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TRANSMITTAL

DATE: 6-25-10

REFERENCE NO.: 632327

PROJECT NAME: Former Chevron Station 9-0019

TO: Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RECEIVED
10:51 am, Jun 28, 2010
Alameda County
Environmental Health

Please find enclosed:
- ☐ Draft
- ☒ Originals
- ☐ Prints
- ☐ Final
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QUANTITY	DESCRIPTION
1	Site Conceptual Model and Case Closure Request

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

COMMENTS:

Copy to: Ms. Stacie Frerichs, Chevron
Mr. Ron Basarich, CEDA Real Estate

Completed by: James P. Kiernan [Please Print]

Signed:

Filing: Correspondence File

Stacie H. Frerichs
Team Lead
Marketing Business Unit

Chevron Environmental Management Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 842-9655
Fax (925) 842-8370

June 25, 2010
(date)

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

Re: Chevron Facility #_9-0019_____

Address: 210 Grand Avenue, Oakland, California_____

I have reviewed the attached report titled *Site Conceptual Model and Case Closure Request*_____ and dated June 25, 2010.

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 Conestoga-Rovers & Associates, 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,

SH Frerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

SITE CONCEPTUAL MODEL AND CASE CLOSURE REQUEST

FORMER CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA
LOP CASE NO. RO0000137

Prepared For:

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health

Prepared by:
Conestoga-Rovers & Associates

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JUNE 25, 2010
REF. NO. 632327 (5)

SITE CONCEPTUAL MODEL AND CASE CLOSURE REQUEST

FORMER CHEVRON SERVICE STATION NO. 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA
LOP CASE NO. RO0000137

James P. Kiernan, P.E.

Bruce H. Eppler, P.G.

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JUNE 25, 2010
REF. NO. 632327 (5)

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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this *Site Conceptual Model and Case Closure Request* on behalf of Chevron Environmental Management Company (Chevron) for former Chevron Service Station No. 9-0019 located at 210 Grand Avenue in Oakland, California. This Site Conceptual Model (SCM) has been prepared to summarize site conditions, identify potential receptors and potentially complete exposure pathways, and assess whether any data gaps exist.

From June to November 2009, CRA conducted periodic oxygen injection into well MW-5 to reduce concentrations in this well via enhanced biodegradation. The work was performed according to the August 13, 2008 *Oxygen Injection Work Plan* previously submitted to Alameda County Environmental Health (ACEH). Based on the past two semi-annual groundwater monitoring events (third quarter 2009 and first quarter 2010), the oxygen injection appears to have been successful as petroleum hydrocarbon concentrations have significantly decreased and are not rebounding. The results of the oxygen injection are discussed in greater detail in Section 5.0 of this report.

Based on our review of the site background and conditions, the site meets the San Francisco Bay Regional Water Quality Control Board (RWQCB) criteria for closure as a low-risk groundwater case as described in their January 5, 1996 memorandum entitled *Interim Guidance on Required Cleanup of Low-Risk Fuel Sites*.

Presented below are the site description and background, site characteristics, a summary of previous environmental work, the details and results of the oxygen injection, a discussion of remaining impacts at the site, an evaluation of potential risk, our rationale for closure based on the low-risk groundwater case criteria, and our conclusions and recommendations.

2.0 SITE DESCRIPTION AND BACKGROUND

The site was formally a Chevron-branded service station located on the northwest corner of the intersection of Grand Avenue and Bay Place (Figure 1). The majority of the site is currently occupied by a paved parking lot for the Downtown Oakland Senior Center; however, the eastern portion of the site is now covered by the southbound lanes of Bay Place (Figure 2). The date the site was first occupied by a service station is unknown; however, based on historical aerial photographs, the site appears to have been occupied by a service station as early as 1946. In the 1946 aerial photograph, the site appears triangular in shape and occupied by a building in a Y-shaped configuration.

This configuration is also shown on an older Chevron site survey and facility plan (date unknown), in which a station building and two canopies formed the observed Y-shape.

Information regarding other station facilities at this time including previous underground storage tanks (USTs) is unknown; however, it appears the fuel USTs, possibly 6,000-gallon capacity, were located on the southern side of the site and several fill pipes were noted in the sidewalk of Grand Avenue on the facility plan. Sometime between 1946 and 1958, a portion of the western side of the site became part of Montecito Avenue as this road was reconfigured to intersect perpendicular to Grand Avenue. By 1968, the station appeared to have been reconstructed into the most recent configuration (Figure 2).

The most recent station facilities consisted of a station building with two service bays each containing a hydraulic hoist, three 10,000-gallon fiberglass gasoline USTs, a 1,000-gallon fiberglass used-oil UST, two dispenser islands, and associated product piping (Figure 2). The station was demolished and all facilities were removed in June 1990. In 1992, the property was acquired by the City of Oakland, and the existing parking lot was constructed over the western portion of the site in the mid-1990s. Bay Place was expanded over the eastern portion of the site. Montecito Avenue was closed at Bay Place and its southernmost portion, between Bay Place and Grand Avenue, was incorporated into the Veteran's Memorial Building property (existing senior center) and converted to a parking lot and landscaping. No structures are present on the original service station property.

Surrounding land use is primarily commercial with some residential further from the site. St. Paul's Episcopal Church is located across Bay Place to the east of the site. The Downtown Oakland Senior Center is located to the northwest of the site. To the south and southeast of the site across Grand Avenue is Lakeside Park located on the shores of Lake Merritt, an estuarine urban surface water body. Lake Merritt, at its closest point, is approximately 225 feet southwest of the site. The site is relatively flat at an approximate elevation of 8 feet above mean sea level (msl).

Environmental investigations and assessments have been ongoing since 1989 when monitoring wells were installed. Investigations to date include: installing monitoring wells MW-1 through MW-9; quarterly to semi-annual groundwater monitoring; confirmation soil sampling during UST removal; and a soil vapor survey. Monitoring wells MW-4 and MW-5 remain onsite, well MW-6 is offsite in a landscaped area to the west, and wells MW-7 through MW-9 are in Grand Avenue to the south and southwest. Monitoring wells MW-1 through MW-3 have been destroyed due to construction or soil

excavation. Well locations are shown on Figure 2. Well construction details are presented in Table 1.

Soil and groundwater remedial actions have consisted of extensive over-excavation of hydrocarbon-bearing source area soil (approximately 1,700 cubic yards) in 1990, 1991, and 1996; groundwater extraction (approximately 2,500 gallons) in 1993; the placement of Oxygen Releasing Compound® (ORC) in well MW-5 from 1998 to 2004; and oxygen injection into well MW-5 in 2009. A summary of the environmental work performed at the site is presented in Section 4.0.

3.0 SITE CHARACTERISTICS

3.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

The site is located on the East Bay Plain as mapped by E.J. Helley and others.[1] Soil in the site vicinity consists of Holocene-age, medium-grained alluvium including unconsolidated, moderately sorted, fine sand, silt, and clayey silt with a few thin beds of coarse sand. These materials are underlain by late Pleistocene-age alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, interbedded clay, silt, sand, and gravel.

The site is located in the East Bay Plain Basin. The basin is an elongated, northwest–trending, flat alluvial plain occupying approximately 115 square miles. The basin is bounded by San Francisco Bay to the west, by San Pablo Bay to the north, by the Hayward fault to the east, and by the boundary of the Alameda County Water District to the south. The bottom of the basin is the contact between the consolidated and unconsolidated sediment, which can occur at maximum depths of 1,000 feet. The Oakland Sub-area consists of a series of alluvial fan deposits. There are no well-defined estuarine muds that act as aquitards for groundwater migration[2].

Designated beneficial uses for groundwater in this basin include municipal, industrial, and agricultural uses. There is no evidence that groundwater supplies are sufficient for municipal use, primarily due to the low recharge rates. It is our understanding that there are no current or planned uses of groundwater in the site vicinity as a drinking water source.

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1 1979, Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943

2 From Department of Water Resources Bulletin 118-2-9.04

3.2 SITE GEOLOGY AND HYDROGEOLOGY

Based on previous subsurface investigations and remedial excavations, the site is underlain by silts and clays interbedded with silty sand and gravel to the maximum depth explored of 20 feet below grade (fbg). Fine-grained material (silts and clays) were encountered immediately beneath surface fill materials. A coarser-grained unit consisting of silty sand to silty gravel, ranging in thickness from 1 to 9 feet, was encountered beneath the fine-grained unit at depths between 5 to 16 fbg. This unit is underlain by another fine-grained unit consisting of silt to silty clay. Copies of the available boring logs are presented in Appendix A. Geologic cross-sections presenting soil encountered beneath the site are presented on Figures 3 and 4. These cross-sections depict the best available information on the shallow subsurface, and include the approximate limits of the remedial excavations conducted in the early to mid-1990s.

Groundwater was encountered during drilling at depths ranging from approximately 6 to 13 fbg. Depth to groundwater in the site monitoring wells has ranged from 0.94 to 12.17 feet below top of casing (TOC); but typically fluctuates between 4 and 7 feet below TOC. Groundwater may be at least semi-confined as the initial depth to water in the completed wells generally was several feet shallower than the depth to groundwater encountered in the associated boring. The groundwater flow direction has varied from northwest to southwest, but the overall flow direction appears to be to the west-southwest toward Lake Merritt. A groundwater flow rose diagram is presented on Figure 2. A copy of the first semi-annual 2010 groundwater monitoring report is presented in Appendix B. The historical range of groundwater elevations measured in the wells is shown on the cross-sections (Figures 3 and 4).

3.3 NEARBY WELLS AND SENSITIVE RECEPTORS

In 1989, Western Geologic Resources, Inc. (WGR) reviewed California Department of Water Resources (DWR) records to identify wells within half-mile of the site. Twelve wells were identified during the survey; however, only eight of these wells fell within the half-mile search radius. Four of the wells were identified as monitoring wells. A cathodic protection well was identified approximately quarter-mile northeast (up- to crossgradient) of the site, an irrigation well was identified approximately 2,000 feet south-southwest (crossgradient) of the site across Lake Merritt, and two wells of unknown use were identified approximately half-mile southwest (down- to crossgradient) of the site. Lake Merritt was identified approximately 225 feet to the southwest of the site. The results of the survey were presented in WGR's *Subsurface*

Investigation report dated June 1989. The well survey results and a copy of the figure showing the identified well locations are presented in Appendix C.

In 1990, WGR updated the well survey by reviewing both Alameda County Public Works Agency (ACPWA) and DWR records. A total of 62 active wells were identified during the survey; however, only 42 of these wells fell within the half-mile search radius. All 20 wells beyond the search radius were identified as monitoring wells. The wells within the half-mile search radius included the previously identified cathodic protection and irrigation wells and a test well approximately 2,200 feet northwest (crossgradient) of the site; the remaining wells were identified as monitoring wells. This work was documented in WGR's *Off-Site Subsurface Investigation* report dated August 1990. The well survey results and a copy of the figure showing the identified well locations are presented in Appendix C.

In May 2010, CRA reviewed DWR records to identify wells within quarter-mile of the site. Twenty-five wells were identified within the search radius; however, all were identified as monitoring wells with the exception of the previously identified cathodic protection well. The well survey results and a figure showing the identified well locations are also presented in Appendix C.

Drinking water for the area is provided by East Bay Municipal Utility District (EBMUD), and the source is the Mokelumne River Basin in the Sierra Nevada range. Based on the proximity to San Francisco Bay and Lake Merritt (mixed fresh and saltwater), it is unlikely shallow groundwater in the site area would be used as a drinking water source. The concentration of total dissolved solids (TDS) in several groundwater samples collected from wells at a nearby facility (Former Bill Cox Cadillac & Buick at 230 Bay Place) in 2008 exceeded the RWQCB Basin Plan drinking water standard of 3,000 milligrams per liter (mg/L); further decreasing the likelihood groundwater in the site area would be considered suitable as a potential drinking water source.

Because the site is occupied by a paved parking lot (no structures) and the Bay Place right-of-way, no sensitive receptors exist at the site. Although the site is located in a mixed commercial and residential area, the nearby sensitive properties are located up-or crossgradient of the site. The area downgradient of the site is occupied by major streets or undeveloped land.

The nearest surface water body is Lake Merritt, located approximately 225 feet southwest (down- to crossgradient) of the site. Lake Merritt is a tidal lagoon that serves as a wildlife refuge. Glen Echo Creek (concrete-lined channel) is located approximately 250 feet west-southwest (downgradient) of the site. Glen Echo Creek discharges into

Lake Merritt after flowing beneath Grand Avenue. A discussion of the incomplete exposure pathway to the downgradient receptors is included in Section 8.2.

3.4 PREFERENTIAL PATHWAY EVALUATION

Due to the shallow depth to groundwater, CRA evaluated the presence of potential preferential pathways in the site vicinity that may contribute to the migration of groundwater to other receptors through an unanticipated exposure pathway.

The older Chevron facility plan showed a 24-inch diameter storm drain line, an 8-inch sanitary sewer line, and what appeared to be two 6-inch water lines running southeast to northwest beneath Bay Place to the northeast of the site (Appendix D). A lateral from one of the water lines appeared to be servicing the second-generation station building on the northeast side of the site. A telephone line was also shown beneath the sidewalk of Bay Place as it was configured at that time. A 30-inch diameter storm drain line and an 8-inch diameter sanitary sewer line were shown running northeast to southwest beneath the northwest portion of the site and Montecito Avenue. An electric line servicing the first-generation station building, and a sanitary sewer lateral servicing the second-generation station building from Montecito Avenue in the northwest portion of the site were also shown. Two storm drain catch basins were shown adjacent to the southwest corner of the site; these connected to a line that ran to the west beneath Grand Avenue into which the 30-inch line beneath Montecito Avenue connected.

In a letter dated June 2, 1995, ACEH requested an investigation and report on the location of utilities in the site vicinity (Montecito and Grand Avenues) that may be providing a preferential pathway for impacted groundwater migration to Glen Echo Creek or Lake Merritt. Cambria Environmental Technology, Inc. (Cambria [now CRA]) evaluated utilities present in the site vicinity and prepared a site plan showing known or suspected utilities. Sanitary sewer and storm drain information was obtained from a City of Oakland (City) map. The results of the investigation and the site plan were presented in a letter from Chevron to ACEH dated August 23, 1995; the identified utilities are summarized below.

- The 24-inch diameter storm drain line and the water line lateral beneath Bay Place to the northeast of the site were shown
- The 30-inch diameter storm drain and 8-inch diameter sanitary sewer lines were shown beneath the northwest portion of the site and Montecito Avenue; the sewer lateral servicing the second-generation station building was also shown

- The 12-inch storm drain line beginning near the southwest corner of the site and running west beneath Grand Avenue was also shown
- Two City electrical vaults and a possible Pacific Gas & Electric (PG&E) line were shown beneath the sidewalk of Grand Avenue, possibly indicating that electric and/or gas lines may be present

No information regarding the depth of any utilities was provided. A copy of the Cambria site plan is presented in Appendix D.

Based on the available information, several utility lines are located in the vicinity of the site beneath the current parking lot and Grand Avenue. No information regarding the depth or backfill material of these utilities was available. However, since the extent of impacted groundwater appears to be limited to the area of well MW-5, and the plume does not appear to be migrating, the utilities along Bay Place and the former Montecito Avenue right-of-way are unlikely to result in preferential groundwater flow that could affect hydrocarbon migration. The remaining wells either do not contain petroleum hydrocarbons or did not contain petroleum hydrocarbons when they were removed or sampling was discontinued. The residual impacted groundwater in the vicinity of MW-5 may be in close proximity to the assumed electrical conduits between the identified electrical boxes, and to the possible PG&E line along Grand Avenue; however, these lines are typically installed at a shallow depth and are likely above the typical groundwater depth of 4 to 7 fbg. Therefore, we would not expect the identified utility lines to act as preferential pathways and no further assessment is warranted.

4.0 SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

A summary of the previous environmental work performed at the site is presented below. The historical soil and soil vapor sample analytical results are presented in Tables 2 and 3, respectively. The approximate well and soil sample locations are shown on Figure 2. Copies of previous site plans showing former sampling locations are presented in Appendix E.

February 1989 Soil Vapor Survey

In February 1989, WGR performed a soil vapor survey to assess the presence of hydrocarbons in shallow soil. Nineteen soil vapor samples were collected at various depths (generally 5 and 15 fbg) from 12 locations (VP-1 through VP-12) across the site. The samples were analyzed for total volatile hydrocarbons (TVH), benzene, toluene, and

xylenes using a portable gas chromatograph (GC). TVH were detected in all the samples at concentrations ranging up to 73,000 parts per million (ppm) (VP-7 at 10 fbg). Benzene was reported in three samples at concentrations up to 220 ppm (VP-8 at 5 fbg); in the majority of the remaining samples benzene was unable to be reported due to overlapping peaks. Toluene and xylenes were reported in several of the samples at concentrations up to 4,700 ppm (VP-4 at 5 fbg) and 390 ppm (VP-9 at 5 fbg), respectively; again, in several of the samples these constituents were unable to be reported due to overlapping peaks. The results of the investigation were presented in WGR's letter report dated March 30, 1989.

March 1989 Well Installations and Well Survey

In March 1989, WGR installed groundwater monitoring wells MW-1 through MW-5 at depths of 12 to 16.5 fbg. Soil samples were collected at various depths (ranging from 5 to 16.5 fbg) and analyzed for total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and total xylenes (BTEX), 1,2-Dichloroethane (1,2-DCA), and ethylene dibromide (EDB). Hydrocarbon concentrations detected in soil include up to 390 milligrams per kilogram (mg/kg) TPHg, 4.5 mg/kg benzene, 16 mg/kg toluene, 8.4 mg/kg ethylbenzene, and 32 mg/kg total xylenes (Table 2). No EDB was detected in any of the samples, and 1,2-DCA was detected in three samples up to 0.2 mg/kg. None of the analytes were detected in the samples collected from the boring for well MW-1.

Four soil samples (depths of 5, 10, 15, and 18 fbg) from the boring for well MW-3 located near the used-oil UST were also analyzed for volatile organic compounds (VOCs), oil and grease (O&G), and the metals; cadmium, chromium, lead, and zinc. The sample from 5 fbg contained 0.77 mg/kg acetone and 0.061 mg/kg 1,2-DCA. No acetone or 1,2-DCA were detected in the deeper samples. O&G was only detected in the samples collected at 15 fbg (160 mg/kg) and 18 fbg (360 mg/kg). Up to 60 mg/kg chromium, 7 mg/kg lead, and 51 mg/kg zinc were detected in the four samples; no cadmium was detected.

The initial groundwater samples collected from the wells were analyzed for TPHg, BTEX and other VOCs, O&G, and metals. The highest concentrations detected included 20,000 micrograms per liter [µg/L] TPHg, 6,600 µg/L benzene and 0.7 µg/L 1,2-DCA. No O&G was detected.

WGR also performed a well survey to evaluate the presence of any wells within a half-mile radius of the site. The results of the survey were previously discussed in Section 3.3.

Based on the results of the investigation, it was concluded that the petroleum hydrocarbons detected in groundwater appeared to have originated from the USTs. Further details of the investigation were presented in WGR's *Subsurface Investigation* report dated June 1989.

June 1990 Station Demolition and UST Removal

In June 1990, as part of station demolition, three 10,000-gallon fiberglass gasoline USTs, a 1,000-gallon fiberglass used-oil UST, associated product piping, and two hydraulic lifts were removed from the site. No holes were observed in any of the tanks upon removal. Groundwater was encountered in the gasoline UST excavation at approximately 8 fbg; therefore, soil samples #5 through #9 were collected by Blaine Tech Services, Inc. (Blaine Tech) from the excavation sidewalls at depths ranging from 4 to 7.5 fbg and analyzed for TPHg and BTEX. Up to 13 mg/kg TPHg and 0.1 mg/kg benzene were detected (Table 2). Soil samples #10 through #13 were collected at 3 fbg beneath the product piping and analyzed for TPHg and BTEX. Up to 160 mg/kg TPHg and 2.9 mg/kg benzene were detected.

Soil samples #3, #4, and #18 were collected beneath the used-oil UST at depths of 11.5, 10, and 12 fbg, respectively, and analyzed for TPHg, BTEX, O&G, TPH as diesel (TPHd), halogenated VOCs (HVOCs), cadmium, chromium, lead, and zinc. Analytes detected include up to 190 mg/kg TPHd, 69 mg/kg TPHg, and 0.29 mg/kg benzene. O&G was detected in all three of the samples at concentrations ranging up to 3,600 mg/kg. The only HVOCs detected were up to 0.14 mg/kg cis-1,2-dichloroethene (cis-1,2-DCE), 0.052 mg/kg tetrachloroethene (PCE), and 0.25 mg/kg 1,1,1-trichloroethane (1,1,1-TCA). The detected chromium (up to 39 mg/kg), lead (up to 20 mg/kg), and zinc (up to 43 mg/kg) were consistent with background levels; no cadmium was detected in any of the samples.

Soil samples #1 and #2 were collected at 8 fbg beneath each of the hydraulic lifts and analyzed for TPHd and O&G. Up to 180 mg/kg TPHd and 1,300 mg/kg O&G were detected. The results of the investigation were presented in Blaine Tech's *Sampling Report* dated August 16, 1990.

June 1990 Offsite Well Installations and Well Survey

In June 1990, WGR installed offsite wells MW-6 through MW-9 to depths of 8 to 10.5 fbg in adjacent Montecito and Grand Avenues. Three soil samples were collected at depths ranging from 4.5 to 12 fbg from each well boring and analyzed for TPHg and BTEX. No TPHg or benzene were detected. The only hydrocarbon detected was 0.01 mg/kg

ethylbenzene. Several of the samples were also analyzed for VOCs and HVOCs; none were detected. The three soil samples collected from boring MW-6 were analyzed for O&G, cadmium, chromium, lead, and zinc; O&G was not detected in any of the samples, and the detected cadmium (up to 3 mg/kg), chromium (up to 29 mg/kg), lead (up to 15 mg/kg), and zinc (up to 51 mg/kg) concentrations were consistent with background levels.

The initial groundwater samples collected from the wells were analyzed for TPHg, BTEX, and HVOCs. No HVOCs or benzene were detected and the highest TPHg concentration detected was 210 µg/L. The initial groundwater samples collected from wells MW-7 through MW-9 were also analyzed for O&G, cadmium, chromium, lead, and zinc. No O&G was detected. Metals detected include up to 79 µg/L cadmium, 960 µg/L chromium, 100 µg/L lead, and 790 µg/L zinc.

An updated well survey was also performed; the results were previously discussed in Section 3.3. The results of the investigation were presented in WGR's *Off-Site Subsurface Investigation* dated August 1990.

June 1990 to May 1991 Over-Excavation

Due to the petroleum hydrocarbons detected in soil during the UST removals, WGR directed an extensive over-excavation of impacted soil beginning in June 1990. Excavation was performed in the area of the former gasoline USTs and dispenser islands, the former used-oil UST and station building, and what reportedly was a former product line parallel to Bay Place in the eastern and southeastern portions of the site. The extent of the excavations were determined based on field screening of soil with a photo-ionization detector (PID) and/or visual observation, and in some areas was limited due to the proximity of sidewalks and streets.

The excavation was extended vertically to the groundwater depth. The final depth of the excavation areas ranged from approximately 4 to 9 fbg. A total of 10 discrete confirmation soil samples (OP-W-7.0; OPSW-5; OPSC-5; 02; 04; 111-06; 123-01; 123-02; 0214.01; and 0214.02) and eight 2-point composite soil samples (04291.01,02; 04291.03,04; 04291.05,06; 04291.07,08; 05211-01,02; 05211-03,04; 05211-05,06; and 05211-07,08) were collected from the sidewalls of the excavation areas during the work. The 10 discrete samples were collected in the area of the former gasoline and used-oil USTs and were analyzed for TPHg, BTEX, and O&G. The eight composite samples were collected from the excavation in the area of the (reported) former product line and were analyzed for TPHg and BTEX. The highest hydrocarbon concentrations detected in the final

confirmation samples were 210 mg/kg TPHg, 0.57 mg/kg benzene, and 380 mg/kg O&G (Table 2).

Based on field observations, impacted soil reportedly was still present in the sidewalls of the excavations along Grand and Montecito Avenues. Approximately 1,500 cubic yards (yds^3) of soil were removed during the work. Approximately 800 yds^3 of soil was aerated onsite, sampled, and reused as backfill material. The remaining 700 yds^3 of soil was disposed offsite and replaced with clean imported fill. Well MW-2 also was reportedly destroyed during this time. Further details of the work were presented in the *Soil Excavation, Remediation, and Disposal* report dated August 1991 and prepared by RESNA Environmental Solutions.

1993 Groundwater Extraction

From March 1993 through January 1994, Geraghty & Miller, Inc. (Geraghty & Miller) operated a groundwater extraction (GWE) system connected to well MW-5. The system was shut down in January 1994 because the maximum flow rate was only 0.02 gallons per minute (gpm). As of December 1993, approximately 2,500 gallons of groundwater had been removed, treated, and discharged under permit into the sanitary sewer.

December 1995 System Removal, Well Destructions, and Shallow Soil Sampling

In December 1995, Geraghty & Miller coordinated the removal of the GWE system from the site. Wells MW-1 and MW-3 were also destroyed by pressure grouting at this time. Because the site was planned for redevelopment as a parking lot, shallow soil samples S-1 through S-10 were collected from 3 fbg across the site using a backhoe to evaluate if residual hydrocarbons were present that may impact the proposed development. The samples were analyzed for TPHg, TPHd, and BTEX. The highest concentrations detected included up to 38 mg/kg TPHd, 2.8 mg/kg TPHg, and 0.026 mg/kg benzene (Table 2).

Based on the low concentrations detected, it was concluded that there did not appear to be any significant concerns regarding the proposed construction activities or the use of the site as a parking lot. The results of the investigation were presented in Geraghty & Miller's *Report of Groundwater Extraction System Removal, Shallow Soil Sampling, and Abandonment of Groundwater Monitoring Wells* dated December 20, 1995.

November 1996 Excavation

In November 1996, impacted soil was encountered during the installation of a new storm drain line in Montecito Avenue near the western side of the site to the northwest of the former gasoline USTs. The storm drain line was being installed for the new parking lot. Touchstone Developments (Touchstone) coordinated the removal of impacted soil in this area. Soil was excavated down to and around a portion of the existing storm drain line and excavation continued toward the area where a new catch basin would be installed. Excavation was continued until impacted soil was removed based on field observations. The final excavation dimensions were approximately 36 feet long by 18 feet wide by 9.5 feet deep. Soil sample OXB was collected from the bottom of the excavation at approximately 9.5 fbg, and four soil samples (OX-1 through OX-4) were collected from the sidewalls of the excavation at depths of 4.5 to 8 fbg. The five samples were analyzed for TPHg and BTEX. The highest concentrations detected include 140 mg/kg TPHg and 0.54 mg/kg benzene (Table 2). Approximately 200 yds^3 of impacted soil was removed and disposed offsite during the work, and the excavation was backfilled with clean imported fill. Details of the investigation were presented in Touchstone's *Soil Excavation Sampling Report* dated January 31, 1997.

2000 Risk-Based Corrective Action (RBCA) Evaluation

In 2000, Gettler-Ryan Inc. (G-R) performed a RBCA evaluation (as described in ASTM E-1739 *Standard Guide for Risk-Based Corrective Action Applied at Petroleum Sites*) to evaluate if further investigation or remediation was warranted. Based on the RBCA analysis and a review of the corresponding Risk-Based Screening Levels (RBSLs), residual concentrations in soil and groundwater were below Tier 1 screening levels; therefore, no further work was warranted. It was concluded that the extent of hydrocarbons was defined and shrinking, and there were no potential threats to human health or the environment based on the site usage. Therefore, case closure was recommended. Further details were presented in G-R's *Site Conceptual Model, Risk-Based Corrective Action Evaluation, and Closure Plan* dated May 10, 2000.

2002 Updated RBCA Evaluation

In 2002, Delta Environmental Consultants, Inc. (Delta) performed an updated Tier 2 RBCA evaluation for the site as requested by ACEH. The updated RBCA evaluated TPHg and a future residential land use scenario. The results of the RBCA analysis indicated that residual concentrations in soil and groundwater at the site did not exceed the respective Site-Specific Target Levels (SSTLs). Based on these results, it was concluded that no further work was warranted and case closure was again

recommended. Further details were presented in Delta's *Risk-Based Corrective Action Evaluation* dated June 13, 2002.

September 2005 Two-Phase Extraction (TPE) Pilot Test

In September 2005, Cambria performed a 5-day TPE pilot test to evaluate if TPE would be an effective method to remediate hydrocarbons in the area of well MW-5. At the end of the test, a casing vacuum of 21-inches of mercury produced only 16 cubic feet per minute of vapor flow. Hydrocarbon concentrations in vapor at the end of the test were 2,200 parts per million by volume (ppmv) TPHg and 10 ppmv benzene. The cumulative hydrocarbon mass removed in vapor-phase during the five day test was 23.9 pounds. Approximately 764 gallons of groundwater were removed. Because of the low vapor flow rates, low mass removal rates, and minimal groundwater table drawdown observed during the test, TPE was not deemed to be a practical remedial option. The results of the investigation were presented in CRA's *Two-Phase Extraction Pilot Test Report* dated May 16, 2007. Copies of the figures and tables from this report are presented in Appendix F.

2009 Oxygen Injection

From June to November 2009, CRA performed bi-weekly oxygen injection into well MW-5 to enhance hydrocarbon biodegradation. Confirmation grab-groundwater samples were collected periodically to evaluate the effectiveness of the injections. The injections were discontinued in November 2009 to evaluate for rebound. The results of the oxygen injection are discussed in the following section.

5.0 OXYGEN INJECTION SUMMARY AND RESULTS

In June 2009, CRA began bi-weekly oxygen injection into remaining impacted well MW-5 in an effort to decrease dissolved hydrocarbon concentrations in groundwater via enhanced biodegradation. The oxygen injection was performed in general accordance with CRA's August 13, 2008 *Oxygen Injection Work Plan*. During each event, approximately 125 cubic feet of oxygen was diffused into well MW-5 over a period of approximately 1 to 2 hours. Dissolved oxygen (DO) measurements were collected in wells MW-4 and MW-5 before and after each event. CRA collected confirmation grab-groundwater samples (no-purge) from wells MW-4 and MW-5 prior to the first event in June 2009, then once during July, August, and November 2009 to evaluate the effectiveness of the oxygen injection. The samples were analyzed for TPHg and BTEX; additional analysis for methyl tertiary butyl ether (MTBE) was performed

during two of the events. Regular groundwater monitoring data was also used to evaluate the effectiveness. By November 2009, TPHg and BTEX concentrations in well MW-5 had been reduced by one to two orders of magnitude; therefore, injection was discontinued to evaluate for rebound.

TPHg and benzene concentrations in wells MW-4 and MW-5 over the past two years (including both confirmation and semi-annual monitoring samples) are summarized in Table A below. Copies of the laboratory analytical reports from the CRA confirmation sampling events are presented in Appendix G. A copy of the first semi-annual 2010 groundwater monitoring report is presented in Appendix B.

TABLE A.
SUMMARY OF OXYGEN INJECTION RESULTS
(concentrations in ug/L)

Well	*Date*	*TPHg*	*Benzene*
MW-4	3/6/08	<50	<0.5
	9/16/08	<50	<0.5
	3/2/09	<50	<0.5
Grab (begin O_2 injection)	6/3/09	<50	<0.5
Grab	7/15/09	<50	<0.5
Grab	8/28/09	<50	<0.5
	9/16/09	<50	<0.5
Grab	11/5/09	<50	<0.5
(End O_2 Injection 11/19/09)	3/4/10	<50	<0.5
MW-5	3/6/08	22,000	1,100
	9/16/08	11,000	460
	3/2/09	25,000	450
Grab (begin O_2 injection)	6/3/09	27,000	560
Grab	7/15/09	16,000	560
Grab	8/28/09	7,800	250
	9/16/09	990	38
Grab	11/5/09	990	3
(End O_2 Injection 11/19/09)	3/4/10	540	9

< Not detected at or above stated laboratory reporting limit
Grab Grab-groundwater sample (no purge)

As shown above, the oxygen injection reduced concentrations in well MW-5 and only low concentrations of TPHg and benzene were detected during the March 2010 event. Significant increases in DO concentrations were observed in well MW-5 following each event. The measured DO levels in MW-5 prior to each event were similar to the pre-injection level, possibly indicating that the oxygen was being rapidly utilized by the microorganisms to degrade the hydrocarbons, as evidenced by the rapid decline in concentrations.

6.0 CONSTITUENTS OF CONCERN

6.1 SOIL

Based on the historical data, the primary constituents of concern (COCs) in soil remaining at the site (i.e. soil that was not over-excavated) are TPHg and BTEX. O&G was detected in soil remaining at the site at concentrations up to 3,600 mg/kg in the area of the former used-oil UST and hydraulic hoists; however, heavier-end hydrocarbons such as O&G exhibit characteristics of low mobility and low toxicity in the environment. In addition, since the soil samples were collected in 1991 or earlier, concentrations likely have decreased due to natural attenuation processes, and O&G was not detected in groundwater in any of the wells. Therefore, O&G does not appear to be a primary COC in soil at the site. Low concentrations of TPHd (up to 190 mg/kg) were detected in several of the soil samples analyzed. As only low concentrations were detected in soil, TPHd does not appear to be a primary COC in soil at the site.

None of the soil samples collected were analyzed for MTBE because MTBE was not a concern at the time of sample collection. No MTBE has been detected in any of the site monitoring wells since 2002. MTBE was detected on one occasion in well MW-4 (7.4 µg/L in 1998), and six times in well MW-5 between 1997 and 2002 at concentrations ranging from 58.2 µg/L to 1,200 µg/L; but has not been detected since the samples have been analyzed using EPA Method 8260. Since it has been eight years since the last detection, it can be safely assumed that MTBE is not a COC.

The acetone and HVOCs detected (1,2-DCA, cis-1,2-DCE, PCE, and 1,1,1-TCA) were at low concentrations and were not detected in groundwater at concentrations of concern; therefore, none of these constituents appear to be COCs in soil.

6.2 GROUNDWATER

Based on the monitoring results, the COCs in groundwater are TPHg and BTEX. As mentioned above, MTBE has only been detected in groundwater infrequently throughout the course of monitoring and not has been detected since 2002. The concentrations that were detected in well MW-5 were by EPA Method 8020; no MTBE has been detected using EPA Method 8260. Other fuel oxygenates including ethanol were not detected in wells MW-4 and MW-5 during a one-time analysis for these compounds in third quarter 1999. O&G was not detected in any of the wells. Low concentrations of several HVOCs were initially detected in a few of the wells, but concentrations decreased to below detection limits and analysis for these compounds was discontinued in the early to mid-1990s. Therefore, HVOCs are not COCs in groundwater.

6.3 SOIL VAPOR

Based on the soil and groundwater analytical results, potential COCs in soil vapor are TPHg and BTEX.

7.0 PETROLEUM HYDROCARBON SOURCES AND DISTRIBUTION

7.1 RELEASE SOURCE AND VOLUME

Based on previous investigations and UST/piping removal confirmation sampling, the primary source(s) of the released petroleum hydrocarbons appears to be the second-generation gasoline and used-oil USTs and dispensers. The site appears to have been occupied by a service station as early as 1946, and therefore releases from previous generation USTs or site activities may also have occurred. Although the volume of released product is unknown, approximately 1,700 cubic yards of impacted soil has been excavated and treated or removed from the site. This remedial action has been demonstrated to have adequately mitigated the product release as evidenced by decreasing hydrocarbon concentrations in groundwater.

7.2 POTENTIAL OFFSITE SOURCES

There are no documented offsite sources contributing to the impacts at the site. However, a regulatory database report obtained as part of a Phase I investigation

performed in 2000 for a nearby facility (former Bill Cox Cadillac & Buick at 230 Bay Place) identified a UST located at the apartment building at 214 Grand Avenue. The UST was identified as having been removed; no other details were available. This building is located across Bay Place to the east (approximately 300 feet up- to crossgradient) of the subject site. Based on the location of this facility, a release from this UST could have been the cause of the petroleum hydrocarbons detected in soil on the upgradient (northeast) side of the subject site adjacent to (former) Bay Place; however, there is no documentation of a release from this tank and hydrocarbon distribution in soil and groundwater at the Chevron site are consistent with onsite releases. Although a product line was previously shown on the northeast side of the site, there does not appear to have been any USTs or dispensers in this area; therefore, a product line may have been erroneously identified, or documentation of earlier generations of USTs or dispensers may have been incomplete.

7.3 PETROLEUM HYDROCARBON DISTRIBUTION IN SOIL

Since 1989, numerous soil samples have been collected to evaluate the extent of impacted soil and the effectiveness of over-excavation activities. The majority of the site was over-excavated in 1990 and 1991 to remove impacted soil to the extent possible (approximately 1,500 cubic yards was removed); an additional approximately 200 cubic yards of impacted soil was removed in 1996. The final depth of the excavations ranged from approximately 4 to 9.5 fbg. The 1990 and 1991 excavations reportedly were completed to within 5 feet of the western, eastern, and southern property lines, where further excavation could not be performed due to the proximity of the sidewalk (Figure 2). As a result, some of the soil samples were collected from areas that were later excavated (reflected in Table 2 with "strikethrough" formatting). For clarity, only the quality of the soil remaining is discussed in this section, and is further limited to the primary COCs (TPHg and BTEX) identified in Section 6.1.

Product Line Over-Excavation Area

Low concentrations of TPHg (up to 210 mg/kg) and BTEX (benzene up to 0.57 mg/kg) were detected in the soil samples collected from the northeast sidewall (formerly adjacent to Bay Place) of the product line over-excavation in the southeastern portion of the site in 1991. No TPHg or BTEX were detected in the soil samples collected from the southeast sidewall of this excavation with the exception of low concentrations of TPHg (1 mg/kg) and xylenes (0.013 mg/kg) in one of the samples. Low concentrations of TPHg (up to 56 mg/kg) and BTEX (benzene up to 0.17 mg/kg) were detected in the samples collected from the northern sidewall of this excavation. Low concentrations of

TPHg (340 mg/kg) and BTEX (benzene at 4.5 mg/kg) were detected in the sample collected at 5 fbg from the boring for well MW-2. However, the area surrounding this well was over-excavated, and TPHg and BTEX were not detected in the three deeper samples collected from the well boring.

Gasoline UST and Dispenser Over-Excavation Area

Along the southern edge of the site, low concentrations of TPHg (up to 390 mg/kg) and BTEX (benzene up to 3.4 mg/kg) were detected in the soil samples collected (5.5 to 15 fbg) from the boring for well MW-5; and lower concentrations of TPHg (13 mg/kg) and BTEX (benzene at 0.1 mg/kg) were detected in the sample collected at 7 fbg from the southern sidewall of the gasoline UST excavation in 1990. Low concentrations of TPHg (up to 240 mg/kg) and BTEX (benzene up to 0.2 mg/kg) were also detected in two or three of the soil samples (5, 8.5, and 16.5 fbg) collected from the boring for well MW-4 in the southwest corner of the site. Only low concentrations of TPHg (up to 4 mg/kg) and BTEX (benzene up to 0.084 mg/kg) were detected in the two samples collected from the western sidewall of the gasoline UST over-excavation area. TPHg and BTEX were not detected in the three samples collected from the northern sidewall of the gasoline UST excavation with the exception of trace concentrations of benzene (0.011 mg/kg), ethylbenzene (0.025 mg/kg), and xylenes (0.0054 mg/kg) in the sample collected at 4 fbg.

Used-Oil UST and Hydraulic Hoist Over-Excavation Area

TPHg and BTEX were not detected in the samples collected from the northern and western sidewalls of the used-oil UST excavation in 1991. Low concentrations of TPHg (130 mg/kg) and BTEX (benzene at 0.86 mg/kg) were detected in the sample collected at 5 fbg from the boring for well MW-3; only trace concentrations of benzene (0.005 mg/kg) and toluene (0.007 mg/kg) were detected in the sample collected at 10 fbg, and TPHg and BTEX were not detected in the samples collected at 15 and 18 fbg. Low concentrations of TPHg (130 mg/kg) and BTEX (up to 9 mg/kg; benzene not detected) were also detected in the sample collected at 7 fbg from the southern sidewall of the used-oil UST excavation. TPHg and BTEX were not detected in the sample collected from the eastern sidewall of the used-oil UST excavation.

Shallow Soil

TPHg and BTEX were detected at low concentrations in three of the ten soil samples collected at 3 fbg across the site in 1995. A low concentration of TPHg (2.8 mg/kg) and trace concentrations of toluene, ethylbenzene, and xylenes (up to 0.019 mg/kg) were

detected in sample S-2 collected adjacent to the south of the former dispenser islands. A low concentration of TPHg (2.1 mg/kg) and low to trace concentrations of BTEX (up to 0.13 mg/kg) were also detected in sample S-9 collected in the vicinity of well MW-3. Only a trace concentration of xylenes (0.017 mg/kg) was detected in sample S-1 collected to the south of the former gasoline USTs.

Offsite Soil

TPHg and BTEX were not detected in the soil samples collected from the borings for offsite wells MW-6 through MW-9 to the west, south, and southwest of the site with the exception of a low concentration of ethylbenzene (0.01 mg/kg) in the samples collected at 5.5 and 8.7 fbg from the boring for well MW-6. Low concentrations of TPHg (up to 140 mg/kg) and BTEX (benzene up to 0.54 mg/kg) were detected in the two soil samples (OX1-4.5 and OX2-4.5) collected from the northwest and southwest sidewalls of the storm drain over-excavation to the west of the site in 1996.

Summary

Only low concentrations of TPHg and BTEX were detected in soil remaining at the site. The over-excavation activities appear to have removed the majority of the impacted soil, except for a small amount that could not be removed near MW-5 due to its proximity to the Grand Avenue Sidewalk, and trace amounts in the excavation sidewalls that do not pose a threat to human health or the environment.

The extent of the residual soil with concentrations of COCs beneath the site appears limited to narrow areas on the eastern, southern, and western sides of the site in the area of the former dispenser islands, gasoline USTs, and product line where further over-excavation could not be performed due to nearby sidewalks. Residual impacted soil also appears present in the central portion of the site where excavation was not performed. TPHg and BTEX were not detected in deeper soil samples collected from the onsite well borings except for low concentrations of TPHg (up to 28 mg/kg) and BTEX (benzene up to 0.12 mg/kg) that were detected in the samples collected at 16.5 fbg and 15 fbg from the borings for wells MW-4 and MW-5, respectively. Low concentrations of TPHg (69 mg/kg) and BTEX (benzene at 0.29 mg/kg) were also detected in the soil sample collected at 12 fbg from the used-oil UST excavation. Based on this information and the analytical results, and the fact that the site is at sea level, the vertical extent of impacted soil beneath the site appears to have been adequately evaluated. Based on the analytical results of the soil samples collected from the offsite well borings, the lateral extent of impacted soil also appears to have been adequately evaluated. Although impacted soil remains on the northeast side of the site adjacent to former Bay Place, this

area is on the upgradient side of the site, and therefore the impacts are not expected to extend significantly in this direction. Based on the time since most of the soil samples were collected, concentrations likely have decreased due to natural attenuation processes. As the lateral and vertical extent of impacted soil appears to have been adequately evaluated, no further investigation appears warranted.

The approximate well boring locations and final excavation limits are shown on Figure 2. Previous site plans showing the approximate UST removal and over-excavation verification sample locations are presented in Appendix E. The historical soil sample analytical results are presented in Table 2; the TPHg and benzene analytical results of soil remaining at the site are also presented on Figure 5.

7.4 PETROLEUM HYDROCARBON DISTRIBUTION IN GROUNDWATER

Wells MW-1 through MW-3 and MW-6 through MW-9

Groundwater has been monitored since 1989. Well MW-2 located in the southeast portion of the site was sampled in 1989 and 1990 prior to its destruction, and no hydrocarbons were detected after the initial event. Wells MW-1 and MW-3 were sampled from 1989 through 1995 prior to their destruction. Well MW-1 was located in the northern corner of the site, and well MW-3 was located on the western side of the site in the area of the former used-oil UST. Low hydrocarbon concentrations were intermittently detected at concentrations near detection limits. Sampling of offsite wells MW-6 through MW-9 was discontinued in the 1990s after TPHg and BTEX concentrations decreased to below detection limits for at least four consecutive quarters.

Wells MW-4 and MW-5

Onsite source area wells MW-4 and MW-5 located in the area of the former gasoline USTs and dispensers are the only wells currently sampled (semi-annually). No TPHg or BTEX have been detected in well MW-4 during the last 10 sampling events. Well MW-5 historically has contained the highest TPHg and BTEX concentrations. Although significant fluctuations have been observed, concentrations in this well have until recently remained relatively stable overall.

Oxygen injection conducted by CRA between June and November 2009 has significantly reduced concentrations in well MW-5. A comparison of the historical maximum and the most recent TPHg and BTEX concentrations in well MW-5 is presented in Table B below.

A graph of TPHg and benzene concentrations in well MW-5 over time is presented in Appendix H.

TABLE B
SUMMARY OF MAXIMUM AND
MOST RECENT CONCENTRATIONS IN WELL MW-5

Well	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*
MW-5 Maximum (date)	72,000 (5/22/92)	18,000 (5/22/92)	17,100 (3/10/00)	3,500 (3/30/06)	10,000 (5/22/92)
MW-5 Most Recent (3/4/10)	540	9	10	0.7	82

Summary

TPHg and BTEX remain in groundwater; however, the residual concentrations are low and the extent appears limited to the area of well MW-5. The plume does not appear to be migrating. Therefore, the extent of impacted groundwater has been adequately evaluated and no further investigation is warranted.

Based on the historical range of groundwater elevations as shown on the cross-sections (Figures 3 and 4), the groundwater level has at times appeared to have risen above the top of the well screens. As described in Section 3.2, this appears to be due to the semi-confined shallow groundwater condition at the site and therefore, we do not consider it to be a significant concern with regards to data quality.

A copy of the first semi-annual 2010 groundwater monitoring report is presented in Appendix B. Iso-concentration maps of the remaining TPHg and benzene concentrations in groundwater are presented on Figures 6 and 7, respectively.

7.4.1 LIGHT NON-AQUEOUS PHASE LIQUID

No light non-aqueous phase liquid (LNAPL) has ever been observed in any of the site monitoring wells and current concentrations are not indicative of measurable residual LNAPL.

7.5 PETROLEUM HYDROCARBON DISTRIBUTION IN SOIL VAPOR

Elevated concentrations of total volatile hydrocarbons were detected in several of the soil vapor samples collected during the 1989 investigation. The majority of these samples were collected in the area of the gasoline USTs and dispensers in the southern portion of the site that were later excavated. Elevated concentrations were also detected in two samples collected in the northern portion of the site and in a sample collected on the northeast side of the site adjacent to (former) Bay Place. Significantly lower concentrations were detected in samples collected in the three corners of the site.

Although no recent soil vapor sampling has been performed, it does not appear warranted as potential vapor intrusion does not appear to be a significant concern at the site given the current site use and the residual concentrations in groundwater, as will be discussed in the following section.

8.0 RISK EVALUATION

To evaluate potential risks to human health or the environment associated with the residual petroleum hydrocarbons in soil and groundwater, CRA evaluated the presence of wells and potential sensitive receptors in the site vicinity, evaluated potential receptor exposure pathways, and performed a screening-level risk evaluation. The findings of the risk evaluation are presented below.

8.1 NEARBY WELLS AND SENSITIVE RECEPTORS

As described in Section 3.3, no water-supply wells were identified within quarter-mile of the site and the local drinking water supply is obtained from distant surface water. Based on the proximity to San Francisco Bay and Lake Merritt, it is unlikely shallow groundwater in the site area would be used as a drinking water source. The site is currently occupied by a paved public parking lot and the southbound lanes of Bay Place and therefore no sensitive receptors exist at the site. The surrounding sensitive use properties are located up- or crossgradient of the site. The area downgradient of the site is occupied by City streets or undeveloped land. Lake Merritt is located approximately 225 feet southwest (down- to crossgradient) of the site, and Glen Echo Creek (concrete-lined channel) is located approximately 250 feet west-southwest (downgradient) of the site. As the residual impacted groundwater is limited to the immediate vicinity of well MW-5 and does not appear to be migrating, it is unlikely that Lake Merritt or Glen Echo Creek would be impacted by petroleum hydrocarbons from

the site. Based on this information, there are no wells or sensitive receptors that would likely be impacted by petroleum hydrocarbons from the site.

8.2 POTENTIAL EXPOSURE PATHWAYS

8.2.1 SOIL

As the site is capped with asphalt, concrete, or topsoil, there is no complete potential exposure to any residual subsurface impacted soil beneath the site by the general public. Therefore, the only identified potential exposure pathway to any residual impacted soil beneath the site is direct exposure by construction workers during trenching or excavating activities.

8.2.2 GROUNDWATER

The extent of impacted groundwater appears to be adequately defined, limited in extent, and no water supply wells were identified in the site vicinity. As discussed in Section 3.3, the drinking water supply is obtained from surface water runoff in the Sierra Nevada Mountains. Due to the proximity to San Francisco Bay, shallow groundwater in the site area likely will never be used as a drinking water resource. Therefore, no complete groundwater ingestion pathways appear to exist and none are likely to exist in the foreseeable future. Due to the relatively shallow depth to groundwater, it may be encountered during trenching or excavating activities.

8.2.3 SURFACE WATER

The nearest surface water bodies are Lake Merritt located approximately 225 feet southwest of the site, and Glen Echo Creek located approximately 250 feet west-southwest of the site. Based on the monitoring results, the extent of impacted groundwater appears limited to the area of onsite well MW-5. TPHg and BTEX generally were not detected in wells MW-7 through MW-9 located on the south side of Grand Avenue and only low concentrations were detected in well MW-6, but were not detected for at least four events prior to the discontinuation of sampling in 1998. Therefore, it is unlikely that Lake Merritt or Glen Echo Creek would be impacted by petroleum hydrocarbons from the site. Based on this information, there does not appear to be a significant risk to surface waters or other ecological receptors from the site hydrocarbons.

8.2.4 VAPOR INTRUSION

Given the current use of the site as a parking lot/City street, vapor intrusion is not a complete exposure pathway.

8.3 COMPARISON TO ENVIRONMENTAL SCREENING LEVELS

The maximum residual COC concentrations in soil and groundwater were compared to the corresponding environmental screening levels (ESLs) established by the RWQCB in May 2008. The ESLs are for use as screening levels in determining if further evaluation is warranted, in prioritizing areas of concern, in establishing cleanup goals, and in estimation of potential health risks. As stated by the RWQCB, the ESLs are considered to be conservative. The presence of a chemical at a concentration above an ESL does not necessarily indicate that adverse impacts to human health or the environment are occurring; rather exceeding ESLs indicates that the potential for impacts may exist and additional evaluation may be needed. Under most circumstances, the presence of a chemical in soil, groundwater, or soil gas at concentrations below the corresponding ESL can be assumed to not pose a significant, long-term (chronic) threat to human health and the environment. For soil vapor, the most recent groundwater concentrations were compared to the ESLs for evaluation of potential vapor intrusion concerns.

8.3.1 SOIL

As discussed in Section 8.2.1 above, the only identified complete potential exposure pathway to residual impacted soil beneath the site under the current land use scenario is direct exposure by construction workers during trenching or excavation activities. Therefore, Table C below presents a comparison of the maximum COC concentrations detected in soil samples collected from areas that were not over-excavated to the respective soil ESLs associated with direct exposure concerns under the construction/trench worker exposure scenario. The results were also compared to the ESLs for groundwater protection (soil leaching) at residential or commercial sites (values are equal) where groundwater is not a current or potential drinking water source.

TABLE C COMPARISON OF RECENT MAXIMUM SOIL CONCENTRATIONS TO ESLs			
Constituent	***Highest Detected Concentration Remaining in Soil (mg/kg)***	***ESL for Construction/Trench Worker Exposure[1] (mg/kg)***	***ESL for Groundwater Protection[2] (mg/kg)***
TPHg	390 (MW-5, 5.5 fbg)	4,200	180
Benzene	3.4 (MW-5, 5.5 fbg)	12	2.0
Toluene	16 (MW-2, 5 fbg)	650	9.3
Ethylbenzene	8.4 (MW-2, 5 fbg)	210	4.7
Xylenes	32 (MW-2, 5 fbg)	420	11

1. ESLs from Table K-3, Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008
2. ESLs from Table B-1, Shallow Soil Screening Levels, Residential Land Use, Groundwater Is Not a Current or Potential Drinking Water Resource, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008

As shown above, the maximum COC concentrations in soil did not exceed the respective ESLs for construction/trench worker exposure. The maximum residual concentrations only slightly exceeded the ESLs associated with groundwater protection, thus concentrations likely have decreased to levels below the ESLs since the samples were collected in 1989 due to natural attenuation processes. Additionally, the entire area surrounding well MW-2, and the majority of soil in the area of well MW-5, was over-excavated in 1991, and these were generally the only two areas with concentrations that exceeded the ESLs. Therefore, the residual impacted soil does not appear to pose a significant threat to human health or the environment (low-risk) under the current land use scenario.

8.3.2 GROUNDWATER

As described in Section 8.2.2 above, there were no identified complete groundwater ingestion pathways. Therefore, the most recent residual COC concentrations detected in well MW-5 were compared to the most stringent groundwater ESLs, which are those associated with the protection of aquatic habitats (i.e., Lake Merritt). These ESLs address the potential discharge of groundwater into a surface water body and the subsequent impacts on aquatic life; however, they are conservative as potential dilution is not considered. The comparison is presented in Table D below.

TABLE D COMPARISON OF MOST RECENT MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLs		
Constituent	***Highest Detected Concentration Remaining in Groundwater (ug/L)***	***Aquatic Habitat Goal ESL[1] (ug/L)***
TPHg	540	210
Benzene	9	46
Toluene	10	130
Ethylbenzene	0.7	43
Xylenes	82	100

1. ESLs from Table F-1b, Groundwater Screening Levels, groundwater is not a current or potential drinking water resource, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008

As shown above, the maximum detected TPHg concentration in groundwater exceeded the aquatic habitat goal ESL. However, this concentration was detected in onsite well MW-5, and as previously described, the extent of impacted groundwater appears limited to the area of this well and the plume does not appear to be migrating. In addition, this ESL value of 210 µg/L is conservatively based on the drinking water screening level which is not applicable to the site. Therefore, the residual petroleum hydrocarbons in groundwater do not pose a significant threat to Lake Merritt. Although groundwater may be encountered during trenching or excavation activities, the potential risk to construction workers is likely low based on the low remaining concentrations. In addition, the concentrations are well below the groundwater gross contamination ceiling level ESLs (Table I-2) for TPHg (5,000 µg/L), benzene (20,000 µg/L), toluene (400 µg/L), ethylbenzene (300 µg/L), and xylenes (5,300 µg/L). Therefore, the residual petroleum hydrocarbons in groundwater at the site do not pose a significant threat to human health or the environment.

8.3.3 SOIL VAPOR

As previously discussed, the 1989 soil vapor samples were collected prior to removal of the USTs and the subsequent soil excavation. Based on this information and the age of the data, these samples were not considered representative of site conditions and therefore the results were not included in the ESL comparison.

As no recent soil vapor sampling has been performed, the most recent residual COC concentrations in groundwater detected in well MW-5 were compared to the groundwater ESLs for evaluation of potential vapor intrusion concerns at residential

sites (most conservative) (see Table E below). An ESL has not been established for TPHg.

TABLE E
COMPARISON OF MOST RECENT MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLs ASSOCIATED WITH VAPOR INTRUSION

Constituent	*Highest Detected Concentration Remaining in Groundwater (ug/L)*	*ESL[1] (ug/L)*
Benzene	9	540
Toluene	10	380,000
Ethylbenzene	0.7	170,000
Xylenes	82	160,000

1. ESLs from Table E-1, Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008

As shown above, the residual concentrations in groundwater are two or more orders of magnitude below the corresponding ESLs and thus do not pose a significant threat to human health via vapor intrusion. In conclusion, potential vapor intrusion does not appear to be a significant concern at the site under the current land use scenario and no further work appears warranted.

9.0 LOW-RISK GROUNDWATER CRITERIA

The site appears to meet the RWQCB criteria for classification as a low-risk groundwater case. As described in the January 5, 1996, RWQCB memorandum entitled *Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*, a low-risk groundwater case has the following general characteristics:

- The leak has been stopped and ongoing sources, including LNAPL, 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 low-risk groundwater case criteria, as it relates to the site, is discussed below.

9.1 THE LEAK HAS BEEN STOPPED AND ONGOING SOURCES, INCLUDING LNAPL, HAVE BEEN REMOVED OR REMEDIATED

All original potential sources of the petroleum hydrocarbon release(s) (former used-oil and gasoline USTs, dispensers, and product piping) were removed from the site in 1990. The site is no longer used as a service station, and is currently a parking lot/City street. The remedial excavation removed approximately 1,700 cubic yards of soil, representing the vast majority of the impacted media. The only impacted soil left in place was along the boundaries of the property where excavation was not practical due to the proximity of city sidewalks. The oxygen injection activities appear to have been successful at significantly reducing concentrations in the area of well MW-5, and rebound has not occurred. Based on this information, the leak has been stopped and ongoing sources have been removed to the extent practicable.

9.2 THE SITE HAS BEEN ADEQUATELY CHARACTERIZED

As described in Section 7.3, numerous soil samples have been collected from excavations and borings, and the analytical results indicate that the lateral and vertical extent of impacted soil has been adequately evaluated. Impacted soil appears to remain in narrow areas along the western, southern, and eastern edges of the site where further over-excavation could not be performed; and in the central portion of the site where excavation was not performed. However, the concentrations are low and likely have further decreased since the samples were collected.

As described in Section 7.4, groundwater quality has been monitored since 1989 by wells installed near the source area(s) and downgradient. Only wells MW-4 and MW-5 are currently sampled, and impacts (TPHg and BTEX) remain only in MW-5. The plume appears to be stable and the extent of impacted groundwater appears limited to the area of well MW-5. Concentrations are expected to continue to decrease over time due to natural attenuation.

Although recent soil vapor sampling has not been performed, potential vapor intrusion does not appear to be a significant concern at the site based on the remaining groundwater concentrations and the current land use scenario, and therefore further investigation does not appear warranted. Based on this information, the extent of impact has been defined to the degree necessary to demonstrate that the site does not present a significant threat to human health or the environment.

9.3 THE DISSOLVED HYDROCARBON PLUME IS STABLE, DECREASING, AND NOT MIGRATING

Based on the monitoring results, the extent of impacted groundwater appears limited to the area of well MW-5. The plume appears stable, shrinking, and not migrating. The oxygen injection significantly reduced concentrations in well MW-5. Natural attenuation is expected to continue to reduce the remaining concentrations to background levels.

9.4 NO WATER WELLS, DEEPER DRINKING WATER AQUIFERS, SURFACE WATER, OR OTHER SENSITIVE RECEPTORS ARE LIKELY TO BE IMPACTED

No water-supply wells were identified near the site and the local drinking water supply is obtained from surface water in the Sierra Nevada Mountains. Based on the proximity to San Francisco Bay and Lake Merritt (mixed fresh and saltwater), it is unlikely that shallow groundwater in the site area would be used as a drinking water source. The site is an unoccupied paved public parking lot and public street with no structures and therefore no sensitive receptors exist at the site. The area downgradient of the site is occupied by Grand Avenue followed by undeveloped land and therefore no sensitive receptors are present in this area with the exception of Lake Merritt, located approximately 225 feet down- to crossgradient of the site, and Glen Echo Creek (concrete-lined channel) located approximately 250 feet west-southwest (downgradient) of the site. However, based on the monitoring results, it appears unlikely that Lake Merritt or Glen Echo Creek would be impacted by petroleum hydrocarbons from the site. Based on this information, it does not appear that any water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

9.5 THE SITE PRESENTS NO SIGNIFICANT RISK TO HUMAN HEALTH OR THE ENVIRONMENT

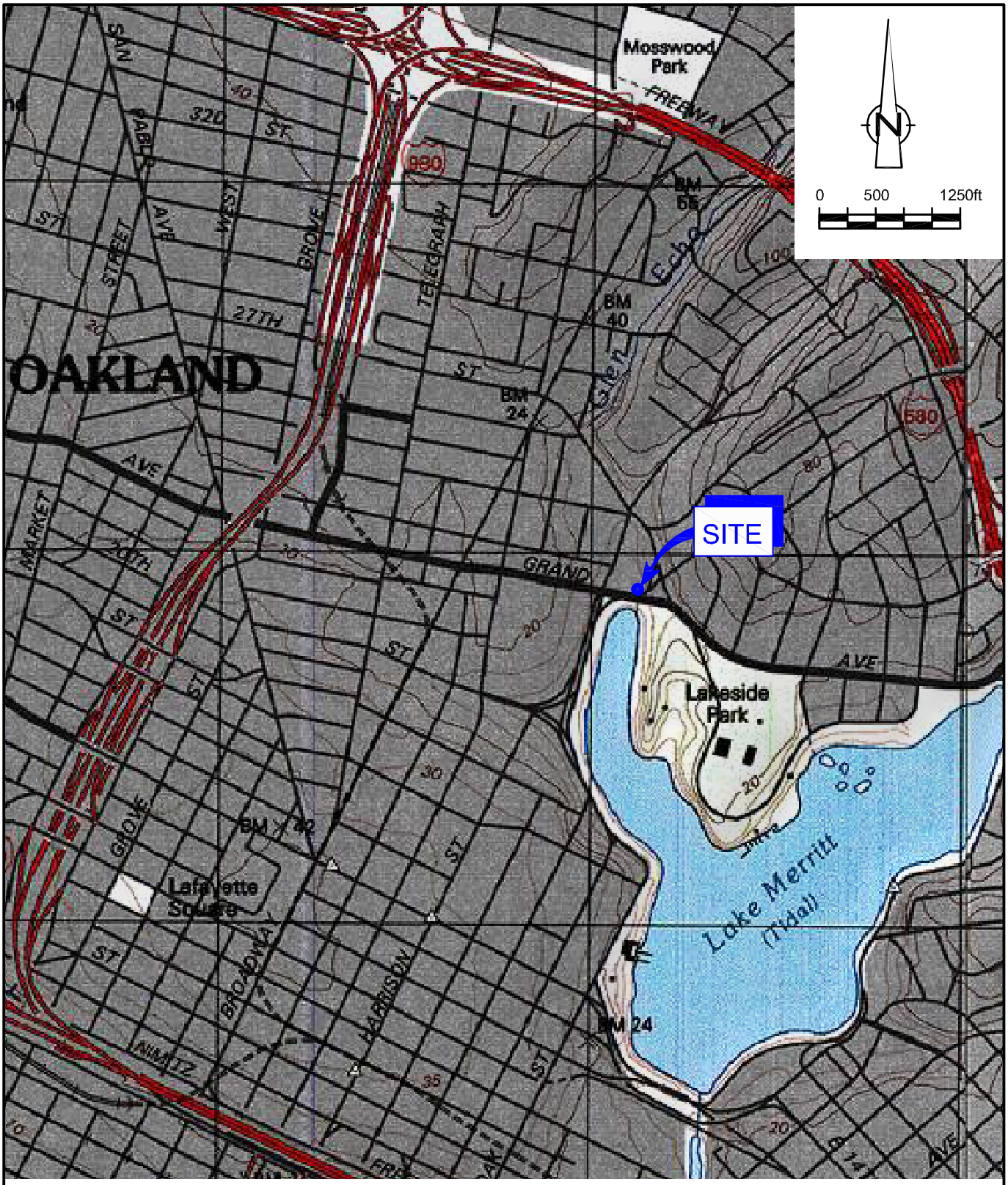
The most recent maximum residual COC concentrations in soil and groundwater generally did not exceed the corresponding ESLs based on the identified potential receptors and exposure pathways. The site is capped with asphalt paving or concrete sidewalks over most of surface area, thus potential exposure to any residual impacted soil by the general public is essentially eliminated. The maximum residual detected concentrations in soil slightly exceeded the ESLs associated with groundwater protection; however, concentrations likely have decreased to levels below the ESLs since

the samples were collected in 1989, and the majority of the soil in the two areas with the maximum concentrations was excavated. Although impacted groundwater remains beneath the site, the residual concentrations are low, the plume appears stable and limited in extent, and no sensitive receptors appear likely to be impacted. Natural attenuation is expected to continue to decrease concentrations in groundwater to background levels. Potential vapor intrusion should not be a significant concern given the remaining concentrations and the current land use scenario. Based on this information, the site does not pose a significant risk to human health or the environment.

10.0 CONCLUSIONS AND RECOMMENDATIONS

This SCM was prepared to summarize site conditions and residual impacts, identify potential receptors and exposure pathways, and evaluate whether any data gaps exist. Based on the analytical results, the extent of impact at the site has been adequately evaluated and no further investigation, remediation or monitoring appears warranted. The residual petroleum hydrocarbons in soil and groundwater at the site do not pose a significant threat to human health or the environment under the current land use scenario, and the site meets the RWQCB criteria for classification as a low-risk groundwater case. Therefore, on behalf of Chevron, CRA respectfully requests the site be considered for low-risk case closure.

FIGURES



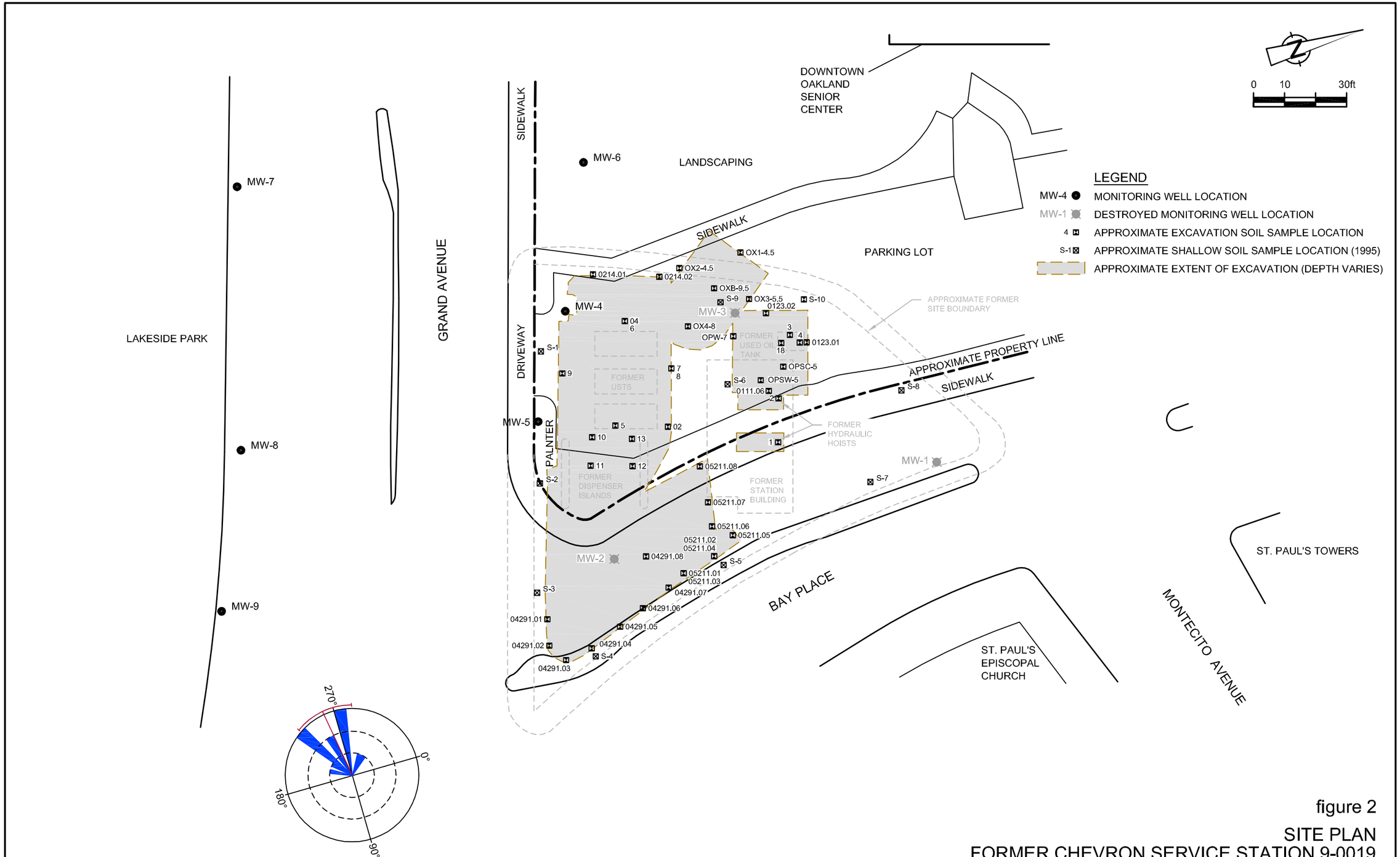
SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

OAKLAND
CALIFORNIA

632327-401(005)GN-WA001 FEB 17/2010

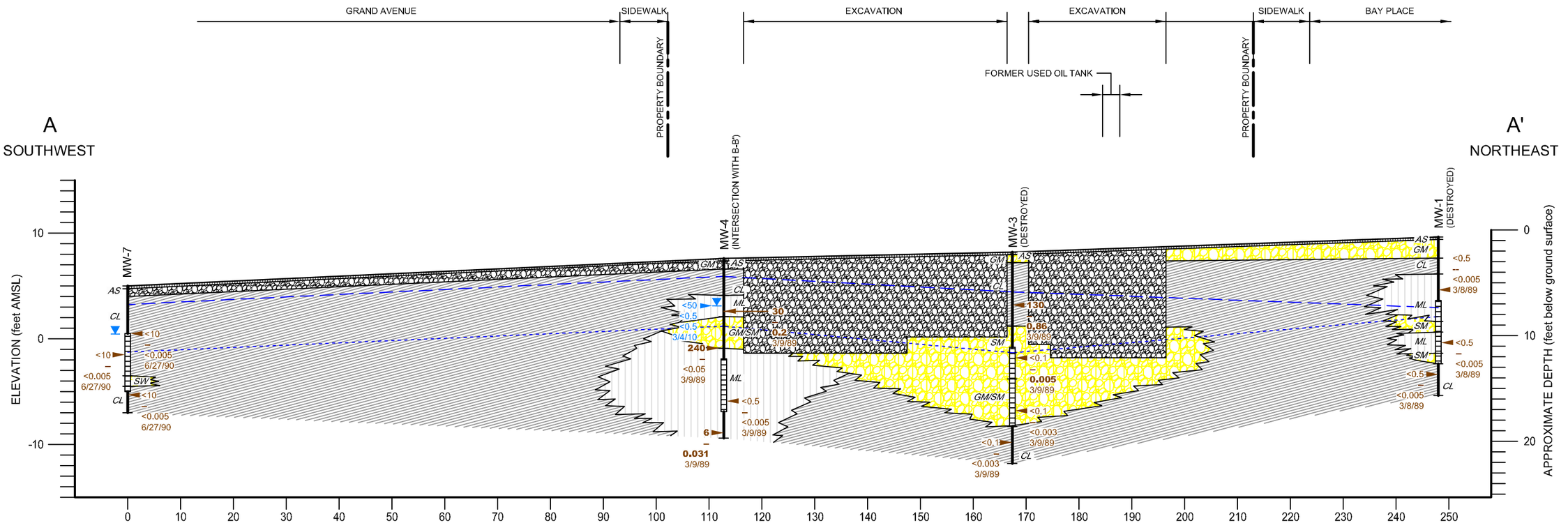


HISTORICAL GROUNDWATER FLOW DIRECTION

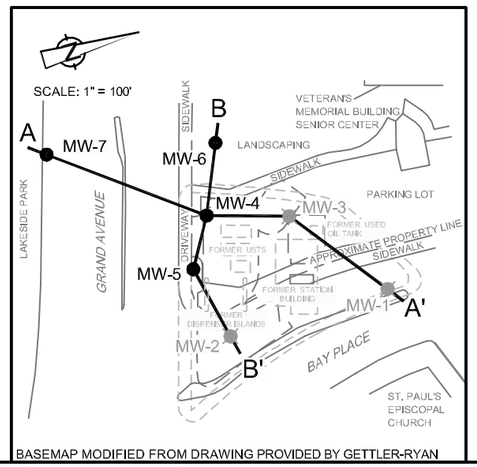
BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

figure 2

SITE PLAN
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California



SCALE: HORZ. 1" = 20'
VERT. 1" = 10'



BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

LEGEND

MW-4 — WELL DESIGNATION
GROUND SURFACE
OBSERVATION WELL INSTALLATION
STRATIGRAPHIC BOUNDARY
CL — TYPICAL SOIL CLASSIFICATION
SCREENED INTERVAL
BOTTOM OF BORING
APPROXIMATE SOIL SAMPLE LOCATION
TPHg
TPHd
BENZENE
DATE
HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
APPROXIMATE GROUNDWATER SAMPLE LOCATION
TPHg
BENZENE
MTBE
DATE
HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)
GROUNDWATER DEPTH (3/4/10)

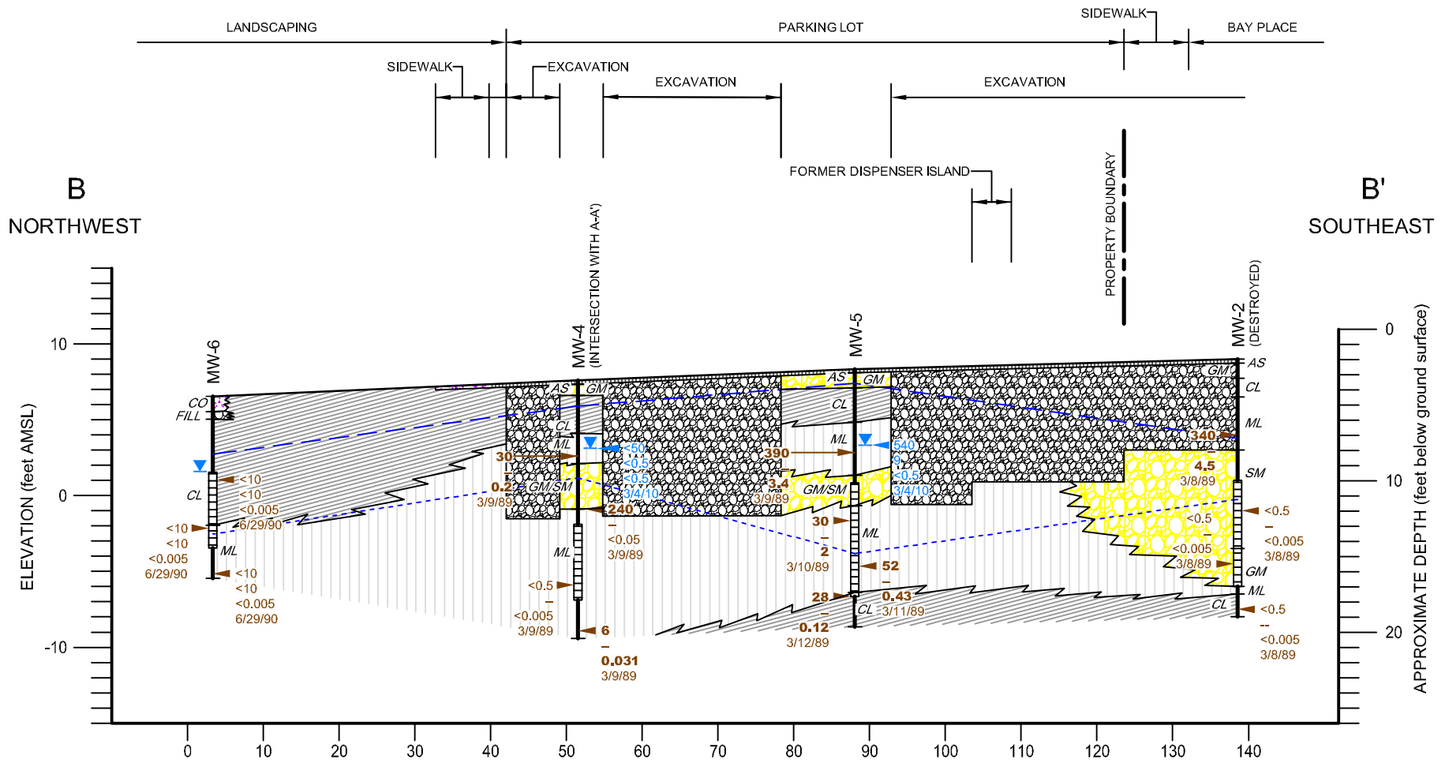
FILL
AS - ASPHALT
CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
ML - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
GM/SM/SW - SILTY GRAVEL AND SILTY SANDS, SAND-SILT MIXTURES
- WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES

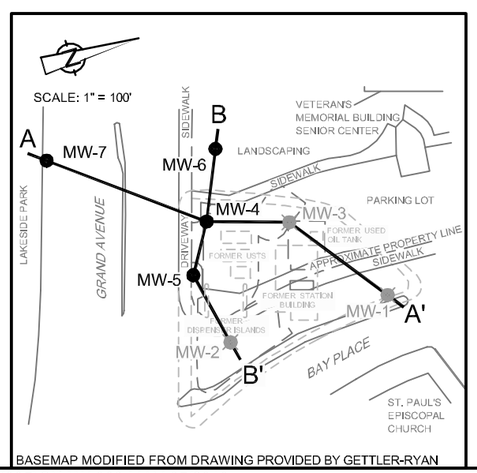
-- NOT ANALYZED
< NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
HIGHEST GROUNDWATER ELEVATION
LOWEST GROUNDWATER ELEVATION

figure 3

GEOLOGIC CROSS SECTION A-A'
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

632327-401(005)GN-WA003 MAY 05/2010





BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

LEGEND

- MW-4 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- APPROXIMATE SOIL SAMPLE LOCATION
- TPHg / TPHd / BENZENE / DATE — HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- APPROXIMATE GROUNDWATER SAMPLE LOCATION
- TPHg / BENZENE / MTBE / DATE — HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)
- GROUNDWATER DEPTH (3/4/10)

- *FILL*
- *CO* - CONCRETE
- *AS* - ASPHALT
- *CL* - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
- *ML* - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- *GM/SM/SW* - SILTY GRAVEL AND SILTY SANDS, SAND-SILT MIXTURES - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES
- -- NOT ANALYZED
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
- HIGHEST GROUNDWATER ELEVATION
- LOWEST GROUNDWATER ELEVATION

figure 4

GEOLOGIC CROSS SECTION B-B'
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

0214.01	Depth	Date	TPHg	Benzene
	UNK	2/14/1991	**4**	**0.077**

OPW-7	Depth	Date	TPHg	Benzene
	7	7/2/1990	**130**	<0.50

MW-6	Depth	Date	TPHg	Benzene
	5.5	6/29/1990	<10	<0.005
	8.7	6/29/1990	<10	<0.005
	11.7	6/29/1990	<10	<0.005

0214.02	Depth	Date	TPHg	Benzene
	UNK	2/14/1991	**3**	**0.084**

OXB-9,5	Depth	Date	TPHg	Benzene
	9.5	11/14/1996	<1.0	<0.005

S-9	Depth	Date	TPHg	Benzene
	3	12/1/1995	**2.1**	**0.026**

OX1-4.5	Depth	Date	TPHg	Benzene
	4.5	11/14/1996	**16**	**0.19**

OX2-4.5	Depth	Date	TPHg	Benzene
	4.5	11/14/1996	**140**	**0.54**

OX3-5.5	Depth	Date	TPHg	Benzene
	5.5	11/14/1996	<1.0	**0.0096**

0123.02	Depth	Date	TPHg	Benzene
	UNK	1/23/1991	<1.0	<0.005

S-10	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

OX4-8	Depth	Date	TPHg	Benzene
	8	11/14/1996	<1.0	<0.005

MW-7	Depth	Date	TPHg	Benzene
	4.5	6/27/1990	<10	<0.005
	6.5	6/27/1990	<10	<0.005
	10.3	6/27/1990	<10	<0.005

MW-4	Depth	Date	TPHg	Benzene
	5	3/9/1989	**30**	**0.2**
	8.5	3/9/1989	**240**	<0.05
	13.5	3/9/1989	<0.5	<0.005
	16.5	3/9/1989	**6**	**0.031**

S-1	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

#7	Depth	Date	TPHg	Benzene
	6.5	6/20/1990	<1.0	<0.005

#8	Depth	Date	TPHg	Benzene
	4	6/20/1990	<1.0	**0.011**

MW-5	Depth	Date	TPHg	Benzene
	5.5	3/9/1989	**390**	**3.4**
	10	3/9/1989	**30**	**2**
	13	3/9/1989	**52**	**0.43**
	15	3/9/1989	**28**	**0.12**

#9	Depth	Date	TPHg	Benzene
	7	6/20/1990	**13**	**0.1**

MW-8	Depth	Date	TPHg	Benzene
	4.8	6/27/1990	<10	<0.005
	7	6/27/1990	<10	<0.005
	12	6/27/1990	<10	<0.005

02	Depth	Date	TPHg	Benzene
	UNK	11/19/1990	<1.0	<0.005

S-2	Depth	Date	TPHg	Benzene
	3	12/1/1995	**2.8**	<0.005

MW-2	Depth	Date	TPHg	Benzene
	5	3/8/1989	**340**	**4.5**
	10	3/8/1989	<0.5	<0.005
	13.5	3/8/1989	<0.5	<0.005
	16.5	3/8/1989	<0.5	<0.005

05211-07, 08	Depth	Date	TPHg	Benzene
	UNK	5/21/1991	**56**	**0.17**

S-3	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

MW-9	Depth	Date	TPHg	Benzene
	5	6/28/1990	<10	<0.005
	6.8	6/28/1990	<10	<0.005
	10.3	6/28/1990	<10	<0.005

04291.01, 02	Depth	Date	TPHg	Benzene
	UNK	4/29/1991	**1**	<0.005

04291.03, 04	Depth	Date	TPHg	Benzene
	UNK	4/29/1991	<1.0	<0.005

S-4	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

04291.05, 06	Depth	Date	TPHg	Benzene
	UNK	4/29/1991	**3**	**0.045**

05211-05, 06	Depth	Date	TPHg	Benzene
	UNK	5/21/1991	**26**	**0.06**

S-5	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

05211-03, 04	Depth	Date	TPHg	Benzene
	UNK	5/21/1991	**210**	**0.57**

05211-01, 02	Depth	Date	TPHg	Benzene
	UNK	5/21/1991	**25**	**0.41**

MW-3	Depth	Date	TPHg	Benzene
	5	3/9/1989	**130**	**0.86**
	10	3/9/1989	<0.1	**0.005**
	15	3/9/1989	<0.1	<0.003
	18	3/9/1989	<0.1	<0.003

#3	Depth	Date	TPHg	Benzene
	11.5	6/20/1990	**41**	**0.085**

123.01	Depth	Date	TPHg	Benzene
	UNK	1/23/1991	<1.0	<0.005

#4	Depth	Date	TPHg	Benzene
	10	6/20/1990	<1.0	<0.005

S-8	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

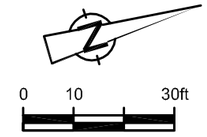
#18	Depth	Date	TPHg	Benzene
	12	6/20/1990	**69**	**0.29**

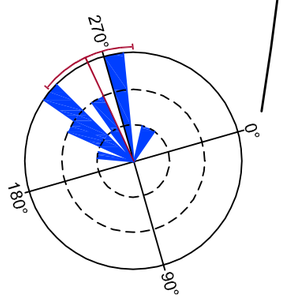
MW-1	Depth	Date	TPHg	Benzene
	5	3/8/1989	<0.5	<0.005
	10	3/8/1989	<0.5	<0.005
	13	3/8/1989	<0.5	<0.005

0111.06	Depth	Date	TPHg	Benzene
	UNK	1/11/1991	<1.0	<0.005

S-7	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005

S-6	Depth	Date	TPHg	Benzene
	3	12/1/1995	<1.0	<0.005





HISTORICAL GROUNDWATER FLOW DIRECTION

LEGEND

- MW-4 ● MONITORING WELL LOCATION
- MW-1 ⊗ ABANDONED MONITORING WELL LOCATION
- 4 ⊠ APPROXIMATE EXCAVATION SOIL SAMPLE LOCATION
- S-1⊠ APPROXIMATE SHALLOW SOIL SAMPLE LOCATION (1995)
- APPROXIMATE EXTENT OF EXCAVATION (DEPTH VARIES)
- UNK UNKNOWN DEPTH
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS

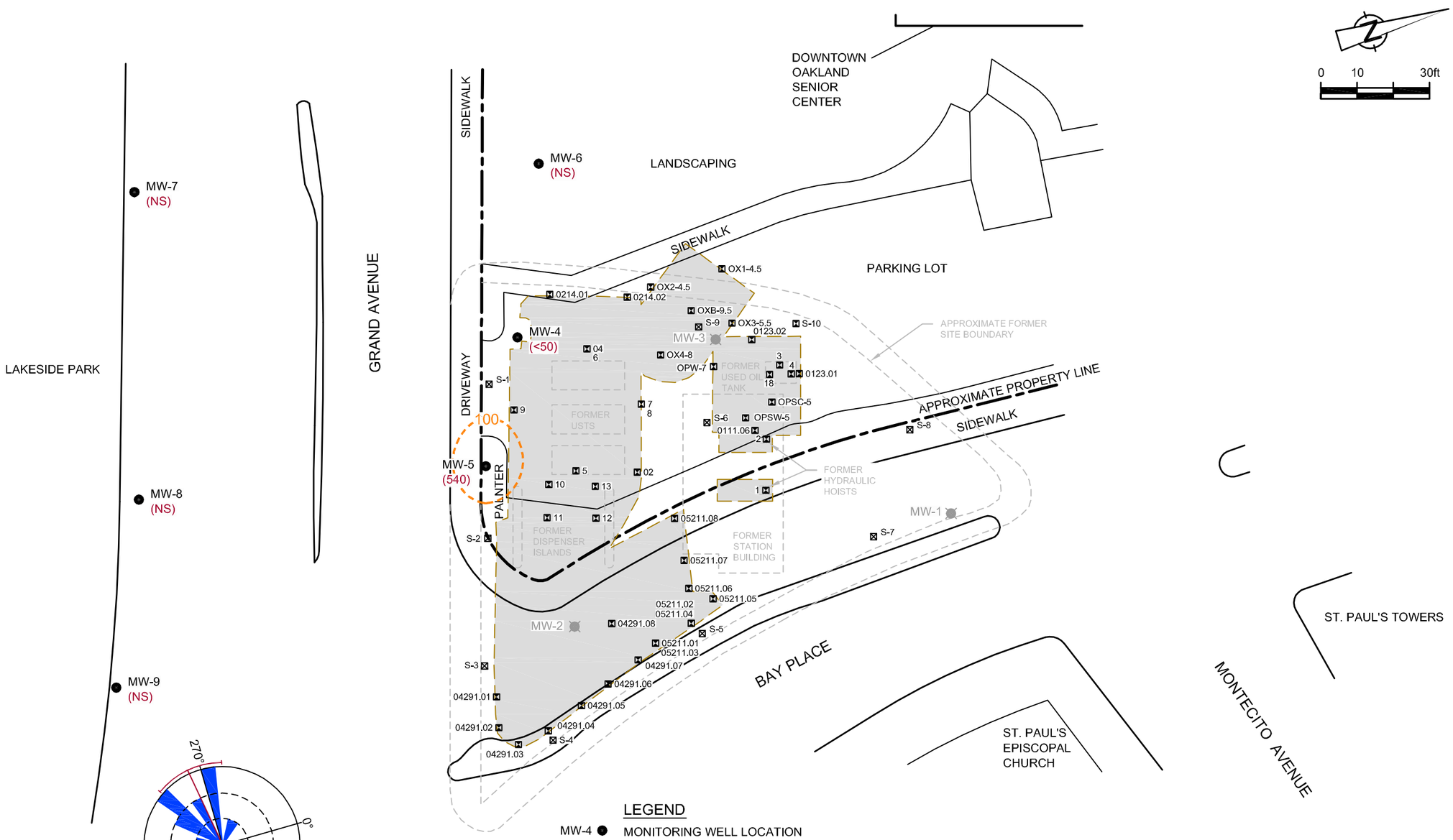
BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

NOTE: CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg)

figure 5

HISTORICAL ANALYTICAL RESULTS IN SOIL
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

632327-401(005)GN-WA004 JUN 11/2010



HISTORICAL GROUNDWATER FLOW DIRECTION

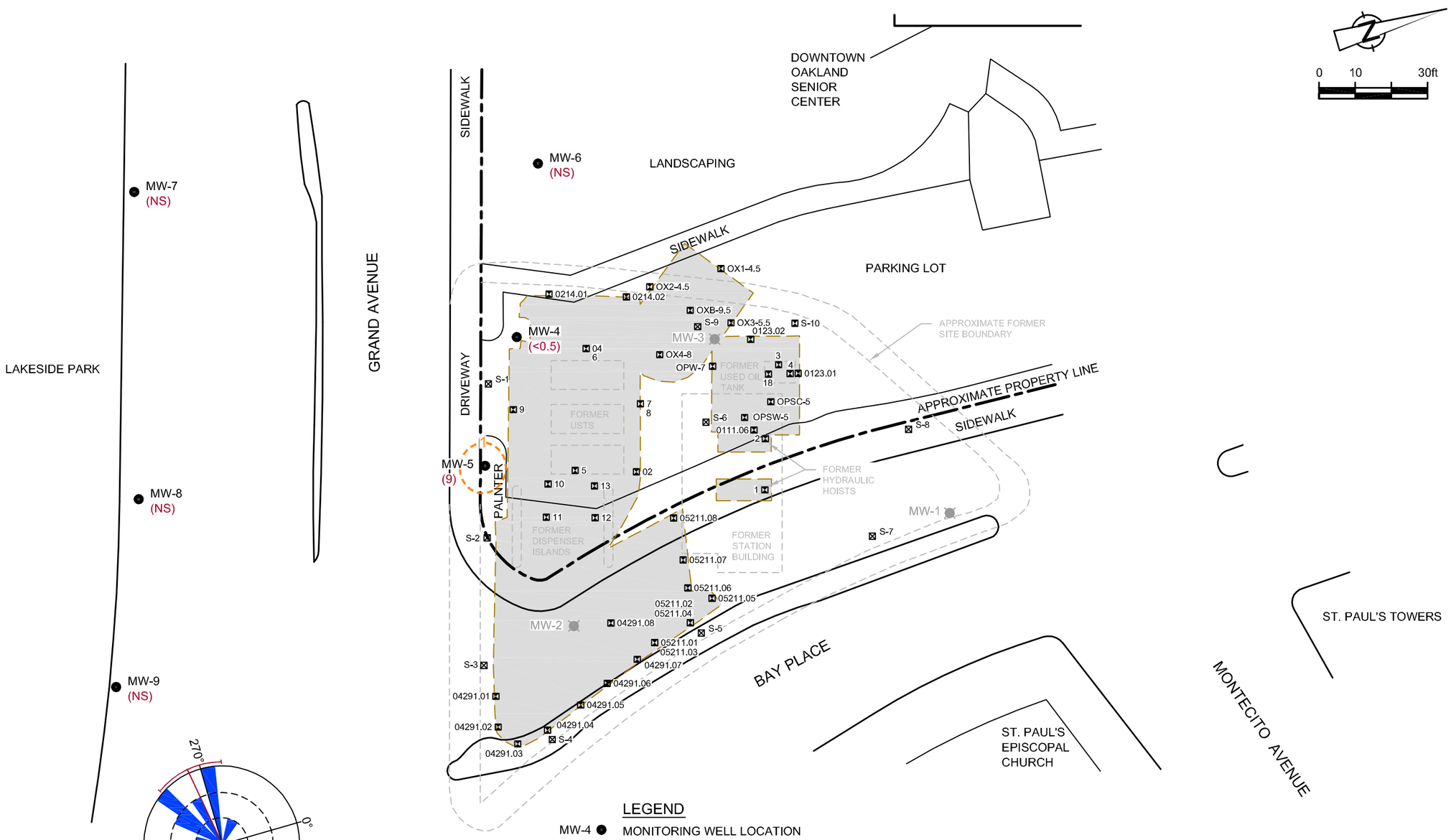
LEGEND

MW-4 ●	MONITORING WELL LOCATION
MW-1 ⊗	ABANDONED MONITORING WELL LOCATION
4 ⊠	APPROXIMATE EXCAVATION SOIL SAMPLE LOCATION
S-1 ⊠	APPROXIMATE SHALLOW SOIL SAMPLE LOCATION (1995)
	APPROXIMATE EXTENT OF EXCAVATION (DEPTH VARIES)
(440)	TPHg CONCENTRATION (ug/L)
10	TPHg CONCENTRATION CONTOUR DASHED WHERE INFERRED
(NS)	NOT SAMPLED
<	NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS

figure 6

TPHg ISOCONCENTRATION MAP
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN



HISTORICAL GROUNDWATER FLOW DIRECTION

LEGEND

MW-4 ●	MONITORING WELL LOCATION
MW-1 ⊗	ABANDONED MONITORING WELL LOCATION
4 ⊠	APPROXIMATE EXCAVATION SOIL SAMPLE LOCATION
S-1 ⊠	APPROXIMATE SHALLOW SOIL SAMPLE LOCATION (1995)
	APPROXIMATE EXTENT OF EXCAVATION (DEPTH VARIES)
(0.9)	BENZENE CONCENTRATION (ug/L)
10	BENZENE CONCENTRATION CONTOUR DASHED WHERE INFERRED
(NS)	NOT SAMPLED
<	NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS

figure 7

BENZENE ISOCONCENTRATION MAP
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER-RYAN

TABLES

TABLE 1

WELL CONSTRUCTION DETAILS
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA

Well ID	*Installation Date*	*Total Depth (fbg)*	*Casing Diameter (inches)*	*Top of Screen (fbg)*	*Bottom of Screen (fbg)*	*Screen Length (feet)*	*Comments*
MW-1	3/8/89	12	4	6	12	6	Destroyed
MW-2	3/8/89	15	4	8	15	7	Destroyed
MW-3	3/9/89	16.5	4	9	16.5	7.5	Destroyed
MW-4	3/9/89	14.5	4	9.5	14.5	5	
MW-5	3/9/89	15	4	7.5	15	7.5	
MW-6	6/29/90	10	2	5	10	5	
MW-7	6/27/90	10.5	2	4.5	10.5	6	
MW-8	6/27/90	8	2	5.5	8	2.5	
MW-9	6/28/90	10	2	5	10	5	

Abbreviations/notes:
fbg = feet below grade

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Date*	*TPHg*	*TPHd*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*TOG*	*1,2-DCA*	*EDB*	*Cd*	*Cr*	*Pb*	*Zn*
			concentrations in milligrams per kilogram (mg/kg)												
Monitoring Well Borings															
MW-1	5	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
	10	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
	13	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
MW-2	5	3/8/89	**340**	--	**4.5**	**16**	**8.4**	**32**	--	**0.2**	<0.1	--	--	--	--
	10	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
	13.5	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
	16.5	3/8/89	<0.5	--	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
MW-3	5[a]	3/9/89	**130**	--	**0.86**	**2.5**	**2.3**	**10**	<50	**0.061**	--	<10	**38**	**7**	**20**
	10[b]	3/9/89	<0.1	--	**0.005**	**0.007**	<0.005	<0.005	<50	<0.005	--	<10	**39**	**5**	**42**
	15[b]	3/9/89	<0.1	--	<0.003	<0.005	<0.005	<0.005	**160**	<0.005	--	<10	**60**	**6**	**39**
	18[b]	3/9/89	<0.1	--	<0.003	<0.005	<0.005	<0.005	**360**	<0.005	--	<10	**39**	**7**	**51**
MW-4	5	3/9/89	**30**	--	**0.2**	**1.1**	**1**	**4**	--	<0.1	<0.1	--	--	--	--
	8.5	3/9/89	**240**	--	<0.05	**0.05**	**0.05**	**0.13**	--	<0.05	<0.05	--	--	--	--
	13.5	3/9/89	<0.5	--	<0.005	0.006	<0.005	<0.005	--	<0.005	<0.005	--	--	--	--
	16.5	3/9/89	**6**	--	**0.031**	**0.037**	**0.014**	**0.057**	--	<0.005	<0.005	--	--	--	--
MW-5	5.5	3/9/89	**390**	--	**3.4**	**13**	**8.3**	**29**	--	**0.06**	<0.05	--	--	--	--
	10	3/9/89	**30**	--	**2**	**0.12**	**0.27**	**0.43**	--	<0.05	<0.05	--	--	--	--
	13	3/9/89	**52**	--	**0.43**	**0.07**	**0.2**	**0.46**	--	<0.05	<0.05	--	--	--	--
	15	3/9/89	**28**	--	**0.12**	**0.03**	**0.04**	**0.15**	--	<0.05	<0.05	--	--	--	--
MW-6	5.5[c]	6/29/90	<10	<10	<0.005	<0.005	**0.01**	<0.015	<5	<0.005	<0.005	**1**	**29**	**6**	**22**
	8.7[c]	6/29/90	<10	<10	<0.005	<0.005	**0.01**	<0.015	<5	<0.005	<0.005	**3**	**26**	**15**	**46**
	11.7[c]	6/29/90	<10	<10	<0.005	<0.005	<0.005	<0.015	<5	<0.005	<0.005	**3**	**24**	**15**	**51**

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Date*	*TPHg*	*TPHd*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*TOG*	*1,2-DCA*	*EDB*	*Cd*	*Cr*	*Pb*	*Zn*
			concentrations in milligrams per kilogram (mg/kg)												
MW-7	4.5	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	6.5[c]	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	10.3	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
MW-8	4.8	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	7[c]	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	12	6/27/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
MW-9	5[b]	6/28/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	6.8[b,c]	6/28/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
	10.3[b]	6/28/90	<10	--	<0.005	<0.005	<0.005	<0.015	--	--	--	--	--	--	--
UST/Piping Removal Confirmation Samples															
#1	8	6/20/90	--	<1.0	--	--	--	--	**100**	--	--	--	--	--	--
#2	8	6/20/90	--	**180**	--	--	--	--	**1,300**	--	--	--	--	--	--
#3[d]	11.5	6/20/90	**41**	**190**	**0.085**	**0.33**	**0.2**	**1.6**	**3,600**	--	--	<0.5	**39**	**20**	**43**
#4[e]	10	6/20/90	<1.0	<1.0	<0.005	<0.005	<0.005	<0.005	**170**	--	--	<0.5	**41**	**3.1**	**26**
~~#5~~	~~7.5~~	~~6/20/90~~	~~<1.0~~	~~—~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	--	--	--	--	--	--	--
~~#6~~	~~7~~	~~6/20/90~~	~~**3.3**~~	~~—~~	~~**0.075**~~	~~**0.012**~~	~~**0.033**~~	~~**0.051**~~	--	--	--	--	--	--	--
#7	6.5	6/20/90	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
#8	4	6/20/90	<1.0	--	**0.011**	<0.005	**0.025**	**0.0054**	--	--	--	--	--	--	--
#9	7	6/20/90	**13**	--	**0.1**	**0.3**	**0.18**	**0.54**	--	--	--	--	--	--	--
~~#10~~	~~3~~	~~6/20/90~~	~~**160**~~	~~—~~	~~**2.9**~~	~~**13**~~	~~**4.4**~~	~~**19**~~	--	--	--	--	--	--	--
~~#11~~	~~3~~	~~6/20/90~~	~~**100**~~	~~—~~	~~**1.7**~~	~~**0.36**~~	~~**5.1**~~	~~**2.9**~~	--	--	--	--	--	--	--
~~#12~~	~~3~~	~~6/20/90~~	~~**67**~~	~~—~~	~~**2.8**~~	~~**7.7**~~	~~**1.4**~~	~~**9**~~	--	--	--	--	--	--	--
~~#13~~	~~3~~	~~6/20/90~~	~~**5.1**~~	~~—~~	~~**0.84**~~	~~**0.43**~~	~~**0.19**~~	~~**0.74**~~	--	--	--	--	--	--	--
#18[c]	12	6/20/90	**69**	**140**	**0.29**	**2.1**	**1.2**	**4**	**650**	--	--	<0.5	**22**	**2.6**	**15**

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Date*	*TPHg*	*TPHd*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*TOG*	*1,2-DCA*	*EDB*	*Cd*	*Cr*	*Pb*	*Zn*
			concentrations in milligrams per kilogram (mg/kg)												
Over-Excavation Confirmation Samples															
OP-W-7.0	7	7/2/90	**130**	--	<0.50	**1.9**	**2.6**	**9**	**50**	--	--	--	--	--	--
~~OPSW-5~~	~~5~~	~~7/2/90~~	~~**3.6**~~	~~--~~	~~**0.06**~~	~~**0.12**~~	~~**0.06**~~	~~**0.19**~~	~~<50~~	--	--	--	--	--	--
~~OPSC-5~~	~~5~~	~~7/2/90~~	~~**800**~~	~~--~~	~~**1.9**~~	~~**28**~~	~~**17**~~	~~**68**~~	~~**850**~~	--	--	--	--	--	--
02	Unknown	11/19/90	<1.0	--	<0.005	<0.005	<0.005	<0.005	<50	--	--	--	--	--	--
~~04~~	~~Unknown~~	~~11/19/90~~	~~<1.0~~	~~--~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~**140**~~	--	--	--	--	--	--
111-06	Unknown	1/11/91	<1.0	--	<0.005	<0.005	<0.005	<0.005	**60**	--	--	--	--	--	--
123-01	Unknown	1/23/91	<1.0	--	<0.005	<0.005	<0.005	<0.005	<50	--	--	--	--	--	--
123-02	Unknown	1/23/91	<1.0	--	<0.005	<0.005	<0.005	<0.005	**380**	--	--	--	--	--	--
0214.01	Unknown	2/14/91	**4**	--	**0.077**	**0.027**	**0.29**	**0.11**	**190**	--	--	--	--	--	--
0214.02	Unknown	2/14/91	**3**	--	**0.084**	**0.019**	**0.17**	**0.35**	<50	--	--	--	--	--	--
04291.01, 02	Unknown	4/29/91	**1**	--	<0.005	<0.005	<0.005	**0.013**	--	--	--	--	--	--	--
04291.03, 04	Unknown	4/29/91	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
04291.05, 06	Unknown	4/29/91	**3**	--	**0.045**	**0.051**	**0.023**	**0.086**	--	--	--	--	--	--	--
~~04291.07, 08~~	~~Unknown~~	~~4/29/91~~	~~**1,100**~~	~~--~~	~~**4.2**~~	~~**48**~~	~~**24**~~	~~**84**~~	--	--	--	--	--	--	--
05211-01, 02	Unknown	5/21/91	**25**	--	**0.41**	**2.2**	**0.69**	**2.3**	--	--	--	--	--	--	--
05211-03, 04	Unknown	5/21/91	**210**	--	**0.57**	**6.4**	**3.6**	**12**	--	--	--	--	--	--	--
05211-05, 06	Unknown	5/21/91	**26**	--	**0.06**	**0.48**	**0.54**	**1.7**	--	--	--	--	--	--	--
05211-07, 08	Unknown	5/21/91	**56**	--	**0.17**	**1.9**	**1.3**	**1.6**	--	--	--	--	--	--	--
OX1-4.5	4.5	11/14/96	**16**	--	**0.19**	**0.39**	**0.26**	**1**	--	--	--	--	--	--	--
OX2-4.5	4.5	11/14/96	**140**	--	**0.54**	**0.78**	**1.3**	**4.8**	--	--	--	--	--	--	--
OX3-5.5	5.5	11/14/96	<1.0	--	**0.0096**	**0.014**	<0.005	**0.016**	--	--	--	--	--	--	--
OX4-8	8	11/14/96	<1.0	--	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
OXB-9.5	9.5	11/14/96	<1.0	--	<0.005	**0.0098**	<0.005	**0.016**	--	--	--	--	--	--	--

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION NO. 9-0019
210 GRAND AVENUE, OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Date*	*TPHg*	*TPHd*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*TOG*	*1,2-DCA*	*EDB*	*Cd*	*Cr*	*Pb*	*Zn*
			concentrations in milligrams per kilogram (mg/kg)												
Shallow Soil Samples															
S-1	3	12/1/95	<1.0	**8.3**	<0.005	<0.005	<0.005	**0.017**	--	--	--	--	--	--	--
S-2	3	12/1/95	**2.8**	**12**	<0.005	**0.0059**	**0.0068**	**0.019**	--	--	--	--	--	--	--
S-3	3	12/1/95	<1.0	**38**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-4	3	12/1/95	<1.0	**3.2**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-5	3	12/1/95	<1.0	**5.5**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-6	3	12/1/95	<1.0	**2.7**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-7	3	12/1/95	<1.0	**28**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-8	3	12/1/95	<1.0	**8.6**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
S-9	3	12/1/95	**2.1**	**3.2**	**0.026**	**0.034**	**0.029**	**0.13**	--	--	--	--	--	--	--
S-10	3	12/1/95	<1.0	**2.8**	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--

Abbreviations/Notes:

fbg = feet below grade

TPHg/TPHd = Total petroleum hydrocarbons as gasoline and diesel, respectively

TOG = Total Oil & Grease

1,2-DCA = 1,2-Dichloroethane

EDB = 1,2-Dibromoethane

Cd (cadmium), Cr (chromium), Pb (lead), and Zn (zinc)

< = Not detected at or above stated laboratory reporting limit

-- = Not analyzed

a = Volatile organic compounds (VOCs) not detected except acetone at 0.77 mg/kg

b = VOCs not detected

c = Halogenated VOCs (HVOCs) not detected

d = HVOCs not detected except cis-1,2-DCE (0.14 mg/kg), PCE (0.052 mg/kg), and 1,1,1-TCA (0.25 mg/kg)

e = HVOCs not detected except cis-1,2-DCE (0.026 mg/kg)

Note: samples with "strikethrough" formatting were collected from soil that was later removed

TABLE 3

SOIL VAPOR SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION NO. 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA

Sample ID	*Sample Depth (fbg)*	*Sample Date*	*Total Volatile Hydrocarbons*	*Benzene*	*Toluene*	*Xylenes*
			Concentrations reported in parts per million (ppm)			
VP-1(A)	5	2/2/89	**6,400**	OP	**200**	**160**
VP-1(B)	15	2/2/89	**52**	OP	ND	ND
VP-2(A)	5	2/2/89	**190**	**43**	**31**	**6.7**
VP-2(B)	15	2/2/89	**5,100**	OP	**29**	ND
VP-3(A)	5	2/2/89	**41**	OP	ND	ND
VP-3(B)	15	2/2/89	**17**	ND	ND	ND
VP-4	5	2/2/89	**4,900**	OP	**4,700**	**180**
VP-5	5	2/2/89	**17,000**	OP	OP	OP
VP-6(A)	5	2/2/89	**410**	**29**	**120**	**160**
VP-6(B)	15	2/2/89	**9.2**	ND	ND	ND
VP-7(A)	5	2/2/89	**13,000**	OP	OP	OP
VP-7(B)	10	2/2/89	**73,000**	OP	OP	ND
VP-8(A)	5	2/2/89	**1,000**	**220**	**460**	**170**
VP-8(B)	13	2/2/89	**33,000**	OP	OP	ND
VP-9	5	2/3/89	**27,000**	OP	OP	**390**
VP-10	5	2/3/89	**30,000**	OP	OP	**190**
VP-11	5	2/3/89	**32,000**	OP	OP	**300**
VP-12(A)	5	2/3/89	**960**	OP	**37**	**7.4**
VP-12(B)	14	2/3/89	**240**	OP	**20**	ND

Abbreviations/Notes:

fbg = feet below grade

OP = Overlapping peaks, unable to resolve

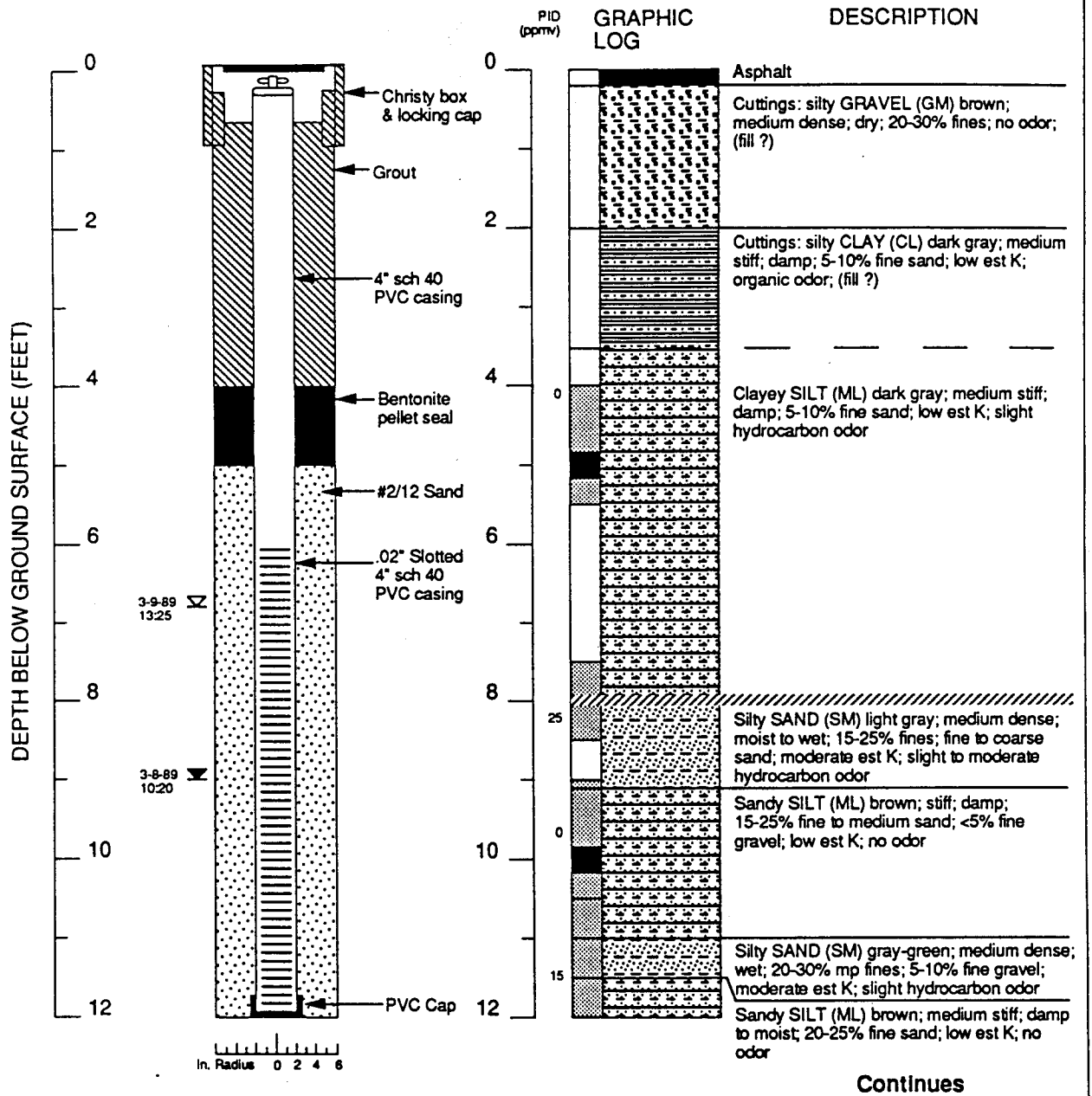
ND = Not detected (less than 6 ppm method detection limit)

Note: Samples analyzed using a Photovac 10S50 portable gas chromatograph (GC). The GC was calibrated to a 250-microliter standard of benzene, toluene and xylenes. A concentration standard of 50.3 ppm (benzene), 52.6 ppm (toluene) and 147.9 ppm (xylenes) was used.

APPENDIX A

HISTORICAL BORING LOGS

MONITOR WELL MW-1



Continues

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Gradational (hachured), uncertain (dashed) contact
- Location of recovered drive sample
- NR — No recovery
- Location of drive sample sealed for chemical analysis
- Grab sample

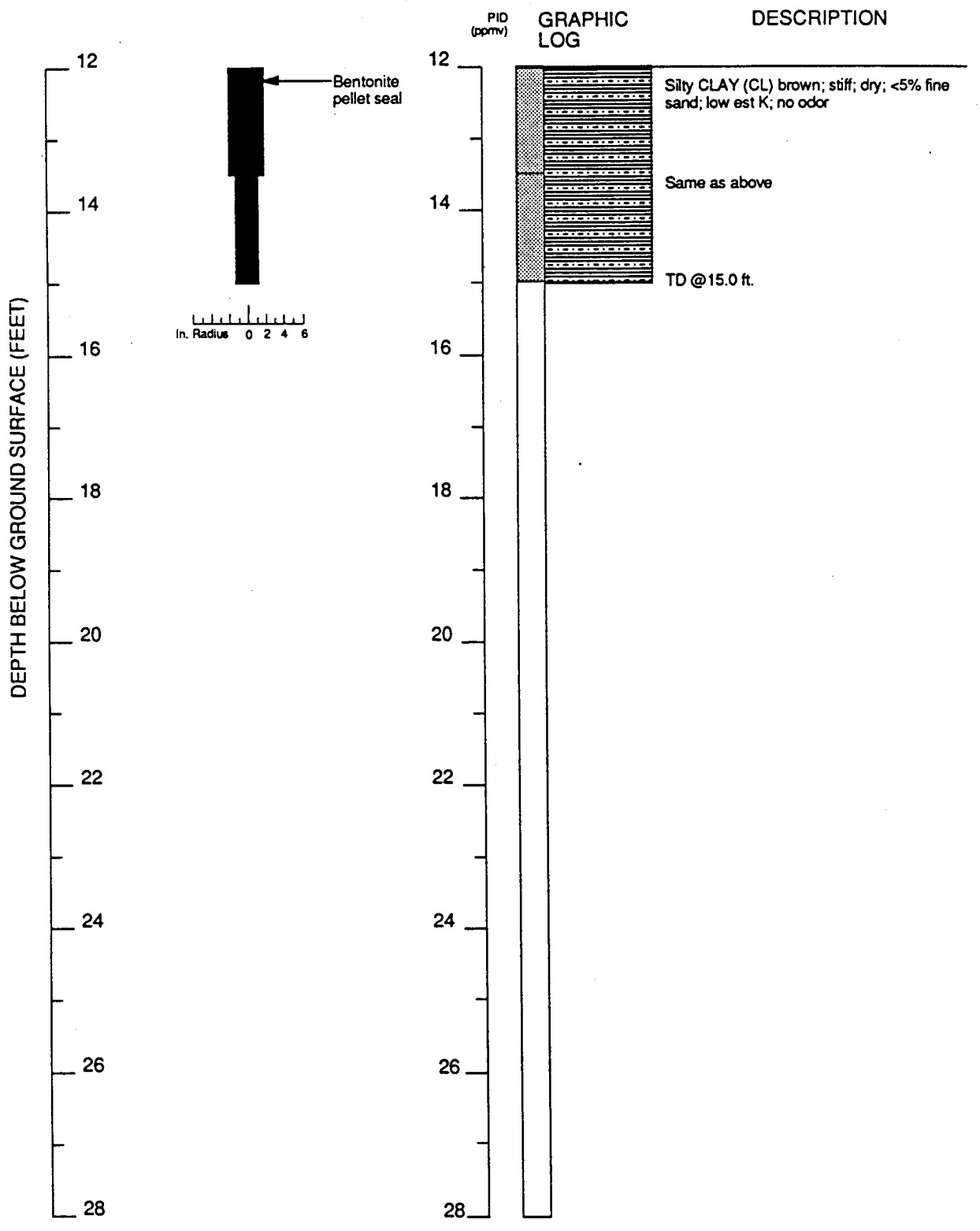
est K = Estimated permeability (hydraulic conductivity)

Logged by: Mike Edmonson
Supervisor: Doug Sheeks
Drilling Company: Exploration Geoservices
Driller: Dave Yeager
Drilling Method: 12" Hollow stem auger
Dates Drilled: 3/8/89
Well Head Completion: Christy box & locking cap
Type of Sampler: 2" split barrel
TD: Total depth= 15.0 ft.

Boring Log and Well Completion Details MW-1
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

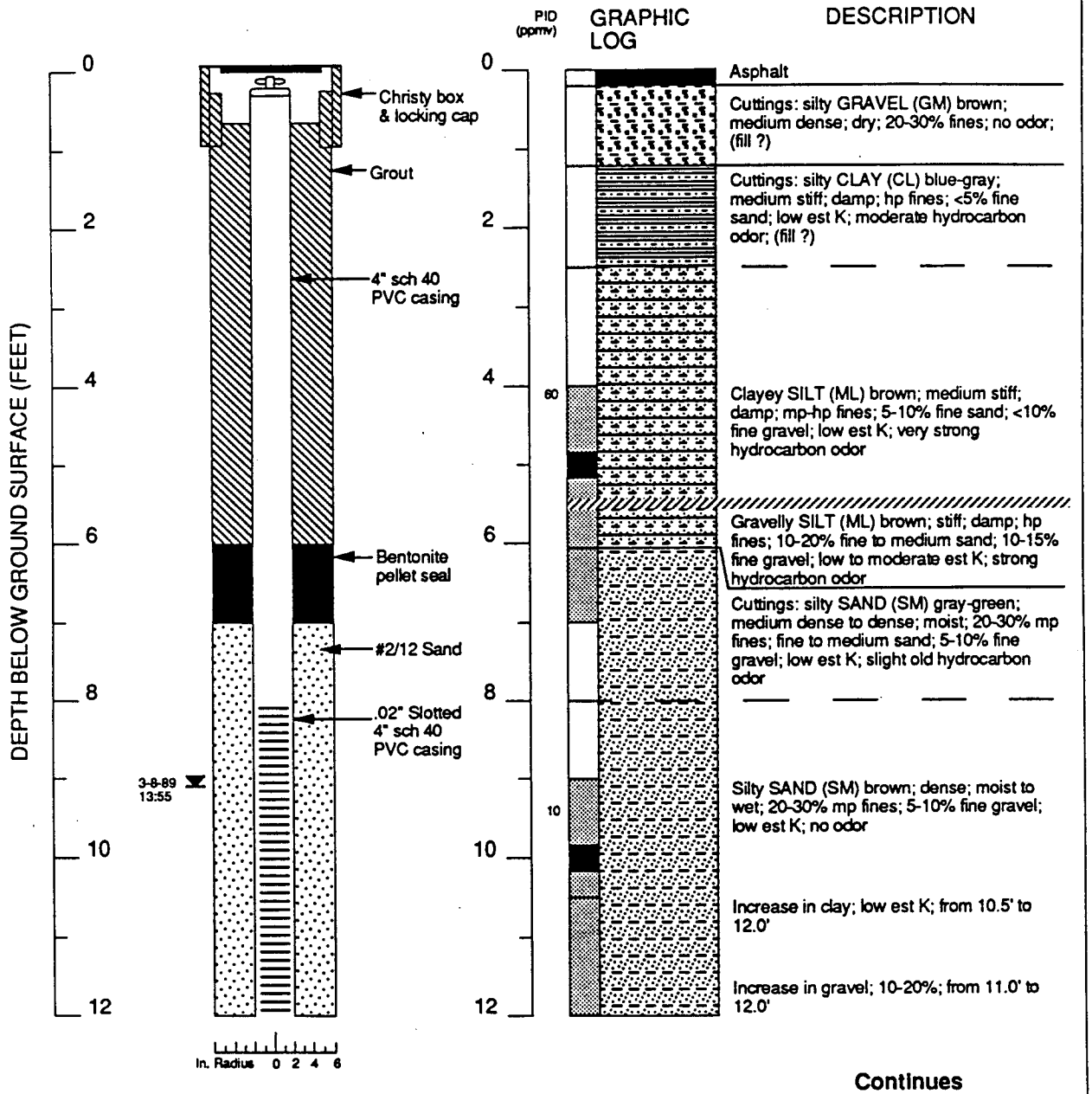
MONITOR WELL MW-1 (cont.)



Boring Log and Well Completion Details MW-1 (cont.)
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

MONITOR WELL MW-2



Continues

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Gradational (hachured), uncertain (dashed) contact
- Location of recovered drive sample
- NR — No recovery
- Location of drive sample sealed for chemical analysis
- Grab sample

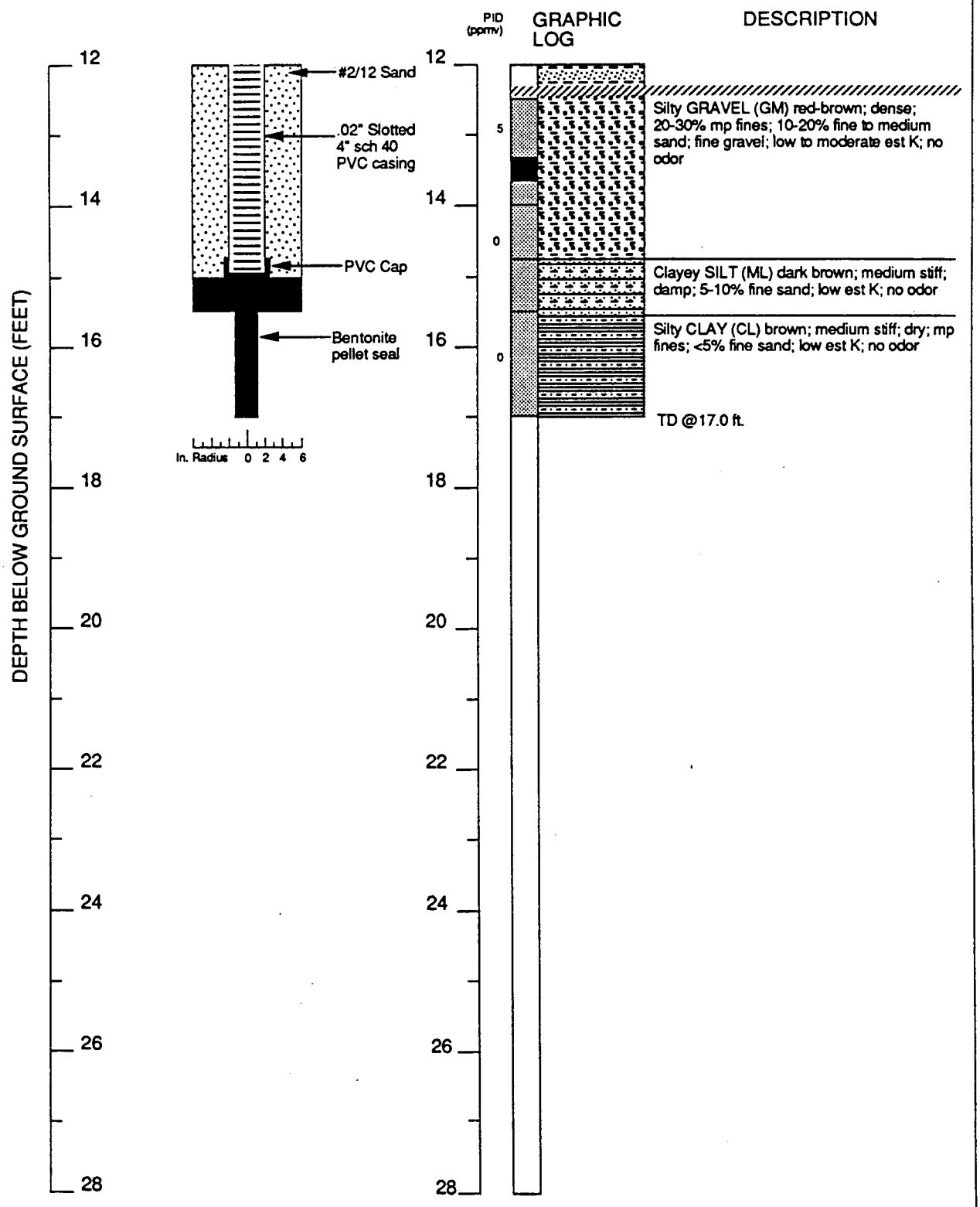
est K = Estimated permeability (hydraulic conductivity)

Logged by: Mike Edmonson
Supervisor: Doug Sheeks
Drilling Company: Exploration Geoservices
Driller: Dave Yeager
Drilling Method: 12" Hollow stem auger
Dates Drilled: 3/8/89
Well Head Completion: Christy box & locking cap
Type of Sampler: 2" split barrel
TD: Total depth= 17.0 ft.

Boring Log and Well Completion Details MW-2
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

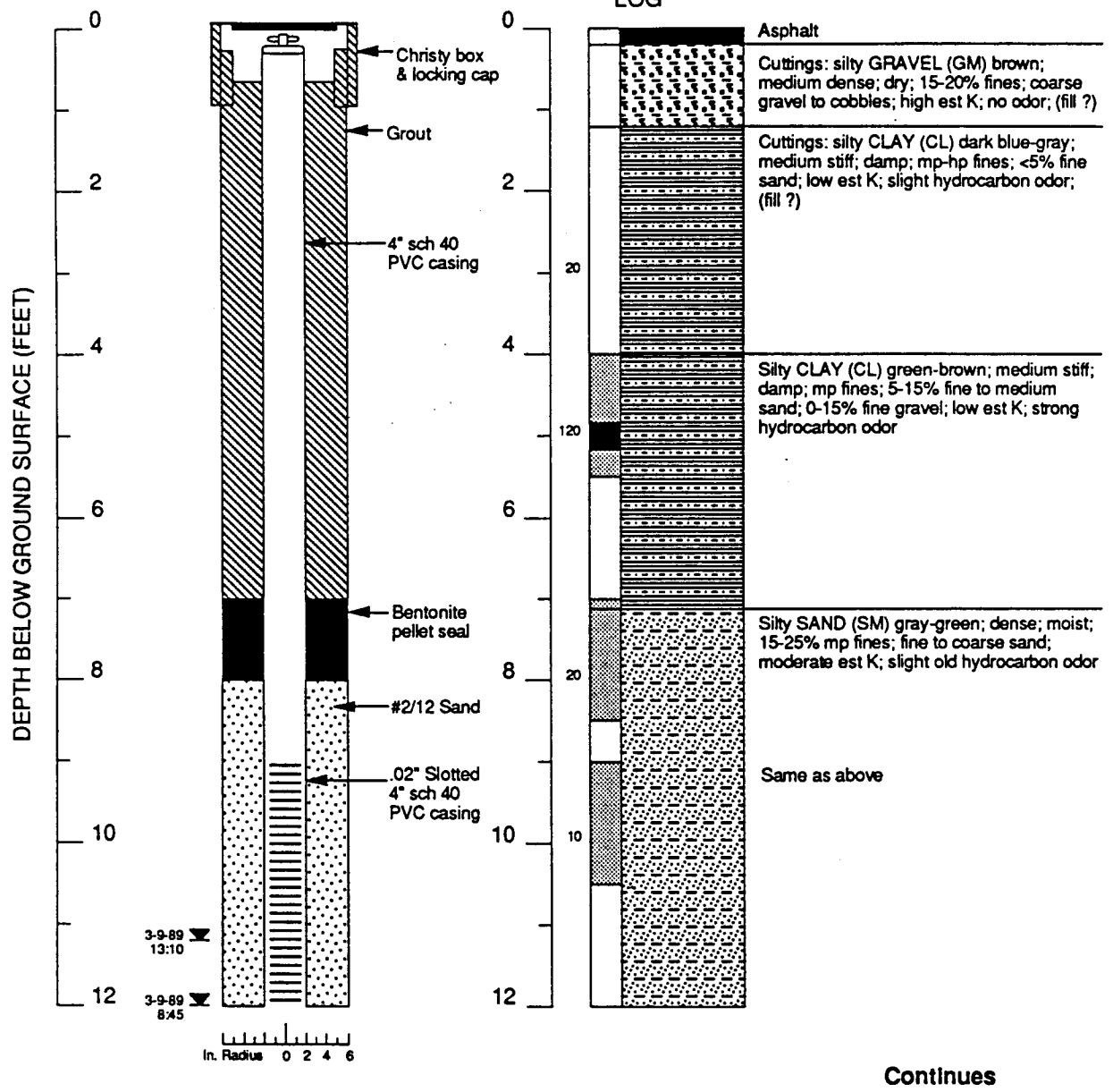
MONITOR WELL MW-2 (cont.)



Boring Log and Well Completion Details MW-2 (cont.)
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

MONITOR WELL MW-3



Continues

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Gradational (hachured), uncertain (dashed) contact
- Location of recovered drive sample
- NR — No recovery
- Location of drive sample sealed for chemical analysis
- Grab sample

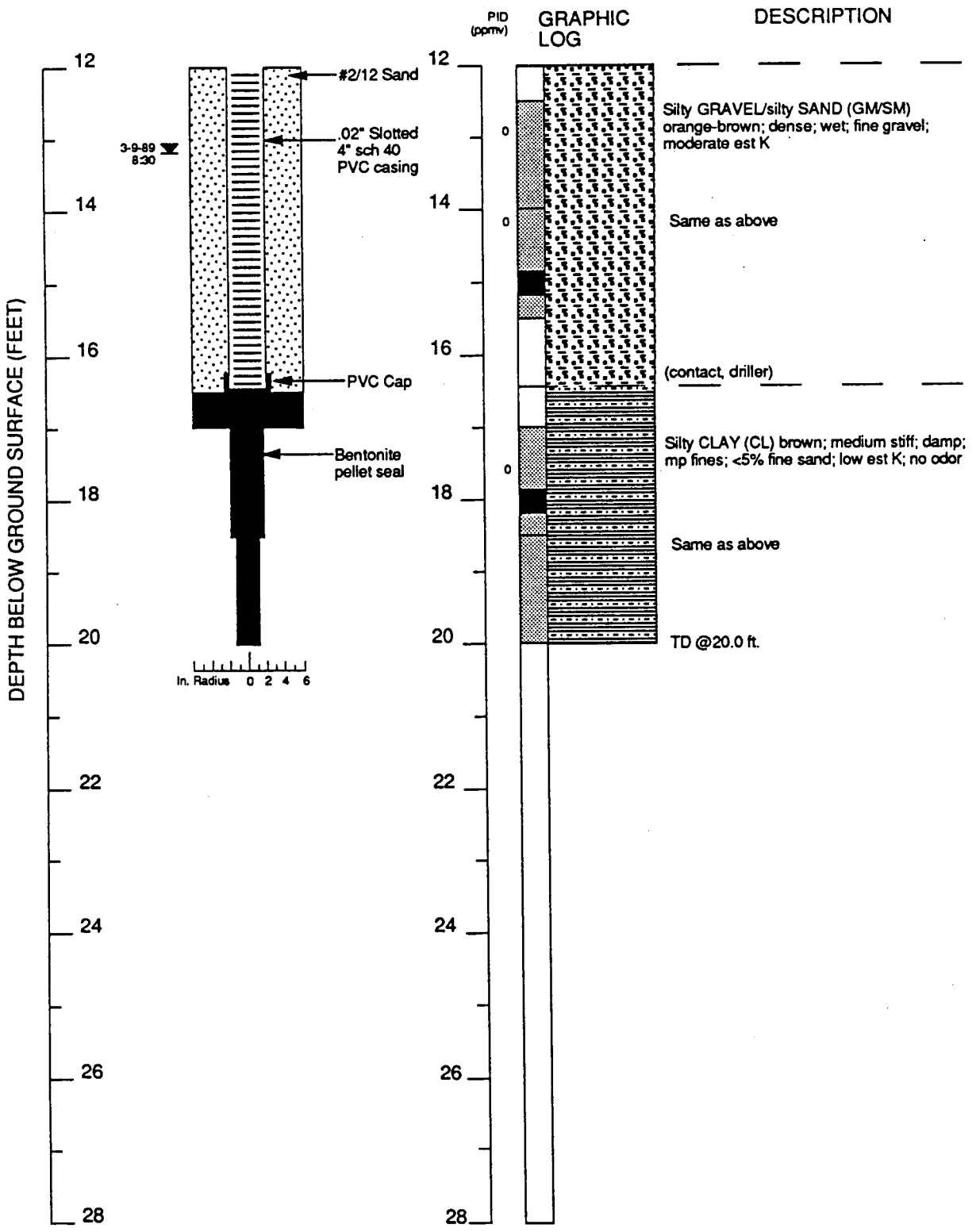
est K = Estimated permeability (hydraulic conductivity)

Logged by: Mike Edmonson
Supervisor: Doug Sheeks
Drilling Company: Exploration Geoservices
Driller: Dave Yeager
Drilling Method: 12" Hollow stem auger
Dates Drilled: 3/9/89
Well Head Completion: Christy box & locking cap
Type of Sampler: 2" split barrel
TD: Total depth= 20.0 ft.

Boring Log and Well Completion Details MW-3
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

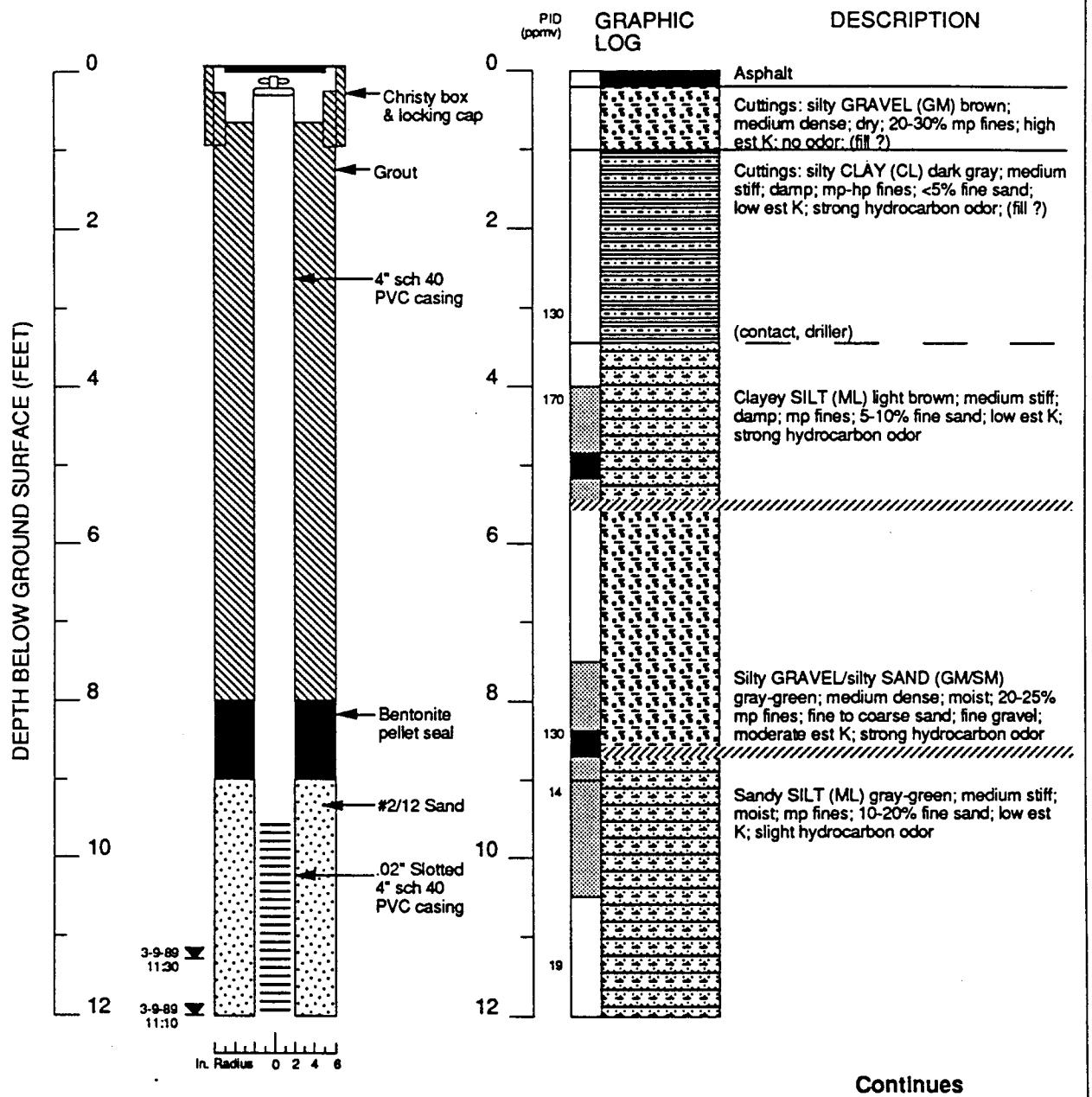
MONITOR WELL MW-3 (cont.)



Boring Log and Well Completion Details MW-3 (cont.)
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

MONITOR WELL MW-4



Continues

EXPLANATION

- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——····—— Contact (dotted where approx.)
- ////////- - - Gradational (hachured), uncertain (dashed) contact
- ▩ Location of recovered drive sample
- NR No recovery
- ■ Location of drive sample sealed for chemical analysis
- ■ Grab sample

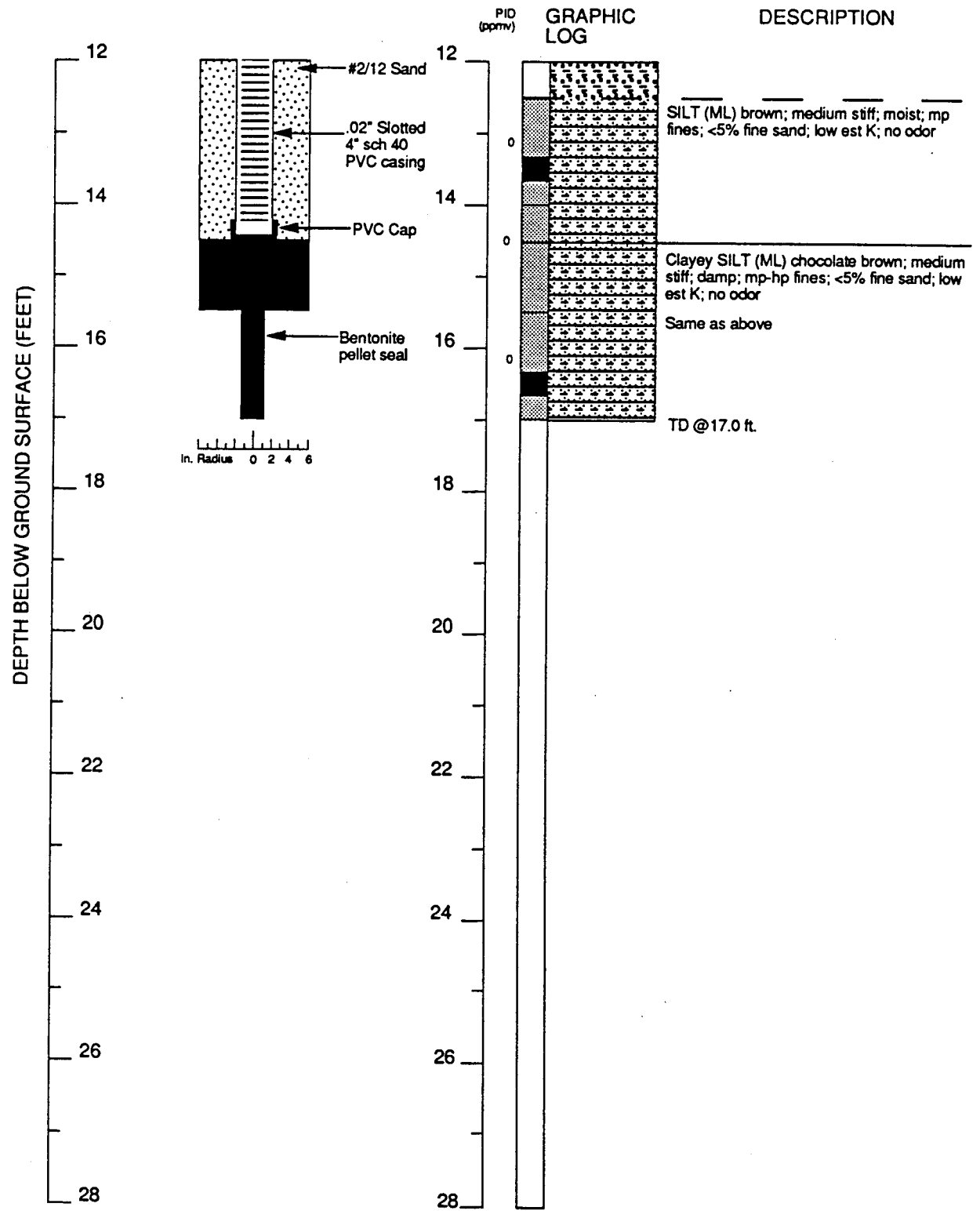
est K = Estimated permeability (hydraulic conductivity)

Logged by: Mike Edmonson
Supervisor: Doug Sheeks
Drilling Company: Exploration Geoservices
Driller: Dave Yeager
Drilling Method: 12" Hollow stem auger
Dates Drilled: 3/9/89
Well Head Completion: Christy box & locking cap
Type of Sampler: 2" split barrel
TD: Total depth= 17.0 ft.

Boring Log and Well Completion Details MW-4
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

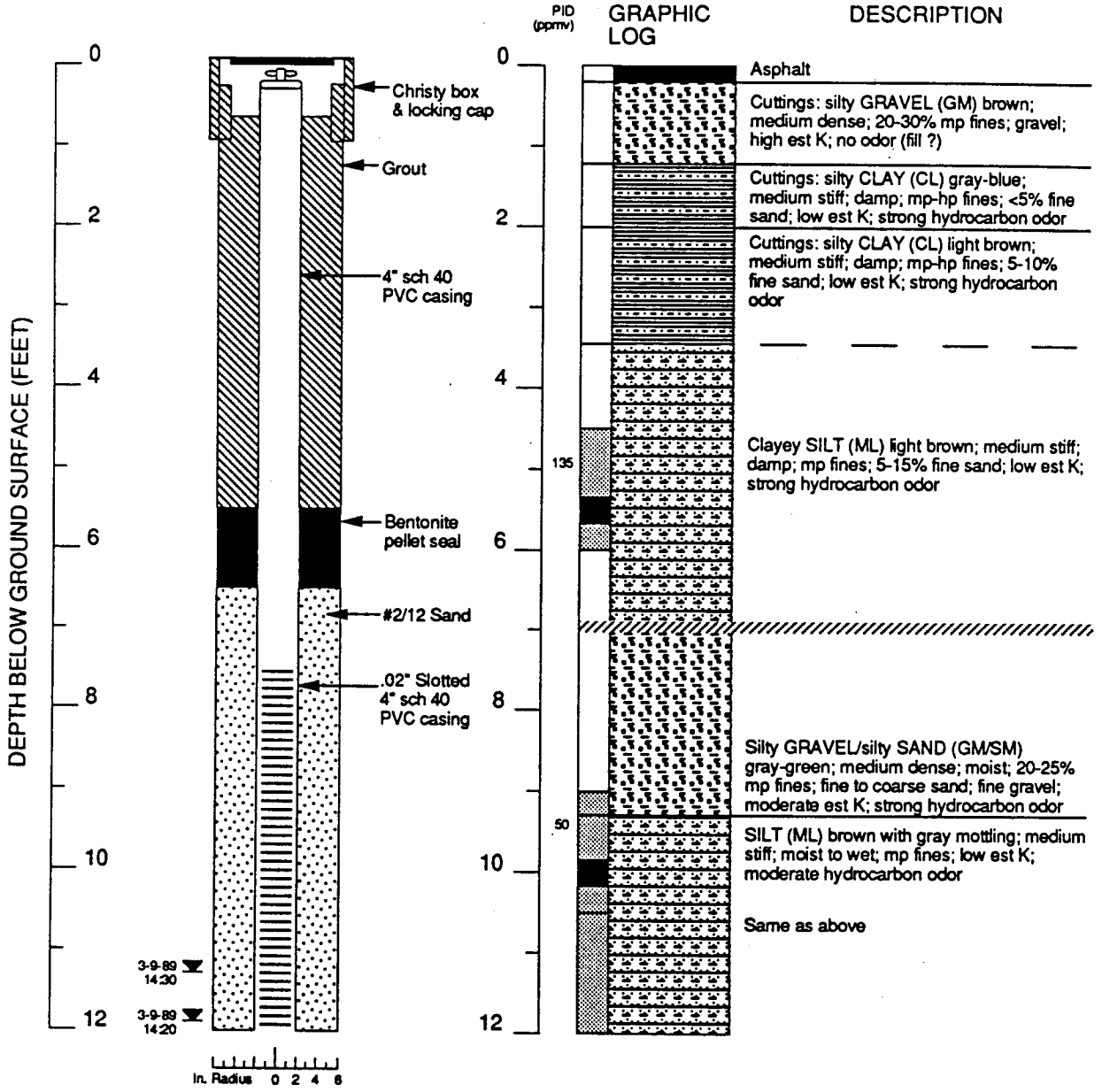
MONITOR WELL MW-4 (cont.)



Boring Log and Well Completion Details MW-4 (cont.)
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA

MONITOR WELL MW-5



Continues

EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approx.)
- Gradational (hachured), uncertain (dashed) contact
- Location of recovered drive sample
- NR — No recovery
- Location of drive sample sealed for chemical analysis
- Grab sample

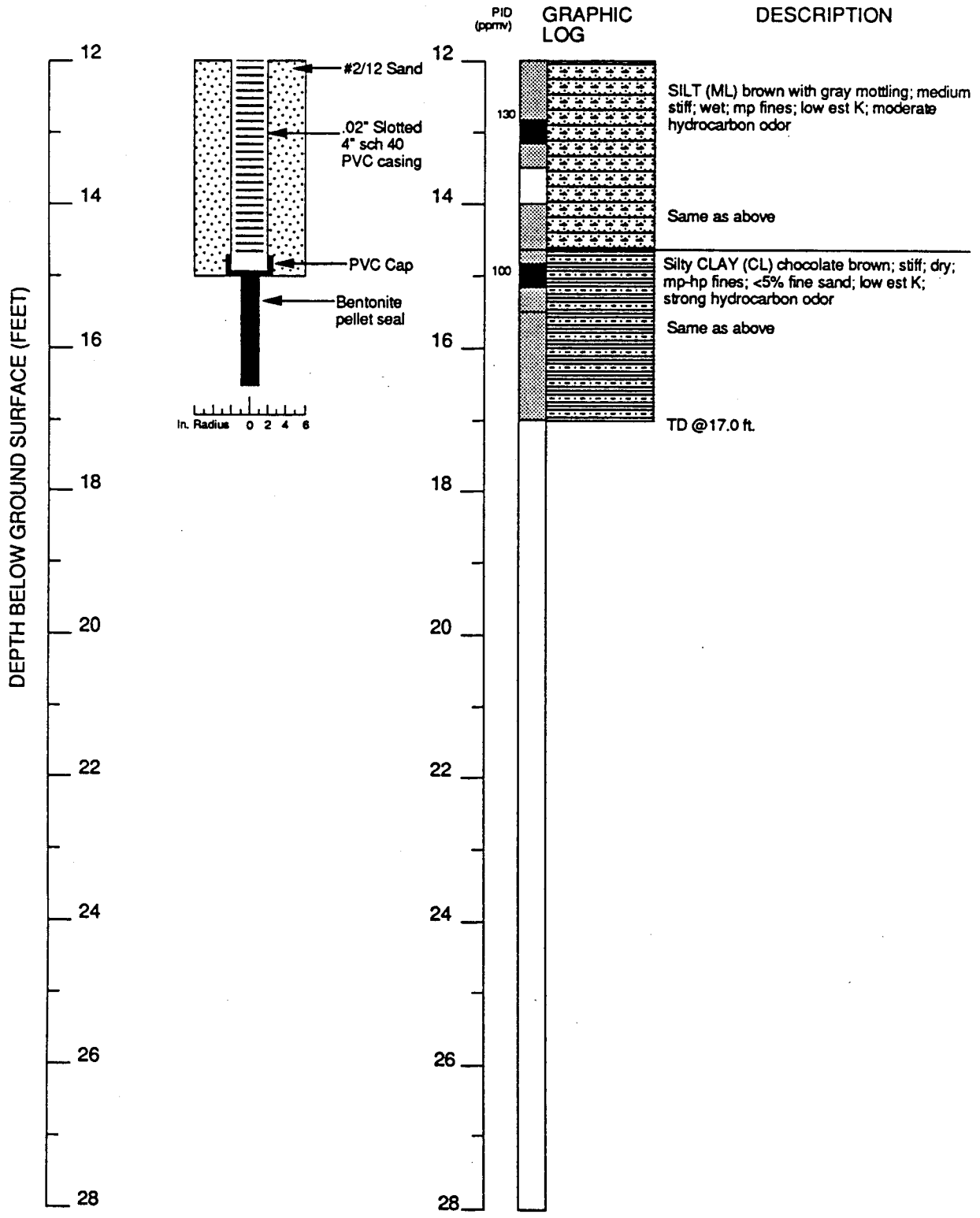
est K = Estimated permeability (hydraulic conductivity)

Logged by: Mike Edmonson
Supervisor: Doug Sheeks
Drilling Company: Exploration Geoservices
Driller: Dave Yeager
Drilling Method: 12" Hollow stem auger
Dates Drilled: 3/9/89
Well Head Completion: Christy box & locking cap
Type of Sampler: 2" split barrel
TD: Total depth= 17.0 ft.

Boring Log and Well Completion Details MW-5
WGR Project No.: 1-101.01

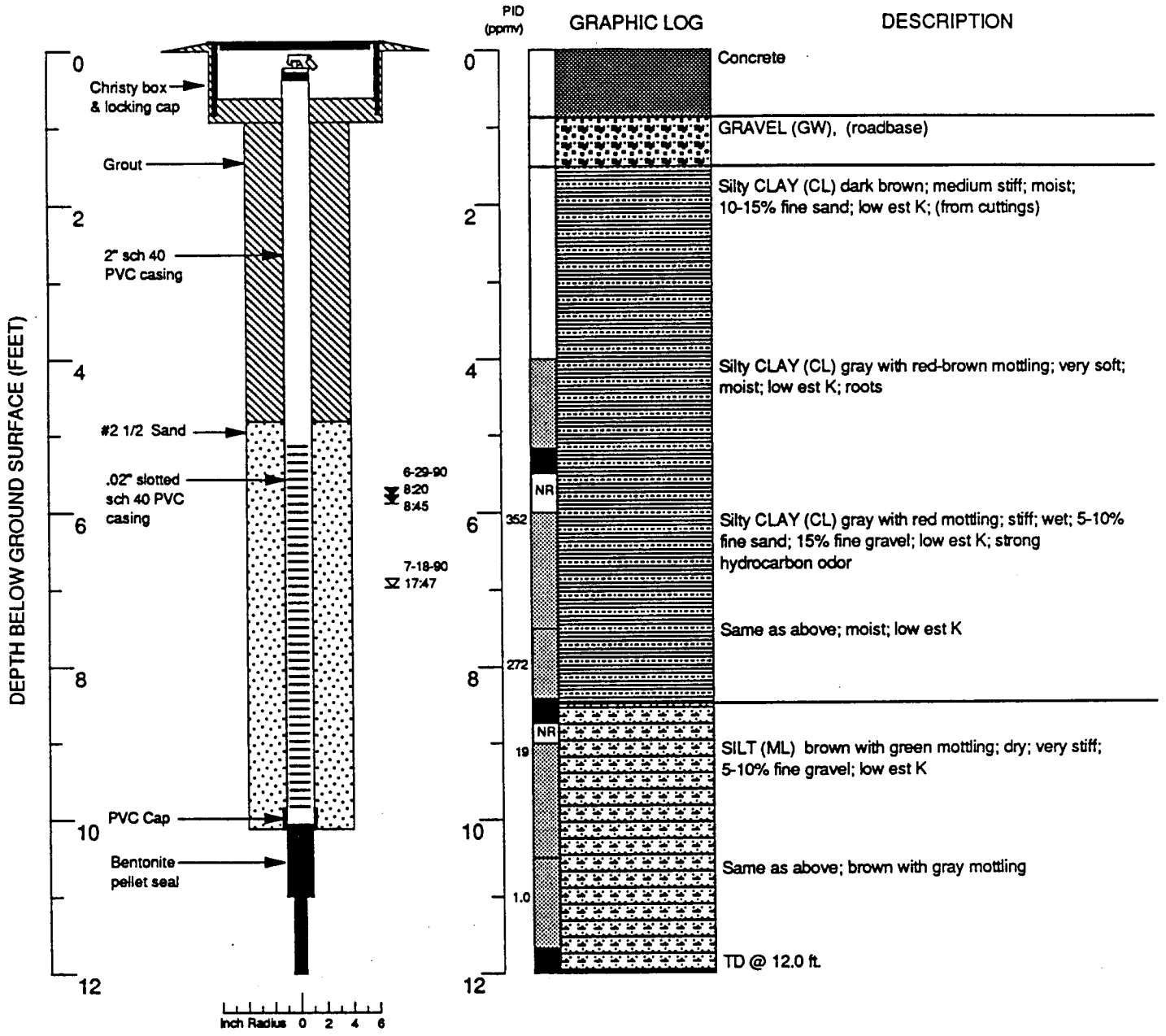
Chevron Facility # 90019
Oakland, CA

MONITOR WELL MW-5 (cont.)



Boring Log and Well Completion Details MW-5 (cont.)
WGR Project No.: 1-101.01

Chevron Facility # 90019
Oakland, CA



Logged by:	Justin Power	Drilling Company:	B & F Drilling	Well Head Completion:	Christy box & locking cap
Project Mgr:	Len Niles	Drilling Method:	8" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	6/29/90	Driller:	Bruce Cox	TD (Total Depth):	12.0 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

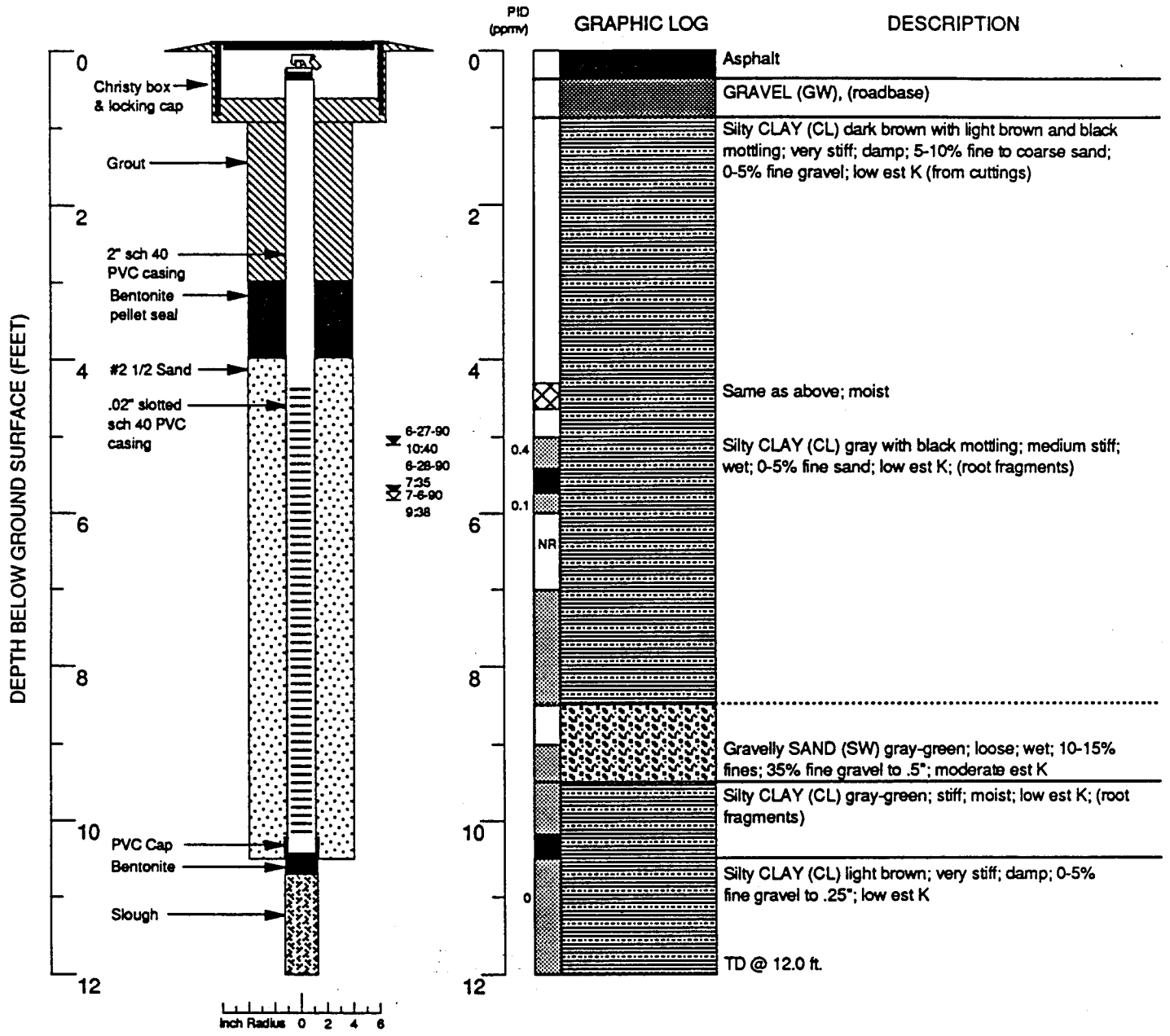
Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

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

Boring Log and Well Completion Details
MW-6 (Boring B-6)

Chevron Service Station #90019
Oakland, California

MONITOR WELL
6



Logged by:	Justin Power	Drilling Company:	B & F Drilling	Well Head Completion:	Christy box & locking cap
Project Mgr:	Len Niles	Drilling Method:	8" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	6/27/90	Driller:	Bruce Cox	TD (Total Depth):	12.0 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

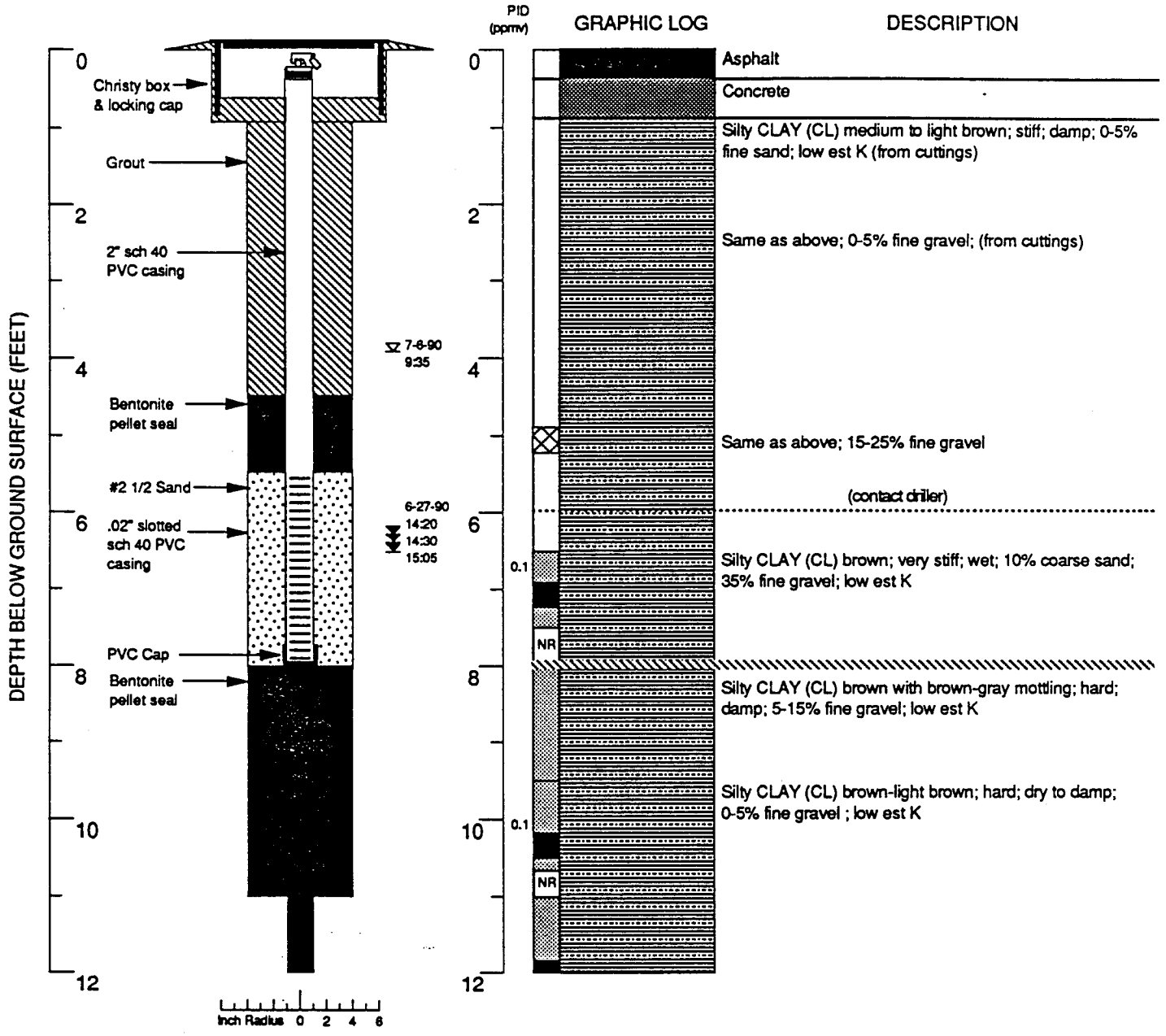
Contacts:
- Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational

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

Boring Log and Well Completion Details
MW-7 (Boring B-7)

Chevron Service Station #90019
Oakland, California

MONITOR WELL
7



Continues

Logged by:	Justin Power	Drilling Company:	B & F Drilling	Well Head Completion:	Christy box & locking cap
Project Mgr:	Len Niles	Drilling Method:	8" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	6/27/90	Driller:	Bruce Cox	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

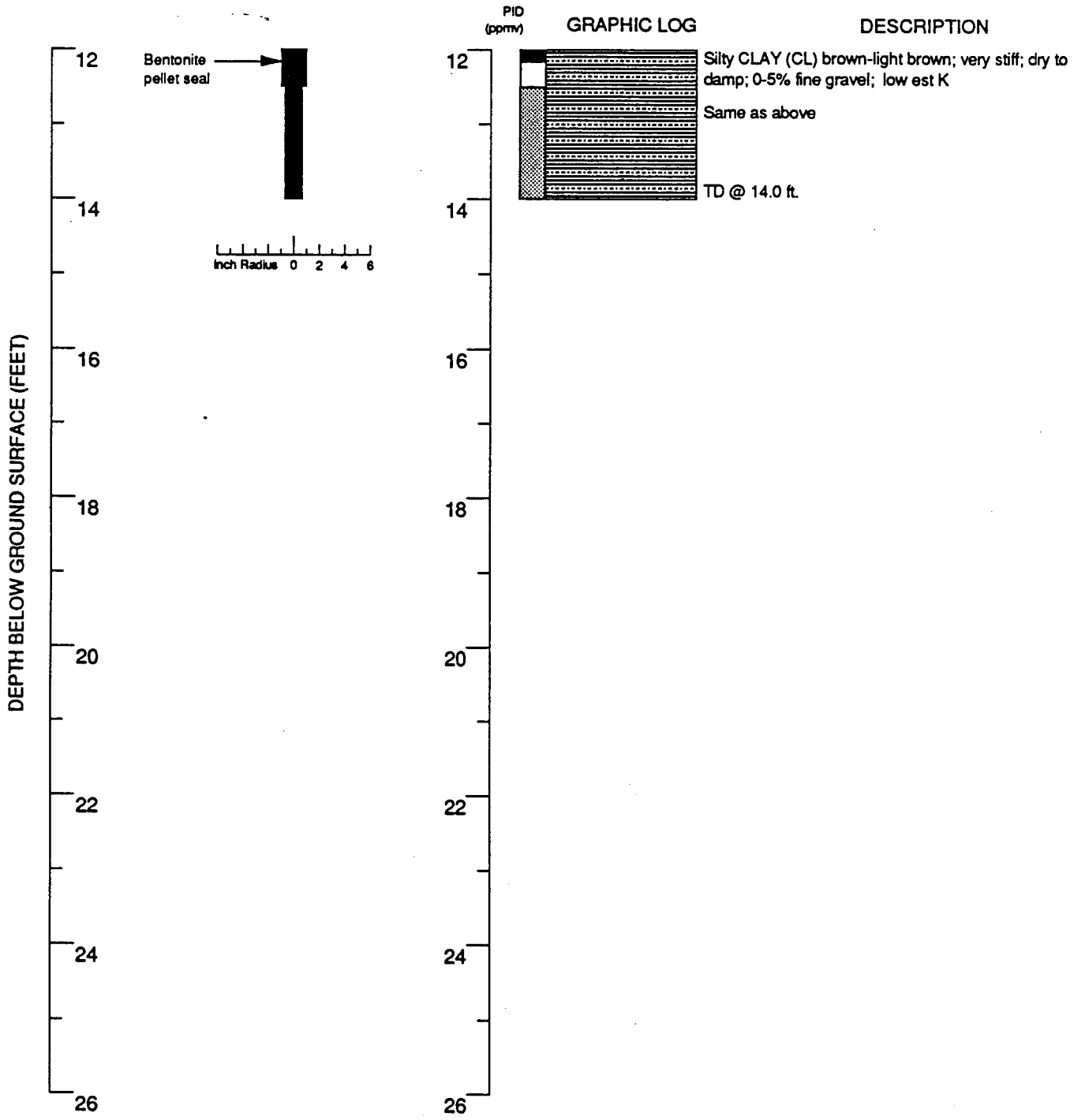
Boring Log and Well Completion Details
MW-8 (Boring B-8)

Chevron Service Station #90019
Oakland, California

MONITOR WELL
8

WESTERN GEOLOGIC RESOURCES, INC.

1-101.04



EXPLANATION

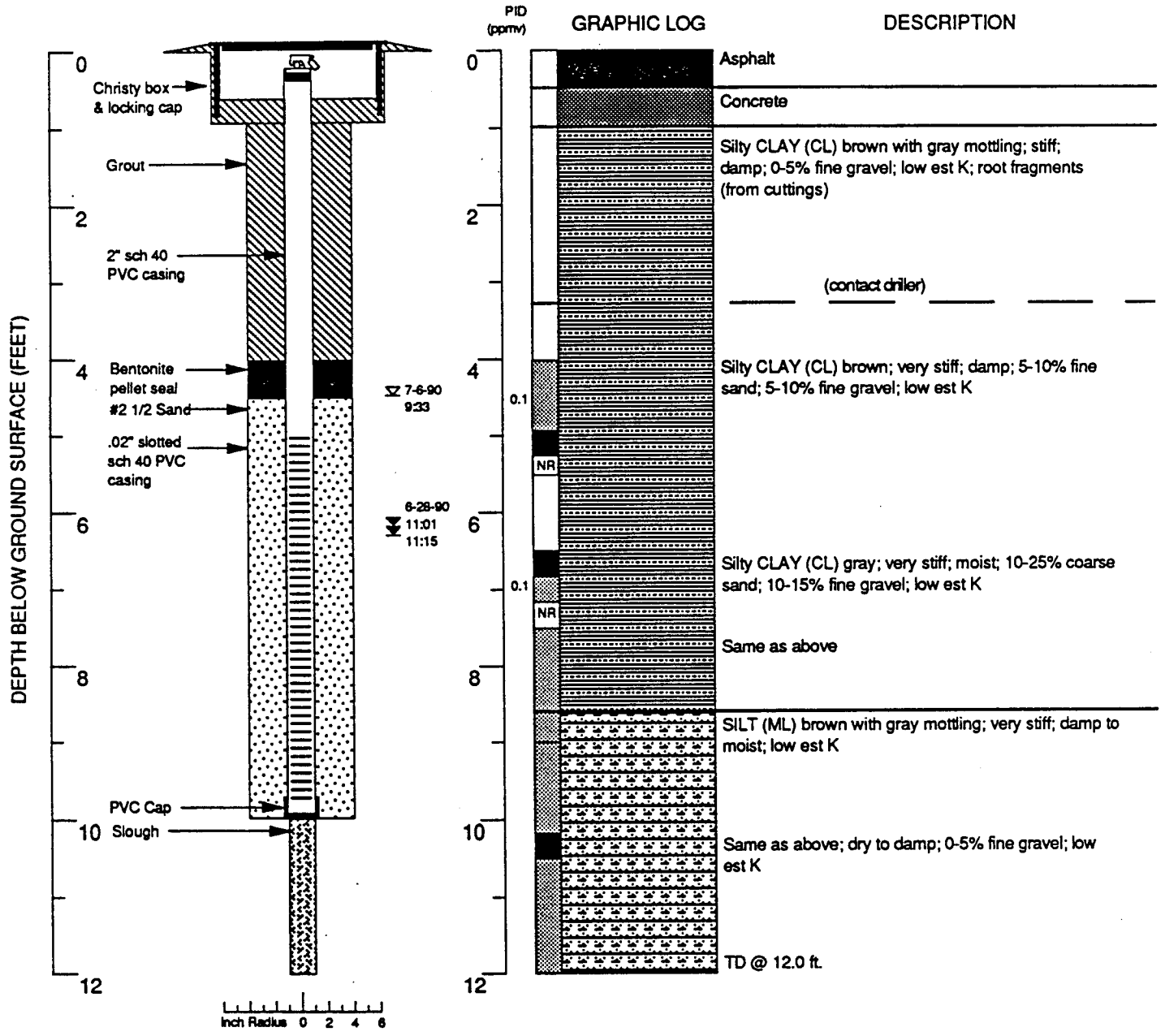
- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K —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

Boring Log and Well Completion Details
MW-8 (Boring B-8)

Chevron Service Station #90019
Oakland, California

MONITOR WELL

8



Logged by:	Justin Power	Drilling Company:	B & F Drilling	Well Head Completion:	Christy box & locking cap
Project Mgr:	Len Niles	Drilling Method:	8" Hollow stem auger	Type of Sampler:	2" split barrel
Dates Drilled:	6/28/90	Driller:	Bruce Cox	TD (Total Depth):	12.0 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-9 (Boring B-9)

Chevron Service Station #90019
Oakland, California

MONITOR WELL
9

WESTERN GEOLOGIC RESOURCES, INC.

1-101.04

APPENDIX B

FIRST SEMI-ANNUAL 2010 GROUNDWATER MONITORING REPORT

GETTLER-RYAN INC.

TRANSMITTAL

April 2, 2010
G-R #386500

TO: Mr. James Kiernan
Conestoga-Rovers & Associates
10969 Trade Center Dr, Suite 107
Rancho Cordova, CA 95670

CC: Ms. Stacie H. Frerichs
Chevron Environmental
Management Company
6111 Bollinger Canyon Road,
Room 3596
San Ramon, California 94583
(VIA PDF)

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

RE: Former Chevron Service Station
#9-0019 (MTI)
210 Grand Avenue
Oakland, California
RO 0000137

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	March 25, 2010	Groundwater Monitoring and Sampling Report **First Semi-Annual Event of March 4, 2010**

COMMENTS:

This report is being sent for your review. Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***April 16, 2010***, at which time this final report will be distributed to the following:

cc: Mr. Mark Detterman, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577
(No Hard Copy-UPLOAD TO ALAMEDA CO.)
Mr. Ron Basarich, CEDA Real Estate City of Oakland, 250 Frank Ogawa Plaza, Suite 4314, Oakland, California 94612-2033

Enclosures

trans/9-0019-SHF

Chevron

Stacie H. Frerichs
Team Lead
Marketing Business Unit

Chevron Environmental Management Company
6001 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 842-9655
Fax (925) 842-8370

April 2, 2010
(date)

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

Re: Chevron Facility # 9-0019

Address: 210 Grand Ave., Oakland, California

I have reviewed the attached routine groundwater monitoring report dated April 2, 2010.

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

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

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

Sincerely,

SHFrerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

WELL CONDITION STATUS SHEET

Client/Facility #: **Chevron #9-0019**
Site Address: **210 Grand Avenue**
City: **Oakland, CA**

Job #: **386500**
Event Date: 3-4-10
Sampler: Joe

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS *(M) Missing (R) Replaced*	Bolt Flanges *B= Broken S= Stripped R=Retap*	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal *(Deficient) inches from TOC*	Casing *(Condition prevents tight cap seal)*	REPLACE LOCK Y / N	REPLACE CAP Y / N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
MW-4	O.K	O.K	O.K	O.K	O.K	O.K	O.K	N	N	12" Diversified/2	No
MW-5	↓	↓	↓	↓	↓	↓	↓	↓	↓	12" Emco/2	↓
MW-6	↓	↓	↓	↓	↓	↓	↓	↓	↓	8" Boart L. / 3	↓
MW-7	↓	N/A	N/A	N/A	↓	↓	↓	↓	↓	8" Monument box	↓

Comments

GETTLER-RYAN INC.

March 25, 2010
G-R Job #386500

Ms. Stacie H. Frerichs
Chevron Environmental Management Company
6111 Bollinger Canyon Road, Room 3596
San Ramon, CA 94583

RE: First Semi-Annual Event of March 4, 2010
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-0019
210 Grand Avenue
Oakland, California

Dear Ms. Frerichs:

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 Potentiometric Map is included as Figure 1.

Groundwater samples were collected from the monitoring wells and submitted to a state certified laboratory for analyses. The field data sheets for this event are attached. Analytical results are presented in the table(s) listed below. The chain of custody document and laboratory analytical report are also attached. All groundwater and decontamination water generated during sampling activities was removed from the site, per the Standard Operating Procedure.

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

Sincerely,

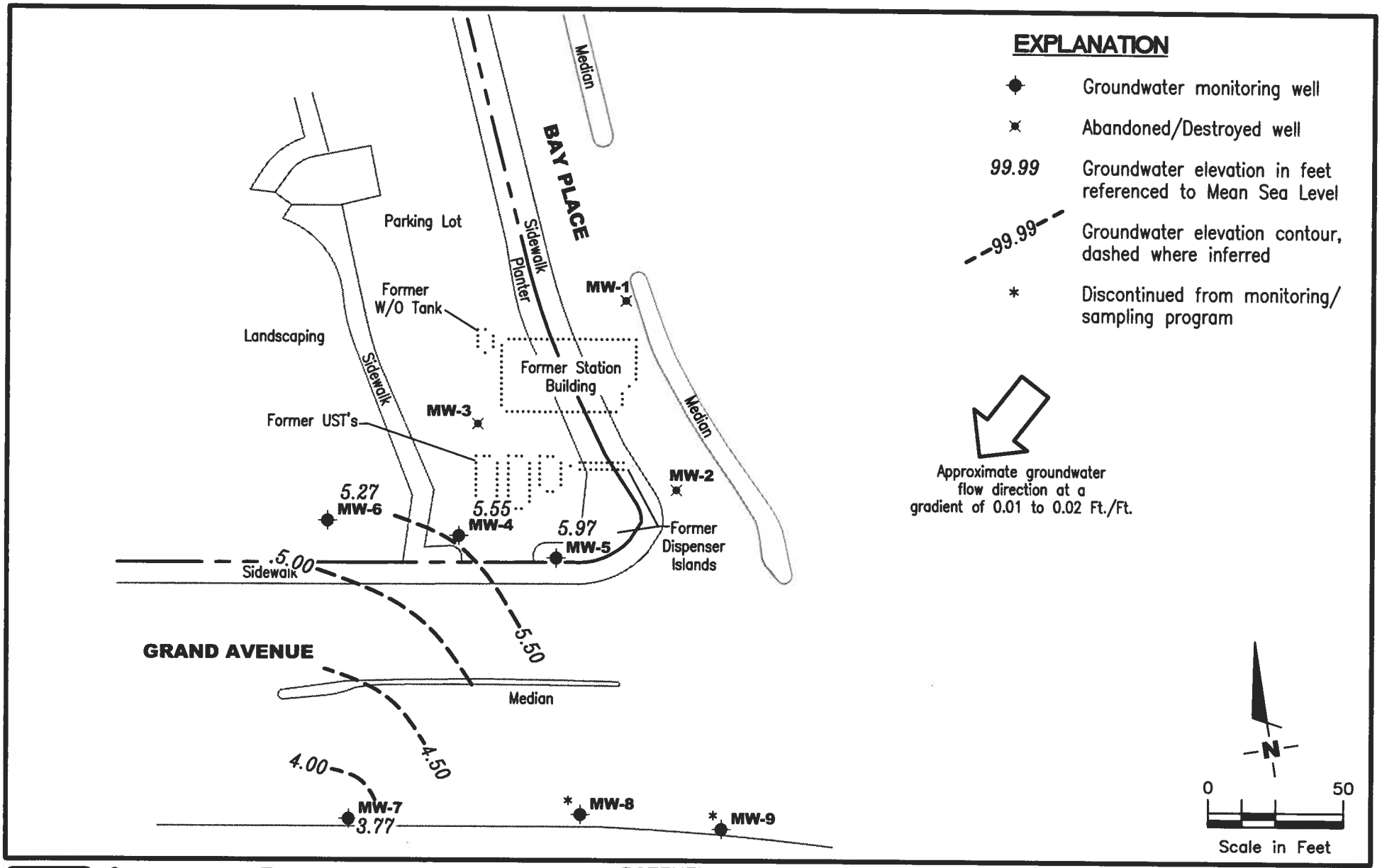
Cheryl L Hansen
-FOR-
Deanna L. Harding
Project Coordinator

Douglas J. Lee
Senior Geologist, P.G. No. 6882

PROFESSIONAL GEOLOGIST
DOUGLAS J. LEE
No. 6882
STATE OF CALIFORNIA

Figure 1: Potentiometric Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Dissolved Oxygen Concentrations
Table 3: Groundwater Analytical Results - Oxygenate Compounds
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
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.
6747 Sierra Court, Suite J
Dublin, CA 94568
(925) 551-7555

POTENTIOMETRIC MAP
Former Chevron Service Station #9-0019
210 Grand Avenue
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386500		March 4, 2010	

FILE NAME: P:\Enviro\Chevron\9-0019\Q10-9-0019.dwg | Layout Tab: Pot1

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-4																	
03/14/89	7.60	2.08	5.52	3,000	810	200	30	130	--	<3,000	<20	<5.0	<20	<5.0	--	--	--
06/08/89	7.60	3.41	4.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/09/89	7.60	--	--	900	440	13	22	40	--	--	<20	<5.0	60	<5.0	--	--	--
09/14/89	7.60	2.80	4.80	540	220	2.0	6.1	9.3	--	--	<1.0	2.3	<1.0	<0.2	--	--	--
12/08/89	7.60	2.74	4.86	150	18	<0.3	1.0	<0.6	--	--	<0.5	1.9	--	<0.5	--	--	--
03/19/90	7.60	2.95	4.65	270	50	<0.3	0.7	<0.6	--	--	<0.5	0.8	--	<0.5	--	--	--
07/06/90	7.59	1.17	6.42	140	0.7	<0.3	0.5	<0.6	--	--	<0.5	0.79	--	<0.5	--	--	--
10/03/90	7.59	1.20	6.39	180	<0.3	<0.3	2.0	<0.6	--	--	<0.5	0.5	--	<0.5	--	--	--
08/23/91	7.59	3.17	4.42	400	9.9	6.8	3.1	7.1	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	7.59	2.21	5.38	130	3.4	1.3	3.5	6.0	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	7.59	4.94	2.65	520	15	2.7	6.1	8.6	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	7.59	3.63	3.96	460	20	2.8	5.0	6.9	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	7.59	2.91	4.68	160	1.1	1.7	0.8	2.8	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	7.59	3.96	3.63	110	0.7	0.5	0.9	1.7	--	--	--	--	--	--	--	--	--
03/22/93	7.59	4.69	2.90	930	9.0	3.0	7.0	8.0	--	--	--	--	--	--	--	--	--
06/07/93	7.59	3.70	3.89	240	2.0	0.9	3.0	3.0	--	--	--	--	--	--	--	--	--
09/10/93	7.59	3.07	4.52	<50	<0.5	<0.5	0.8	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	7.59	4.44	3.15	550	3.0	3.0	8.0	12	--	--	--	--	--	--	--	--	--
06/16/94	7.59	3.51	4.08	150	<0.5	0.6	1.5	0.7	--	--	--	--	--	--	--	--	--
09/08/94	7.59	3.04	4.55	<50	<0.5	<0.5	<0.5	1.2	--	--	--	--	--	--	--	--	--
11/29/94	7.59	4.74	2.85	130	<0.5	1.1	<0.5	0.58	--	--	--	--	--	--	--	--	--
03/21/95	7.59	5.89	1.70	720	2.2	<2.0	5.9	<2.0	--	--	--	--	--	--	--	--	--
06/27/95	7.59	4.21	3.38	100	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/27/95	7.59	3.84	3.75	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/29/95	7.59	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/10/96	7.59	3.71	3.88	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/19/96	7.59	2.53	5.06	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
03/22/97	7.59	3.42	4.17	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/29/97	10.03	5.76	4.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
09/12/97	10.03	5.61	4.42	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/05/97	10.03	5.57	4.46	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
02/21/98	10.03	5.92	4.11	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
08/17/98	10.03	5.61	4.42	120	5.4	7.8	3.0	28	7.4	--	--	--	--	--	--	--	--
03/11/99	10.03	5.69	4.34	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--
09/28/99	10.03	4.50	5.53	<50	<0.5	0.69	<0.5	0.901	<5.0	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE		TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-4 (cont)																		
03/14/00		10.03	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/29/00		10.03	4.71	5.32	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
03/21/01		10.03	5.11	4.92	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
09/10/01[4]		10.03	4.65	5.38	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
03/06/02[4]		10.03	5.06	4.97	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	--	--	--	--	--	--	--
09/14/02[4]		10.03	4.86	5.17	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	--	--	--	--	--	--	--
03/28/03[5]		10.03	4.85	5.18	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--	--	--	--	--	--	--	--
09/02/03[4,6]		10.03	4.53	5.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/26/04[4,6]		10.03	5.22	4.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/13/04[6,7]		10.03	4.83	5.20	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/02/05[6]		10.03	6.13	3.90	<50	<0.5	1	<0.5	2	<0.5	--	--	--	--	--	--	--	--
09/22/05[6]		10.03	5.56	4.47	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/30/06[6]		10.03	6.42	3.61	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
08/28/06[6]		10.03	5.22	4.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/05/07[6]		10.03	6.01	4.02	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/24/07[6]		10.03	5.53	4.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/06/08[6]		10.03	5.43	4.60	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/16/08[6]		10.03	5.51	4.52	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/02/09[6]		10.03	6.22	3.81	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/16/09[6]		10.03	4.76	5.27	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/04/10[6]		**10.03**	**5.55**	**4.48**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	--	--	--	--	--	--	--
MW-5																		
03/14/89		8.35	1.37	6.98	20,000	6,600	1,600	270	1,100	--	<3,000	<100	<20	<20	<20	--	--	--
06/08/89		8.35	3.62	4.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/09/89		8.35	--	--	15,000	>2,800	270	240	640	--	--	<20	28	<20	<5.0	--	--	--
06/09/89	(D)	8.35	--	--	12,000	5,100	300	240	700	--	--	<200	<50	<20	<50	--	--	--
09/14/89		8.35	2.98	5.37	15,000	>730	>320	>290	440	--	--	<10	<2.0	<20	<2.0	--	--	--
09/14/89	(D)	8.35	--	--	15,000	3,300	450	490	730	--	--	<100	<20	100	<20	--	--	--
09/14/89	(T)	8.35	--	--	16,000	3,100	550	400	690	--	--	<50	<10	<50	<10	--	--	--
12/08/89		8.35	-0.78	9.13	20,000	4,600	640	390	1,300	--	--	<0.5	27	--	<0.5	--	--	--
03/19/90		8.35	3.23	5.12	25,000	6,500	1,200	450	2,200	--	--	<0.5	10	--	0.7	--	--	--
07/06/90		8.35	2.54	5.81	30,000	5,600	890	210	1,400	--	--	<0.5	<0.5	--	<0.5	1.2	--	--
10/03/90		8.35	1.45	6.90	29,000	6,000	790	270	1,500	--	--	<0.5	<0.5	--	<0.5	--	2.0	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-5 (cont)																	
08/23/91	8.35	3.30	5.05	36,000	6,100	1,200	460	2,600	--	--	<0.5	3.9	--	<0.5	--	0.9	--
11/22/91	8.35	2.10	6.25	21,000	8,000	1,500	530	2,600	--	--	<0.5	3.9	<0.5	<0.5	1.0	0.8	--
02/26/92	8.35	5.35	3.00	43,000	14,000	1,600	640	4,700	--	--	<0.5	2.0	<0.5	<0.5	--	--	--
05/22/92	8.35	3.86	4.49	72,000	18,000	8,100	920	10,000	--	--	<0.5	6.8	<0.5	<0.5	--	--	--
09/29/92	8.35	3.50	4.85	54,000	14,000	1,400	740	8,100	--	--	<0.5	4.4	--	<0.5	--	--	--
12/23/92	8.35	4.77	3.58	38,000	8,400	910	530	5,300	--	--	<0.5	2.9	--	<0.5	--	--	--
03/22/93	8.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/07/93	8.35	-3.82	12.17	24,000	3,000	280	360	1,200	--	--	<0.5	<0.5	--	<0.5	--	--	--
09/10/93	8.35	-0.15	8.50	8,900	860	160	100	320	--	--	<5.0	<5.0	--	<5.0	--	--	--
03/07/94	8.35	5.30	3.05	9,600	2,100	380	120	290	--	--	<12.5	<12.5	--	<12.5	--	--	--
06/16/94	8.35	2.64	5.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--
07/08/94	8.35	2.43	5.92	10,000	3,600	360	210	460	--	--	<0.5	<0.5	--	<0.5	1.2	--	2.0
09/08/94	8.35	3.04	5.31	14,000	2,800	270	170	360	--	--	<0.5	2.8	--	<0.5	--	--	--
11/29/94	8.35	5.72	2.63	11,000	2,800	280	130	300	--	--	<5.0	<5.0	<5.0	<5.0	<5.0	<5.0	--
03/21/95	8.35	7.41	0.94	6,700	1,400	120	100	260	--	--	<0.5	0.59	<0.5	<0.5	<0.5	<0.5	--
06/27/95	8.35	6.01	2.34	18,000	6,100	480	600	990	--	--	<10	<10	<10	<10	<10	<10	--
09/27/95	8.35	4.65	3.70	15,000	3,600	140	210	310	--	--	<25	<25	<25	<25	<25	<25	--
12/29/95	8.35	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
10/10/96	8.35	4.31	4.04	5,700	1,800	53	530	84	<100	--	--	--	--	--	--	--	--
12/19/96	8.35	INACCESSIBLE		--	--	--	--	--		--	--	--	--	--	--	--	--
03/22/97	8.35	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/03/97	--	--	4.46	21,000	6,800	4,100	610	1,900	530	--	--	--	--	--	--	--	--
06/29/97	10.99	5.90	5.09	16,000	5,300	1,900	530	1,600	<250	--	--	--	--	--	--	--	--
09/12/97	10.99	5.98	5.01	6,100	1,900	510	120	390	<25	--	--	--	--	--	--	--	--
12/05/97	10.99	5.36	5.63	52,000	11,000	7,700	1,400	3,600	920	--	--	--	--	--	--	--	--
02/21/98	10.99	6.34	4.65	55,000	13,000	11,000	450	3,300	1,200	--	--	--	--	--	--	--	--
06/24/98[1]	10.99	5.51	5.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/98	10.99	6.05	4.94	5,700	4,100	1,500	210	81	<50	--	--	--	--	--	--	--	--
03/11/99	10.99	6.09	4.90	11,400	1590	2610	351	1,200	58.2	--	--	--	--	--	--	--	--
09/28/99	10.99	5.45	5.54	21,300	3,250	3,830	656	1,450	<500	--	--	--	--	--	--	--	--
03/10/00[2]	10.99	5.65	5.34	59,800	4,280	17,100	2,280	7,210	<1,000	--	--	--	--	--	--	--	--
08/29/00	10.99	5.96	5.03	42,000[3]	3,300	6,300	1,700	4,300	<1,000	--	--	--	--	--	--	--	--
03/21/01	10.99	5.79	5.20	26,000[3]	2,500	7,300	1,500	4,200	750	--	--	--	--	--	--	--	--
09/10/01[4]	10.99	5.91	5.08	300	29	50	7.7	66	<5.0	--	--	--	--	--	--	--	--
03/06/01[4]	10.99	6.21	4.78	32,000	2,500	6,900	1,800	5,300	<50	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-5 (cont)																	
09/14/02[4]	10.99	6.06	4.93	55,000	2,800	8,400	3,200	8,300	160	--	--	--	--	--	--	--	--
03/28/03[5]	10.99	6.08	4.91	35,000	2,100	5,700	2,500	7,000	<63	--	--	--	--	--	--	--	--
09/02/03[4,6]	10.99	5.76	5.23	680	130	98	54	200	<0.5	--	--	--	--	--	--	--	--
03/26/04[4,6]	10.99	6.35	4.64	15,000	810	2,200	590	2,900	<1	--	--	--	--	--	--	--	--
09/13/04[6,7]	10.99	5.35	5.64	4,800	280	220	170	950	<0.5	--	--	--	--	--	--	--	--
03/02/05[6]	10.99	6.67	4.32	39,000	2,900	5,700	2,700	7,900	<3	--	--	--	--	--	--	--	--
09/22/05[6]	10.99	5.19	5.80	12,000	640	500	190	880	<0.5	--	--	--	--	--	--	--	--
03/30/06[6]	10.99	6.89	4.10	57,000	1,700	4,500	3,500	9,500	<5	--	--	--	--	--	--	--	--
08/28/06[6]	10.99	6.03	4.96	41,000	2,700	580	2,400	5,300	<5	--	--	--	--	--	--	--	--
03/05/07[6]	10.99	6.59	4.40	25,000	1,800	930	1,600	2,600	<1	--	--	--	--	--	--	--	--
09/24/07[6]	10.99	6.09	4.90	13,000	1,200	220	930	860	<2	--	--	--	--	--	--	--	--
03/06/08[6]	10.99	6.11	4.88	22,000	1,100	1,700	1,100	4,300	<3	--	--	--	--	--	--	--	--
09/16/08[6]	10.99	6.01	4.98	11,000	460	200	390	1,200	<0.5	--	--	--	--	--	--	--	--
03/02/09[6]	10.99	6.74	4.25	25,000	450	1,600	2,000	6,000	<3	--	--	--	--	--	--	--	--
09/16/09[6]	10.99	5.28	5.71	990	38	30	28	120	<0.5	--	--	--	--	--	--	--	--
03/04/10[6]	**10.99**	**5.97**	**5.02**	**540**	**9**	**10**	**0.7**	**82**	**<0.5**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	**--**
MW-6																	
07/06/90	6.56	-2.53	9.09	210	<0.3	<0.3	3.0	7.0	--	--	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	6.56	0.78	5.78	320	<0.3	0.3	1.0	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	6.56	-0.93	7.49	320	1.7	<0.5	2.1	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	6.56	-1.07	7.63	190	1.9	2.2	5.4	7.7	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	6.56	1.01	5.55	120	2.0	1.5	3.5	5.1	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	6.56	-0.38	6.94	160	1.1	0.6	0.9	1.0	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	6.56	-0.24	6.80	65	0.5	1.4	0.5	0.64	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	6.56	0.57	5.99	140	0.7	0.7	0.9	2.1	--	--	--	--	--	--	--	--	--
03/22/93	6.56	-0.51	7.07	71	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	6.56	-1.05	7.61	85	<0.5	<0.5	2.0	1.0	--	--	--	--	--	--	--	--	--
09/10/93	6.56	1.88	4.68	<50	<0.5	<0.5	1.0	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	6.56	1.34	5.22	<50	<0.5	<0.5	<0.5	0.8	--	--	--	--	--	--	--	--	--
06/16/94	6.56	2.39	4.17	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	6.56	1.96	4.60	70	<0.5	0.6	<0.5	2.3	--	--	--	--	--	--	--	--	--
11/29/94	6.56	0.03	6.53	120	<0.5	<0.5	1.3	<0.5	--	--	--	--	--	--	--	--	--
03/21/95	6.56	-0.47	7.03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-6 (cont)																	
06/27/95	6.56	0.20	6.36	84	<0.5	<0.5	<0.5	1.1	--	--	--	--	--	--	--	--	--
09/27/95	6.56	2.21	4.35	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/29/95	6.56	0.41	6.15	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	--	--	--	--	--	--	--
03/28/96	6.56	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
04/04/96	6.56	2.75	3.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/21/96	6.56	1.64	4.92	130	<0.5	<0.5	<0.5	0.66	<2.5	--	--	--	--	--	--	--	--
09/26/96	6.56	-0.18	6.74	130	<0.5	0.52	0.92	1.0	<2.5	--	--	--	--	--	--	--	--
12/19/96	6.56	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/22/97	6.56	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/29/97	10.23	3.45	6.78	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
09/12/97	10.23	3.97	6.26	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/05/97	10.23	3.95	6.28	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
02/21/98	10.23	3.88	6.35	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
08/17/98	10.23	4.33	5.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/11/99	10.23	4.88	5.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/28/99	10.23	4.61	5.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/14/00	10.23	4.64	5.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/29/00	10.23	4.52	5.71	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/21/01	10.23	4.75	5.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/10/01	10.23	5.04	5.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/06/02	10.23	4.77	5.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/02	10.23	4.99	5.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/28/03	10.23	4.74	5.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/02/03[4]	10.23	4.43	5.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/26/04	10.23	UNABLE TO LOCATE - NEW LANDSCAPING IN AREA							--	--	--	--	--	--	--	--	--
09/13/04	10.23	4.68	5.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/05	10.23	5.27	4.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/22/05	10.23	4.55	5.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/06	10.23	5.88	4.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/28/06	10.23	4.73	5.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/05/07	10.23	5.36	4.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/24/07	10.23	5.06	5.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/06/08	10.23	5.25	4.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/16/08	10.23	5.08	5.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-6 (cont)																	
03/02/09	10.23	5.40	4.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/16/09	10.23	4.62	5.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/04/10	**10.23**	**5.27**	**4.96**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-7																	
07/06/90	4.99	-0.86	5.85	<50	<0.3	<0.3	<0.3	<0.6	--	<1,000	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	4.99	-1.26	6.25	<50	<1.5	<1.5	<1.5	<3.0	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	4.99	-0.51	5.50	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	4.99	-0.74	5.73	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	4.99	0.15	4.84	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	4.99	0.10	4.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	4.99	-0.56	5.55	<50	<0.5	<0.5	<0.5	0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	4.99	0.12	4.87	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/22/93	4.99	0.94	4.05	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	4.99	0.36	4.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/10/93	4.99	-0.57	5.56	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	4.99	0.34	4.65	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/16/94	4.99	-0.08	5.07	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	4.99	-0.34	5.33	250	34	40	4.4	26	--	--	--	--	--	--	--	--	--
11/29/94	4.99	0.12	4.87	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/21/95	4.99	1.31	3.68	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/27/95	4.99	0.53	4.46	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/29/95	4.99	1.24	3.75	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
03/28/96	4.99	1.74	3.25	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/21/96	4.99	0.66	4.33	<50	<0.5	1.2	<0.5	<0.5	5.3	--	--	--	--	--	--	--	--
09/26/96	4.99	0.04	4.95	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/19/96	4.99	1.81	3.18	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
03/22/97	4.99	2.26	2.73	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/29/97	8.08	4.04	4.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
09/12/97	8.08	6.04	2.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/05/97	8.08	5.68	2.40	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
02/21/98	8.08	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/17/98	8.08	3.46	4.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/11/99	8.08	6.33	1.75	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-7 (cont)																	
09/28/99	8.08	6.29	1.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/14/00	8.08	4.45	3.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/29/00	8.08	3.60	4.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/21/01	8.08	5.21	2.87	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/10/01	8.08	4.88	3.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/06/02	8.08	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/14/02	8.08	5.27	2.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/28/03	8.08	4.92	3.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/02/03[4]	8.08	4.59	3.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/26/04	8.08	5.14	2.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/13/04	8.08	3.72	4.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/05	8.08	5.41	2.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/22/05	8.08	3.50	4.58	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/30/06	8.08	5.78	2.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/28/06	8.08	3.36	4.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/05/07	8.08	5.27	2.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/24/07	8.08	3.66	4.42	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/06/08	8.08	4.36	3.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/16/08	8.08	3.69	4.39	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/02/09	8.08	5.53	2.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/16/09	8.08	3.70	4.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/04/10	**8.08**	**3.77**	**4.31**	--	--	--	--	--	--	--	--	--	--	--	--	--	--
MW-1																	
03/14/89	9.63	2.89	6.74	600	<0.2	<0.2	3.2	1.7	--	<3,000	1.0	<0.2	<20	<0.2	--	--	--
06/08/89	9.63	2.49	7.14	<50	<0.1	<0.5	<0.1	<0.2	--	--	<0.5	<0.1	<20	<0.1	--	--	--
09/14/89	9.63	2.42	7.21	<50	<0.2	<1.0	<0.2	<0.4	--	--	<1.0	<0.2	<1.0	0.7	--	--	--
12/08/89	9.63	2.34	7.29	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
03/19/90	9.63	2.63	7.00	190	0.8	<0.3	7.0	3.0	--	--	<0.5	<0.5	--	<0.5	--	--	--
07/06/90	9.63	2.50	7.13	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	9.63	2.10	7.53	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	9.63	2.57	7.06	150	5.0	11	3.5	10	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	9.63	2.16	7.47	86	7.2	11	2.9	13	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	9.63	2.94	6.69	<50	<0.5	<0.5	<0.5	1.4	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-1 (cont)																	
05/22/92	9.63	2.67	6.96	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	9.63	2.44	7.19	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	9.63	2.60	7.03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/22/93	9.63	3.03	6.60	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	9.63	2.66	6.97	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/10/93	9.63	2.55	7.08	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	9.63	2.80	6.83	<50	<0.5	<0.5	<0.5	1.0	--	--	--	--	--	--	--	--	--
06/16/94	9.63	2.60	7.03	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	9.63	2.53	7.10	<50	1.3	1.5	<0.5	1.7	--	--	--	--	--	--	--	--	--
11/29/94	9.63	2.81	6.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/21/95	9.63	3.73	5.90	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/27/95	9.63	2.69	6.94	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/27/95	9.63	2.13	7.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ABANDONED																	
MW-2																	
03/14/89	8.99	2.91	6.08	<100	6.7	7.1	0.5	4.6	--	<3,000	<1.0	0.7	<20	<0.2	--	--	--
06/08/89	8.99	3.77	5.22	--	--	--	--	--	--	--	--	--	--	<0.2	--	--	--
06/09/89	8.99	--	--	<100	<0.2	<1.0	<0.2	<0.4	--	--	<1.0	<0.2	<20	<0.2	--	--	--
09/14/89	8.99	3.04	5.95	<50	<0.2	<1.0	<0.2	<0.4	--	--	<1.0	<0.2	<1.0	<0.2	--	--	--
12/08/89	8.99	-0.26	9.25	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
03/19/90	8.99	3.07	5.92	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
07/06/90	9.01	2.22	6.79	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	9.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
08/23/91	9.01	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
DESTROYED																	
MW-3																	
03/14/89	8.19	2.16	6.02	<100	2.1	0.8	<0.2	2.0	--	<3,000	<1.0	3.0	<20	<0.2	--	--	--
06/08/89	8.19	2.30	5.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/09/89	8.19	--	--	<100	<0.5	<1.0	<0.2	<0.4	--	--	<1.0	3.3	<20	<0.2	--	--	--
09/14/89	8.19	1.88	6.30	<50	<0.2	<1.0	<0.2	<0.4	--	--	<1.0	2.2	<1.0	<0.2	--	--	--
12/08/89	8.19	-1.34	9.52	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	1.3	--	<0.5	--	--	--
03/19/90	8.19	2.01	6.17	<50	<0.3	<0.3	<0.3	<0.6	--	--	0.5	1.3	--	<0.5	--	--	--
07/06/90	8.19	0.67	7.52	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-3 (cont)																	
10/03/90	8.19	0.88	7.31	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	0.83	--	<0.5	--	--	--
08/23/91	8.19	2.53	5.65	220	16	22	5.5	16	--	--	<0.5	0.6	--	<0.5	--	--	--
11/22/91	8.19	1.41	6.78	<50	<0.5	<0.5	<0.5	0.6	--	--	0.6	1.0	<0.5	<0.5	--	--	--
02/26/92	8.19	3.54	4.65	<50	4.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	8.19	2.63	5.56	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	8.19	1.96	6.23	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	8.19	2.37	5.82	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
03/22/93	8.19	3.27	4.92	<50	7.0	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
06/07/93	8.19	2.50	5.69	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
09/10/93	8.19	2.15	6.04	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
03/07/94	8.19	3.04	5.15	<50	1.0	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
06/16/94	8.19	2.30	5.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
09/08/94	8.19	2.13	6.06	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	1.0	--	--
11/29/94	8.19	3.00	5.19	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/21/95	8.19	4.43	3.76	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/27/95	8.19	3.09	5.10	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	--
09/27/95	8.19	2.94	5.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--
ABANDONED																	
MW-8																	
07/06/90	6.77	2.79	3.98	<50	<0.3	<0.3	<0.3	<0.6	--	<1,000	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	6.77	2.04	4.73	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	6.77	2.01	4.76	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	6.77	1.04	5.73	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	6.77	2.47	4.30	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	6.77	3.11	3.66	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	6.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/23/92	6.77	3.94	2.83	<50	<0.5	7.2	0.6	2.5	--	--	--	--	--	--	--	--	--
03/22/93	6.77	2.39	4.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	6.77	1.60	5.17	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/10/93	6.77	1.61	5.16	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	6.77	2.06	4.71	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/16/94	6.77	2.62	4.15	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	6.77	1.66	5.11	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
11/29/94	6.77	1.94	4.83	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-8 (cont)																	
03/21/95	6.77	0.94	5.83	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/27/95	6.77	0.57	6.20	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/27/95	6.77	1.62	5.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/29/95	6.77	2.22	4.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/28/96	6.77	2.55	4.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/21/96	6.77	3.41	3.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/26/96	6.77	2.65	4.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/19/96	6.77	3.83	2.94	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/22/97	6.77	3.88	2.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/29/97	9.88	6.92	2.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/12/97	9.88	7.11	2.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/05/97	9.88	7.16	2.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/21/98	9.88	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED																	
MW-9																	
07/06/90	7.63	3.02	4.61	<50	<0.3	<0.3	<0.3	<0.6	--	<1,000	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	7.63	2.49	5.14	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	7.63	2.18	5.45	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
11/22/91	7.63	2.15	5.48	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/26/92	7.63	5.00	2.63	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/22/92	7.63	3.63	4.00	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	<0.5	<0.5	--	--	--
09/29/92	7.63	2.93	4.70	<50	<0.5	<0.5	<0.5	<0.5	--	--	<0.5	<0.5	--	<0.5	--	--	--
12/23/92	7.63	3.87	3.76	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/22/93	7.63	5.52	2.11	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	7.63	4.35	3.28	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/10/93	7.63	2.45	5.18	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	7.63	4.61	3.02	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/16/94	7.63	3.50	4.13	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	7.63	2.84	4.79	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
11/29/94	7.63	3.71	3.92	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/21/95	7.63	0.14	7.49	NOT SAMPLED DUE TO INSUFFICIENT WATER						--	--	--	--	--	--	--	--
06/27/95	7.63	5.73	1.90	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/27/95	7.63	3.68	3.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/29/95	7.63	5.08	2.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
MW-9 (cont)																	
03/28/96	7.63	5.43	2.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/21/96	7.63	4.98	2.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/26/96	7.63	4.27	3.36	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/19/96	7.63	5.02	2.61	--	--	--	--	--	--	--	--	--	--	--	--	--	--
03/22/97	7.63	5.30	2.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--
06/29/97	10.74	7.85	2.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--
09/12/97	10.74	7.33	3.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--
12/05/97	10.74	8.00	2.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--
02/21/98	10.74	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--	--	--	--	--
NOT MONITORED/SAMPLED																	
TRIP BLANK																	
12/08/89	--	--	--	<100	<0.1	<0.2	<0.1	<0.2	--	--	<0.5	<0.1	--	<0.1	--	--	--
06/09/89	--	--	--	<50	<0.5	<0.5	<0.1	<0.2	--	--	<0.5	<0.1	<20	<0.1	--	--	--
09/14/89	--	--	--	<50	<0.1	<0.5	<0.1	<0.2	--	--	<0.5	<0.1	<0.5	<0.1	--	--	--
12/08/89	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--	4.4	<0.5	--	1.9	--	--	--
03/19/90	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
07/06/90	--	--	--	<50	<0.3	<0.3	<0.3	<0.6	--	--	<0.5	<0.5	--	<0.5	--	--	--
10/03/90	--	--	--	<50	<0.3	<0.3	<0.3	1.0	--	--	<0.5	<0.5	--	<0.5	--	--	--
08/23/91	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
11/22/91	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	<0.5	--	--	--	--
02/26/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
05/22/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/29/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/23/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/22/93	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/07/93	--	--	--	<50	<0.5	<0.5	<0.5	1.0	--	--	--	--	--	--	--	--	--
09/10/93	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/07/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/16/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/08/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
11/29/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/21/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
06/27/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
TRIP BLANK (cont)																	
09/27/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/29/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
03/28/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/21/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
09/26/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--
12/19/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
03/22/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
06/29/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
09/12/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
12/05/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
02/21/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
08/17/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
03/11/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--	--	--	--	--	--	--	--
09/28/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	--
03/14/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--	--	--	--	--	--	--
08/29/00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
03/21/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
09/10/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--	--	--	--	--	--	--
QA																	
03/06/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	--	--	--	--	--	--	--
09/14/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	--	--	--	--	--	--	--
03/28/03	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	--	--	--	--	--	--	--
09/02/03[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/26/04[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/13/04[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/02/05[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/22/05[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/30/06[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
08/28/06[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/05/07[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/24/07[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)	Chloro-form (µg/L)	1,2-DCA (µg/L)	Freon (µg/L)	1,1,1-TCA (µg/L)	PCE (µg/L)	1,2-DCPA (µg/L)	1,2-DCE (µg/L)
QA (cont)																	
03/06/08[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
09/16/08[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
03/02/09[6]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--
DESTROYED																	

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to August 29, 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
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl Tertiary Butyl Ether
TOG = Total Oil and Grease
1,2-DCA = 1,2-Dichloroethane
1,1,1-TCA = 1,1,1-Trichloroethane
PCE = Trichloroethene
1,2-DCPA = 1,2-Dichloropropane
1,2-DCE = 1,2-Dichloroethene
(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
(T) = Triplicate
QA = Quality Assurance/Trip Blank

1 ORC installed.
2 Results reported were generated out of hold time.
3 Laboratory report indicates gasoline C6-C12.
4 ORC present in well.
5 Absorbent sock in well.
6 BTEX and MTBE by EPA Method 8260.
7 Removed ORC from well.

Table 2

Dissolved Oxygen Concentrations

Former Chevron Service Station #9-0019

210 Grand Avenue

Oakland, California

WELL ID	DATE	Pre-purge *(mg/L)*	Post-purge *(mg/L)*
MW-4	09/10/01	2.60	--
MW-5	08/29/00	2.04	--
	03/21/01	4.60	--
	09/10/01	1.90	--
	03/06/02	2.10	--
	09/14/02	2.60	--
	03/28/03	0.30	--
	09/02/03	0.10	--
	03/26/04	1.20	--

EXPLANATIONS:

(mg/L) = Milligrams per liter

-- = Not Measured

Table 3

Groundwater Analytical Results-Oxygenate Compounds

Former Chevron Service Station # 9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-4						
09/28/99	<1,000	<200	<2.0	<2.0	<2.0	<2.0
09/02/03	--	--	<0.5	--	--	--
03/26/04	--	--	<0.5	--	--	--
09/13/04	--	--	<0.5	--	--	--
03/02/05	--	--	<0.5	--	--	--
09/22/05	--	--	<0.5	--	--	--
03/30/06	--	--	<0.5	--	--	--
08/28/06	--	--	<0.5	--	--	--
03/05/07	--	--	<0.5	--	--	--
09/24/07	--	--	<0.5	--	--	--
03/06/08	--	--	<0.5	--	--	--
09/16/08	--	--	<0.5	--	--	--
03/02/09	--	--	<0.5	--	--	--
09/16/09	--	--	<0.5	--	--	--
03/04/10	--	--	**<0.5**	--	--	--
MW-5						
09/28/99	<20,000	<4,000	<40	<40	<40	<40
09/02/03	--	--	<0.5	--	--	--
03/26/04	--	--	<1	--	--	--
09/13/04	--	--	<0.5	--	--	--
03/02/05	--	--	<3	--	--	--
09/22/05	--	--	<0.5	--	--	--
03/30/06	--	--	<5	--	--	--
08/28/06	--	--	<5	--	--	--
03/05/07	--	--	<1	--	--	--
09/24/07	--	--	<2	--	--	--
03/06/08	--	--	<3	--	--	--
09/16/08	--	--	<0.5	--	--	--
03/02/09	--	--	<3	--	--	--
09/16/09	--	--	<0.5	--	--	--
03/04/10	--	--	**<0.5**	--	--	--

Table 3

Groundwater Analytical Results-Oxygenate Compounds

Former Chevron Service Station # 9-0019

210 Grand Avenue

Oakland, California

WELL ID/ DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
TB						
09/28/99	<1,000	<200	<2.0	<2.0	<2.0	<2.0

Table 3

Groundwater Analytical Results-Oxygenate Compounds

Former Chevron Service Station # 9-0019

210 Grand Avenue

Oakland, California

EXPLANATIONS:

Groundwater laboratory analytical results prior to September 2, 2003, were compiled from reports prepared by Blaine Tech Services, Inc.

TBA = t-Butyl alcohol
MTBE = Methyl Tertiary Butyl Ether
DIPE = di-Isopropyl ether
ETBE = Ethyl t-butyl ether
TAME = t-Amyl methyl ether
(µg/L) = Micrograms per liter
-- = Not Analyzed

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

Gettler-Ryan Inc. (GR) field personnel adhere to the following procedures for the collection and handling of groundwater samples prior to analysis by the analytical laboratory. All work is performed in accordance with the GR Health & Safety Plan and all client-specific programs. The scope of work and type of analysis to be performed is determined prior to commencing field work.

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, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). 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 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, as directed by the scope of work. 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. The trip blank is analyzed for some or all of the same compounds as the groundwater samples.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-0019 | Job Number: 386500
Site Address: 210 Grand Avenue | Event Date: 3-4-10 (inclusive)
City: Oakland, CA | Sampler: Sox

Well ID: MW-4 | Date Monitored: 3-4-10
Well Diameter: 2 (4) in.
Total Depth: 13.75 ft.
Depth to Water: 4.48 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

☐ Check if water column is less then 0.50 ft.

9.27 xVF 0.66 = 6.12 x3 case volume = Estimated Purge Volume: 18.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.33

Purge Equipment:
- Disposable Bailer: ____
- Stainless Steel Bailer: ____
- Stack Pump: ✓
- Suction Pump: ____
- Grundfos: ____
- Peristaltic Pump: ____
- QED Bladder Pump: ____
- Other: ____

Sampling Equipment:
- Disposable Bailer: ✓
- Pressure Bailer: ____
- Discrete Bailer: ____
- Peristaltic Pump: ____
- QED Bladder Pump: ____
- 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): 0705 | Weather Conditions: cloudy
Sample Time/Date: 0730 / 3-4-10 | Water Color: clear Odor: Y / (N)
Approx. Flow Rate: 2-3 gpm. | Sediment Description: none
Did well de-water? no If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 5.16

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - (S))	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)
0712	6	7.72	1213	16.5		
0716	13	7.41	1225	16.8		
0720	19	7.47	1223	16.9		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)

COMMENTS: ____

Add/Replaced Lock: ____ Add/Replaced Plug: ____ Add/Replaced Bolt: ____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-0019 | Job Number: 386500
Site Address: 210 Grand Avenue | Event Date: 3-4-10 (inclusive)
City: Oakland, CA | Sampler: Joe

Well ID: MW-5 | Date Monitored: 3-4-10
Well Diameter: 2/(4) in.
Total Depth: 10.95 ft.
Depth to Water: 5.02 ft. ☐ Check if water column is less then 0.50 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

5.93 xVF 0.66 = 3.91 x3 case volume = Estimated Purge Volume: 12 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 6.20

Purge Equipment:
- Disposable Bailer: ✓
- Stainless Steel Bailer:
- Stack Pump:
- Suction Pump:
- Grundfos:
- Peristaltic Pump:
- QED Bladder Pump:
- Other:

Sampling Equipment:
- Disposable Bailer: ✓
- Pressure Bailer:
- Discrete Bailer:
- Peristaltic Pump:
- QED Bladder Pump:
- 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): 0745 | Weather Conditions: cloudy
Sample Time/Date: 0825 / 3-4-10 | Water Color: clear | Odor: Y / N | moderate
Approx. Flow Rate: — gpm. | Sediment Description: none
Did well de-water? no | If yes, Time: — | Volume: — gal. | DTW @ Sampling: 5.43

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0754	4	6.80	956	17.0		
0800	8	6.83	962	16.8		
0810	12	6.77	967	17.2		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-5	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)

COMMENTS:

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: **Chevron #9-0019** Job Number: **386500**

Site Address: **210 Grand Avenue** Event Date: 3-4-10 (inclusive)

City: **Oakland, CA** Sampler: Joe

Well ID **MW-6** Date Monitored: 3-4-10

Well Diameter (2)4 in.

Total Depth 7.93 ft.

Depth to Water 4.96 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

☐ Check if water column is less then 0.50 ft.

2.97 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Suction Pump _____
Grundfos _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Sampling Equipment:

Disposable Bailer _____
Pressure Bailer _____
Discrete Bailer _____
Peristaltic Pump _____
QED Bladder Pump _____
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: Y / N _____

Approx. Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	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-GRO(8015)/BTEX+MTBE(8260)

COMMENTS: M-only

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-0019** Job Number: **386500**

Site Address: **210 Grand Avenue** Event Date: 3-4-10 (inclusive)

City: **Oakland, CA** Sampler: Joe

Well ID **MW-7**

Well Diameter (2)4 in.

Total Depth 9.84 ft.

Depth to Water 4.31 ft.

5.53 xVF _____ = _____ x3 case volume = Estimated Purge Volume: _____ gal.

Date Monitored: 3-4-10

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

☐ Check if water column is less then 0.50 ft.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: _____

Purge Equipment:

Disposable Bailer _____
Stainless Steel Bailer _____
Stack Pump _____
Suction Pump _____
Grundfos _____
Peristaltic Pump _____
QED Bladder Pump _____
Other: _____

Sampling Equipment:

Disposable Bailer _____
Pressure Bailer _____
Discrete Bailer _____
Peristaltic Pump _____
QED Bladder Pump _____
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: Y / N

Approx. Flow Rate: _____ gpm. Sediment Description: _____

Did well de-water? _____ If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	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-GRO(8015)/BTEX+MTBE(8260)

COMMENTS: M. only

Add/Replaced Lock: _____ Add/Replaced Plug: _____ Add/Replaced Bolt: _____

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

030410-01

For Lancaster Laboratories use only
Acct. #: 12099 Sample #: 5920304-05 Group #: 017669

Group# 1184860

CRA MTI Project #: 63H-2327

Facility #: SS#9-0019 G-R#386500 Global ID#T0600100313
Site Address: 210 GRAND AVENUE, OAKLAND, CA
Chevron PM: MTI Lead Consultant: CRAKJ
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: JOE AJEMIAN

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil	Matrix: Air	Total Number of Containers	Preservation Codes: H	Preservation Codes: H	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates	Total Lead Method	Dissolved Lead Method
MW-4	3-4-10	0730	✓			✓			6			✓	✓					
MW-5	"	0825	"			"			6			✓	✓					

Analyses Requested

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 | EDF/EDD
Type VI (Raw Data) | ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	3-4-10	945	Received by:	3/4/10	945
Relinquished by:	3/4/10	1610	Received by: FedEx		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	3/5/10	0900
Temperature Upon Receipt 0.8-7.1 C°			Custody Seals Intact? Yes No		

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Analysis Report

RECEIVED
MAR 16 2010
GETTLER-RYAN INC.
GENERAL CONTRACTORS

ANALYTICAL RESULTS

Prepared for:

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

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

March 15, 2010

Project: 90019

Samples arrived at the laboratory on Friday, March 05, 2010. The PO# for this group is 90019 and the release number is MTI. The group number for this submittal is 1184860.

Client Sample Description	Lancaster Labs (LLI) #
MW-4-W-100304 Grab Water	5920304
MW-5-W-100304 Grab Water	5920305

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO Gettler-Ryan, Inc. Attn: Cheryl Hansen

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300

Respectfully Submitted,

Martha L Seidel

Martha L. Seidel
Senior Chemist

Lancaster Laboratories

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Analysis Report

Sample Description: MW-4-W-100304 Grab Water
Facility# 90019 Job# 386500 MTI# 63H-2327 GRD
210 Grand Ave-Oakland T0600100313 MW-4

LLI Sample # WW 5920304
LLI Group # 1184860
CA

Project Name: 90019

Collected: 03/04/2010 07:30 by JA

Submitted: 03/05/2010 09:00
Reported: 03/15/2010 at 16:55
Discard: 04/15/2010

Account Number: 12099

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

210M4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
06054	Benzene	71-43-2	N.D.	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100672AA	03/09/2010 02:57	Nicholas P Riehl	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	T100672AA	03/09/2010 02:57	Nicholas P Riehl	1
01146	GC VOA Water Prep	SW-846 5030B	1	10068A07A	03/10/2010 13:29	Marie D John	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10068A07A	03/10/2010 13:29	Marie D John	1

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Analysis Report

Sample Description: MW-5-W-100304 Grab Water
Facility# 90019 Job# 386500 MTI# 63H-2327 GRD
210 Grand Ave-Oakland T0600100313 MW-5

LLI Sample # WW 5920305
LLI Group # 1184860
CA

Project Name: 90019

Collected: 03/04/2010 08:25 by JA

Submitted: 03/05/2010 09:00
Reported: 03/15/2010 at 16:55
Discard: 04/15/2010

Account Number: 12099

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

210M5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		ug/l	ug/l	
06054	Benzene	71-43-2	9	0.5	1
06054	Ethylbenzene	100-41-4	0.7	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
06054	Toluene	108-88-3	10	0.5	1
06054	Xylene (Total)	1330-20-7	82	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	540	50	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	T100672AA	03/09/2010 04:07	Nicholas P Riehl	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	T100672AA	03/09/2010 04:07	Nicholas P Riehl	1
01146	GC VOA Water Prep	SW-846 5030B	1	10068A07A	03/10/2010 13:55	Marie D John	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	10068A07A	03/10/2010 13:55	Marie D John	1

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 03/15/10 at 04:55 PM

Group Number: 1184860

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: T100672AA	Sample number(s): 5920304-5920305							
Benzene	N.D.	0.5	ug/l	95		79-120		
Ethylbenzene	N.D.	0.5	ug/l	92		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	91		76-120		
Toluene	N.D.	0.5	ug/l	97		79-120		
Xylene (Total)	N.D.	0.5	ug/l	91		80-120		
Batch number: 10068A07A	Sample number(s): 5920304-5920305							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	118	75-135	8	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: T100672AA	Sample number(s): 5920304-5920305 UNSPK: 5920304								
Benzene	104	109	80-126	5	30				
Ethylbenzene	101	106	71-134	5	30				
Methyl Tertiary Butyl Ether	96	100	72-126	4	30				
Toluene	106	110	80-125	4	30				
Xylene (Total)	98	103	79-125	5	30				
Batch number: 10068A07A	Sample number(s): 5920304-5920305 UNSPK: P920301								
TPH-GRO N. CA water C6-C12	118		63-154						

Surrogate Quality Control

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

Analysis Name: BTEX+MTBE by 8260B
Batch number: T100672AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5920304	99	101	102	104
5920305	99	100	104	110
Blank	99	99	104	102
LCS	98	101	103	105
MS	99	101	102	105

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

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 03/15/10 at 04:55 PM

Group Number: 1184860

Surrogate Quality Control

MSD	98	101	102	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 10068A07A
Trifluorotoluene-F

5920304	100
5920305	107
Blank	103
LCS	112
LCSD	114
MS	115
Limits:	63-135

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

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**flb >5 um/ml**	fibers greater than 5 microns in length per ml

< 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

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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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.

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

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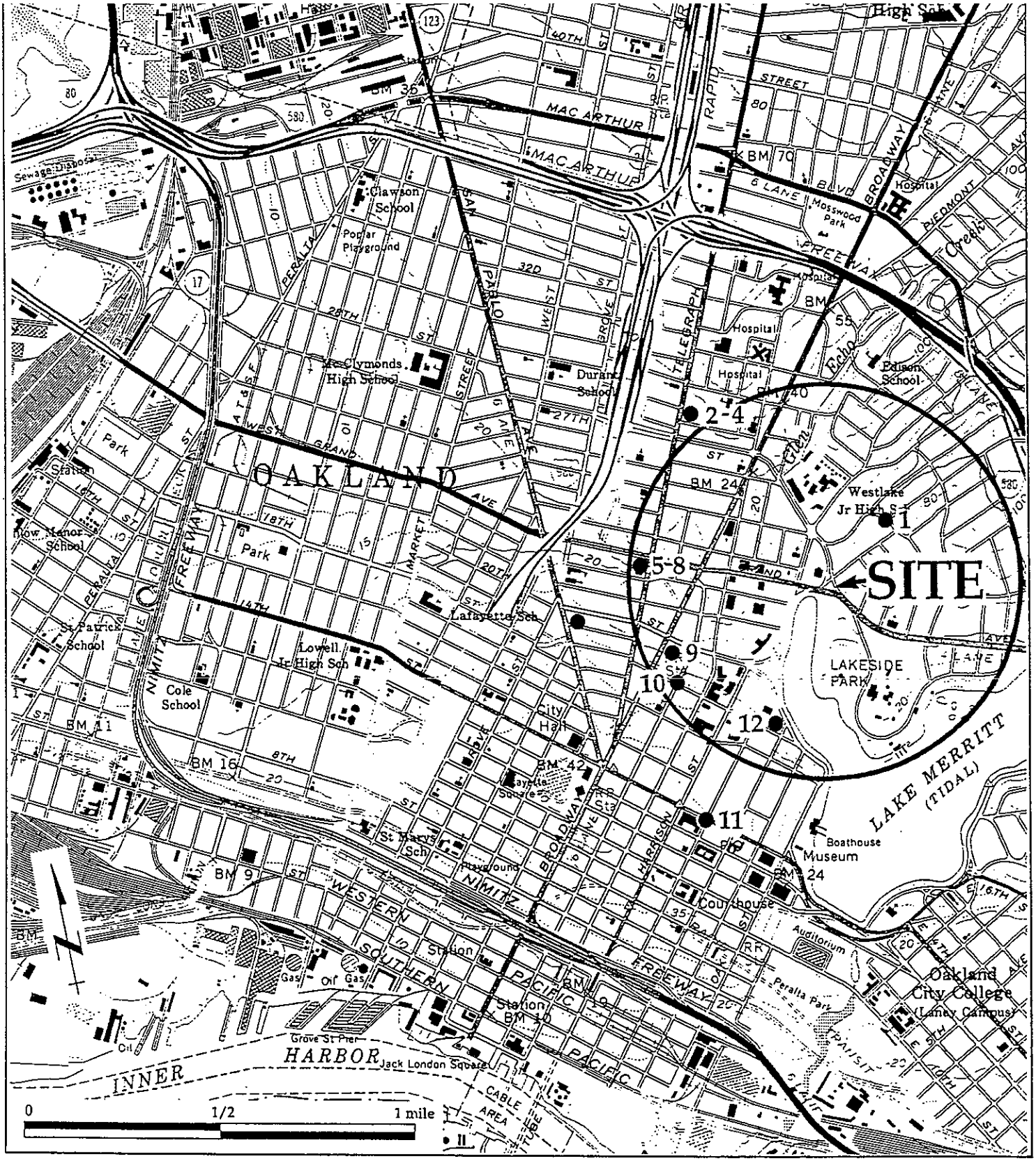
APPENDIX C

SENSITIVE RECEPTOR AND WELL SURVEY INFORMATION

Table 5. Water Wells Within a One-Half Mile Radius of Chevron SS# 90019
Oakland, CA

No.	Owner	Owner's Address	Well Location	Year Drilled	Use
1.	PG&E	4801 Oakport Street Oakland, CA	Adams & Lee Streets Oakland, CA	1974	Cathodic Protection
2-4.	Shell Oil Company	2800 Telegraph Ave. Oakland, CA	NE corner of Telegraph and 28th Street Oakland, CA	1988	Monitoring
5-8.	Texaco USA	10 Universal City Plaza Los Angeles, CA	W Corner of Intersection of Grand & Telegraph	1988	Monitoring
9.	B.P.O.E.	SE corner of 20th and Broadway	same	?	?
10.	Leamington Hotel	19th & Franklin	same	?	?
11.	Raymond Hotel	1461 Alice Street	same	?	?
12.	Lakeside Corp (Bechtel)	244 Lakeside	100'NW of Jackson 200'SW of Lakeside	1977	Irrigation



LEGEND

●1 Wells

Site Location Wells within 1/2 Mile Radius
Chevron SS #90019, Oakland, California

June 1989

FIGURE 4

WESTERN GEOLOGIC RESOURCES, INC.

1-101.02

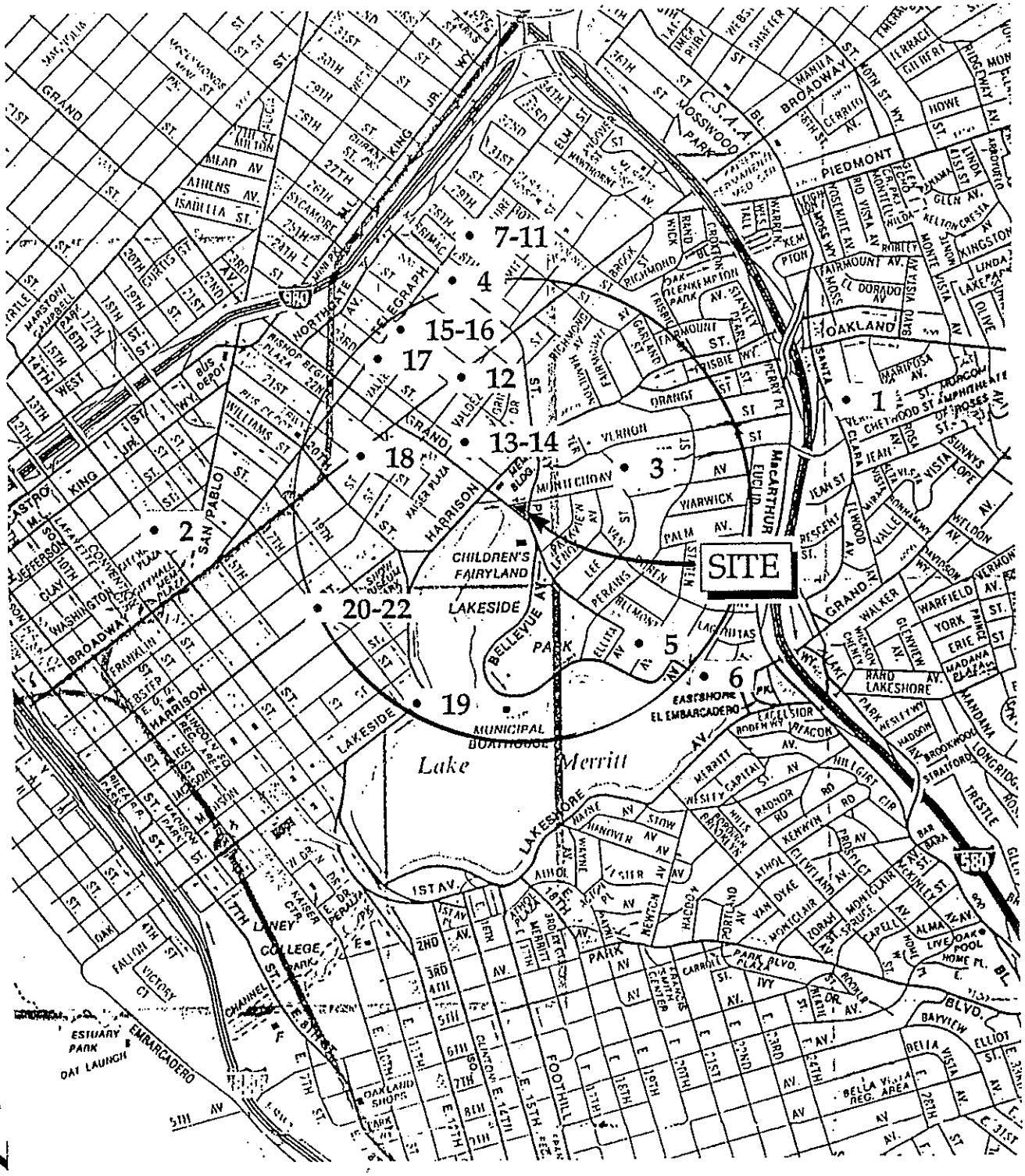
TABLE 5. Wells Located Within One-Half Mile Radius
of Former Chevron Service Station #90019
210 Grand Avenue
Oakland, California

Map Location Number	Well Owner	Well Address	City	No. of Wells	Date Drilled	Use
1	Eagan & Co.	172 Santa Clara Street	Oakland	1	6/89	Mon.
2	Five City Center, City of Oakland	Crn of Clay & 14th Street	Oakland	3	9/88	Des.
3	PG&E	Adams & Lee Street	Oakland	1	8/74	Cat.
4	Ehler Contractors	225 27th Street	Oakland	3	6/89	Mon.
5	Quick Stop Mkts.	363 Grand Avenue	Oakland	4	11/88, 12/88	Mon.
6	Texaco Inc.	500 Grand Avenue	Oakland	2	3/89	Mon.
7	Shell Oil Co.	2800 Telegraph Avenue	Oakland	3	4/88	Mon.
8	Shell Oil Co.	2800 Telegraph Avenue	Oakland	4	10/88	Mon.
9	Shell Oil Co.	2800 Telegraph Avenue	Oakland	3	9/89	Mon.
10	Shell Oil Co.	2800 Telegraph Avenue	Oakland	3	7/89	Mon.
11	Shell Oil Co.	2800 Telegraph Avenue	Oakland	1	10/89	Mon.
12	Broadway VW	2740 Broadway	Oakland	3	1/89	Mon.
13	Oakland Tribune	23rd & Valdez	Oakland	3	8/88	Mon.
14	Morrison & Forestor	2302 Valdez Street	Oakland	4	8/89	Mon.
15	Texaco Station #62488000195	2225 Telegraph Avenue	Oakland	6	7/88	Mon.
16	Texaco Station #62488000195	2225 Telegraph Avenue	Oakland	6	12/88	Mon.
17	Carter-Hawley-Hale	1911 Telegraph Avenue	Oakland	1	3/88	Test
18	Bank of America	21st Street & Broadway	Oakland	1	11/88	Mon.
19	Lakeside Corp (Bechtel)	244 Lakeside	Oakland	1	77	Irr.
20	Chevron	17th & Harrison NW	Oakland	3	10/88	Mon.
21	Chevron	17th & Harrison NW	Oakland	4	6/90	Mon.
22	Chevron	17th & Harrison NW	Oakland	5	4/89	Mon.

TABLE 5. Wells Located Within One-Half Mile Radius (continued)
of Former Chevron Service Station #90019
210 Grand Avenue
Oakland, California

NOTES:

Wells = 40 in 1/2-mile radius
Total = 58
Mon. = Monitor well
Cat. = Cathodic Protection
Test = Test well
Irr. = Irrigation Well
Des. = Destroyed



8/90

Wells Located Within 1/2 Mile Radius of
Former Chevron Service Station #90019
210 Grand Avenue
Oakland, California

FIGURE
9

Road Map Reference: CSAA map of

WELL SURVEY INFORMATION

FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA

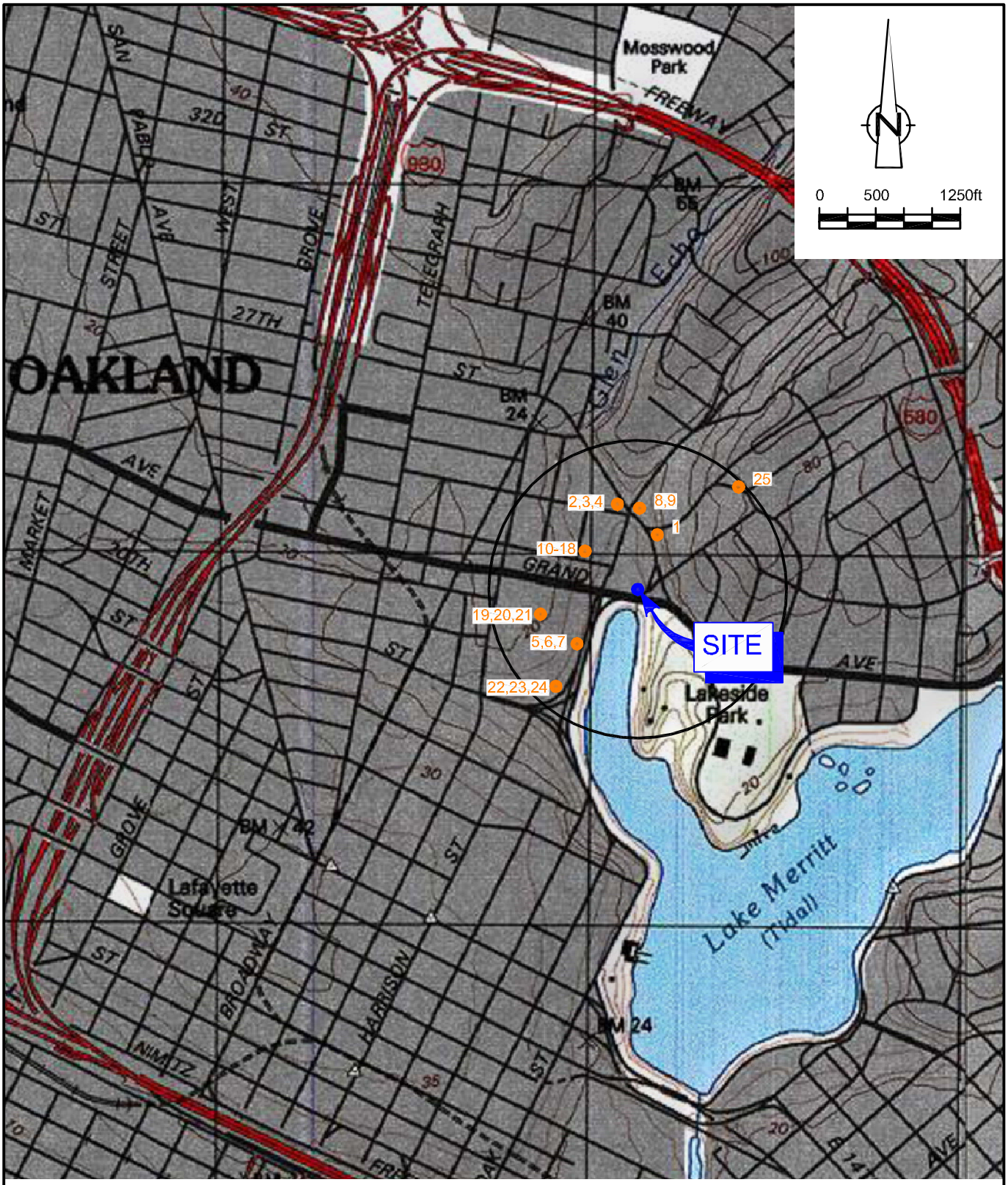
Figure ID	*Water Well Drillers Report Number*	*Township/Range Section/Tract*	*Well ID*	*Well Owner*	*Location*	*Well Type*	*Date Installed*	*Depth (fbg)*	*Screened Interval (fbg)*	*Approximate Distance from Site*
1	398403	01S-04W-25	MW-1	Wells Fargo Bank/Shepard Trust	230 Bay Place	Monitoring	3/5/90	20	5-20	0.10 mile
2	01-434S	01S-04W-25	OW-1	Ehler Construction	24th and 27 Streets	Monitoring	6/2/89	12.5	5-12.5	0.15 mile
3	01-434T	01S-04W-25	OW-2	Ehler Construction	24th and 27 Streets	Monitoring	6/2/89	10.5	1.5-10.5	0.15 mile
4	01-434U	01S-04W-25	OW-3	Ehler Construction	24th and 27 Streets	Monitoring	6/2/89	1.5	1.5-8	0.15 mile
5	277892	01S-04W-26	MW-1	Ahmanson Commercial Development	2100 Harrison Street	Monitoring	3/15/91	24.5	9.5-24.5	0.16 mile
6	277814	01S-04W-25	MW-2	Ahmanson Commercial Development	2100 Harrison Street	Monitoring	3/18/91	30	10-25	0.16 mile
7	01-509M	01S-04W-25	MW-3	Ahmanson Commercial Development	2100 Harrison Street	Monitoring	3/19/92	26	4.5-24.5	0.16 mile
8	403318	01S-04W-25	MW-1	MR & RB Partnership	294 27th Street	Monitoring	2/11/93	18	5.5-18	0.17 mile
9	403317	01S-04W-25	MW-2	MR & RB Partnership	294 27th Street	Monitoring	2/11/93	17	4.5-17	0.17 mile
10	01-416X	01S-04W-26	MW-1	Oakland Tribune	2302 Valdez	Monitoring	8/10/88	32	15-31	0.18 mile
11	01-416Y	01S-04W-26	MW-2	Oakland Tribune	2302 Valdez	Monitoring	8/10/88	27	14-27	0.18 mile
12	01-416Z	01S-04W-26	MW-3	Oakland Tribune	2302 Valdez	Monitoring	8/10/88	25	12-25	0.18 mile
13	01-032L	01S-04W-26	MW-4	Oakland Tribune	2302 Valdez	Monitoring	8/8/89	25	10-25	0.18 mile
14	01-032M	01S-04W-26	MW-5	Oakland Tribune	2302 Valdez	Monitoring	8/9/89	27.5	12-27	0.18 mile
15	01-032N	01S-04W-26	MW-6	Oakland Tribune	2302 Valdez	Monitoring	8/9/89	26	10.5-25.5	0.18 mile
16	01-032O	01S-04W-26	MW-7	Oakland Tribune	2302 Valdez	Monitoring	8/10/89	26	10-25.5	0.18 mile
17	01-460L	01S-04W-26	MW-8	Oakland Tribune	2302 Valdez	Monitoring	5/14/90	27	14-27	0.18 mile
18	01-460M	01S-04W-26	MW-9	Oakland Tribune	2302 Valdez	Monitoring	5/14/90	25.5	11.5-25.5	0.18 mile
19	185635	01S-04W-26	MW-1	JMB Properties	1 Kaizer Plaza	Monitoring	4/11/92	34	16-34	0.19 mile
20	185636	01S-04W-26	MW-2	JMB Properties	1 Kaizer Plaza	Monitoring	12/14/92	32	14-29.5	0.19 mile
21	185637	01S-04W-26	MW-3	JMB Properties	1 Kaizer Plaza	Monitoring	3/27/92	26	12.5-25.5	0.19 mile
22	336808	01S-04W-26	MW-1	Kaiser Center	300 Lakeside Drive	Monitoring	10/29/90	40	28-40	0.23 mile

WELL SURVEY INFORMATION

FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA

Figure ID	*Water Well Drillers Report Number*	*Township/Range Section/Tract*	*Well ID*	*Well Owner*	*Location*	*Well Type*	*Date Installed*	*Depth (fbg)*	*Screened Interval (fbg)*	*Approximate Distance from Site*
23	345857	01S-04W-26	--	Kaiser Center	300 Lakeside Drive	Monitoring	5/24/91	160	120-160	0.23 mile
24	482786	01S-04W-26	MW-2	Kaiser Center	300 Lakeside Drive	Monitoring	12/14/91	30.5	15-30.5	0.23 mile
25	120171	01S-04W-25	--	Pacific Gas & Electric	Adam & Lee Streets	Cathodic	8/7/74	120	95-120	0.25 mile

Abbreviations/Notes:
fbg = feet below grade
- - = Information not available
Well location information obtained from California Department of Water Resources



SOURCE: TOPO! MAPS.

OAKLAND
CALIFORNIA

SENSITIVE RECEPTOR SURVEY MAP
FORMER CHEVRON SERVICE STATION 9-0019
210 GRAND AVENUE
Oakland, California

632327-401(005)GN-WA007 JUN 02/2010

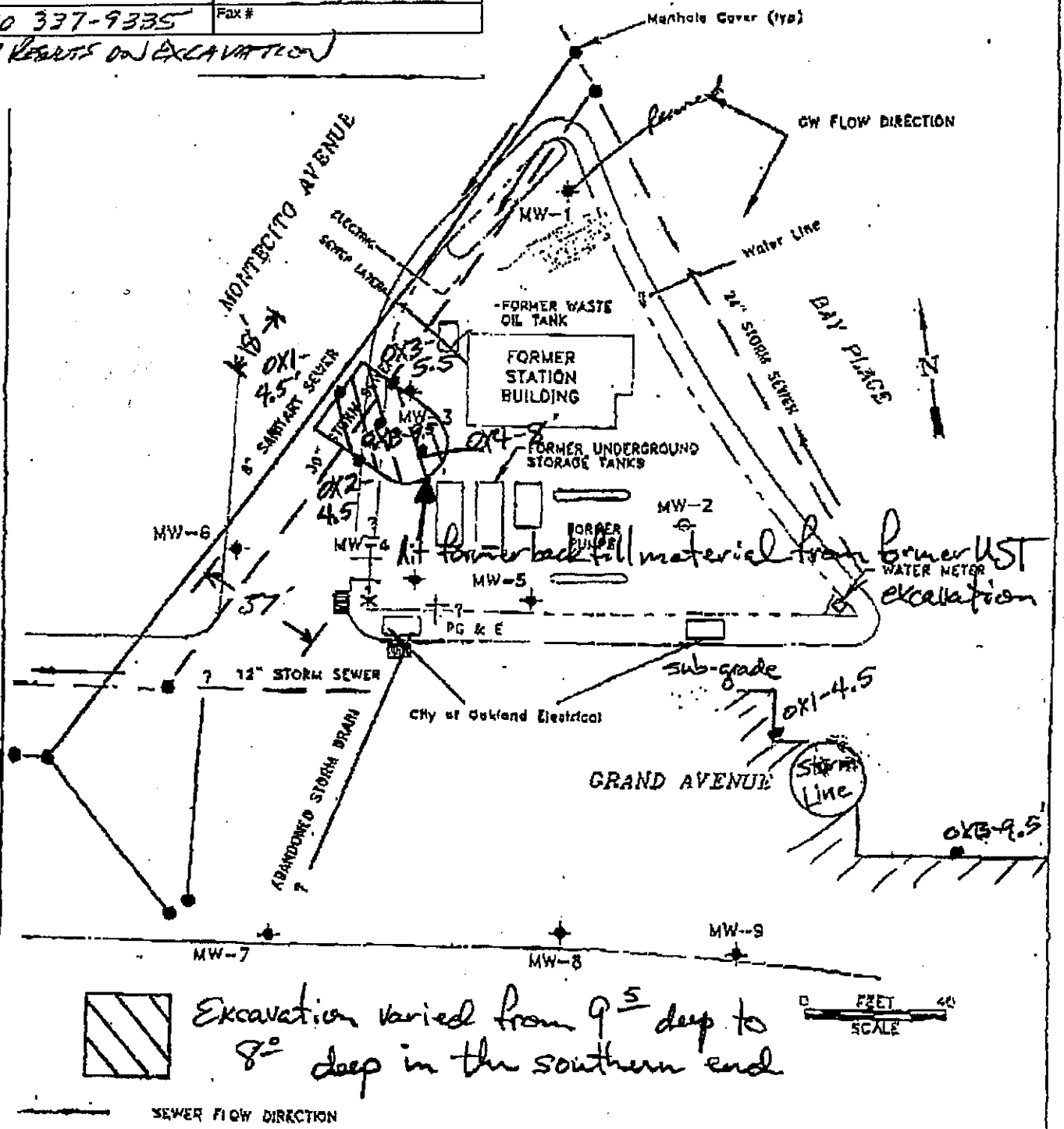
APPENDIX D

PREFERENTIAL PATHWAY STUDY INFORMATION

Post-it® Fax Note 7671	Date 11-19-96	# of pages ▶ 5
To Brandon Beagles	From Eric Briggs	
Co./Dept. ACHCS	Co. Chevron	
Phone #	Phone # 510 842-9136	
Fax # 510 337-9335	Fax #	

— Lab Results on Excavation

CHEVRON U.S.A. 001/002
335 1996-11-12 12:46 #981 P.02/02



1.1' former backfill material from former UST excavation

Base map from Groundwater Technology, Inc.

CAMBRIA
Environmental Technology, Inc.

Chevron Station 9-0019
210 Grand Avenue
Oakland, California

9CHEVRON9-001909\9-0M.DWG

Utility Locations
July 26, 1995

FIGURE
1

APPENDIX E

PREVIOUS SITE PLANS

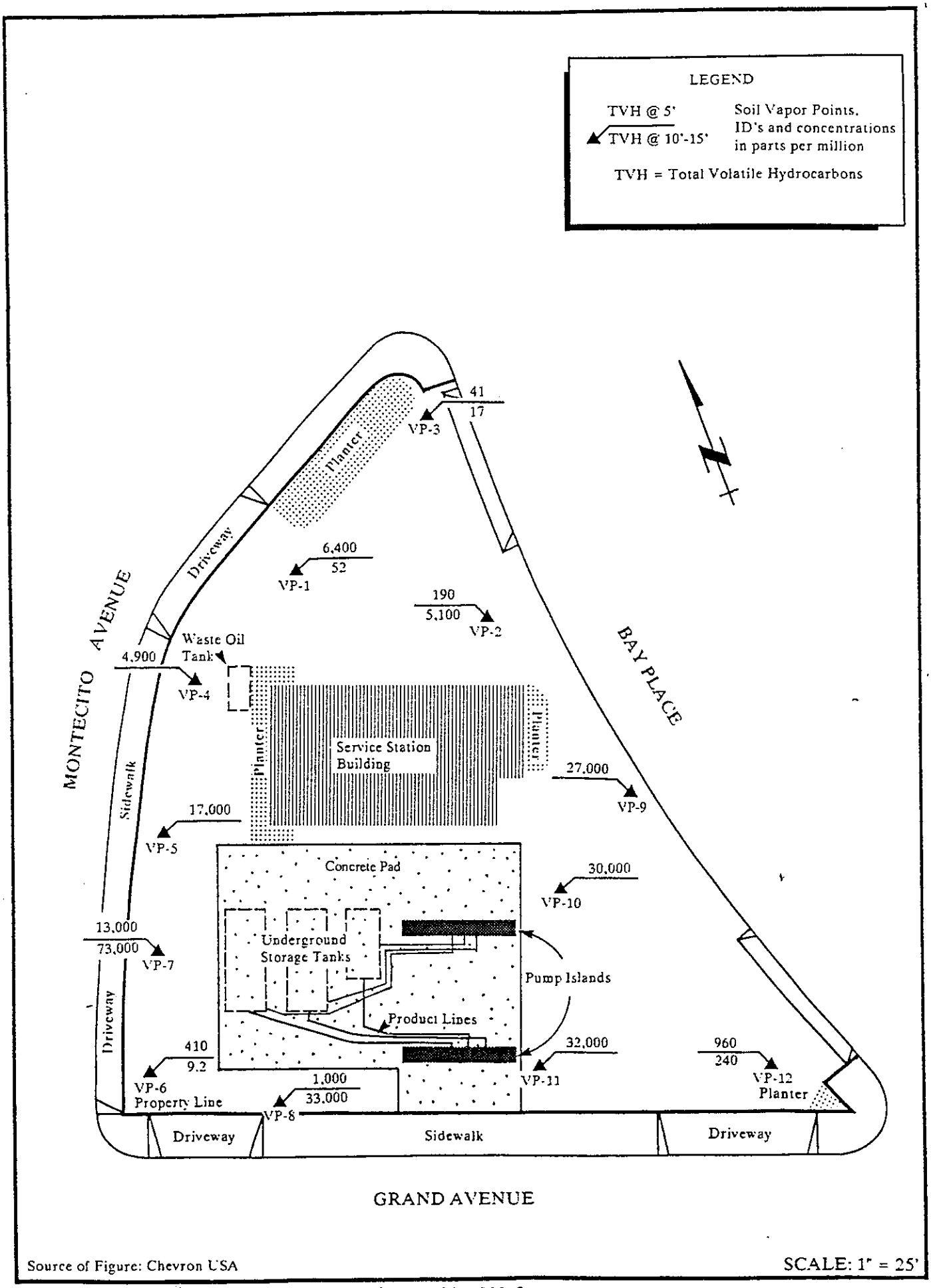
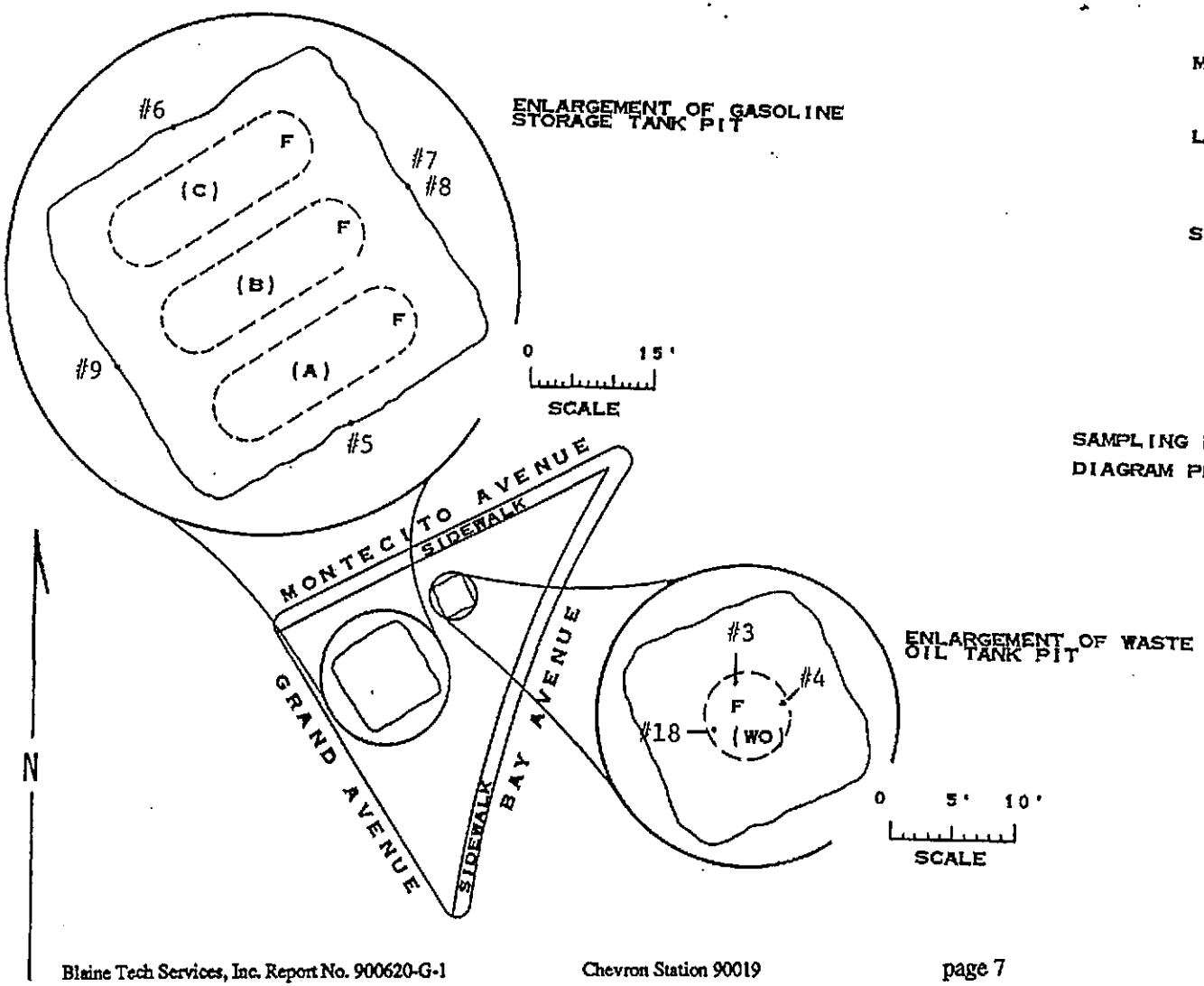


Figure 2. Soil Vapor Point Locations, Chevron SS# 90019
Oakland, California

TANK REMOVAL DIAGRAM

June 20, 1990 / 900620-G-1

DIAGRAM ONE



MAP REF: THOMAS BROS., ALAMEDA COUNTY P,9 C,10

LEGEND: F = FILL END

SCALE: 0 75'

SAMPLING PERFORMED BY CHUCK GRAVES
DIAGRAM PREPARED BY BRENT ADAMS

TANK REMOVAL DIAGRAM

June 20, 1990 / 900620-G-1

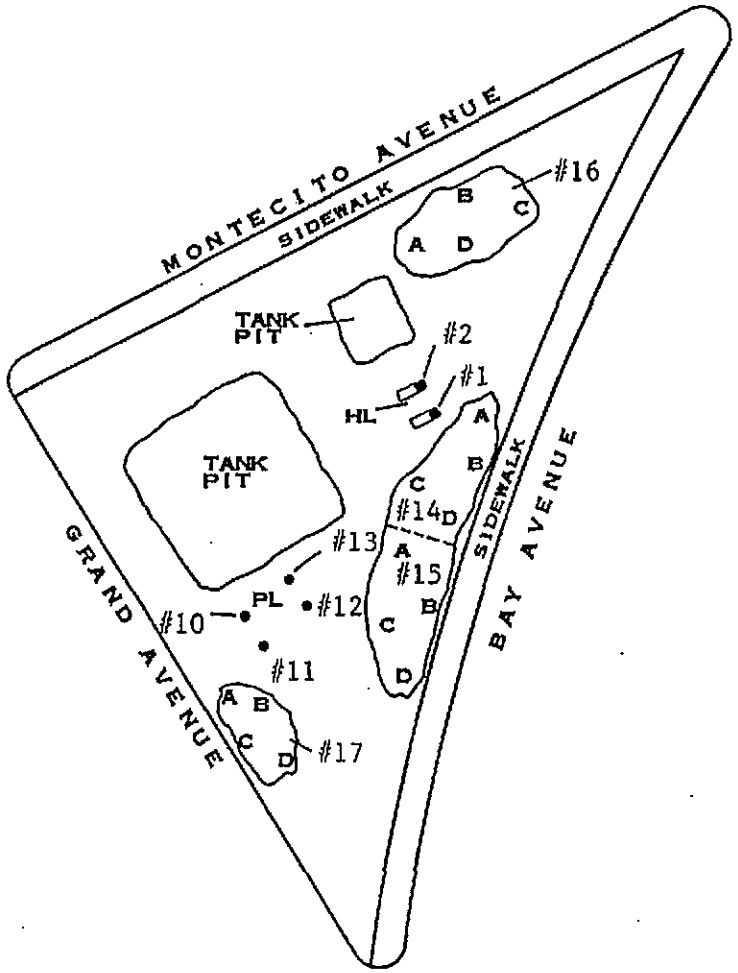


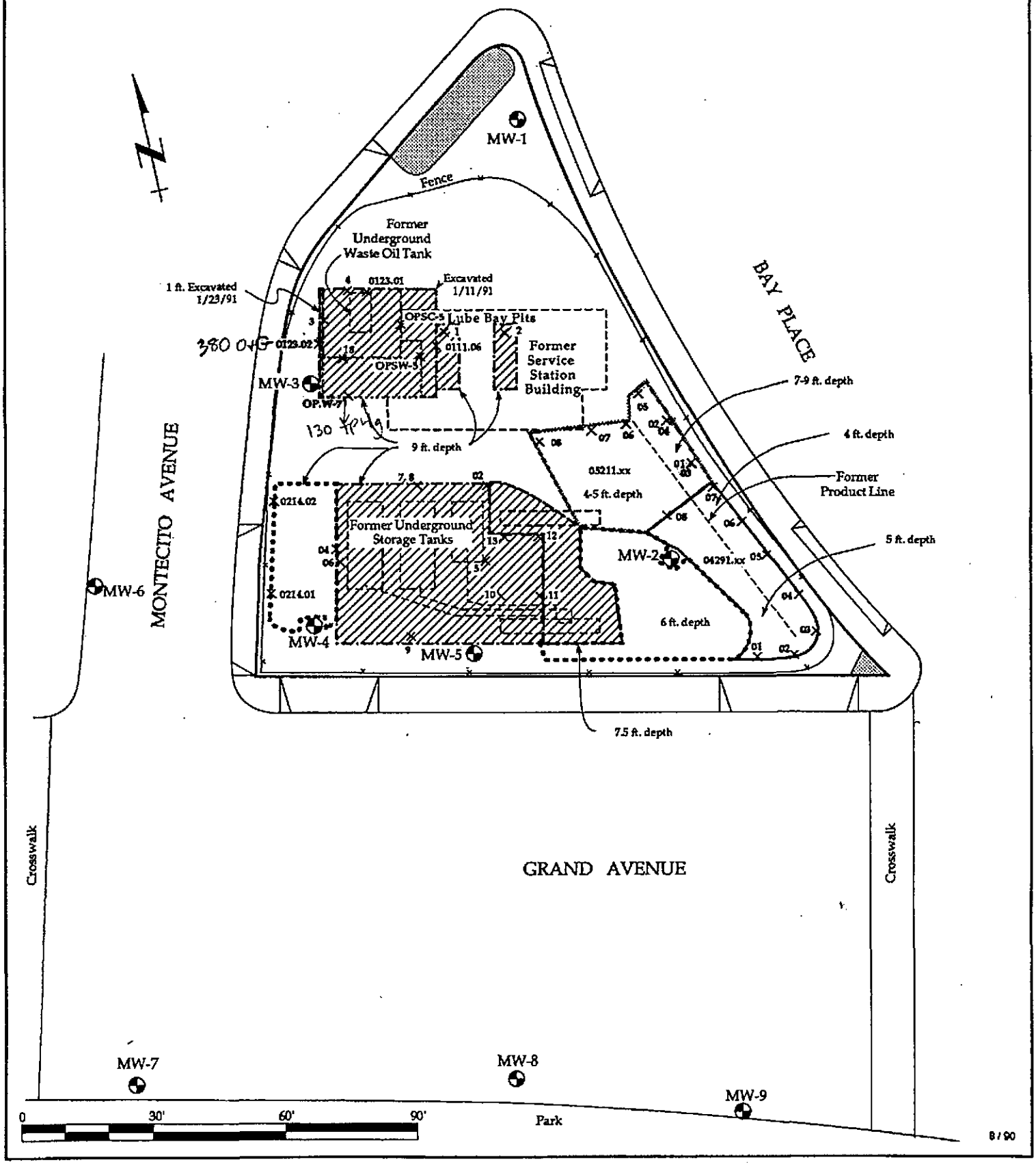
DIAGRAM TWO

MAP REF: THOMAS BROS., ALAMEDA COUNTY P. 9 C-10

SCALE: 0 75'

LEGEND: HL = HYDRAULIC LIFT
PL = PRODUCT LINE

SAMPLING PERFORMED BY CHUCK GRAVES
DIAGRAM PREPARED BY BRENT ADAMS



EXPLANATION

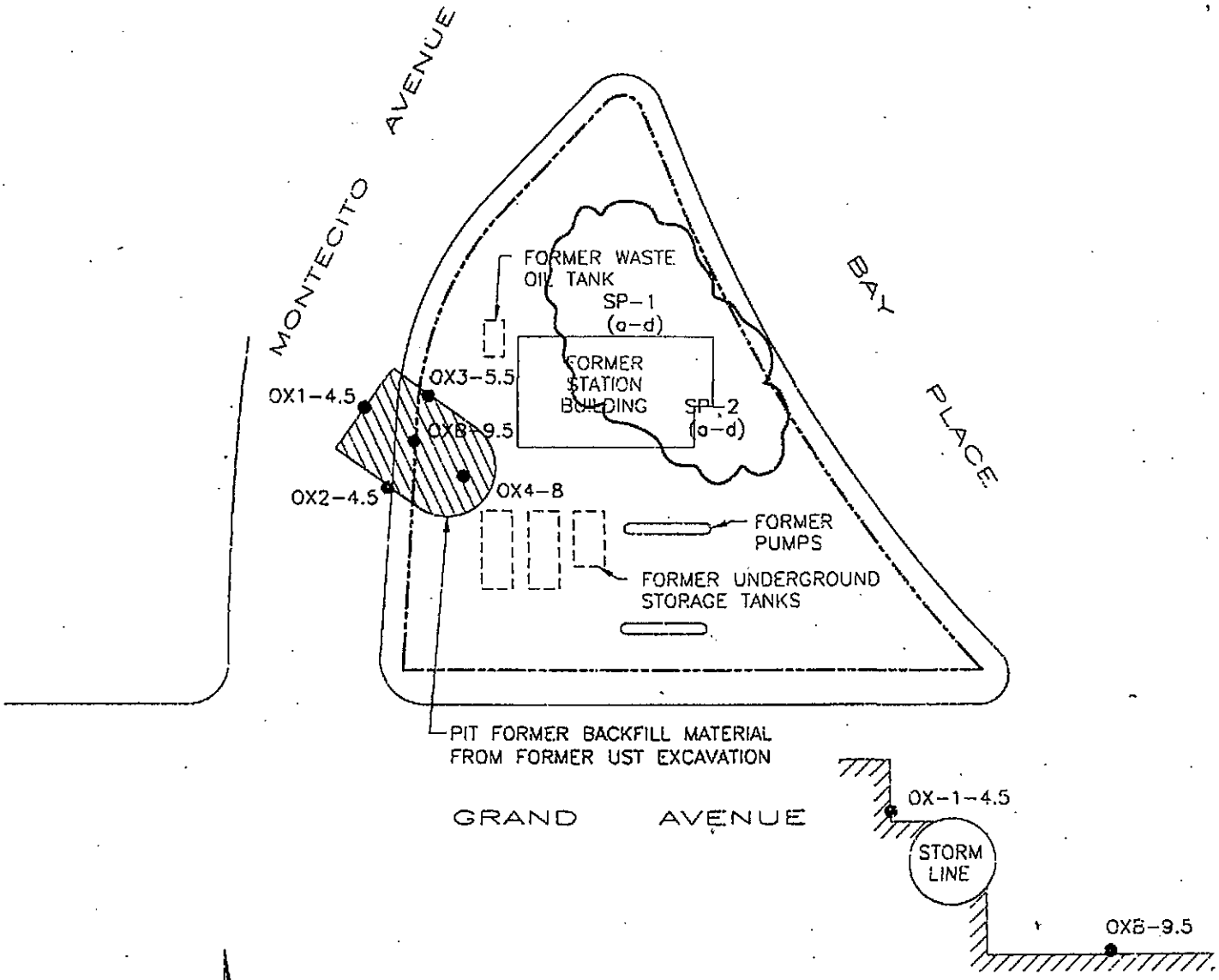
MW-7	Monitor Well Location
× 0214.01	Soil Sample Location
	Excavation, Blaine Tech Services, 6/20/90
	Excavation, WGR/Armer Norman, 7/2/90
	Excavation, WGR, 11/19/90 & 12/6/90
	Excavation, WGR, 1/11/91 & 1/23/91
	Excavation, WGR, 2/14, 2/15 and 2/19/91
	Excavation, WGR, 4/29/91-
	Excavation, WGR, 5/21/91
	Backfilled Excavation, 2/5/91 & 2/14/91

Site Map with Excavations and Soil Sample Locations
Chevron Service Station #90019
210 Grand Avenue
Oakland, California

FIGURE
3

WESTERN GEOLOGIC RESOURCES, INC.

1-101.06



Reference: Cambria

Touchstone Developments Environmental Management	Job. No: 96-0019 Appr: Drwn: CD Date: DEC 1996	SITE PLAN W/ SAMPLE LOCATIONS Chevron Station No. 9-0019 210 Grand Avenue Oakland, California	FIGURE 2

APPENDIX F

TPE TEST DATA

Figure 3: Soil Vapor Extraction Rate vs. Time

Former Chevron Service Station No. 9-0019
210 Grand Avenue
Oakland, California

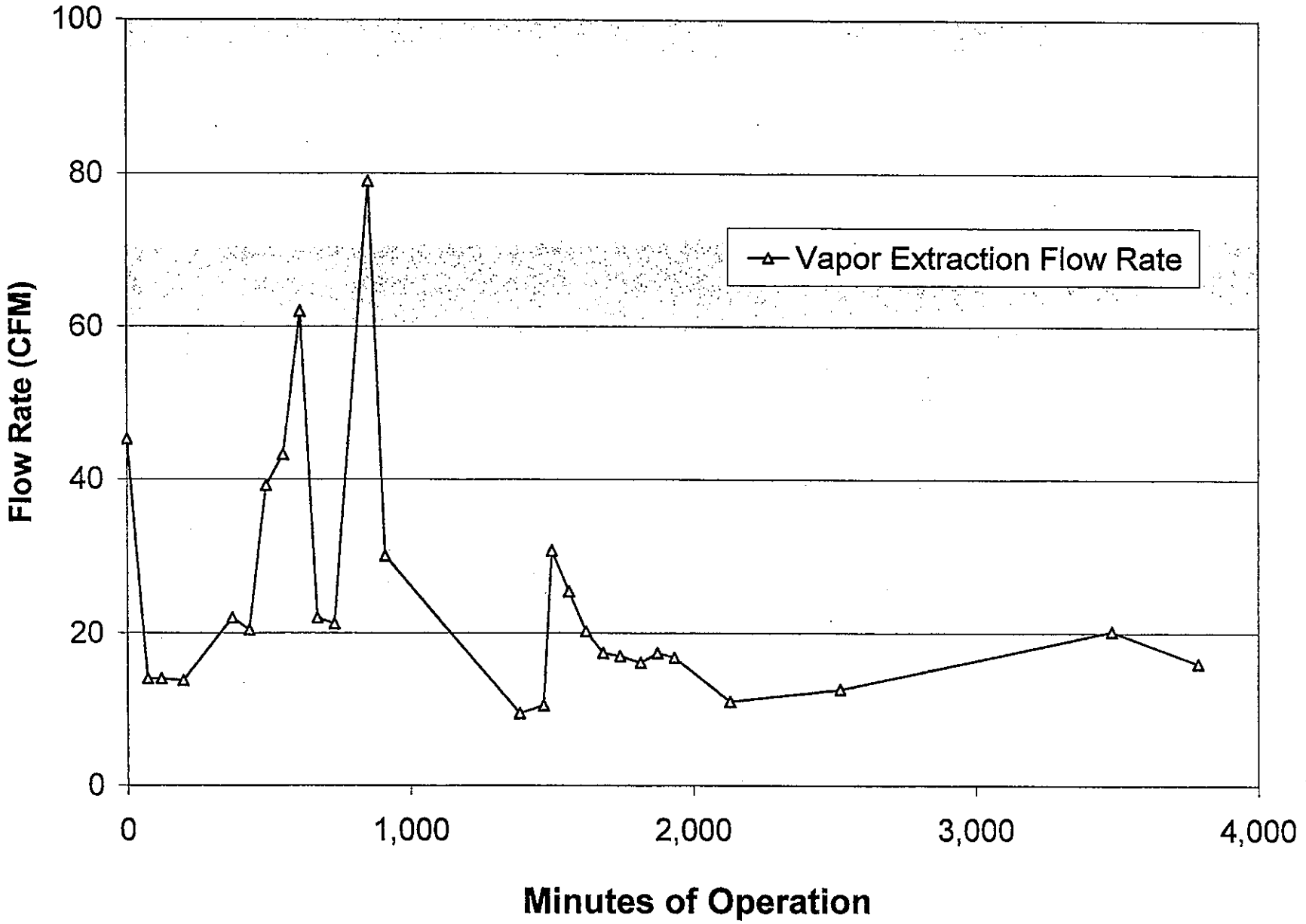


Figure 4: Vapor Concentrations vs. Time

Former Chevron Service Station No. 9-0019
210 Grand Avenue
Oakland, California

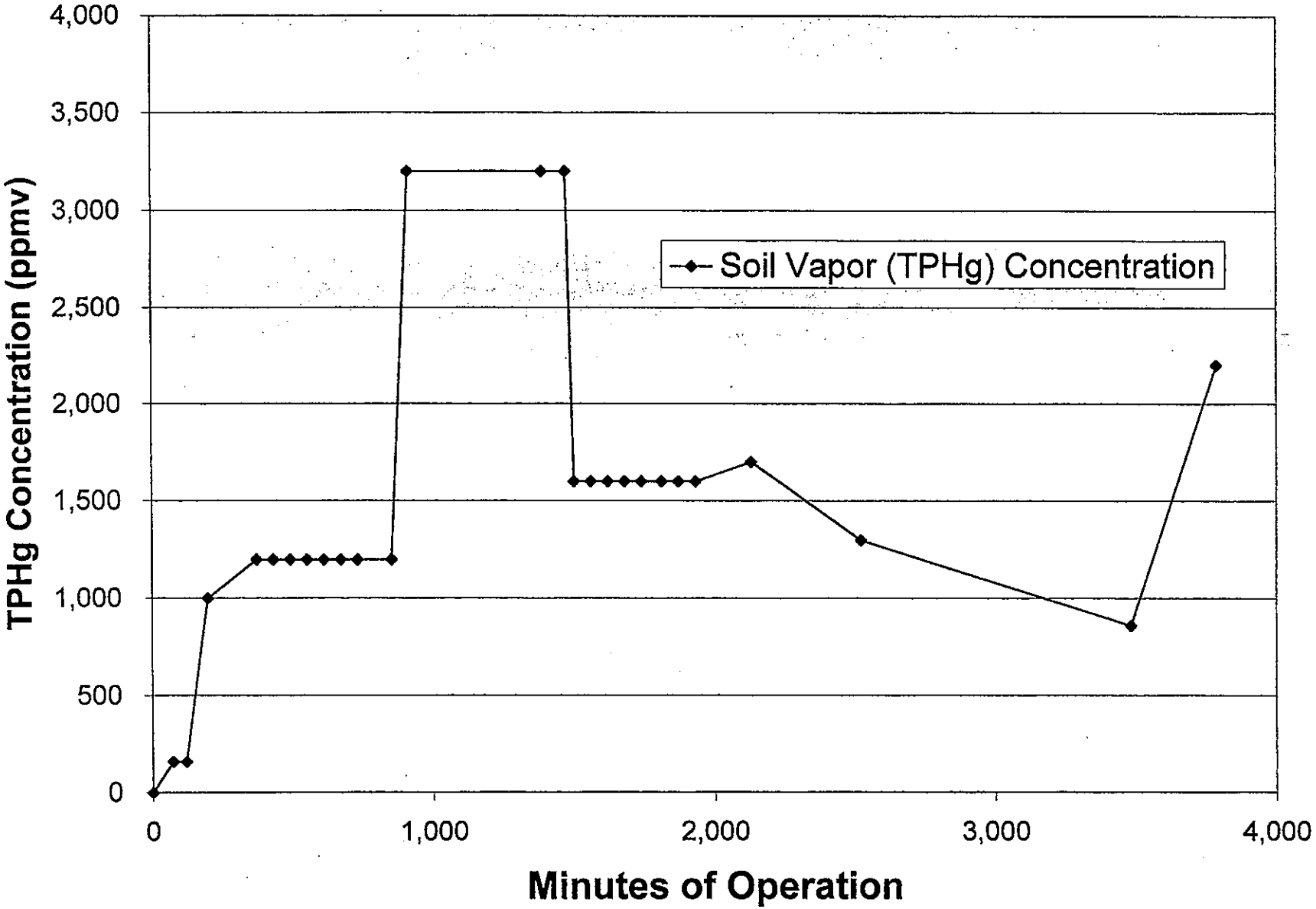


Figure 5: Mass Removal Rate vs. Time

Former Chevron Service Station No. 9-0019
210 Grand Avenue
Oakland, California

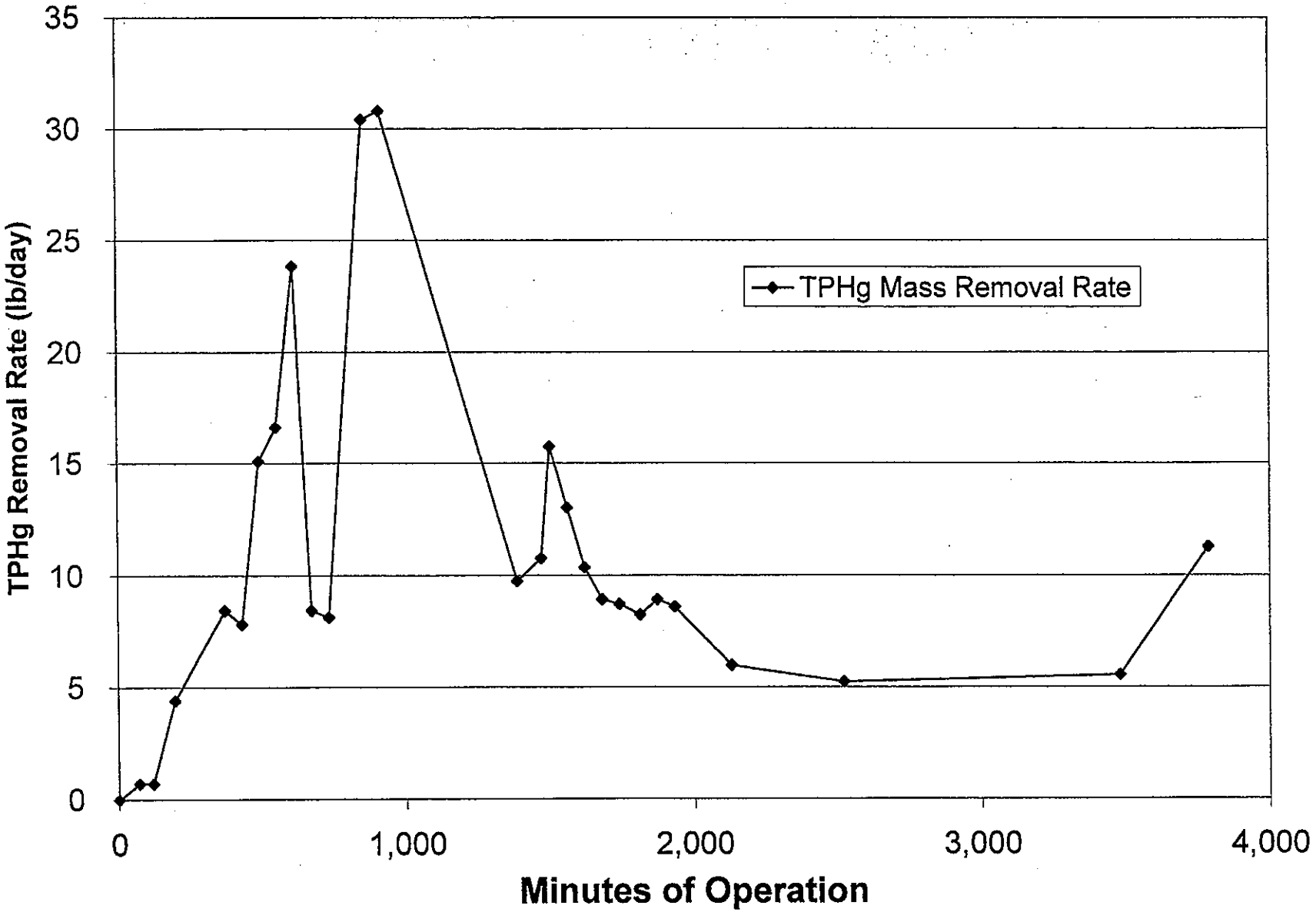


Figure 6: Vacuum Data

Former Chevron Service Station No. 9-0019
210 Grand Avenue
Oakland, California

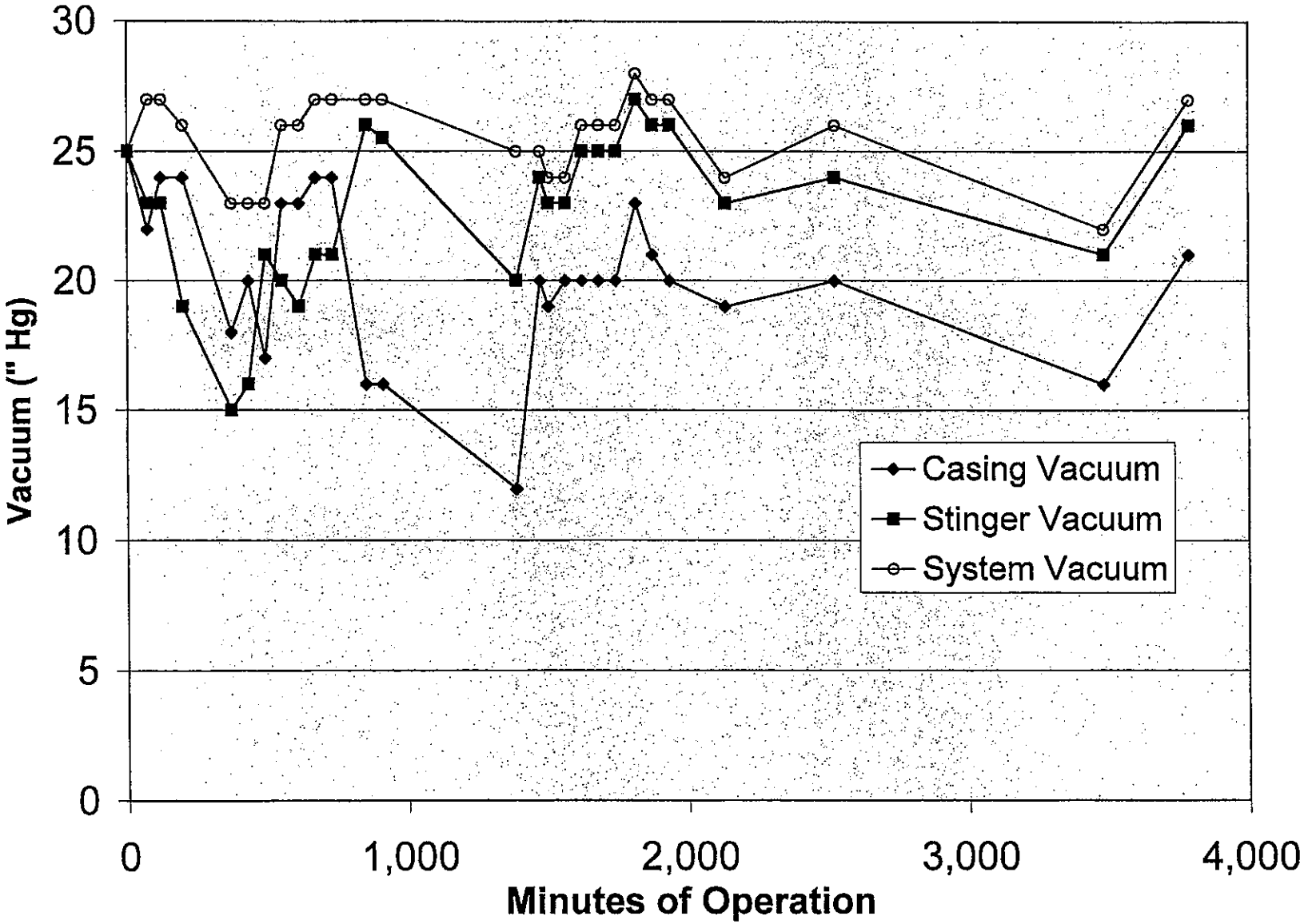


Table 1. TPE Performance Data. Former Chevron Service Station 9-0019, 210 Grand Avenue Oakland, CA.

Date	Time	Extraction Well	Hour Meter Reading (hours)	Operation Time Interval (minutes)	Cumulative Operation Time (minutes)	System Flow Rate (cfm)	System Vacuum ("Hg)	Stinger Vacuum ("Hg)	Casing Vacuum ("Hg)	Laboratory Concentration[1] (ppmv)	FID Concentration[2] (ppmv)	Hydrocarbon Removal Rate[3] (lbs/day)	Cumulative Hydrocarbon Removal (lbs)
09/14/05	12:15	MW-5	210.0	Test Start	0	45.2	25	25	25	0	305	0.0	---
"	13:25	MW-5	211.2	72	72	14.0	27	23	22	160	800	0.7	0.0
"	14:20	MW-5	212.0	48	120	14.0	27	23	24	160	751	0.7	0.1
"	15:30	MW-5	213.3	78	198	13.8	26	19	24	1,000	825	4.4	0.3
09/15/05	7:00	MW-5	216.2	174	372	22.0	23	15	18	1,200	960	8.5	1.3
"	8:00	MW-5	217.2	60	432	20.4	23	16	20	1,200	920	7.9	1.7
"	9:00	MW-5	218.2	60	492	39.2	23	21	17	1,200	1,330	15.1	2.3
"	10:00	MW-5	219.2	60	552	43.2	26	20	23	1,200	1,570	16.6	3.0
"	11:00	MW-5	220.2	60	612	62.0	26	19	23	1,200	1,470	23.9	4.0
"	12:00	MW-5	221.2	60	672	22.0	27	21	24	1,200	1,680	8.5	4.3
"	13:00	MW-5	222.2	60	732	21.2	27	21	24	1,200	1,833	8.2	4.7
"	15:00	MW-5	224.2	120	852	79.0	27	26	16	1,200	2,596	30.4	7.2
"	16:00	MW-5	225.2	60	912	30.0	27	25.5	16	3,200	2,620	30.8	8.5
09/16/05	7:00	MW-5	233.1	474	1,386	9.5	25	20	12	3,200	3,780	9.8	11.7
"	8:30	MW-5	234.5	84	1,470	10.5	25	24	20	3,200	3,510	10.8	12.3
"	9:00	MW-5	235.0	30	1,500	30.7	24	23	19	1,600	1,390	15.8	12.6
"	10:00	MW-5	236.0	60	1,560	25.4	24	23	20	1,600	1,120	13.0	13.2
"	11:00	MW-5	237.0	60	1,620	20.2	26	25	20	1,600	1,205	10.4	13.6
"	12:00	MW-5	238.0	60	1,680	17.4	26	25	20	1,600	1,260	8.9	14.0
"	13:00	MW-5	239.0	60	1,740	17.0	26	25	20	1,600	1,586	8.7	14.4
"	14:00	MW-5	240.2	72	1,812	16.1	28	27	23	1,600	1,242	8.3	14.8
"	15:00	MW-5	241.2	60	1,872	17.4	27	26	21	1,600	1,260	8.9	15.1
"	16:00	MW-5	242.2	60	1,932	16.8	27	26	20	1,600	1,225	8.6	15.5
09/17/05	9:00	MW-5	245.5	198	2,130	11.0	24	23	19	1,700	1,345	6.0	16.3
"	15:30	MW-5	252.0	390	2,520	12.6	26	24	20	1,300	1,290	5.3	17.7
09/18/05	8:00	MW-5	268.0	960	3,480	20.2	22	21	16	860	1,120	5.6	21.5
"	15:30	MW-5	273.1	306	3,786	16.0	27	26	21	2,200	1,952	11.3	23.9

Average Mass Removal Rate = 9.1

Notes:

1 See Table 2 for summary of laboratory analytical data. For the purpose of calculating mass removal, laboratory TPHg concentrations were assumed to be stable between sample collection events.

2 Field influent concentration collected with flame ionization detector

3 Hydrocarbon Removal/Emission Rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.
Rate = lab concentration (ppmv) x system flowrate (scfm) x (1lb-mole/386 ft³) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

"Hg = inches of mercury
cfm = cubic feet per minute
lbs = pounds
ppmv = parts per million by volume
TPE = two-phase extraction

Table 2. Soil Vapor Sample Analytical Results - Former Chevron Sevice Station 9-0019, 210 Grand Avenue, Oakland, CA.

Sample ID	Sampling Date	Sampling Time	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE
			(concentrations reported in parts per million by volume, ppm(v))					
EFFLUENT	09/14/05	12:25	3.9	<0.5	<0.8	<0.4	<0.7	<0.4
INFLUENT	09/14/05	12:30	160	2	1	0.8	2	14
INFLUENT	09/14/05	15:45	1,000	10	20	6	20	110
INFLUENT	09/15/05	7:15	1,200	10	10	4	9	140
INFLUENT	09/15/05	16:15	3,200	20	50	10	30	340
INFLUENT	09/16/05	9:10	1,600	10	30	6	20	160
INFLUENT	09/16/05	16:15	1,600	10	30	8	20	140
INFLUENT	09/17/05	9:35	1,700	10	30	20	40	130
INFLUENT	09/17/05	15:30	1,300	8	30	10	40	<0.4
INFLUENT	09/18/05	8:15	860	6	20	10	30	61
INFLUENT	09/18/05	15:35	2,200	10	40	20	60	140

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg) is identified in the laboratory report as "C2-C10 Hydrocarbons hexane" and was determined using EPA Method 25 modified

Benzene, toluene, ethylbenzene and xylenes (BTEX) and methyl *tertiary*-butyl ether (MTBE) by EPA Method 18 modified

<x = Not detected above method detection limit

ppm(v) = Parts per million by volume

Table 3. Drawdown Data. Chevron Facility #90019- 210 Grand Avenue Oakland, CA.

Date	Time	MW-5		MW-4		MW-6	
		Depth to Water (feet below top of casing)	Drawdown (feet)	Depth to Water (feet below top of casing)	Drawdown (feet)	Depth to Water (feet below top of casing)	Drawdown (feet)
09/14/05	10:00	5.00	0.00	4.32	0.00	5.62	0.00
"	16:00	14.5	9.50	4.30	-0.02	5.61	-0.01
09/15/05	7:30	14.5	9.50	4.32	0.00	5.65	0.03
09/16/05	16:00	14.5	9.50	4.33	0.01	5.67	0.05
09/17/05	16:45	14.5	9.50	4.33	0.01	5.66	0.04
09/18/05	8:00	14.5	9.50	4.34	0.02	5.66	0.04
"	15:45	14.5	9.50	4.45	0.13	5.66	0.04
Distance from MW-5		**0**		**36**		**85**	

Notes:

Times shown above at which depths to water were measured are approximate.

Depths to water at MW-5 documented above are estimated except for the measurement at 10:00 AM on 9/14/05.

APPENDIX G

OXYGEN INJECTION CONFIRMATION SAMPLE LABORATORY REPORTS

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:

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

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

June 15, 2009

SAMPLE GROUP

The sample group for this submittal is 1147729. Samples arrived at the laboratory on Thursday, June 04, 2009. The PO# for this group is 90019 and the release number is MTI.

Client Description	Lancaster Labs Number
MW-4-W-090603 Grab Water	5690996
MW-5-W-090603 Grab Water	5690997

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Chronicle.

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: CRA EDD
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: James Kiernan

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

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Christine Dulaney
Senior Specialist

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

Lancaster Laboratories Sample No. WW 5690996 **Group No. 1147729**
CA

MW-4-W-090603 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-4

Collected: 06/03/2009 09:45 by BC

Account Number: 11997

Submitted: 06/04/2009 09:40
Reported: 06/15/2009 at 15:24
Discard: 07/16/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAO04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1
06053	Toluene	108-88-3	N.D.	0.5	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F091601AA	06/09/2009 10:26	Anita M Dale	1
06053	BTEX by 8260B	SW-846 8260B	1	F091601AA	06/09/2009 10:26	Anita M Dale	1
01146	GC VOA Water Prep	SW-846 5030B	1	09161A20A	06/12/2009 00:56	Carrie E Miller	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09161A20A	06/12/2009 00:56	Carrie E Miller	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5690997 **Group No. 1147729**
CA

MW-5-W-090603 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-5

Collected: 06/03/2009 10:15 by BC

Account Number: 11997

Submitted: 06/04/2009 09:40
Reported: 06/15/2009 at 15:24
Discard: 07/16/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	
06053	Benzene	71-43-2	560	25	50
06053	Ethylbenzene	100-41-4	2,200	25	50
06053	Toluene	108-88-3	1,200	25	50
06053	Xylene (Total)	1330-20-7	5,600	25	50
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	27,000	250	5

General Sample Comments

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F091601AA	06/09/2009 11:08	Anita M Dale	50
06053	BTEX by 8260B	SW-846 8260B	1	F091601AA	06/09/2009 11:08	Anita M Dale	50
01146	GC VOA Water Prep	SW-846 5030B	1	09161A20B	06/12/2009 11:48	Fanella S Zamcho	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09161A20B	06/12/2009 11:48	Fanella S Zamcho	5

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1147729
Reported: 06/15/09 at 03:24 PM

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: F091601AA	Sample number(s): 5690996-5690997							
Benzene	N.D.	0.5	ug/l	95		80-116		
Ethylbenzene	N.D.	0.5	ug/l	97		80-113		
Toluene	N.D.	0.5	ug/l	99		80-115		
Xylene (Total)	N.D.	0.5	ug/l	99		81-114		
Batch number: 09161A20A	Sample number(s): 5690996							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	30
Batch number: 09161A20B	Sample number(s): 5690997							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	109	75-135	0	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: F091601AA	Sample number(s): 5690996-5690997 UNSPK: P690992								
Benzene	102	103	80-126	1	30				
Ethylbenzene	104	106	77-125	2	30				
Toluene	106	106	80-125	0	30				
Xylene (Total)	104	107	79-125	3	30				
Batch number: 09161A20A	Sample number(s): 5690996 UNSPK: P690992								
TPH-GRO N. CA water C6-C12	118		63-154						
Batch number: 09161A20B	Sample number(s): 5690997 UNSPK: P690992								
TPH-GRO N. CA water C6-C12	118		63-154						

Surrogate Quality Control

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

Analysis Name: BTEX by 8260B
Batch number: F091601AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5690996	92	89	92	101

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

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1147729
Reported: 06/15/09 at 03:24 PM

Surrogate Quality Control

5690997	89	87	90	103
Blank	92	86	90	100
LCS	92	88	90	105
MS	95	87	91	105
MSD	91	87	88	104
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09161A20A
Trifluorotoluene-F

5690996	89
Blank	89
LCS	125
LCSD	129
MS	127
Limits:	63-135

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09161A20B
Trifluorotoluene-F

5690997	128
Blank	87
LCS	125
LCSD	129
MS	127
Limits:	63-135

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

Chevron California Region Analysis Request/Chain of Custody

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Where quality is a science.

240392

Ø6Ø3Ø9-Ø6

For Lancaster Laboratories use only
Acct. #: 11991 Sample #: 5690996-97 SCR#:

C# 1147729

Facility #: Chevron 9-0019 MT
Site Address: 210 Grand Avenue Oakland, CA
Chevron PM: Stacie H Frerichs Lead Consultant: CRA
Consultant/Office: 2000 Opportunity Drive Roseville, CA 95678
Consultant Prj. Mgr.: James Kiernan
Consultant Phone #: 916-751-4102 Fax #: 916-751-4199
Sampler: Bruce Campbell
Service Order #: ☐ Non SAR:

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	Total Number of Containers	Analyses Requested / Preservation Codes: BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates ___	Lead 7420 ☐ 7421 ☐
MW-4	GW			09-06-03	0945		X		6	X	X				
MW-5	GW			09-06-03	1015		X		6	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) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	03JUN09	1328	Received by:	03JUN09	1328
Relinquished by:	6/3/09	1530	Received by: FedEx		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	6/4/09	0940
Temperature Upon Receipt 0.8-1.8 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< 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

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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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.

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

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

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

July 23, 2009

SAMPLE GROUP

The sample group for this submittal is 1153663. Samples arrived at the laboratory on Thursday, July 16, 2009. The PO# for this group is 90019 and the release number is MTI.

Client Description	Lancaster Labs Number
MW-4-W-090715 Grab Water	5724340
MW-5-W-090715 Grab Water	5724341

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: CRA EDD
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: James Kiernan

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Robin C. Runkle
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5724340

Group No. 1153663
CA

MW-4-W-090715 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-4

Collected: 07/15/2009 09:45 by BC

Account Number: 11997

Submitted: 07/16/2009 09:10
Reported: 07/23/2009 at 18:11
Discard: 08/23/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

00194

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	**ug/l**	
06054	Benzene	71-43-2	N.D.	0.5	1	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
06054	Toluene	108-88-3	N.D.	0.5	1	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D092033AA	07/22/2009 23:41	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	D092033AA	07/22/2009 23:41	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09198A20A	07/17/2009 21:57	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09198A20A	07/17/2009 21:57	Fanella S Zamcho	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5724341

Group No. 1153663
CA

MW-5-W-090715 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-5

Collected: 07/15/2009 10:15 by BC

Account Number: 11997

Submitted: 07/16/2009 09:10
Reported: 07/23/2009 at 18:11
Discard: 08/23/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

00195

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
SW-846 8260B	**GC/MS Volatiles**		**ug/l**	**ug/l**	**ug/l**	
06054	Benzene	71-43-2	560	5	10	10
06054	Ethylbenzene	100-41-4	590	5	10	10
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
06054	Toluene	108-88-3	1,200	5	10	10
06054	Xylene (Total)	1330-20-7	2,500	5	10	10
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	16,000	250	500	5

General Sample Comments

State of California Lab Certification No. 2116
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z092011AA	07/20/2009 16:08	Daniel H Heller	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	Z092011AA	07/20/2009 16:33	Daniel H Heller	10
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z092011AA	07/20/2009 16:08	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z092011AA	07/20/2009 16:33	Daniel H Heller	10
01146	GC VOA Water Prep	SW-846 5030B	1	09198A20A	07/17/2009 22:19	Fanella S Zamcho	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09198A20A	07/17/2009 22:19	Fanella S Zamcho	5

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Group Number: 1153663
Reported: 07/23/09 at 06:11 PM

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**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D092033AA	Sample number(s): 5724340								
Benzene	N.D.	0.5	1	ug/l	101		80-116		
Ethylbenzene	N.D.	0.5	1	ug/l	100		80-113		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	99		78-117		
Toluene	N.D.	0.5	1	ug/l	102		80-115		
Xylene (Total)	N.D.	0.5	1	ug/l	103		81-114		
Batch number: Z092011AA	Sample number(s): 5724341								
Benzene	N.D.	0.5	1	ug/l	93		80-116		
Ethylbenzene	N.D.	0.5	1	ug/l	100		80-113		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	99		78-117		
Toluene	N.D.	0.5	1	ug/l	99		80-115		
Xylene (Total)	N.D.	0.5	1	ug/l	101		81-114		
Batch number: 09198A20A	Sample number(s): 5724340-5724341								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	109	109	75-135	0	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D092033AA	Sample number(s): 5724340 UNSPK: P725415								
Benzene	100	101	80-126	1	30				
Ethylbenzene	99	102	77-125	3	30				
Methyl Tertiary Butyl Ether	76	78	72-126	2	30				
Toluene	102	104	80-125	2	30				
Xylene (Total)	102	104	79-125	2	30				
Batch number: Z092011AA	Sample number(s): 5724341 UNSPK: P722140								
Benzene	101	99	80-126	2	30				
Ethylbenzene	108	108	77-125	0	30				
Methyl Tertiary Butyl Ether	104	104	72-126	0	30				
Toluene	107	109	80-125	2	30				
Xylene (Total)	109	110	79-125	1	30				
Batch number: 09198A20A	Sample number(s): 5724340-5724341 UNSPK: P724368								
TPH-GRO N. CA water C6-C12	89		63-154						

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1153663
Reported: 07/23/09 at 06:11 PM

Surrogate Quality Control

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

Analysis Name: BTEX+MTBE by 8260B
Batch number: D092033AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5724340	104	105	99	98
Blank	104	105	99	99
LCS	104	106	99	101
MS	106	107	99	100
MSD	106	109	99	101
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z092011AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5724341	83	80	94	89
Blank	90	82	93	84
LCS	88	85	93	89
MS	84	82	91	90
MSD	90	85	92	89
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09198A20A

	Trifluorotoluene-F
5724340	105
5724341	125
Blank	103
LCS	129
LCSD	130
MS	123
Limits:	63-135

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
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07159-11

For Lancaster Laboratories use only
Acct. #: 11997 Sample #: 5724340-41 SCR#:

248160

1153663

Analyses Requested

Preservation Codes

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

Facility #: 9-0019 Chevron MT
Site Address: 210 Grand Avenue Oakland, CA
Chevron PM: Stacie M Freriche Lead Consultant: CRA
Consultant/Office: 2000 Opportunity Drive Roseville, CA
Consultant Prj. Mgr.: James Berner
Consultant Phone #: 916-751-4102 Fax #: 916-751-4199
Sampler: Bruce Campbell
Service Order #: ☐ Non SAR:

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	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 ☐						
MW-4	GW			09-07-15	0945		X		6	X	X										
MW-5	GW			09-07-15	10:15		X		6	X	X										

☐ 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) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	7/15/09	1305	Received by:	15JUL09	1305
Relinquished by:	15JUL09	1630	Received by: FEDEX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		0910
Temperature Upon Receipt 16.3 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< 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

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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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.

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

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

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

September 09, 2009

SAMPLE GROUP

The sample group for this submittal is 1159869. Samples arrived at the laboratory on Saturday, August 29, 2009. The PO# for this group is 90019 and the release number is MTI.

Client Description	Lancaster Labs Number
MW-4-W-090828 Grab Water	5764718
MW-5-W-090828 Grab Water	5764719

METHODOLOGY

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: CRA EDD
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: James Kiernan

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Marla S. Lord
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5764718

Group No. 1159869
CA

MW-4-W-090828 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-4

Collected: 08/28/2009 08:50 by BHC

Account Number: 11997

Submitted: 08/29/2009 10:20
Reported: 09/09/2009 at 11:57
Discard: 10/10/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAOM4

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
06054	Benzene	71-43-2	N.D.	0.5	1	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
06054	Toluene	108-88-3	N.D.	0.5	1	1
06054	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D092462AA	09/04/2009 00:42	Florida A Cimino	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	D092462AA	09/04/2009 00:42	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	09246B20A	09/04/2009 04:47	Tyler O Griffin	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09246B20A	09/04/2009 04:47	Tyler O Griffin	1

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW 5764719

Group No. 1159869
CA

MW-5-W-090828 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-5

Collected: 08/28/2009 09:20 by BHC

Account Number: 11997

Submitted: 08/29/2009 10:20
Reported: 09/09/2009 at 11:57
Discard: 10/10/2009

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAOM5

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
06054	Benzene	71-43-2	250	5	10	10
06054	Ethylbenzene	100-41-4	360	5	10	10
06054	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1	1
06054	Toluene	108-88-3	240	5	10	10
06054	Xylene (Total)	1330-20-7	1,000	5	10	10
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	7,800	250	500	5

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	D092462AA	09/04/2009 01:06	Florida A Cimino	1
01163	GC/MS VOA Water Prep	SW-846 5030B	2	D092462AA	09/04/2009 01:29	Florida A Cimino	10
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	D092462AA	09/04/2009 01:06	Florida A Cimino	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	D092462AA	09/04/2009 01:29	Florida A Cimino	10
01146	GC VOA Water Prep	SW-846 5030B	1	09246B20A	09/04/2009 07:18	Tyler O Griffin	5
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09246B20A	09/04/2009 07:18	Tyler O Griffin	5

*=This limit was used in the evaluation of the final result

Lancaster Laboratories

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1159869
Reported: 09/09/09 at 11:57 AM

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**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: D092462AA	Sample number(s): 5764718-5764719								
Benzene	N.D.	0.5	1	ug/l	98		79-120		
Ethylbenzene	N.D.	0.5	1	ug/l	95		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	1	ug/l	96		76-120		
Toluene	N.D.	0.5	1	ug/l	97		79-120		
Xylene (Total)	N.D.	0.5	1	ug/l	96		80-120		
Batch number: 09246B20A	Sample number(s): 5764718-5764719								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	100	100	75-135	0	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: D092462AA	Sample number(s): 5764718-5764719 UNSPK: P764161								
Benzene	108	111	80-126	3	30				
Ethylbenzene	104	106	71-134	2	30				
Methyl Tertiary Butyl Ether	103	104	72-126	1	30				
Toluene	105	107	80-125	2	30				
Xylene (Total)	103	105	79-125	2	30				
Batch number: 09246B20A	Sample number(s): 5764718-5764719 UNSPK: P764532								
TPH-GRO N. CA water C6-C12	127		63-154						

Surrogate Quality Control

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

Analysis Name: BTEX+MTBE by 8260B
Batch number: D092462AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5764718	93	90	87	93
5764719	90	85	88	105
Blank	94	89	88	94
LCS	95	89	88	97
MS	94	92	89	97

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1159869
Reported: 09/09/09 at 11:57 AM

Surrogate Quality Control

MSD	95	90	88	98
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09246B20A
Trifluorotoluene-F

5764718	98
5764719	114
Blank	99
LCS	126
LCSD	125
MS	130
Limits:	63-135

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

082809-03

For Lancaster Laboratories use only
Acct. #: 11997 Sample #: 5764718-19 SCR#: 249579

Grp# 1159869

Facility #: Chevron 9-0019 MT
Site Address: 210 Grand Avenue Oakland, CA
Chevron PM: Stacie H Freriks Lead Consultant: CRA
Consultant/Office: Roseville, CA
Consultant Prj. Mgr.: James Kiernan
Consultant Phone #: 916-751-4102 Fax #: 916-751-4199
Sampler: Bruce H Campbell
Service Order #: ☐ Non SAR:

Analyses Requested

Preservation Codes

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

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	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 ☐
MW-4	GW			09-08-28	8:50		X		6	X	X				
MW-5	GW			09-08-28	9:20		X		6	X	X				

Comments / Remarks

Turnaround Time Requested (TAT) (please circle)
(STD. TAT) 72 hour 48 hour
24 hour 4 day 5 day

Data Package Options (please circle if required)
QC Summary Type I – Full
Type VI (Raw Data) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by: Bruce H Campbell	8/28/09	12:00	Received by:	8/28/09	1200
Relinquished by: A. Malagon 28AUG09		1639	Received by: FED EX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		
Temperature Upon Receipt 16.34 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< 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

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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

916-677-3407

Prepared by:

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

November 13, 2009

Project: 90019

Samples arrived at the laboratory on Friday, November 06, 2009. The PO# for this group is 90019 and the release number is MTI. The group number for this submittal is 1169870.

Client Sample Description	Lancaster Labs (LLI) #
MW-4-W-091105 Grab Water	5828936
MW-5-W-091105 Grab Water	5828937

The specific methodologies used in obtaining the enclosed analytical results are indicated on the Laboratory Sample Analysis Record.

ELECTRONIC COPY TO	Chevron c/o CRA	Attn: CRA EDD
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: James Kiernan

Lancaster Laboratories

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Analysis Report

Questions? Contact your Client Services Representative
Angela M Miller at (717) 656-2300

Respectfully Submitted,

Susan M. Goshert
Group Leader

Lancaster Laboratories

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Analysis Report

Sample Description: MW-4-W-091105 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-4

LLI Sample # WW 5828936
LLI Group # 1169870
CA

Project Name: 90019

Collected: 11/05/2009 07:50 by BC

Submitted: 11/06/2009 09:00
Reported: 11/13/2009 at 11:21
Discard: 12/14/2009

Account Number: 11997

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAO04

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
06053	Benzene	71-43-2	N.D.	0.5	1	1
06053	Ethylbenzene	100-41-4	N.D.	0.5	1	1
06053	Toluene	108-88-3	N.D.	0.5	1	1
06053	Xylene (Total)	1330-20-7	N.D.	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	100	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F093144AA	11/10/2009 22:17	Florida A Cimino	1
06053	BTEX by 8260B	SW-846 8260B	1	F093144AA	11/10/2009 22:17	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	09314B20A	11/10/2009 16:03	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09314B20A	11/10/2009 16:03	Matthew S Woods	1

*=This limit was used in the evaluation of the final result

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

Sample Description: MW-5-W-091105 Grab Water
Facility# 90019 CRAW
210 Grand Ave-Oakland T0600100313 MW-5

LLI Sample # WW 5828937
LLI Group # 1169870
CA

Project Name: 90019

Collected: 11/05/2009 08:30 by BC

Submitted: 11/06/2009 09:00
Reported: 11/13/2009 at 11:21
Discard: 12/14/2009

Account Number: 11997

Chevron c/o CRA
Suite 110
2000 Opportunity Drive
Roseville CA 95678

GAO05

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit*	As Received Limit of Quantitation	Dilution Factor
GC/MS Volatiles	**SW-846 8260B**		**ug/l**	**ug/l**	**ug/l**	
06053	Benzene	71-43-2	3	0.5	1	1
06053	Ethylbenzene	100-41-4	2	0.5	1	1
06053	Toluene	108-88-3	3	0.5	1	1
06053	Xylene (Total)	1330-20-7	13	0.5	1	1
GC Volatiles	**SW-846 8015B**		**ug/l**	**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	990	50	100	1

General Sample Comments

State of California Lab Certification No. 2501
Trip blank vials were not received by the laboratory for this sample group.

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F093144AA	11/10/2009 22:39	Florida A Cimino	1
06053	BTEX by 8260B	SW-846 8260B	1	F093144AA	11/10/2009 22:39	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	09314B20A	11/10/2009 16:25	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09314B20A	11/10/2009 16:25	Matthew S Woods	1

*=This limit was used in the evaluation of the final result

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1169870
Reported: 11/13/09 at 11:21 AM

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**	Blank LOQ	Report Units	LCS %REC	LCSD %REC	LCS/LCSD Limits	RPD	RPD Max
Batch number: F093144AA	Sample number(s): 5828936-5828937								
Benzene	N.D.	0.5	1	ug/l	88	88	79-120	0	30
Ethylbenzene	N.D.	0.5	1	ug/l	85	86	79-120	1	30
Toluene	N.D.	0.5	1	ug/l	91	90	79-120	1	30
Xylene (Total)	N.D.	0.5	1	ug/l	89	89	80-120	1	30
Batch number: 09314B20A	Sample number(s): 5828936-5828937								
TPH-GRO N. CA water C6-C12	N.D.	50.	100	ug/l	118	118	75-135	0	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: F093144AA	Sample number(s): 5828936-5828937 UNSPK: P826000								
Benzene	83		80-126						
Ethylbenzene	94		71-134						
Toluene	97		80-125						
Xylene (Total)	95		79-125						
Batch number: 09314B20A	Sample number(s): 5828936-5828937 UNSPK: P828833								
TPH-GRO N. CA water C6-C12	127		63-154						

Surrogate Quality Control

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

Analysis Name: BTEX by 8260B
Batch number: F093144AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5828936	103	106	100	101
5828937	99	100	97	105
Blank	100	103	100	99
LCS	96	98	95	103
LCSD	96	96	96	103
MS	99	99	99	105

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Quality Control Summary

Client Name: Chevron c/o CRA Group Number: 1169870
Reported: 11/13/09 at 11:21 AM

Surrogate Quality Control

Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09314B20A

	Trifluorotoluene-F
5828936	104
5828937	119
Blank	103
LCS	120
LCSD	117
MS	121
Limits:	63-135

*- Outside of specification
**-This limit was used in the evaluation of the final result for the blank
(1) The result for one or both determinations was less than five times the LOQ.
(2) The unspiked result was more than four times the spike added.

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories
Where quality is a science.

110509-01

For Lancaster Laboratories use only
Acct. #: 11991 Sample #: 5828936-37 SCR#: 248582

G# 1169870

Facility #: 9-0019 Chevron MT
Site Address: 210 Grand Avenue Oakland, CA
Chevron PM: Rob Speer Lead Consultant: CRA
Consultant/Office: 10969 Trade Center Drive Ste 107 Rancho Cordova, CA
Consultant Prj. Mgr.: James Kiernan
Consultant Phone #: 916-889-8917 Fax #: 916-889-8999
Sampler: Bruce Campbell
Service Order #: ☐ Non SAR:

Field Point Name	Matrix	Repeat Sample	Top Depth	Year Month Day	Time Collected	New Field Pt.	Grab	Composite	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 ☐
MW-4	GW			09-11-05	7:50		X		6	X	X				
MW-5	GW			09-11-05	8:30		X		6	X	X				

Analyses Requested
Preservation Codes

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) ☐ Coelt Deliverable not needed
WIP (RWQCB)
Disk

	Date	Time		Date	Time
Relinquished by:	11-5-09	11:05	Received by:	11/5/09	1105
Relinquished by:	05 NOV 09	1638	Received by: FED EX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS RedEx Other			Received by:	11/6/09	0900
Temperature Upon Receipt 13.2 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

N.D.	none detected	**BMQL**	Below Minimum Quantitation Level
TNTC	Too Numerous To Count	**MPN**	Most Probable Number
IU	International Units	**CP Units**	cobalt-chloroplatinate units
umhos/cm	micromhos/cm	**NTU**	nephelometric turbidity units
C	degrees Celsius	**F**	degrees Fahrenheit
Cal	(diet) calories	**lb.**	pound(s)
meq	milliequivalents	**kg**	kilogram(s)
g	gram(s)	**mg**	milligram(s)
ug	microgram(s)	**l**	liter(s)
ml	milliliter(s)	**ul**	microliter(s)
m3	cubic meter(s)	**fib >5 um/ml**	fibers greater than 5 microns in length per ml

< 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

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.

U.S. EPA 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 quatitated on a diluted sample
E	Concentration exceeds the calibration range of the instrument
J	Estimated value
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 amount 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.

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

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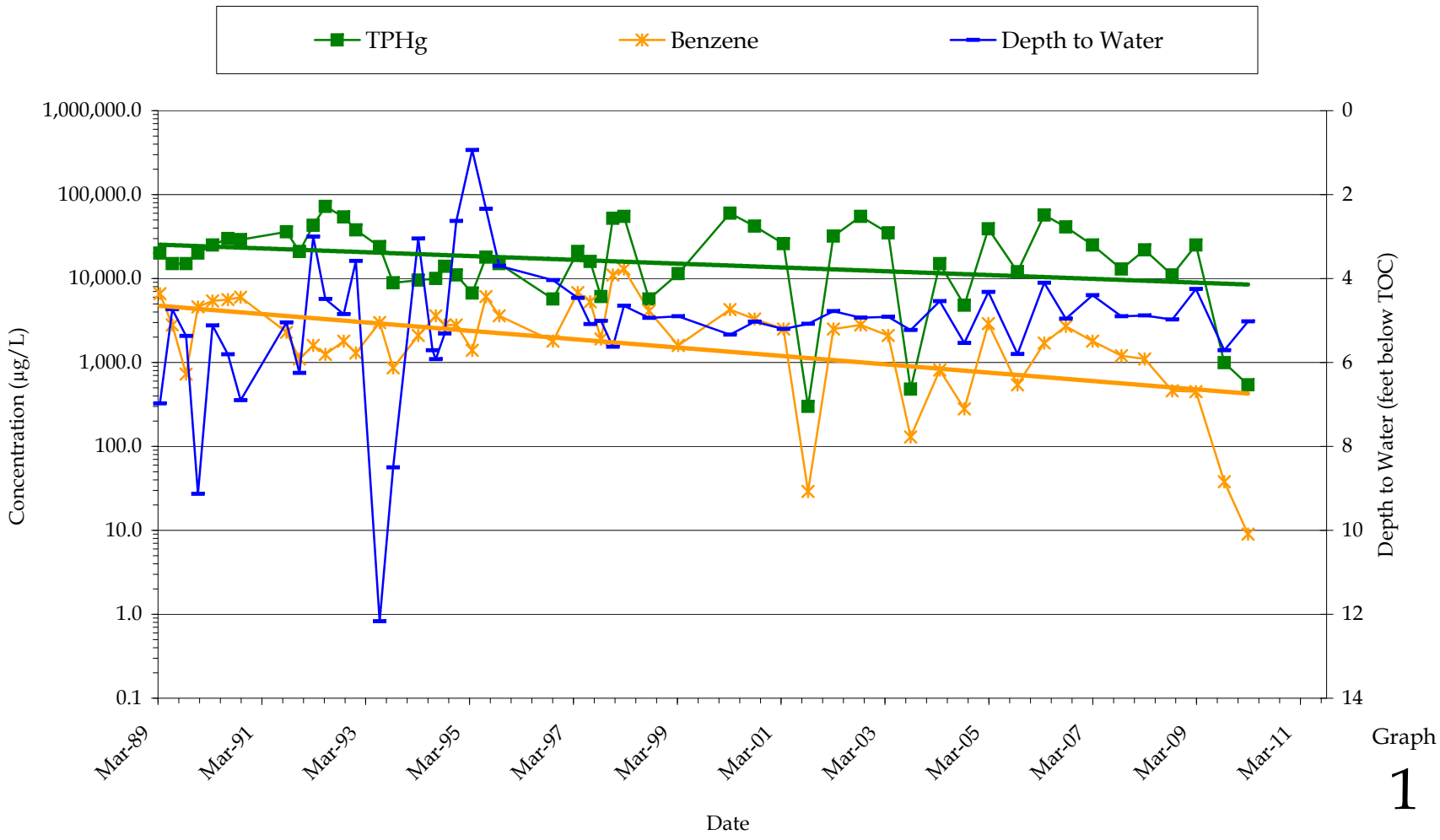
APPENDIX H

CONCENTRATION VERSUS TIME GRAPH – MW-5



Graph 1

FORMER CHEVRON STATION 9-0019
210 GRAND AVENUE
OAKLAND, CALIFORNIA

CONESTOGA-ROVERS & ASSOCIATES

MW-5: TPHg AND BENZENE CONCENTRATIONS AND DEPTH TO WATER