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December 14, 2009
(date)

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

Re: Chevron Facility #_21-1173_____

Address: 500 Grand Avenue, Oakland, California_____

I have reviewed the attached report titled *Site Conceptual Model and Case Closure Request*_____ and dated December 14, 2009.

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 TEXACO STATION 21-1173 (FORMER EXXON NO. 7-0237)
500 GRAND AVENUE
OAKLAND, CALIFORNIA
LOP CASE NO. RO0000391

Prepared For:

Mr. Mark Detterman, PG, CEG
Alameda County Environmental Health

Prepared by:
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DECEMBER 14, 2009
REF. NO. 612049 (2)

SITE CONCEPTUAL MODEL AND CASE CLOSURE REQUEST

FORMER TEXACO STATION 21-1173 (FORMER EXXON NO. 7-0237)
500 GRAND AVENUE
OAKLAND, CALIFORNIA
LOP CASE NO. RO0000391

Christopher J. Benedict

James P. Kiernan, P.E.

12/14/09

DECEMBER 14, 2009
REF. NO. 612049 (2)

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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 Texaco Service Station No. 21-1173 (former Exxon No. 7-0237) located at 500 Grand Avenue in Oakland, California. Preparation of a site conceptual model (SCM) to summarize site conditions, identify potential receptors and potentially complete exposure pathways, and evaluate if any data gaps exist was requested by Alameda County Environmental Health (ACEH) in a letter dated September 30, 2008 (Technical Comment No. 6).

In Technical Comments No. 1-3 of the September 30, 2008 letter, ACEH noted that the investigation summarized in the August 14, 2008 *Subsurface Investigation Report* was not performed as was proposed in the September 14, 2007 *Workplan for Additional Soil Vapor Study* (the installation and sampling of five soil vapor wells [SV-4 through SV-8] onsite and the drilling of three offsite borings). The soil vapor wells were not installed due to high groundwater levels, and the three offsite borings were not drilled due to safety concerns with numerous underground utilities present in Grand Avenue. Therefore, ACEH requested the completion of the vapor sampling, with the exception that the wells be installed in native soil rather than excavation backfill; information regarding the utilities present and clearance activities performed in Grand Avenue was also requested. In Technical Comment No. 4 of the letter, ACEH concurred with our recommendation that the remaining monitoring wells be redeveloped and sampled to evaluate current conditions as they had not been sampled since 2000. In Technical Comment No. 5 of the letter, ACEH requested the performance of a study to evaluate if any preferential pathways may exist that could contribute to the migration of impacted groundwater, including utility and well surveys. A copy of the letter is presented in Appendix A.

CRA subsequently prepared and submitted the November 21, 2008 *Response to Comments and Revised Scope of Work*, in which the collection of the soil vapor samples using direct-push methods was proposed rather than the installation of wells due to the high groundwater levels encountered, and the collection of additional soil samples in these areas was no longer recommended as sufficient data had been collected during the previous investigations. Regarding the three proposed borings in Grand Avenue, upon review of the historical data it was determined that sufficient data had been collected to adequately evaluate the downgradient extent of impacted soil; therefore, these borings were no longer recommended. It was noted that the monitoring wells would be redeveloped and sampled once an encroachment permit could be secured with the City of Oakland (City) for the five wells in Grand Avenue. Regarding the preparation of a SCM, CRA recommended that it should reflect current conditions including

groundwater monitoring data (at least two quarters) and the results of any soil vapor sampling. Finally, CRA concurred that a preferential pathway study was warranted; the results would be presented in the SCM. In a letter dated May 13, 2009 (Technical Comments No. 1-4), ACEH concurred with the above recommendations; a copy of the letter is presented in Appendix A.

Please note that CRA had planned to perform the additional soil vapor sampling at the site in June 2009 as it likely was the best time of the year to perform the work (i.e., lowest groundwater levels during summer). However, during the groundwater monitoring event in early June, the depth to groundwater in the onsite wells ranged from approximately 0.9 to 1.3 feet. Based on this information, the work was not performed as it did not appear that accurate soil vapor data could be obtained. This was communicated to ACEH via e-mail on September 9, 2009, and acknowledged in a return e-mail from ACEH on September 10, 2009. During the October 2009 groundwater monitoring event, the depth to water in onsite well MW-8K was 1.85 feet, still too shallow to obtain valid soil vapor data. Therefore, it does not appear this work can be performed. However, based on the site conditions, vapor intrusion does not appear to be a significant concern and thus additional soil vapor sampling does not appear warranted, as will be further discussed.

The encroachment permit issue with the City was resolved in May 2009 and the wells were generally able to be redeveloped and sampled during the second and third quarters. However, please note that separate groundwater monitoring reports were not submitted by CRA for the two events; rather the results of the groundwater monitoring are discussed herein. Copies of the reports are included in an appendix.

Based on our review of the site background and conditions, the site appears to meet 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*.

The site description and background, site characteristics, a summary of previous environmental work, the results of the current groundwater monitoring, 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 are presented in the following sections.

2.0 SITE DESCRIPTION AND BACKGROUND

The site is located on the northeast corner of the intersection of Grand Avenue and Euclid Avenue (Figure 1), and is currently a paved public parking lot. The site was formerly occupied by a Texaco, and later Exxon, service station. 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. The site operated as a Texaco service station until 1988; then as an Exxon service station until 1991. The most recent former station facilities included a station building with three service bays containing a sump and two hydraulic hoists, three 10,000-gallon gasoline (unleaded and leaded) underground storage tanks (USTs), a 500-gallon used-oil UST, two dispenser islands, and associated product piping (Figure 2). The most recent USTs reportedly were installed in the mid-1980s. The used-oil UST was removed from the site in 1990 and the station was decommissioned in 1991 when Exxon's lease expired. In 1992, the station was demolished and all aboveground and belowground facilities were removed, including the three gasoline USTs. The site remained a vacant lot until the mid-1990s, when it was paved for use as an unattended public parking lot. No structures are present onsite.

Surrounding land use is mixed commercial and residential. The site is bounded by Grand Avenue to the south, Euclid Avenue to the west, a multi-family residential structure to the north, and a three-story structure (occupied by the American Indian Child Resource Center) to the east. The site is relatively flat at an approximate elevation of 20 feet above mean sea level (msl). To the south of the site across Grand Avenue is a portion of a city park followed by Lake Merritt, an estuarine urban surface water body, approximately 225 feet south of the site.

Environmental investigation at the site has been ongoing since 1988. To date, 23 exploratory borings (B-1 through B-14, B-8K, S1 through S3, and SV-4 through SV-8) have been drilled, 12 monitoring wells (MW-8A through MW-8L) have been installed, and 2 soil vapor surveys have been performed. Two monitoring wells (MW-8K and MW-8L) remain onsite, and five (MW-8F, MW-8G, MW-8H, MW-8I, and MW-8J) are present offsite in Grand Avenue. The well construction details are presented in Table 1. Groundwater monitoring was performed from 1988 through 2000, when it was discontinued as the site was being reviewed for closure. Remedial activities performed at the site have consisted of extensive over-excavation of impacted soil (at least 2,400 cubic yards), groundwater extraction (at least 36,300 gallons), and the placement of Oxygen Releasing Compound® (ORC) in wells MW-8F, MW-8G, and MW-8I. A summary of the environmental work performed at the site to date is presented in Section 4.0. The approximate well and boring locations are shown on Figure 2.

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 consisting of 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 local topography consists of gently rolling hills and flatland.

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 migration[2]. Designated beneficial uses for groundwater in this basin include municipal, industrial, and agricultural uses. However, there is no evidence that groundwater supplies are sufficient for municipal use, primarily due to the low recharge rates. We understand there are no current or planned uses of groundwater in the site vicinity as a drinking water source.

3.2 SITE GEOLOGY AND HYDROGEOLOGY

Based on previous investigations, soil beneath the site generally consists of fine-grained material (clays and silts) with varying amounts of sand and gravel. A layer of clayey sand several feet thick was generally encountered at 10 to 15 feet below grade (fbg). In some of the borings, additional layers of clayey sand were encountered at approximately 5 fbg or between 20 and 25 fbg. Copies of the available historical boring logs are presented in Appendix B. Geologic cross-sections presenting soil encountered beneath the site are presented on Figures 3 and 4. However, as previously mentioned, the

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

majority of the site was over-excavated to remove impacted soil (Figure 2) and backfilled with imported material (clayey gravel); this is reflected on the cross-sections.

Groundwater was encountered in the borings drilled at the site at depths ranging from less than 1 to approximately 16.5 fbg. Depth to groundwater in the site monitoring wells has ranged from less than 1 to approximately 12.5 feet below top of casing (TOC). The groundwater flow direction has consistently been to the south-southeast towards Lake Merritt. A groundwater rose diagram depicting radial gradient vectors is presented on Figure 2. Copies of the second and third quarter 2009 groundwater monitoring reports are presented in Appendix C. The historic range of groundwater elevations is shown on the cross-sections on Figures 3 and 4.

Previous studies have indicated that groundwater beneath the site moves relatively slowly due to the predominantly fine-grained soils present. Slug tests were performed in wells MW-8C and MW-8E in 1989, resulting in calculated hydraulic conductivities of $1.1x10^{-5}$ centimeters per second (cm/s) (0.03 foot/day) and $7.1x10^{-6}$ cm/s (0.02 foot/day) for silty clay and sandy clay soils beneath the site.

3.3 NEARBY WELLS AND SENSITIVE RECEPTORS

In 1988, Harding Lawson Associates (HLA) performed a sensitive receptor survey of the site vicinity. The survey indicated there were no public water supply wells within 2,500 feet of the site, no private water supply wells within 1,000 feet of the site, and no schools within 1,000 feet of the site. Lake Merritt was located to the south of the site. Local drinking water was supplied by the East Bay Municipal Utility District (EBMUD) via the Mokelumne Aqueduct from the Sierra Nevada Mountains. The results of the investigation were presented in HLA's *Environmental Assessment Report* dated September 22, 1989. A copy of the sensitive receptor information is presented in Appendix D.

In 2001, KHM Environmental Management (KHM) requested information from the Alameda County Public Works Agency (ACPWA) regarding the presence of wells within ½ mile of the site. No wells were identified within the search radius and no visual evidence of wells was observed within 1,000 feet of the site. The two nearest water supply wells identified were irrigation wells located approximately 3,500 feet west (crossgradient) and southwest (crossgradient) of the site. This work was documented in KHM's *Underground Storage Tank Case Closure Request* dated February 13, 2001. The well survey results and a copy of the figure showing the identified well locations are presented in Appendix D.

In May 2009, CRA searched California Department of Water Resources (DWR) records to evaluate the presence of any wells within ¼ mile of the site. Twenty-three wells were identified within the search radius; however, all were identified as monitoring wells. The well survey results and a figure showing the identified well locations are presented in Appendix D. CRA also confirmed (via their website) that EBMUD still supplies drinking water to the site area, 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.

As the site is an unattended paved public parking lot with no structures, 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- and crossgradient of the site. The area downgradient of the site is occupied by a major street followed by undeveloped land.

The nearest surface water body is Lake Merritt, located approximately 225 feet south-southeast (downgradient) of the site. Lake Merritt is a tidal lagoon that serves as a wildlife refuge.

3.4 PREFERENTIAL PATHWAY EVALUATION

Due to the shallow depth to groundwater at the site, ACEH requested performance of a study to evaluate the presence of potential preferential pathways in the site vicinity that may contribute to the migration of impacted groundwater. Therefore, CRA reviewed and relied upon previously obtained information and conducted a utility survey of the site and vicinity.

A site plan prepared by HLA in 1991 showed several underground utility lines both on and near the site. Gas and television lines were noted beneath the sidewalk of Grand Avenue adjacent to the site. A water line, two telephone lines, an unknown utility line, and an 8-inch sewer line were shown beneath Grand Avenue. Several utility lines were shown beneath the site; however, these lines serviced the former station and therefore the majority of these lines likely were removed during subsequent station demolition or site over-excavation activities. No information regarding the depth of any utilities was provided. A copy of the HLA site plan is presented in Appendix E.

CRA also obtained a storm drain and sanitary sewer map from the City. On the map, the sewer line shown on the HLA figure beneath Grand Avenue was identified as abandoned. A 15-inch diameter sewer line was shown on the south side of Grand Avenue downgradient of the site. The flow line depth of the pipe was identified as ranging from 2.25 to 1.96 feet, and the direction of flow was west to east. No other lines were shown downgradient of the site. A copy of the City map is presented in Appendix E.

CRA contacted Underground Service Alert (USA) to have public utility companies mark the locations of utilities at the site and in the site vicinity, retained a private utility locator to further identify any potential utilities, and conducted a field reconnaissance to note the marked utilities. Based on the results, a gas line is present in the sidewalk adjacent to the south of the site, followed by an electric line, a communications line, and what appears to be an electric line for the traffic signal. Beneath Grand Avenue, an 8-inch water line appears present, followed by an electric line, a communications line, and an unknown metal utility line. No information regarding the depths of the utilities or the trench backfill material was available.

Based on the available information, several utility lines are located beneath the sidewalk and Grand Avenue downgradient of the site. Generally, no information regarding the depth or backfill material of these utilities was available. However, we would expect the utility lines beneath the sidewalk to be relatively shallow. The active sewer line on the south side of Grand Avenue also appears to be shallow (less than 3 feet). Based on our experience in the City, the trenches for older utility lines such as these generally were backfilled with native soil and thus likely would not significantly affect the general flow of groundwater. In addition, the depth to water in downgradient wells MW-8I and MW-8J has generally been between 6 and 7 feet, and that in wells MW-8F and MW-8G generally greater than 8 or 9 feet; likely below the depth of any trenches in the sidewalk and those identified in Grand Avenue. Therefore, we would not expect the identified utility lines to significantly act as preferential pathways and they do not appear to be a concern; no further work appears 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, grab-groundwater, and soil vapor sample analytical results are presented in Tables 2 through 4, respectively. Copies of previous site plans showing former sampling locations (not shown on Figure 2) are presented in Appendix F.

May 1988 Sensitive Receptor Survey: In May 1988, HLA performed a sensitive receptor survey of the site vicinity. The results of the survey were previously discussed in Section 3.3.

June 1988 Well Installations: In June 1988, HLA installed four groundwater monitoring wells (MW-8A through MW-8D) at the site to depths of 15.5, 20, 24.5, and 5 fbg, respectively. Well MW-8D was designed to intercept perched water just below the ground surface. An additional boring (B-8A) was also drilled to 32 fbg that was supposed to be the location of well MW-8A; however, the boring extended through two water-bearing zones (clayey sand at 12 and 23 fbg) and thus was abandoned. Well MW-8A was placed adjacent to boring B-8A and constructed to intercept water in the upper water-bearing zone. A soil sample was collected at approximately 1.3 fbg from boring MW-8D and analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene, and xylenes (BTEX); TPHg, toluene, and xylenes were detected at concentrations of 10, 0.4, and 0.5 milligrams per kilogram (mg/kg), respectively. The initial groundwater samples collected from wells MW-8A, MW-8B, and MW-8C were analyzed for BTEX; well MW-8D was dry. Benzene (5.3 micrograms per liter [µg/L]) was only detected in well MW-8A. Low concentrations of toluene, ethylbenzene, and xylenes (up to 13 µg/L) were detected in wells MW-8A and MW-8C. The results of the investigation were presented in HLA's *Subsurface Investigation* report dated July 20, 1988.

September 1988 Soil Gas Survey: In September 1988, HLA conducted a soil gas survey both on and offsite. A total of 17 soil gas samples were collected from 16 locations at depths ranging from 2 to 6 fbg and analyzed for total hydrocarbons and BTEX using a gas chromatograph equipped with a flame ionization detector (FID). Elevated concentrations of total hydrocarbons (up to 360,000 µg/L) and benzene (up to 86,000 µg/L) were detected in two of the samples (SG-04 and SG-05) collected on the west side of the site. Elevated concentrations of total hydrocarbons (up to 1,400,000 µg/L) and benzene (up to 300,000 µg/L) were also detected in two of the samples (SG-12 and SG-15) collected to the south-southwest of the site. Groundwater samples collected from four observation wells (OB-1 through OB-4) located within the gasoline UST pit were also analyzed for total hydrocarbons and BTEX; total hydrocarbons (up to 32,000 µg/L) and benzene (up to 7,700 µg/L) were detected in all four of the samples. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

October 1988 Subsurface Investigation and Well Installation: In October 1988, HLA drilled four exploratory borings (B-1 through B-4) to depths of 8 to 16.5 fbg in the

vicinity of the gasoline USTs and dispensers. Well MW-8E was also installed adjacent to boring B-3. One soil sample was collected from borings B-1, B-3, B-4, and MW-8E (depths ranging from 3.5 to 6.5 fbg) and analyzed for TPHg and BTEX. TPHg (up to 750 mg/kg) was detected in several of the samples; low concentrations of toluene, ethylbenzene, and xylenes (up to 26 mg/kg) were also detected. Benzene was only detected in the soil sample collected at 5.5 fbg from boring MW-8E (0.82 mg/kg). The initial groundwater sample collected from well MW-8E contained benzene at 1,400 µg/L. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

March 1989 Subsurface Investigation, Well Destruction and Installations: In March 1989, HLA drilled an additional boring (B-5) on the west side of the site in the area where elevated hydrocarbon concentrations were previously detected in soil gas. Soil samples were collected from the boring at depths of 5.5, 10.5, and 16 fbg and analyzed for TPHg and BTEX, which were not detected. Well MW-8D was also destroyed at this time due to a lack of water. Two offsite monitoring wells (MW-8F and MW-8G) were installed to 16.5 fbg across Grand Avenue to the south-southeast of the site. Soil samples were collected from boring MW-8F at 11 fbg and from boring MW-8G at 6 fbg and analyzed for TPHg and BTEX, which were not detected. BTEX were not detected in the initial groundwater samples collected from the wells. The results of the investigation were presented in HLA's *Quarterly Technical Report-First Quarter of 1989* dated May 31, 1989 and *Environmental Assessment Report* dated September 22, 1989.

Fourth Quarter 1989 Subsurface Investigation and Interim Remediation: During fourth quarter 1989, HLA drilled four additional onsite borings (B-6 through B-9) to depths of 3.5 to 5.5 fbg. A total of five soil samples were collected at various depths (ranging from 2 to 4.5 fbg) from the borings and analyzed for TPHg, BTEX, and TPH as diesel (TPHd). TPHg (up to 580 mg/kg) was only detected in the soil samples collected from borings B-7, B-8, and B-9; concentrations of one or more BTEX compounds (up to 50 mg/kg) were also detected. TPHd was only detected in the soil sample collected at 2.5 fbg from boring B-9 (460 mg/kg). Observation wells OB-3 and OB-4 were also re-sampled and elevated concentrations of TPHg (4,000 µg/L) and benzene (up to 500 µg/L) were detected. In December 1989, approximately 5,000 gallons of groundwater were pumped from the gasoline UST pit and disposed offsite as an interim remedial measure. This work was documented in HLA's *Quarterly Technical Report-Fourth Quarter of 1989* dated March 21, 1990.

First Quarter 1990 Subsurface Investigation and Well Installations: During first quarter 1990, HLA drilled four additional borings (B-8K [offsite], and B-10 through B-12

[onsite]) to depths of 6 to 9.5 fbg. A total of 15 soil samples were collected at various depths (ranging from 1 to 8.5 fbg) from the borings and analyzed for TPHg, BTEX, and TPHd. Low concentrations of TPHg (up to 84 mg/kg) and BTEX (up to 5.4 mg/kg) were detected in several of the soil samples. Elevated concentrations of TPHg were detected in the soil samples collected at 1.5 fbg from boring B-11 (2,900 mg/kg) and at 4.5 fbg from boring B-12 (1,200 mg/kg). TPHd (up to 94 mg/kg) was only detected in three of the samples. Three additional offsite monitoring wells (MW-8H, MW-8I, and MW-8J) were also installed. Four soil samples were collected at various depths from each well boring and analyzed for TPHg, BTEX, and TPHd. TPHg (up to 550 mg/kg) was detected in the majority of the soil samples. An elevated concentration of TPHg (2,100 mg/kg) was detected in the sample collected at 5.5 fbg from boring MW-8J. Low concentrations of BTEX (up to 25 mg/kg) were also detected in several of the soil samples. TPHd (up to 83 mg/kg) was only detected in three of the samples. TPHg was only detected in the initial groundwater samples collected from wells MW-8H and MW-8I (460 µg/L and 580 µg/L, respectively). Benzene was detected in wells MW-8H, MW-8I, and MW-8J at 14.8 µg/L, 116 µg/L, and 2.7 µg/L, respectively. TPHd was only detected in well MW-8I (440 µg/L). This work was documented in HLA's *Quarterly Technical Report-First Quarter of 1990* dated June 13, 1990.

Second Quarter 1990 Subsurface Investigation: During second quarter 1990, HLA drilled two additional borings (B-13 and B-14) to depths of 4 and 4.5 fbg, respectively. The borings were located near the station building; boring B-14 was located adjacent to the used-oil UST. A total of five soil samples were collected at various depths from the borings and analyzed for TPHg, BTEX, TPHd, and TPH "other" (heavier-end hydrocarbons). The soil sample collected from boring B-13 at 2.5 fbg was also analyzed for halogenated volatile organic compounds (HVOCs), semi-VOCs, total oil and grease (TOG), and the metals cadmium, chromium, lead, and zinc. TPHg (up to 130 mg/kg) was detected in the majority of the soil samples. Low concentrations of toluene, ethylbenzene, and xylenes (up to 5.4 mg/kg) were detected in a few of the samples. TPHd and benzene were not detected in any of the samples. Heavier-end petroleum hydrocarbons (constituents unknown) were detected in four of the samples at concentrations ranging from 62 to 1,000 mg/kg (B-13 at 2.5 fbg). The sample collected from boring B-13 at 2.5 fbg also contained the semi-VOCs naphthalene (0.9 mg/kg), 2-methylnaphthalene (1.4 mg/kg), and bis(2-ethylhexyl)phthalate (0.26 mg/kg); HVOCs were not detected with the exception of trichloroethane at 0.06 mg/kg; TOG was detected at 5,600 mg/kg; and the metals chromium and zinc were detected at 36 mg/kg and 41 mg/kg, respectively. In June 1990, during work on the used-oil UST, a layer of light non-aqueous phase liquid (LNAPL) was observed on the water in the backfill surrounding the tank. Exxon reportedly had the fluid in the excavation pumped out

several times. This work was documented in HLA's *Quarterly Technical Report-Second Quarter of 1990* dated August 30, 1990.

September-October 1990 Used Oil-UST Removal and Over-Excavation: In September 1990, the 500-gallon, single-walled fiberglass used-oil UST was removed from the site. No apparent holes or cracks were observed in the tank. The excavation was approximately 7.5 feet by 9.5 feet by 8 feet deep. Approximately 1/8 inch of LNAPL was observed on the water in the excavation. A water sample (WOT #1) was collected prior to pumping the water out of the excavation; the sample contained TPHg at 1,900 µg/L, TPHd at 1,400 µg/L, benzene at 320 µg/L, and TOG at 70 µg/L; HVOCs were not detected. Four soil samples (WO#2 through WO#5) were collected at 1.5 fbg from the sidewalls of the excavation and analyzed for TPHg, BTEX, TPHd, TOG, and HVOCs. Low concentrations of TPHg (up to 15 mg/kg), TPHd (up to 20 mg/kg), and BTEX (up to 1.5 mg/kg) were detected in several of the samples. TOG was detected in all four of the samples at concentrations ranging from 100 to 2,600 mg/kg. HVOCs were not detected in any of the samples.

In October 1990, over-excavation of impacted soil was conducted in the area of the soil sample with the highest TOG concentration (WO#3; western sidewall). The upper 3 feet of this sidewall was excavated laterally to the west an additional 3 feet. Additional soil samples were collected at 1.5 (WO#7) and 2 fbg (WO#6) from the new western sidewall, and from the bottom of the original excavation on the south side (WO#8). Samples WO#6 and WO#7 contained TOG at 100 mg/kg and 850 mg/kg, respectively. Sample WO#8 was analyzed for TPHg, BTEX, TPHd, and TOG; which were not detected except toluene at 0.016 mg/kg. Two clay pipes were encountered at approximately 1.5 fbg in the northwest and northeast corners of the excavation. The excavation was backfilled several days later. This work was documented in HLA's *Soil and Groundwater Sampling During Waste Oil Tank Removal* dated November 8, 1990.

January 1991 Clay Pipe Excavation: In January 1991, the clay pipes were removed. The excavation trench was located on the western side of the former used-oil UST and was approximately 15 feet long, 2.5 feet wide, and 4.5 feet deep. Two water samples (EP-01 and WP-01) were collected from the trench and analyzed for TPHg, TPHd, BTEX, and TPH as motor oil (TPHmo). TPHg (5,200 µg/L and 3,900 µg/L), TPHd (31,000 µg/L and 13,000 µg/L), benzene (280 µg/L and 320 µg/L), and TPHmo (100,000 µg/L and 17,000 µg/L) were detected in both samples. The water sample collected nearest the former UST contained the higher TPH concentrations. Four soil samples were also collected from the sidewalls and bottom of the trench (depths ranging from 1.5 to 4.5 fbg) and analyzed for TPHg, BTEX, TOG, and TPHd; three of the samples were also analyzed for TPHmo and HVOCs. Low concentrations of TPHg (up to 100 mg/kg),

TPHd (up to 190 mg/kg), and BTEX (up to 0.63 mg/kg) were detected in several of the samples. TOG was detected in all four of the samples at concentrations up to 630 mg/kg. TPHmo was detected in the three soil samples analyzed at concentrations up to 330 mg/kg. HVOCs were not detected in the three soil samples analyzed. A small excavation was also made on the east side of the UST excavation and an additional soil sample was collected at 1.5 fbg; this sample only contained TPHg (1.1 mg/kg), TPHd (110 mg/kg), and TOG (780 mg/kg); BTEX were not detected. As requested by ACEH, the excavation trench was continued to the door of the first service bay. An unknown volume of water was removed from the trench. This work was documented in HLA's *Results of Pipe Excavation and Recent Groundwater Analyses* dated February 12, 1991.

April-May 1992 Station Demolition, Gasoline UST Removal, and Over-Excavation: In April 1992, the station was demolished and three 10,000-gallon, fiberglass gasoline USTs, two dispenser islands, and associated piping were removed from the site. No cracks or holes were observed in any of the tanks. During tank removal activities, approximately 25,000 gallons of impacted groundwater was pumped from the excavation and disposed offsite. Nine confirmation soil samples were collected from the bottom (10 fbg) and sidewalls (5 fbg) of the UST excavation and analyzed for TPHg and BTEX. Low concentrations of TPHg (up to 130 mg/kg) and BTEX (up to 1.4 mg/kg) were detected in several of the samples. Three soil samples were also collected beneath the dispensers and one soil sample was collected beneath the product piping at depths of 5 or 6 fbg and analyzed for TPHg, BTEX, and TOG. TPHg and benzene were detected in the four samples at concentrations ranging from 7.8 to 2,100 mg/kg and 0.019 to 11 mg/kg, respectively. TOG was also detected in the four samples at concentrations ranging from 30 to 6,900 mg/kg. Approximately 540 cubic yards of impacted pea gravel was disposed offsite. Clean, imported fill material was then used to backfill the excavation. This work was documented in HLA's *Underground Storage Tank Removal* report dated June 8, 1992.

In May 1992, additional excavation was performed in the area of the former dispenser islands. The excavation was approximately 55 feet wide, 60 feet long, and 7 to 9 feet deep. Nine soil samples (BE-1, BE-2, and BE-4 through BE-10) were collected from the bottom of the excavation at depths of 4.5 to 9 fbg and analyzed for TPHg and BTEX. TPHg was only detected in one of the samples (1.1 mg/kg), and toluene, ethylbenzene, and xylenes generally were not detected in any of the samples with the exception of ethylbenzene in one sample (0.058 mg/kg). Low concentrations of benzene (up to 0.043 mg/kg) were detected in several of the samples. Four soil samples (WS-2 through WS-5) were also collected at depths of 5 or 7.5 fbg from the western and southern sidewalls of the excavation. TPHg and BTEX were not detected in the sample (WS-3) collected from the western sidewall. TPHg (ranging from 72 to 1,000 mg/kg) and BTEX (benzene ranging from 1.1 to 22 mg/kg) were detected in the three samples collected

from the southern sidewall. The excavation could not be extended further to the south without undermining Grand Avenue. A small area was also excavated under a former service bay near a former hydraulic hoist and sump. Soil samples were collected from the bottom (BE-3 at 4 fbg) and the western sidewall (WS-1 at 3 fbg) of this excavation; TPHg and BTEX were not detected in either of the samples. Approximately 1,100 cubic yards of soil were removed and disposed offsite. Clean, imported fill material was then used to backfill the excavations. This work was documented in HLA's *Quarterly Technical Report-Second Quarter of 1992* dated September 10, 1992.

August 1992 Well Destructions: In August 1992, onsite wells MW-8A and MW-8E were destroyed by over-drilling. This work was documented in a HLA letter dated August 14, 1992.

January 1993 Additional Over-Excavation: In January 1993, Converse Environmental West (Converse) supervised the removal of additional soil from the northern portion of the site. Ten soil samples (B-1 through B-10) were collected from the bottom of the excavation, and seven soil samples (SW-1 through SW-7) were collected from the western, northern, and eastern sidewalls of the excavation and analyzed for TPHg and BTEX; which were not detected in any of the soil samples. Approximately 828 cubic yards of impacted soil were removed, and approximately 6,300 gallons of water were pumped from the excavation and disposed offsite during the work. Clean, imported fill was used to backfill the excavation. This work was documented in Converse's *Soil Excavation and Soil Sampling Report* dated March 26, 1993.

April 1993 Well Destructions: In April 1993, onsite wells MW-8B and MW-8C were destroyed by over-drilling. This work was documented in a letter by Pacific Environmental Group, Inc. (PEG) dated May 6, 1993.

May 1993 Well Installations: In May 1993, PEG installed two wells onsite (MW-8K and MW-8L) to 18 fbg. Well MW-8K was installed adjacent to former well MW-8E which historically contained the highest concentrations. No soil samples were collected for laboratory analysis from the well borings; however, organic vapor concentrations greater than 100 parts per million by volume (ppmv) were not observed. This work was documented in PEG's untitled letter report dated July 30, 1993.

1996-2000 Groundwater Oxygenation: In December 1996, socks containing ORC were placed in wells MW-8F, MW-8G, and MW-8I in an attempt to enhance biodegradation of petroleum hydrocarbons in groundwater. The socks were periodically replaced and were permanently removed from the wells in March 2000.

2001 Well Survey: In early 2001, KHM performed a well survey to evaluate the presence of wells within ½ mile of the site. The results of the survey were previously discussed in Section 3.3.

November 2006 Subsurface Investigation: In November 2006, Cambria Environmental Technology, Inc. (Cambria [now CRA]) advanced borings S-1 through S-3 to approximately 4 fbg along the southern edge of the site. Boring S-3 was advanced into the excavation backfill. A soil sample was collected from each boring at 4 fbg and analyzed for TPHg, BTEX, TPHd, and TOG. TPHg was detected in the soil samples collected from borings S-1 and S-2 at concentrations of 390 mg/kg and 3,800 mg/kg, respectively. Benzene was only detected in the soil sample collected from boring S-2 (0.41 mg/kg). Toluene, ethylbenzene, and xylenes (up to 170 mg/kg) were also detected in the soil samples collected from borings S-1 and S-2. TPHd was detected in the soil samples collected from borings S-1, S-2, and S-3 at 15 mg/kg, 580 mg/kg, and 11 mg/kg, respectively. TOG was not detected in any of the soil samples.

Soil vapor samples (SV-1 and SV-2) were also collected adjacent to the borings and analyzed for TPHg and BTEX. An additional sample (SV-3) was not analyzed due to inadequate sample volume. TPHg was detected in samples SV-1 and SV-2 at concentrations of 60,000 micrograms per cubic meter ($\mu g/m^3$) and 2 x 10^6 $\mu g/m^3$, respectively. Benzene was detected in samples SV-1 and SV-2 at concentrations of 3,400 $\mu g/m^3$ and 34,000 $\mu g/m^3$, respectively. Toluene (330 $\mu g/m^3$ and 160,000 $\mu g/m^3$, respectively), ethylbenzene (2,600 $\mu g/m^3$ and 64,000 $\mu g/m^3$, respectively), and xylenes (380 $\mu g/m^3$ and 280,000 $\mu g/m^3$, respectively) were also detected in samples SV-1 and SV-2. A field duplicate sample collected from SV-2 contained significantly lower concentrations of TPHg (720,000 $\mu g/m^3$), benzene (14,000 $\mu g/m^3$), toluene (69,000 $\mu g/m^3$), ethylbenzene (27,000 $\mu g/m^3$), and xylenes (110,000 $\mu g/m^3$). This work was documented in Cambria's *Subsurface Investigation Report* dated February 28, 2007.

March 2008 Subsurface Investigation: In March 2008, CRA advanced five borings (SV-4 through SV-8) to depths of 3 to 6 fbg along the southern and eastern sides of the site. Groundwater was encountered in the borings at depths of 2 to 6 fbg. Borings SV-4 through SV-6 were mistakenly advanced into the excavation backfill. One or two soil samples were collected at depths of 2 or 5 fbg from borings SV-5, SV-7, and SV-8 and analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE). TPHg was only detected in the soil samples collected at 2 fbg (16 mg/kg) and 5 fbg (1,400 mg/kg) from boring SV-7; BTEX (up to 19 mg/kg) were also only detected in these two samples. MTBE was not detected in any of the soil samples. A grab-groundwater sample was also collected from each of the five borings and analyzed for TPHg, BTEX, and MTBE. TPHg (6,200 $\mu g/L$) and BTEX (benzene at 200 $\mu g/L$) were only detected in the

groundwater sample collected from boring SV-7. Low concentrations of MTBE were detected in the groundwater samples collected from borings SV-4 (1 µg/L), SV-7 (0.7 µg/L), and SV-8 (2 µg/L). The borings were intended to be completed as soil vapor wells; however, due to the shallow groundwater encountered, the wells were not installed. This work was documented in CRA's *Subsurface Investigation Report* dated August 14, 2008.

5.0 RECENT GROUNDWATER MONITORING RESULTS

As they had not been sampled since 2000, the remaining site wells (MW-8F through MW-8L) were redeveloped on June 5, 2009 and sampled by Gettler-Ryan Inc. (G-R) during second and third quarter 2009 (June 10 and October 1, respectively) to evaluate current groundwater conditions. The results of these monitoring events are discussed below. Please note that well MW-8L was not able to be redeveloped or sampled during the third quarter event due to an obstruction in the well (apparent bent casing). Copies of the second and third quarter 2009 groundwater monitoring reports prepared by G-R are presented in Appendix C.

The depth to water in the site wells during the June 5 redevelopment event ranged from 0.90 (MW-8L) to 9.92 feet below TOC (MW-8G). The depth to water in the site wells during the June 10 sampling event ranged from 0.91 (MW-8L) to 12.41 feet below TOC (MW-8F), indicating a very slow recharge rate in the downgradient wells. The depth to water in the site wells during the October 1 sampling event ranged from 1.85 (MW-8K) to 11.94 feet below TOC (MW-8G). The calculated groundwater flow direction during both events was to the south-southeast toward Lake Merritt (see the potentiometric maps in Appendix C), which is consistent with historical trends.

The groundwater samples collected from the wells were analyzed for TPHg, TPHd, BTEX, and MTBE. A silica gel cleanup was performed by the laboratory on the samples collected during the third quarter event prior to TPHd analysis. Please note that no-purge samples were collected from wells MW-8F and MW-8G during both events due to insufficient water (slow recharge). In addition, no-purge samples were collected from wells MW-8H through MW-8J during the third quarter event due to time constraints associated with obstructing traffic in Grand Avenue. Finally, a no-purge sample was collected from well MW-8L during the second quarter event due to a bent casing. The sampling results during both quarters are discussed below.

TPHg was only detected in well MW-8I (420 and 53 µg/L). BTEX generally were not detected in any of the wells with the exception of low concentrations of benzene in well

MW-8I (23 and 2 µg/L). MTBE was only detected in wells MW-8H (0.7 and 1 µg/L), MW-8I (5 and 4 µg/L), MW-8J (10 µg/L during second quarter, not detected during third quarter), and MW-8K (2 and 1 µg/L). TPHd was detected in wells MW-8F (300 and 81 µg/L), MW-8G (140 and 55 µg/L), MW-8H (78 and 640 µg/L), MW-8I (360 and 92 µg/L), MW-8J (400 µg/L during second quarter, not detected during third quarter), and MW-8L (2,600 µg/L during second quarter). The TPHg, TPHd, benzene, and MTBE analytical results are summarized in Table A below.

TABLE A. GROUNDWATER ANALYTICAL DATA – 2Q09 AND 3Q09 (concentrations in ug/L)

Well	*Sample Date*	*TPHg*	*TPHd*	*Benzene*	*MTBE*
MW-8F	6/10/09[a]	<50	**300**	<0.5	<0.5
	10/1/09[a]	<50	**81**[b]	<0.5	<0.5
MW-8G	6/10/09[a]	<50	**140**	<0.5	<0.5
	10/1/09[a]	<50	**55**[b]	<0.5	<0.5
MW-8H	6/10/09	<50	**78**	<0.5	**0.7**
	10/1/09[a]	<50	**640**[b]	<0.5	**1**
MW-8I	6/10/09	**420**	**360**	**23**	**5**
	10/1/09[a]	**53**	**92**[b]	**2**	**4**
MW-8J	6/10/09	<50	**400**	<0.5	**10**
	10/1/09[a]	<50	<50[b]	<0.5	<0.5
MW-8K	6/10/09	<50	<50	<0.5	**2**
	10/1/09	<50	<50[b]	<0.5	**1**
MW-8L	6/10/09[a]	<50	**2,600**	<0.5	<0.5
	10/1/09	NS	NS	NS	NS

a No-purge sample
b Silica gel cleanup performed prior to analysis
< Not detected at or above stated laboratory reporting limits
NS Not sampled

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 (not over-excavated) are TPHg and BTEX. TPHd was also detected in soil remaining at the site; however, only low to relatively low concentrations were detected.

The majority of the soil samples collected to date were not analyzed for MTBE. However, MTBE was not detected in the four soil samples collected from borings SV-7 and SV-8 in 2008. In addition, MTBE generally was not detected in groundwater throughout the course of monitoring, and only low concentrations were recently detected. HVOCs generally were not detected in any of the soil samples analyzed. Semi-VOCs generally were not detected in the soil sample collected from boring B-13 near the former used-oil UST with the exception of low concentrations of a few compounds, and the detected chromium and zinc concentrations were consistent with background levels. Based on these results, none of these constituents appear to be COCs in soil.

6.2 GROUNDWATER

Based on the monitoring results, the primary COC in groundwater is TPHd. TPHg, BTEX, and MTBE are also COCs in groundwater, but to a lesser degree as only low concentrations remain.

6.3 SOIL VAPOR

Although the validity of the analytical results from the 2006 investigation was called into question, the COCs in soil vapor appear to be 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 of the released petroleum hydrocarbons at the site appears to be the former gasoline and used-oil USTs and dispensers. As the site appears to have been occupied by a service station as early as 1946, releases from previous generation USTs or site activities likely also occurred. The volume of released product is unknown.

7.2 POTENTIAL OFFSITE SOURCES

There do not appear to be any offsite sources potentially contributing to the impacts at the site. The properties upgradient of the site are generally residential.

7.3 PETROLEUM HYDROCARBON DISTRIBUTION IN SOIL

Since 1988, numerous soil samples have been collected to evaluate the extent of impacted soil and the effectiveness of over-excavation activities. However, the majority of the site was over-excavated in 1992 and 1993 to remove impacted soil to the extent possible (approximately 2,400 cubic yards was removed). The final depth of the excavations ranged from 4.5 to 10 fbg. The excavations reportedly were completed to within 5 feet of the northern, eastern, and southern property lines, where further excavation could not be performed due to the proximity of adjacent structures or the sidewalk and underlying utilities (Figure 2). As a result, many of the previous soil samples were collected from areas that were later excavated (please note that this is reflected in Table 2 with "strikethrough" formatting). Therefore, only the quality of the soil remaining at the site is discussed in this section.

Based on the analytical results of the final excavation verification samples collected during the 1992 and 1993 activities, only low concentrations of TPHg (up to 130 mg/kg) and BTEX (benzene up to 0.2 mg/kg) were detected in the five samples (SS1, SS2, and SS4 through SS6) collected at 10 fbg beneath the gasoline USTs. TPHg and BTEX were not detected in the two samples collected at 5 fbg from the southern (SS7) and eastern (SS8) sidewalls of the gasoline UST excavation. TPHg and BTEX generally were not detected in the nine samples (BE-1, BE-2, and BE-4 through BE-10) collected at depths of 4.5 to 9 fbg from the bottom of the excavation in the central/southwest portion of the site with the exception of low concentrations of TPHg (1.1 mg/kg), benzene (0.043 mg/kg), and ethylbenzene (0.058 mg/kg) in sample BE-1 collected in the southwest portion of the excavation; and low concentrations of benzene in samples BE-2 (0.011 mg/kg), BE-5 (0.018 mg/kg), and BE-8 (0.028 mg/kg) collected in the area of the former dispensers. TPHg and BTEX were not detected in any of the samples collected from the bottom (B-1 through B-10) and western, northern, and eastern sidewalls (SW-1 through SW-7) of the excavation in the northern portion of the site.

With regards to soil remaining in the western portion of the site, it does not appear to be significantly impacted. TPHg and BTEX were not detected in sample WS-3 collected at 7.5 fbg from the western sidewall of the excavation in the central/southwest portion of the site. In addition, two borings (B-5 and B-10) were drilled in this area in 1989 and 1990, respectively. TPHg and BTEX were not detected in the three soil samples collected from boring B-5; and TPHg, BTEX, and TPH "other" generally were not detected in the four soil samples collected from boring B-10 with the exception of low concentrations of TPHg (8.4 mg/kg) and BTEX (up to 0.28 mg/kg) in one or two of the shallower samples.

With regards to soil remaining along the southern edge of the site, it does appear to be impacted. The soil sample collected at 4 fbg from boring S-1 drilled in the southwest portion of the site in 2006 contained low concentrations of TPHg (390 mg/kg), TPHd (15 mg/kg), ethylbenzene (0.9 mg/kg), and xylenes (1.9 mg/kg). TPHg (ranging from 72 to 1,000 mg/kg) and BTEX (benzene ranging from 1.1 to 22 mg/kg) were detected in samples WS-2, WS-4, and WS-5 collected at 5 fbg from the southern sidewall of the excavation in the central/southwest portion of the site; the highest concentrations were detected in sample WS-4 located near the former dispensers. The soil sample collected at 4 fbg from boring S-2 drilled to the south of the former dispensers in 2006 contained an elevated concentration of TPHg (3,800 mg/kg); lower concentrations of TPHd (580 mg/kg) and BTEX (benzene at 0.41 mg/kg) were also detected. However, only low concentrations were detected in soil in the southeast portion of the site. The sample collected at 6.5 fbg from boring B-1 drilled directly to the south of the gasoline USTs in 1988 only contained TPHg at 12 mg/kg, and the sample collected at 1.3 fbg from the boring for well MW-8D contained only low concentrations of TPHg (10 mg/kg), toluene (0.4 mg/kg), and xylenes (0.5 mg/kg). Borings S-3 (2006) and SV-5 (2008) were located within the limits of the former excavation (fill material encountered); therefore, the results of the soil samples collected from these borings are not considered.

With regards to soil remaining along the eastern edge of the site, it also appears to be impacted, although the extent appears limited to the area adjacent to the former USTs. TPHg, BTEX, and MTBE were not detected in the samples collected at 2 and 5 fbg from boring SV-8 drilled near the northeast corner of the former UST pit in 2008. TPHg, TPHd, and BTEX generally were not detected in the samples collected at 2 and 4 fbg from boring B-6 drilled in 1989, with the exception of low concentrations of TPHg (1 mg/kg) and toluene (up to 0.09 mg/kg) in one or both of the samples. The sample collected at 3.5 fbg from boring B-4 drilled in 1988 contained a slightly elevated concentration of TPHg (510 mg/kg), and low concentrations of toluene, ethylbenzene, and xylenes (up to 13 mg/kg). The sample collected at 5 fbg from boring SV-7 drilled near boring B-4 in 2008 contained an elevated concentration of TPHg (1,400 mg/kg) and low concentrations of BTEX (benzene at 0.11 mg/kg); significantly lower concentrations of TPHg (16 mg/kg) and BTEX (up to 0.078 mg/kg) were detected in the sample collected at 2 fbg from boring SV-7.

With regards to offsite soil, low to elevated concentrations of TPHg were detected in the samples collected at 5.5 fbg from borings MW-8H (550 mg/kg), MW-8I (280 mg/kg), MW-8J (2,100 mg/kg), and B-8K (84 mg/kg) drilled in Grand Avenue to the south/southeast of the site in 1990; benzene was not detected in these samples, and only low concentrations of ethylbenzene (up to 25 mg/kg), xylenes (up to 9.2 mg/kg), and

TPH "other" (up to 83 mg/kg) were detected. However, only low concentrations of TPHg (up to 24 mg/kg) were detected in the shallower samples (1.5 and 3 or 3.5 fbg) collected from these borings, as well as low concentrations of BTEX (benzene up to 0.18 mg/kg) and TPH "other" (33 mg/kg). TPHg, BTEX, and TPH "other" generally were not detected in the samples collected at 10.5 fbg from borings MW-8H, MW-8I, and MW-8J with the exception of low concentrations of TPHg (8 mg/kg) and toluene (0.02 mg/kg) in the sample collected from boring MW-8J. TPHg and BTEX were not detected in the samples collected from the borings for wells MW-8F (11 fbg) and MW-8G (6 fbg) drilled downgradient of the site on the south side of Grand Avenue in 1989.

Based on the analytical results, the over-excavation activities adequately removed the impacted soil beneath the site to the extent possible. The extent of the residual soil with elevated concentrations of COCs (primarily TPHg) beneath the site appears limited to narrow (approximately 5 feet wide) areas on the southern and eastern sides of the site in the area of the former dispenser islands and former gasoline USTs, respectively, where further over-excavation could not be performed. Only low concentrations of COCs were detected in the soil samples collected at 10 fbg beneath the gasoline USTs, therefore the vertical extent of impacted soil beneath the site appears to have been adequately evaluated; impacts are not expected to extend significantly below this depth. Impacted soil also likely remains downgradient of the site beneath Grand Avenue; the highest TPHg concentration was detected in boring MW-8J. Based on the soil samples collected from boring B-8K and downgradient borings MW-8F and MW-8G, the lateral extent of impacted soil appears to have been adequately evaluated. The impacted soil appears generally limited to the smear zone around 5.5 fbg, and the COCs generally were not detected at 10.5 fbg. Therefore, the vertical extent of impacted soil offsite also appears to have been adequately evaluated. 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 both on- and offsite appear to have been adequately evaluated, no further investigation appears warranted.

The approximate 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 F. The historical soil sample analytical results are presented in Table 2; the TPHg, TPHd, and benzene analytical results of soil remaining at the site are also presented on Figure 5.

7.4 PETROLEUM HYDROCARBON DISTRIBUTION IN GROUNDWATER

Groundwater monitoring was performed at the site from 1988 through 2000, when it was discontinued as the site was under review for closure. Wells MW-8A, MW-8B, and MW-8C were sampled from 1988 through 1992 prior to their destruction. Well MW-8A was located in the southwest corner of the site, well MW-8B was located near the southwest corner of the station building, and well MW-8C was located in the southeast corner of the site near the gasoline USTs. TPHg and BTEX generally were not detected in these wells with the exception of low concentrations during a few events. TPHd (up to 1,200 µg/L) was also only detected during one or two events in these wells. Low concentrations of TPH "other" (sometimes quantified as TPHmo) (generally less than 500 µg/L) were periodically detected in these wells. Well MW-8E, located in the area of the dispensers, was also sampled from 1988 through 1992 prior to its destruction, and historically contained the highest concentrations. Elevated concentrations of TPHg (ranging from 15,000 to 56,000 µg/L), benzene (ranging from 1,400 to 20,000 µg/L), and TPHd (ranging from 620 to 17,000 µg/L) were generally detected in this well; TPH "other" generally was not detected with the exception of two events (520 and 4,900 µg/L). However, this sampling was done prior to UST removal/site over-excavation and associated groundwater extraction activities.

Onsite wells MW-8K and MW-8L are located in the vicinity of the former dispensers (Figure 2). Well MW-8K was sampled from second quarter 1993 through third quarter 2000, and TPHg, TPHd, and BTEX generally were not detected during this time with the exception of low concentrations during a few events (MTBE was not detected). During 1999 and 2000, the samples collected from well MW-8K were analyzed for total recoverable petroleum hydrocarbons (TRPH) (quantified as oil and grease), which generally were not detected with the exception of an elevated concentration (9,100 µg/L) during one event. Well MW-8L was sampled from second quarter 1993 to third quarter 1994, when sampling was discontinued due to a bent casing. Low to relatively low concentrations of TPHg (ranging from 76 to 590 µg/L) and BTEX (benzene ranging from 1.1 to 77 µg/L) were detected in well MW-8L during this time; TPHd was not detected.

Wells MW-8H, MW-8I, and MW-8J are located to the south/southeast of the site in Grand Avenue (Figure 2), and were sampled from first quarter 1990 through third quarter 2000. Low to relatively low concentrations of TPHg (up to 830 µg/L) and BTEX (benzene up to 67 µg/L) were initially detected in well MW-8H; however, concentrations decreased and TPHg and BTEX generally were not detected since the early 1990s. Low to relatively low concentrations of TPHd (generally less than 500 µg/L) were also detected in well MW-8H; MTBE was not detected and TPH "other"

generally was not detected. Elevated concentrations of TPHg (up to 4,400 µg/L) and benzene (up to 2,400 µg/L) were initially detected in well MW-8I, although significant concentration fluctuations occurred; however, concentrations decreased and TPHg and BTEX were not detected since the late 1990s. Low to relatively low concentrations of TPHd (generally less than 500 µg/L) also were periodically detected in well MW-8I but had decreased to less than 100 µg/L by 2000; MTBE generally was not detected. TPH "other" (up to 1,400 µg/L) was periodically detected in well MW-8I from 1990 to 1992. Low concentrations of TPHg (up to 300 µg/L) and BTEX (benzene up to 28 µg/L) were initially detected in well MW-8J; however, concentrations decreased and TPHg and BTEX generally were not detected since the early 1990s. TPHd and TPH "other" generally were not detected in well MW-8J, and MTBE was not detected. During 1999 and 2000, the samples collected from these wells were analyzed for TRPH (quantified as oil and grease), and elevated concentrations (ranging from 6,400 to 35,200 µg/L) were periodically detected in the three wells.

Furthest downgradient wells MW-8F and MW-8G are located on the south side of Grand Avenue (Figure 2), and were sampled from second quarter 1989 through third quarter 2000. During this time, TPHg, BTEX, and MTBE generally were not detected in these wells with the exception of low concentrations during one or two events. Low concentrations of TPHd (generally less than 300 µg/L) were detected in these wells during this time. Low to relatively low concentrations of TPH "other" were periodically detected in these wells from 1989 to 1992. During 1999 and 2000, the samples collected from these wells were analyzed for TRPH (quantified as oil and grease); which generally was not detected with the exception of an elevated concentration (23,000 µg/L) during one event in well MW-8G.

In February 2000, case closure was recommended based on declining concentrations in the site wells. ACEH concurred with this recommendation; however, two quarters of groundwater monitoring without the ORC socks in wells MW-8F, MW-8G, and MW-8I was requested to evaluate the stability of the plume. The ORC socks were removed in March 2000, and no significant change in concentrations was observed during the second and third quarter 2000 events. In October 2000, ACEH requested a one-time analysis for TPHd and TRPH with a silica gel cleanup on samples collected from all the wells to evaluate whether natural organic material may be contributing to the detections. The wells (except MW-8L) were sampled in November 2000 and TPHd was detected in all the wells sampled except MW-8J. The detected TPHd concentrations (ranging from 53.2 [MW-8K] to 433 µg/L [MW-8H]) were consistent with historical levels; indicating that natural organic matter was not interfering with the analytical results. TRPH was not detected in any of the samples. In January 2001, after review of this data, ACEH again concurred that the site appeared to be a good candidate for case closure.

As described in Section 5.0, during the recent groundwater monitoring events, TPHg was only detected in offsite well MW-8I, and only at low concentrations (420 and 53 µg/L). BTEX generally were not detected in any of the wells with the exception of low concentrations of benzene in well MW-8I (23 and 2 µg/L). MTBE was only detected in wells MW-8H, MW-8I, MW-8J, and MW-8K, and only at low concentrations (up to 10 µg/L). TPHd was not detected in onsite well MW-8K; an elevated concentration (2,600 µg/L) was detected in onsite well MW-8L during the second quarter event (no-purge sample). Low concentrations of TPHd were detected in wells MW-8H (78 and 640 µg/L), MW-8I (360 and 92 µg/L), MW-8J (400 µg/L during second quarter, not detected during third quarter), MW-8F (300 and 81 µg/L), and MW-8G (140 and 55 µg/L). The concentrations detected during the third quarter event generally were less than those detected during the second quarter event.

Elevated concentrations of TPHg (1,900 µg/L), TPHd (1,400 µg/L), and benzene (320 µg/L) were detected in the grab-groundwater sample collected from the used-oil UST excavation in 1990. Elevated concentrations of TPHg (3,900 and 5,200 µg/L), TPHd (13,000 and 31,000 µg/L), TPHmo (17,000 and 100,000 µg/L), and benzene (320 and 280 µg/L) were also detected the two grab-groundwater samples collected from the adjacent clay pipe excavation in 1991. However, these three samples were collected prior to the removal of groundwater from the excavations (volume unknown) and therefore are not considered representative of conditions beneath the site.

Elevated concentrations of TPHg (6,200 µg/L) and benzene (200 µg/L) were detected in the groundwater sample collected from boring SV-7 in the area of the former gasoline USTs; only low concentrations of toluene (7 µg/L), ethylbenzene (250 µg/L), xylenes (260 µg/L), and MTBE (0.7 µg/L) were detected. Petroleum hydrocarbons generally were not detected in the groundwater samples collected from borings SV-4, SV-5, SV-6, and SV-8 with the exception of low concentrations of MTBE in the samples collected from borings SV-4 (1 µg/L) and SV-8 (2 µg/L).

Based on the analytical results, groundwater impacted with TPHd remains beneath the site and downgradient; however, the residual concentrations are generally low. An elevated concentration of TPHd was detected in onsite well MW-8L, however, this well could not be properly redeveloped and only a grab sample could be collected. Therefore, these results likely are not representative of surrounding conditions. Groundwater in the area of offsite well MW-8I is impacted with TPHg and benzene; however, the residual concentrations are low. Elevated concentrations of TPHg and benzene were detected in the groundwater sample collected from boring SV-7 in the southeast portion of the site in March 2008. However, as this was a grab sample

collected from a boring, the detected concentrations likely are greater than what is actually present in groundwater due to the presence of impacted sediment in the sample. Based on the monitoring results, only low concentrations of TPHd (just above the reporting limit) were detected in furthest downgradient wells MW-8F and MW-8G. Therefore, the extent of impacted groundwater appears to have been adequately evaluated and no further investigation appears warranted.

Copies of the second and third quarter 2009 groundwater monitoring reports are presented in Appendix C. The historical groundwater monitoring data (prior to 1992) is also included in Appendix C. The grab-groundwater sample analytical results are presented in Table 3. The most recent concentrations in groundwater are shown on Figure 6; an iso-concentration map of TPHd concentrations in groundwater is presented on Figure 7.

7.4.1 LIGHT NON-AQUEOUS PHASE LIQUID

As described in Section 4.0, during work on the used-oil UST in June 1990, LNAPL reportedly was observed on the water in the tank pit backfill; Exxon reportedly had the water in the excavation pumped out several times. During removal of the used-oil UST in September 1990, approximately 1/8 inch of LNAPL reportedly was observed on the water in the excavation; an unknown volume of water was again pumped out of the excavation. LNAPL has not been observed in any of the site monitoring wells.

7.5 PETROLEUM HYDROCARBON DISTRIBUTION IN SOIL VAPOR

Elevated concentrations of total hydrocarbons and BTEX were detected in several of the soil vapor samples collected during the 1988 investigation. The majority of these samples were collected in the area of the gasoline USTs along the southern edge of the site, or downgradient in Grand Avenue just past the sidewalk. Elevated concentrations were also detected in a sample collected in Grand Avenue to the south of the dispenser islands, and in two samples collected on the western edge of the site crossgradient of the USTs and dispensers. Total hydrocarbons and BTEX were not detected in three samples collected to the west of the site in Euclid Avenue. However, these samples were collected prior to removal of the USTs and the subsequent remedial activities at the site. Based on this information and the age of the data, these samples are not considered representative of site conditions.

During the investigation in 2006, elevated concentrations of TPHg (60,000 and $2x10^6$ µg/m^3) and benzene (3,400 and 34,000 µg/m^3) were detected in soil vapor samples SV-1 and SV-2, respectively, collected along the southern edge of the site. Elevated concentrations of toluene ($1x10^5$ µg/m^3), ethylbenzene (64,000 µg/m^3), and xylenes ($2.8x10^5$ µg/m^3) were also detected in sample SV-2. The field duplicate sample collected simultaneously with SV-2 contained significantly lower concentrations of TPHg ($7.2x10^5$ µg/m^3), benzene (14,000 µg/m^3), toluene (69,000 µg/m^3), ethylbenzene (27,000 µg/m^3), and xylenes ($1.1x10^5$ µg/m^3). The lower concentrations in the duplicate sample called into question the validity of the data. The historical soil vapor sample analytical results are presented in Table 4.

To further evaluate soil vapor quality, additional sampling (SV-4 through SV-8) was proposed with ACEH concurrence. However, two subsequent attempts to collect the additional soil vapor data (March 2008 and June 2009) were unsuccessful due to very shallow groundwater levels onsite (as shallow as 0.9 feet), precluding the collection of valid data. This was communicated to ACEH via e-mail on September 9, 2009, and acknowledged in a return e-mail from ACEH on September 10, 2009. During the October 2009 groundwater monitoring event, the depth to water in onsite well MW-8K was 1.85 feet, again too shallow to allow for the collection of valid soil vapor data. As the groundwater levels at the site have not dropped enough to allow for the collection of valid soil vapor data even at various times throughout the year, it does not appear the previously proposed additional soil vapor sampling can be performed. However, no further investigation appears warranted as potential vapor intrusion given the current site use is not a significant concern, 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 beneath the site, 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 ¼ 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 an unmanned paved public parking lot with no structures 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 Grand Avenue followed by undeveloped land. Lake Merritt is located approximately 225 feet downgradient of the site. Downgradient wells MW-8F and MW-8G are located approximately 115 feet from the lake; and only low concentrations of TPHd are present in these wells. Based on the low permeability soils present, and the low residual concentrations, it appears unlikely that Lake Merritt would be significantly impacted by petroleum hydrocarbons from the site. Based on this information, there do not appear to be any 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, potential exposure to the residual subsurface impacted soil along the southern and eastern edges of the site by the general public is essentially eliminated. Therefore, the only identified potential exposure pathway to impacted soil beneath the site under the current land use scenario 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 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 never will 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.

8.2.3 SURFACE WATER

The nearest surface water body is Lake Merritt, located approximately 225 feet downgradient of the site. Based on the monitoring results, only low concentrations of

TPHd remain in furthest downgradient wells MW-8F and MW-8G located approximately 115 feet from the lake. Based on the low permeability soils present, and the low residual concentrations, it appears unlikely that Lake Merritt would be significantly 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, vapor intrusion does not appear to be a complete potential exposure pathway as no structures are present onsite and there are no site workers or occupants. Given the current economic conditions, this land use is not expected to change in the near future.

With regards to potential future site redevelopment, as the majority of the site has been over-excavated, the only residual impacts that appear could potentially pose a significant risk via vapor intrusion are within the approximately 5-foot area adjacent to the southern and eastern property lines where further excavation could not be performed. Soil vapor samples SV-1 and SV-2 were collected within this area; the elevated TPHg and BTEX concentrations detected appear to be due to the samples being collected within the heart of the smear zone. Future development plans could include building setbacks from these property lines or these areas could be over-excavated if possible during redevelopment activities to mitigate this potential pathway. Chevron would work with ACEH and the property owner to ensure that the selected mitigation measures were adequate such that no significant risk to human health was present. It should be noted that a nearby fuel release case (Former Gulf Station No. 0006 at 460 Grand Avenue) had similar site conditions and was closed with such provisions in place should future redevelopment occur.

Although the previously proposed additional soil vapor sampling could not be performed due to the very shallow groundwater levels, based on the information above no further investigation appears warranted at this time and it is no longer recommended.

8.3 COMPARISON TO ENVIRONMENTAL SCREENING LEVELS

The maximum residual COC concentrations in soil, groundwater, and soil vapor 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.

8.3.1 SOIL

As discussed in Section 8.2.1 above, the only identified complete potential exposure pathway to residual impacted soil at the site under the current land use scenario is direct exposure by construction workers during trenching or excavation activities. Therefore, Table B below presents a comparison of the maximum COC concentrations detected in soil samples recently 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. Older soil samples (collected during and prior to 1992) were not considered as the detected concentrations likely have decreased since the time they were collected due to natural attenuation processes and therefore they would not represent current conditions.

TABLE B. COMPARISON OF MAXIMUM SOIL CONCENTRATIONS TO ESLs

Constituent	*Highest Detected Concentration Remaining in Soil (mg/kg)*	*ESL for Construction/Trench Worker Exposure[1] (mg/kg)*
TPHg	3,800 (S-2, 4 fbg)	4,200
TPHd	580 (S-2, 4 fbg)	4,200
Benzene	0.41 (S-2, 4 fbg)	12
Toluene	17 (S-2, 4 fbg)	650
Ethylbenzene	36 (S-2, 4 fbg)	650

TABLE B. COMPARISON OF MAXIMUM SOIL CONCENTRATIONS TO ESLs		
Constituent	***Highest Detected Concentration Remaining in Soil (mg/kg)***	***ESL for Construction/Trench Worker Exposure[1] (mg/kg)***
Xylenes	170 (S-2, 4 fbg)	420

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

As shown above, the maximum COC concentrations in soil do not exceed the respective ESLs. Therefore, the residual impacted soil does not appear to pose a significant threat to human health 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 maximum residual COC concentrations detected in the site wells were compared to the groundwater ESLs 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.

TABLE C. COMPARISON OF MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLs		
Constituent	***Highest Detected Concentration Remaining in Groundwater (ug/L)***	***Aquatic Habitat Goal ESL[1] (ug/L)***
TPHg	53 (MW-8I)	210
TPHd	2,600 (MW-8L)	210
Benzene	2 (MW-8I)	46
MTBE	4 (MW-8I)	8,000

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 TPHd concentration in groundwater exceeded the aquatic habitat goal ESL. However, this concentration was detected in onsite well MW-8L, the TPHd concentrations in the remaining wells were significantly lower. The most recent TPHd concentrations detected in furthest downgradient wells MW-8F (81 µg/L) and MW-8G (55 µg/L) located approximately 115 feet from Lake Merritt did

not exceed the ESL. Therefore, the petroleum hydrocarbons from the site do not appear to pose a significant threat to Lake Merritt.

8.3.3 SOIL VAPOR

As previously discussed, the soil vapor samples collected in 1988 were collected prior to removal of the USTs and the subsequent remedial activities at the site. Therefore, based on this information and the age of the data, these samples were not considered representative of site conditions and not included in the comparison. Although the validity of the analytical results was called into question, the TPHg and benzene concentrations detected in samples SV-1, SV-2, and the field duplicate, and the ethylbenzene and xylenes concentrations detected in sample SV-2 and the field duplicate exceeded the shallow soil gas ESLs associated with vapor intrusion concerns at commercial/industrial sites. The commercial/industrial shallow soil gas ESLs for TPHg, benzene, ethylbenzene, and xylenes are 29,000 $\mu g/m^3$, 280 $\mu g/m^3$, 3,300 $\mu g/m^3$, and 58,000 $\mu g/m^3$, respectively.

However, regardless of whether or not the detected concentrations were valid or exceeded the ESLs, 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 at this time.

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 by 1993. The site is no longer used as a service station, and is currently a parking lot. The over-excavation activities removed the majority of the impacted soil (approximately 2,400 cubic yards) to the extent possible. Overall, concentrations in groundwater have significantly decreased, indicating that any residual impacted soil is not acting as a continuing source of hydrocarbons that would reverse overall improving groundwater quality trends. The groundwater extraction activities appear to have been successful at removing the previously observed LNAPL, as it has never been observed in any of the site wells. Based on this information, the leak has been stopped and ongoing sources have been removed.

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 horizontal and vertical extent of impacted soil has been adequately evaluated. Impacted soil appears to remain in narrow strips (approximately 5 feet in width) along the southern and eastern edges of the site where further over-excavation could not be performed; and likely just downgradient of the site beneath Grand Avenue.

As described in Section 7.4, groundwater quality at the site has been monitored since 1988 by wells installed near the source area(s) and downgradient. Concentrations have decreased since the start of monitoring. Groundwater impacted with TPHd remains beneath the site and downgradient; however, the residual concentrations are generally low. An elevated concentration of TPHd was detected in onsite well MW-8L, however, as previously discussed these results likely are not representative of surrounding conditions. Groundwater in the area of offsite well MW-8I is impacted with TPHg and benzene; however, the residual concentrations are low. Although elevated concentrations of TPHg and benzene were detected in the grab-groundwater sample collected from boring SV-7 in the southeast portion of the site, the detected concentrations likely are greater than what is actually present due to the presence of impacted sediment in the sample. Only low concentrations of TPHd just above the

reporting limit are present in furthest downgradient wells MW-8F and MW-8G. The plume appears to be stable and the extent of impacted groundwater appears to have been adequately evaluated. Concentrations are expected to continue to decrease over time due to natural attenuation.

Although the proposed additional soil vapor sampling could not be performed, potential vapor intrusion does not appear to be a significant concern at the site under the current land use scenario, and therefore it no longer appears 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

Only low concentrations of TPHd (just above the reporting limit) are present in downgradient wells MW-8F and MW-8G, and concentrations in groundwater have decreased since the start of monitoring. The plume appears stable, shrinking, and not migrating. 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 within ¼ mile of 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 shallow groundwater in the site area would be used as a drinking water source. The site is an unmanned paved public parking lot 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 downgradient of the site. However, based on the low permeability soils present, and the low residual concentrations in the downgradient wells, it appears unlikely that Lake Merritt would be significantly 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. As the site is paved, potential exposure to any residual impacted soil by the general public is essentially eliminated. Although impacted groundwater remains beneath the site, the concentrations are generally low, the plume appears stable and concentrations are decreasing, and no sensitive receptors appear likely to be impacted. Natural attenuation is expected to continue to decrease concentrations in groundwater to background levels. Although elevated concentrations of petroleum hydrocarbons were detected in soil vapor, potential vapor intrusion does not appear to be a significant concern given the current land use scenario. Based on this information, the site does not appear to pose a significant risk to human health or the environment.

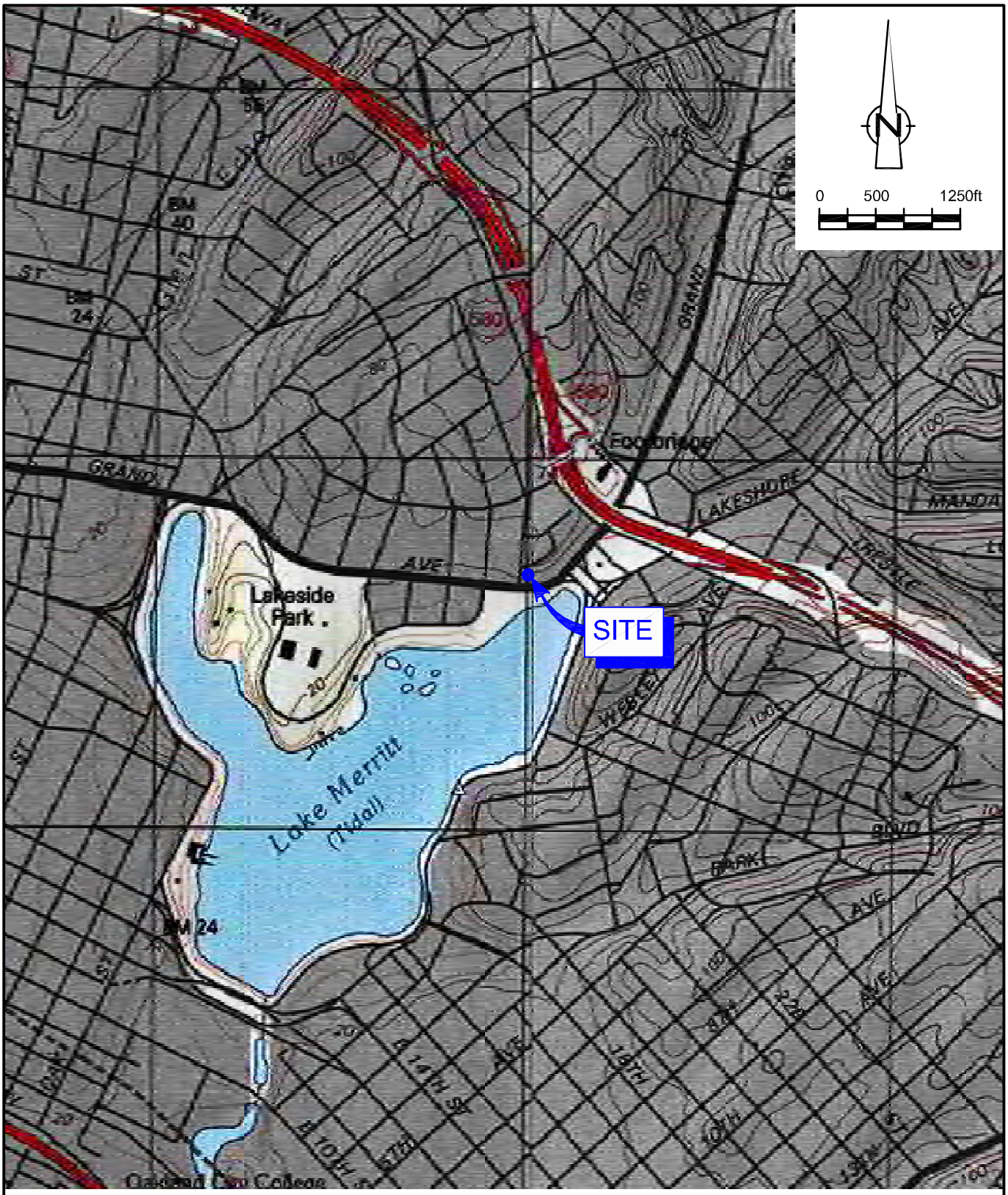
10.0 CONCLUSIONS AND RECOMMENDATIONS

Preparation of a SCM to summarize site conditions and residual impacts, identify potential receptors and exposure pathways, and evaluate if any data gaps exist was requested by ACEH in letters dated September 30, 2008 and May 13, 2009. This report presented a SCM for the site and addressed the technical comments included in the ACEH letters. The site is currently used as a parking lot, and this land use is not expected to change in the near future. Based on the analytical results, the extent of impact at the site appears to have been adequately evaluated and no further investigation appears warranted at this time. The residual petroleum hydrocarbons in soil and groundwater at the site do not appear to pose a significant threat to human health or the environment under the current land use scenario, and the site appears to meet the RWQCB criteria for classification as a low-risk groundwater case.

With regards to potential future site redevelopment, as the majority of the site has been over-excavated, the only residual impacts that appear could potentially pose a risk to human health under a different land use scenario are within the approximately 5-foot area adjacent to the southern and eastern property lines where further excavation could not be performed. Future development plans could include building setbacks from these property lines or these areas could be over-excavated if possible during redevelopment activities to mitigate this potential pathway. Other mitigation measures

(vapor barrier, venting system, etc.) could also be implemented at the time of redevelopment. Chevron would work with ACEH and the property owner to ensure that the selected mitigation measures were adequate such that no significant risk to human health was present. As previously noted, a nearby fuel release case (Former Gulf Station No. 0006 at 460 Grand Avenue) had similar site conditions and was closed with such provisions in place should future redevelopment occur. Therefore, on behalf of Chevron, CRA respectfully requests the site be considered for low-risk case closure and no further action.

FIGURES

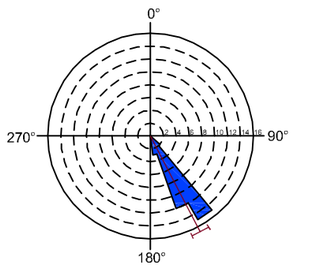


SOURCE: TOPO! MAPS.

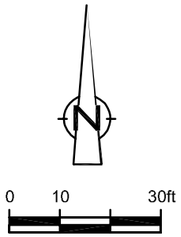
figure 1

VICINITY MAP
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

612049-400(002)GN-WA001 MAY 25/2009



HISTORICAL GROUNDWATER FLOW DIRECTION



LEGEND

SV-1 ▲	SOIL VAPOR SAMPLE LOCATION
MW-8K ●	MONITORING WELL LOCATION
B-6 ■	EXPLORATORY BORING LOCATION
MW-8C ✱	DESTROYED MONITORING/OBSERVATION WELL LOCATION
A — A'	CROSS SECTION LOCATION

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

figure 2

SITE PLAN
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

612049-899(002)GN-WA003 DEC 04/2009

A
NORTHWEST

A
SOUTHEAST

EXCAVATION
FORMER DISPENSER ISLANDS
SIDEWALK
GRAND AVENUE
±115'
PROPERTY BOUNDARY

MW-8B (DESTROYED)
MW-8L (INTERSECTION WITH B-B')
MW-8J
MW-8G

ELELVATION (feet MSL)
APPROXIMATE DEPTH (feet below grade)
DISTANCE (feet)

ASPHALT
CONCRETE
EXCAVATION
CL
SC
SM
ML
CH
GW

24
NA
0.18
NA
1/9/90

13
NA
0.08
NA
1/9/90

2,100
NA
ND
NA
1/9/90

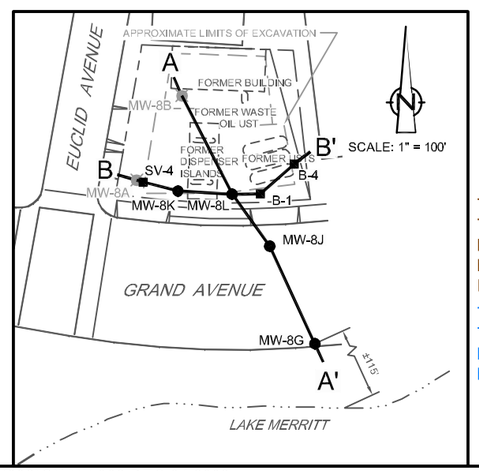
10/01/09
<50
<50
<0.5
<0.5

8
NA
ND
NA
1/9/90

<10
NA
<0.5
NA
3/16/89

10/01/09
<50
55
<0.5
<0.5

LAKE MERRITT
?



LEGEND

SCALE: HORZ. 1" = 20'
VERT. 1" = 5'

MW-8B — WELL/BORING DESIGNATION
GROUND SURFACE
OBSERVATION WELL INSTALLATION
STRATIGRAPHIC BOUNDARY
CL — TYPICAL SOIL CLASSIFICATION
SCREENED INTERVAL
BOTTOM OF BORING
APPROXIMATE SOIL SAMPLE LOCATION
TPHg
TPHd
BENZENE
MTBE
DATE — HYDROCARBON CONCENTRATIONS IN SOIL, IN mg/kg
APPROXIMATE GROUNDWATER SAMPLE LOCATION
TPHg
TPHd
BENZENE
MTBE — HYDROCARBON CONCENTRATIONS IN GROUNDWATER, IN µg/L
DATE ▼ GROUNDWATER DEPTH

ASPHALT
CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS,SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
CH - INORGANIC CLAYS OF HIGH PLASTICITY
SC - CLAYEY SANDS, SAND-CLAY MIXTURES
SM - SILTY SANDS, SAND-SILT MIXTURES
GW - WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
ML - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
FILL

HIGHEST GROUNDWATER ELEVATION
LOWEST GROUNDWATER ELEVATION
ND NON DETECT
NA NOT ANALYZED
< NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS

figure 3

GEOLOGIC CROSS SECTION A-A'
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

LEGEND

MW-8A — WELL/BORING DESIGNATION

GROUND SURFACE

OBSERVATION WELL INSTALLATION

STRATIGRAPHIC BOUNDARY

CL — TYPICAL SOIL CLASSIFICATION

SCREENED INTERVAL

BOTTOM OF BORING

TPHg
TPHd
BENZENE
MTBE
DATE — APPROXIMATE SOIL SAMPLE LOCATION
HYDROCARBON CONCENTRATIONS IN SOIL, IN mg/kg

TPHg
TPHd
BENZENE
MTBE — APPROXIMATE GROUNDWATER SAMPLE LOCATION
HYDROCARBON CONCENTRATIONS IN GROUNDWATER, IN µg/L

ASPHALT

CL - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS

SC - CLAYEY SANDS, SAND-CLAY MIXTURES
SM - SILTY SANDS, SAND-SILT MIXTURES

FILL

NA — NOT ANALYZED

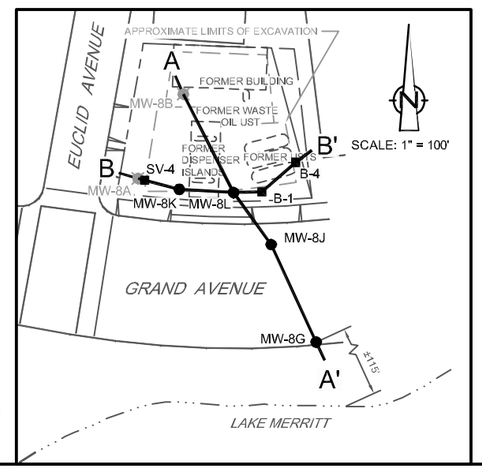
< — NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS

GROUNDWATER DEPTH

DATE

HIGHEST GROUNDWATER ELEVATION

LOWEST GROUNDWATER ELEVATION



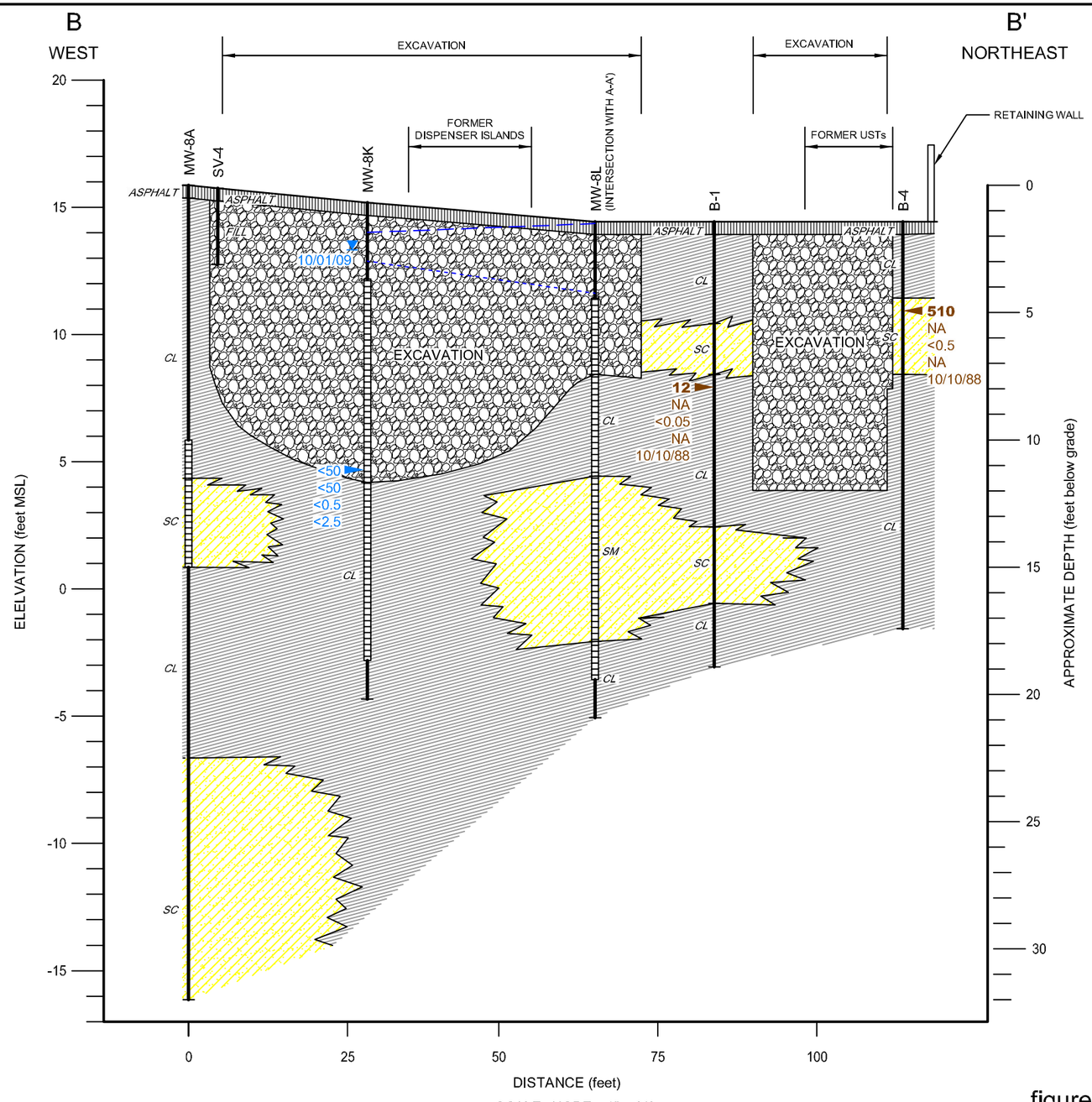


figure 4

GEOLOGIC CROSS SECTION B-B'
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

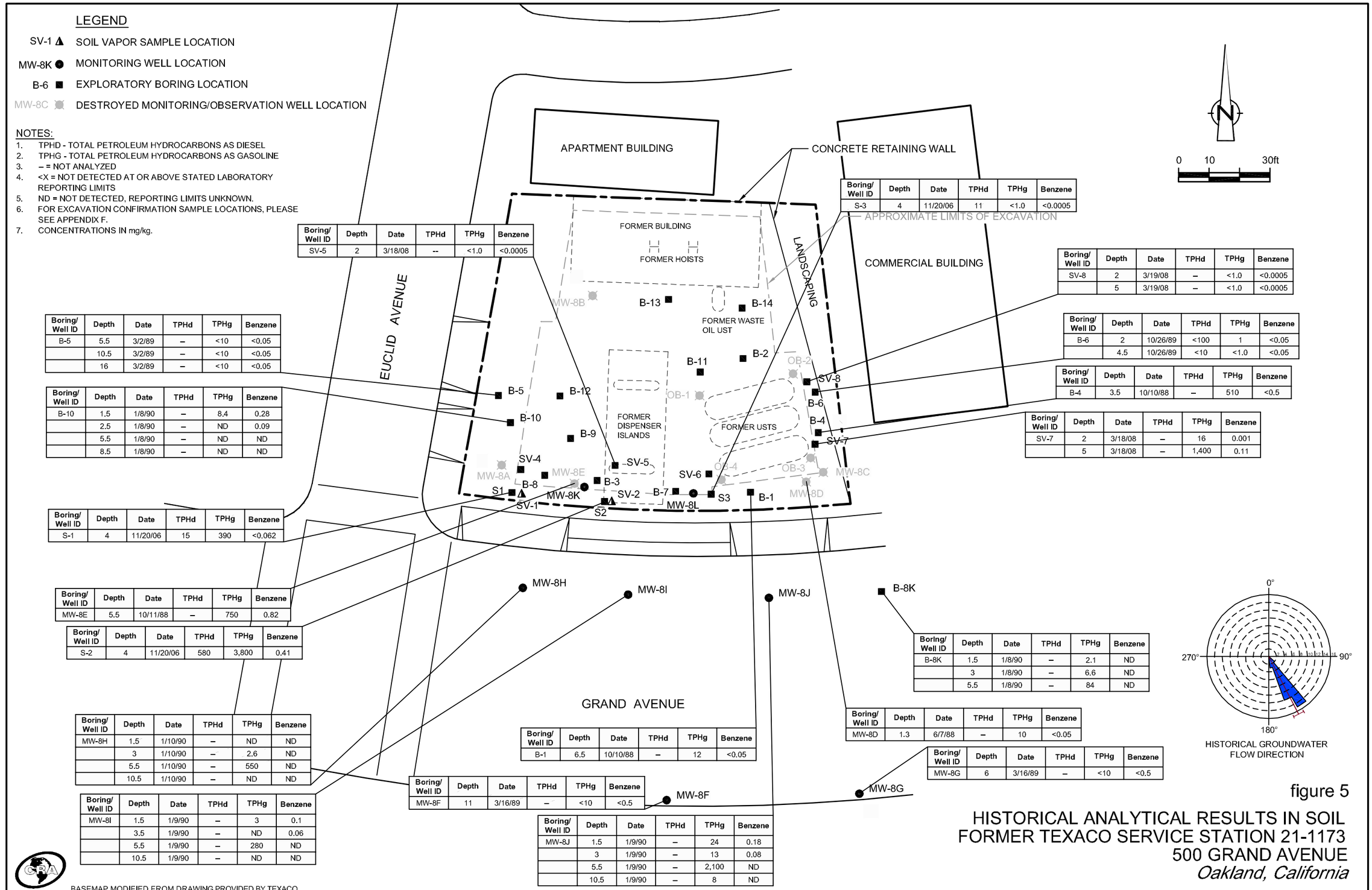
612049-899(002)GN-WA002 DEC 04/2009

LEGEND

- SV-1 ◭ SOIL VAPOR SAMPLE LOCATION
- MW-8K ● MONITORING WELL LOCATION
- B-6 ■ EXPLORATORY BORING LOCATION
- MW-8C ✳ DESTROYED MONITORING/OBSERVATION WELL LOCATION

NOTES:

1. TPHD - TOTAL PETROLEUM HYDROCARBONS AS DIESEL
2. TPHG - TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
3. – = NOT ANALYZED
4. <X = NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMITS
5. ND = NOT DETECTED, REPORTING LIMITS UNKNOWN.
6. FOR EXCAVATION CONFIRMATION SAMPLE LOCATIONS, PLEASE SEE APPENDIX F.
7. CONCENTRATIONS IN mg/kg.



Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-5	2	3/18/08	--	<1.0	<0.0005

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
S-3	4	11/20/06	11	<1.0	<0.0005

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-8	2	3/19/08	–	<1.0	<0.0005
	5	3/19/08	–	<1.0	<0.0005

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-5	5.5	3/2/89	–	<10	<0.05
	10.5	3/2/89	–	<10	<0.05
	16	3/2/89	–	<10	<0.05

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-6	2	10/26/89	<100	1	<0.05
	4.5	10/26/89	<10	<1.0	<0.05

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-4	3.5	10/10/88	–	510	<0.5

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-10	1.5	1/8/90	–	8.4	0.28
	2.5	1/8/90	–	ND	0.09
	5.5	1/8/90	–	ND	ND
	8.5	1/8/90	–	ND	ND

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
SV-7	2	3/18/08	–	16	0.001
	5	3/18/08	–	1,400	0.11

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
S-1	4	11/20/06	15	390	<0.062

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8E	5.5	10/11/88	–	750	0.82

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
S-2	4	11/20/06	580	3,800	0.41

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-8K	1.5	1/8/90	–	2.1	ND
	3	1/8/90	–	6.6	ND
	5.5	1/8/90	–	84	ND

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8H	1.5	1/10/90	–	ND	ND
	3	1/10/90	–	2.6	ND
	5.5	1/10/90	–	550	ND
	10.5	1/10/90	–	ND	ND

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8D	1.3	6/7/88	–	10	<0.05

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
B-1	6.5	10/10/88	–	12	<0.05

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8G	6	3/16/89	–	<10	<0.5

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8I	1.5	1/9/90	–	3	0.1
	3.5	1/9/90	–	ND	0.06
	5.5	1/9/90	–	280	ND
	10.5	1/9/90	–	ND	ND

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8F	11	3/16/89	–	<10	<0.5

Boring/ Well ID	Depth	Date	TPHd	TPHg	Benzene
MW-8J	1.5	1/9/90	–	24	0.18
	3	1/9/90	–	13	0,08
	5.5	1/9/90	–	2,100	ND
	10.5	1/9/90	–	8	ND

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

figure 5

HISTORICAL ANALYTICAL RESULTS IN SOIL
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

LEGEND

SV-1 ◭ SOIL VAPOR SAMPLE LOCATION

MW-8K ● MONITORING WELL LOCATION

B-6 ■ EXPLORATORY BORING LOCATION

MW-8C ✱ DESTROYED MONITORING/OBSERVATION WELL LOCATION

(100) TPHd CONCENTRATION (ug/L)

(242) TPHg CONCENTRATION (ug/L)

(370) BENZENE CONCENTRATION (ug/L)

(4) MTBE CONCENTRATION (ug/L)

NOTE: MW-8L WAS SAMPLED JUNE 10, 2009.

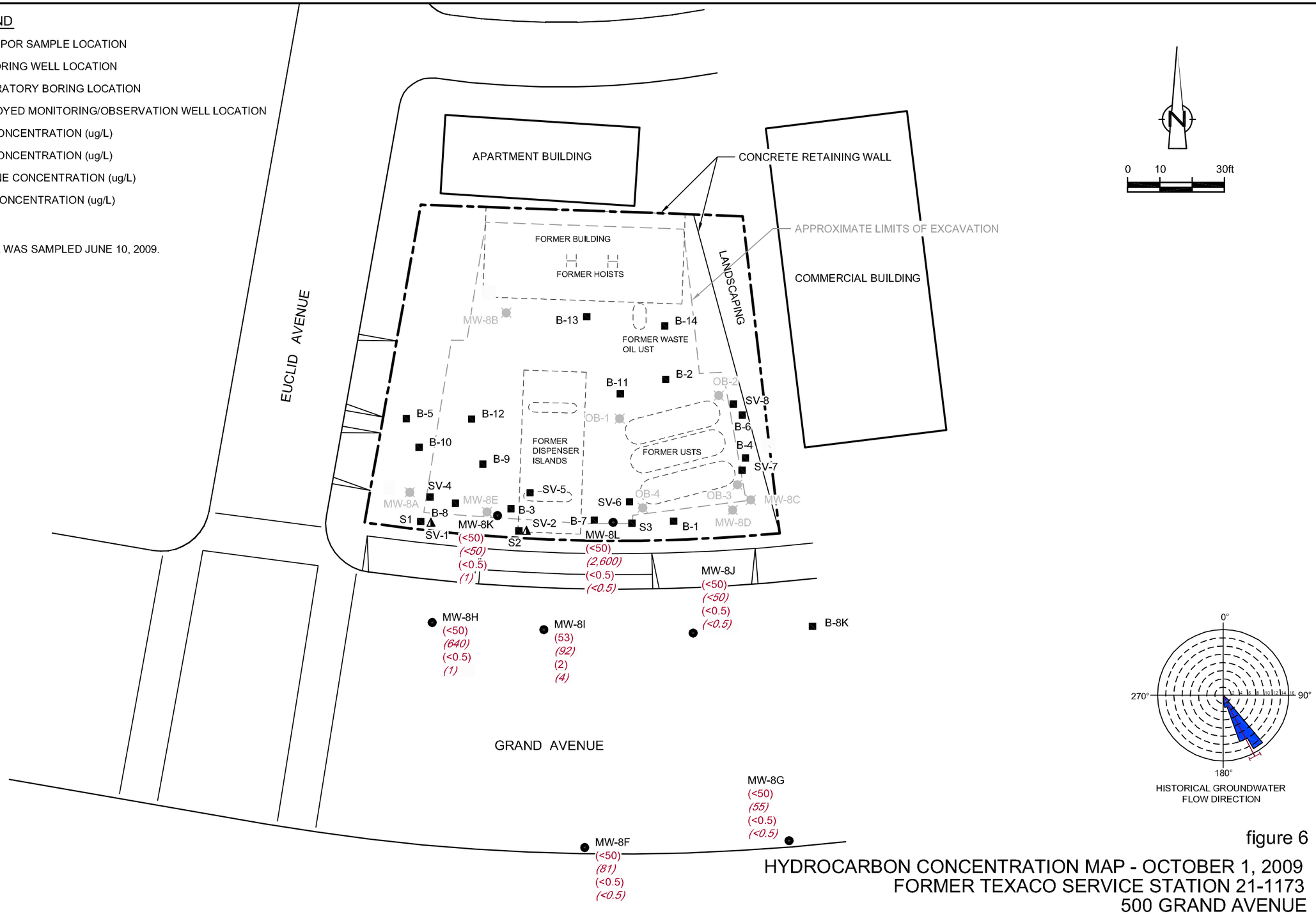


figure 6

HYDROCARBON CONCENTRATION MAP - OCTOBER 1, 2009
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

612049-899(002)GN-WA005 DEC 04/2009

LEGEND

SV-1 ◭ SOIL VAPOR SAMPLE LOCATION

MW-8K ● MONITORING WELL LOCATION

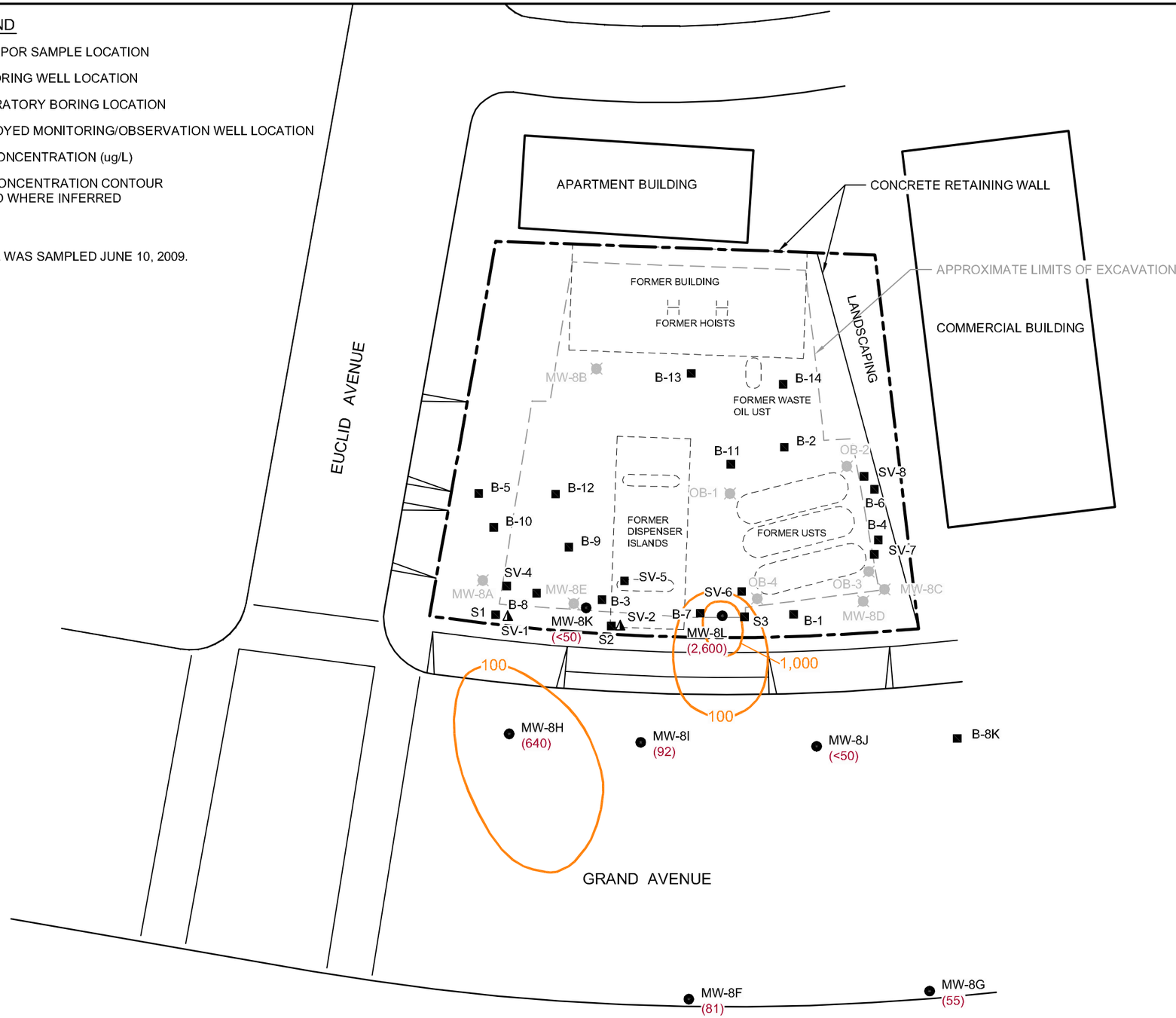
B-6 ■ EXPLORATORY BORING LOCATION

MW-8C ✳ DESTROYED MONITORING/OBSERVATION WELL LOCATION

(100) TPHd CONCENTRATION (ug/L)

100 TPHd CONCENTRATION CONTOUR
DASHED WHERE INFERRED

NOTE: MW-8L WAS SAMPLED JUNE 10, 2009.



HISTORICAL GROUNDWATER FLOW DIRECTION

figure 7

TPHd ISOCONCENTRATION MAP
FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
Oakland, California

BASEMAP MODIFIED FROM DRAWING PROVIDED BY TEXACO

612049-899(002)GN-WA006 DEC 04/2009

TABLES

TABLE 1

WELL CONSTRUCTION DETAILS
FORMER TEXACO STATION 21-1173
500 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-8A	6/6/88	15.5	2	10	15	5	Destroyed
MW-8B	6/7/88	20	2	14.5	19.5	5	Destroyed
MW-8C	6/7/88	24.5	2	14	24	10	Destroyed
MW-8D	6/7/88	5	2	0.8	4.5	3.7	Destroyed
MW-8E	10/21/88	15.5	4	4.5	15	10.5	Destroyed
MW-8F	3/16/89	16.5	4	9	14.5	5.5	
MW-8G	3/16/89	16.5	4	5	14.5	9.5	
MW-8H	1/8/90	16.5	4	5	15	10	
MW-8I	1/9/90	16.5	4	5	15	10	
MW-8J	1/9/90	16.5	4	5	15	10	
MW-8K	5/18/93	18	2	3	18	15	
MW-8L	5/18/93	18	2	3	18	15	

Abbreviations/notes:
fbg = feet below grade

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHmo*	*TOG*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*HVOCs*	*TPH other*
						Concentrations reported in milligrams per kilogram mg/kg							
Exploratory and Monitoring Well Borings													
B-1	6.5	10/10/88	--	--	--	**12**	<0.05	<0.1	<0.2	<0.1	--	--	--
~~B-3~~	~~4~~	~~10/10/88~~	--	--	--	~~**520**~~	~~<1~~	~~<2~~	~~<4~~	~~**5**~~	--	--	--
B-4	3.5	10/10/88	--	--	--	**510**	<0.5	**1**	**3.5**	**13**	--	--	--
B-5	5.5	3/2/89	--	--	--	<10	<0.05	<0.1	<0.2	<0.1	--	--	--
B-5	10.5	3/2/89	--	--	--	<10	<0.05	<0.1	<0.2	<0.1	--	--	--
B-5	16	3/2/89	--	--	--	<10	<0.05	<0.1	<0.2	<0.1	--	--	--
B-6	2	10/26/89	--	--	<100	**1**	<0.05	**0.08**	<0.05	<0.05	--	--	--
B-6	4.5	10/26/89	--	--	<10	<1.0	<0.05	**0.09**	<0.05	<0.05	--	--	--
~~B-7~~	~~3~~	~~10/26/89~~	--	--	~~<100~~	~~**580**~~	~~<0.5~~	~~**6.7**~~	~~**5.1**~~	~~**50**~~	--	--	--
~~B-8~~	~~2~~	~~10/26/89~~	--	--	~~<10~~	~~**3.4**~~	~~**0.05**~~	~~<0.05~~	~~<0.05~~	~~**0.34**~~	--	--	--
~~B-9~~	~~2.5~~	~~10/26/89~~	--	--	~~**460**~~	~~**100**~~	~~**0.05**~~	~~**0.32**~~	~~**0.81**~~	~~**6.4**~~	--	--	--
B-8K	1.5	1/8/90	--	--	--	**2.1**	ND	ND	ND	ND	--	--	ND
	3	1/8/90	--	--	--	**6.6**	ND	**0.05**	ND	ND	--	--	ND
	5.5	1/8/90	--	--	--	**84**	ND	ND	**0.08**	**0.05**	--	--	**20**
B-10	1.5	1/8/90	--	--	--	**8.4**	**0.28**	ND	**0.2**	**0.18**	--	--	ND
	2.5	1/8/90	--	--	--	ND	**0.09**	ND	ND	ND	--	--	ND
	5.5	1/8/90	--	--	--	ND	ND	ND	ND	ND	--	--	ND
	8.5	1/8/90	--	--	--	ND	ND	ND	ND	ND	--	--	ND
~~B-11~~	~~1.5~~	~~1/8/90~~	--	--	--	~~**2,900**~~	~~ND~~	~~ND~~	~~**5.4**~~	~~**1.6**~~	--	--	~~**30**~~
	~~2.5~~	~~1/8/90~~	--	--	--	~~**62**~~	~~ND~~	~~ND~~	~~**0.31**~~	~~**0.12**~~	--	--	~~**11**~~
	~~5.5~~	~~1/8/90~~	--	--	--	~~**17**~~	~~ND~~	~~ND~~	~~**0.06**~~	~~ND~~	--	--	~~ND~~
~~B-11~~	~~8.5~~	~~1/8/90~~	--	--	--	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	--	--	~~ND~~

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHmo*	*TOG*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*HVOCs*	*TPH other*
						Concentrations reported in milligrams per kilogram mg/kg							
~~B-12~~	~~1~~	~~1/8/90~~	--	--	--	~~13~~	~~0.22~~	~~0.11~~	~~0.18~~	~~0.42~~	--	--	~~ND~~
	~~2.5~~	~~1/8/90~~	--	--	--	~~49~~	~~ND~~	~~ND~~	~~0.19~~	~~0.83~~	--	--	~~ND~~
	~~4.5~~	~~1/8/90~~	--	--	--	~~1,200~~	~~ND~~	~~ND~~	~~1.27~~	~~0.67~~	--	--	~~94~~
	~~6~~	~~1/8/90~~	--	--	--	~~ND~~	~~ND~~	~~0.06~~	~~ND~~	~~ND~~	--	--	~~ND~~
~~B-13~~	~~1.5~~	~~2Q90*~~	--	--	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	--	--	~~ND~~
	~~2.5~~[1,2,3]	~~2Q90*~~	--	~~5,600~~	~~ND~~	~~130~~	~~ND~~	~~ND~~	~~1.7~~	~~5.4~~	--	~~ND~~	~~1,000~~
	~~3.5~~	~~2Q90*~~	--	--	~~ND~~	~~26~~	~~ND~~	~~0.06~~	~~0.06~~	~~0.3~~	--	--	~~250~~
~~B-14~~	~~1.5~~	~~2Q90*~~	--	--	~~ND~~	~~4.8~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	--	--	~~85~~
	~~3.5~~	~~2Q90*~~	--	--	~~ND~~	~~2.3~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	--	--	~~62~~
MW-8D	1.3	6/7/88	--	--	--	**10**	<0.05	**0.4**	<0.2	**0.5**	--	--	--
MW-8E	5.5	10/11/88	--	--	--	**750**	**0.82**	**6.5**	**5.5**	**26**	--	--	--
MW-8F	11	3/16/89	--	--	--	<10	<0.5	<0.1	<0.2	<0.1	--	--	--
MW-8G	6	3/16/89	--	--	--	<10	<0.5	<0.1	<0.2	<0.1	--	--	--
MW-8H	1.5	1/10/90	--	--	--	ND	ND	**0.07**	ND	ND	--	--	ND
	3	1/10/90	--	--	--	**2.6**	ND	**0.24**	ND	ND	--	--	ND
	5.5	1/10/90	--	--	--	**550**	ND	ND	**0.3**	**0.83**	--	--	**66**
	10.5	1/10/90	--	--	--	ND	ND	ND	ND	ND	--	--	ND
MW-8I	1.5	1/9/90	--	--	--	**3**	**0.1**	ND	ND	ND	--	--	ND
	3.5	1/9/90	--	--	--	ND	**0.06**	ND	ND	**0.02**	--	--	ND
	5.5	1/9/90	--	--	--	**280**	ND	ND	**2.7**	**9.2**	--	--	ND
	10.5	1/9/90	--	--	--	ND	ND	ND	ND	ND	--	--	ND
MW-8J	1.5	1/9/90	--	--	--	**24**	**0.18**	**0.09**	**0.06**	**0.05**	--	--	ND
MW-8J	3	1/9/90	--	--	--	**13**	**0.08**	**0.14**	**0.04**	ND	--	--	**33**
	5.5	1/9/90	--	--	--	**2100**	ND	ND	**25**	**9.2**	--	--	**83**

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHmo*	*TOG*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*HVOCs*	*TPH other*
						Concentrations reported in milligrams per kilogram mg/kg							
	10.5	1/9/90	--	--	--	**8**	ND	**0.02**	ND	ND	--	--	ND
S-1	4	11/20/06	--	<330	**15**	**390**	<0.062	<0.12	**0.9**	**1.9**	--	--	--
S-2	4	11/20/06	--	<330	**580**	**3,800**	**0.41**	**17**	**36**	**170**	--	--	--
S-3	4	11/20/06	--	<330	**11**	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--
SV-5	2	3/18/08	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--
SV-7	2	3/18/08	--	--	--	**16**	**0.001**	<0.001	**0.078**	**0.027**	<0.0005	--	--
SV-7	5	3/18/08	--	--	--	**1,400**	**0.11**	**0.059**	**15**	**19**	<0.025	--	--
SV-8	2	3/19/08	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--
SV-8	5	3/19/08	--	--	--	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	--	--
Waste Oil Tank Excavation													
~~W.O.#2~~	~~1.5~~	~~9/25/90~~	--	~~**200**~~	~~<5.0~~	~~<1.0~~	~~**0.048**~~	~~<0.005~~	~~**0.007**~~	~~**0.013**~~	~~--~~	~~ND~~	--
~~W.O.#3~~	~~1.5~~	~~9/25/90~~	--	~~**2,600**~~	~~**220**~~	~~**15**~~	~~**0.53**~~	~~**0.06**~~	~~**0.75**~~	~~**1.5**~~	~~--~~	~~ND~~	--
~~W.O.#4~~	~~1.5~~	~~9/25/90~~	--	~~**500**~~	~~**17**~~	~~**1.9**~~	~~**0.054**~~	~~**0.012**~~	~~**0.062**~~	~~**0.29**~~	~~--~~	~~ND~~	--
~~W.O.#5~~	~~1.5~~	~~9/25/90~~	--	~~**100**~~	~~**21**~~	~~<1.0~~	~~<0.005~~	~~**0.017**~~	~~<0.005~~	~~<0.005~~	~~--~~	~~ND~~	--
~~W.O.#6~~	~~2.0~~	~~10/3/90~~	--	~~**100**~~	--	--	--	--	--	--	~~--~~	--	--
~~W.O.#7~~	~~1.5~~	~~10/3/90~~	--	~~**850**~~	--	--	--	--	--	--	~~--~~	--	--
W.O.#8	8	10/3/90	--	<50	<5.0	<1.0	<0.005	**0.016**	<0.005	<0.005	~~--~~	--	--
Clay Pipe Excavation													
~~PT-NS-7.5~~	~~2.5~~	~~1/8/91~~	~~**330**~~	~~**110**~~	~~**28**~~	~~**22**~~	~~**0.02**~~	~~ND~~	~~**0.055**~~	~~**0.13**~~	--	~~ND~~	--
~~PT-B-7.5~~	~~4.5~~	~~1/8/91~~	~~**93**~~	~~**150**~~	~~**8.1**~~	~~**5.7**~~	~~ND~~	~~ND~~	~~ND~~	~~ND~~	--	~~ND~~	--
~~PT-SS-7.5~~	~~2.5~~	~~1/8/91~~	~~**160**~~	~~**630**~~	~~**17**~~	~~**100**~~	~~**0.071**~~	~~**0.071**~~	~~**0.3**~~	~~**0.63**~~	--	~~ND~~	--
~~PT-E-1.5~~	~~1.5~~	~~1/8/91~~	--	~~**780**~~	~~**110**~~	~~**1.1**~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	--	--	--
~~PT-W-1.5~~	~~1.5~~	~~1/8/91~~	--	~~**370**~~	~~**190**~~	~~**3.8**~~	~~<0.005~~	~~**0.014**~~	~~<0.005~~	~~**0.024**~~	--	--	--
Gasoline UST and Dispenser Island Excavation													
SS1	10	4/14/92	--	--	--	**5.3**	<0.005	**0.038**	**0.016**	**0.12**	--	--	--
SS2	10	4/14/92	--	--	--	**89**	**0.049**	**0.38**	**0.15**	**1.4**	--	--	--
~~SS3~~	~~5~~	~~4/14/92~~	--	--	--	~~<1.0~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~**0.011**~~	--	--	--
SS4	10	4/14/92	--	--	--	**130**	**0.14**	**0.21**	**0.17**	**1.1**	--	--	--
SS5	10	4/14/92	--	--	--	**36**	**0.2**	**0.028**	**0.04**	**0.15**	--	--	--

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHmo*	*TOG*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*HVOCs*	*TPH other*
						Concentrations reported in milligrams per kilogram mg/kg							
SS6	10	4/14/92	--	--	--	**2.3**	**0.0057**	<0.005	<0.005	**0.017**	--	--	--
SS7	5	4/14/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SS8	5	4/14/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
~~SS9~~	~~5~~	~~4/14/92~~	--	--	--	~~<1.0~~	~~0.0069~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	--	--	--
~~PI-1~~	~~5~~	~~4/15/92~~	--	~~190~~	--	~~2,100~~	~~11~~	~~60~~	~~32~~	~~180~~	--	--	--
~~PI-2~~	~~5~~	~~4/15/92~~	--	~~30~~	--	~~7.8~~	~~0.019~~	~~0.013~~	~~0.035~~	~~0.077~~	--	--	--
~~PI-2A~~	~~6~~	~~4/15/92~~	--	~~6,900~~	--	~~810~~	~~1.3~~	~~1.1~~	~~2~~	~~11~~	--	--	--
~~Fuel Line~~	~~5~~	~~4/15/92~~	--	~~36~~	--	~~390~~	~~0.92~~	~~2.9~~	~~3.6~~	~~21~~	--	--	--
Site Over-Excavation													
BE-1	8	5/5/92	--	--	--	**1.1**	**0.043**	<0.005	**0.058**	<0.005	--	--	--
BE-2	8	5/5/92	--	--	--	<1.0	**0.011**	<0.005	<0.005	<0.005	--	--	--
~~BE-3~~	~~4~~	~~5/5/92~~	--	--	--	~~<1.0~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	--	--	--
BE-4	4.5	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
BE-5	7.5	5/5/92	--	--	--	<1.0	**0.018**	<0.005	<0.005	<0.005	--	--	--
BE-6	7.5	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
BE-7	8	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
BE-8	8	5/5/92	--	--	--	<1.0	**0.028**	<0.005	<0.005	<0.005	--	--	--
BE-9	9	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
BE-10	9	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
~~WS-1~~	~~3~~	~~5/5/92~~	--	--	--	~~<1.0~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	~~<0.005~~	--	--	--
WS-2	5	5/5/92	--	--	--	**72**	**1.1**	**3.1**	**2.2**	**9.7**	--	--	--
WS-3	7.5	5/5/92	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
WS-4	5	5/5/92	--	--	--	**1,000**	**22**	**28**	**30**	**100**	--	--	--
WS-5	5	5/5/92	--	--	--	**480**	**11**	**23**	**9.9**	**42**	--	--	--
SW-1**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-2**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-3**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-4**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-5**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-6**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
SW-7**	Sidewall	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-1**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--

TABLE 2

SOIL SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Boring/ Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHmo*	*TOG*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*HVOCs*	*TPH other*
			Concentrations reported in milligrams per kilogram mg/kg										
B-2**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-3**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-4**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-5**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-6**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-7**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-8**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-9**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--
B-10**	Bottom	1/20/93	--	--	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--

Abbreviations/Notes:

Total petroleum hydrocarbons as motor oil (TPHmo), diesel (TPHd), and gasoline (TPHg) by EPA Method 8015
Total oil and grease (TOG) by EPA Method 5520
Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020 or 8260B
Methyl tertiary butyl ether (MTBE) by EPA Method 8260B
Halogenated volatile organic compounds (HVOCs) by EPA Method 8010
"TPH other" = heavier-end hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil by EPA Method 8015
-- = Not analyzed
<x = Not detected at or above stated laboratory reporting limits
ND = Not detected; reporting limits vary or are unknown
Note: samples that are crossed out were collected from soil that was later removed
* Exact drilling date unknown
[1] HVOCs not detected except for Trichloroethane at 0.06 mg/kg
[2] Semi-volatile organic compounds ND except for Naphthalene (0.9 mg/kg), 2-Methylnaphthalene (1.4 mg/kg), and Bis(2-ethylhexyl)phthalate (0.26 mg/kg)
[3] Cadmium (ND), Chromium (36 mg/kg), Lead (ND), Zinc (41 mg/kg)
** Exact sample depths unknown; depth of excavation reportedly averaged 4.5 feet

TABLE 3

GRAB-GROUNDWATER SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Sample ID	*Sample Date*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylenes*	*MTBE*	*TPHmo*	*TOG*	*HVOCs*
		Concentrations reported in micrograms per liter (µg/L)									
Clay Pipe Excavation Water Samples											
EP-01*	1/8/91	**31,000**	**5,200**	**280**	**300**	**120**	**860**	--	**100,000**	--	--
WP-01*	1/8/91	**13,000**	**3,900**	**320**	**73**	**95**	**48**	--	**17,000**	--	--
Waste Oil Tank Excavation											
W.O.T.#1*	9/25/90	**1,400**	**1,900**	**320**	**180**	**2.1**	**300**	--	--	**70**	ND
Exploratory Borings											
SV-4-W	3/18/08	--	<50	<0.5	<0.5	<0.5	<0.5	**1**	--	--	--
SV-5-W	3/18/08	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
SV-6-W	3/18/08	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--
SV-7-W	3/18/08	--	**6,200**	**200**	**7**	**250**	**260**	**0.7**	--	--	--
SV-8-W	3/19/08	--	<50	<0.5	<0.5	<0.5	<0.5	**2**	--	--	--

Abbreviations/Notes:

Total petroleum hydrocarbons as diesel (TPHd) and gasoline (TPHg) by EPA Method 8015

Benzene, toluene, ethylbenzene and xylenes (BTEX) by EPA Method 8020 or 8260B

Methyl tertiary butyl ether (MTBE) by EPA Method 8260B

Total oil and grease (TOG) by EPA Method 5520

Halogenated volatile organic compouds (HVOCs) by EPA Method 8010

* Samples collected prior to removal of water from excavation

<x = Not detected at or above stated laboratory reporting limits

-- = Not Analyzed

ND = Not detected; reporting limits vary

TABLE 4

SOIL VAPOR SAMPLE ANALYTICAL RESULTS
FORMER TEXACO STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Sample ID	*Sample Depth (fbg)*	*Sample Date*	*TPHg*	*Total Hydrocarbons*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylenes*
			Concetrations reported in micrograms per cubic meter ($\mu g/m^3$)					
SG-01	3	9/21/88	--	<800	<800	<800	<900	<900
	6	9/21/88	--	**2,000**	**400**	**400**	<200	**400**
SG-02	3	9/21/88	--	**1.40E+06**	**3.20E+05**	**2.80E+05**	**1.20E+05**	**23,000**
SG-04	4	9/21/88	--	**3.60E+08**	**8.60E+07**	**4.00E+07**	**2.60E+07**	**3.30E+06**
SG-05	2	9/21/88	--	**5.40E+07**	**4.20E+07**	**8.60E+06**	**86,000**	**86,000**
SG-06	4	9/21/88	--	<800	<800	<800	<900	<900
SG-08	5	9/28/88	--	<400	<400	<400	<500	<400
SG-09	4	9/28/88	--	<400	<400	<400	<500	<400
SG-10	4	9/28/88	--	<400	<400	<400	<500	<400
SG-11	3.5	9/28/88	--	<400	<400	<400	<500	<400
SG-12	4	9/28/88	--	**2.50E+08**	**3.80E+07**	**1.60E+07**	**1.80E+05**	**1.70E+05**
SG-13	3	9/28/88	--	**32,000**	<400	<400	<500	<400
SG-14	4	9/28/88	--	<400	<400	<400	<500	<400
SG-15	3	9/28/88	--	**1.40E+09**	**3.00E+08**	**9.00E+07**	**2.70E+07**	**2.20E+07**
SG-16	4	9/28/88	--	**4.20E+05**	**1.20E+05**	**63,000**	**14,000**	**14,000**
SG-17	4	9/28/88	--	<400	<400	<400	<500	<400
SG-18	4	9/28/88	--	<8,000	<8,000	<7,000	<9,000	<9,000
SV-1	4	11/20/06	**60,000**	--	**3,400**	**330**	**2,600**	**380**
SV-2	4	11/20/06	**2.00E+06**	--	**34,000**	**1.60E+05**	**64,000**	**2.80E+05**
SV-2 Duplicate[1]	4	11/20/06	**7.20E+05**	--	**14,000**	**69,000**	**27,000**	**1.10E+05**

Abbreviations/Notes:

Total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene and xylenes by EPA Method TO-3 Modified

Total hydrocarbons = approximately C4-C9 aliphatic, alicyclic, and aromatic compounds

Note: Samples collected in 1988 analyzed using a gas chromatograph and flame ionization detector (FID)

-- = Not analyzed

<x = Not detected at or above stated laboratory reporting limits

[1] Field duplicate sample collected simultaneously with initial sample

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

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

September 30, 2008

Ms. Staci Frerichs
Chevron Environmental Management
6001 Bollinger Canyon Rd K2256
PO Box 6012
San Ramon, CA 94583-2324

Mr. Denis Brown
Shell Oil Products US
20945 S Wilmington Ave
Carson, CA 90810-1039

Ms Jennifer Sedlachek
Exxon Mobil
4096 Piedmont Ave #194
Oakland, CA 94611

Mr. Brandford Howard
Brandford Howard ET AL
516 Grand Avenue
Oakland, CA 94610-3515

Subject: Fuel Leak Case No. RO0000391 (Global ID # T0600101355), Chevron #21-1173, 500 Grand Avenue, Oakland

Dear Ms Frerichs and Ms Seldachek; Mr. Brown and Mr. Howard:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site and the document entitled "Work Plan for Additional for Additional Soil Vapor Study" and "Subsurface Investigation Report" received September 19, 2007 and August 14, 2008 and prepared by Conestoga Rovers Associates (CRA). We note that Chevron implemented the soil vapor work plan without Agency approval. Furthermore, the work performed in the subsurface investigation is not what was proposed in the work plan; soil vapor sampling was not completed, limited shallow soil samples were collected and soil borings were not installed. Therefore, we request that you complete the scope of work from your work plan (approved by ACEH) including soil vapor sampling and soil boring installation.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to mail to:steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Work Plan for Additional Soil Vapor Study.** Previous soil vapor data collected in November 2006 detected high concentrations of up to 2,204,000 µg/m^3 TPHg and 35,130 µg/m^3 benzene. However, CRA neglected to analyze vapor samples for leak detection compounds, calling into question the validity of the analytical results. Consequently, ACEH requested a supplemental soil vapor work plan in a directive letter dated July 30, 2007, which CRA submitted in September 2007. The work plan proposed the installation of additional soil borings, soil and groundwater sampling and soil vapor sampling. The work plan was implemented in August 2008 without Agency concurrence. However, the proposed scope of work which included soil vapor assessment was not completed. As a result, the potential for indoor vapor intrusion has not been adequately evaluated for the site.

2. **Subsurface Investigation Results**. The work plan recommended the installation of 3 soil borings and 5 soil vapor probes with soil, groundwater and soil vapor sampling. However, the vapor probes were not installed as proposed and soil samples were only collected from SV-5 (within the excavation backfill), SV-7 and SV-8 at selected depths of 2 feet and 5 feet bgs. In addition, the proposed soil borings along Grand Avenue were not installed. CRA states that the vapor probes were not installed due to high groundwater elevations, but no further recommendations for vapor sampling is discussed. ACEH agrees that high groundwater elevations would preclude the installation of soil vapor probes; however, the vapor probes must be installed to assess soil vapor contamination in the vadoze zone and evaluate the vapor intrusion pathway. ACEH recommends that you measure groundwater elevations in existing monitoring wells to determine the appropriate time to install soil vapor probes. We also request that soil probes be installed in native material as close to the limits of the excavation as possible. Please relocate proposed soil vapor probes SV-5 and SV-6 from the backfill material so that the probes will be installed in native, undisturbed soil.

   CRA concludes that results from the recent site characterization indicate that residual contamination in soil does not pose a significant health risk. ACEH does not agree with this conclusion, given that residual TPHg and benzene contamination in the vadoze zone have not been adequately evaluated. A strong hydrocarbon odor was noted on the boring logs for SV-7 and SV-8, indicating the presence of residual contamination in soil. Furthermore, analytical data collected from boring SV-7 detected 1,400 mg/kg TPHg and 0.11 mg/kg benzene, which are above residential ESLs and demonstrate that contamination in the vadoze must be further evaluated. Please present the results from the soil vapor assessment in the soil and groundwater investigation report requested below.

3. **Recommended Soil Borings in Grand Avenue**. CRA proposed the installation of three soil borings along Grand Avenue; however, the soil borings were not installed as proposed. CRA states that the soil borings were not installed due to utility conflicts. However, no discussion is presented regarding the results of utility clearance by a utility locating service or utility clearance by hand auger. It appears that only a nominal effort was made to actually install the soil borings and determine the location of utilities. Please present any additional information you may have regarding the actual location of underground utilities and results from activities for utility clearance.

4. **Well Redevelopment and Quarterly Groundwater Sampling**. Groundwater monitoring and sampling has not been conducted at the site since 2001. CRA recommends that onsite and offsite wells should be redeveloped and sampled to evaluate the dissolved phase hydrocarbon plume beneath and downgradient of your site. ACEH concurs with the recommendations to redevelop and sample onsite and offsite monitoring wells. Please present results of your well redevelopment activities in the quarterly monitoring report requested below, and implement a program of quarterly groundwater monitoring.

5. **Preferential Pathway Study**. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

   Discuss your analysis and interpretation of the results of the preferential pathway study (including the well survey and utility survey requested below) and report your results in the next quarterly groundwater monitoring report (Second Quarter 2008) requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

   a. Utility Survey

An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and cross-sections illustrating the location and depth of all utility lines and trenches within and near the site and plume areas(s) as part of your study.

b. Well Survey

The preferential pathway study shall include a detailed well survey of all wells (monitoring and production wells: active, inactive, standby, decommissioned (sealed with concrete), abandoned (improperly decommissioned or lost); and dewatering, drainage, and cathodic protection wells) within a ¼ mile radius of the subject site.

6. **Site Conceptual Model (SCM).** We anticipate that at this juncture, it may be advantageous to develop a site conceptual model (SCM), which synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup goals. At a minimum, the SCM should include:

(1) Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;

(2) Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;

(3) Plots of chemical concentrations versus time;

(4) Plots of chemical concentrations versus distance from the source;

(5) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and

(6) Well logs, boring logs, and well survey maps;

(7) Discussion of likely contaminant fate and transport.

If data gaps (i.e. potential contaminant volatilization to indoor air or contaminant migration along preferential pathways, etc.) are identified in the SCM, please submit a work plan to address those data gaps

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **December 1, 2008** – 4th Quarter 2008 Groundwater Monitoring and Sampling Report
- **January 15, 2009** – Site Conceptual Model with Preferential Pathway Study
- **March 15, 2009** – Soil and Groundwater Investigation Report
- **March 1, 2009** – 1st Quarter 2009 Groundwater Monitoring and Sampling Report
- **June 1, 2009** – 2nd Quarter 2009 Groundwater Monitoring and Sampling Report
- **September 1, 2009** – 3rd Quarter 2009 Groundwater Monitoring and Sampling Report
- **December 1, 2009** – 4th Quarter 2009 Groundwater Monitoring and Sampling Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

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

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 383-1761 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Jerry Wickham, PG, CHg, CEG
Senior Hazardous Materials Specialist

cc: Laura Genin
CRA
5900 Hollis Street, Suite A
Emeryville, CA 94608

Donna Drogos, ACEH, Steven Plunkett ACEH, File

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
DAVID J. KEARS, Agency Director

CRA
MAY 26 2009
Received

612049
(21-1173)

ENVIRONMENTAL HEALTH SERVICES
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1131 Harbor Bay Parkway, Suite 250
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(510) 567-6700
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May 13, 2009

Ms. Staci Frerichs
Chevron Environmental Management
6001 Bollinger Canyon Rd K2256
PO Box 6012
San Ramon, CA 94583-2324

Mr. Denis Brown
Shell Oil Products US
20945 S Wilmington Ave
Carson, CA 90810-1039

Ms Jennifer Sedlachek
Exxon Mobil
4096 Piedmont Ave #194
Oakland, CA 94611

Mr. Brandford Howard
Brandford Howard ET AL
516 Grand Avenue
Oakland, CA 94610-3515

Subject: Fuel Leak Case No. RO0000391 (Global ID #T0600101355), Chevron #21-1137, 500 Grand, Oakland, CA 94611

Dear Ms. Frerichs and Ms. Seldachek, Mr. Brown and Mr. Howard:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above referenced site and the document entitled "Response to Technical Comments and Revised Scope of Work" dated November 21, 2009 and prepared by Conestoga Rovers Associates (CRA). Chevron completed an initial soil vapor assessment in August 2008; however the full scope of work was not completed leaving the potential indoor air migration pathway incomplete. Chevron proposes the installation of five soil vapor sampling points to evaluate the soil vapor to indoor air migration pathway. In addition, Chevron recommends incorporating monitoring wells MW-8F through MW-8J into the groundwater monitoring program, as soon as the City of Oakland encroachment permit requirements have been satisfied. ACEH generally concurs with the proposed scope of work as recommended in the work plan provided the technical comments discussed below are incorporated prior to the implementation of the work plan.

Based on ACEH staff review of the case file, we request that you address the following technical comments and send us the reports described below. Please provide 72-hour advance written notification to this office (e-mail preferred to mail to:steven.plunkett@acgov.org) prior to the start of field activities.

TECHNICAL COMMENTS

1. **Additional Soil Vapor Study.** Chevron has proposed the installation of five soil vapor sampling points to evaluate the soil vapor to indoor air migrations pathway. ACEH requests the soil vapor investigation be conducted according to the DTSC's January 2003 *Advisory – Active Soil Gas Investigations*. ACEH generally concurs with the recommendations in soil vapor sampling work plan. Please submit results from the investigation in the report requested below.

2. **Site Conceptual Model (SCM)**. Chevron has requested that the previously requested SCM be prepared in conjunction with soil vapor and groundwater data that accurately reflect current subsurface conditions beneath the site. We concur with your proposal to prepare a SCM, that includes a detailed discussion of the results from the soil vapor and groundwater sampling. Please submit the SCM according to the schedule below.

3. **Preferential Pathway Study**. Chevron will perform a utility survey and, if necessary, update the well survey that was completed in 2001. ACEH concurs with Chevron's proposal to complete a utility survey. Please present results in the report requested below.

4. **Well Redevelopment and Semi-Annual Groundwater Sampling**. Groundwater monitoring and sampling has not been conducted at the site since 2001. CRA recommends that onsite and offsite wells be redeveloped and sampled to evaluate the dissolved phase hydrocarbon plume beneath and downgradient of the site. ACEH generally concurs with the recommendations to redevelop and sample onsite and offsite monitoring wells. Please present the results from the well redevelopment and sampling activities in the semi-annual groundwater monitoring report requested below.

TECHNICAL REPORT REQUEST

Please submit technical reports to Alameda County Environmental Health (Attention: Mr. Steven Plunkett), according to the following schedule:

- **May 30, 2009** – SCM with Preferential Pathway Study
- **June 30, 2009** – Semi-Annual Groundwater Monitoring and Sampling Report
- **December 15, 2009** – Semi-Annual Groundwater Monitoring and Sampling Report

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions."

Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

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

Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at (510) 383-1767 or send me an electronic mail message at steven.plunkett@acgov.org.

Sincerely,

Steven Plunkett
Hazardous Materials Specialist

Donna L. Drogos, PE
Supervising Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: James Kirnan
CRA
2000 Opportunity Drive, Suite 110
Roseville, CA 95678

Leroy Griffin
City of Oakland, Assistant Fire Marshall
250 Frank Ogawa Plaza, Suite 3341
Oakland, CA 94612

Donna Drogos, Steven Plunkett, File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

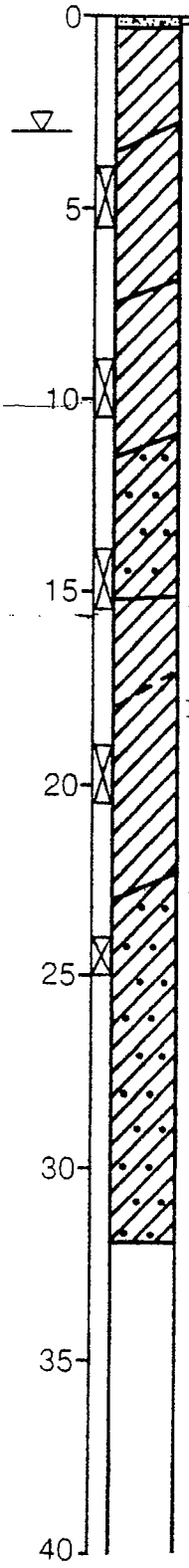
3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

HISTORICAL BORING LOGS

Equipment 8-inch Hollow Stem Auger

Elevation **100 feet Date 6/6/88



*PID = photo ionization detector, HNU PI 101
ppm = parts per million

**Reference Elevation (arbitrary datum)

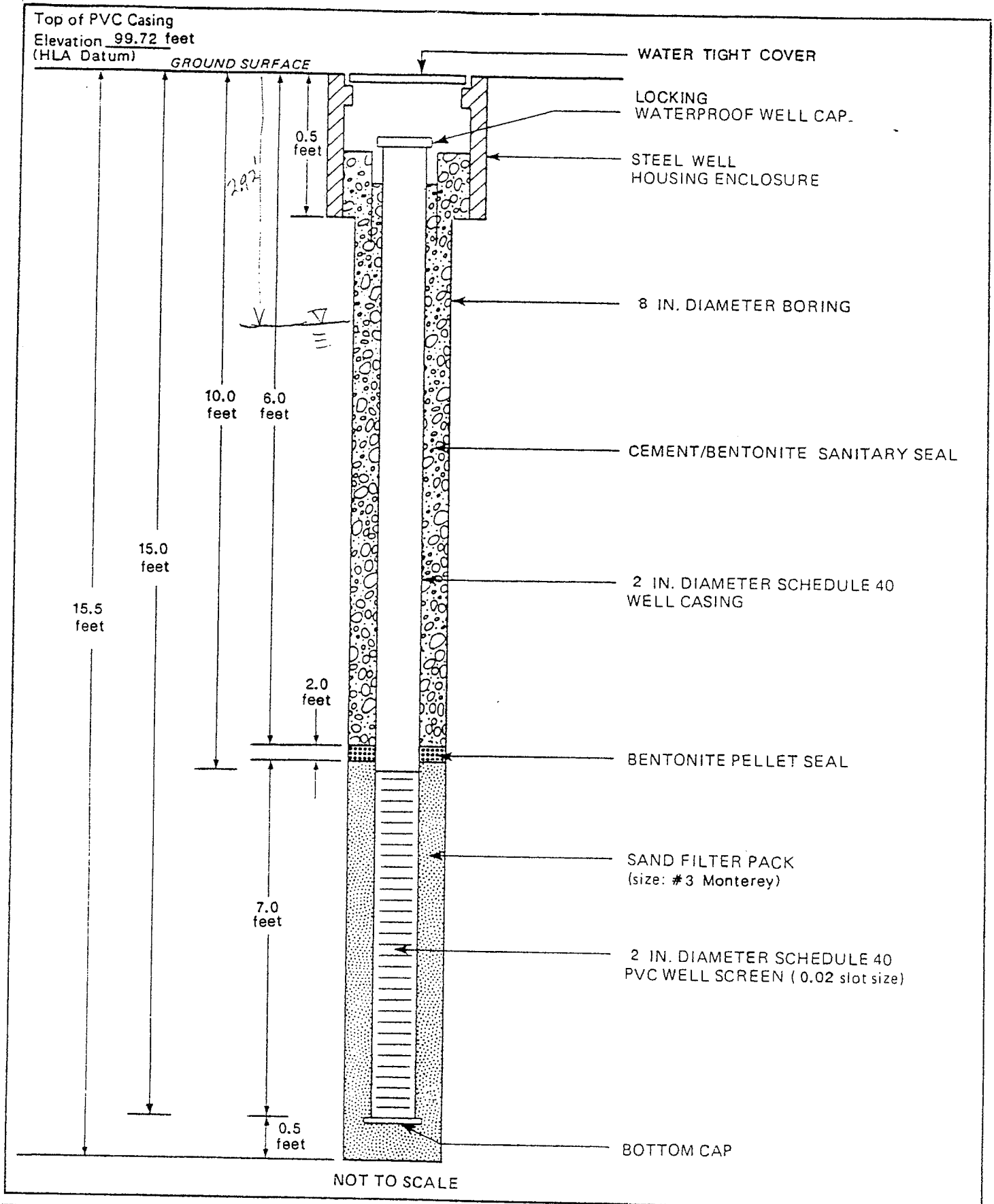
Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring MW-8A

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE 3

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251.054.04	AO	7/88		



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Monitoring Well MW-8A Completion Detail

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE **8**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	JO	7/88		

FORM GW3

Equipment 8-inch Hollow Stem Auger

Elevation ***101.5 feet Date 6/7/88

Laboratory Tests	** Blows/foot	PID * Reading (ppm)	Depth (ft)	Sample	
		30	0		asphaltic pavement GREENISH GRAY SILTY CLAY (CH) stiff, moist
					water seep
	17/6"	70	5		GRAYISH BROWN SILTY CLAY (CL) hard, moist
					WHITE SILTY CLAY trace sand (CL) very stiff, moist
	28	30	10		
					BROWN CLAYEY SAND (SC) very dense, moist
	27/6"	10	15		
					BROWN MOTTLED GRAY SILTY CLAY (CL) very stiff, moist
	15	20	20		
					bottom of boring 20 feet
					stabilized water level at 2 feet on 6/14/88
			25		
			30		
			35		
			40		

*PID = photo ionization detector, HNU PI 101
ppm = parts per million

**S&H Sampler blow counts converted to SPT blow counts.

***Reference Elevation (arbitrary datum)

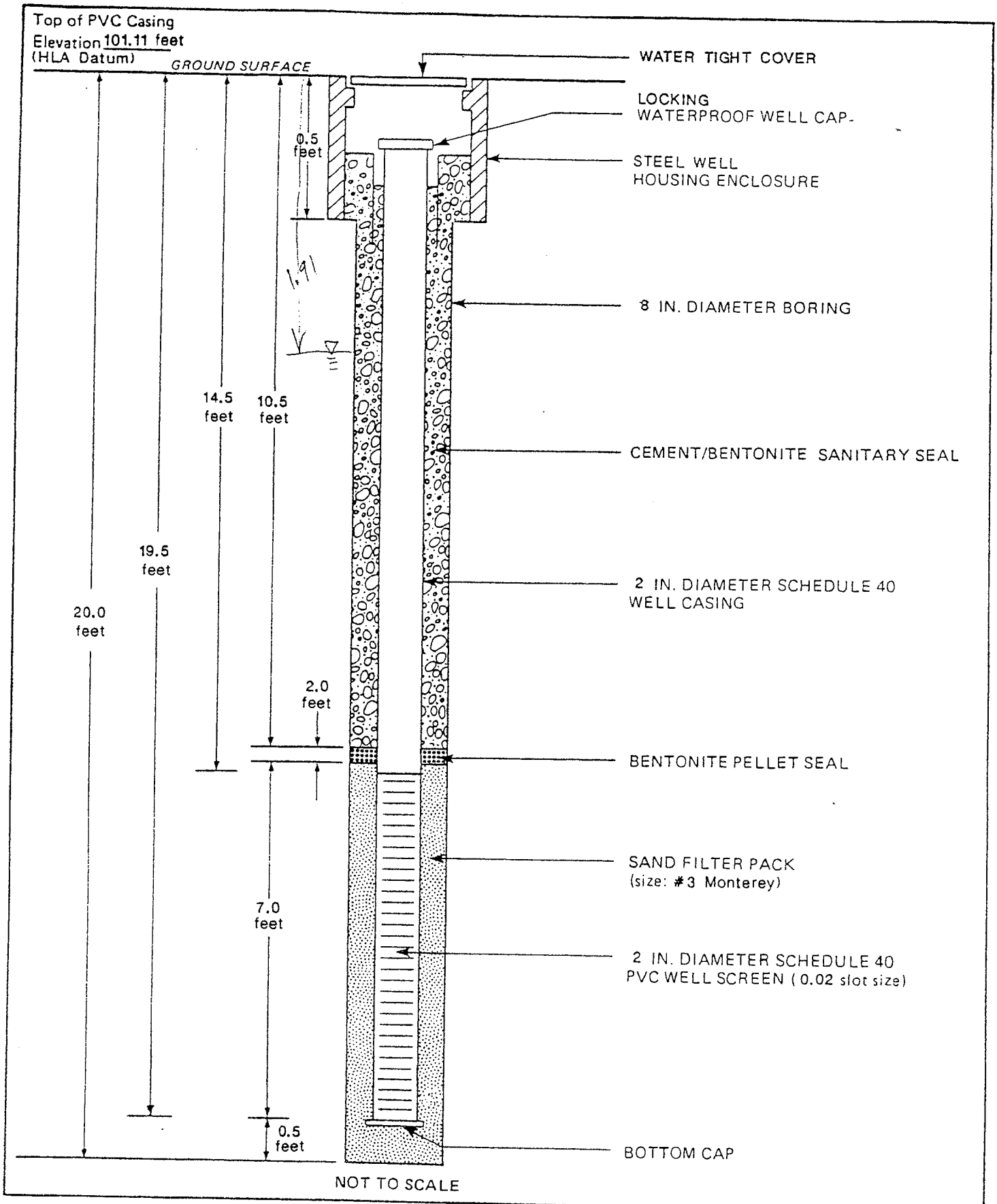
Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring MW-8B

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE 4

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	JO	7/88		



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Monitoring Well MW-8B Completion Detail

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE **9**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	40	7/88		

FORM GW3

Equipment 8-inch Hollow Stem Auger

Elevation ***98.7 feet Date 6/7/88

Laboratory Tests	Blows/foot	PID * Reading (ppm)	Depth (ft)	Sample
			0	
	**21	100		
			5	
				▽
	**22	50		
			10	
	32	50		
			15	
	26	40		
			20	
	27	10	25	
			30	
			35	
			40	

asphaltic pavement

GRAYISH BROWN CLAYEY SAND (SC)
dense, moist

GRAY GRAVELLY SAND (SW)
dense, saturated

GRAYISH BROWN CLAYEY SAND (SC)
dense, moist

GRAYISH BROWN SILTY CLAY
trace sand (CL)
very stiff, moist

BROWN SILTY CLAY (CL)
hard, moist

BROWN CLAYEY SAND (SC)
dense, moist

BROWN MOTTLED GRAY SILTY CLAY (CL)
moist, hard, with 1 to 2 inches
brown sand lenses (SP)

BROWN SILTY CLAY (CL)
very stiff, moist

GRAY SILTY CLAY (CH)
very stiff, dry, intermixed
with WHITE SILTY CLAY (CL)
very stiff, dry

bottom of boring 24.5 feet

stabilized water level at
7.5 feet on 6/14/88

*PID = photo ionization detector
HNU PI 101
ppm = parts per million

**S&H Sampler blow counts converted
to SPT blow counts

***Reference Elevation
(arbitrary datum)

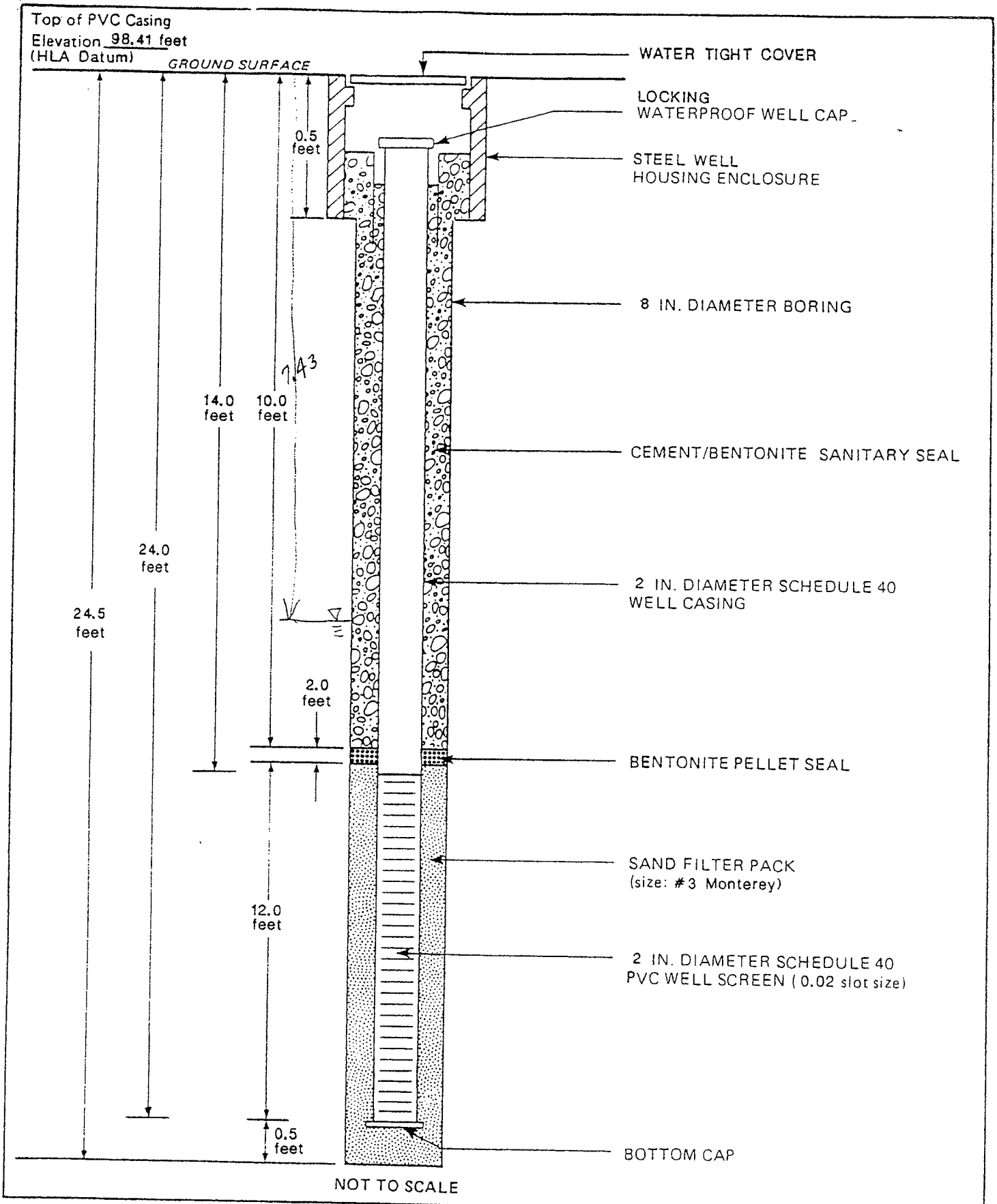
Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Log of Boring MW-8C

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE 5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	JO	7/88		



Harding Lawson Associates
Engineers Geologists
& Geophysicists

Monitoring Well MW-8C Completion Detail

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

10

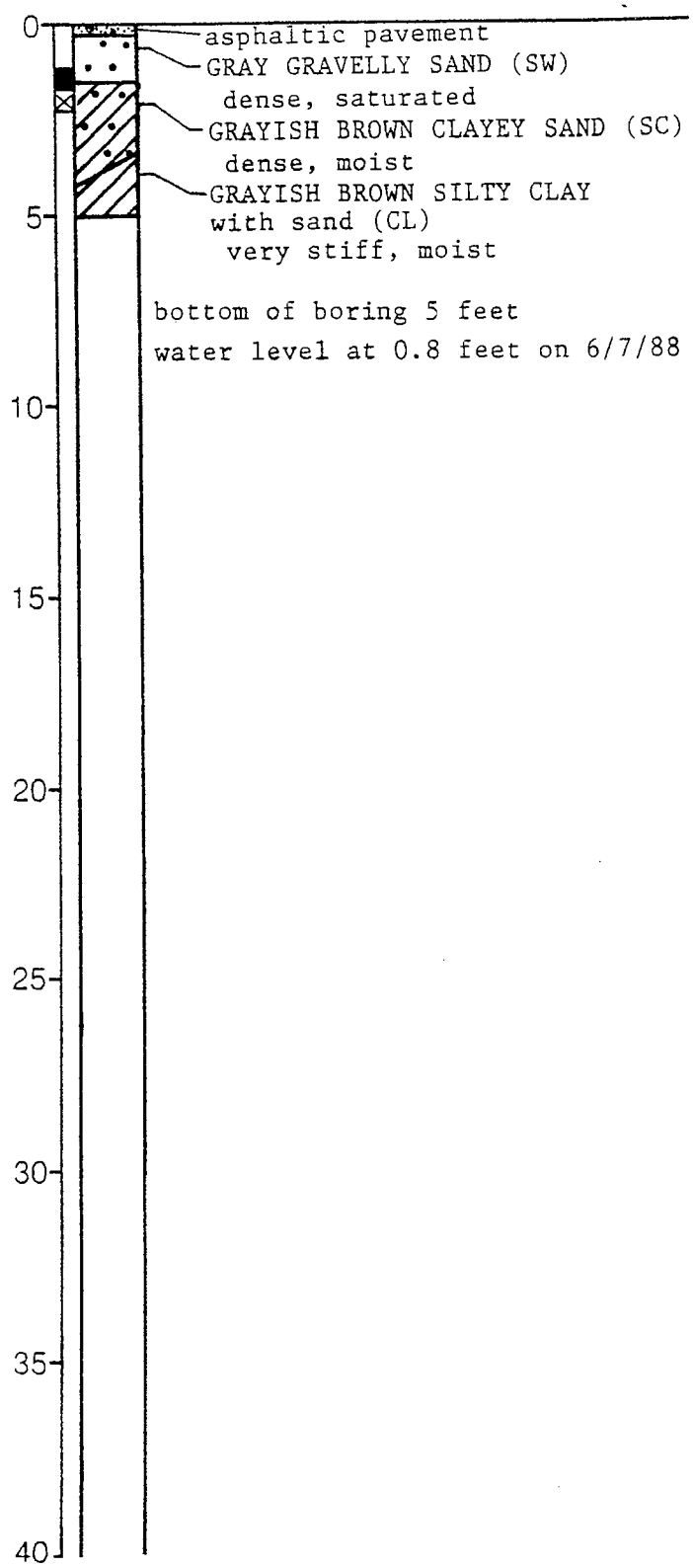
DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	JO	7/88		

FORM GW3

Equipment 8-inch Hollow Stem Auger

Elevation ***98± feet Date 6/7/88

Laboratory Tests	Blows/foot **	PID* Reading (ppm)	Depth (ft)	Sample
	21	170	0	■



■ Sample kept for testing

*PID = photo ionization detector
HNU PI 101
ppm = parts per million

**S&H Sampler blow counts converted to SPT blow counts.

*** Reference Elevation
(arbitrary datum)

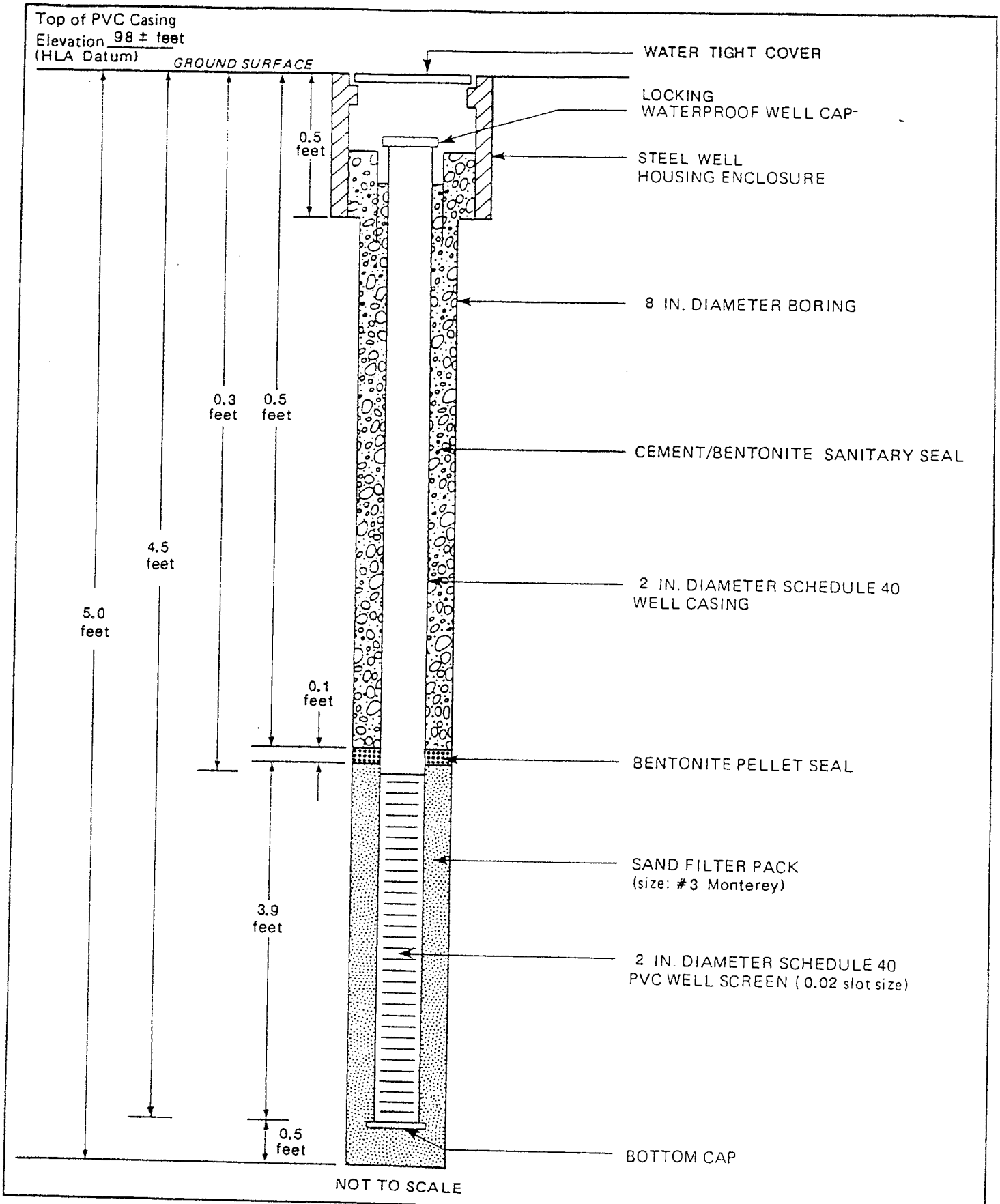
Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Log of Boring MW-8D

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE 6

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251,054.04	AO	7/88		



Harding Lawson Associates
Engineers, Geologists
& Geophysicists

Monitoring Well MW-8D Completion Detail

Texaco Station - 62488000235
500 Grand Avenue
Oakland, California

PLATE **11**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
RS	2251.054.04	AO	7/88		

FORM GW3

Equipment Hollow Stem Auger

Elevation 99.5*** Date 10/10/88

Laboratory Tests	Blows/foot *	TIP (ppm**)	Depth (ft)	Sample	
			0		ASPHALT
					GREEN-GRAY SILTY CLAY W/FINE SAND (CL) moist
	35	6			No odor
		20			BROWN CLAYEY SAND (SC) moist
		1	5		
	29	1			More clay
		300			Less clay
	43	250			HARD WHITE CLAY W/GRAVEL (CL) dry
	63	5			BROWN CLAYEY SILT W/SMALL PIECES LIMESTONE (CL) dry
		6	10		
					BROWN CLAYEY SAND (SC) moist
		ND			
	30	ND			
		ND	15		GRAY-BROWN CLAY W/SOME SAND (CL) wet
	50	ND			▽ Water level (10/10/88)
	26	—			Bottom of boring at 17.5 feet
			20		
			25		
			30		
			35		
			40		

* S&H Sampler Blow Counts Converted to SPT Blow Counts

** Parts Per Million

***HLA Project Datum

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-1
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE 5

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJD	11/88		

Equipment Hollow Stem Auger

Elevation 100 Date 10/10/88

Laboratory Tests	Blows/foot	TIP(ppm)	Depth (ft) Sample
			0
			ASPHALT
			CONCRETE
			Water level (10/10/88)
	3.4	ND	GRAVEL W/TRACE SAND (GP) saturated
	2.1	ND	5
			WHITE SILTY CLAY (CL) very stiff, dry
			Bottom of boring at 8.0 feet
			10
			15
			20
			25
			30
			35
			40

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-2
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE 6

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJD	11/88		

Equipment Hollow Stem Auger

Elevation 99.5 Date 10/10/88

Laboratory Tests	Blows/foot	TIP (ppm)	Depth (ft)	Sample	
			0		ASPHALT
					BROWN CLAY W/SAND (CL) stiff, moist
	26	250			
		270			
		5	5		
		150			BROWN SANDY SILT (ML) stiff, dry
	43	10			
		15			
	28	ND	10		BROWN CLAY W/FINE SAND (CL) moist
		ND			
					WHITE CLAY (CL) very hard, dry
	55	ND			BROWN CLAY (CL) soft, moist
			15		WHITE CLAY (CL) hard, dry
	39				Bottom of boring at 16.5 feet
			20		
			25		
			30		
			35		
			40		

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-3
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE 7

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SD	11/88		

Equipment Hollow Stem Auger

Elevation 98.6 Date 10/10/88

Laboratory Tests	Blows/foot	TIP (ppm)	Depth (ft)	Sample	
			0		ASPHALT
		1200			BROWN-GRAY CLAY (CL) stiff, moist, hydrocarbon odor
	29	250			BROWN MEDIUM COARSE SAND (SC) wet, hydrocarbon odor
			5		
	68	3 2			WHITE CLAY (CL) hard, dry, no odor
	45	—			
			10		BROWN CLAYEY SILT (CL) stiff, dry
	—	—			▽ Water level (10/10/88)
					BROWN CLAYEY SILT W SAND (CL) stiff, wet
			15		
					Bottom of boring at 16.0 feet
			20		
			25		
			30		
			35		
			40		

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-4
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE 8

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJD	11/88		

Equipment Hollow Stem Auger

Elevation 99.5 Date 10/11/88

Laboratory Tests	Blows/foot	TIP(ppm)	Well Screen Interval	Depth (ft)	Sample	
				0		ASPHALT
						GRAY-BROWN CLAY (CL) stiff, moist, very strong hydrocarbon odor
	30	250 250		5		Water Level 5/10/89
	20	ND ND		10		BROWN SANDY CLAY (CL) stiff, moist
						TAN CLAYEY SAND (SC) very soft, wet
	63	—		15		DARK GRAY CLAY W/SOME SAND (CL) soft, moist
						WHITE CLAY (CL) hard, dry
	35	—		20		BROWN CLAYEY SAND (SC) stiff, saturated
						Bottom of boring at 20.0 feet
				25		
				30		
				35		
				40		

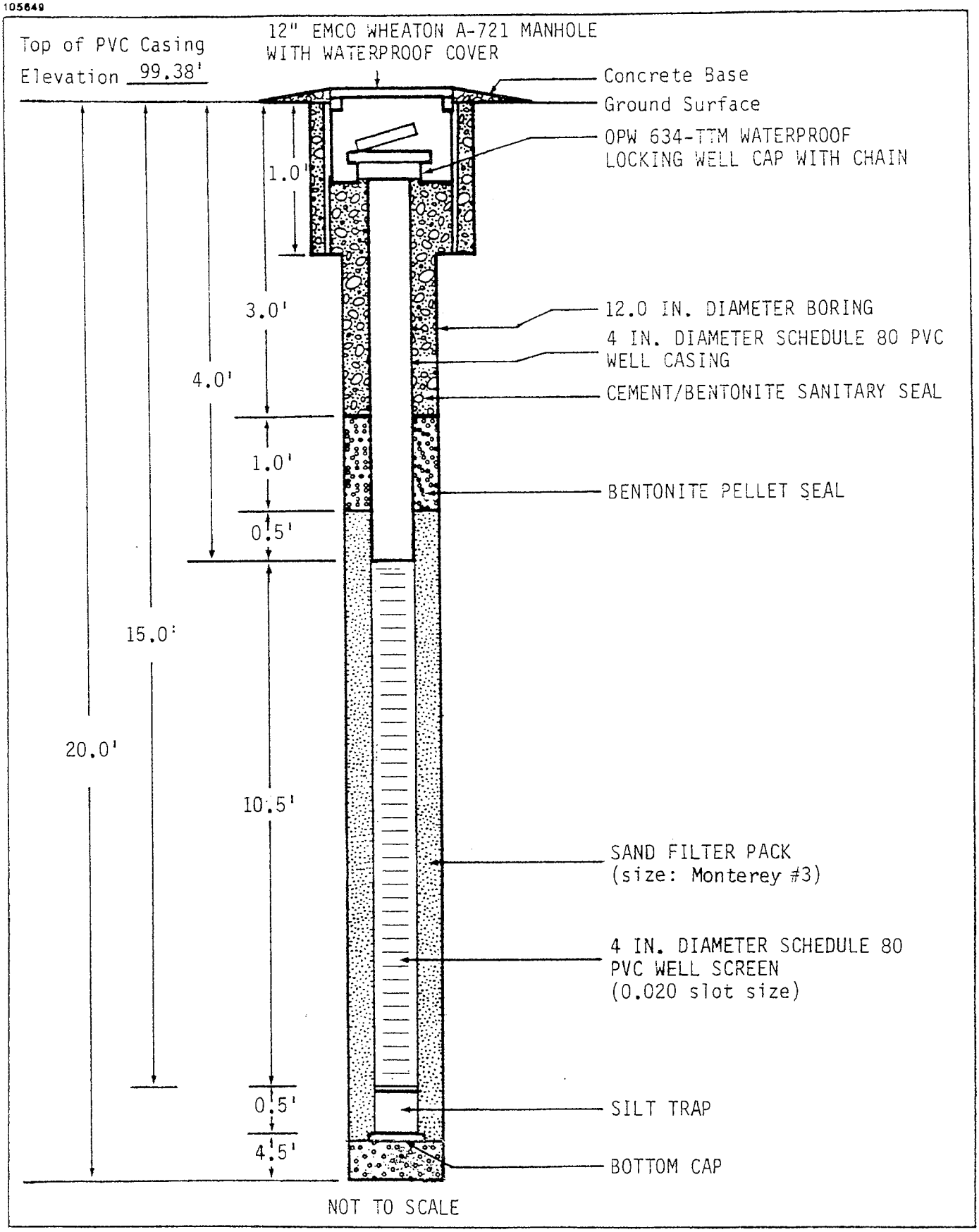
Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Monitoring Well MW-8E
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE **10**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		11/88		

105649



Harding Lawson Associates
Engineers and Geoscientists

Well Construction Diagram MW-8E
Former Texaco Service Station
500 Grand Avenue
Oakland, California

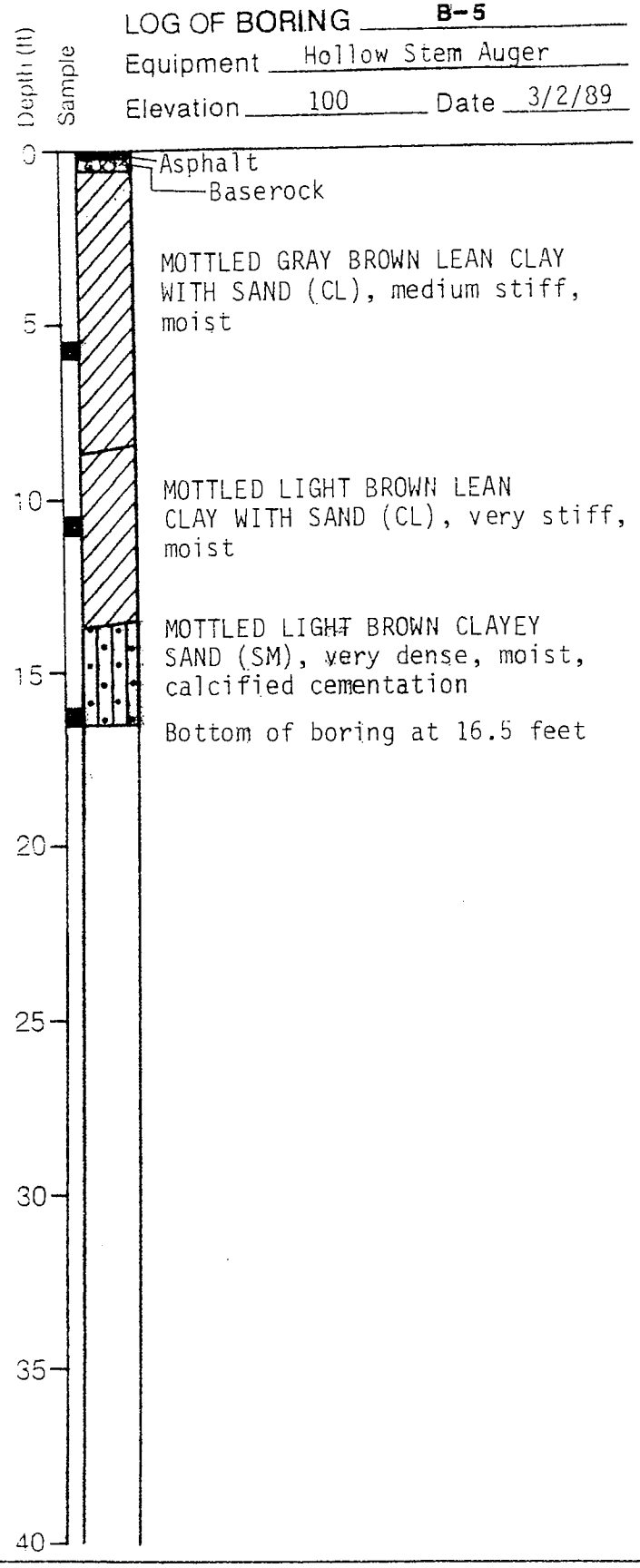
PLATE
13

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJD	12/88		

LOG OF BORING B-5

Equipment Hollow Stem Auger

Elevation 100 Date 3/2/89



Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-5
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE 9

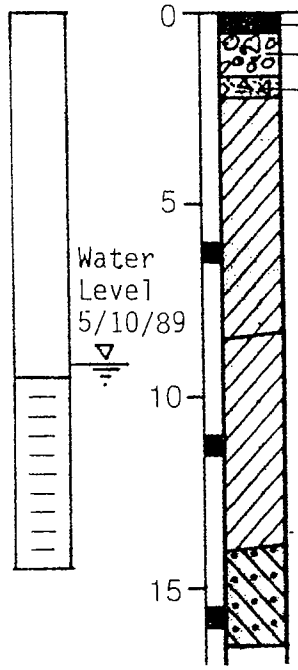
DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJO	5/89		

LOG OF BORING MW-8F

Equipment Hollow Stem Auger

Elevation 98.1 Date 3/16/89

Blows/foot	HNu (ppm)	Depth (ft)	Sample
		0	
10	0	5	
5	0	10	
3	0	15	



Asphalt

Aggregate baserock

Concrete

MOTTLED BROWN LEAN CLAY (CL) stiff, moist, contains sand and some angular fine gravels ½" in diameter

GRAY GREEN LEAN CLAY (CL) medium stiff, moist

GRAY GREEN CLAYEY SAND (SC) very loose, moist, contains fibrous organic material

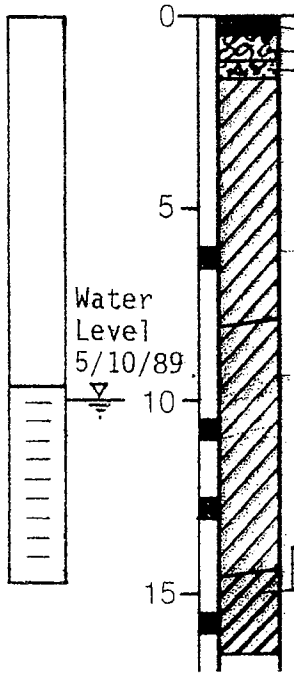
Bottom of boring at 16.5 feet

LOG OF BORING MW-8G

Equipment Hollow Stem Auger

Elevation 97.5 Date 3/16/89

Blows/foot	HNu (ppm)	Depth (ft)	Sample
		0	
9	0	5	
6	0	10	
8	0		
5	0	15	



Asphalt

Aggregate baserock

Concrete

MOTTLED BROWN LEAN CLAY WITH SAND (CL), stiff moist, contains orange sandy concretions

GRAY GREEN SANDY LEAN CLAY (CL) medium stiff, moist

BLACK FAT CLAY (CH) medium stiff, moist, contains fibrous organics

Bottom of boring at 16.5 feet

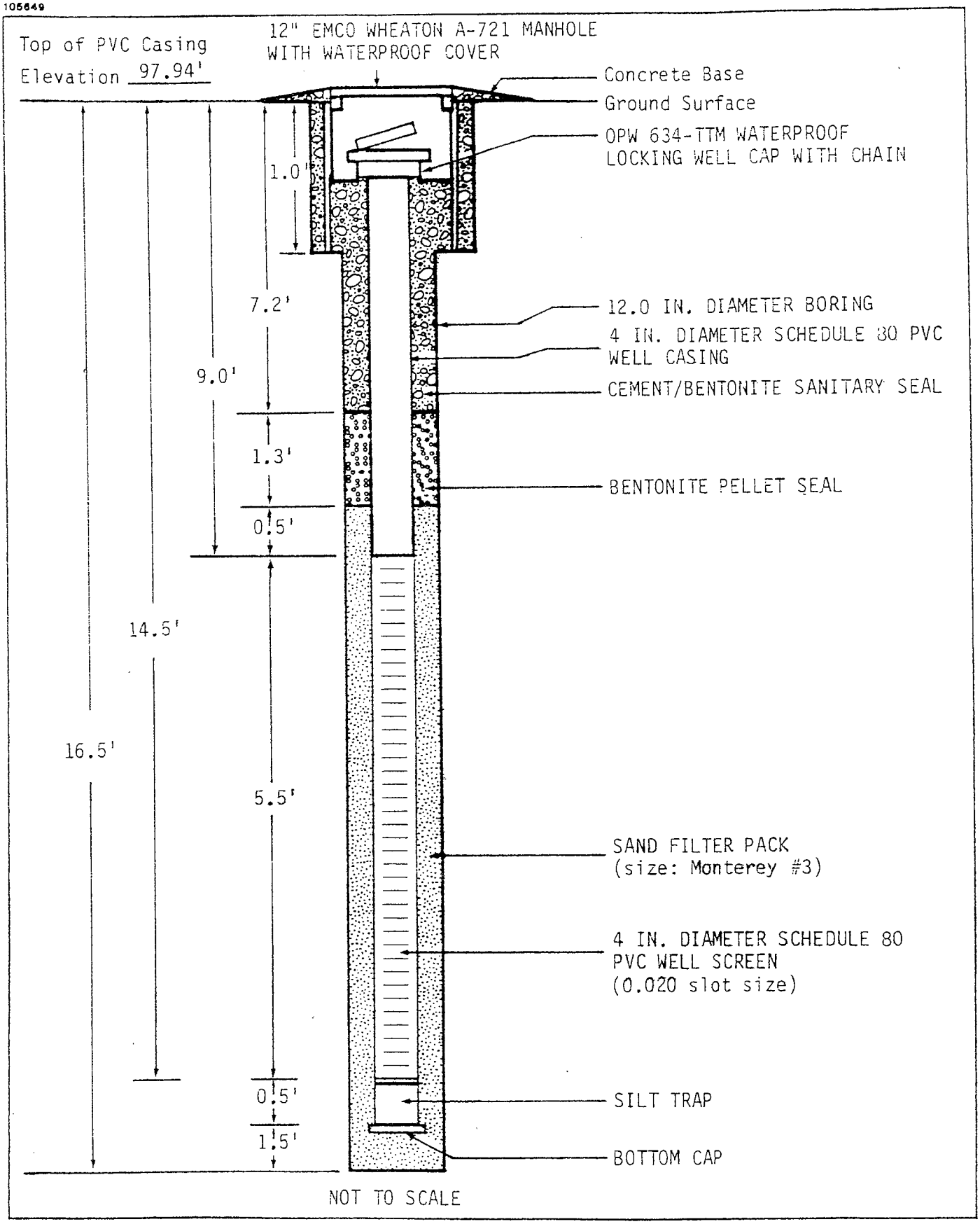
Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring MW-8F and MW-8G
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE **11**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SGD	5/89		

105649



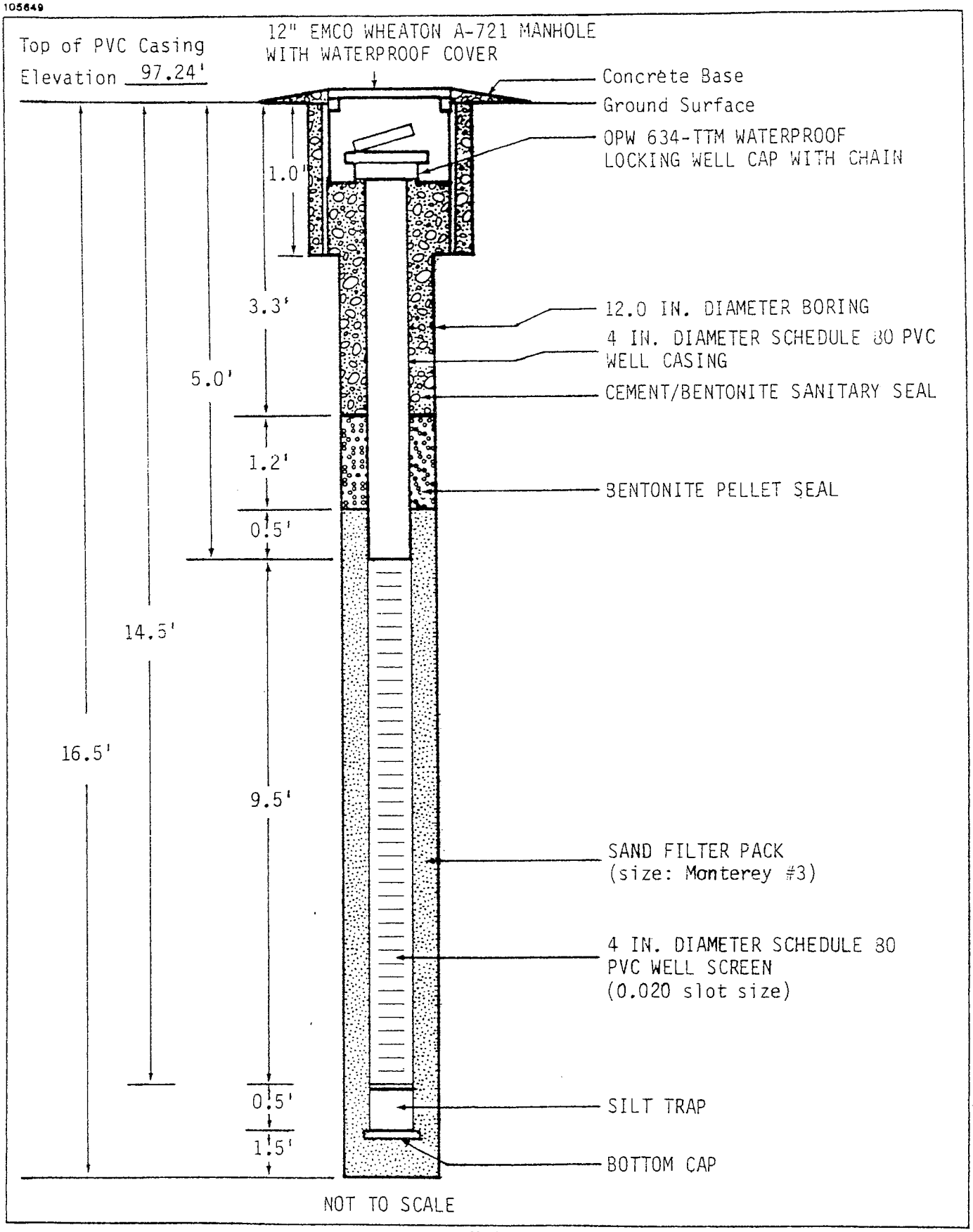
Harding Lawson Associates
Engineers and Geoscientists

Well Construction Diagram - MW-8F
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE **14**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJD	5/89		

105649



Harding Lawson Associates
Engineers and Geoscientists

Well Construction Diagram – MW-8G
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE **15**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	SJO	5/89		

2884028 B15/14W 25Q

A

LOG OF BORING B-6

Equipment 8" Hollow Stem Auger

Elevation _____ Date 10/26/89

Blows/foot	HNu(ppm)	Odor	Depth (ft)	Sample	
			0		
Sampled with hand auger	0				GRAY-BROWN CLAY (CL), moist
37	0		5		GRAY-BROWN CLAY (CL), hard, moist, with 1/2"-1" gravel WHITE-GRAY CLAY (CL), very stiff, moist, with fine roots
			10		
			15		

Driller: Maggiora Brothers

Kevin

B

LOG OF BORING B-7

Equipment 8" Hollow Stem Auger

Elevation _____ Date 10/26/89

Blows/foot	HNu(ppm)	Odor	Depth (ft)	Sample	
			0		Asphalt
27	110		5		MOTTLED GRAY-BROWN CLAY (CL), very stiff, moist
			10		
			15		

Driller: Maggiora Brothers

Kevin

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Logs of Borings B-6 and B-7
Former Texaco Station
500 Grand Ave.
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
CT	2251,081.03		12/89		

288402 C1 P 1S/4W 25Q

C

LOG OF BORING B-8

Equipment 8" Hollow Stem Auger

Elevation _____ Date 10/26/89

Blows/foot	HNu(ppm)	Odor	Depth (ft)	Sample	
			0		Asphalt GREEN-GRAY CLAY (CL), very stiff, moist
24	20				MOTTLED GREEN, RED, BROWN CLAY (CL), very stiff, moist, minor gravel ≤1/4" diameter.
			5		
			10		
			15		

Driller: Maggiora Brothers

Kevin

D

LOG OF BORING B-9

Equipment 8" Hollow Stem Auger

Elevation _____ Date 10/26/89

Blows/foot	HNu(ppm)	Odor	Depth (ft)	Sample	
			0		Asphalt Strong diesel smell in cuttings GREEN-GRAY SILTY CLAY (CL), medium stiff, moist
	20				
11	60				GREEN SILTY SAND (SM), loose, very moist
			5		
			10		
			15		

Driller: Maggiora Brothers

Kevin

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Logs of Borings B-8 and B-9
Former Texaco Station
500 Grand Ave.
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
CT	2251,081.03		12/89		

288402 B, F15/4W 25Q

E

LOG OF BORING B-10

Equipment 8" Hollow-stem auger

Elevation _____ Date 01/08/90

Laboratory Tests	Blows/foot	Photo-Ionization Detector (ppm)	Depth (ft)	Sample	
			0		Asphalt WELL GRADED GRAVEL WITH SAND
	24	30			GREENISH-BLACK LEAN CLAY WITH SAND (CL), hard, moist, some gravel
	12	20			GRAY-GREEN FAT CLAY (CH), very stiff, moist, some sand
	18	10	5		MOTTLED GRAY AND BROWN SANDY FAT CLAY (CH), hard, moist, some gravel
	20	0			LIGHT BROWN SANDY FAT CLAY (CH), hard, moist, some gravel, sandier at 7.5 feet
	15	0	10		GRAYISH-BROWN SANDY SILT (ML), hard, dry
	27	0			Bottom of boring at 9.5 feet
			15		

Driller: Week's

~~Kevin~~ Gary

CHECK PRINT
date 3/1 drafter QL

F

LOG OF BORING B-11

Equipment 8" Hollow-stem auger

Elevation _____ Date 01/08/90

Laboratory Tests	Blows/foot	Photo-Ionization Detector (ppm)	Depth (ft)	Sample	
			0		Asphalt WELL GRADED GRAVEL WITH SAND
	14	35			MOTTLED GRAY-GREEN SANDY SILT (ML), hard, moist
	28	140			MOTTLED GRAY-GREEN AND BROWN SILT (ML), hard, moist
	48		5		BROWN SILT (ML), hard, moist, some calcification at ~7 feet
	48	70			WHITE SILTSTONE (ML), hard, dry
	60	10			Bottom of boring at 8.5 feet
			10		Water level: ? Dampness.
			15		

Driller: Week's

~~Kevin~~ Gary

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Logs of Borings B-10 and B-11
- Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		2/90		

2S402G1S/4W 25Q

LOG OF BORING B-12

Equipment 8" Hollow-stem auger

Elevation _____ Date 01/08/90

Laboratory Tests	Blows/foot	Photo-Ionization Detector (ppm)	Depth (ft)	Sample	
			0		Asphalt
	14	15			WELL GRADED GRAVEL to 1.5"
	12	50			GRAY FAT CLAY (CH), hard, moist
	16	100			MOTTLED GRAY AND BROWN FAT CLAY (CH), very stiff, moist
	43	2	5		GRAY-GREEN LEAN CLAY WITH FINE SAND AND SILT (CL), hard, moist, some gravel
	60				BROWN SILT (ML), hard, dry
					Bottom of boring at 8.0 feet
			10		
			15		

No water

Driller:
Weeks

Gary

CHECK PRINT
date 3/1 drafter DL

Harding Lawson Associates
Engineers, Geologists & Geophysicists

Log of Boring B-12
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		2/90		

288379

LOG OF BORING MW-8H

Equipment 12" Hollow-stem auger

Elevation _____ Date 01/10/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Depth (ft)	Sample	Description
				0		Concrete
		2				GRAY LEAN CLAY WITH SAND AND GRAVEL (CL), medium, moist
		2				BLACK FAT CLAY (CH), soft, moist, some sand and gravel
	9	110		5		GRAY-GREEN SILTY CLAY (CL-ML), stiff, moist
	27	0		10		BROWN LEAN CLAY WITH VERY FINE SAND (CL), hard, moist, some silt
						BROWN SILT WITH SAND (ML), hard, slightly moist, some clay
	34	0		15		Bottom of boring at 16.5 feet

LOG OF BORING MW-8I

Equipment 12" Hollow-stem auger

Elevation _____ Date 01/09/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Depth (ft)	Sample	Description
				0		Concrete
		5				BASEROCK - GRAY WELL GRADED GRAVEL WITH SAND (GW)
	34	10				MOTTLED GRAY-BROWN SILT (ML), hard, dry, some fine sand
	18	70		5		GRAY SILT (ML), hard, moist, some sand
	31	0		10		MOTTLED BROWN SILT (ML), hard, slightly moist
						MOTTLED LIGHT BROWN/CREAM SILT (ML), hard, slightly moist, some gravel
	34	0		15		Bottom of boring at 16.5 feet

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Logs of Borings MW-8H and MW-8I
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		2/90		

288402

LOG OF BORING MW-8J

Equipment 12" Hollow-stem auger

Elevation _____ Date 01/09/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Depth (ft)	Sample	
				0		Concrete
		35				DARK GRAY SANDY LEAN CLAY (CL), soft, moist, some gravel
		10				
				5		
	23	80				GREEN-GRAY SANDY LEAN CLAY (CL), hard, moist, very fine sand and silt
						WHITE FAT CLAY (CH), soft, moist
				10		MOTTLED TAN/WHITE SILT (ML), hard, dry
	44	4				BROWN WELL GRADED GRAVEL WITH SAND (GW), very dense, saturated, gravel, some silt, fine sand
				15		
	42	0				Bottom of boring at 16.5 feet

LOG OF BORING MW-8K

Equipment 12" Hollow-stem auger

Elevation _____ Date 01/08/90

Laboratory Tests	Blows/foot	Photo Ionization Detector (ppm)	Well Screen Interval	Depth (ft)	Sample	
				0		Asphalt Concrete
	6	4				MOTTLED GRAY-BROWN LEAN CLAY (CL), stiff, moist
	5	4				
				5		Same, some small gravel
	5	15				Drilling aborted
						Bottom of boring at 6.0 feet
				10		
				15		

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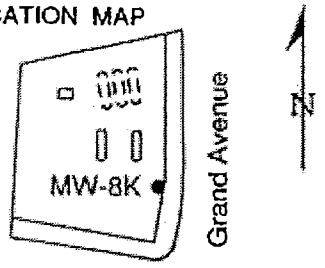
Engineers, Geologists & Geophysicists

Logs of Borings MW-8J and MW-8K
Former Texaco Service Station
500 Grand Avenue
Oakland, California

PLATE

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03		2/90		

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

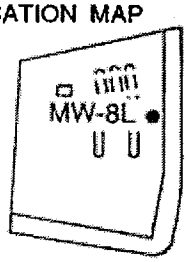
WELL NO. [redacted]
PAGE 1 OF 1

PROJECT NO. 340-34.20
LOGGED BY: L.D.
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: #3 SAND

CLIENT: TEXACO
DATE DRILLED: 5-18-93
LOCATION: 500 Grand Avenue, Oakland
HOLE DIAMETER: 8"
HOLE DEPTH: 19.5'
WELL DIAMETER: [redacted]
WELL DEPTH: 18'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
NEAT CEMENT; BENTONITE; #3 SAND				0			GC	CLAYEY GRAVEL - FILL: dark gray; 30-40% clay; 10-15% sand; fine to coarse gravel; angular; no product odor.
	Sat	6	7	6				@15': as above; fill; loose; no product odor.
	Mst	3	27	10			CL	SANDY CLAY: olive brown; low plasticity; some silt; 15-25% fine to coarse sand; medium dense; no product odor.
	Mst	12	60	14			CL	GRAVELLY CLAY: brown; low plasticity; 25-35% coarse sand to gravel; dense; no product odor.
	Sat	2	32	18			SM	SILTY SAND: (1/4" found in the shoe of sampler); dark yellowish brown; some clay; 15-20% silt; fine sand; medium dense; no product odor.
				20				BOTTOM OF BORING AT 19.5'
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-8L
PAGE 1 OF 1

PROJECT NO. 340-34.20
LOGGED BY: L.D.
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: #3 SAND

CLIENT: TEXACO
DATE DRILLED: 5-18-93
LOCATION: 500 Grand Avenue, Oakland
HOLE DIAMETER: 8"
HOLE DEPTH: 19.5'
WELL DIAMETER: 2"
WELL DEPTH: 18'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
#3 SAND, NEAT CEMENT, BENTONITE				2			GC	CLAYEY GRAVEL - FILL: dark gray; 30-40% clay; 10-15% sand; fine to coarse gravel; angular; medium dense; faint product odor.
	Sat	100	24	6			CL	SANDY CLAY: olive brown; low plasticity; some silt; 15-25% fine to coarse sand; medium dense; faint product odor.
	Mst	20	50	10			SM	SILTY SAND: dark yellowish brown; some clay; 15-20% silt; fine sand; dense; no product odor.
	Mst	2	41	16				@15': as above; no product odor.
	Mst	0	49	18			CL	SANDY CLAY: light olive brown; iron oxide and manganese oxide; medium dense; no product odor.
								BOTTOM OF BORING AT 19.5'

Boring/Well Log Legend

KEY TO SYMBOLS/ABBREVIATIONS

- First encountered groundwater
- Static groundwater
- Soils logged by hand-auger or air-knife cuttings
- Soils logged by drill cuttings or disturbed sample
- Undisturbed soil sample interval
- Soil sample retained for submittal to analytical laboratory
- No recovery within interval
- Hydropunch screen interval
- ——— Definite contact line
- ----- Inferred or gradational contact line

PID = Photo-ionization detector or organic vapor meter reading in parts per million (ppm)

fbg = Feet below grade

Blow Counts = Number of blows required to drive a California-modified split-spoon sampler using a 140-pound hammer falling freely 30 inches, recorded per 6-inch interval of a total 18-inch sample interval

msl = Mean sea level

Soils logged according to the USCS.

UNIFIED SOILS CLASSIFICATION SYSTEM (USCS) SUMMARY

Major Divisions			Graphic	Group Symbol	Typical Description
Coarse-Grained Soils (>50% Sands and/or Gravels)	Gravel and Gravelly Soils	Clean Gravels (≤5% fines)		GW	Well-graded gravels, gravel-sand mixtures, little or no fines
				GP	Poorly-graded gravels, gravel-sand mixtures, little or no fines
		Gravels with Fines (≥15% fines)		GM	Silty gravels, gravel-sand-silt mixtures
				GC	Clayey gravels, gravel-sand-clay mixtures
	Sand and Sandy Soils	Clean Sands (≤5% fines)		SW	Well-graded sands, gravelly sands, little or no fines
				SP	Poorly-graded sands, gravelly sand, little or no fines
		Sands with Fines (≥15% fines)		SM	Silty sands, sand-silt mixtures
				SC	Clayey sands, sand-clay mixtures
Fine-Grained Soils (>50% Silts and/or Clays)	Silts and Clays			ML	Inorganic silts, very fine sands, silty or clayey fine sands, clayey silts with slight plasticity
				CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
				OL	Organic silts and organic silty clays of low plasticity
	Silts and Clays			MH	Inorganic silts, micaceous or diatomaceous fine sand or silty soils
				CH	Inorganic clays of high plasticity
				OH	Organic clays of medium to high plasticity, organic silts
Highly Organic Soils				PT	Peat, humus, swamp soils with high organic contents

CAMBRIA

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	**BORING/WELL NAME**	S-1
JOB/SITE NAME	21-1173	**DRILLING STARTED**	20-Nov-06
LOCATION	500 Grand Ave, Oakland, CA	**DRILLING COMPLETED**	20-Nov-06
PROJECT NUMBER	61H-2049	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Fisch Environmental	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVAL**	NA
LOGGED BY	K. Hoey	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	D. Herzog, PG# 7211	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							Fill	0.5	Portland Type I/II
					MH		**SILT:** dark grey; dry; hard; 70% silt, 25% clay, 5% sand; medium plasticity; moderate estimated permeability.	2.0	
					MH		**SILT with sand:** dark grey; moist; 60% silt, 20% clay, 20% sand; medium plasticity; moderate estimated permeability.	3.0	
581		S-1			CH		**CLAY:** green-grey; moist; soft; 50% clay, 30% silt, 20% sand; high plasticity; low estimated permeability.	4.0	Bottom of Boring @ 4 ft

WELL LOG (PID) R:\21-117-2\GINT\21-1173 GINT.GPJ DEFAULT.GDT 2/28/07

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	**BORING/WELL NAME**	S-2
JOB/SITE NAME	21-1173	**DRILLING STARTED**	20-Nov-06
LOCATION	500 Grand Ave, Oakland, CA	**DRILLING COMPLETED**	20-Nov-06
PROJECT NUMBER	61H-2049	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Fisch Environmental	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVAL**	NA
LOGGED BY	K. Hoey	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	D. Herzog, PG# 7211	**DEPTH TO WATER (Static)**	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							Fill	0.5	Portland Type I/II
					ML		**SILT with sand:** brown-grey; dry; 75% silt, 25% sand; medium plasticity; high estimated permeability.	1.5	
					ML		**SILT with sand:** brown-grey; dry; 65% silt, 20% sand, 15% clay; medium plasticity; moderate estimated permeability.	2.0	
1257		S-2			ML		**SILT:** brown-grey; moist; 65% silt, 25% clay, 10% sand; medium plasticity; moderate estimated permeability.	4.0	Bottom of Boring @ 4 ft

WELL LOG (PID) R:\21-1173 OAKLAND\GINT\21-1173 GINT.GPJ DEFAULT.GDT 2/8/07

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	**BORING/WELL NAME**	S-3
JOB/SITE NAME	21-1173	**DRILLING STARTED**	20-Nov-06
LOCATION	500 Grand Ave, Oakland, CA	**DRILLING COMPLETED**	20-Nov-06
PROJECT NUMBER	61H-2049	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Fisch Environmental	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hydraulic push	**TOP OF CASING ELEVATION**	Not Surveyed
BORING DIAMETER	2"	**SCREENED INTERVAL**	NA
LOGGED BY	K. Hoey	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	D. Herzog, PG# 7211	**DEPTH TO WATER (Static)**	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0.0		S-3					**FILL:** grey; wet; 45% gravel 20% clay, 25% sand,10% silt.	4.0	◄ Portland Type I/II Bottom of Boring @ 4 ft

WELL LOG (PID) R:\21-1173 OAKLAND\GINT\21-1173 GINT.GPJ DEFAULT.GDT 2/8/07

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	BORING/WELL NAME	SV-4
JOB/SITE NAME	21-1173	DRILLING STARTED	18-Mar-08
LOCATION	500 Grand Ave, Oakland, CA	DRILLING COMPLETED	18-Mar-08
PROJECT NUMBER	612049	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	CRA	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	B. Summersett	DEPTH TO WATER (First Encountered)	2.0 fbg (18-Mar-08)
REVIEWED BY	B. Carey	DEPTH TO WATER (Static)	2.0 fbg (18-Mar-08)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt to 6"	0.5	Portland Type I/II
							FILL: dark brown; wet; 40% gravel, 30% silt, 30% sand; high estimated permeability.	3.0	Bottom of Boring @ 3 fbg

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	BORING/WELL NAME	SV-5
JOB/SITE NAME	21-1173	DRILLING STARTED	18-Mar-08
LOCATION	500 Grand Ave, Oakland, CA	DRILLING COMPLETED	18-Mar-08
PROJECT NUMBER	612049	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	CRA	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	J. Bostick	DEPTH TO WATER (First Encountered)	4.5 fbg (18-Mar-08) ▽
REVIEWED BY	B. Carey	DEPTH TO WATER (Static)	3.0 fbg (18-Mar-08) ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
0.0		SV-5-2			GM		Asphalt to 6"	0.5	Portland Type I/II
							FILL: dark brown; moist; 40% gravel, 30% silt, 30% sand; high estimated permeability.	1.5	
							Silty GRAVEL with sand: dark brown; moist; 40% gravel 30% sand,30% silt: high estimated permeability. ▼ ▽	5.0	Bottom of Boring @ 5 fbg
				5					

WELL LOG (PID) I:\ROCKL~1.CHE\21-117~2\GINT\21-1173 GINT.GPJ DEFAULT.GDT 7/31/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	BORING/WELL NAME	SV-6
JOB/SITE NAME	21-1173	DRILLING STARTED	18-Mar-08
LOCATION	500 Grand Ave, Oakland, CA	DRILLING COMPLETED	18-Mar-08
PROJECT NUMBER	612049	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	CRA	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	B. Summersett	DEPTH TO WATER (First Encountered)	2.0 fbg (18-Mar-08)
REVIEWED BY	B. Carey	DEPTH TO WATER (Static)	2.0 fbg (18-Mar-08)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt to 6"	0.5	
					GM		**Silty GRAVEL with sand:** dark brown; wet; 40% gravel 30% sand,30% silt: high estimated permeability.	3.0	Portland Type I/II Bottom of Boring @ 3 fbg

WELL LOG (PID) I:\ROCKLI~1.CHE\21-117~2\GINT\21-1173 GINT.GPJ DEFAULT.GDT 7/31/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA
Telephone: 916-677-3407
Fax: 916-677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	BORING/WELL NAME	SV-7
JOB/SITE NAME	21-1173	DRILLING STARTED	18-Mar-08
LOCATION	500 Grand Ave, Oakland, CA	DRILLING COMPLETED	18-Mar-08
PROJECT NUMBER	612049	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	CRA	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	J. Bostick	DEPTH TO WATER (First Encountered)	5.9 fbg (18-Mar-08)
REVIEWED BY	B. Carey	DEPTH TO WATER (Static)	3.0 fbg (18-Mar-08)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt to 6"	0.5	
69.2		SV-7-2			ML		SILT: brown with blue grey mottling; moist; 60%silt, 30% clay, 10% sand; Moderate plasticity; moderate estimated permeability; strong odor.		Portland Type I/II
1156		SV-7-5		5			@ 5fbg Sandy SILT: light brown; wet; 50% silt 30% sand,20% clay: low plasticity, moderate estimated permeability.	6.0	Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\ROCKL\~1.CHE\21-117~2\GINT\21-1173 GINT.GPJ DEFAULT.GDT 7/31/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA
Telephone: 916-677-3407
Fax: 916-677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management	BORING/WELL NAME	SV-8
JOB/SITE NAME	21-1173	DRILLING STARTED	19-Mar-08
LOCATION	500 Grand Ave, Oakland, CA	DRILLING COMPLETED	19-Mar-08
PROJECT NUMBER	612049	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	CRA	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand Auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3"	SCREENED INTERVAL	NA
LOGGED BY	B. Summersett	DEPTH TO WATER (First Encountered)	5.9 fbg (19-Mar-08)
REVIEWED BY	B. Carey	DEPTH TO WATER (Static)	3.0 fbg (19-Mar-08)
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt to 6"	0.5	
0.0		SV-8-2			ML		SILT:; brown with white mottling; moist; 60%silt, 30% clay, 10% sand; Moderate plasticity; moderate estimated permeability; strong odor.		Portland Type I/II
0.0		SV-8-5		5				6.0	Bottom of Boring @ 6 fbg

WELL LOG (PID) I:\ROCKLI-1.CHE\21-1117-2\GINT\21-1173 GINT.GPJ DEFAULT.GDT 5/19/08

APPENDIX C

SECOND AND THIRD QUARTER 2009 GROUNDWATER MONITORING REPORTS AND HISTORICAL GROUNDWATER MONITORING DATA

GETTLER-RYAN INC.

TRANSMITTAL

October 29, 2009
G-R #385866

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

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

RE: Former Texaco Service Station
#211173
500 Grand Avenue
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	October 19, 2009	Groundwater Monitoring and Sampling Report **Third Quarter Event of October 1, 2009**

COMMENTS:

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

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

Enclosures

trans/211173-SHF

WELL CONDITION STATUS SHEET

Client/Facility #: Chevron #211173
Site Address: 500 Grand Avenue
City: Oakland, CA

Job # 385866
Event Date: 10.1.09
Sampler: FT

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-8F	OK	→	→	S=2	OK	→	→			EMCO | 12" | 2	
MW-8G	OK	→	→	S=2	OK	→	→			EMCO | 12" | 2	
MW-8H	OK	N/A	N/A	N/A	OK	→	→			CITY MONUMENT 8"	
MW-8I	OK	N/A	N/A	N/A	OK	→	→			" " "	
MW-8J	OK	N/A	N/A	N/A	OK	→	→			CITY MONUMENT 8"	
MW-8K	OK	N/A	N/A	N/A	OK	→	→			CHRISTY 12"	
MW-8L	OK	N/A	N/A	N/A	OK	OK	SEE NOTE	↓	↓	CHRISTY 12"	

Comments MW-8L - CASING BENT @ .90 FEET. ALSO OBSTRUCTION IN WELL UNABLE TO ACCESS (GAUGE OR SAMPLE) POSSIBLE ROOT OBSTRUCTION THERE IS A OLD TREE ± 20' SOUTH OF WELL BY CURB

GETTLER-RYAN INC.

October 19, 2009
G-R Job #385866

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

RE: Third Quarter Event of October 1, 2009
Groundwater Monitoring & Sampling Report
Former Texaco Service Station #211173
500 Grand Ave.
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.

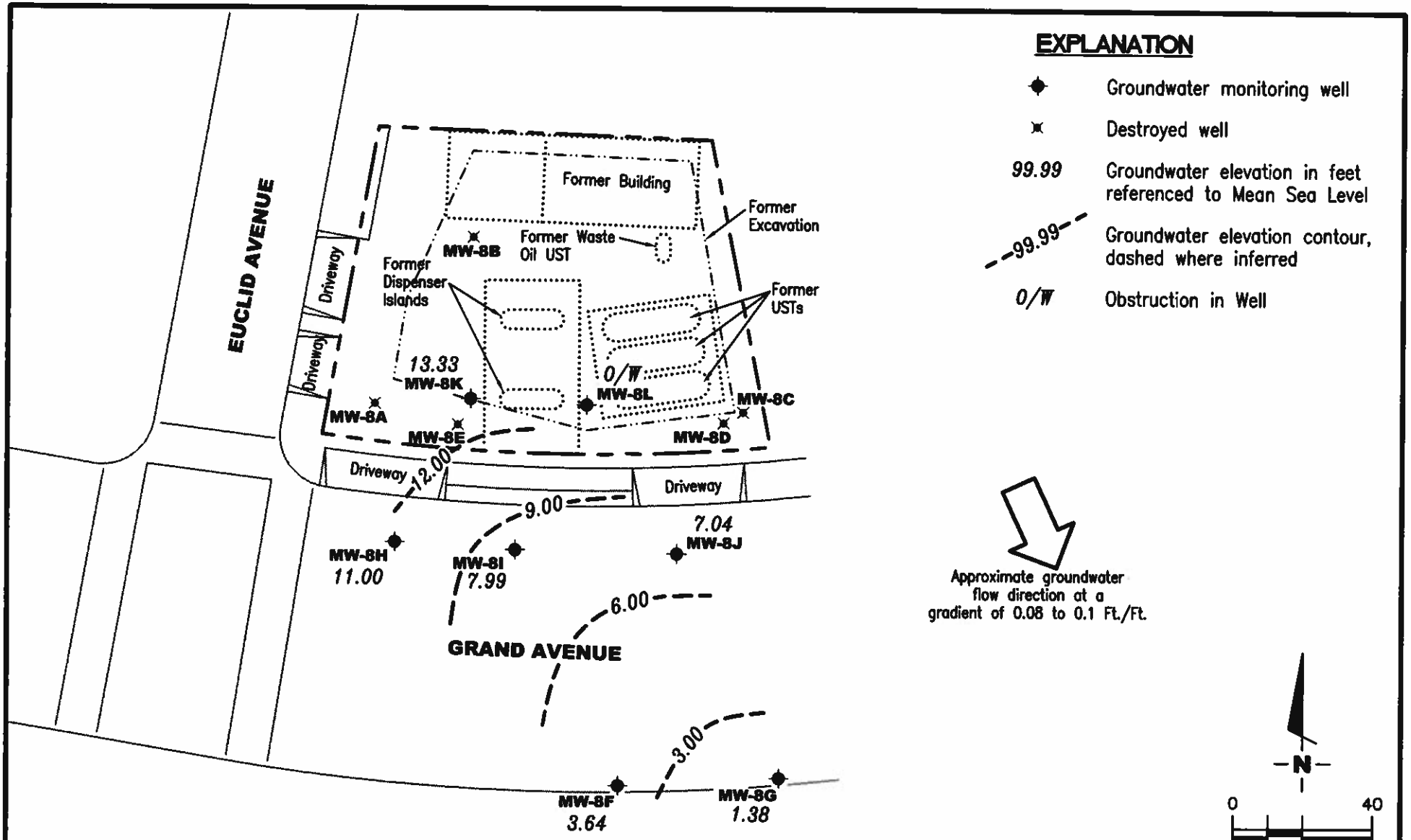
Sincerely,

Deanna L. Harding
Project Coordinator

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

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

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



Source: Figure modified from drawing provided by CRA, Figure 2, Site Plan, 5/27/2008.

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

POTENTIOMETRIC MAP
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
385866		October 1, 2009	

FILE NAME: P:\Enviro\Texaco\211173\009-211173.dwg | Layout Tab: Pot4

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8A													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8B													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8C													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8D													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8E													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8F													
01/23/92	97.94	10.24	87.70	--	<50	1,300	4.0	1.3	<0.5	1.9	--	--	--
02/28/92	97.94	9.93	88.01	--	--	--	--	--	--	--	--	--	--
03/26/92	97.94	8.78	89.16	--	--	--	--	--	--	--	--	--	--
04/30/92	97.94	9.36	88.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.94	11.83	86.11	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
11/19/92	97.94	11.22	86.72	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93	97.94	9.66	88.28	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93	97.94	8.83	89.11	--	<50	<100	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	14.04	10.16	3.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	14.04	10.60	3.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.04	9.29	4.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	14.04	9.34	4.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	14.04	10.14	3.90	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	14.04	10.42	3.62	--	<50	520	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8F (cont)														
01/31/95		14.04	7.47	6.57	--	<50	290	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95		14.04	8.00	6.04	--	<50	54	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95		14.04	8.08	5.96	--	<50	83	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95		14.04	8.70	5.34	--	<50	51	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96		14.04	7.16	6.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96		14.04	7.25	6.79	--	<50	62	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96		14.04	8.72	5.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96		14.04	8.16	5.88	--	210	110	17	17	11	46	<30	--	--
02/21/97		14.04	5.53	8.51	--	<50	85	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97		14.04	7.85	6.19	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	--	--
07/30/97		14.04	8.87	5.17	--	<50	93	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97		14.04	9.16	4.88	--	<50	140	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98		14.04	8.56	5.48	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98		14.04	8.30	5.74	--	<50	730	<0.5	<0.5	<0.5	<0.5	2.9	--	--
08/04/98		14.04	10.67	3.37	--	<50	210	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98		14.04	8.72	5.32	--	<50	210	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99		14.04	8.78	5.26	--	<50.0	230	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99		14.04	8.24	5.80	--	<50	120	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99		14.04	8.87	5.17	--	<50.0	176	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.7/1.4
11/03/99		14.04	9.40	4.64	--	<50.0	130	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	4.6/2.0
02/29/00		14.04	8.00	14.04	--	<50.0	59	<0.500	<0.500	<0.500	<0.500	<2.50	--	6.0/1.4
04/24/00		14.04	7.05	14.04	--	<50.0	161	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.1/2.0
07/25/00		14.04	8.66	14.04	--	<50.0	123	<0.500	<0.500	<0.500	<0.500	<2.50	--	0.4/1.2
11/06/00		14.04	9.37	14.04	--	--	77.3[8]	--	--	--	--	--	--	0.7/1.3
06/05/09[1]		14.04	8.99	5.05	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	NP[5]	14.04	12.41	1.63	--	<50	300	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
10/01/09[4]	**NP[5]**	**14.04**	**10.40**	**3.64**	--	**<50**	**81[8]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G													
01/23/92**	97.24	11.30	85.94	--	<50	980	<0.5	<0.5	<0.5	<0.5	--	--	--
02/28/92	97.24	10.83	86.41	--	--	--	--	--	--	--	--	--	--
03/26/92	97.24	9.20	88.04	--	--	--	--	--	--	--	--	--	--
04/30/92	97.24	9.00	88.24	--	<50	<50	1.7	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.24	13.32	83.92	--	WELL DRY		--	--	--	--	--	--	--
11/19/92	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/12/93	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
05/06/93	97.24	11.18	86.06	--	<50	60	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	13.32	9.51	3.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	13.32	10.93	2.39	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	13.32	9.69	3.63	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	13.32	9.24	4.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	13.32	9.74	3.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	13.32	10.08	3.24	--	<50	530	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	13.32	5.75	7.57	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95	13.32	6.60	6.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	13.32	8.14	5.18	--	<50	120	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	13.32	9.16	4.16	--	<50	140	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	13.32	7.18	6.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	13.32	7.00	6.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	13.32	8.94	4.38	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	13.32	9.22	4.10	--	190	57	16	16	9.0	39	<30	--	--
02/21/97	13.32	6.11	7.21	--	<50	54	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	13.32	7.54	5.78	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	13.32	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/05/97	13.32	9.65	3.67	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	13.32	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	13.32	7.57	5.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	13.32	9.37	3.95	--	<50	570	<0.5	<0.5	<0.5	<0.5	4.0	--	--
08/04/98	13.32	9.89	3.43	--	<50	200	<0.5	<0.5	<0.5	<0.5	<2.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G (cont)														
11/05/98		13.32	10.81	2.51	--	<50	170	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99		13.32	8.63	4.69	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99		13.32	7.95	5.37	--	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99		13.32	9.11	4.21	--	<50.0	247	<0.500	<0.500	<0.500	<0.500	<2.50	--	4.5/1.3
11/03/99		13.32	9.58	3.74	--	<50.0	174	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	11.6/4.8
02/29/00		13.32	5.43	7.89	--	<50.0	90	<0.500	<0.500	<0.500	<0.500	<2.50	--	3.4/1.8
04/24/00		13.32	6.35	6.97	--	<50.0	72.4	<0.500	<0.500	<0.500	<0.500	<2.50	--	10.1/6.5
07/25/00		13.32	8.71	4.61	--	<50.0	79.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.2/0.8
11/06/00		13.32	9.76	3.56	--	--	106[8]	--	--	--	--	--	--	1.3/1.0
06/05/09[1]		13.32	9.92	3.40	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	NP[5]	13.32	12.35	0.97	--	<50	140	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
10/01/09[4]	**NP[5]**	**13.32**	**11.94**	**1.38**	--	**<50**	**55[8]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--
MW-8H														
01/23/92		98.90	3.74	95.16	--	110	<60	7.2	1.2	4.7	3.2	--	--	--
02/28/92		98.90	4.44	94.46	--	--	--	--	--	--	--	--	--	--
03/26/92		98.90	4.21	94.69	--	--	--	--	--	--	--	--	--	--
04/30/92		98.90	3.46	95.44	--	190	90	11	1.5	5.6	3.6	--	--	--
09/28/92		98.90	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92		98.90	3.75	95.15	--	130	--	6.8	<0.5	1.1	1.5	--	--	--
02/12/93		98.90	4.12	94.78	--	73	--	5.9	<0.5	0.8	<0.5	--	--	--
05/06/93		98.90	3.85	95.05	--	57	<100	1.7	<0.5	<0.5	<0.5	--	--	--
08/16/93		15.04	3.88	11.16	--	<50	<50	0.5	<0.5	0.5	1.4	--	--	--
10/12/93		15.04	3.80	11.24	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94		15.04	3.71	11.33	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94		15.04	3.80	11.24	--	<50	<50	0.79	<0.5	<0.5	<0.5	--	--	--
08/25/94		15.04	3.89	11.15	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94		15.04	3.64	11.40	--	<50	760	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95		15.04	3.58	11.46	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8H (cont)														
05/18/95		15.04	3.53	11.51	--	<50	370	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95		15.04	3.55	11.49	--	<50	1,000	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/95		15.04	3.49	11.55	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/05/96		15.04	3.54	11.50	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96		15.04	3.50	11.54	--	<50	1,800	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96		15.04	3.62	11.42	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96		15.04	3.38	11.66	--	100	350	6.2	7.3	5.0	22	<30	--	--
02/21/97		15.04	3.77	11.27	--	<50	900	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97		15.04	3.64	11.40	--	<50	450	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97		15.04	3.65	11.39	--	<50	180	<0.5	0.62	<0.5	<0.5	<30	--	--
11/05/97		15.04	3.61	11.43	--	<50	280	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98		15.04	3.57	11.47	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98		15.04	3.50	11.54	--	<50	440	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98		15.04	3.64	11.40	--	<50	300	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/03/99		15.04	3.49	11.55	--	<50.0	576	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00		15.04	3.63	11.41	--	<50.0	53.8	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00		15.04	3.54	11.50	--	<50.0	90.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00		15.04	3.49	11.55	--	--	433[a]	--	--	--	--	--	--	--
06/05/09[1]		15.04	3.91	11.13	--	--	--	--	--	--	--	--	--	--
06/10/09[4]		15.04	3.66	11.38	--	<50	78	<0.5	<0.5	<0.5	<0.5	--	0.7	--
10/01/09[4]	**NP[7]**	**15.04**	**4.04**	**11.00**	--	**<50**	**640[a]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**1**	--
MW-8I														
01/23/92		98.27	6.33	91.94	--	820	210	420	7	27	20	--	--	--
02/28/92		98.27	6.55	91.72	--	--	--	--	--	--	--	--	--	--
03/26/92		98.27	6.45	91.82	--	--	--	--	--	--	--	--	--	--
04/30/92		98.27	6.48	91.79	--	2,200	430	1,800	19	180	25	--	--	--
09/28/92		98.27	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92		98.27	6.37	91.90	--	720	--	120	1.1	29	13	--	--	--

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Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
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Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8I (cont)													
02/12/93	98.27	6.44	91.83	--	4,000	--	970	9.2	52	36	--	--	--
05/06/93	98.27	6.36	91.91	--	1,400	<10	370	2.4	40	8.4	--	--	--
08/16/93	14.40	6.35	8.05	--	<50	<50	3.1	<0.5	6	<0.5	--	--	--
10/12/93	14.40	5.99	8.41	--	<50	<50	1.4	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.40	5.84	8.56	--	1,000	<50	270	3.2	51	14	--	--	--
05/31/94	14.40	6.25	8.15	--	1,400	<50	330	4.6	52	16	--	--	--
08/25/94	14.40	6.31	8.09	--	540	<50	14	0.58	30	4.3	--	--	--
11/02/94	14.40	6.10	8.30	--	310	370	5.7	0.74	20	<0.5	--	--	--
01/31/95	14.40	5.83	8.57	--	840	910	290	4.5	45	1.6	--	--	--
05/18/95	14.40	6.09	8.31	--	1,700	1100	390	7.8	80	10	--	--	--
08/29/95	14.40	6.09	8.31	--	300	560	81	<0.5	13	0.63	<10	--	--
11/02/95	14.40	6.26	8.14	--	81	160	<0.5	4.1	1.5	<0.5	<10	--	--
02/05/96	14.40	5.97	8.43	--	300	140	75	0.75	8.4	1.2	--	--	--
04/30/96	14.40	6.04	8.36	--	350	<50	150	0.77	3.2	1.3	--	--	--
08/28/96	14.40	6.20	8.20	--	1,100	380	300	2.9	3.2	2.1	--	--	--
12/05/96	14.40	6.01	8.39	--	340	53	23	8.7	11	26	<30	--	--
02/21/97	14.40	6.15	8.25	--	<50	330	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	14.40	6.20	8.20	--	110	<50	39	<0.5	0.92	<0.5	--	--	--
07/30/97	14.40	6.12	8.28	--	<50	170	4.2	<0.5	<0.5	<0.5	<30	--	--
11/05/97	14.40	6.26	8.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	14.40	6.00	8.40	--	<50	<50	1.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	14.40	6.74	7.66	--	<50	360	<0.5	<0.5	<0.5	<0.5	1.5	--	--
08/04/98	14.40	6.16	8.24	--	<50	83	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	14.40	6.14	8.26	--	<50	67	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99	14.40	6.12	8.28	--	--	--	--	--	--	--	--	--	--
11/03/99	14.40	6.45	7.95	--	<50.0	192	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	7.15/9.6
02/29/00	14.40	5.69	8.71	--	--	--	--	--	--	--	--	--	11.1
04/24/00	14.40	6.25	8.15	--	<50.0	69.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	7.1/5.6
07/25/00	14.40	6.22	8.18	--	<50.0	80.1	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.4/1.2
11/06/00	14.40	6.34	8.06	--	--	157[a]	--	--	--	--	--	--	1.5/1.1

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WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8I (cont)														
06/05/09		14.40	INACCESSIBLE		--	--	--	--	--	--	--	--	--	--
06/10/09[1,4]		14.40	6.31	8.09	--	420	360	23	<0.5	<0.5	<0.5	--	5	--
10/01/09[4]	**NP[7]**	**14.40**	**6.41**	**7.99**	**--**	**53**	**92[a]**	**2**	**<0.5**	**<0.5**	**<0.5**	**--**	**4**	**--**
MW-8J														
01/23/92		97.69	6.31	91.38	--	<50	<50	1	<0.5	<0.5	<0.5	--	--	--
02/28/92		97.69	6.28	91.41	--	--	--	--	--	--	--	--	--	--
03/26/92		97.69	6.20	91.49	--	--	--	--	--	--	--	--	--	--
04/30/92		97.69	6.48	91.21	--	<50	<50	2	<0.5	<0.5	<0.5	--	--	--
09/28/92		97.69	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92		97.69	6.55	91.14	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93		97.69	7.46	90.23	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93		97.69	6.21	91.48	--	<50	<10	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93		13.82	6.29	7.53	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93		13.82	5.87	7.95	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94		13.82	5.98	7.84	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94		13.82	6.10	7.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94		13.82	6.01	7.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94		13.82	5.90	7.92	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95		13.82	5.07	8.75	--	<50	<50	3.7	<0.5	<0.5	<0.5	--	--	--
05/18/95		13.82	5.33	8.49	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95		13.82	3.50	10.32	--	<50	250	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95		13.82	5.94	7.88	--	<50	520	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96		13.82	5.34	8.48	--	<50	65	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96		13.82	5.96	7.86	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96		13.82	6.38	7.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96		13.82	5.94	7.88	--	160	<50	13	14	8.9	38	<30	--	--
02/21/97		13.82	5.60	8.22	--	<50	<50	<0.5	<05	<0.5	<0.5	<30	--	--
05/02/97		13.82	6.22	7.60	--	<50	<50	<0.5	<05	<0.5	<0.5	--	--	--

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WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8J (cont)														
07/30/97		13.82	6.28	7.54	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97		13.82	6.03	7.79	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98		13.82	5.71	8.11	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98		13.82	5.45	8.37	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98		13.82	5.93	7.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98		13.82	6.05	7.77	--	<50	<50	2.0	<0.50	<0.50	<0.50	<2.5	--	--
11/03/99		13.82	5.84	7.98	--	<50.0	58.9	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00		13.82	5.58	8.24	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00		13.82	5.89	7.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00		13.82	6.24	7.58	--	--	<50.0[6]	--	--	--	--	--	--	--
06/05/09[1]		13.82	6.59	7.23	--	--	--	--	--	--	--	--	--	--
06/10/09[4]		13.82	6.41	7.41	--	<50	400	<0.5	<0.5	<0.5	<0.5	--	10	--
10/01/09[4]	**NP[7]**	**13.82**	**6.78**	**7.04**	--	**<50**	**<50[6]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--
MW-8K														
05/21/93		15.18	--	--	--	54	<50	12	<0.5	<0.5	<0.5	--	--	--
08/16/93		15.18	2.08	13.10	--	<50	<50	<0.5	<0.5	1.0	<0.5	--	--	--
10/12/93		15.18	1.95	13.23	--	<50	<50	4.2	<0.5	<0.5	<0.5	--	--	--
01/03/94		15.18	1.48	13.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94		15.18	1.59	13.59	--	<50	<50	1.0	0.57	<0.5	<0.5	--	--	--
08/25/94		15.18	2.00	13.18	--	<50	<50	0.78	<0.5	<0.5	<0.5	--	--	--
11/02/94		15.18	2.10	13.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95		15.18	1.35	13.83	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/18/95		15.18	1.36	13.82	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95		15.18	1.55	13.63	--	<50	160	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95		15.18	1.88	13.30	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96		15.18	1.46	13.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96		15.18	1.43	13.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96		15.18	1.75	13.43	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8K (cont)													
12/05/96	15.18	1.42	13.76	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
02/21/97	15.18	1.49	13.69	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	15.18	1.60	13.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	15.18	1.66	13.52	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	15.18	1.62	13.56	--	<50	300	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	15.18	1.29	13.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	15.18	1.17	14.01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	15.18	1.21	13.97	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	15.18	2.30	12.88	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
11/03/99	15.18	1.63	13.55	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	15.18	1.25	13.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	15.18	1.38	13.80	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	15.18	11.38	3.80	--	--	53.2[a]	--	--	--	--	--	--	--
06/05/09[1]	15.18	1.18	14.00	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	15.18	1.31	13.87	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	2	--
10/01/09[4]	**15.18**	**1.85**	**13.33**	--	**<50**	**<50[a]**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**1**	--
MW-8L													
05/21/93	14.44	--	--	--	76	<50	1.1	<0.5	<0.5	6	--	--	--
08/16/93	14.44	2.47	11.97	--	<50	<50	<0.5	<0.5	0.7	1.1	--	--	--
10/12/93	14.44	2.36	12.08	--	110	<50	13	<0.5	6	<0.5	--	--	--
01/03/94	14.44	2.82	11.62	--	590	<50	61	2.4	<0.5	110	--	--	--
05/31/94	14.44	2.66	11.78	--	410	<50	77	<0.5	20	1.1	--	--	--
08/25/94	14.44	2.34	12.10	--	260	<50	16	<0.5	2.5	<0.5	--	--	--
11/02/94	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
01/31/95	14.44	0.08	14.36	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/18/95	14.44	0.42	14.02	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/29/95	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/02/95	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8L (cont)														
02/05/96		14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
04/30/96		14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/28/96		14.44	0.75	13.69	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
12/05/96		14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/21/97		14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
05/02/97		14.44	0.60	13.84	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
07/30/97		14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/05/97		14.44	0.67	13.77	--	--	--	--	--	--	--	--	--	--
01/21/98		14.44	--	--	--	--	--	--	--	--	--	--	--	--
06/05/09[2,3]		14.44	0.90	13.54	--	--	--	--	--	--	--	--	--	--
06/10/09[1,2,4]	NP[6]	14.44	0.91	13.53	--	<50	2,600	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
10/01/09		**14.44**	**OBSTRUCTION IN WELL**			--	--	--	--	--	--	--	--	--
TRIP BLANK														
QA														
06/10/09		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	<0.5	--
DISCONTINUED														

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

Data prior to June 5, 2009, compiled from Blaine Tech Reports.

EXPLANATIONS:

TOC = Top of Casing Elevation
ft = Feet
GWE = Groundwater Elevation
msl = Mean sea level
DTW = Depth to Water
SPH = Separate-Phase Hydrocarbons
TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics
DRO = Diesel Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl Tertiary Butyl Ether

ug/L = parts per billion
ppm = parts per million
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
D = Duplicate sample
DO = Dissolved Oxygen

ANALYTICAL METHODS:

TPH-GRO by modified EPA Method 8015
TPH-DRO by modified EPA Method 8015
Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8020

* New well elevation survey performed at wells MW-8F through MW-8L on August 16, 1993, based on mean sea level (MSL). Prior data based on arbitrary site data.
** Non-diesel mix >C16. The certified analytical report for sample MW-8G was revised on October 21,1993.

a TPH-DRO with Silica Gel Cleanup.
1 Well Development performed.
2 Casing bent, see field sheet for additional information.
3 Attempted well development.
4 BTEX analyzed by EPA Method 8260.
5 No purge due to insufficient water.
6 No purge due to bent well casing.
7 No purge due to traffic control constraints.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8 F Date Monitored: 10.1.09
Well Diameter 4 in.
Total Depth 14.56 ft.
Depth to Water 10.40 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.

4.16 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: LOW-D SAMPLE

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: SUNNY
Sample Time/Date: 1120 / 10.1.09 Water Color: CLEAR 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-8 F	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: ENCO 12" (2 SF)
INSUFFICIENT WATER FOR PURGING

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8 G
Well Diameter 4 in.
Total Depth 14.47 ft.
Depth to Water 11.94 ft.
2.53 xVF ___ = ___

Date Monitored: 10.1.09

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.

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: GRAB SAMPLE

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: SUNNY
Sample Time/Date: 1045 / 10.1.09 Water Color: CLEAR 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-8 G	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: EMCO 12" (2SF)
INSUFFICIENT WATER FOR PURGING

Add/Replaced Lock: ___ Add/Replaced Plug: ___ Add/Replaced Bolt: ___

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10-1-09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8H Date Monitored: 10-1-09
Well Diameter 2/4 in.
Total Depth 14.98 ft.
Depth to Water 4.04 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.

10.94 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: GRAB SAMPLE

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: 0730 / 10.1.09 Water Color: CLEAR 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-8H	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: GRAB SAMPLE DUE TO TIME CONSTRAINTS ON TRAFFIC CONTROL ON GRAND AVENUE ROAD CONSTRUCTION IN PROGRESS.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8I Date Monitored: 10.1.09
Well Diameter 2 (4) in.
Total Depth 15.00 ft.
Depth to Water 6.41 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.

8.59 xVF .66 = — 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: GRAB SAMPLE

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):
Sample Time/Date: 0800 / 10.1.09
Approx. Flow Rate: — gpm.
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: —

Weather Conditions: SUNNY
Water Color: CLEAR Odor: Y / N MODERATE
Sediment Description:

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-8I	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: GRAB SAMPLE DUE TO TIME CONSTRAINTS ON TRAFFIC CONTROL ON GRAND AVENUE ROAD, CONSTRUCTION IN PROGRESS.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8J Date Monitored: 10.1.09
Well Diameter 2 (4) in.
Total Depth 14.97 ft.
Depth to Water 6.78 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.

8.19 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: GRAB SAMPLE

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: 0700 / 10.1.09 Water Color: CLEAR 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-8J	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: GRAB SAMPLE DUE TO TIME CONTRAINTS ON TRAFFIC FLOW ON GRAND AVENUE ROAD. CONSTRUCTION IN PROGRESS.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8K Date Monitored: 10.1.09
Well Diameter 2 in.
Total Depth 18.82 ft.
Depth to Water 1.85 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.

16.97 xVF .17 = 2.88 x3 case volume = Estimated Purge Volume: 9.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.24

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): 0900
Sample Time/Date: 0928 / 10.1.09
Approx. Flow Rate: gpm.
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 1.95

Weather Conditions: SUNNY
Water Color: CLEAR Odor: Y / (N)
Sediment Description:

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0906	3.0	7.15	465	25.3		
0912	6.0	7.10	472	25.1		
0918	9.0	7.07	476	24.9		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8K	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 10.1.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8 L Date Monitored: 10.1.09
Well Diameter 4 in.
Total Depth 18.00 ft.
Depth to Water N/A 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.

____ 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-8	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	x 500ml ambers	YES	NP	LANCASTER	TPH-DRO w/sgc (8015)

COMMENTS: WELL HAS AN OBSTRUCTION @ 2'2½"; THERE'S A OLD TREE ≅ 20' SOUTH OF THE WELL NEAR CURB POSSIBLY MAY BE A ROOT FROM THE TREE. WELL CASING IS ALSO BENT. BUT YOU CAN STILL GET A BAILER DOWN IT.

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

100109-06

For Lancaster Laboratories use only
Acct. #: 12099 Sample # 5294199-204 Group #: 019108
1164495

CRA MTI Project #: No Number

Facility #: SS#211173 G-R#385866 Global ID#T0600101355
Site Address: 500 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: FRANK TERUYONI

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Oil	Air	Potable	NPDES	Total Number of Containers	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-8F	10/1/09	1120	X			W					8	X		X	X					
MW-8G	prCH	1045	X								8	X		X	X					
MW-8H	jmp	0730	X								8	X		X	X					
MW-8I	10/2/09	0800	X								8	X		X	X					
MW-8J		0700	X								8	X		X	X					
MW-8K		0928	X								8	X		X	X					

Analyses Requested — Preservation Codes: H H

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 ____ cov's on highest hit
- ☐ Run ____ cov's on all hits

Comments / Remarks

Collection date revised per Cheryl Hansen jmp 10/8/09

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

	Date	Time		Date	Time
Relinquished by:	10-1-09	1415	Received by:	10/1/09	1415
Relinquished by:	10/2/09	1634	Received by: FedEx		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		
Temperature Upon Receipt 15-23 C°			Custody Seals Intact? Yes No		

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

100109-06

For Lancaster Laboratories use only
Acct. #: 12099 Sample # 5294199-204 Group #: 019108

CRA MTI Project #: No Number 1164495

Facility #: SS#211173 G-R#385866 Global ID#T0600101355
Site Address: 500 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: FRANK TERLINONI

Analyses Requested / Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Oil	Air	Potable	NPDES	Total Number of Containers	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-8F		1120	X			X					8	X		X	X					
MW-8G		1045	X			X					8	X		X	X					
MW-8H		0730	X			X					8	X		X	X					
MW-8I		0800	X			X					8	X		X	X					
MW-8J		0700	X			X					8	X		X	X					
MW-8K		0928	X			X					8	X		X	X					

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

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

8021 MTBE Confirmation
- ☐ Confirm highest hit by 8260
- ☐ Confirm all hits by 8260
- ☐ Run ____ oxy's on highest hit
- ☐ Run ____ oxy's on all hits

Comments / Remarks

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

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

Relinquished by:	Date	Time	Received by:	Date	Time
	10.09	1415		10/10/09	1415
Relinquished by:	Date	Time	Received by:	Date	Time
	10/10/09	1634	FEDEX		
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:	Date	Time
				10/10/09	0915
Temperature Upon Receipt 1.5 +2.3 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories

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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

October 08, 2009

Project: 211173

Samples arrived at the laboratory on Friday, October 02, 2009. The PO# for this group is 211173 and the release number is MTI. The group number for this submittal is 1164495.

Client Sample Description	Lancaster Labs (LLI) #
MW-8F-W-091001 Grab Water	5794199
MW-8G-W-091001 Grab Water	5794200
MW-8H-W-091001 Grab Water	5794201
MW-8I-W-091001 Grab Water	5794202
MW-8J-W-091001 Grab Water	5794203
MW-8K-W-091001 Grab Water	5794204

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,

Christine Dulaney
Senior Specialist

Lancaster Laboratories

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Analysis Report

Sample Description: MW-8F-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8F

LLI Sample # WW 5794199
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 11:20 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738F

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
GC Extractable TPH w/Si Gel	**SW-846 8015B**		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	81	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	P092782AA	10/05/2009 19:31	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 19:31	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 16:55	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 16:55	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 03:06	Lisa A Reinert	1

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Analysis Report

Sample Description: MW-8H-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8H

LLI Sample # WW 5794201
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 07:30 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738H

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	1	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
GC Extractable TPH w/Si Gel	**SW-846 8015B**		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	640	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	P092782AA	10/05/2009 20:25	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 20:25	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 20:32	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 20:32	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 04:55	Lisa A Reinert	1

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Analysis Report

Sample Description: MW-8G-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8G

LLI Sample # WW 5794200
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 10:45 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738G

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
GC Extractable TPH w/Si Gel	**SW-846 8015B**		**ug/l**	**ug/l**	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	55	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	P092782AA	10/05/2009 19:58	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 19:58	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 17:17	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 17:17	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 03:28	Lisa A Reinert	1

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Analysis Report

Sample Description: MW-8I-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8I

LLI Sample # WW 5794202
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 08:00 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738I

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	2	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	4	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.	53	50	1
GC Extractable TPH w/Si Gel	**SW-846 8015B**		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w/ Si Gel	n.a.	92	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	P092782AA	10/05/2009 11:53	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 11:53	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 20:54	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 20:54	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 04:33	Lisa A Reinert	1

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Analysis Report

Sample Description: MW-8J-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8J

LLI Sample # WW 5794203
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 07:00 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738J

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
GC Extractable TPH w/Si Gel	**SW-846 8015B**		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w/ Si Gel	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	P092782AA	10/05/2009 13:14	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 13:14	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 18:22	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 18:22	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 04:12	Lisa A Reinert	1

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Analysis Report

Sample Description: MW-8K-W-091001 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand-Oakland T0600101355 MW-8K

LLI Sample # WW 5794204
LLI Group # 1164495
CA

Project Name: 211173

Collected: 10/01/2009 09:28 by FT

Account Number: 12099

Submitted: 10/02/2009 09:15
Reported: 10/08/2009 at 11:20
Discard: 11/08/2009

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

1738K

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	1	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
GC Extractable TPH w/Si Gel	**SW-846 8015B**		ug/l	ug/l	
06610	TPH-DRO CA C10-C28 w/ Si Gel	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	P092782AA	10/05/2009 13:41	Daniel H Heller	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	P092782AA	10/05/2009 13:41	Daniel H Heller	1
01146	GC VOA Water Prep	SW-846 5030B	1	09278B20A	10/05/2009 18:44	Matthew S Woods	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09278B20A	10/05/2009 18:44	Matthew S Woods	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	092750018A	10/02/2009 14:40	Cody R Hanna	1
06610	TPH-DRO CA C10-C28 w/ Si Gel	SW-846 8015B	1	092750018A	10/06/2009 03:50	Lisa A Reinert	1

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 10/08/09 at 11:20 AM

Group Number: 1164495

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: P092782AA	Sample number(s): 5794199-5794204							
Benzene	N.D.	0.5	ug/l	103		79-120		
Ethylbenzene	N.D.	0.5	ug/l	100		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	102		76-120		
Toluene	N.D.	0.5	ug/l	103		79-120		
Xylene (Total)	N.D.	0.5	ug/l	101		80-120		
Batch number: 09278B20A	Sample number(s): 5794199-5794204							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	100	75-135	9	30
Batch number: 092750018A	Sample number(s): 5794199-5794204							
TPH-DRO CA C10-C28 w/ Si Gel	N.D.	32.	ug/l	88	83	52-126	6	20

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: P092782AA	Sample number(s): 5794199-5794204 UNSPK: 5794202								
Benzene	106	103	80-126	2	30				
Ethylbenzene	105	105	71-134	0	30				
Methyl Tertiary Butyl Ether	105	106	72-126	0	30				
Toluene	107	108	80-125	1	30				
Xylene (Total)	106	106	79-125	0	30				
Batch number: 09278B20A	Sample number(s): 5794199-5794204 UNSPK: P794185								
TPH-GRO N. CA water C6-C12	109		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: P092782AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5794199	102	108	95	89
5794200	103	106	95	91

*- 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: 10/08/09 at 11:20 AM

Group Number: 1164495

Surrogate Quality Control

5794201	102	105	96	90
5794202	101	108	95	90
5794203	102	105	96	92
5794204	100	105	95	90
Blank	102	105	96	92
LCS	103	109	95	92
MS	100	109	95	93
MSD	100	111	96	92
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09278B20A

	Trifluorotoluene-F
5794199	100
5794200	101
5794201	99
5794202	102
5794203	101
5794204	100
Blank	99
LCS	128
LCSD	126
MS	127
Limits:	63-135

Analysis Name: TPH-DRO CA C10-C28 w/ Si Gel
Batch number: 092750018A

	Orthoterphenyl
5794199	121
5794200	112
5794201	106
5794202	104
5794203	94
5794204	100
Blank	91
LCS	107
LCSD	109
Limits:	59-131

*- 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)	**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.

GETTLER-RYAN INC.

TRANSMITTAL

July 13, 2009
G-R #385866

TO: Mr. James Kiernan
Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, California 95678

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

RE: Former Texaco Service Station
#211173
500 Grand Avenue
Oakland, California

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	July 8, 2009	Groundwater Monitoring and Sampling Report **Well Development Event of June 5, 2009** **Second Quarter Event of June 10, 2009**

COMMENTS:

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

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

Enclosures

trans/211173-SHF

WELL CONDITION STATUS SHEET

Client/Facility #: **Chevron #211173**
Site Address: **500 Grand Avenue**
City: **Oakland, CA**

Job # **385866**
Event Date: 6-5-09
Sampler: FT

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-8H	OK	N/A	→	→	OK	→	→	Y	Y	CITY MONUMENT 18"	
MW-8K	OK	N/A	→	→	OK	→	→	Y	Y	CHRISTY - 12"	
MW-8L	OK	N/A	→	→	OK	→	→	Y	Y	CHRISTY 12"	

Comments MW-8L - CASING BENT AT .90 FEET

WELL CONDITION STATUS SHEET

Client/Facility #: **Chevron #211173**
Site Address: **500 Grand Avenue**
City: **Oakland, CA**

Job # **385866**
Event Date: 6/10/9
Sampler: AC-HK

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-8F	OK	→	→	2-S	OK	→	→	N	N	Emco 12"-2	
MW-8G	OK	→	→	2-S	OK	→	→	N	N	Emco 12"-2	
MW-8H	OK	N/A	→	→	OK	→	→	N	N	City Monument - ø 8"	
MW-8I	OK	N/A	→	→	OK	→	→	N	N	↓	
MW-8J	OK	N/A	→	→	OK	→	→	N	N	↓	
MW-8K	OK	N/A	→	→	OK	→	→	N	N	Christy - 12" - ø	
MW-8L	OK	N/A	→	→	OK	→	→	N	N	↓	

Comments

GETTLER-RYAN INC.

July 8, 2009
G-R Job #385866

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

RE: Well Development Event of June 5, 2009
Second Quarter Event of June 10, 2009
Groundwater Monitoring & Sampling Report
Former Texaco Service Station #211173
500 Grand Ave.
Oakland, California

Dear Ms. Frerichs:

This report documents the most recent groundwater monitoring and sampling events 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.

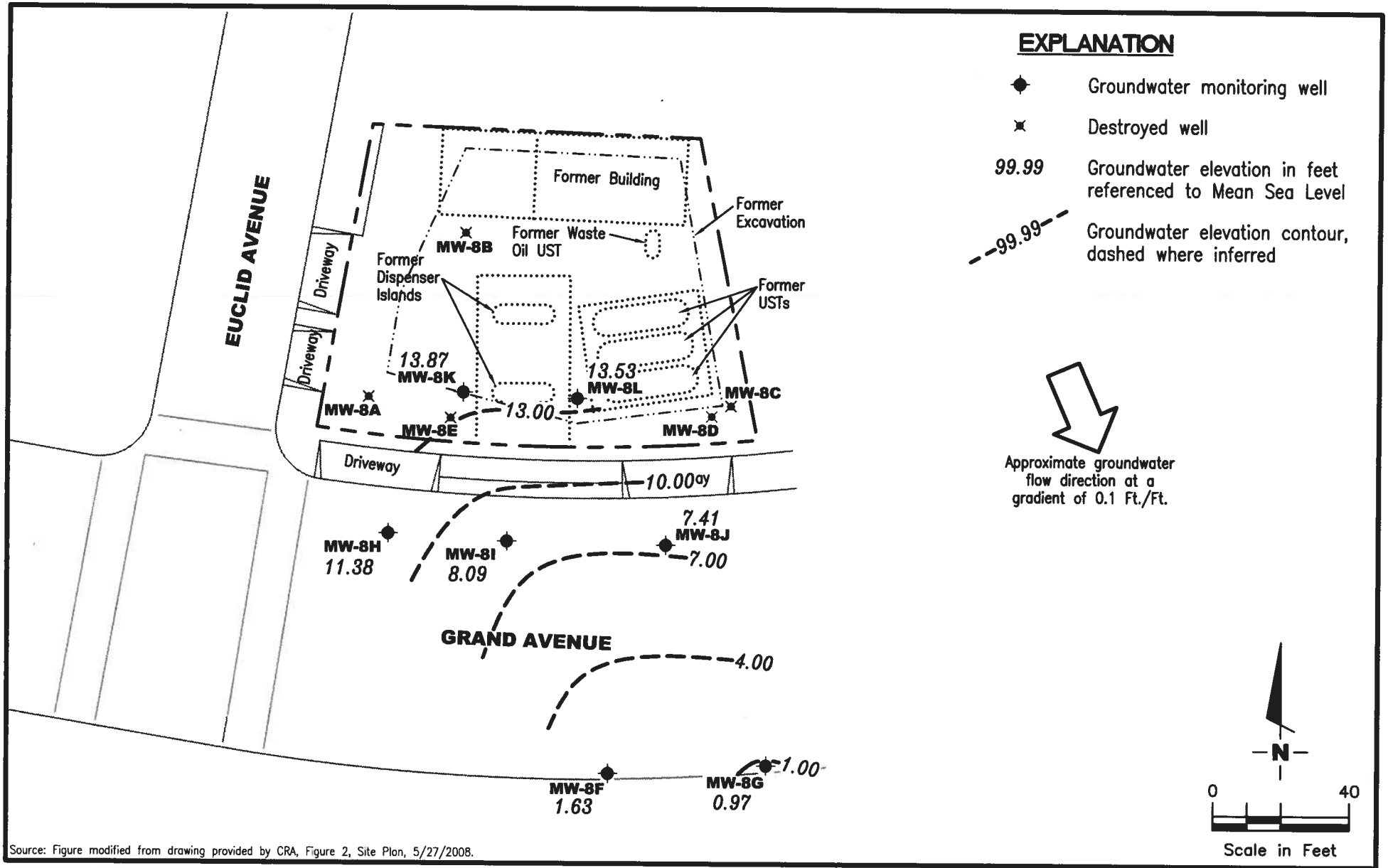
Sincerely,

Deanna L. Harding
Project Coordinator

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

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

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



Source: Figure modified from drawing provided by CRA, Figure 2, Site Plan, 5/27/2008.

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

POTENTIOMETRIC MAP
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
385866		June 10, 2009	

FILE NAME: P:\Enviro\Texoco\211173\Q09-211173.dwg | Layout Tab: Pot2

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8A													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8B													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8C													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8D													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8E													
--	--	--	--	--	WELL ABANDONED		--	--	--	--	--	--	--
MW-8F													
01/23/92	97.94	10.24	87.70	--	<50	1,300	4.0	1.3	<0.5	1.9	--	--	--
02/28/92	97.94	9.93	88.01	--	--	--	--	--	--	--	--	--	--
03/26/92	97.94	8.78	89.16	--	--	--	--	--	--	--	--	--	--
04/30/92	97.94	9.36	88.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.94	11.83	86.11	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
11/19/92	97.94	11.22	86.72	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93	97.94	9.66	88.28	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93	97.94	8.83	89.11	--	<50	<100	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	14.04	10.16	3.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	14.04	10.60	3.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.04	9.29	4.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	14.04	9.34	4.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	14.04	10.14	3.90	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	14.04	10.42	3.62	--	<50	520	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8F (cont)														
01/31/95		14.04	7.47	6.57	--	<50	290	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95		14.04	8.00	6.04	--	<50	54	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95		14.04	8.08	5.96	--	<50	83	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95		14.04	8.70	5.34	--	<50	51	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96		14.04	7.16	6.88	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96		14.04	7.25	6.79	--	<50	62	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96		14.04	8.72	5.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96		14.04	8.16	5.88	--	210	110	17	17	11	46	<30	--	--
02/21/97		14.04	5.53	8.51	--	<50	85	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97		14.04	7.85	6.19	--	<50	<50	<0.5	<0.5	<0.5	<0.5	NA	--	--
07/30/97		14.04	8.87	5.17	--	<50	93	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97		14.04	9.16	4.88	--	<50	140	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98		14.04	8.56	5.48	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98		14.04	8.30	5.74	--	<50	730	<0.5	<0.5	<0.5	<0.5	2.9	--	--
08/04/98		14.04	10.67	3.37	--	<50	210	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98		14.04	8.72	5.32	--	<50	210	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99		14.04	8.78	5.26	--	<50.0	230	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99		14.04	8.24	5.80	--	<50	120	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99		14.04	8.87	5.17	--	<50.0	176	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.7/1.4
11/03/99		14.04	9.40	4.64	--	<50.0	130	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	4.6/2.0
02/29/00		14.04	8.00	14.04	--	<50.0	59	<0.500	<0.500	<0.500	<0.500	<2.50	--	6.0/1.4
04/24/00		14.04	7.05	14.04	--	<50.0	161	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.1/2.0
07/25/00		14.04	8.66	14.04	--	<50.0	123	<0.500	<0.500	<0.500	<0.500	<2.50	--	0.4/1.2
11/06/00		14.04	9.37	14.04	--	--	77.3[a]	--	--	--	--	--	--	0.7/1.3
06/05/09[1]		**14.04**	**8.99**	**5.05**	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	**NP[5]**	**14.04**	**12.41**	**1.63**	--	**<50**	**300**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G													
01/23/92**	97.24	11.30	85.94	--	<50	980	<0.5	<0.5	<0.5	<0.5	--	--	--
02/28/92	97.24	10.83	86.41	--	--	--	--	--	--	--	--	--	--
03/26/92	97.24	9.20	88.04	--	--	--	--	--	--	--	--	--	--
04/30/92	97.24	9.00	88.24	--	<50	<50	1.7	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.24	13.32	83.92	--	WELL DRY		--	--	--	--	--	--	--
11/19/92	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/12/93	97.24	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
05/06/93	97.24	11.18	86.06	--	<50	60	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	13.32	9.51	3.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	13.32	10.93	2.39	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	13.32	9.69	3.63	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	13.32	9.24	4.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	13.32	9.74	3.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	13.32	10.08	3.24	--	<50	530	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	13.32	5.75	7.57	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95	13.32	6.60	6.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	13.32	8.14	5.18	--	<50	120	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	13.32	9.16	4.16	--	<50	140	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	13.32	7.18	6.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	13.32	7.00	6.32	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	13.32	8.94	4.38	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	13.32	9.22	4.10	--	190	57	16	16	9.0	39	<30	--	--
02/21/97	13.32	6.11	7.21	--	<50	54	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	13.32	7.54	5.78	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	13.32	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/05/97	13.32	9.65	3.67	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	13.32	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	13.32	7.57	5.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	13.32	9.37	3.95	--	<50	570	<0.5	<0.5	<0.5	<0.5	4.0	--	--
08/04/98	13.32	9.89	3.43	--	<50	200	<0.5	<0.5	<0.5	<0.5	<2.5	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8G (cont)														
11/05/98		13.32	10.81	2.51	--	<50	170	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
02/16/99		13.32	8.63	4.69	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<2.00	--	--
06/04/99		13.32	7.95	5.37	--	<50	190	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99		13.32	9.11	4.21	--	<50.0	247	<0.500	<0.500	<0.500	<0.500	<2.50	--	4.5/1.3
11/03/99		13.32	9.58	3.74	--	<50.0	174	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	11.6/4.8
02/29/00		13.32	5.43	7.89	--	<50.0	90	<0.500	<0.500	<0.500	<0.500	<2.50	--	3.4/1.8
04/24/00		13.32	6.35	6.97	--	<50.0	72.4	<0.500	<0.500	<0.500	<0.500	<2.50	--	10.1/6.5
07/25/00		13.32	8.71	4.61	--	<50.0	79.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.2/0.8
11/06/00		13.32	9.76	3.56	--	--	106[a]	--	--	--	--	--	--	1.3/1.0
06/05/09[1]		**13.32**	**9.92**	**3.40**	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	**NP[5]**	**13.32**	**12.35**	**0.97**	--	**<50**	**140**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--
MW-8H														
01/23/92		98.90	3.74	95.16	--	110	<60	7.2	1.2	4.7	3.2	--	--	--
02/28/92		98.90	4.44	94.46	--	--	--	--	--	--	--	--	--	--
03/26/92		98.90	4.21	94.69	--	--	--	--	--	--	--	--	--	--
04/30/92		98.90	3.46	95.44	--	190	90	11	1.5	5.6	3.6	--	--	--
09/28/92		98.90	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92		98.90	3.75	95.15	--	130	--	6.8	<0.5	1.1	1.5	--	--	--
02/12/93		98.90	4.12	94.78	--	73	--	5.9	<0.5	0.8	<0.5	--	--	--
05/06/93		98.90	3.85	95.05	--	57	<100	1.7	<0.5	<0.5	<0.5	--	--	--
08/16/93		15.04	3.88	11.16	--	<50	<50	0.5	<0.5	0.5	1.4	--	--	--
10/12/93		15.04	3.80	11.24	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94		15.04	3.71	11.33	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94		15.04	3.80	11.24	--	<50	<50	0.79	<0.5	<0.5	<0.5	--	--	--
08/25/94		15.04	3.89	11.15	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94		15.04	3.64	11.40	--	<50	760	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95		15.04	3.58	11.46	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--
05/18/95		15.04	3.53	11.51	--	<50	370	<0.5	<0.5	<0.5	<0.5	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8H (cont)													
08/29/95	15.04	3.55	11.49	--	<50	1,000	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/95	15.04	3.49	11.55	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/05/96	15.04	3.54	11.50	--	<50	190	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	15.04	3.50	11.54	--	<50	1,800	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	15.04	3.62	11.42	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	15.04	3.38	11.66	--	100	350	6.2	7.3	5.0	22	<30	--	--
02/21/97	15.04	3.77	11.27	--	<50	900	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	15.04	3.64	11.40	--	<50	450	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	15.04	3.65	11.39	--	<50	180	<0.5	0.62	<0.5	<0.5	<30	--	--
11/05/97	15.04	3.61	11.43	--	<50	280	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	15.04	3.57	11.47	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	15.04	3.50	11.54	--	<50	440	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	15.04	3.64	11.40	--	<50	300	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/03/99	15.04	3.49	11.55	--	<50.0	576	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	15.04	3.63	11.41	--	<50.0	53.8	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	15.04	3.54	11.50	--	<50.0	90.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	15.04	3.49	11.55	--	--	433[a]	--	--	--	--	--	--	--
06/05/09[1]	**15.04**	**3.91**	**11.13**	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	**15.04**	**3.66**	**11.38**	--	**<50**	**78**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**0.7**	--
MW-8I													
01/23/92	98.27	6.33	91.94	--	820	210	420	7	27	20	--	--	--
02/28/92	98.27	6.55	91.72	--	--	--	--	--	--	--	--	--	--
03/26/92	98.27	6.45	91.82	--	--	--	--	--	--	--	--	--	--
04/30/92	98.27	6.48	91.79	--	2,200	430	1,800	19	180	25	--	--	--
09/28/92	98.27	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92	98.27	6.37	91.90	--	720	--	120	1.1	29	13	--	--	--
02/12/93	98.27	6.44	91.83	--	4,000	--	970	9.2	52	36	--	--	--
05/06/93	98.27	6.36	91.91	--	1,400	<10	370	2.4	40	8.4	--	--	--

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500 Grand Avenue
Oakland, CA

WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8I (cont)													
08/16/93	14.40	6.35	8.05	--	<50	<50	3.1	<0.5	6	<0.5	--	--	--
10/12/93	14.40	5.99	8.41	--	<50	<50	1.4	<0.5	<0.5	<0.5	--	--	--
02/03/94	14.40	5.84	8.56	--	1,000	<50	270	3.2	51	14	--	--	--
05/31/94	14.40	6.25	8.15	--	1,400	<50	330	4.6	52	16	--	--	--
08/25/94	14.40	6.31	8.09	--	540	<50	14	0.58	30	4.3	--	--	--
11/02/94	14.40	6.10	8.30	--	310	370	5.7	0.74	20	<0.5	--	--	--
01/31/95	14.40	5.83	8.57	--	840	910	290	4.5	45	1.6	--	--	--
05/18/95	14.40	6.09	8.31	--	1,700	1100	390	7.8	80	10	--	--	--
08/29/95	14.40	6.09	8.31	--	300	560	81	<0.5	13	0.63	<10	--	--
11/02/95	14.40	6.26	8.14	--	81	160	<0.5	4.1	1.5	<0.5	<10	--	--
02/05/96	14.40	5.97	8.43	--	300	140	75	0.75	8.4	1.2	--	--	--
04/30/96	14.40	6.04	8.36	--	350	<50	150	0.77	3.2	1.3	--	--	--
08/28/96	14.40	6.20	8.20	--	1,100	380	300	2.9	3.2	2.1	--	--	--
12/05/96	14.40	6.01	8.39	--	340	53	23	8.7	11	26	<30	--	--
02/21/97	14.40	6.15	8.25	--	<50	330	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	14.40	6.20	8.20	--	110	<50	39	<0.5	0.92	<0.5	--	--	--
07/30/97	14.40	6.12	8.28	--	<50	170	4.2	<0.5	<0.5	<0.5	<30	--	--
11/05/97	14.40	6.26	8.14	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	14.40	6.00	8.40	--	<50	<50	1.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	14.40	6.74	7.66	--	<50	360	<0.5	<0.5	<0.5	<0.5	1.5	--	--
08/04/98	14.40	6.16	8.24	--	<50	83	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	14.40	6.14	8.26	--	<50	67	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
08/31/99	14.40	6.12	8.28	--	--	--	--	--	--	--	--	--	--
11/03/99	14.40	6.45	7.95	--	<50.0	192	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	7.15/9.6
02/29/00	14.40	5.69	8.71	--	--	--	--	--	--	--	--	--	11.1
04/24/00	14.40	6.25	8.15	--	<50.0	69.2	<0.500	<0.500	<0.500	<0.500	<2.50	--	7.1/5.6
07/25/00	14.40	6.22	8.18	--	<50.0	80.1	<0.500	<0.500	<0.500	<0.500	<2.50	--	1.4/1.2
11/06/00	14.40	6.34	8.06	--	--	157[a]	--	--	--	--	--	--	1.5/1.1
06/05/09	**14.40**	**INACCESSIBLE**		--	--	--	--	--	--	--	--	--	--
06/10/09[1,4]	**14.40**	**6.31**	**8.09**	--	**420**	**360**	**23**	**<0.5**	**<0.5**	**<0.5**	--	**5**	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8J													
01/23/92	97.69	6.31	91.38	--	<50	<50	1	<0.5	<0.5	<0.5	--	--	--
02/28/92	97.69	6.28	91.41	--	--	--	--	--	--	--	--	--	--
03/26/92	97.69	6.20	91.49	--	--	--	--	--	--	--	--	--	--
04/30/92	97.69	6.48	91.21	--	<50	<50	2	<0.5	<0.5	<0.5	--	--	--
09/28/92	97.69	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/19/92	97.69	6.55	91.14	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
02/12/93	97.69	7.46	90.23	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--
05/06/93	97.69	6.21	91.48	--	<50	<10	<0.5	<0.5	<0.5	<0.5	--	--	--
08/16/93	13.82	6.29	7.53	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
10/12/93	13.82	5.87	7.95	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
02/03/94	13.82	5.98	7.84	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	13.82	6.10	7.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/25/94	13.82	6.01	7.81	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
11/02/94	13.82	5.90	7.92	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	13.82	5.07	8.75	--	<50	<50	3.7	<0.5	<0.5	<0.5	--	--	--
05/18/95	13.82	5.33	8.49	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	13.82	3.50	10.32	--	<50	250	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	13.82	5.94	7.88	--	<50	520	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	13.82	5.34	8.48	--	<50	65	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	13.82	5.96	7.86	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	13.82	6.38	7.44	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	13.82	5.94	7.88	--	160	<50	13	14	8.9	38	<30	--	--
02/21/97	13.82	5.60	8.22	--	<50	<50	<0.5	<05	<0.5	<0.5	<30	--	--
05/02/97	13.82	6.22	7.60	--	<50	<50	<0.5	<05	<0.5	<0.5	--	--	--
07/30/97	13.82	6.28	7.54	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	13.82	6.03	7.79	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	13.82	5.71	8.11	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	13.82	5.45	8.37	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--
08/04/98	13.82	5.93	7.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	13.82	6.05	7.77	--	<50	<50	2.0	<0.50	<0.50	<0.50	<2.5	--	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8J (cont)													
11/03/99	13.82	5.84	7.98	--	<50.0	58.9	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	13.82	5.58	8.24	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	13.82	5.89	7.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	13.82	6.24	7.58	--	--	<50.0[a]	--	--	--	--	--	--	--
06/05/09[1]	**13.82**	**6.59**	**7.23**	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	**13.82**	**6.41**	**7.41**	--	**<50**	**400**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**10**	--
MW-8K													
05/21/93	15.18	--	--	--	54	<50	12	<0.5	<0.5	<0.5	--	--	--
08/16/93	15.18	2.08	13.10	--	<50	<50	<0.5	<0.5	1.0	<0.5	--	--	--
10/12/93	15.18	1.95	13.23	--	<50	<50	4.2	<0.5	<0.5	<0.5	--	--	--
01/03/94	15.18	1.48	13.70	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
05/31/94	15.18	1.59	13.59	--	<50	<50	1.0	0.57	<0.5	<0.5	--	--	--
08/25/94	15.18	2.00	13.18	--	<50	<50	0.78	<0.5	<0.5	<0.5	--	--	--
11/02/94	15.18	2.10	13.08	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
01/31/95	15.18	1.35	13.83	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/18/95	15.18	1.36	13.82	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/29/95	15.18	1.55	13.63	--	<50	160	<0.5	<0.5	<0.5	<0.5	<10	--	--
11/02/95	15.18	1.88	13.30	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<10	--	--
02/05/96	15.18	1.46	13.72	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
04/30/96	15.18	1.43	13.75	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
08/28/96	15.18	1.75	13.43	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
12/05/96	15.18	1.42	13.76	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
02/21/97	15.18	1.49	13.69	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
05/02/97	15.18	1.60	13.58	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--	--
07/30/97	15.18	1.66	13.52	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
11/05/97	15.18	1.62	13.56	--	<50	300	<0.5	<0.5	<0.5	<0.5	<30	--	--
01/21/98	15.18	1.29	13.89	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<30	--	--
06/03/98	15.18	1.17	14.01	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	--

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WELL ID/ DATE	TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8K (cont)													
08/04/98	15.18	1.21	13.97	--	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	--
11/05/98	15.18	2.30	12.88	--	<50	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--	--
11/03/99	15.18	1.63	13.55	--	<50.0	270	<0.500	<0.500	<0.500	<0.500	<5.00	<2.00	--
04/24/00	15.18	1.25	13.93	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
07/25/00	15.18	1.38	13.80	--	<50.0	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--	--
11/06/00	15.18	11.38	3.80	--	--	53.2[a]	--	--	--	--	--	--	--
06/05/09[1]	**15.18**	**1.18**	**14.00**	--	--	--	--	--	--	--	--	--	--
06/10/09[4]	**15.18**	**1.31**	**13.87**	--	**<50**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**2**	--
MW-8L													
05/21/93	14.44	--	--	--	76	<50	1.1	<0.5	<0.5	6	--	--	--
08/16/93	14.44	2.47	11.97	--	<50	<50	<0.5	<0.5	0.7	1.1	--	--	--
10/12/93	14.44	2.36	12.08	--	110	<50	13	<0.5	6	<0.5	--	--	--
01/03/94	14.44	2.82	11.62	--	590	<50	61	2.4	<0.5	110	--	--	--
05/31/94	14.44	2.66	11.78	--	410	<50	77	<0.5	20	1.1	--	--	--
08/25/94	14.44	2.34	12.10	--	260	<50	16	<0.5	2.5	<0.5	--	--	--
11/02/94	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
01/31/95	14.44	0.08	14.36	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/18/95	14.44	0.42	14.02	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/29/95	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/02/95	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/05/96	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
04/30/96	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
08/28/96	14.44	0.75	13.69	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
12/05/96	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
02/21/97	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
05/02/97	14.44	0.60	13.84	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
07/30/97	14.44	--	--	--	WELL INACCESSIBLE		--	--	--	--	--	--	--
11/05/97	14.44	0.67	13.77	--	--	--	--	--	--	--	--	--	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

WELL ID/ DATE		TOC* (msl)	DTW (ft.)	GWE (msl)	SPH THICKNESS (ft.)	TPH-GRO (ug/L)	TPH-DRO (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE by 8020 (ug/L)	MTBE by 8260 (ug/L)	DO Reading (ppm)
MW-8L (cont)														
01/21/98		14.44	--	--	--	--	--	--	--	--	--	--	--	--
06/05/09[2,3]		**14.44**	**0.90**	**13.54**	--	--	--	--	--	--	--	--	--	--
06/10/09[1,2,4]	**NP[6]**	**14.44**	**0.91**	**13.53**	--	**<50**	**2,600**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--
TRIP BLANK														
QA														
06/10/09		--	--	--	--	**<50**	--	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--	**<0.5**	--

Table 1

Groundwater Monitoring Data and Analytical Results
Former Texaco Service Station #211173
500 Grand Avenue
Oakland, CA

Data prior to June 5, 2009, compiled from Blaine Tech Reports.

EXPLANATIONS:

TOC = Top of Casing Elevation
ft = Feet
GWE = Groundwater Elevation
msl = Mean sea level
DTW = Depth to Water
SPH = Separate-Phase Hydrocarbons
TPH = Total Petroleum Hydrocarbons

GRO = Gasoline Range Organics
DRO = Diesel Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl Tertiary Butyl Ether

ug/L = parts per billion
ppm = parts per million
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
D = Duplicate sample
DO = Dissolved Oxygen

ANALYTICAL METHODS:

TPH-GRO by modified EPA Method 8015
TPH-DRO by modified EPA Method 8015
Benzene, Toluene, Ethylbenzene, Xylenes by EPA Method 8020

* New well elevation survey performed at wells MW-8F through MW-8L on August 16, 1993, based on mean sea level (MSL). Prior data based on arbitrary site data.
** Non-diesel mix >C16. The certified analytical report for sample MW-8G was revised on October 21,1993.

[a] TPH-DRO with Silica Gel Cleanup.
[1] Well Development performed.
[2] Casing bent, see field sheet for additional information.
[3] Attempted well development.
[4] BTEX analyzed by EPA Method 8260.
[5] No purge due to insufficient water.
[6] No purge due to bent well casing.

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

Prior to well development, each well is monitored for the presence of free-phase hydrocarbons and the depth to water is recorded. Wells are then developed by alternately surging the well with the bailer, then purging the well with a pump to remove accumulated sediments and draw groundwater into the well. Development continues until the groundwater parameters (temperature, pH, and conductivity) have stabilized.

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

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

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

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

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

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

FORMER TEXACO SERVICE STATION #211170
Oakland, CA

WELL DEVELOPMENT EVENT OF
June 5, 2009

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**
Site Address: **500 Grand Avenue** Event Date: 6-5-9 (inclusive)
City: **Oakland, CA** Sampler: AC

Well ID **MW-8F** Date Monitored: 6-5-9
Well Diameter 2 1/(4) in.
Initial Total Depth 14.55 ft.
Final Total Depth 14.56 ft.
Depth to Water 8.99 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.

5.56 xVF .66 = 3.6 x10 case volume = Estimated Purge Volume: 36 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.10

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): 0829 Weather Conditions: Cloudy
Sample Time/Date: Water Color: Odor: Y / N
Approx. Flow Rate: 3 gpm. Sediment Description:
Did well de-water? Yes Yes If yes, Time: 0830 0840 Volume: 3 6 gal. DTW @ Sampling:

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - (µS))	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0830	3	7.12	1443	16.3		
0839	6	7.04	1451	17.3		
	9					
	12					
	16					
	20					
	24					
	27					
	30					
	36					

LABORATORY INFORMATION

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

COMMENTS: DEVELOP ONLY - No recovery after 2nd CV - DTW holding steady @ 13.29 1 hour after dewatered

Add/Replaced Lock: X Add/Replaced Plug: X 4" Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: Chevron #211173 | Job Number: 385866
Site Address: 500 Grand Avenue | Event Date: 6-5-9 (inclusive)
City: Oakland, CA | Sampler: AC

Well ID: MW-8G | Date Monitored: 6-5-9
Well Diameter: 2/4 in.
Initial Total Depth: 14.47 ft.
Final Total Depth: 14.47 ft.
Depth to Water: 9.92 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

4.55 xVF .66 = 3.0 x10 case volume = Estimated Purge Volume: 30 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 10.83

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): 0943 | Weather Conditions: Cloudy
Sample Time/Date: — | Water Color: — | Odor: Y / N
Approx. Flow Rate: 3 gpm. | Sediment Description: —
Did well de-water? Yes If yes, Time: 0944 Volume: 3 gal. DTW @ Sampling: —

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0944	3	7.50	1543	17.1		
	6					
	9					
	12					
	15					
	18					
	21					
	24					
	27					
	30					

LABORATORY INFORMATION

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

COMMENTS: DEVELOP ONLY - No recovery - DTW holding @ 12.98 @ 1036

Add/Replaced Lock: X | Add/Replaced Plug: 4" | Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 6.5.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8H
Well Diameter 2 (4) in.
Initial Total Depth 14.98 ft.
Final Total Depth 14.98 ft.
Depth to Water 3.91 ft.
Date Monitored: 6.5.09

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.

11.07 xVF .66 = 7.3 x10 case volume = Estimated Purge Volume: 73 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): 1007 Weather Conditions: CLOUDY
Sample Time/Date: — / 6.5.09 Water Color: CLEAR Odor: Y / (N)
Approx. Flow Rate: 2.0 gpm. Sediment Description:
Did well de-water? YES If yes, Time: 1110 Volume: 52.0 gal. DTW @ Sampling: —

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1011	7.3	7.68	497	21.2		
→ 1015	14.6	7.65	500	21.0		
RE-WATERED 1025	22.0	7.62	502	20.9		
1035	29.2	7.64	509	21.1		
1045	36.5	7.61	501	21.3		
1055	43.8	7.62	505	21.4		
1110	51.1	7.59	515	20.9		
	58.4					
	65.7					
	73.0					

LABORATORY INFORMATION

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

COMMENTS: DEVELOP ONLY SLOW RECOVERY WELL TOTALLY DE-WATERED AFTER 17 CASE VOLUMES, WATER WAS TOTALLY CLEAR NO SILT

Add/Replaced Lock: ✓ Add/Replaced Plug: ✓ 4" Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**

Site Address: **500 Grand Avenue** Event Date: 6/5/09 (inclusive)

City: **Oakland, CA** Sampler: KE

Well ID MW-~~8~~1

Well Diameter 2 / 4 in.

Initial Total Depth ft.

Final Total Depth ft.

Depth to Water ft.

Date Monitored: 6/5/09

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.

____ xVF ____ = ____ x10 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

COMMENTS: DEVELOP ONLY Unable to remove lid

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

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**

Site Address: **500 Grand Avenue** Event Date: 6/5/09 (inclusive)

City: **Oakland, CA** Sampler: KE

Well ID **MW-8J** Date Monitored: 6/5/09

Well Diameter 2 (4) in.

Initial Total Depth 14.95 ft.

Final Total Depth 14.97 ft.

Depth to Water 6.59 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

8.36 xVF .66 = 5.5 x10 case volume = Estimated Purge Volume: 55.1 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): 0830 Weather Conditions: Sunny

Sample Time/Date: — / — Water Color: Cloudy Odor: Y / (N)

Approx. Flow Rate: 2 gpm. Sediment Description: light

Did well de-water? yes yes If yes, Time: 0837 0849 Volume: 13 22 gal. DTW @ Sampling: _____

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)
0835	6	8.15	1117	20.8		
0836	12	7.97	1198	21.3		
0844	18	7.86	578	20.3		
0849	24	7.90	917	20.2		
0900	30	7.99	854	20.7		
0903	36	8.03	882	21.1		
0933	42	7.83	1212	21.2		
0950	48	7.90	1208	22.1		
1001	52	7.80	1168	21.6		
1003	56	7.73	1179	21.1		

LABORATORY INFORMATION

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

COMMENTS: DEVELOP ONLY dewater: yes 38gal 0904, yes 0933 46gal

Add/Replaced Lock: X Add/Replaced Plug: X 4" Add/Replaced Bolt: _____

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 6.5.09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8K Date Monitored: 6.5.09
Well Diameter (2)4 in.
Initial Total Depth 16.55 ft.
Final Total Depth 18.82 ft.
Depth to Water 1.18 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

15.37 xVF .17 = 2.61 x10 case volume = Estimated Purge Volume: 26.0 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): 0840 Weather Conditions: CLOUDY
Sample Time/Date: — / 6.5.09 Water Color: V. LT. BRN Odor: Y / (N)
Approx. Flow Rate: ≈ 1.5 gpm. Sediment Description:
Did well de-water? NO 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)
0842	2.6	7.65	586	22.9		
0844	5.2	7.60	584	21.8		
0846	7.8	7.67	591	20.7		
0848 → BW starting	10.4	7.64	596	20.6		
0855	13.0	7.61	611	22.4		
0858	15.6	7.59	609	21.1		
0903	18.2	7.55	616	21.3		
0908	20.8	7.57	620	22.8		
0918	23.4	7.53	618	22.0		
0930	26.0	7.50	622	21.9		

LABORATORY INFORMATION

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

COMMENTS: DEVELOP ONLY

Add/Replaced Lock: ✓ Add/Replaced Plug: ✓ 2" Add/Replaced Bolt:

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT
FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 6-5-09 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-8L Date Monitored: _____
Well Diameter 2 4 in.
Initial Total Depth _____ ft.
Final Total Depth _____ ft.
Depth to Water .90 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.

_____ xVF _____ = _____ x10 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

COMMENTS: DEVELOP ONLY / CASING BENT AT .90 feet

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

FORMER TEXACO SERVICE STATION #211170
Oakland, CA

SPECIAL EVENT OF
June 10, 2009

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 6-10-9 (inclusive)
City: Oakland, CA Sampler: AC-HK

Well ID MW-8F Date Monitored: 6-10-9
Well Diameter 2 (4) in.
Total Depth 14.56 ft.
Depth to Water 12.41 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.

2.15 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: Cloudy
Sample Time/Date: 1410 / 6-10-9 Water Color: _____ Odor: Y / N _____
Approx. Flow Rate: — gpm. Sediment Description: _____
Did well de-water? — If yes, Time: _____ Volume: _____ gal. DTW @ Sampling: 12.41

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-8F	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS: Water level has not recovered since 6/5/9 development event. Previous DTW was 8.99. Unable to redevelop nor purge well. Grab sample taken due to very slow recovery, and to ensure sample was collected today.

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**

Site Address: **500 Grand Avenue** Event Date: 6-10-9 (inclusive)

City: **Oakland, CA** Sampler: AC-HK

Well ID **MW-8G** Date Monitored: 6-10-9

Well Diameter 2/4 in.

Total Depth 14.47 ft.

Depth to Water 12.35 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.

2.12 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: Cloudy

Sample Time/Date: 1435 / 6-10-9 Water Color: _____ Odor: Y / N _____

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

Did well de-water? — If yes, Time: — Volume: — gal. DTW @ Sampling: 12.35

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-8G	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS: Water level has not recovered since 6/5/09 development event. Previous DTW was 9.92. Unable to redevelop or purge well. Grab sample taken due to very slow recovery and to ensure a sample was collected today

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 Job Number: 385866
Site Address: 500 Grand Avenue Event Date: 6-10-9 (inclusive)
City: Oakland, CA Sampler: AC

Well ID MW-8H Date Monitored: 6-10-9
Well Diameter 2 (4) in.
Total Depth 14.98 ft.
Depth to Water 3.66 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.

11.32 xVF .66 = 7.4 x3 case volume = Estimated Purge Volume: 22.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 5.92

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): 1024 Weather Conditions: Cloudy
Sample Time/Date: 1105 / 6-10-09 Water Color: Clear Odor: Y / N
Approx. Flow Rate: 2 gpm. Sediment Description:
Did well de-water? Yes If yes, Time: 1032 Volume: ~16 gal. DTW @ Sampling: 5.92

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1028	8	7.51	479	22.3		
1032	16	7.33	493	21.7		
1046	23	7.29	497	21.5		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8H	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/DEVELOPMENT FIELD DATA SHEET

Client/Facility#: Chevron #211173 | Job Number: 385866
Site Address: 500 Grand Avenue | Event Date: 6-10-9 (inclusive)
City: Oakland, CA | Sampler: HK

Well ID: MW-8I | Date Monitored: 6-10-9
Well Diameter: 2 (4) in.
Initial Total Depth: 14.60 ft.
Final Total Depth: 14.61 ft.
Depth to Water: 6.31 ft. ☐ Check if water column is less then 0.50 ft.
8.29 xVF .66 = 5.4 x10 case volume = Estimated Purge Volume: 54 gal.
Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 7.96

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

Purge Equipment:
Disposable Bailer
Stainless Steel Bailer ✓
Stack Pump ✓
Suction Pump
Grundfos
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: 0 ft
Visual Confirmation/Description:
Skimmer / Absorbant Sock (circle one)
Amt Removed from Skimmer: gal
Amt Removed from Well: gal
Water Removed:
Product Transferred to:

Start Time (purge): 0910 | Weather Conditions: Cloudy
Sample Time/Date: 1125 / 6/10/09 | Water Color: CLEAR Odor: (Y) / N MODERATE
Approx. Flow Rate: 2 gpm. | Sediment Description:
Did well de-water? YES If yes, Time: 0919 / 0949 Volume: 18 / 32 gal. DTW @ Sampling: 7.96

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm (µS))	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)
0913	6	7.31	708	21.4		
0916	12	7.25	716	21.2		
0919	18	DEWATERED				
0942	24	7.28	713	21.5		
0948	30	7.25	715	21.5		
0949	32	DEWATERED				
1017	38	7.19	720	21.7		
1020	44	7.22	723	21.8		
1022	48	DEWATERED				
1050	54	7.20	726	21.7		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8I	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**

Site Address: **500 Grand Avenue** Event Date: 6-10-9 (inclusive)

City: **Oakland, CA** Sampler: AC

Well ID **MW-8J** Date Monitored: 6-10-9

Well Diameter 2 (4) in.

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

Total Depth 14.97 ft.

Depth to Water 6.41 ft. ☐ Check if water column is less then 0.50 ft.

8.56 xVF .66 = 5.6 x3 case volume = Estimated Purge Volume: 17 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 8.12

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): 0934 Weather Conditions: Cloudy

Sample Time/Date: 1010 / 6-10-9 Water Color: Clear Odor: Y / (N)

Approx. Flow Rate: 2 gpm. Sediment Description: —

Did well de-water? Yes If yes, Time: 0941 Volume: 14 gal. DTW @ Sampling: 8.12

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)
0937	6	7.63	773	21.6		
0940	12	7.43	812	20.9		
0953	17	7.37	808	20.7		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8J	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #211173** Job Number: **385866**

Site Address: **500 Grand Avenue** Event Date: 6-10-9 (inclusive)

City: **Oakland, CA** Sampler: AC

Well ID MW-8K Date Monitored: 6-10-9

Well Diameter (2) 4 in.

Total Depth 18.82 ft.

Depth to Water 1.31 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.

17.51 xVF .17 = 2.9 x3 case volume = Estimated Purge Volume: 9 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 4.81

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): 1240 Weather Conditions: Cloudy

Sample Time/Date: 1325 / 6-10-9 Water Color: Clear Odor: Y / (N)

Approx. Flow Rate: 2 gpm. Sediment Description: —

Did well de-water? YES If yes, Time: 1244 Volume: 7 gal. DTW @ Sampling: 4.81

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1242	3	7.32	528	23.2		
1243	6	7.21	544	22.4		
1258	9	7.16	549	21.9		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8K	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	2x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #211173 | Job Number: 385866
Site Address: 500 Grand Avenue | Event Date: 6.10.9 (inclusive)
City: Oakland, CA | Sampler: AC - HK

Well ID: MW-8L | Date Monitored: 6.10.9
Well Diameter: 2 | 4 in.
Total Depth: 18.00 ft. 2.62 *see notes
Depth to Water: 0.91 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.

1.71 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: Cloudy
Sample Time/Date: 1225 / 6-10-9 | Water Color: Grey | Odor: Y / N Slight
Approx. Flow Rate: ____ gpm. | Sediment Description: moderate
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)

GRAB SAMPLE TAKEN

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-8L	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)
	1 x 500ml ambers	YES	NP	LANCASTER	TPH-DRO(8015)
*	- Well dewatered	with no	recharge		
	Unable to meet	bottle	requirements		

COMMENTS: Two obstructions in well. One @ 0.73 below TOC. Appears that casing has bubbled or deformed inside well blocking use of normal bailer. Second is complete obstruction @ 2.62 below TOC blocking water meter from passing down Available water column is above screen interval.

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

$611859-16

For Lancaster Laboratories use only
Acct. #: 12099 Sample # 5697718-25 Group #: 017263

C# 1148871

Facility #: SS#211173-OML G-R#385866 Global ID#T0600101355
Site Address: 500 GRAND AVENUE, OAKLAND, CA
Chevron PM: SHF 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: A. Chandler, H. Kework

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Water	Oil	Air	Potable	NPDES	Total Number of Containers	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
QA	6-10-9	—	X			X					2	X		X						
MW-8F		1410									8	X		X						
MW-8G		1435									8	X		X						
MW-8H		1105									8	X		X						
MW-8I		1125									8	X		X						
MW-8J		1010									8	X		X						
MW-8K		1325									8	X		X						
MW-8L	↓	1225	↓			↓					8	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
EDF/EDD

	Date	Time		Date	Time
Relinquished by:	6/11/9	1545	Received by:	11 JUN 09	1545
Relinquished by:	11 JUN 09	1636	Received by: FED EX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS Fedex Other			Received by:	12 JUN 09	0905
Temperature Upon Receipt 14.2 C°			Custody Seals Intact? Yes No		

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 25, 2009

SAMPLE GROUP

The sample group for this submittal is 1148871. Samples arrived at the laboratory on Friday, June 12, 2009. The PO# for this group is 211173 and the release number is MTI.

Client Description	Lancaster Labs Number
QA-T-090610 NA Water	5697718
MW-8F-W-090610 Grab Water	5697719
MW-8G-W-090610 Grab Water	5697720
MW-8H-W-090610 Grab Water	5697721
MW-8I-W-090610 Grab Water	5697722
MW-8J-W-090610 Grab Water	5697723
MW-8K-W-090610 Grab Water	5697724
MW-8L-W-090610 Grab Water	5697725

METHODOLOGY

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

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

Lancaster Laboratories

Analysis Report

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

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

Respectfully Submitted,

Robin C. Runkle
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 5697718

Group No. 1148871
CA

QA-T-090610 NA Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 QA

Collected: 06/10/2009

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAOQA

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**	
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
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

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	Z091711AA	06/20/2009 11:46	Ginelle L Feister	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091711AA	06/20/2009 11:46	Ginelle L Feister	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 16:01	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 16:01	Fanella S Zamcho	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697719

Group No. 1148871
CA

MW-8F-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8F

Collected: 06/10/2009 14:10 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8F

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**	
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
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B	**GC Extractable TPH**		**ug/l**	**ug/l**	
06609	TPH-DRO CA C10-C28	n.a.	300	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 03:50	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 03:50	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 17:49	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 17:49	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 19:49	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697720

Group No. 1148871
CA

MW-8G-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8G

Collected: 06/10/2009 14:35 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8G

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**	
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
	Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.				
SW-846 8015B	**GC Volatiles**		**ug/l**	**ug/l**	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
	Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 5.				
SW-846 8015B	**GC Extractable TPH**		**ug/l**	**ug/l**	
06609	TPH-DRO CA C10-C28	n.a.	140	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/18/2009 22:48	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/18/2009 22:48	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 18:11	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 18:11	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 18:04	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697721

Group No. 1148871
CA

MW-8H-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8H

Collected: 06/10/2009 11:05 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8H

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	
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	0.7	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	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
SW-846 8015B	**GC Extractable TPH**		ug/l	ug/l	
06609	TPH-DRO CA C10-C28	n.a.	78	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 04:15	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 04:15	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 18:33	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 18:33	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 18:46	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697722

Group No. 1148871
CA

MW-8I-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8I

Collected: 06/10/2009 11:25 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8I

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**	
06054	Benzene	71-43-2	23	0.5	1
06054	Ethylbenzene	100-41-4	N.D.	0.5	1
06054	Methyl Tertiary Butyl Ether	1634-04-4	5	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	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.	420	50	1
SW-846 8015B	**GC Extractable TPH**		**ug/l**	**ug/l**	
06609	TPH-DRO CA C10-C28	n.a.	360	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 04:40	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 04:40	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 23:37	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 23:37	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 19:07	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697723

Group No. 1148871
CA

MW-8J-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8J

Collected: 06/10/2009 10:10 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8J

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**	
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	10	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	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
SW-846 8015B	**GC Extractable TPH**		**ug/l**	**ug/l**	
06609	TPH-DRO CA C10-C28	n.a.	400	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 05:05	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 05:05	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 19:16	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 19:16	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 19:28	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697724

Group No. 1148871
CA

MW-8K-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8K

Collected: 06/10/2009 13:25 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8K

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	
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	2	0.5	1
06054	Toluene	108-88-3	N.D.	0.5	1
06054	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
SW-846 8015B	**GC Extractable TPH**		ug/l	ug/l	
06609	TPH-DRO CA C10-C28	n.a.	N.D.	50	1

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 05:30	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 05:30	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 19:38	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 19:38	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 17:01	Diane V Do	1

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Analysis Report

Lancaster Laboratories Sample No. WW 5697725

Group No. 1148871
CA

MW-8L-W-090610 Grab Water
Facility# 211173 Job# 385866 GRD
500 Grand Avenue-Oakland T0600101355 MW-8L

Collected: 06/10/2009 12:25 by AC

Account Number: 12099

Submitted: 06/12/2009 09:05
Reported: 06/25/2009 at 16:07
Discard: 07/26/2009

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

GAO8L

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	
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
	Preservation requirements were not met. The vial submitted for volatile analysis did not have a pH < 2 at the time of analysis. Due to the volatile nature of the analytes, it is not appropriate for the laboratory to adjust the pH at the time of sample receipt. The pH of this sample was pH = 3.				
SW-846 8015B	**GC Volatiles**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1
SW-846 8015B	**GC Extractable TPH**		ug/l	ug/l	
06609	TPH-DRO CA C10-C28	n.a.	2,600	66	2

General Sample Comments

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
01163	GC/MS VOA Water Prep	SW-846 5030B	1	Z091693AA	06/19/2009 05:56	Michael A Ziegler	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	Z091693AA	06/19/2009 05:56	Michael A Ziegler	1
01146	GC VOA Water Prep	SW-846 5030B	1	09169A20A	06/18/2009 20:00	Fanella S Zamcho	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	09169A20A	06/18/2009 20:00	Fanella S Zamcho	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	091640006A	06/15/2009 10:15	Jessica Agosto	1
06609	TPH-DRO CA C10-C28	SW-846 8015B	1	091640006A	06/16/2009 20:52	Diane V Do	2

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 06/25/09 at 04:07 PM

Group Number: 1148871

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: Z091693AA	Sample number(s): 5697719-5697725							
Benzene	N.D.	0.5	ug/l	86		80-116		
Ethylbenzene	N.D.	0.5	ug/l	95		80-113		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	87		78-117		
Toluene	N.D.	0.5	ug/l	95		80-115		
Xylene (Total)	N.D.	0.5	ug/l	96		81-114		
Batch number: Z091711AA	Sample number(s): 5697718							
Benzene	N.D.	0.5	ug/l	89		80-116		
Ethylbenzene	N.D.	0.5	ug/l	99		80-113		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	88		78-117		
Toluene	N.D.	0.5	ug/l	99		80-115		
Xylene (Total)	N.D.	0.5	ug/l	99		81-114		
Batch number: 09169A20A	Sample number(s): 5697718-5697725							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	127	127	75-135	0	30
Batch number: 091640006A	Sample number(s): 5697719-5697725							
TPH-DRO CA C10-C28	N.D.	32.	ug/l	81	79	56-122	3	20

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: Z091693AA	Sample number(s): 5697719-5697725 UNSPK: 5697720								
Benzene	97	93	80-126	4	30				
Ethylbenzene	105	101	77-125	3	30				
Methyl Tertiary Butyl Ether	92	89	72-126	3	30				
Toluene	106	102	80-125	4	30				
Xylene (Total)	107	103	79-125	4	30				
Batch number: Z091711AA	Sample number(s): 5697718 UNSPK: P697636								
Benzene	90	92	80-126	2	30				
Ethylbenzene	100	102	77-125	2	30				
Methyl Tertiary Butyl Ether	87	89	72-126	2	30				
Toluene	101	103	80-125	2	30				
Xylene (Total)	100	102	79-125	1	30				
Batch number: 09169A20A	Sample number(s): 5697718-5697725 UNSPK: P697708								
TPH-GRO N. CA water C6-C12	127		63-154						

*- 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: 06/25/09 at 04:07 PM

Group Number: 1148871

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

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: Z091693AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5697719	83	82	93	87
5697720	84	82	92	86
5697721	83	83	92	85
5697722	82	79	90	88
5697723	81	83	88	84
5697724	83	84	90	85
5697725	83	83	90	85
Blank	82	83	91	87
LCS	82	84	92	90
MS	83	84	91	90
MSD	83	82	91	88
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: Z091711AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5697718	82	82	91	86
Blank	81	79	92	87
LCS	81	82	92	89
MS	80	82	92	88
MSD	81	83	93	89
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 09169A20A

	Trifluorotoluene-F
5697718	89
5697719	88
5697720	88
5697721	87
5697722	99
5697723	88
5697724	87
5697725	88
Blank	87
LCS	128

*- 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: 06/25/09 at 04:07 PM

Group Number: 1148871

Surrogate Quality Control

LCSD	133
MS	128
Limits:	63-135

Analysis Name: TPH-DRO CA C10-C28
Batch number: 091640006A
Orthoterphenyl

5697719	85
5697720	83
5697721	85
5697722	87
5697723	85
5697724	88
5697725	71
Blank	87
LCS	112
LCSD	106
Limits:	59-131

*- 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)	**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.

Table 3. Results of Groundwater Analyses
Concentrations in µg/l (ppb)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8A	06/14/88	<0.5[1]	1.5	<2	6.6	--	--	--
	10/28/88	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	1.0	<0.5	<0.5	<50	1,200	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	2,800
	04/26/90	<0.5	<0.5	<0.5	<0.5	<2,500	<50	890
	07/26/90	6.0	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	130[3]
	04/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	07/23/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	700[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8B	06/14/88	<0.5	<1	<2	<1	--	--	--
	10/21/88	<0.5	<1	<2	3.1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	380
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	350
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	<50	180[3]
	04/23/91	8.4	2.5	<0.5	5.1	<50	<50	<500
	07/23/91	<0.5	1.1	<0.5	2.0	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	<0.5	<0.5	<0.5	<0.5	<50	550[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8C	06/14/88	5.3	3.5	2.6	13.0	--	--	--
	10/21/88	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3.0	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	190
	01/24/90	0.9	<0.5	<0.5	<0.5	<100	--	480
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	160
	07/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	76	110[3]
	04/23/91	12	25	3.7	19	800	<50	<500
	07/23/91	<0.5	0.6	<0.5	<0.5	<50	<50	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	1.2	<0.5	<0.5	<0.5	<50	840[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	150	<500

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8E	10/25/88	1,400	510	2.9	420	--	--	--
	09/28/89	5,600	3,100	<500	<3,000	22,000	--	--
	11/29/89	4,900	2,600	<250	1,490	15,000	6,800	<50
	01/24/90	10,100	3,340	540	1,790	36,000	--	4,900
	04/26/90	11,000	5,700	840	2,900	48,000	1,400	<50
	07/26/90	15,000	6,200	520	4,700	56,000	<50	<50
	(10/18/90)	1,500	1,300	170	1,800	15,000	620	<50
	01/08/91	14,000	5,400	860	1,700	51,000	17,000	520[3]
	04/23/91	19,000	6,100	750	4,100	50,000	4,800	<500
	07/23/91	16,000	5,400	1,100	4,000	47,000	3,500[4]	<500
	10/24/91	19,000	6,100	1,100	4,900	40,000	9,400	<500
	01/23/92	3,800	2,800	610	4,800	38,000	9,800[4]	--
	04/30/92	20,000	3,700	500	3,900	41,000	9,600	<500
MW-8F	04/14/89	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	<300
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	110
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	360	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	380	620[3]
	04/23/91	5.9	3.1	<0.5	2.7	<50	1,400	3,200
	07/23/91	<0.5	0.8	<0.5	<0.5	<50	60	<500
	10/24/91	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	4.0	1.3	<0.5	1.9	<50	1,300[5]	--
	04/30/92	<0.5	<0.5	<0.5	<0.5	<50	<50	<500
MW-8G	04/14/89	<0.5	<1	<2	<1	--	--	--
	09/28/89	<0.5	<0.5	<0.5	<3	<50	--	--
	11/29/89	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	01/24/90	<0.5	<0.5	<0.5	<0.5	<100	--	650
	04/26/90	<0.5	<0.5	<0.5	<0.5	<50	<50	120
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	<0.5	<0.5	<0.5	<0.5	<50	460	<50
	01/08/91	<0.3	<0.3	<0.3	<0.3	<30	220	260[3]
	04/23/91	0.9	0.9	<0.5	<0.5	<50	1,100	<500
	07/23/91	0.5	1.5	<0.5	3.0	<50	<50	<500
	10/24/91	0.6	<0.5	<0.5	<0.5	<50	--	--
	01/24/92	<0.5	<0.5	<0.5	<0.5	<50	980[5]	--
	04/30/92	1.7	<0.5	<0.5	<0.5	<50	<50	<500

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
MW-8H	01/24/90	14.8	14.8	10.8	38.8	460	--	<300
	04/26/90	67	19	43	64	830	<50	820
	(07/26/90)	45	1.3	12	8.2	190	<50	<50
	10/18/90	17	2.5	14	8.5	300	<50	<50
	01/08/91	12	2.2	6.4	4.0	320	180	89[3]
	04/23/91	1.5	<0.5	<0.5	<0.5	<50	730	<500
	07/23/91	21	1.8	9.7	2.6	270	<50	<500
	10/24/91	7.6	1.0	3.5	2.4	120	70	<500
	01/23/92	7.2	1.2	4.7	3.2	110	60[5]	--
	04/30/92	11	1.5	5.6	3.6	190	90	<500
MW-8I	01/24/90	116	2.9	13	30.5	580	--	440
	04/26/90	2,400	100	230	350	4,400	<50	1,400
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	92	4.1	37	21	530	<50	<50
	01/08/91	500	4.3	36	26	1,300	710	210[3]
	04/23/91	1,600	17	100	86	1,500	1,100	900
	07/23/91	1,600	30	140	63	1,700	260	<500
	10/25/91	470	6.0	76	13	760	230	<500
	01/23/92	420	7.2	27	20	820	210[4]	--
	04/30/92	1,800	19	180	25	2,200	430	<500
MW-8J	01/24/90	2.7	<0.5	1	2.6	<100	--	<300
	04/26/90	28	7.7	19	24	160	<50	320
	(07/26/90)	<0.5	<0.5	<0.5	<0.5	<50	<50	<50
	10/18/90	8.3	<0.5	2.6	1.5	<50	<50	<50
	01/08/91	0.41	<0.3	<0.3	0.52	71	<50	69[3]
	04/23/91	16	2.2	9.3	4.6	300	550	<500
	07/23/91	4.6	<0.5	3.1	<0.5	<50	<50	<500
	10/24/91	0.8	<0.5	<0.5	<0.5	<50	<50	<500
	01/23/92	0.8	<0.5	<0.5	<0.5	<50	<50	--
	04/30/92	2.3	<0.5	<0.5	<0.5	<50	<50	<500
OB-3	11/06/89	420	8	6	64	4,000	--	--
	04/26/90	160	19	5	8.6	1,000	3,200	<50
	(07/26/90)	<0.5	<0.5	<0.5	0.9	68	1,200	<50
	10/18/90	260	69	35	490	3,200	2,100	<50

Table 3 (continued)

Well	Date Sampled	Benzene	Toluene	Ethyl-benzene	Xylenes	TPH as Gasoline	TPH as Diesel	TPH Other[2]
OB-4	11/06/89	500	11	10	24	4,000	--	--
	04/26/90	360	10	10	18	460	3,900	<50
	(07/26/90)	23	3.7	1.6	5.9	200	1,600	<50
	10/18/90	600	540	83	840	4,300	330	<50
DWAL		1.0	1.0	680	100	1,750		

DWAL Drinking water action levels, State of California Department of Health Services (April, 1989).

1 <0.5 indicates that concentrations are below the reporting limit of 0.5 µg/l.

2 "Heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.

3 TPH as motor oil analyses; analyst did not feel that motor oil was indicted on the chromatogram.

4 Petroleum hydrocarbons quantified as diesel appear to be light hydrocarbons

5 Petroleum hydrocarbons quantified as diesel appear to be heavier hydrocarbons than diesel.

(07/26/90) Sample not analyzed for BTEX and TPH as gasoline within 14-day holding time

-- Samples not collected/not analyzed for compound

Table 1. Summary of Water Level Data

Well	Top of Casing Elevation* (feet)	Depth to Ground Water (feet) 07/14/88	10/21/88
MW-8A	99.72	2.92	3.32
MW-8B	101.11	1.91	1.04
MW-8C	98.41	7.43	7.46
MW-8E	99.38	--	5.02

* HLA datum

Table 4. Historical Record of Depth to Groundwater

Well		MW-8A	MW-8B	MW-8C	MW-8E	MW-8F	MW-8G	MW-8H	MW-8I	MW-8J
Top of Casing Elev.		99.72	101.11	98.41	99.38	97.94	97.24	98.57	97.94	97.38
Date										
JAN 24, 90	GW ELEV	91.47	100.60	90.87	96.07	88.06	86.57	94.97	91.94	91.44
FEB 27, 90	GW ELEV	95.21	100.73	91.15	96.13	87.95	86.68	95.06	92.03	91.60
MAR 27,90	GW ELEV	95.64	100.66	91.24	96.09	88.69	87.45	95.03	92.02	91.58
APR 24,90	GW ELEV	96.10	100.69	91.51	96.07	88.95	87.59	95.02	91.98	91.39
MAY 29, 90	GW ELEV	97.37	100.84	87.88	96.36	89.67	86.61	PAVED	PAVED	PAVED
JUNE 28, 90	GW ELEV	97.37	100.71	89.79	96.24	88.95	87.45	PAVED	PAVED	PAVED

Well		MW-8A	MW-8B	MW-8C	MW-8E	MW-8F	MW-8G	MW-8H	MW-8I	MW-8J
Top of Casing Elev.		99.72	101.11	98.41	99.38	97.94	97.24	98.90	98.27	97.69
Date										
JUL 24, 90	GW ELEV	97.31	100.62	90.98	96.06	88.74	87.54	95.14	92.05	91.21
AUG 24, 90	GW ELEV	94.74	100.60	90.30	95.90	87.13	86.08	92.14	91.93	93.89
SEPT 25, 90	GW ELEV	95.24	100.56	91.05	95.94	87.25	BLOCKED	95.10	91.90	91.01
OCT 18, 90	GW ELEV	96.11	100.55	90.92	95.86	86.89	85.62	95.07	91.85	90.96
NOV 28, 90	GW ELEV	89.69	100.54	88.60	96.00	87.02	85.57	94.94	92.16	91.01

All measurement are in feet
TOC = Top of casing elevation relative to arbitrary datum of 100 feet
GW Elev = Groundwater elevation relative to arbitrary datum

Table 4. Historical Record of Groundwater Elevations

Well		MW-8A	MW-8B	MW-8C	MW-8E	MW-8F	MW-8G	MW-8H	MW-8I	MW-8J
Top of Casing Elev.		99.72	101.11	98.41	99.38	97.94	97.24	98.90	98.27	97.69
Date										
MAR 29, 91	GW ELEV	97.40	100.85	91.94	96.10	89.35	BLOCKED	95.20	92.12	91.98
APR 23, 91	GW ELEV	97.41	100.80	91.74	96.36	89.09	87.80	92.87	91.98	93.88
JUN 10, 91	GW ELEV	96.90	100.69	90.33	96.30	88.36	86.95	95.22	92.16	91.52
JUN 28, 91	GW ELEV	97.19	100.70	91.05	96.13	88.46	86.94	95.07	91.97	91.38
JUL 23, 91	GW ELEV	97.37	100.59	91.04	96.14	88.15	86.50	95.05	91.86	91.02
AUG 22, 91	GW ELEV	97.04	100.49	89.62	95.90	86.50	84.68	95.10	91.83	90.94
OCT 03, 91	GW ELEV	97.26	100.59	90.48	96.06	86.36	84.15	95.11	91.80	90.92
OCT 24, 91	GW ELEV	97.19	100.49	90.73	95.93	86.19	83.82	94.88	91.70	90.81
NOV 26, 91	GW ELEV	96.69	100.38	90.82	96.04	86.31	84.22	95.02	91.69	91.10
DEC 30, 91	GW ELEV	97.44	100.81	91.26	95.85	87.43	85.30	95.06	91.86	91.28
JAN 23, 92	GW ELEV	97.15	100.57	91.53	95.81	87.70	85.94	95.16	91.94	91.38
FEB 28, 92	GW ELEV	97.24	100.82	91.72	96.03	88.01	86.41	94.46	91.72	91.41
MAR 26, 92	GW ELEV	97.59	101.04	91.72	96.37	89.16	88.04	94.69	91.82	91.49
APR 30, 92	GW ELEV	97.62	100.51	91.51	95.62	88.58	88.24	95.44	91.79	91.21

All measurements are in feet
Top of casing elevation relative to arbitrary datum of 100 feet
GW Elev = Groundwater elevation relative to arbitrary datum of 100 feet

TABLE 1
GROUNDWATER ANALYTICAL RESULTS
TRPH

Former Texaco Service Station
500 Grand Avenue at Euclid Avenue
Oakland, California

Well Number	Date Sampled	TRPH (ppb)
MW-8F	02/16/99	<1,000
	06/04/99	<1,000
	08/31/99	<5,000
	11/03/99	<5,000
	02/29/00	<5,000
	04/24/00	<5,000
	07/25/00	<5,000
	11/06/00	<5,000
MW-8G	02/16/99	<1,000
	06/04/99	23,000
	08/31/99	<5,000
	11/03/99	<5,000
	02/29/00	<5,000
	04/24/00	<5,000
	07/25/00	<5,000
	11/06/00	<5,000
MW-8H	11/03/99	24,000
	04/24/00	35,200
	07/25/00	13,200
	11/06/00	<5,000
MW-8I	11/03/99	11,000
	04/24/00	<5,000
	07/25/00	11,100
	11/06/00	<5,000
MW-8J	11/03/99	10,000
	04/24/00	<5,000
	07/25/00	6,400
	11/06/00	<5,000
MW-8K	11/03/99	<5,000
	04/24/00	<5,000
	07/25/00	9,100
	11/06/00	<5,000

TRPH = Total recoverable petroleum hydrocarbons (quantified as oil and grease)
ppb = Parts per billion
< = Less than laboratory detection limit stated to the right

APPENDIX D

SENSITIVE RECEPTOR AND WELL SURVEY INFORMATION

WELL SURVEY INFORMATION

FORMER TEXACO SERVICE STATION 21-1173
500 GRAND AVENUE
OAKLAND, CALIFORNIA

Figure I.D.	*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	425627A	01S-04W-26	C-1	Chevron	460 Grand Ave	Monitoring	12/14/92	15	5-15	1/8 mile
2	425627B	01S-04W-26	C-2	Chevron	460 Grand Ave	Monitoring	12/14/92	15	5-15	1/8 mile
3	425627C	01S-04W-26	C-3	Chevron	460 Grand Ave	Monitoring	12/14/92	15	5-15	1/8 mile
4	293467	01S-04W-25	MW-1	Quik Stop Markets	363 Grand Ave	Monitoring	11/10/88	27	16.5-26.5	1/4 mile
5	293470	01S-04W-25	MW-2	Quik Stop Markets	363 Grand Ave	Monitoring	11/11/88	35.5	15-35	1/4 mile
6	293469	01S-04W-25	MW-3	Quik Stop Markets	363 Grand Ave	Monitoring	11/16/88	36	24-34	1/4 mile
7	293442	01S-04W-25	MW-4	Quik Stop Markets	363 Grand Ave	Monitoring	3/5/90	31.5	15-30	1/4 mile
8	293371	01S-04W-25	MW-5	Quik Stop Markets	363 Grand Ave	Monitoring	3/5/90	31.5	15-30	1/4 mile
9	293354	01S-04W-25	MW-6	Quik Stop Markets	363 Grand Ave	Monitoring	3/6/90	30	15-30	1/4 mile
10	293355	01S-04W-25	MW-7	Quik Stop Markets	363 Grand Ave	Monitoring	3/7/90	23.5	13.5-23.5	1/4 mile
11	293356	01S-04W-25	MW-8	Quik Stop Markets	363 Grand Ave	Monitoring	3/7/90	31.5	18.5-28.5	1/4 mile
12	293474	01S-04W-25	RW-1	Quik Stop Markets	363 Grand Ave	Monitoring	8/14/90	35	25-35	1/4 mile
13	372178	01S-04W-25	S-1	Shell	350 Grand Ave	Monitoring	1/7/91	17	7-16.0	1/4 mile
14	372179	01S-04W-25	S-2	Shell	350 Grand Ave	Monitoring	1/7/91	15	7-15.0	1/4 mile
15	372180	01S-04W-25	S-3	Shell	350 Grand Ave	Monitoring	1/7/91	14.5	7-14.5	1/4 mile
16	--	01S-04W-25	MW-2	Chevron	3026 Lakeshore Blvd	Monitoring	8/7/91	12	2-12.0	1/4 mile
17	--	01S-04W-25	MW-3	Chevron	3026 Lakeshore Blvd	Monitoring	8/13/91	18	8-18.0	1/4 mile
18	--	01S-04W-25	MW-4	Chevron	3026 Lakeshore Blvd	Monitoring	8/13/91	15	5-15.0	1/4 mile
19	--	01S-04W-25	MW-1	Chevron	3026 Lakeshore Blvd	Monitoring	8/19/92	19	4-19.0	1/4 mile
20	--	01S-04W-25	MW-5	Chevron	3026 Lakeshore Blvd	Monitoring	6/12/92	35	15-35	1/4 mile
21	--	01S-04W-25	MW-6	Chevron	3026 Lakeshore Blvd	Monitoring	6/12/92	20	4-19.0	1/4 mile
22	--	01S-04W-25	MW-7	Chevron	3026 Lakeshore Blvd	Monitoring	6/12/92	19	4-19.0	1/4 mile
23	--	01S-04W-25	MW-8	Chevron	3026 Lakeshore Blvd	Monitoring	6/19/92	25	5-25.0	1/4 mile

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

APPENDIX E

PREFERENTIAL PATHWAY STUDY INFORMATION

EXPLANATION

- Monitoring Well
- Observation Well
- Soil Boring
- Decommissioned Monitoring Well
- Ground-Water flow direction
- Bench Mark (HLA datum el. = 100 Feet)

UTILITIES

- Electrical
- Telephone
- Gas
- Sanitary
- Water
- Air
- Approximate location of vent lines
- Anode line

EUCLID AVENUE

GRAND AVENUE

NOTE:
Gas lines and cable TV.
under sidewalk/landscaping

N

Unknown utility

8-inch sewer main

Sidewalk

Landscaping

Apartments

Office

Canopy

Dispensers

Service Area

Tanks

Former waste oil tank

Property Boundary

Concrete Retaining Wall

Landscaping

MW-8A
B-5
B-10
MW-8H
B-8
B-12
B-9
MW-8B
MW-8E
B-3
MW-8I
B-13
B-7
OB-4
OB-1
B-11
B-2
B-14
B-1
OB-2
MW-8J
OB-3
MW-8D
B-6
B-4
MW-8C
MW-8F
MW-8G
B-8K

0 20 40

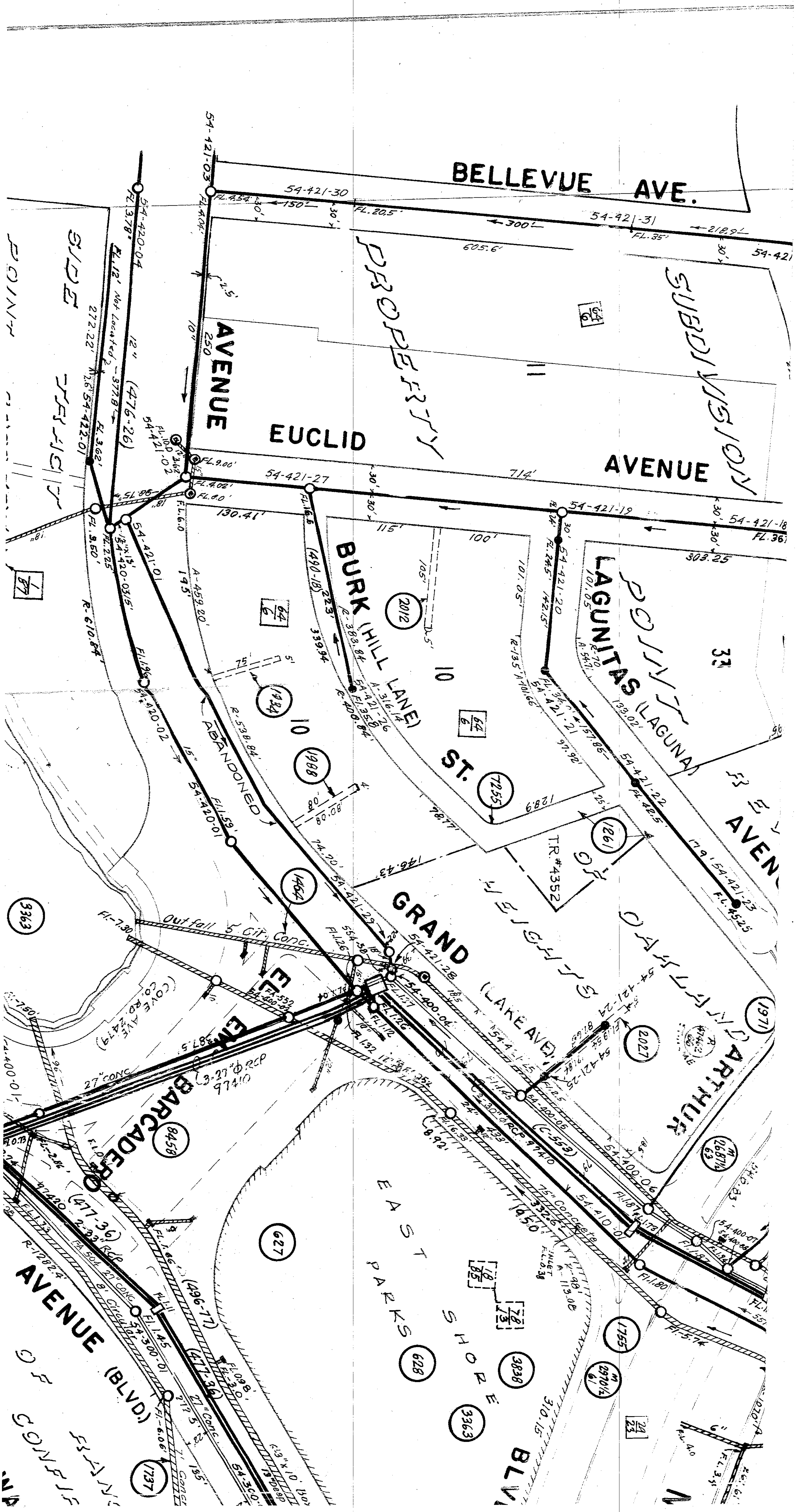
SCALE IN FEET

Harding Lawson Associates
Engineering and Environmental Services

Site Plan Showing Utilities
Former Texaco Station
500 Grand Avenue
Oakland, California

PLATE 1

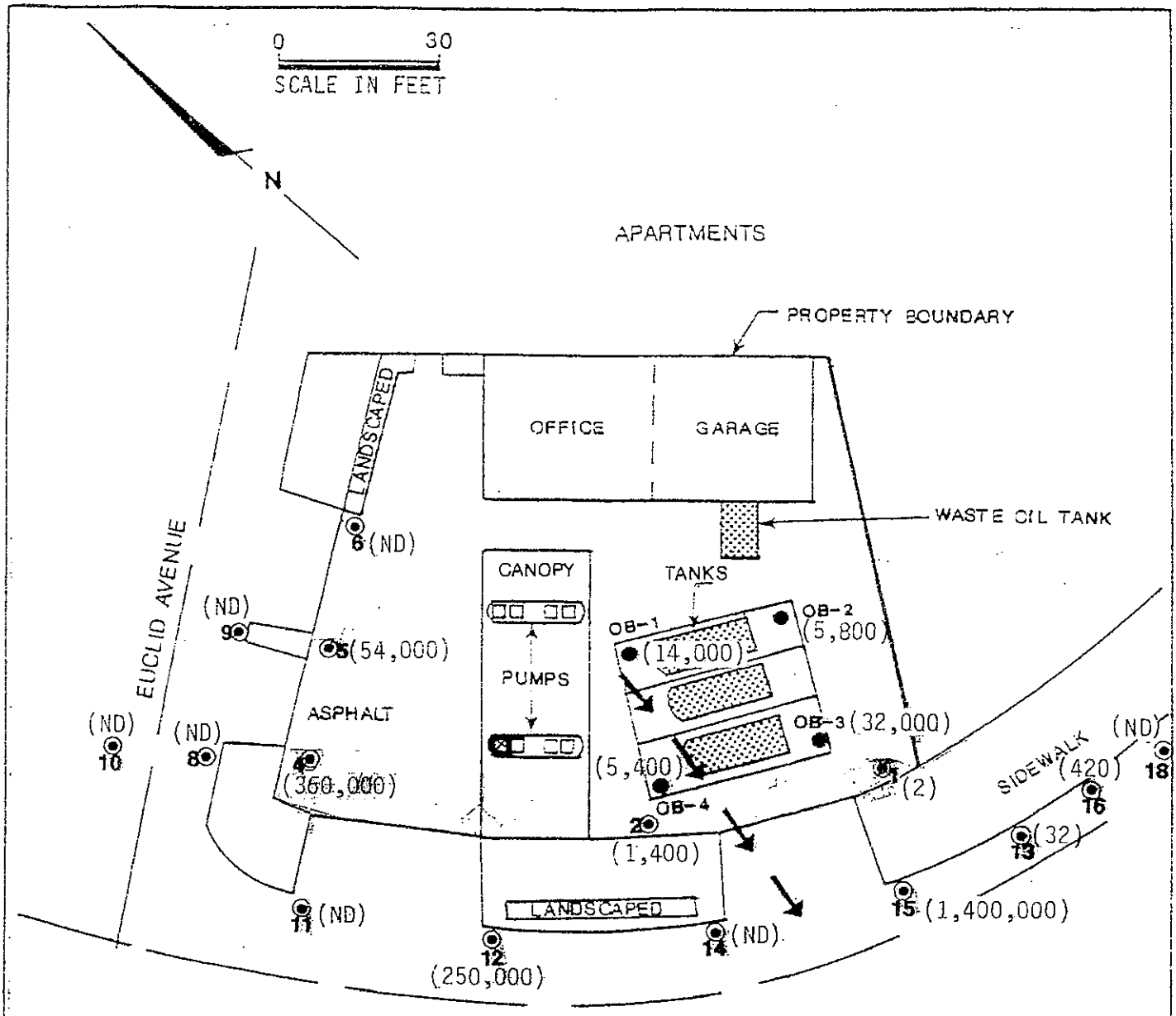
DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SP/RHC	2251,114.03		11/09/90	01/30/91



BELLEVUE AVE.
54-421-30
54-421-31
54-421-03
54-420-04
EUCLID AVENUE
AVENUE
SUBDIVISION
PROPERTY
54-421-27
54-421-19
54-421-18
54-421-02
54-422-01
54-421-01
54-420-03
54-420-02
54-420-01
BURK (HILL LANE) ST.
LAGUNITAS (LAGUNA) AVENUE
ABANDONED
T.R. #4352
GRAND (LAKE AVE.)
54-421-29
54-421-28
54-421-22
54-421-23
54-421-24
54-421-25
54-400-04
54-400-05
54-400-06
54-410-01
ARTHUR
EAST SHORE PARKS
BARCADERO
AVENUE (BLVD.)
Out fall 5' Cir. Conc.
(COVE AVE.)

APPENDIX F

PREVIOUS SITE PLANS



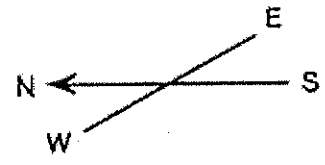
Harding Lawson Associates
Engineers and Geoscientists

Soil-Gas Probe Locations
Former Texaco Service Station
500 Grand Avenue
Oakland, California

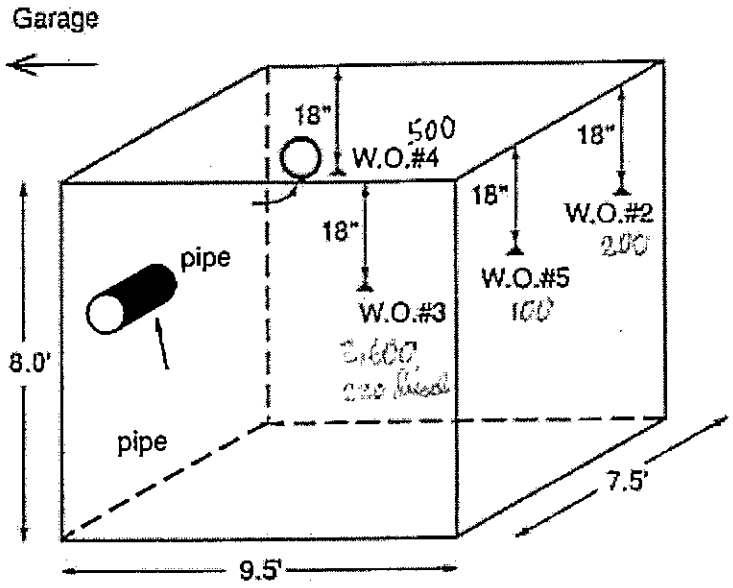
PLATE **3**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED	DATE
YC	2251,081.03	AK	5/89		

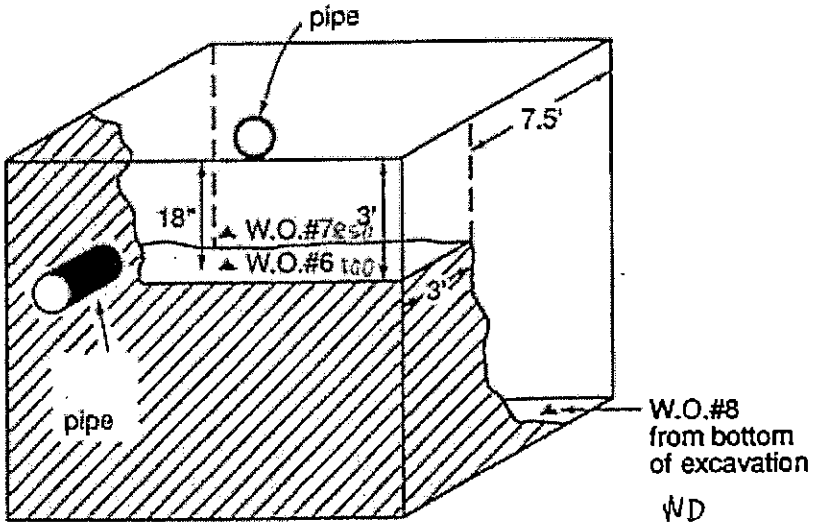
O & G, ppm



September 25, 1990
Excavation



October 3, 1990
Excavation



West wall

LEGEND

▲ approxiamate soil sample location

diagram not drawn to scale

Harding Lawson Associates
Engineering and Environmental Services

Excavation Diagram & Sample Locations

Exxon Tank Pull
500 Grand Avenue
Oakland, California

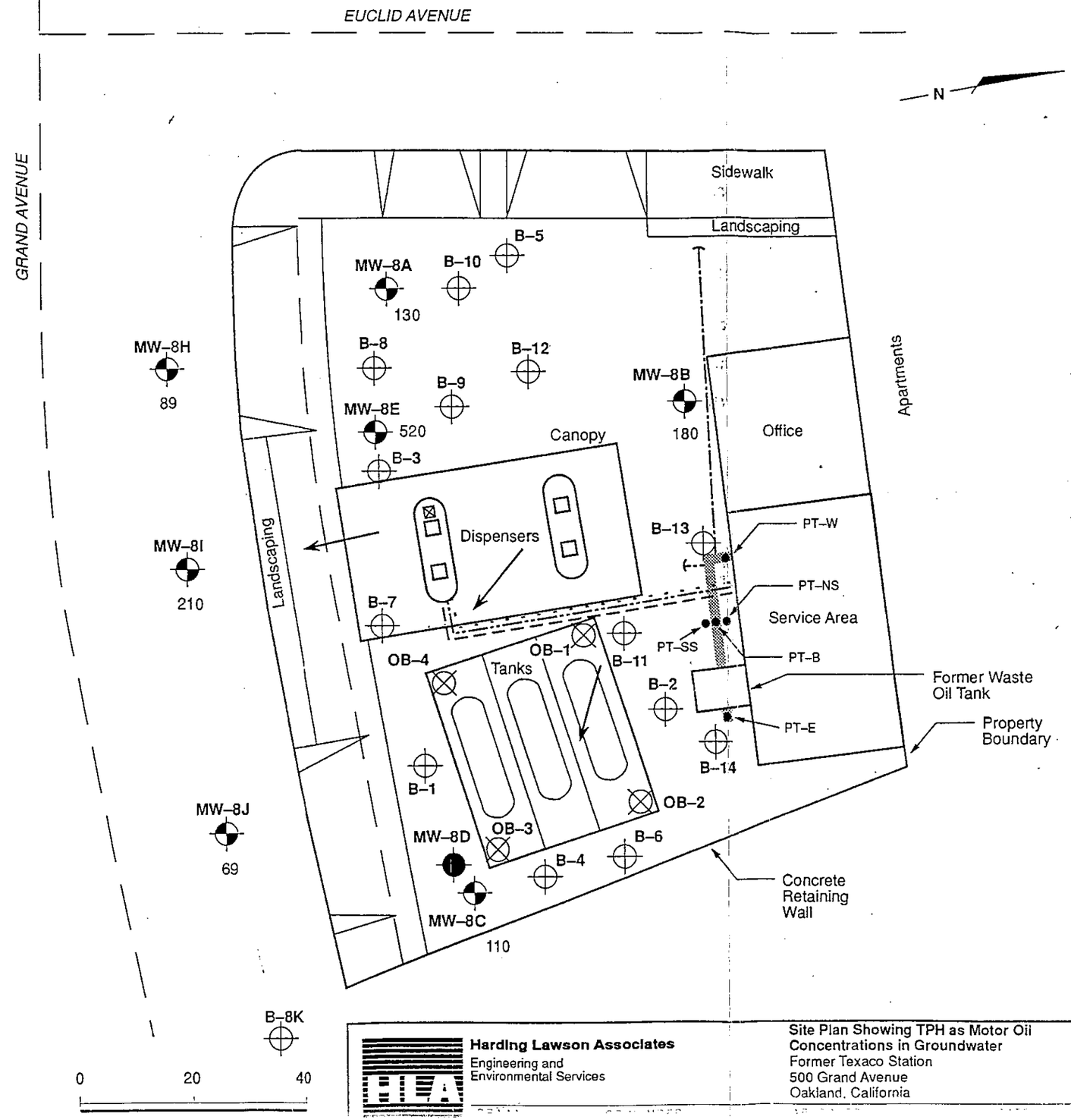
PLATE
2

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
S. Patel	4167,352.03		10/90	

LEGEND

- Monitoring Well
- Observation Well
- Soil Boring
- Decommissioned Monitoring Well
- Ground-Water flow direction
- Bench Mark (HLA datum el. = 100 Feet)
- Area of clay pipe excavation
- Soil samples collected from trench
- Clay pipe (abandoned sewer line?)
- Air
- Water
- Electrical

620 Groundwater concentrations of TPH as motor oil in parts per billion. Samples collected 1/8/91



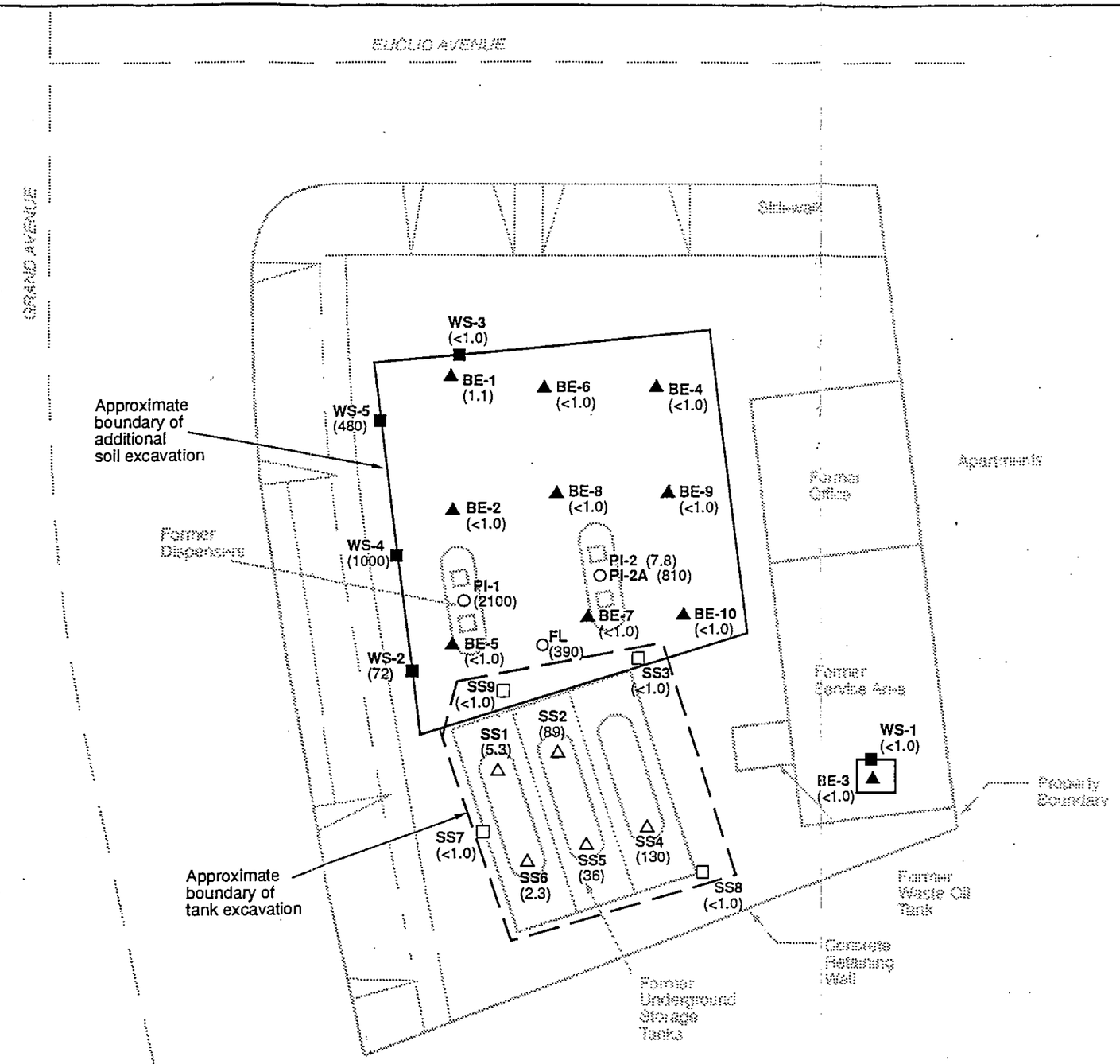
Harding Lawson Associates
Engineering and Environmental Services

Site Plan Showing TPH as Motor Oil Concentrations in Groundwater
Former Texaco Station
500 Grand Avenue
Oakland, California

PLATE 1

EXPLANATION

- Approximate boundary of excavation at the time of tank removal (April 14 and 15, 1992)
- △ Soil sample (SS) from bottom of tank excavation (approximately 10 feet below grade)
- □ Soil sample (SS) from wall of tank excavation (5 to 10 feet below grade)
- Approximate boundary of soil excavation (May 5 and 6, 1992)
- ○ Soil sample from pump island (PI) of fuel line (FL) prior to excavation (5 to 6 feet below grade)
- ▲ Soil sample (BE) from bottom of evcavation (4.5 to 9 feet below grade)
- ■ Soil sample (WS) from wall of excavation (5 to 7.5 feet below grade)
- (2.3) Total petroleum hydrocarbons as gasoline, in mg/kg (ppm)

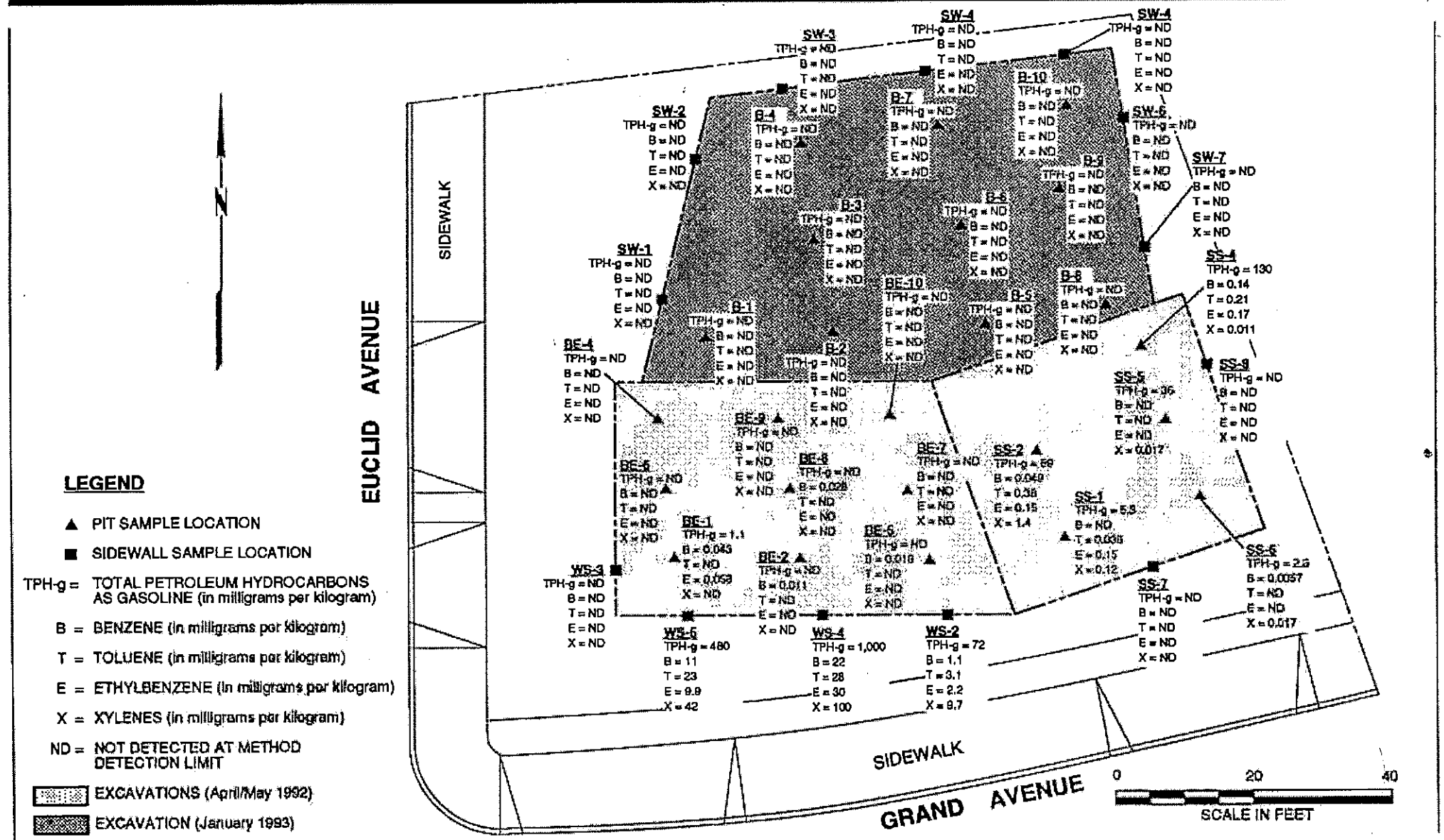


Harding Lawson Associates
Engineering and Environmental Services

Locations Sampled During Excavation Operations
Former Service Station
500 Grand Avenue
Oakland, California

PLATE **6**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SRG	10262.169		09/12/92	



LEGEND

- ▲ PIT SAMPLE LOCATION
- ■ SIDEWALL SAMPLE LOCATION
- TPH-g = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE (in milligrams per kilogram)
- B = BENZENE (in milligrams per kilogram)
- T = TOLUENE (in milligrams per kilogram)
- E = ETHYLBENZENE (in milligrams per kilogram)
- X = XYLENES (in milligrams per kilogram)
- ND = NOT DETECTED AT METHOD DETECTION LIMIT
- EXCAVATIONS (April/May 1992)
- EXCAVATION (January 1993)

PLAN: EXCAVATION LIMITS, SAMPLE LOCATIONS and ANALYTICAL RESULTS

TEXACO OIL COMPANY
500 Grand Avenue
Oakland, California

Converse Environmental West

Scale	AS SHOWN
Prepared by	TNW
Checked by	GLM
Approved by	PAF
Project No.	93-44-197-02
Date	3/11/93
Drawing No.	3