D.	1.	ug/l	94		71-126		
Bromomethane	N.D.	1.	ug/l	105		62-131		
Chloroethane	N.D.	1.	ug/l	102		67-127		
Trichlorofluoromethane	N.D.	2.	ug/l	122		70-148		
1,1-Dichloroethene	N.D.	0.8	ug/l	104		79-130		
Methylene Chloride	N.D.	2.	ug/l	98		85-120		
trans-1,2-Dichloroethene	N.D.	0.8	ug/l	102		83-117		
1,1-Dichloroethane	N.D.	1.	ug/l	107		83-127		
cis-1,2-Dichloroethene	N.D.	0.8	ug/l	103		84-117		
Chloroform	N.D.	0.8	ug/l	112		86-124		
1,1,1-Trichloroethane	N.D.	0.8	ug/l	118		83-127		
Carbon Tetrachloride	N.D.	1.	ug/l	118		77-130		
Benzene	N.D.	0.5	ug/l	101		85-117		
1,2-Dichloroethane	N.D.	0.5	ug/l	119		77-132		
Trichloroethene	N.D.	1.	ug/l	108		87-117		
1,2-Dichloropropane	N.D.	1.	ug/l	99		80-117		
Bromodichloromethane	N.D.	1.	ug/l	114		83-121		
Toluene	N.D.	0.5	ug/l	102		85-115		
1,1,2-Trichloroethane	N.D.	0.8	ug/l	96		86-113		
Tetrachloroethene	N.D.	0.8	ug/l	102		74-125		
Dibromochloromethane	N.D.	1.	ug/l	107		78-119		
Chlorobenzene	N.D.	0.8	ug/l	101		85-115		
Ethylbenzene	N.D.	0.5	ug/l	101		82-119		
m+p-Xylene	N.D.	0.5	ug/l	100		83-113		
o-Xylene	N.D.	0.5	ug/l	99		83-113		
Bromoform	N.D.	1.	ug/l	91		69-118		
1,1,2,2-Tetrachloroethane	N.D.	1.	ug/l	85		72-119		
1,3-Dichlorobenzene	N.D.	1.	ug/l	96		81-114		
1,4-Dichlorobenzene	N.D.	1.	ug/l	96		84-116		
1,2-Dichlorobenzene	N.D.	1.	ug/l	96		81-112		
trans-1,3-Dichloropropene	N.D.	1.	ug/l	100		79-114		
cis-1,3-Dichloropropene	N.D.	1.	ug/l	101		78-114		
Freon 113	N.D.	2.	ug/l	109		73-140		
Batch number: 2053002AA	Sample number(s): 4631694							

*- 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: ChevronTexaco c/o Cambria
Reported: 11/04/05 at 04:39 PM

Group Number: 964521

Sample Matrix Quality Control

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: Z053002AA	Sample number(s): 4631694								
Methyl Tertiary Butyl Ether	116	113	69-134	2	30				
Benzene	107	108	83-128	1	30				
Toluene	107	109	83-127	2	30				
Ethylbenzene	110	111	82-129	1	30				
Xylene (Total)	104	106	82-130	2	30				

Surrogate Quality Control

Analysis Name: TPH-GRO - Waters
Batch number: 05299A08A

	Trifluorotoluene-F
4631694	97
4631695	96
Blank	88
LCS	94
LCSD	91
MS	100
Limits:	63-135

Analysis Name: TPH-GRO - Waters
Batch number: 05300A08A

	Trifluorotoluene-F
4631696	98
Blank	89
LCS	98
LCSD	98
MS	96
Limits:	63-135

Analysis Name: EPA SW846/8260 (water)
Batch number: W052972AB

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
4631695	89	90	98	96
4631696	88	88	96	95
Blank	88	90	98	94
LCS	99	90	93	97
MS	97	91	92	97
MSD	96	89	93	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z053002AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene

*- 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: ChevronTexaco c/o Cambria

Group Number: 964521

Reported: 11/04/05 at 04:39 PM

Surrogate Quality Control

4631694	108	106	106	102
Blank	109	109	105	103
LCS	109	108	105	105
MS	108	109	104	103
MSD	107	105	105	103
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
2425 New Holland Pike • Lancaster, PA 17601

Explanation of Symbols and Abbreviations

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

N.D.	none detected
TNTC	Too Numerous To Count
IU	International Units
umhos/cm	micromhos/cm
C	degrees Celsius
meq	milliequivalents
g	gram(s)
ug	microgram(s)
ml	milliliter(s)
m3	cubic meter(s)

BMQL	Below Minimum Quantitation Level
MPN	Most Probable Number
CP Units	cobalt-chloroplatinate units
NTU	nephelometric turbidity units
F	degrees Fahrenheit
lb.	pound(s)
kg	kilogram(s)
mg	milligram(s)
l	liter(s)
ul	microliter(s)

<	less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.
>	greater than
J	estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).
ppm	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.
ppb	parts per billion
Dry weight basis	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. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

A	TIC is a possible aldol-condensation product
B	Analyte was also detected in the blank
C	Pesticide result confirmed by GC/MS
D	Compound quantitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
N	Presumptive evidence of a compound (TICs only)
P	Concentration difference between primary and confirmation columns >25%
U	Compound was not detected
X,Y,Z	Defined in case narrative

Inorganic Qualifiers

B	Value is <CRDL, but ≥IDL
E	Estimated due to interference
M	Duplicate injection precision not met
N	Spike sample not within control limits
S	Method of standard additions (MSA) used for calculation
U	Compound was not detected
W	Post digestion spike out of control limits
*****	Duplicate analysis not within control limits
+	Correlation coefficient for MSA <0.995

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

Measurement uncertainty values, as applicable, are available upon request.

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.

Geraghty & Miller Executive Summary

RISK ASSESSMENT FOR THE FORMER CHEVRON ASPHALT PLANT EMERYVILLE, CALIFORNIA

July 28, 1992

Prepared for:

CHEVRON U.S.A. PRODUCTS COMPANY
West Central Marketing
2410 Camino Ramon
San Ramon, California 94583

Prepared by:

GERAGHTY & MILLER, INC.
Risk Evaluation Group
2840 Plaza Place - Suite 350
Raleigh, North Carolina 27612
(919) 571-1662

EXECUTIVE SUMMARY

This risk assessment, prepared by Geraghty & Miller, Inc., for Chevron U.S.A. Products Company, evaluated the potential threat to human health and the environment for constituents detected in soils and ground water at the former Chevron asphalt plant in Emeryville, California, in the event that the site is redeveloped for commercial or retail uses. From the early 1950s until June 1987, the Chevron asphalt plant operated as a laboratory and test facility. The laboratory tested asphalt composition and experimented with asphalt-based surface coats. A portion of the site was used as a storage and transfer facility for petroleum products. Another area of the site was leased to a solvent handler. Information regarding Chevron's tenants' use of chemicals on site was not available. The buildings at the former Chevron asphalt plant were demolished and the site is now a vacant lot.

Various site investigations at the property have indicated the presence of chlorinated solvents and petroleum hydrocarbons in soil and ground water. Remedial activities have occurred at the site involving the removal of contaminated soil. The calculated health-based cleanup goals were compared to currently measured concentrations of constituents in soil and ground water to aid in the development of any additional remedial strategies.

The constituents of concern identified in soil and/or ground water were benzene, chloroform, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, ethylbenzene, tetrachloroethene, toluene, total petroleum hydrocarbons (TPH) as diesel, TPH as gasoline, 1,1,1-trichloroethane, trichloroethene, vinyl chloride, and xylenes.

The purpose of this report was to develop health-based cleanup goals based on the most probable future land-use at the site. The former Chevron asphalt plant may be developed for commercial purposes. The original site development drawings showed three buildings on the site with the remainder of the site paved over as parking lot. Assuming future development of the site, health-based cleanup goals were calculated evaluating exposure of future users of the property inhaling volatile organic constituents (VOCs) migrating from soil and ground water into

buildings at the site. Ground water in the vicinity of the site is not used as a water supply source. Ground water discharges into San Francisco Bay downgradient of the site. Therefore, the nearest downgradient beneficial use of ground water would be the bay. The most recent ground-water data (collected in April) were compared to water quality criteria for the protection of aquatic life to evaluate whether discharging current concentrations of the constituents of concern would degrade San Francisco Bay or pose a threat to aquatic life in the bay.

The methodologies used in this risk assessment were designed to be constituent with guidelines established by the California Regional Water Quality Control Board (RWQCB), San Francisco Bay Region (RWQCB, 1990) and the U.S. Environmental Protection Agency (USEPA; 1989a, 1991a,b) for risk assessments in general and the development of remedial goals specifically.

The risk assessment process included derivation of numerical estimates of the health-based remediation goals designed to be protective of human health and the environment for human and environmental receptors from potential exposure to constituents detected in environmental media (e.g., soils) at or adjacent to the former Chevron asphalt plant. Exposure to detected constituents was evaluated by considering hypothetical future conditions. Health-based remediation goals were derived based on protection of an on-site worker assuming direct contact exposure to soils during construction activities. In addition, health-based remediation goals were derived based on protection of an on-site worker assuming inhalation exposure to constituents originating in soils or ground water beneath the building and migrating into the building. An evaluation of exposures to environmental receptors also was conducted using the ground-water data and assuming these concentrations discharged into San Francisco Bay, the nearest downgradient ground-water discharge point.

Standard numerical parameters for quantifying human intakes were used to derive the health-based remediation goals for potentially exposed populations. Constituent- and route-specific intakes were estimated, and toxicity criteria (established by the USEPA) were used in the derivation to account for potential non-carcinogenic health effects and potential cancer risk

from the hypothetical exposure scenarios. USEPA-established reference doses (RfDs) were used to derive health-based remediation goals for constituents classified as non-carcinogens. An RfD represents the constituent- and route-specific dose to which a human receptor may be exposed over a lifetime without experiencing adverse health effects. USEPA-established cancer slope factors (CSFs) were used to derive health-based remediation goals for constituents classified as potential carcinogens. A CSF represents an upperbound estimate of the probability of developing cancer from constituent exposure over a lifetime and is derived from a mathematical model that extrapolates from the high doses in animal studies to the low doses characterizing human exposure.

An environmental assessment was conducted as part of this risk assessment to evaluate the potential impacts to environmental receptors potentially exposed to site-related constituents. The approach used in the environmental assessment approximately parallel those used to conduct human health assessments. Following identification of all potentially exposed populations, the nearest downgradient receptor location was assumed to be San Francisco Bay, ambient water quality criteria derived by USEPA and based on information on exposure and toxicity were used to derive qualitative estimates of potential ecological impacts.

Comparisons were made between the health-based remediation goals and the detected levels of constituents at the former Chevron asphalt plant. To evaluate exposure of aquatic life, currently detected ground-water concentrations were compared with ambient water quality criteria. The currently measured levels of the constituents of concern in soil and ground water were all below the health-based remediation goals or ambient water quality criteria. As a result, further remediation at the site does not appear to be warranted.

Bulletin 118 – East Bay Plain Subbasin

Santa Clara Valley Groundwater Basin, East Bay Plain Subbasin

- Groundwater Basin Number: 2-9.04
- County: Alameda, Contra Costa
- Surface Area: 77,800 acres (122 square miles)

Basin Boundaries & Hydrology

The East Bay Plain Subbasin is a northwest trending alluvial plain bounded on the north by San Pablo Bay, on the east by the contact with Franciscan Basement rock, on the south by the Niles Cone Groundwater Basin. The East Bay Plain Basin extends beneath San Francisco Bay to the west.

Numerous creeks including San Pablo Creek, Wildcat Creek, San Leandro Creek, and San Lorenzo Creek flow from the western slope of the Coast Ranges westward across the plain and into the San Francisco and San Pablo bays (CRWQCB 1999). Average precipitation in the subbasin ranges from about 17 inches in the southeast to greater than 25 inches along the eastern boundary, most of which occurs between the months of November and March.

Hydrogeologic Information

Water Bearing Formations

The East Bay Plain subbasin aquifer system consists of unconsolidated sediments of Quaternary age. Deposits include the early Pleistocene Santa Clara Formation, the late Pleistocene Alameda Formation, the early Holocene Temescal Formation, and Artificial Fill. The cumulative thickness of the unconsolidated sediments is about 1,000 feet (CRWQCB 1999). The average specific yield of the basin was calculated to be about 6% (DWR 1994).

Early Pleistocene Santa Clara Formation. The Santa Clara Formation consists of alluvial fan deposits inter-fingered with lake, swamp, river channel, and flood plain deposits. The formation ranges from 300 to 600 feet thick (CRWQCB 1999).

Late Pleistocene Alameda Formation. The Alameda Formation includes a sequence of alluvial fan deposits bounded by mud deposits on top and bottom of the formation. The formation was deposited primarily in an estuarine environment and ranges from 26 to 245 feet thick (CRWQCB 1999).

Early Holocene Temescal Formation. The Temescal Formation is an alluvial deposit consisting primarily of silts and clays with some gravel layers. The formation ranges from 1 to 50 feet thick (CRWQCB 1999).

Artificial Fill is found mostly along the bay front and wetlands areas and is derived primarily from dredging as well as quarrying, construction, demolition debris, and municipal waste. The fill ranges from 1 to 50 feet with the thickest deposits found nearer the Bay (CRWQCB 1999).

Groundwater Level Trends

Historic water levels in the deep (more than 500 feet) aquifer in the basin have varied between –10 to –140 feet mean sea level since the early 1950's. The low water level was reached in about 1962. Shallower aquifers have a much less pronounced water level decline. The historical low water level for aquifers at a depth of about 250 feet bgs since 1950 has been about –30 feet msl. Water levels rose about 5 feet per year between 1965 and 1980. Water levels have been rising continuously since then, but at a less rapid rate. As of 2000 water levels are very near surface in all aquifers.

Groundwater Storage

Groundwater Storage Capacity. Based on an analysis of 357 well logs, DWR (1994) calculated a total storage capacity in the subbasin of 2,670,000 acre feet. The analysis made calculation of storage for successive slices of the subbasin starting at a surface elevation of 350 above MSL and extending to a depth of 1,000 feet below MSL. The calculated average specific yield was 6%.

Groundwater in Storage. Based on 1993 groundwater elevations, DWR (1994) calculated to available storage to a depth of 1,000 below MSL at about 2,500,000 acre feet. However, due to concern over potential adverse impacts such as sea water intrusion, another calculation for the volume of water stored in sediments above MSL was determined at about 80,000 acre feet for 1993 (DWR 1994).

Groundwater Budget (Type A)

Groundwater extraction in the basin remained fairly constant over the last several years. The following budget is based on two studies by Muir (1993 and 1996). It is representative of current conditions in the subbasin. Annual basin inflows include natural recharge of 9,900 af, artificial/incidental recharge of 9,900 af, applied water recharge of 200 af, and subsurface inflow of 200 af. Annual basin outflows include urban extraction of 2,440 af, agricultural extraction of 910 af, and subsurface outflow of 13,500 af.

Groundwater Quality

Characterization. Calcium bicarbonate type groundwater occurs mostly in the upper 200 feet of the subsurface, while sodium bicarbonate waters are common from about 200 to 1,000 foot depths (Ken Muir personal communication 2001). Data from 29 wells in the subbasin indicates that TDS in the shallow zone ranges from about 360 to 1,020 mg/l, while TDS from 200 to 1000 feet below ground surface ranges from 310 to 1,420 mg/l from 13 wells (Muir 1997). TDS exceeded 500 mg/l in 15 of the 29 sampled wells.

Impairments. The San Francisco Regional Water Quality Control Board (1999) identified 13 distinct locations with as areas of major groundwater pollution. These were identified as having plumes of contamination greater than 1,000 feet in length. Most contamination is due to release of fuels and solvents. Most contamination appears to be restricted to the upper 50 feet of the subsurface (RWQCB 1999).

Water Quality in Public Supply Wells

Constituent Group[1]	Number of wells sampled[2]	Number of wells with a concentration above an MCL[3]
Inorganics – Primary	5	0
Radiological	4	0
Nitrates	5	0
Pesticides	3	0
VOCs and SVOCs	3	0
Inorganics – Secondary	5	2

[1] A description of each member in the constituent groups and a generalized discussion of the relevance of these groups are included in *California's Groundwater – Bulletin 118* by DWR (2003).
[2] Represents distinct number of wells sampled as required under DHS Title 22 program from 1994 through 2000.
[3] Each well reported with a concentration above an MCL was confirmed with a second detection above an MCL. This information is intended as an indicator of the types of activities that cause contamination in a given basin. It represents the water quality at the sample location. It does not indicate the water quality delivered to the consumer. More detailed drinking water quality information can be obtained from the local water purveyor and its annual Consumer Confidence Report.

Well Production characteristics

	Well yields (gal/min)	
Municipal/Irrigation	Range: 100 – 1,000	Average: unknown (Muir pers comm 2001)
	Total depths (ft)	
Domestic	Range: 32-525	Average: 206 (20 Well Completion Reports)
Municipal/Irrigation	Range: 29-630	Average: 191 (62 Well Completion Reports)

Active Monitoring Data

Agency	Parameter	Number of wells /measurement frequency
EBMUD	Groundwater levels	29 wells semi-annually
Alameda County FC & WCD	Major Ion	16 wells (9 in odd numbered years, 7 in even years)
Department of Health Services	Coliform, nitrates, mineral, organic chemicals, and radiological.	7 wells as required in Title 22, Calif. Code of Regulations

Basin Management

Groundwater management:	Entities in the basin have had preliminary discussions on groundwater management, but there is currently no compelling need and no groundwater management plans or ordinances are currently underway.
Water agencies	
Public	East Bay MUD, Alameda County FC & WCD.
Private	

References Cited

California Department of Water Resources. 1994. Ground Water Storage Capacity of a Portion of the East Bay Plain, Alameda County, California. 35 p.

California Regional Water Quality Control Board. 1999. East Bay Plain Groundwater Basin Beneficial Use Evaluation Report – Alameda and Contra Costa Counties, CA. 100 p.

Muir, K.S. 1993a. Geologic Framework of the East Bay Plain Groundwater Basin – Alameda County, California. 37 p.

_____. 1993b. Groundwater Recharge in the East Bay Plain Area, Alameda County, California.

_____. 1996a. Groundwater Discharge in the East Bay Plain Area, Alameda County, California.

_____. 1996b. Groundwater Yield of the East Bay Plain Area, Alameda County, California.

Errata

Changes made to the basin description will be noted here.

Additional References

California Department of Water Resources. 1960. Intrusion of Salt Water into Ground Water Basins of Southern Alameda County. Bulletin No. 81. 44p.

_____. 1963. Alameda County Investigation. Bulletin No. 13. 196 p.

CH2M Hill. 2000. Regional Hydrogeologic Investigation South East Bay Plain.

Figuers, S. 1998. Groundwater Study and Water Supply History of the East Bay Plain, Alameda and Contra Costa Counties, CA. 90 p.

Hickenbottom, K. and K.S. Muir. 1988. Geohydrology and Groundwater-Quality Overview, of the East Bay Plain Area, Alameda County, California – 205 (J) Report. 83 p. and Appendix.

Todd Engineers. 1986. Reconnaissance of Groundwater Resources for the EBMUD Service Area. 62 p.

Boring Logs

APPENDIX 2

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 1

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. — Location EMERYVILLE + POWELL ST.

Date 5/2/85 Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 3" SCREEN WITH 1 1/2 to 2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW ON CAP FITTING.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' A/C + BASE
		1'-4' BLACK - DK GREY SILTY CLAY DAMP
5		4'-8.5' GRN-GREY SILTY CLAY W/ THIN LAMINATIONS OF SAND & FN. GRAVEL.
		8.5'-12' BROWN SILTY CLAY WET NO ODOR
10	5/11	
		ENCOUNTERED WATER @ 6'
		ENCOUNTERED NO HYDROCARBON ODOR

OBSERVATION WELL

Type of Observation Well

Ground Elev.

Top of Riser Elev. 98.56 (Protective Casing) Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

L_1 = 0
L_2 = 0
L_3 = 1'
L_4 = 11'
L_5 = 1.5'
L_6 = 10'
L_7 = 12'

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

Bottom of Boring Elev.

Diameter of Boring 7 7/8"

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' ELEV. AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED BEFORE DRILLING. WELL WAS DEVELOPED BY PUMPING ~50 GAL. ~2 WEEKS AFTER DRILLING.

Inspected By W. WEILHER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 2

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. — Location ANDREEMAN + POWELL ST.

Date 3/12/85 Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 3" SCREEN WITH 1½ to 2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW ON CAP FITTING.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-0.5' BASE
5		1-4' DARK GREY SILTY CLAY DAMP-WET NO ODOR
10		4'-5.5' GREY BROWN SILTY CLAY WITH THIN LAMINATIONS OF FINE SAND
		5.5'-12' BROWN SILTY CLAY WITH THIN LAMINATIONS OF FINE SAND WET NO ODOR
		ENCOUNTERED WATER @ ~3'
		ENCOUNTERED NO HYDROCARBON ODOR.

OBSERVATION WELL

Type of Observation Well

Ground Elev.

Top of Riser Elev. 99.20

(Protective Casing)

Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

L_1 = 0'
L_2 = 0'
L_3 = 1'
L_4 = 11'
L_5 = 2'
L_6 = 10'
L_7 = 12'

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

Bottom of Boring Elev.

Diameter of Boring 7¾"

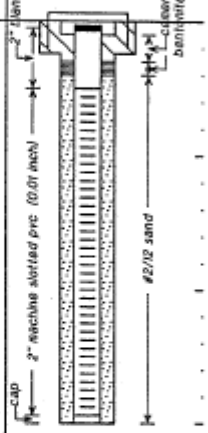
Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED BEFORE DRILLING. WELL WAS DEVELOPED BY PUMPING NITROGEN GAS WORKS AFTER DRILLING

Inspected By W. FELLNER

Gettler-Ryan, Inc.	Log of Boring MW-2A
PROJECT: *Former chevron Asphalt Plant No. 100067*	LOCATION: *Powell Street Overpass at Landregan, Emeryvil*
G-R PROJECT NO.: *5161.01*	SURFACE ELEVATION: *12.45 feet MSL*
DATE STARTED: *10/30/95*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *10/30/95*	WL (ft. bgs): *13.5* DATE: *10/30/95* TIME: *14:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *15.0 Feet*
DRILLING COMPANY: *Bay Area Exploration*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
5							Existing well MW-2 was overdrilled to 15 feet and well casing was removed. Well MW-2A was constructed in the same hole.
10							
15							
20							
25							
30							
35							

WELL DIAGRAM



JOB NUMBER: *5161.01*

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 3

Type of Rig HOLLOW AUGER — Installed By GETTLER-RYAN INC — Location ANDREASEN + POWELL ST.

Date 3/12/85 — Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 8" SCREEN WITH 1½+2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW ON CAP FITTING.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-2' BLACK CLAYEY SOIL MINOR GRAVEL PAMP.
5	4/4/8	2-3' DK GREY CLAY WET NO ODOR.
10		3-7' GREEN GREY SILTY CLAY WITH SILTY SAND + FINE GRAVEL LAMINATIONS WET NO ODOR
		7-12' BROWN SILTY CLAY WET NO ODOR
		ENCOUNTERED WATER @ ~3'
		ENCOUNTERED NO HYDROCARBON ODOR

OBSERVATION WELL

Type of Observation Well

Ground Elev.

Top of Riser Elev. 99.50

(Protective Casing) Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

Bottom of Boring Elev.

Diameter of Boring 7¾"

L_1 = 0'
L_2 = 0
L_3 = 1'
L_4 = 11'
L_5 = 2'
L_6 = 10'
L_7 = 12'

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED BEFORE DRILLING. WELL WAS DEVELOPED BY PUMPING NSD GAL ~ 2 WEEKS AFTER DRILLING.

Inspected By U.V. ELMER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 4

Location LANDREGAN + POWELL ST.

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. Date 5/8/85 Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 8" SCREEN WITH 1½ to 2' of BLANK ON TOP (ONE PIECE, NO JOINT) INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW ON CAP FITTING.

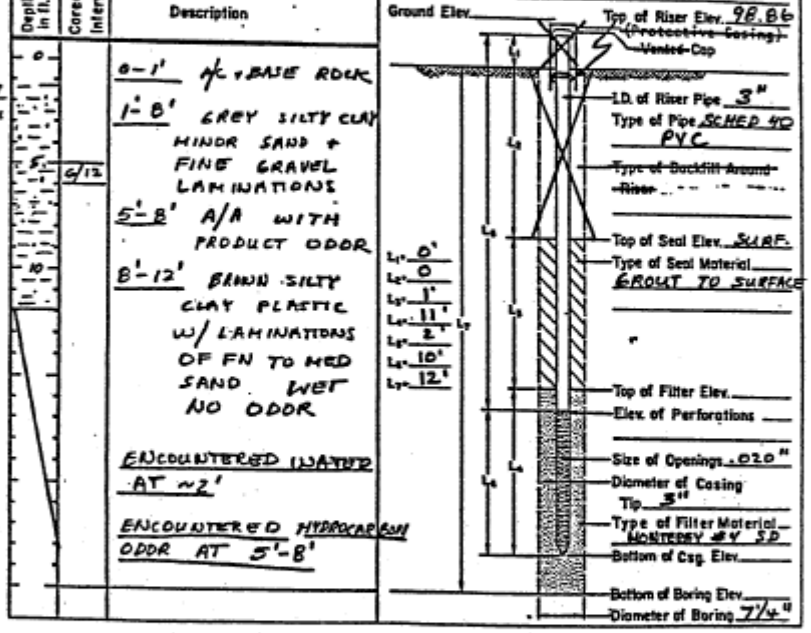
LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' A/C + BASE ROCK
5	6/12	1'-8' GREY SILTY CLAY MINOR SAND + FINE GRAVEL LAMINATIONS
		5'-8' A/A WITH PRODUCT ODOR
10		8'-12' BROWN SILTY CLAY PLASTIC W/ LAMINATIONS OF FN TO MED SAND WET NO ODOR
		ENCOUNTERED WATER AT ~2'
		ENCOUNTERED HYDROCARBON ODOR AT 5'-8'

OBSERVATION WELL

Type of Observation Well



Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED BEFORE DRILLING. WELL WAS DEVELOPED BY PUMPING ~50 GAL ~2 WEEKS AFTER DRILLING.

Inspected By W. VELSHER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 5

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. — Location LANDREGAN + POWELL ST. Date 3/12/85 Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 2" SCREEN WITH 1½±2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW ON CAP FITTING.

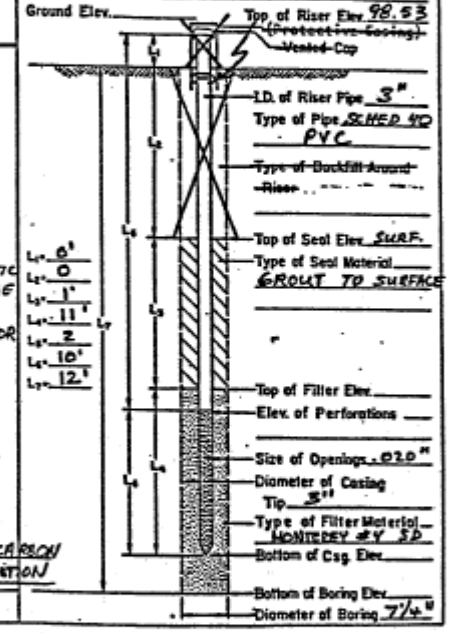
LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' BLACK SOIL DRY
1		1-2' DARK GREY SILTY CLAY WITH LAMINATIONS OF SAND + GRAVEL
5	2/5/8	2-3' SAND + GRAVEL LAYER
		3'-7.5' GREY SILTY CLAY, STIFF PLASTIC WITH THIN LAMINAE OF SAND + FN GRAVEL NO ODOR
10		7.5-12' BROWN SILTY CLAY W/ THIN ZONES OF SAND + FN GRAVEL NO ODOR
		ENCOUNTERED WATER AT ≈2'
		ENCOUNTERED HYDROCARBON ODORS AFTER COMPLETION

OBSERVATION WELL

Type of Observation Well



Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED BEFORE DRILLING. WELL WAS DEVELOPED BY PUMPING ~50 GAL IN 2 WEEKS AFTER DRILLING.

Inspected By W. KELLNER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 6
Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. — Location EMBARCADERO + POWELL ST.
Date 3/13/85 Time
Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 3" SCREEN WITH 1½ x 2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUTED TOP. INSTALLED PROTECTIVE BOX FLUSH WITH GROUND, INSTALL SCREW ON CAP FITTINGS.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' BLACK SILTY CLAY SOIL DAMP
5	2/5/6	1-5 BLACK SILTY CLAY WITH LAMINAE OF SAND + FN GRAVEL WET. NO ODOR
10		5'-12' BROWN + GREY MOTTLED SILTY CLAY WET, DIESEL ODOR FROM ABOUT 6'-7'
		ENCOUNTERED WATER @ ~1'
		ENCOUNTERED DIESEL ODOR 6'-7'

OBSERVATION WELL

Type of Observation Well
Ground Elev.
Top of Riser Elev. 99.03
~~(Protective Casing)~~
~~Vented Cap~~
I.D. of Riser Pipe 3"
Type of Pipe SCHED 40 PVC
~~Type of Backfill Around Riser~~
Top of Seal Elev. SURF.
Type of Seal Material GROUT TO SURFACE
L_1 = 2'
L_2 = 0
L_3 = 1'
L_4 = 11'
L_5 = 4'
L_6 = 10'
L_7 = 12'
Top of Filter Elev.
Elev. of Perforations
Size of Openings .020"
Diameter of Casing Tip 3"
Type of Filter Material MONTEREY #4 SD
Bottom of Csg. Elev.
Bottom of Boring Elev.
Diameter of Boring 7¼"

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' EST AT SW CORNER OF TTLR. AUGERS WERE CLEANED BEFORE DRILLING. WELL WAS DEVELOPED AS OTHERS

Inspected By W. VELMER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL — Observation Well No. 7

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. — Location LANDREGAN + POWELL ST. — Date 3/12/85 — Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 2" SCREEN WITH 1½±0.2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND, INSTALL SCREWS ON CAP FITTINGS.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		.5–8' GRN GREY SILTY CLAY FIRM WITH LAMINAE OF SAND + FN GRAV. STREAKS OF DECAYED WOOD. NO ODOR.
5	4/4	
10		8'-12' BROWN SILTY CLAY FIRM. NO ODOR.
		ENCOUNTERED WATER AT 1'
		ENCOUNTERED NO HYDROCARBON ODOR.

OBSERVATION WELL

Type of Observation Well

Ground Elev. — Top of Riser Elev. 98.40 (Protective Casing) Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

L_1 = 2'
L_2 = 0
L_3 = 1'
L_4 = 11'
L_5 = 9'
L_6 = 10'
L_7 = 12'

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

Bottom of Boring Elev.

Diameter of Boring 7¾"

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AUGERS WERE STEAM CLEANED AND WELL DEVELOPED AS OTHERS.

Inspected By W. VELMER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL Observation Well No. B

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. Location SANDPEARL + POWELL ST.

Date 3/13/85 Time

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 3" SCREEN WITH 1½ to 2' of BLANK ON TOP (ONE PIECE, NO JOINT), INSTALLED GRADE PACK, GROUT TOP INSTALLED PROTECTIVE BOX FILLED WITH GROUND) INSTALL SCREW ON CAP FITTING.

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' BROWN SILTY CLAY WET
5	4/5	1'-7' GREY SILTY CLAY w/ LAMINAE OF SAND + FN GRAVEL NO ODOR
10		7'-12' BROWN CLAY SLTY w/ LAMINAE OF SAND + FN GRAVEL NO ODOR
		ENCOUNTERED WATER AT SURFACE
		ENCOUNTERED NO HYDROCARBON ODOR

OBSERVATION WELL

Type of Observation Well

Ground Elev.

Top of Riser Elev. 98.31

(Protective Casing)

Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

L_1 = 3'
L_2 = 0
L_3 = 1'
L_4 = 11'
L_5 = 5½"
L_6 = 10'
L_7 = 12'

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

Bottom of Boring Elev.

Diameter of Boring 7¼"

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AUGERS WERE CLEANED AND WELLS DEVELOPED AS BEFORE

Inspected By W. ELMER

OBSERVATION WELL INSTALLATION REPORT

Project EMERYVILLE TERMINAL Observation Well No. 9

Type of Rig HOLLOW AUGER Installed By GETTLER-RYAN INC. Location LANDREGAN + POWELL ST.

Method of Installation DRILLED WITH HOLLOW STEM AUGER TO 12' TAKING SPLIT SPOON SAMPLES AT APPROPRIATE INTERVALS. INSTALLED 3" SCREEN WITH 1/2 to 2' of BLANK ON TOP (ONE PIECE, NO JOINT) INSTALLED GRAVEL PACK, GROUT TOP INSTALLED PROTECTIVE BOX FLUSH WITH GROUND. INSTALL SCREW & CAP FITTING.

Date 3/13/85 Time

LOG OF BORING AND OBSERVATION WELL

BORING

Depth in ft.	Cored Interval	Description
0		0-1' ROAD BASE
		1-5' DARK GREY SILTY CLAY WITH SAND LAMINAE. NO ODOR
5	2.5' 1.5'	
		5-12' BROWN SILTY CLAY WITH SAND LAMINAE NO ODOR
		ENCOUNTERED WATER AT 4'
		ENCOUNTERED NO HYDROCARBON ODOR.
12'		

OBSERVATION WELL

Type of Observation Well

Ground Elev.

Top of Riser Elev. 98.75

(Protective Casing) Vented Cap

I.D. of Riser Pipe 3"

Type of Pipe SCHED 40 PVC

Type of Backfill Around Riser

Top of Seal Elev. SURF.

Type of Seal Material GROUT TO SURFACE

L_1 = 0'
L_2 = 0'
L_3 = 1'
L_4 = 11'
L_5 = 2'
L_6 = 10'
L_7 = 12'

Top of Filter Elev.

Elev. of Perforations

Size of Openings .020"

Diameter of Casing Tip 3"

Type of Filter Material MONTEREY #4 SD

Bottom of Csg. Elev.

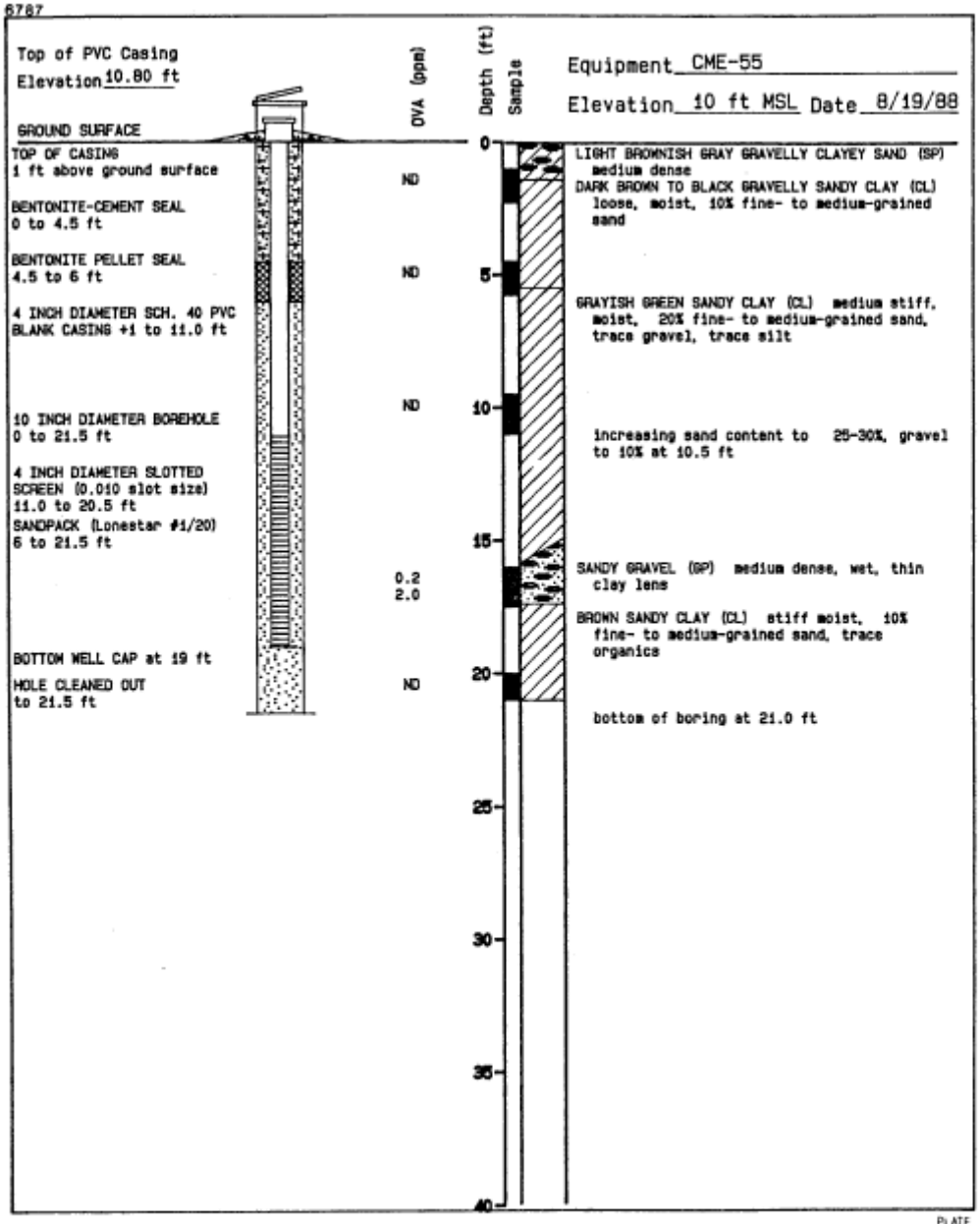
Bottom of Boring Elev.

Diameter of Boring 7¼"

Remarks ELEVATIONS ARE SURVEYED TO ARBITRARY DATUM OF 100' SET AT SW CORNER OF TTLR. AREAS WERE CLEANED AND WELLS DEVELOPED AS OTHERS

Inspected By W. KELLNER

6787



PLATE

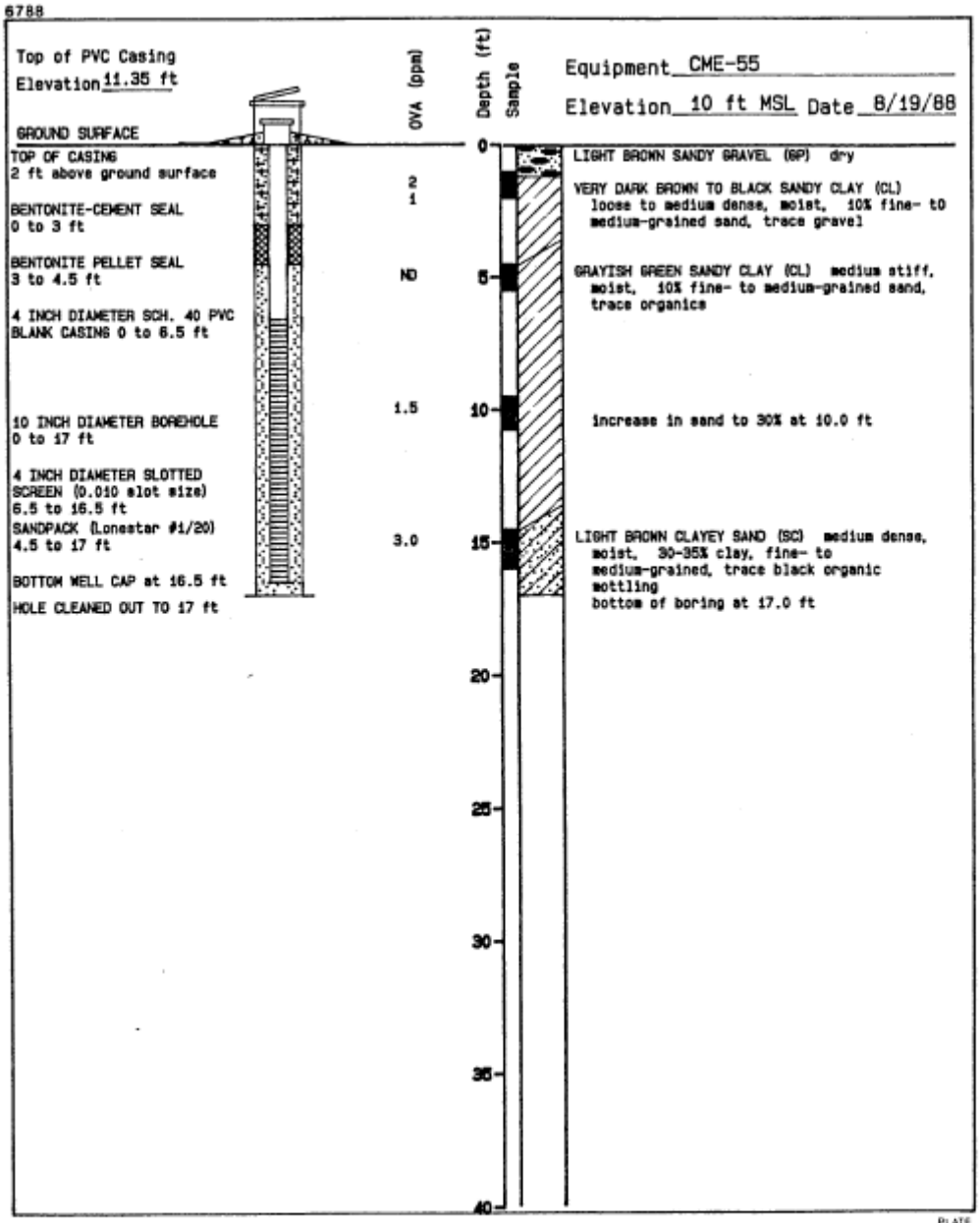
HLA

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring and Well Completion Detail 10
1520 Powell St
Emeryville, California

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
EH	18452,005.02		10/88		

6788



PLATE

Harding Lawson Associates
Engineers and Geoscientists

Log of Boring and Well Completion Detail 11

1520 Powell St

Emeryville, California

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
EH	18452,005.02		10/88		

6789

Top of PVC Casing Elevation 13.01 ft

GROUND SURFACE

TOP OF CASING
2 ft above ground surface

BENTONITE-CEMENT SEAL
0 to 3 ft

BENTONITE PELLET SEAL
3 to 4.5 ft

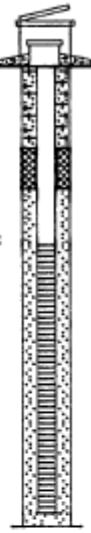
4 INCH DIAMETER SCH. 40 PVC BLANK CASING +2 to 6.5 ft

10 INCH DIAMETER BOREHOLE
0 to 17 ft

4 INCH DIAMETER SLOTTED SCREEN (0.010 slot size)
6.5 to 16 ft
SANDPACK (Lonestar #1/20)
4.5 to 17 ft

BOTTOM WELL CAP at 17 ft

HOLE CLEANED OUT TO 17 ft



OVA (ppm)	Depth (ft)	Sample
ND	0	
ND	5	
ND	10	
ND	15	
	20	
	25	
	30	
	35	
	40	

Equipment CME-55

Elevation 11 ft MSL Date 8/18/88

ASPHALT
LIGHT BROWNISH GRAY GRAVELLY SILTY SAND (SP) loose, 25% silt, 10% sand
VERY DARK BROWN TO BLACK SANDY CLAY (CL) medium stiff, moist

GRAYISH GREEN SANDY CLAY (CL) medium stiff, moist, 13% fine- to medium-grained sand, trace iron oxide concretions

LIGHT BROWN SILTY SANDY CLAY (CL) medium stiff, moist, 30% fine- to medium-grained sand, 15% silt, trace gravel

LIGHT BROWN CLAYEY SAND (SC) loose, wet, fine- to medium-grained, trace silt

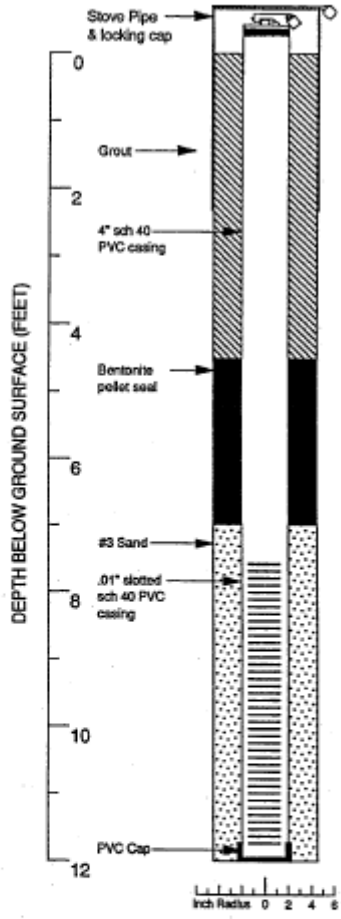
bottom of boring at 17.5 ft

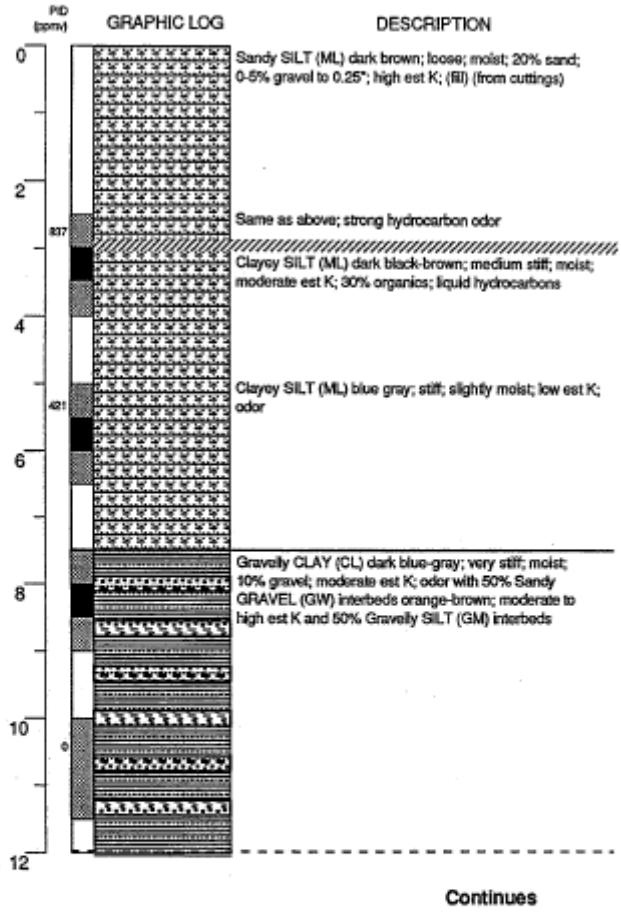
Harding Lawson Associates
Engineers and Geoscientists

Log of Boring and Well Completion Detail 12
1520 Powell St
Emeryville, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
EH	18452,005.02		10/88		





Logged by:	Chris Alger	Drilling Company:	Exploration Geoservices	Well Head Completion:	Stove pipe & locking cap
Project Mgr:	Chris Alger/ Tom Howard	Drilling Method:	9" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	2/1/90	Driller:	Mike Yeager	TD (Total Depth):	14.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain; Dotted where approximate; Dashed where uncertain; Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

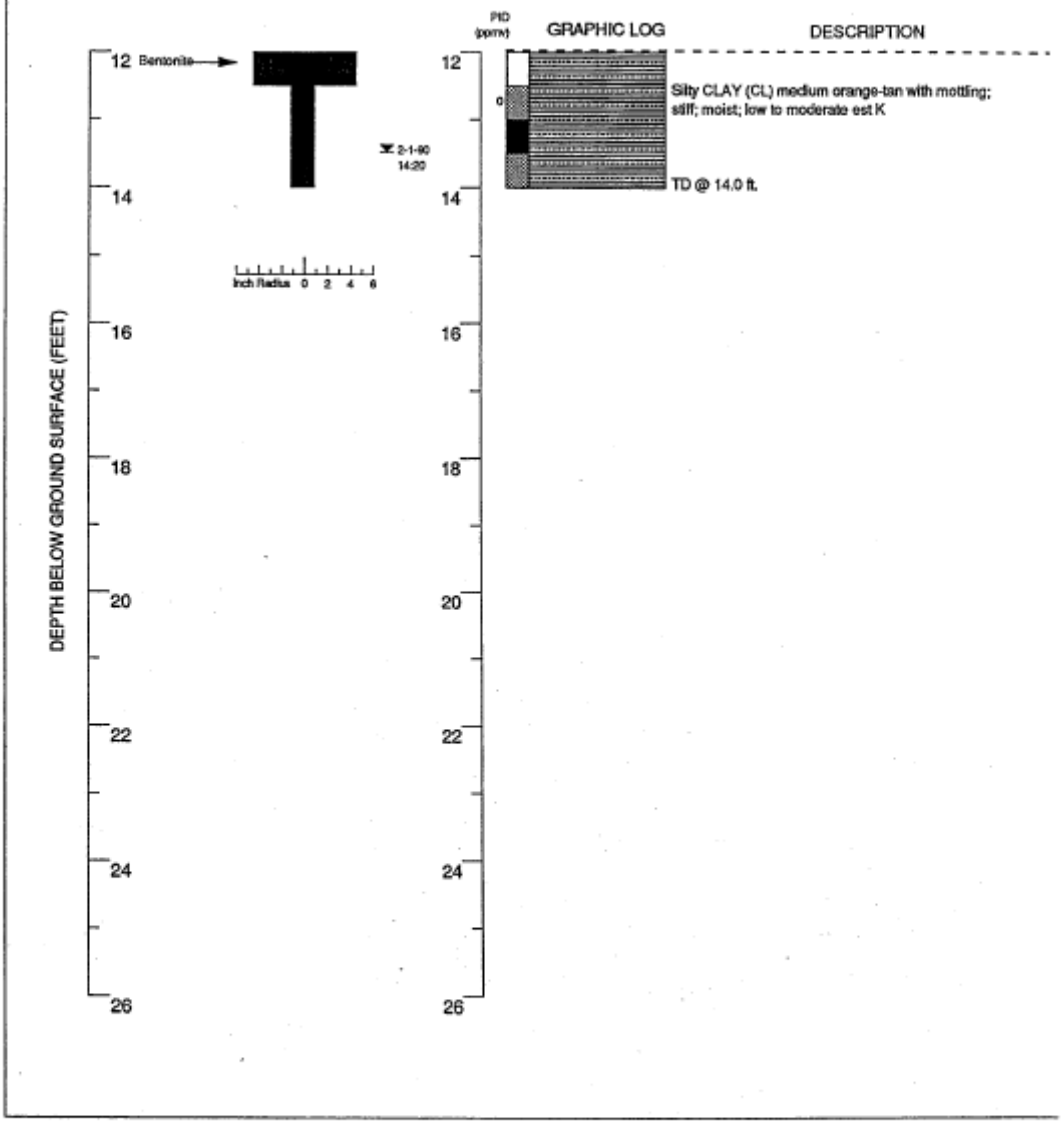
Boring Log and Well Completion Details
MW-13 (Boring B-2)

Emeryville Asphalt Plant
Emeryville, California

MONITOR WELL
13

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

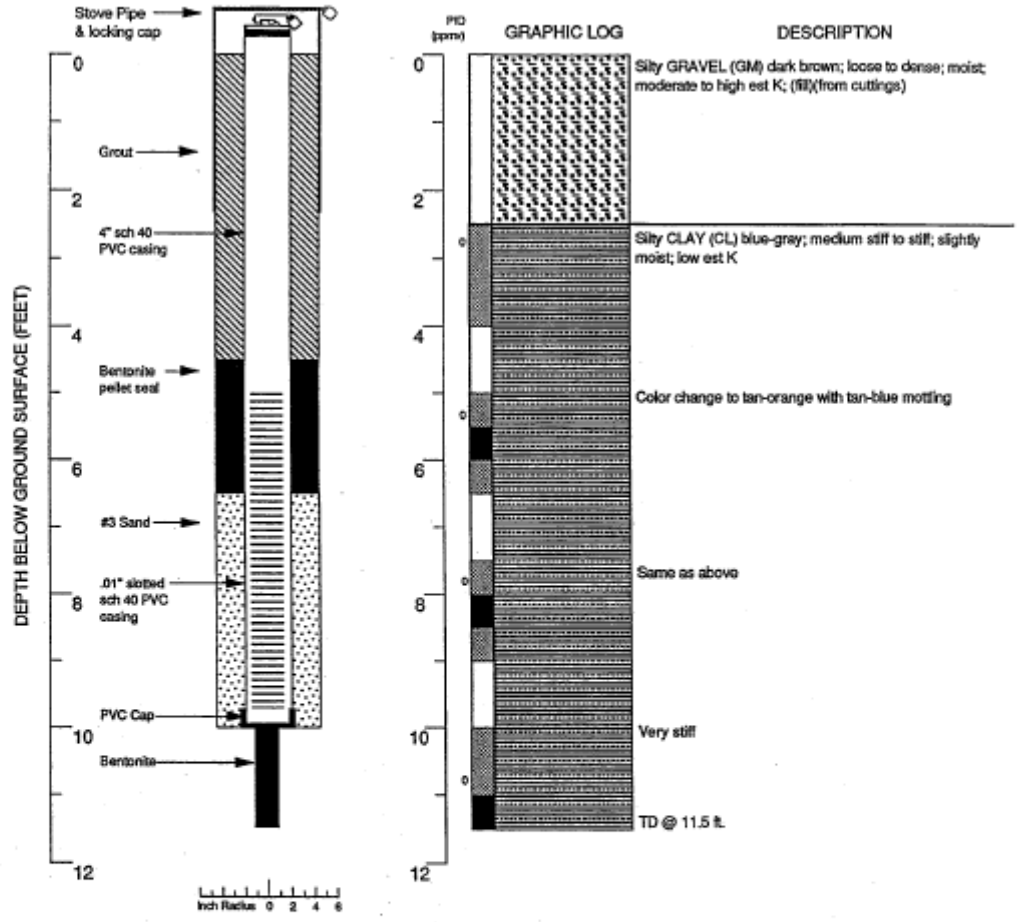
Boring Log and Well Completion Details
MW-13 (Boring B-2)

Emeryville Asphalt Plant
Emeryville, Califonia

MONITOR WELL
13

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Logged by:	Chris Alger	Drilling Company:	Exploration Geoservices	Well Head Completion:	Stove pipe & locking cap
Project Mgr:	Chris Alger/ Tom Howard	Drilling Method:	9" Hollow stem auger	Type of Sampler:	2" split barrel
		Driller:	Mike Yeager	TD (Total Depth):	11.5 ft.
Dates Drilled:	2/1/90				

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

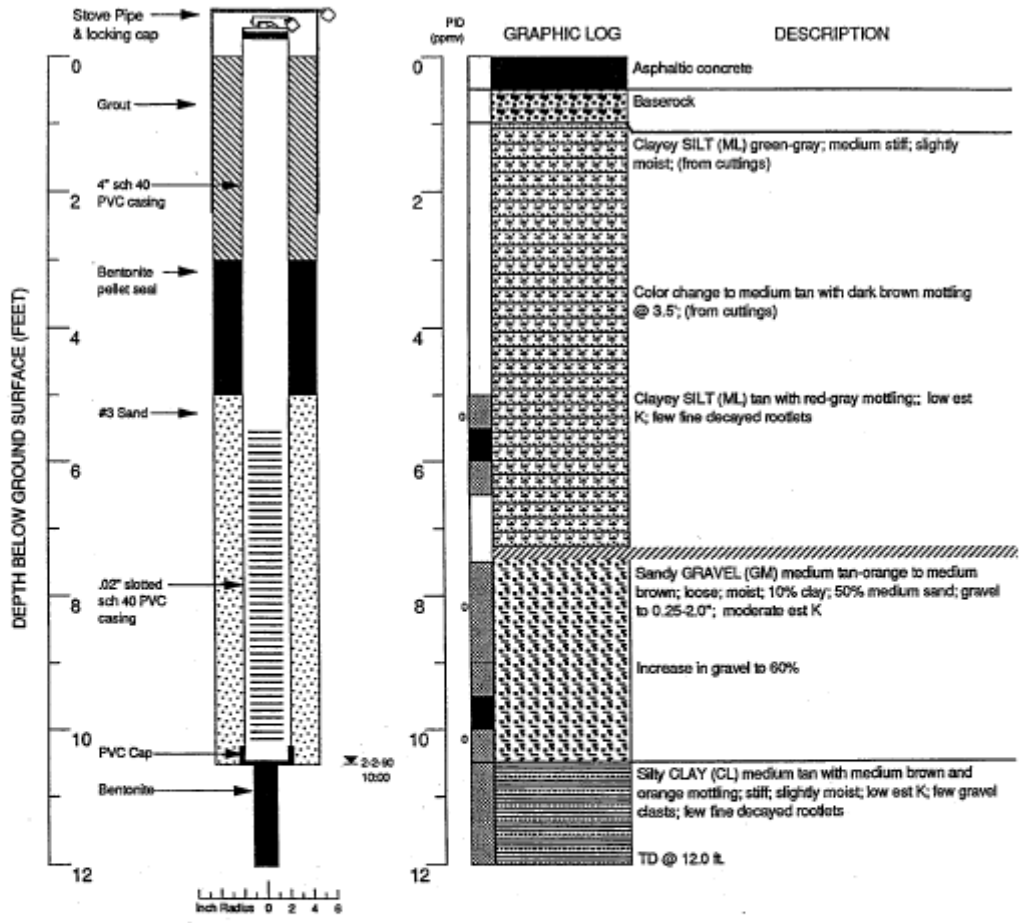
Boring Log and Well Completion Details
MW-14 (Boring B-3)

Emeryville Asphalt Plant
Emeryville, California

MONITOR WELL
14

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Logged by:	Chris Alger	Drilling Company:	Exploration Geoservices	Well Head Completion:	Stove pipe & locking cap
Project Mgr:	Chris Alger/ Tom Howard	Drilling Method:	9" Hollow stem auger	Type of Sampler:	2" split barrel
		Driller:	Mike Yeager	TD (Total Depth):	12.0 ft.
Dates Drilled:	2/2/90				

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample

Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

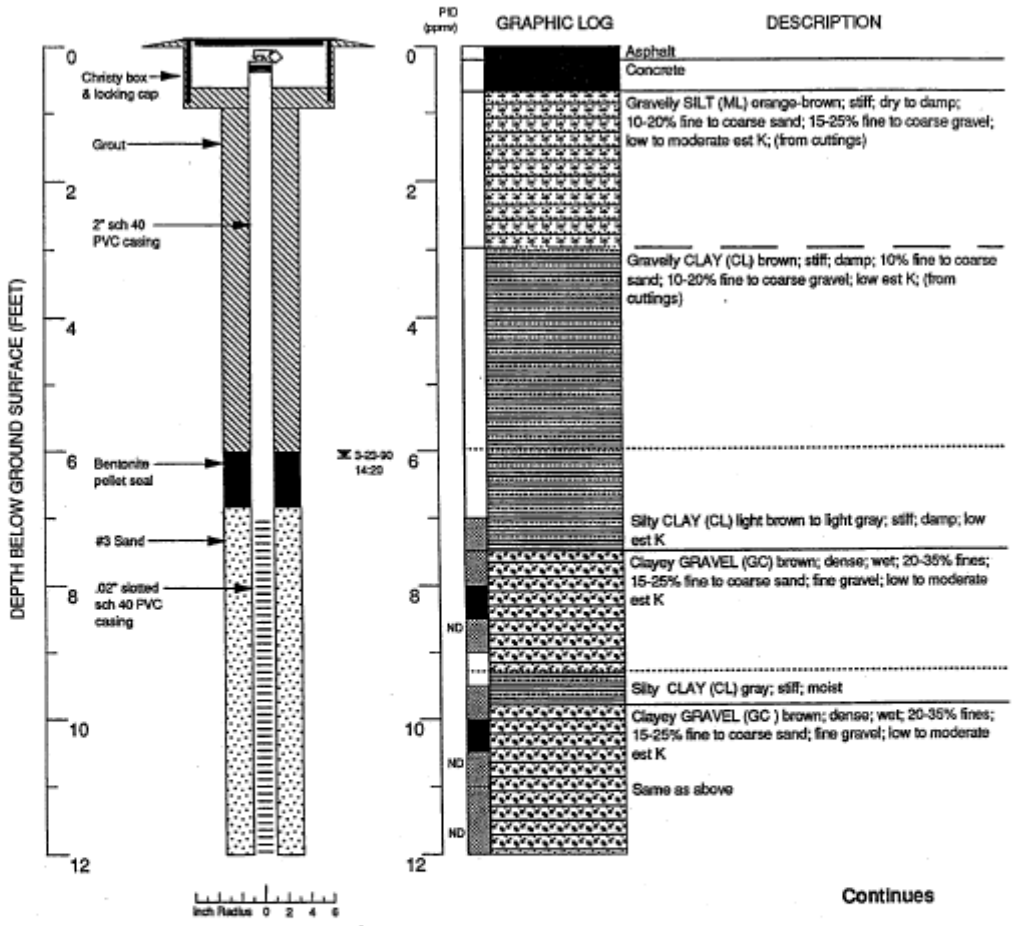
Boring Log and Well Completion Details
MW-15 (Boring B-4)

Emeryville Asphalt Plant
Emeryville, California

MONITOR WELL
15

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Logged by:	Mike Edmonson	Drilling Company:	Western Geologic Resources	Well Head Completion:	Christy box & locking cap
Project Mgr:	Tom Howard	Drilling Method:	6.75" Hollow stem auger	Type of Sampler:	1.4" split barrel
Dates Drilled:	3-23-90	Driller:	Dave Reichard	TD (Total Depth):	14.5 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

Boring Log and Well Completion Details
MW-16 (Boring B-16)

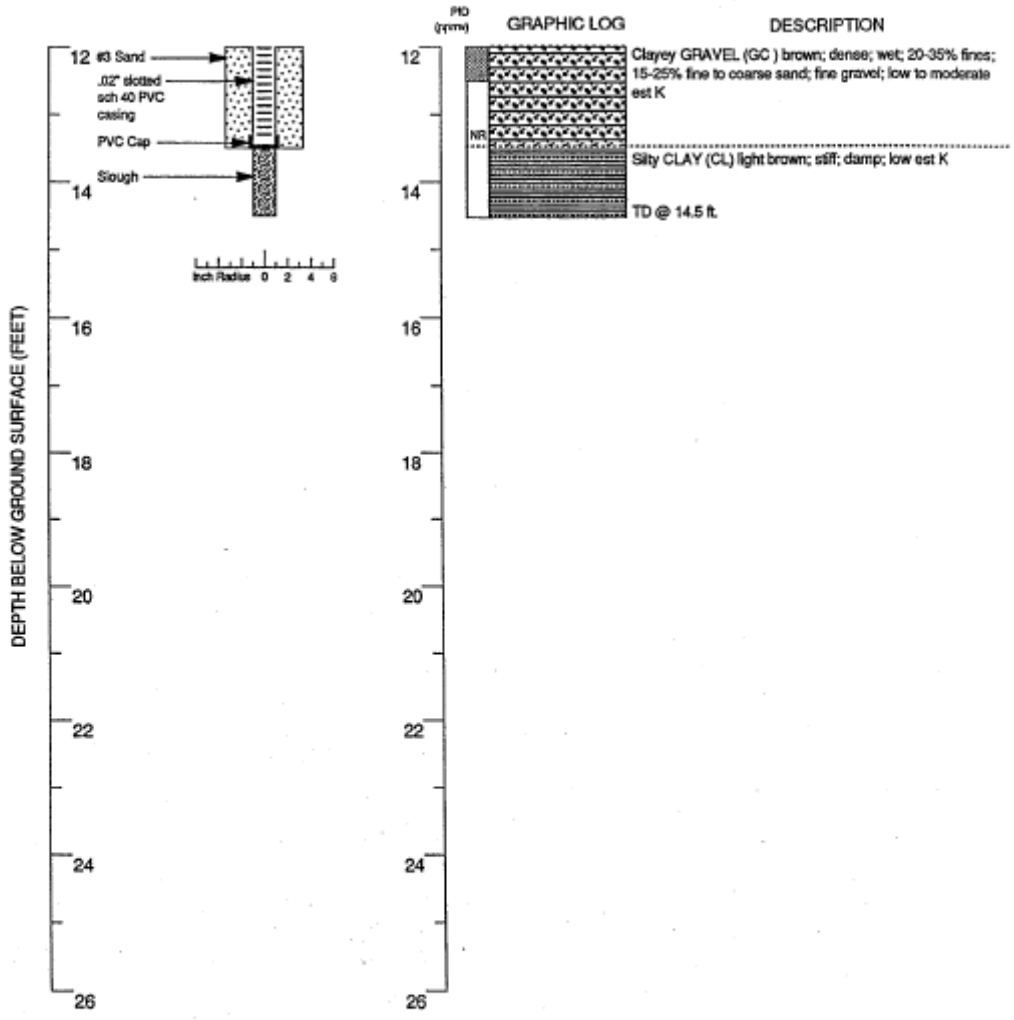
Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL

16

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

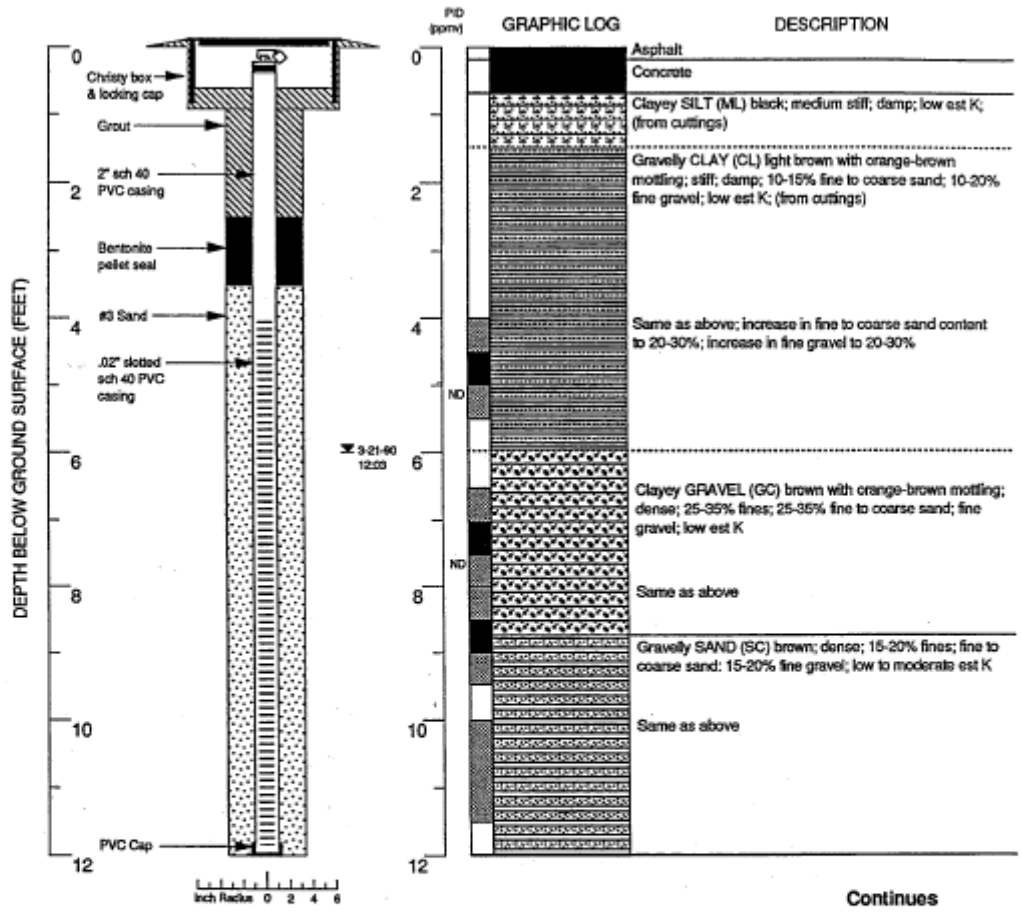
Boring Log and Well Completion Details
MW-16 (Boring B-16)

Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL
16

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Logged by:	Mike Edmonson	Drilling Company:	Western Geologic Resources	Well Head Completion:	Christy box & locking cap
Project Mgr:	Tom Howard	Drilling Method:	6.75" Hollow stem auger	Type of Sampler:	1.4" split barrel
Dates Drilled:	3-21-90	Driller:	Dave Reichard	TD (Total Depth):	13.5 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

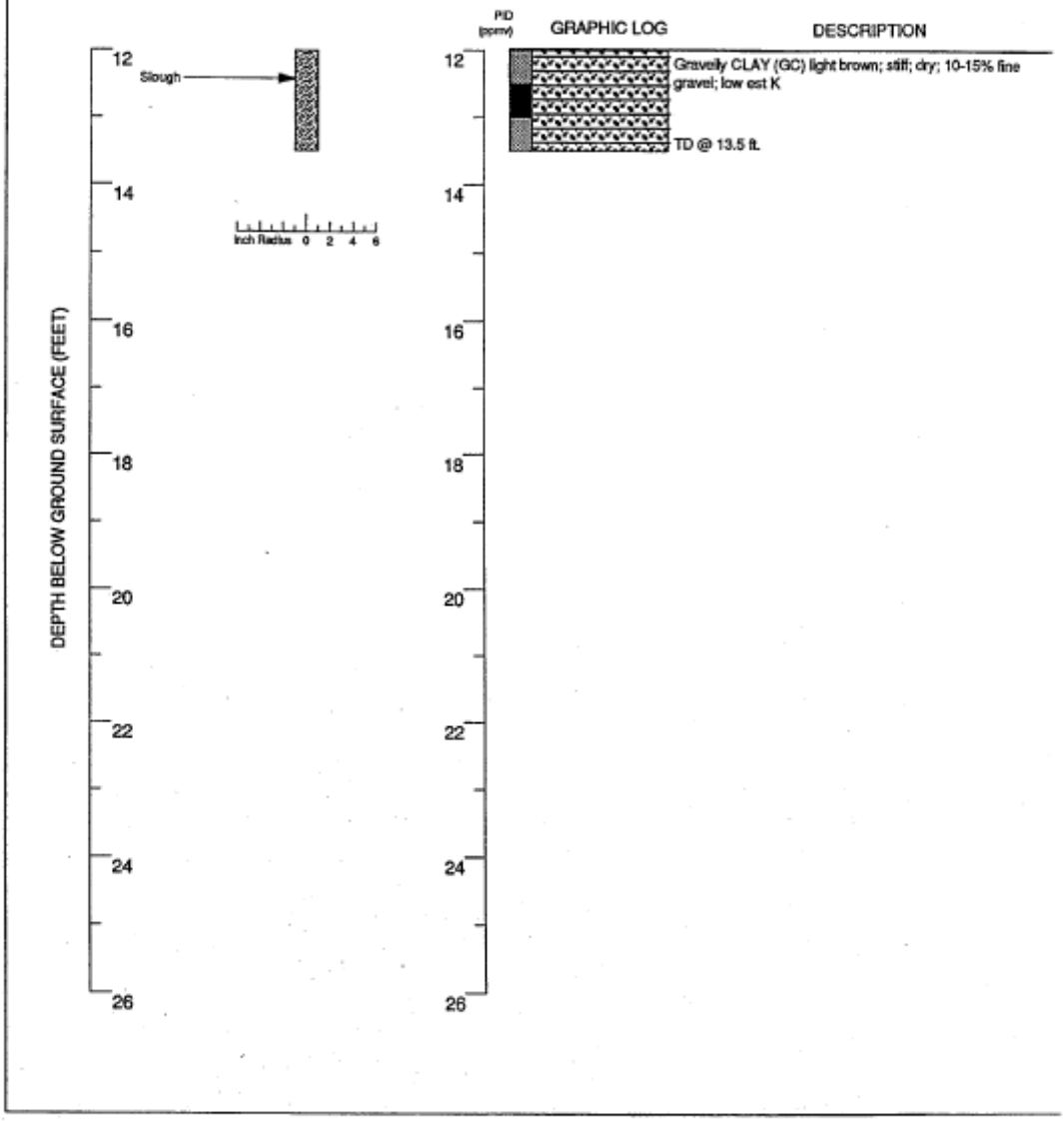
Boring Log and Well Completion Details
MW-17 (Boring B-17)

Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL
17

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

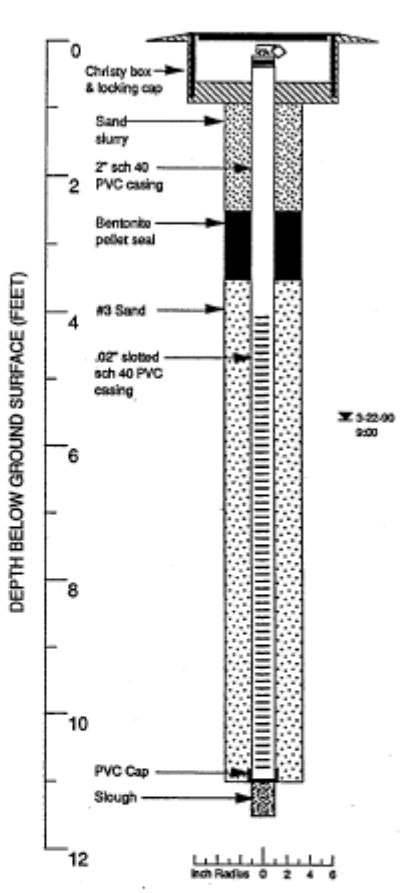
Boring Log and Well Completion Details
MW-17 (Boring B-17)

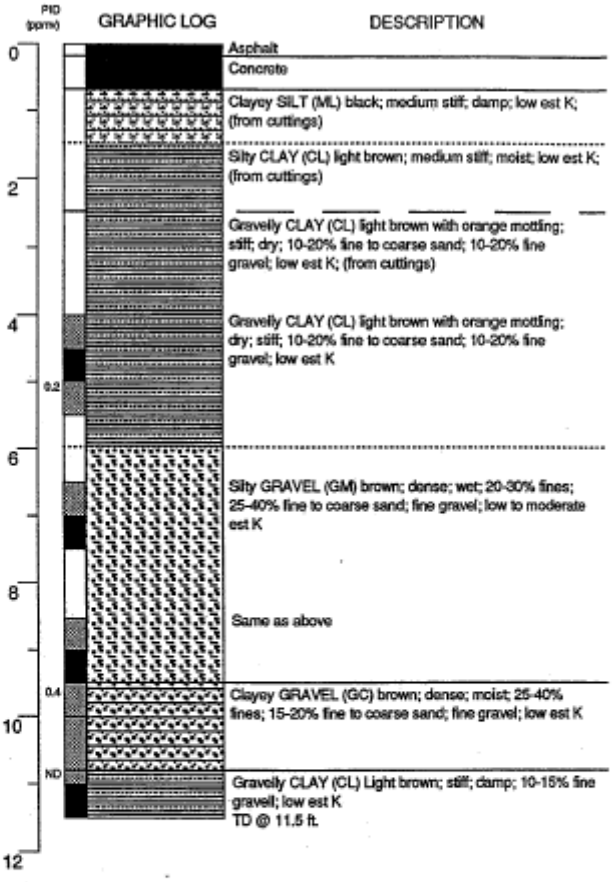
Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL
17

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45





Logged by:	Mike Edmonson	Drilling Company:	Western Geologic Resources	Well Head Completion:	Christy box & locking cap
Project Mgr:	Tom Howard	Drilling Method:	6.75" Hollow stem auger	Type of Sampler:	1.4" split barrel
Dates Drilled:	3-22-90	Driller:	Dave Reichard	TD (Total Depth):	11.5 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachurred where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

Boring Log and Well Completion Details
MW-18 (Boring B-18)

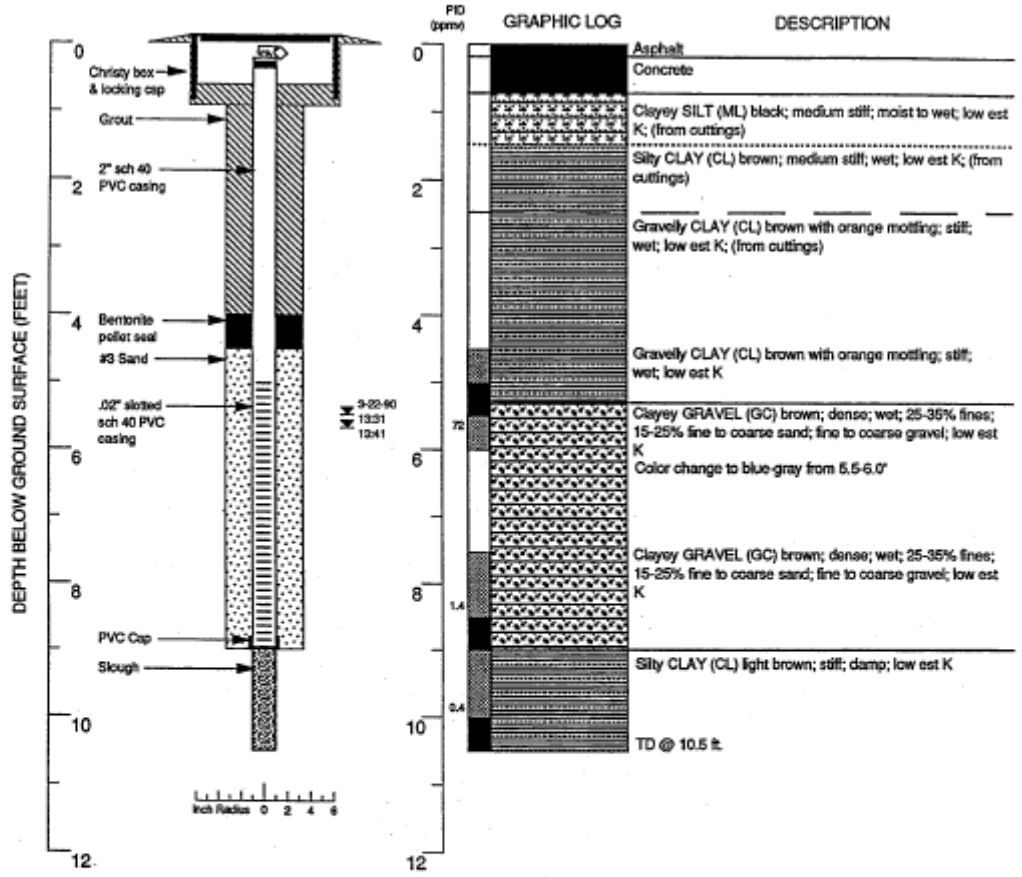
Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL

18

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Logged by:	Mike Edmonson	Drilling Company:	Western Geologic Resources	Well Head Completion:	Christy box & locking cap
Project Mgr:	Tom Howard	Drilling Method:	6.75" Hollow stem auger	Type of Sampler:	1.4" split barrel
Dates Drilled:	3-22-90	Driller:	Dave Reichard	TD (Total Depth):	10.5 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sleeve sample
- Grab sample

Contacts: Solid where certain; Dotted where approximate; Dashed where uncertain; Hachured where gradational

est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary

NR — No recovery

Boring Log and Well Completion Details
MW-19 (Boring B-19)

Chevron Emeryville Asphalt
Emeryville, California

MONITOR WELL
19

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45

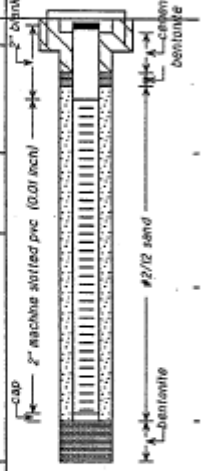
Gettler-Ryan, Inc.

Log of Boring MW-19A

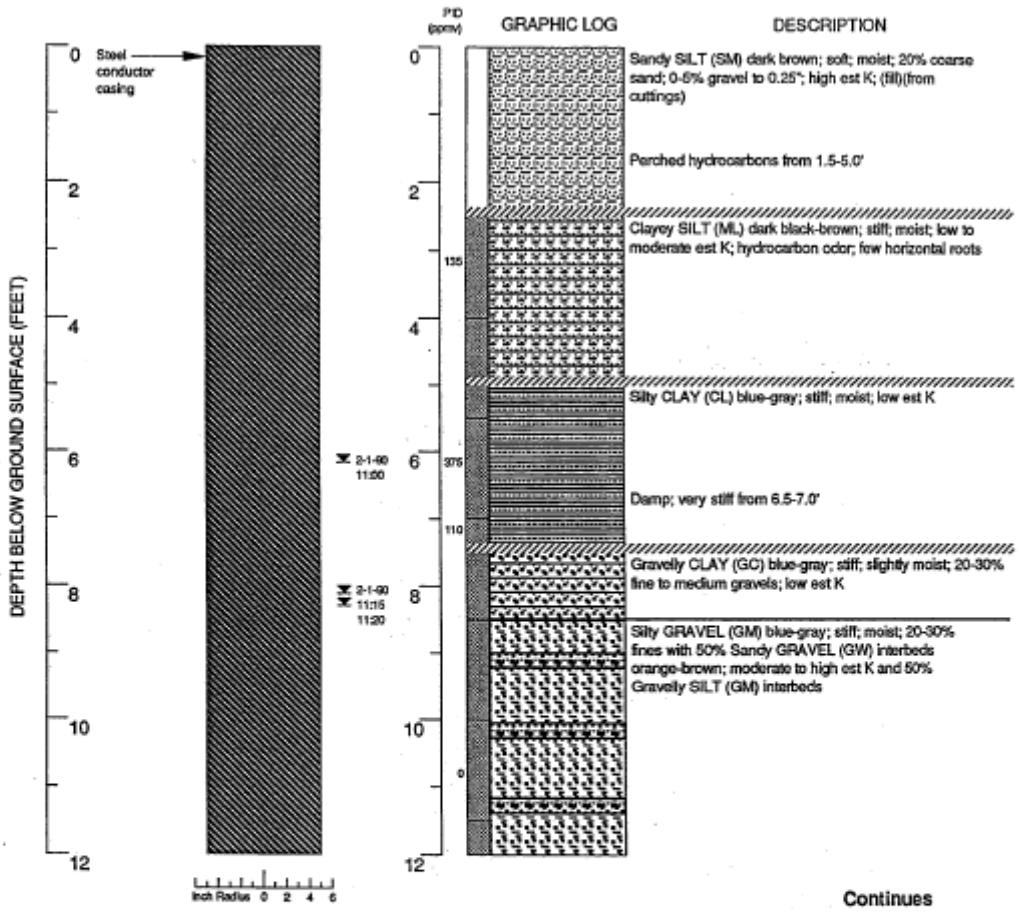
PROJECT: *Former Chevron Asphalt Plant No. 1001067*	LOCATION: *Powell Street Overpass at Landregan, Emeryvi*
G-R PROJECT NO. : *5161.01*	SURFACE ELEVATION: *9.96 feet MSL*
DATE STARTED: *10/30/95*	WL (ft. bgs): *6.0* DATE: *10/30/95* TIME: *12:05*
DATE FINISHED: *10/30/95*	WL (ft. bgs): *6.0* DATE: *10/30/95* TIME: *13:40*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *B. Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							PAVEMENT – asphalt over baserock.
						CL	GRAVELLY CLAY WITH SAND (GC) – dark brown (10YR 3/3), moist, low plasticity; 60% clay, 30% fine gravel, 10% fine to coarse sand; pieces of brick; fill.
	0	NA	MW19A-3				
5	0	18	MW19A-5.5			GC	CLAYEY GRAVEL WITH SAND (GC) – dark yellowish brown (10YR 4/4), saturated, medium dense; 55% fine gravel, 15% clay, 30% fine to coarse sand; pieces of brick; fill.
						CL	SANDY CLAY (CL) – yellowish brown (10YR 5/4), saturated, medium stiff, low plasticity; 70% clay, 30% fine sand.
10	0	5					
15	0	14	MW19A-16				Becomes stiff, color change to light olive brown (2.5Y 5/6); roots.
							Sand decreases to 15%; becomes moist at 16 feet.
							Bottom of boring at 16.5 feet, 10/30/95.
20							(* = converted to equivalent standard penetration blows/ft.)
25							
30							
35							

WELL DIAGRAM



JOB NUMBER: *5161.01*



Continues

Logged by:	Chris Alger	Drilling Company:	Exploration Geoservices	Well Head Completion:	None
Project Mgr:	Chris Alger	Drilling Method:	12" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	2/1-2/2/90	Driller:	Mike Yeager	TD (Total Depth):	32.0 ft.

EXPLANATION

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K: Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR: No recovery

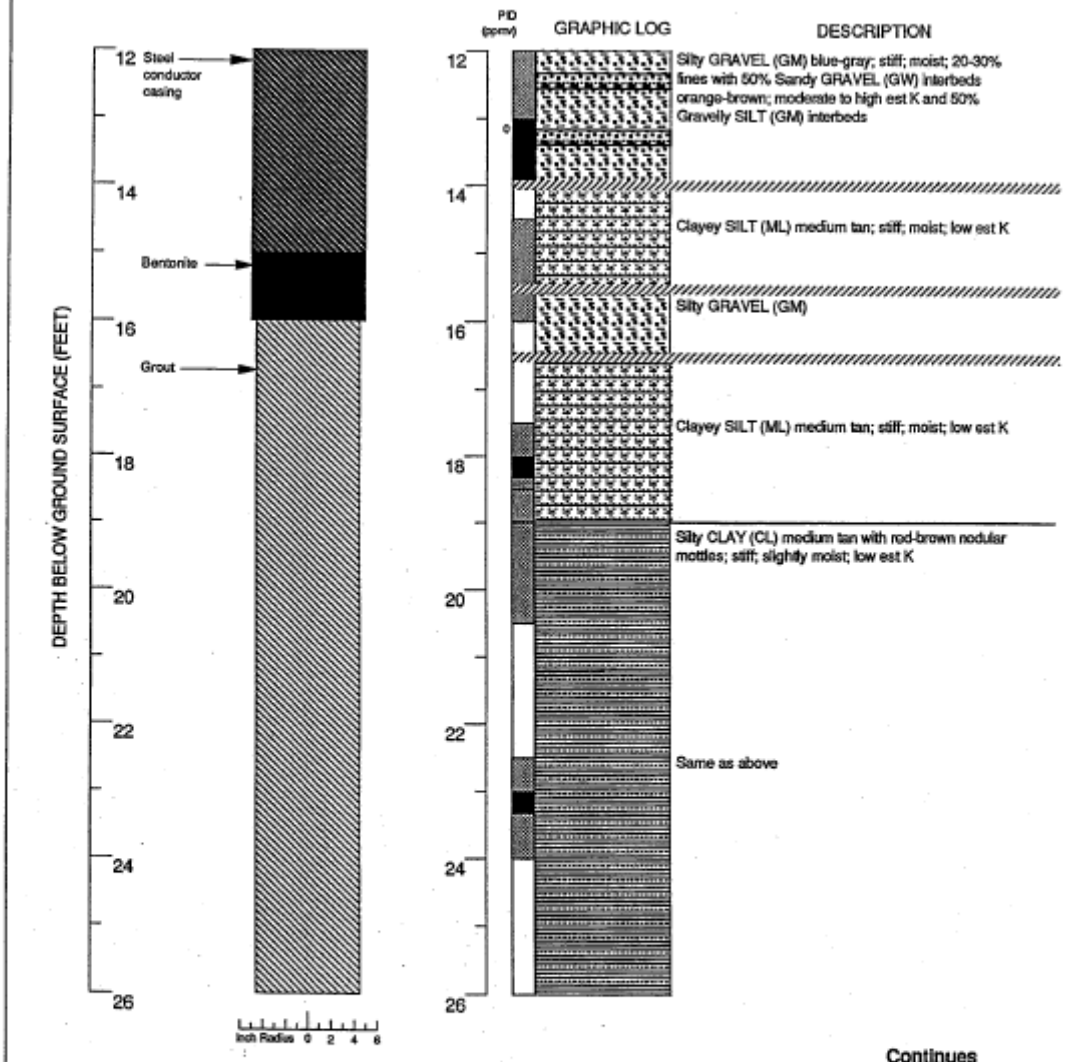
Boring Log
Boring B-1

Emeryville Asphalt Plant
Emeryville, California

BORING 1

WESTERN GEOLOGIC RESOURCES, INC.

1-045.45



Continues

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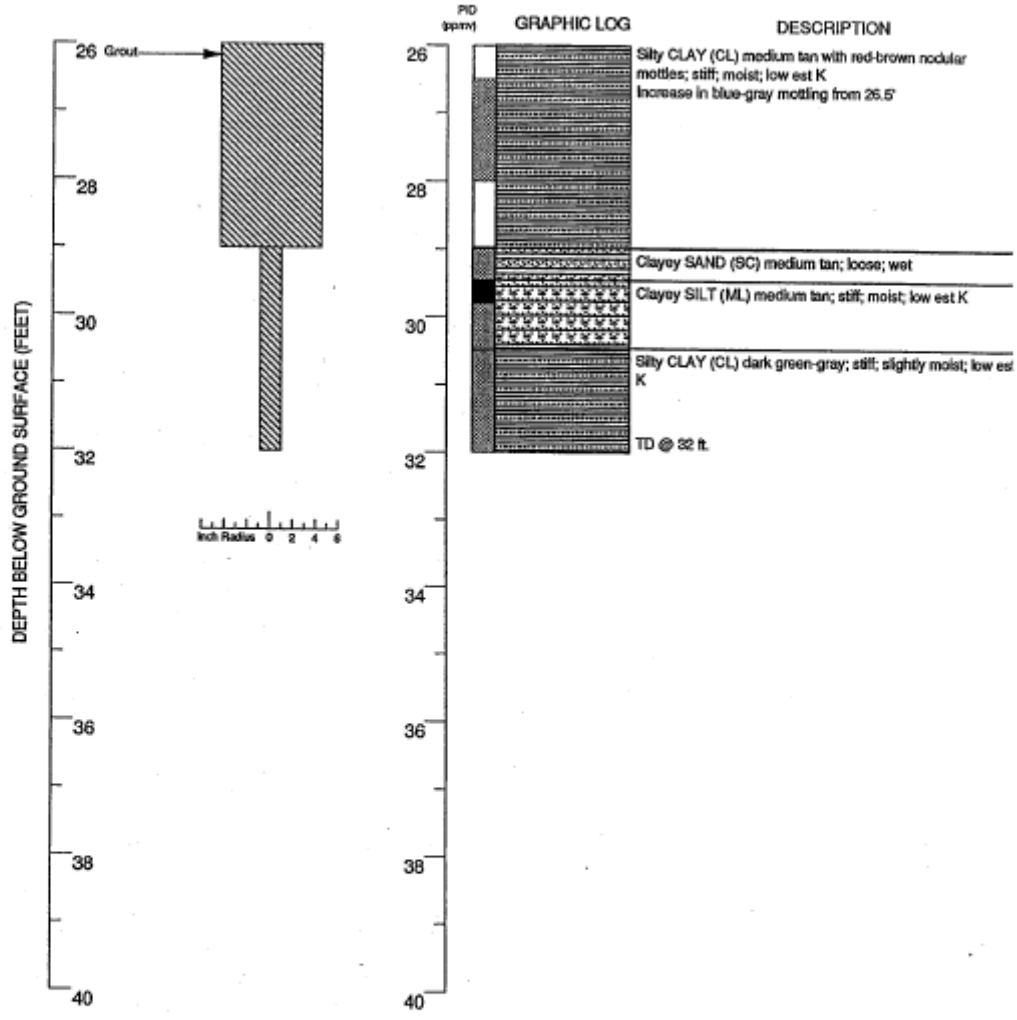

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BORING

1

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