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TRANSMITTAL

DATE: August 12, 2011

REFERENCE NO.: 611951

PROJECT NAME: Former Chevron Station 9-3864 (RO351)

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

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QUANTITY	DESCRIPTION
1	Case Closure Request

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

COMMENTS:

Copy to: Ms. Olivia Skance, Chevron
Mr. Howard Schindler
Mr. John Gwynn

Completed by: James P. Kiernan [Please Print]

Signed:

Filing: **Correspondence File**

Olivia Skance
Team Lead
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
San Ramon, CA 94583
Tel (925) 790-6521

August 12, 2011

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

Re: Chevron Facility # 9-3864

Address: 5101 Telegraph Avenue, Oakland, California

I have reviewed the attached report titled *Case Closure Request* and dated August 12, 2011.

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,

Olivia Skance
Project Manager

Enclosure: Report

CASE CLOSURE REQUEST

Former Chevron Service Station 9-3864
5101 Telegraph Avenue
Oakland, California
Case No. RO0000351

Prepared for:

Mr. Mark Detterman, P.G., C.E.G.
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
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AUGUST 12, 2011
REF. NO. 611951 (6)
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CASE CLOSURE REQUEST

Former Chevron Service Station 9-3864
5101 Telegraph Avenue
Oakland, California
Case No. RO0000351

Christopher J. Benedict

James P. Kiernan, P.E.

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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Case Closure Request* on behalf of Chevron Environmental Management Company (Chevron) for former Chevron service station 9-3864 located at 5101 Telegraph Avenue in Oakland, California. Based on our review of the site background and conditions, this site meets the San Francisco Bay Regional Water Quality Control Board (RWQCB) criteria for closure as a low-risk groundwater case, as described in their January 5, 1996 memorandum entitled *Interim Guidance on Required Cleanup of Low-Risk Fuel Sites*. Please note that this closure request supersedes the June 26, 2009 *Site Status and Revised Work Plan* (work plan), to which a response was not received from Alameda County Environmental Health (ACEH), however, in our opinion the proposed work therein is no longer warranted. Presented below are the site description and background, site conditions and discussion of remaining impacts, an evaluation of potential risk, rationale for closure based on the low-risk criteria, and our conclusions and recommendations.

2.0 SITE DESCRIPTION AND BACKGROUND

The triangular site is located between 51st Street, 52nd Street, and Telegraph Avenue (Figure 1), and is currently developed with two, one- and two-story commercial buildings and associated parking and landscaping areas (known as Temescal Triangle); the buildings are occupied by various retail businesses and a restaurant. Land use in the vicinity of the site is mixed commercial and residential.

The site was occupied by a Chevron service station from approximately 1970 to 1991. Former station facilities included two 10,000-gallon and one 5,000-gallon steel gasoline underground storage tanks (USTs), a 1,000-gallon steel used-oil UST, and associated dispensers and piping. The station was demolished in 1991 and all aboveground and belowground facilities were removed. The site remained vacant until redevelopment with the existing buildings in the late-1990s. Current and former site features are shown on Figure 2.

Environmental work has been ongoing since 1990, and has included the installation of monitoring wells C-1 through C-4 and MW-1 through MW-5; the drilling of exploratory borings TC-1 through TC-5; and confirmation soil sampling during UST removals. In 1998, ownership of MW-4 was transferred to the responsible party at the upgradient former Autopro facility (5200 Telegraph Avenue) and it was re-named MW-5. Wells C-1, C-2, and C-4 were destroyed in 1996 and 1997 to facilitate site redevelopment. Remedial activities have included excavation and offsite disposal or aeration of

hydrocarbon-bearing soil (approximately 600 cubic yards), and the placement of Oxygen Release Compound® (ORC) in wells C-3 and MW-3. A summary of the environmental work is presented in Appendix A. The historical soil and groundwater sample analytical results are presented in Tables 1 and 2, respectively. The approximate well and boring locations are shown on Figure 2.

2.1 NEARBY KNOWN RELEASES

Based on our review of available documents, there are several known petroleum hydrocarbon releases in the nearby site vicinity. These releases and work performed are summarized below. Most of these facilities are shown on Figure 2.

Former Autopro

This upgradient facility (current smog test shop) was formerly an auto repair facility and Shell station with documented releases of gasoline (and related constituents), diesel, and waste oil. Elevated concentrations of total petroleum hydrocarbons as gasoline (TPHg) and diesel (TPHd) historically have been detected in wells MW-3 and MW-4 at the facility. During the most recent event in March 2011, these wells contained up to 6,900 micrograms per liter (µg/L) TPHg, 8,400 µg/L TPHd, and 18,000 µg/L TPH as motor oil (TPHmo). Elevated concentrations of TPHg (up to 26,000 µg/L) and TPHd (up to 4,500 µg/L) were also historically detected in well MW-5 (former Chevron MW-4) in Telegraph Avenue adjacent to the facility. A groundwater sample collected in 2004 adjacent to a storm drain line in Telegraph Avenue downgradient of the facility contained 57,000 µg/L TPHg and 29,000 µg/L TPHd. Additional investigation to further evaluate the downgradient extent of contamination and potential preferential pathways is planned. Groundwater containing petroleum hydrocarbons has migrated from this facility beneath the subject site, and is discussed further in Section 5.4.

5239 Telegraph Avenue

Elevated concentrations of TPHg (up to 17,000 µg/L) were detected in groundwater in 2007 beneath this property to the north (cross- to upgradient) of the subject site (Figure 2). The property is occupied by a vacant restaurant building; with no likely source of the contamination identified. As such, the case was closed by ACEH and the contamination attributed to the former Autopro facility.

Former Berkeley Land Company

The property to the south/southwest of the site across 51st Street (existing Temescal Plaza shopping center) was previously known as the Berkeley Land Company property at 5100 Telegraph Avenue, and was formerly occupied by a street car storage and

maintenance facility with several USTs. Numerous borings were drilled and several wells installed on the property (Figure 2), and soil and groundwater were found to be impacted with petroleum hydrocarbons, chlorinated solvents, and metals. Undocumented fill material (as deep as 17.5 feet below grade [fbg]) was also observed. Remediation was conducted and the case was closed in 1999 by ACEH; however, it was noted that petroleum hydrocarbons and chlorinated solvents remained in soil and/or groundwater.

Former Marshall Steel Cleaners

This former large dry cleaning facility (now Telegraph Business Park at 5427 Telegraph Avenue) located approximately 500 feet north-northeast (upgradient) of the site has documented releases of TPHg and Stoddard solvent; 17 USTs were removed from the property in 1992. In December 2010, up to 2,000 µg/L TPHg and 12,000 µg/L Stoddard solvent were detected in wells at the facility, and investigation is ongoing.

3.0 SITE CHARACTERISTICS

3.1 GEOLOGY AND HYDROGEOLOGY

The site is located on a gently sloping plane west of the Piedmont Hills, approximately 2 miles east of San Francisco Bay. The soil in the site vicinity consists of Late Pleistocene alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. Soil encountered during drilling at the site was reported to consist of interbedded layers of silt, clay, sand, and gravel with varying amounts of one or more of the other soil types within each layer. Copies of the historical boring logs are presented in Appendix B.

Groundwater was encountered during drilling at depths of approximately 12.5 to 17.5 fbg. Depth to groundwater in the wells has ranged from approximately 4.5 to 17.5 feet below top of casing (TOC), but typically fluctuates between 12 and 15 feet below TOC. The groundwater flow direction is generally to the southwest following the local topography (see rose diagram on Figure 2).

3.2 NEARBY WELLS AND SENSITIVE RECEPTORS

CRA reviewed California Department of Water Resources (DWR) and Alameda County Public Works Agency (ACPWA) files to identify any water-supply wells within 2,000 feet of the site. Seven wells were identified within the search radius (excluding monitoring wells): an industrial well approximately 750 feet north (cross- to upgradient), four

cathodic protection wells approximately 1,150 feet southeast (crossgradient), an irrigation well at Children's Hospital approximately 1,500 feet west (crossgradient), and a domestic well approximately 1,900 feet north-northeast (upgradient). The well survey results and a figure showing the identified well locations are presented in Appendix C.

There do not appear to be any sensitive receptors within 2,000 feet of the site in the downgradient direction with the exception of some residential areas at least 600 feet from well MW-3. The local water supply is provided by East Bay Municipal Utility District (EBMUD); the source is the Mokelumne River Basin in the Sierra Nevada range. Shallow groundwater in the site area is not likely to be used as a drinking water source in the foreseeable future. The nearest surface water body is Temescal Creek, which appears to flow in an underground culvert through the property to the south of the site across 51st Street. A map showing the creek location is presented in Appendix C.

4.0 CONSTITUENTS OF CONCERN

4.1 SOIL

Based on the historical data, the primary constituent of concern (COC) in remaining soil (i.e. not excavated) is TPHg; however, it was not detected in the majority of the soil samples (not considering borings TC-4 and MW-4 drilled adjacent to the Autopro facility). The samples with TPHg detections generally contained only low concentrations (up to 270 milligrams per kilogram [mg/kg]); higher concentrations (up to 980 mg/kg) were detected in the samples collected at 15.5 fbg (groundwater interface) from the sidewalls of the gasoline UST excavation, which was excavated to 18 fbg at which depth the soil no longer appeared to be impacted. Benzene, toluene, ethylbenzene, and xylenes (BTEX) are less significant COCs in soil, as they were only detected in a few samples at low concentrations (benzene detected in six samples at a maximum of only 0.069 mg/kg). Other constituents were not detected and therefore are not COCs in soil. Copies of previous site plans showing the excavation areas and confirmation sample locations are presented in Appendix D.

4.2 GROUNDWATER

Based on the monitoring results, and as with soil, the primary COC remaining in groundwater is TPHg. Ethylbenzene and xylenes are present in groundwater, but are insignificant COCs as only low concentrations (up to 1 µg/L) remain in one or two wells. Benzene is no longer detected and methyl tertiary butyl ether (MTBE) has not been

detected for at least several years. Therefore, these constituents are not COCs in groundwater.

5.0 PETROLEUM HYDROCARBON SOURCES AND DISTRIBUTION

5.1 RELEASE SOURCE AND VOLUME

Based on previous investigations and UST/piping removal confirmation sampling, the primary source(s) of the petroleum hydrocarbons appears to be the former UST system. Although the volume of released hydrocarbons is unknown, approximately 600 cubic yards of impacted soil was excavated and disposed or treated. This remedial action has adequately mitigated the release as evidenced by generally decreasing hydrocarbon concentrations in groundwater.

5.2 POTENTIAL OFFSITE SOURCES

Based on the historical data, the upgradient former Autopro facility appears to be contributing to the impacts at the site. This facility is discussed further in Section 5.4 below.

5.3 PETROLEUM HYDROCARBONS IN SOIL

Based on the analytical data, soil with residual COCs likely remains in the area of the former gasoline USTs and dispensers; however, concentrations are generally low. The COCs were also detected in the soil sample collected just above groundwater from the boring for upgradient well C-1, indicating that petroleum hydrocarbons were migrating beneath the site from an offsite source. The remedial excavations ranged from approximately 5 to 18 fbg, and appear to have removed the majority of hydrocarbon mass source in soil. Based on the analytical results and excavation activities, the extent of petroleum hydrocarbons in soil is adequately defined, and no further investigation is warranted. It should be noted that since the soil samples were collected in the early 1990s, concentrations likely have further decreased over time due to natural attenuation processes as evidenced by decreasing hydrocarbon concentrations in groundwater. The historical soil sample analytical results are presented in Table 1 (samples collected from areas that were later excavated are shaded).

5.4 PETROLEUM HYDROCARBONS IN GROUNDWATER

Groundwater has been monitored since 1990. Onsite well C-3 and downgradient well MW-3 are currently sampled semi-annually, and offsite perimeter wells MW-1, MW-2 and MW-5 are sampled annually. The COCs only remain in C-3 or MW-3 and generally have not been detected in MW-1, MW-2, or MW-5 throughout the course of monitoring. A copy of the first semi-annual 2011 groundwater monitoring report is presented in Appendix E.

Based on the monitoring results, groundwater containing the COCs remains beneath the site in the area of well C-3 downgradient of the former USTs and dispensers, as well as downgradient beneath 51st Street in the area of well MW-3. Groundwater containing the COCs also likely remains beneath the site upgradient of C-3; however, as previously mentioned, impacted groundwater is migrating beneath the site from the upgradient Autopro facility. Prior to its destruction in 1996, upgradient well C-1 consistently contained TPHg (up to 7,700 µg/L), BTEX (benzene up to 170 µg/L), and MTBE (up to 87 µg/L) (Appendix E). Groundwater samples collected in 1996 from Autopro borings AP-2 and AP-3 located upgradient of the subject site (Figure 2) contained up to 74,000 µg/L TPHd, 14,000 µg/L TPHg, and 130 µg/L benzene (Appendix F). Historical groundwater isoconcentration maps (prepared by others) incorporating the monitoring results at both sites are presented in Appendix F; these include maps of TPH as diesel (TPHd) and motor oil (TPHmo), which were not COCs at the subject site, but show the extent of the impacts from Autopro. Although the last analytical data in C-1 was from 1996, based on the current concentrations in groundwater at the Autopro facility, the contribution to impacts at the subject site likely remains significant. A current isoconcentration map of TPHg in groundwater is presented on Figure 3, which includes data from the Autopro facility. A TPHg isoconcentration map prepared using data from 1996 which was the last time all the site and Autopro wells were sampled is presented on Figure 4. As an upgradient source is contributing to the impacts beneath the site, it is not possible to accurately estimate the dissolved TPHg mass remaining.

Based on the perimeter borings and wells, the lateral extent of hydrocarbons in groundwater is adequately defined. The downgradient extent of dissolved hydrocarbons is defined by previous groundwater monitoring data from wells at the Berkeley Land Company property downgradient of the site across 51st Avenue (Appendix F), as was presented in the above-mentioned June 26, 2009 work plan.

Graphs of TPHg and benzene concentrations over time in wells C-3 and MW-3 are presented in Appendix G. As shown in the graphs, the TPHg concentrations in C-3 have remained relatively stable over the past 10 years, which, as source removal at the site

occurred 20 years ago, is indicative of continuing offsite contributions. Conversely, the TPHg concentrations in MW-3 are declining, indicating the plume has reached its maximum extent and is decreasing in size and mass due to natural attenuation. A comparison of the historical maximum and most recent TPHg, benzene, and MTBE concentrations in the wells is presented in Table A below.

TABLE A
COMPARISON OF MAXIMUM AND MOST RECENT CONCENTRATIONS IN GROUNDWATER
(concentrations in µg/L)

Well ID	*TPHg*		*Benzene*		*MTBE*[a]	
	Max Conc.	*Most Recent Conc.*	*Max Conc.*	*Most Recent Conc.*	*Max Conc.*	*Most Recent Conc.*
C-3	34,000 (12-6-94)	3,400 (3-14-11)	390 (12-21-92)	<0.5 (3-14-11)	10 (9-15-04)	<0.5 (3-14-11)
MW-1	350 (6-17-94)	<50 (3-14-11)	1.2 (6-17-94)	<0.5 (3-14-11)	<0.5 (all)	<0.5 (3-14-11)
MW-2	330 (6-17-94)	<50 (3-14-11)	1.4 (6-17-94)	<0.5 (3-14-11)	<0.5 (all)	<0.5 (3-14-11)
MW-3	13,000 (12-6-94)	1,300 (3-14-11)	610 (12-6-94)	<0.5 (3-14-11)	<0.5 (all)	<0.5 (3-14-11)
MW-5	1,000 (8-29-94)	<50 (3-14-11)	25 (9-20-93)	<0.5 (3-14-11)	<0.5 (all)	<0.5 (3-14-11)

a Only results obtained using EPA Method 8260 reported

< Not detected at or above stated laboratory reporting limit

6.0 RISK EVALUATION

To evaluate potential risks to human health or the environment associated with the residual petroleum hydrocarbons in soil and groundwater, CRA evaluated the presence of wells and potential sensitive receptors in the site vicinity, evaluated potential receptor exposure pathways, and performed a screening-level risk evaluation. We also relied on the results of a previous risk assessment (dated December 29, 1992) prepared for the site. The findings of the risk evaluation are presented below.

6.1 NEARBY WELLS AND SENSITIVE RECEPTORS

As described in Section 3.2, although several water-supply wells were identified within 2,000 feet, none were located in the downgradient direction and thus are unlikely to be impacted by petroleum hydrocarbons from the site. The local drinking water supply is obtained from distant surface water.

The site is in commercial use and therefore no sensitive receptors exist at the site. Some residential areas are located at least 600 feet downgradient from the site. However, drinking water is supplied by EBMUD.

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.

6.2 POTENTIAL EXPOSURE PATHWAYS

6.2.1 SOIL

As the site is generally capped with the existing development, potential exposure to any residual hydrocarbon-bearing soil beneath the site by the general public is de minimis. Therefore, the only identified potential exposure pathway is direct exposure by construction workers during trenching or excavation activities. However, the residual hydrocarbon concentrations in soil at shallow depths where a construction worker could be exposed were low and limited in extent. Additionally, the previous risk assessment indicated no significant risk to potential construction workers or hypothetical site residents. A copy of the previous risk assessment results is presented in Appendix H.

6.2.2 GROUNDWATER

The extent of impacted groundwater appears to be adequately defined, not migrating, and no water supply wells appear likely to be impacted. Therefore, no complete groundwater ingestion pathways exist and none are likely to exist in the foreseeable future based on the current municipal water supply. Based on the depth to groundwater encountered in the borings and excavations, it is unlikely any typical construction activities would encounter groundwater.

6.2.3 SURFACE WATER

The nearest surface water body appears to be Temescal Creek approximately 200 feet downgradient of the site. However, this section of the creek is confined to an underground culvert, and thus unlikely to be impacted by hydrocarbons from the site.

6.2.4 VAPOR INTRUSION

Remedial excavation was performed to remove/treat secondary hydrocarbon source soil. Benzene, considered the primary risk driver for vapor intrusion as it is a known human carcinogen, is no longer detected in groundwater indicating limited residual source in soil. Although TPHg remains in groundwater beneath the site, at least a portion appears to be originating from the upgradient Autopro facility. The previous risk assessment indicated no significant vapor intrusion risk, even under the most conservative residential land use scenario (Appendix H), and residual TPHg concentrations were higher at this time and benzene was present. Based on this information, potential vapor intrusion is not a concern.

6.3 COMPARISON TO ENVIRONMENTAL SCREENING LEVELS

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

6.3.1 SOIL

The only complete potential exposure pathway to residual hydrocarbons in soil is direct exposure by construction workers during trenching or excavation activities. Table B below presents a comparison of the maximum COC concentrations detected in remaining soil to the respective ESLs associated with construction/trench worker direct exposure concerns. The results were also compared to the shallow or deep soil ESLs (values are identical) for groundwater protection (soil leaching) at commercial sites where groundwater is a current or potential drinking water source.

TABLE B. COMPARISON OF MAXIMUM RESIDUAL SOIL CONCENTRATIONS TO ESLs (concentrations in mg/kg)

Constituent	*Highest Detected Concentration Remaining in Soil*	*ESL for Construction/Trench Worker Exposure*[1]	*ESL for Groundwater Protection*[2]
TPHg	980 (#4; 15.5 fbg; 9/26/91)	4,200	83
Benzene	0.069 (#2; 5 fbg; 9/26/91) (#3; 15.5 fbg; 9/26/91)	12	0.044
Toluene	2.7 (#4; 15.5 fbg; 9/26/91)	650	2.9
Ethylbenzene	2.5 (#4; 15.5 fbg; 9/26/91)	210	3.3
Xylenes	5.5 (#4; 15.5 fbg; 9/26/91)	420	2.3

1. ESLs from Table K-3, Direct Exposure Soil Screening Levels, Construction/Trench Worker Exposure Scenario, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008
2. ESLs from Table A-2, Shallow Soil Screening Levels, Commercial/Industrial Land Use, Groundwater is a current or potential source of drinking water, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008

As shown above, the maximum detected COC concentrations in remaining soil are well below the respective ESLs for construction/trench worker exposure. The historical maximum TPHg, benzene, and xylenes concentrations (1991) slightly exceed the ESLs associated with groundwater protection; however, concentrations in groundwater are generally declining (benzene no longer detected) and therefore any residual impacted soil does not appear to be acting as a significant continuing source of hydrocarbons that would reverse overall improving trends. In addition, as these samples were collected 20 years ago, concentrations have likely decreased due to natural attenuation. To be conservative, the results were compared to the ESLs associated with sites where groundwater is a potential drinking water source; however, at this site drinking water is provided by EBMUD and groundwater is not likely to be used as a resource in the foreseeable future. Therefore, the residual hydrocarbons in soil do not appear to pose a significant threat to human health or the environment, as indicated in the previous risk assessment.

6.3.2 GROUNDWATER

As described above, there were no identified complete groundwater ingestion pathways. However, the most recent COC concentrations detected in groundwater were compared to the ESLs at sites where groundwater is a current or potential source of drinking water. The comparison is presented in Table C below.

TABLE C. COMPARISON OF MOST RECENT MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLs (concentrations in µg/L)

Constituent	*Highest Detected Concentration Remaining in Groundwater*	*Groundwater ESL[1]*
TPHg	3,400	100
Ethylbenzene	0.6	30
Xylenes	1	20

1. ESLs from Table C, ESLs for Deep Soils, groundwater is a current or potential drinking water resource, *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008

As shown above, the maximum detected TPHg concentration in groundwater exceeds the ESL. However, the source has been removed, and the plume is stable, decreasing, and not migrating, and no wells or sensitive receptors are likely to be impacted. Additionally, at least a portion of the detected TPHg is likely due to an offsite source. Therefore, the residual petroleum hydrocarbons in groundwater at the site do not appear to pose a significant threat to human health or the environment.

Degradation trend analysis estimates that the TPHg concentration in MW-3 will reach the ESL by February 2037 (Appendix G), which is a reasonable amount of time given the municipal water supply. An analysis was not performed for C-3 due to the offsite contributing source.

6.3.3 SOIL VAPOR

The most recent residual COC concentrations in groundwater were compared to the groundwater ESLs for evaluation of potential vapor intrusion concerns at residential sites (most conservative). However, as shown in Table D below, the only remaining COCs with corresponding ESLs are ethylbenzene and xylenes.

TABLE D. COMPARISON OF MOST RECENT MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLs ASSOCIATED WITH VAPOR INTRUSION CONCERNS (concentrations in µg/L)		
Constituent	***Highest Detected Concentration Remaining in Groundwater***	***ESL[1]***
Ethylbenzene	0.6	170,000
Xylenes	1.0	160,000
1. ESLs from Table E-1, Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns, in *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, RWQCB-May 2008		

As shown above, the residual concentrations in groundwater are well below the corresponding ESLs and thus do not pose a significant threat to human health. Regardless, as previously discussed, potential vapor intrusion does not appear to be a concern and no further work appears warranted.

7.0 LOW-RISK GROUNDWATER CRITERIA

The site meets the RWQCB criteria for classification as a low-risk groundwater case. As described in the RWQCB memorandum, a low-risk groundwater case has the following general characteristics:

- The leak has been stopped and ongoing sources, including light non-aqueous phase liquid (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 pertains to the site, is discussed below.

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

All original potential sources of the petroleum hydrocarbons from the subject site (former USTs, dispensers, and piping) were removed in 1991. The remedial excavation removed

the majority of the hydrocarbon mass from the original source areas. As previously described, hydrocarbons are migrating beneath the site from an offsite source, and likely contributing to the stable TPHg concentrations in C-3. Otherwise, concentrations in groundwater are decreasing, indicating any residual hydrocarbons in soil are not acting as a significant continuing source that would reverse these trends. LNAPL has not been observed in any of the wells. Based on this information, the leak has been stopped and ongoing sources have been removed.

7.2 THE SITE HAS BEEN ADEQUATELY CHARACTERIZED

Soil sample analytical results and excavation activities indicate that the extent of impacted soil has been adequately defined. Groundwater monitoring has been performed since 1990. The plume appears to be stable and the extent adequately defined. Concentrations are expected to continue to decrease over time due to natural attenuation.

Although soil vapor sampling has not been performed, potential vapor intrusion does not appear to be a concern at the site based on the lack of benzene in soil and groundwater and the results of the previous risk assessment. 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, and no further work is warranted.

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

Based on the monitoring results, the plume appears stable, shrinking, and not migrating. Natural attenuation is expected to continue to reduce the remaining concentrations to background levels. The TPHg concentration in MW-3 is estimated to reach the ESL by 2037.

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

No water wells, surface water or other sensitive receptors were identified that are likely to be impacted by petroleum hydrocarbons from the site.

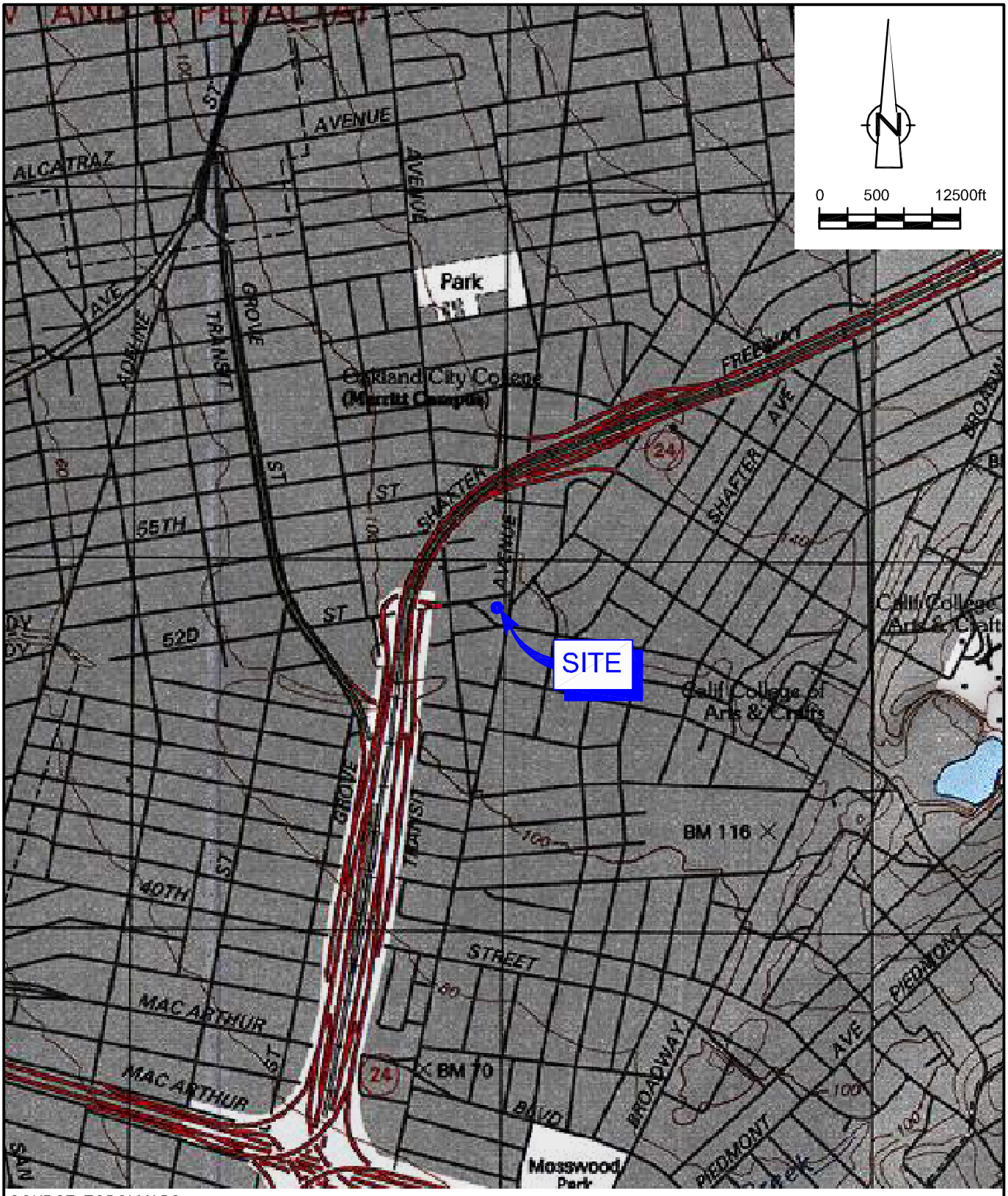
7.5 THE SITE PRESENTS NO SIGNIFICANT RISK TO HUMAN HEALTH OR THE ENVIRONMENT

The site is generally capped with the existing development, thus potential exposure to any residual impacted soil by the general public is precluded. Regardless, the previous risk assessment indicated no significant risk to either construction workers or hypothetical residents. The maximum residual detected concentrations in soil of a few COCs exceeded the ESLs associated with groundwater protection; however, concentrations in groundwater are generally decreasing indicating the lack of a significant continuing soil source. Although impacted groundwater remains beneath the site, and an upgradient source is contributing to the impacts, natural attenuation is expected to continue to decrease concentrations to background levels over time. No sensitive receptors appear likely to be impacted given the plume appears stable, decreasing in size and mass, and is limited in extent. Potential vapor intrusion has been shown to not be a significant concern. Based on this information, the site does not pose a significant risk to human health or the environment.

8.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the site conditions and analytical data, the site satisfies the RWQCB criteria for classification as a low-risk groundwater case. The extent of hydrocarbons in soil and groundwater has been adequately defined and no further work is warranted. The dissolved hydrocarbon plume is stable, decreasing, and an upgradient source is contributing to site impacts. The residual petroleum hydrocarbons in soil and groundwater at the site do not pose a significant threat to human health or the environment. The site is expected to remain in commercial use for the foreseeable future. Therefore, on behalf of Chevron, CRA respectfully requests the site be considered for low-risk case closure.

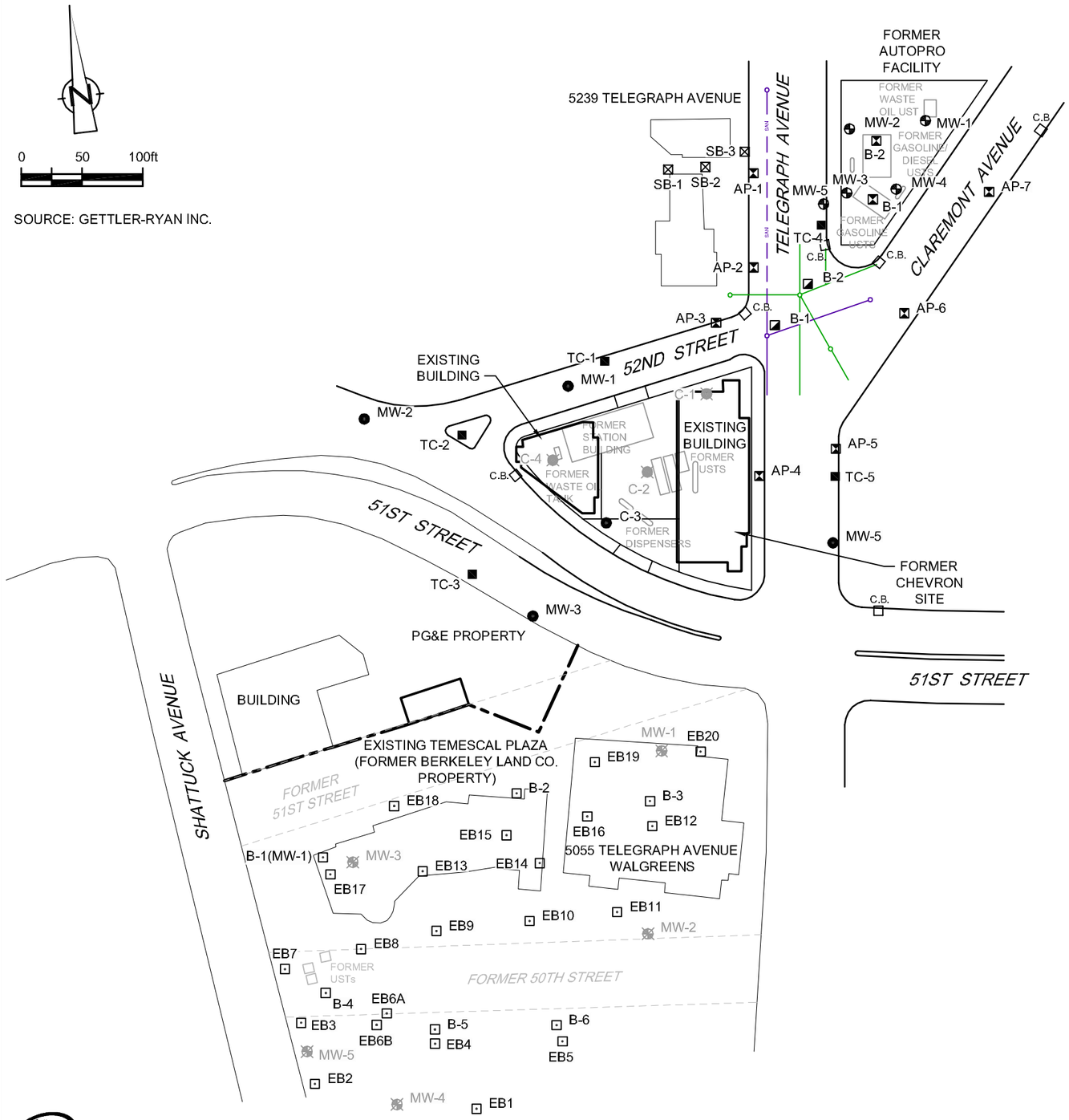
FIGURES

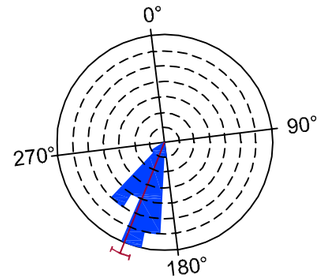


SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
Oakland, California





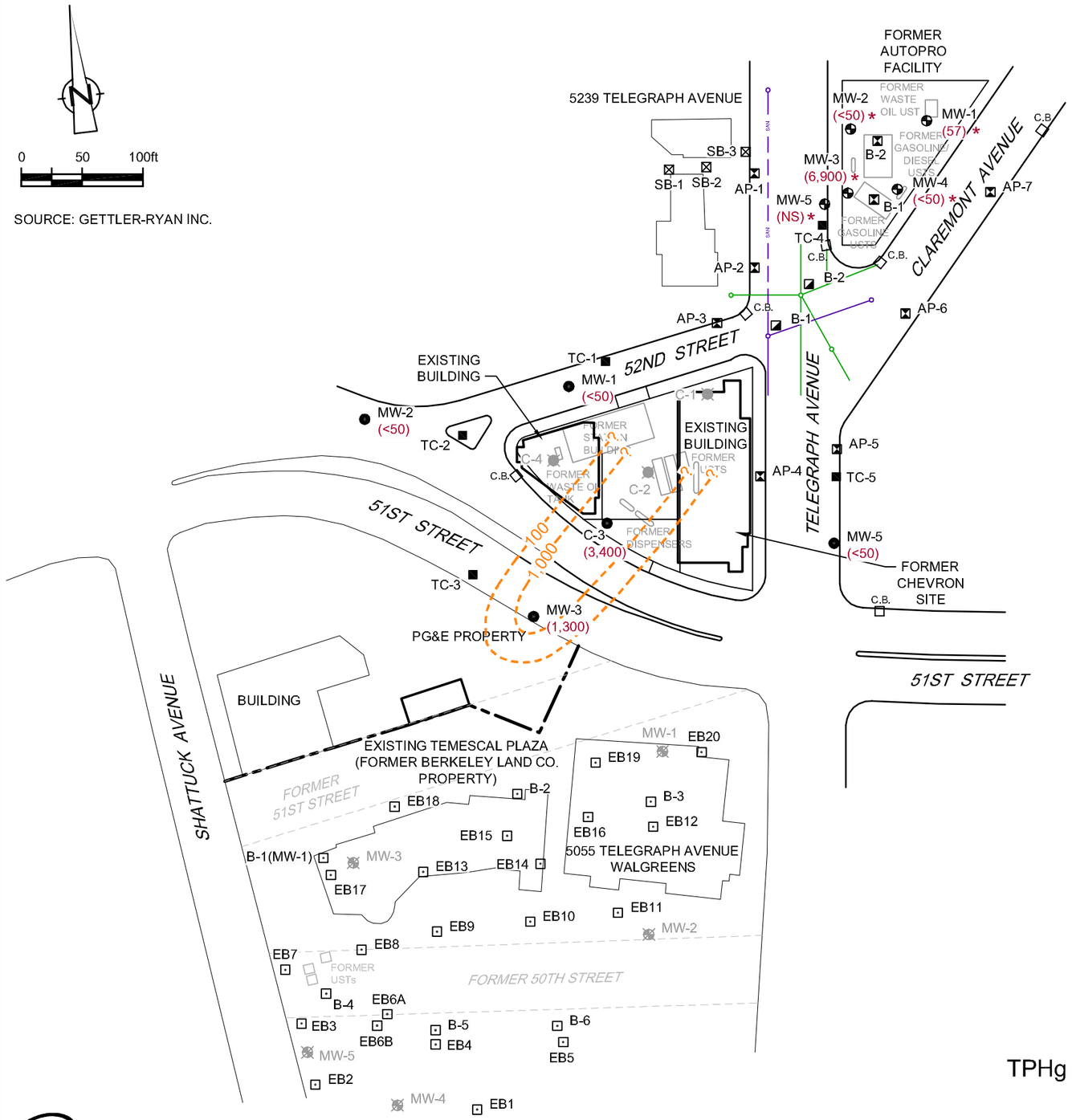
HISTORICAL GROUNDWATER FLOW DIRECTION

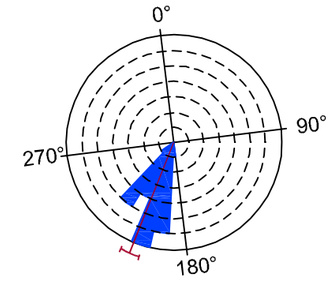
LEGEND

- CHEVRON MONITORING WELL LOCATION
- CHEVRON EXPLORATORY BORING LOCATION
- AUTOPRO WELL LOCATION
- AUTOPRO EXPLORATORY BORING LOCATION
- AUTOPRO TRENCH EXPLORATORY BORING LOCATION
- 5239 TELEGRAPH EXPLORATORY BORING LOCATION
- FORMER BERKELEY LAND CO. EXPLORATORY BORING LOCATION
- ABANDONED CHEVRON WELL LOCATION
- FORMER BERKELEY LAND CO. WELL LOCATION
- STORM DRAIN LINE
- SANITARY SEWER LINE

figure 2

SITE PLAN
FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
Oakland, California





HISTORICAL GROUNDWATER FLOW DIRECTION

LEGEND

- CHEVRON MONITORING WELL LOCATION
- CHEVRON EXPLORATORY BORING LOCATION
- AUTOPRO WELL LOCATION
- AUTOPRO EXPLORATORY BORING LOCATION
- AUTOPRO TRENCH EXPLORATORY BORING LOCATION
- 5239 TELEGRAPH EXPLORATORY BORING LOCATION
- FORMER BERKELEY LAND CO. EXPLORATORY BORING LOCATION
- ABANDONED CHEVRON WELL LOCATION
- FORMER BERKELEY LAND CO. WELL LOCATION
- STORM DRAIN LINE
- SANITARY SEWER LINE
- (1,200) TPHg CONCENTRATIONS ARE IN MICROGRAMS PER LITER (µg/L)
- 100 TPHg CONCENTRATION CONTOUR DASHED WHERE INFERRED
- * DATA FROM PSI SAMPLING EVENT ON MARCH 2, 2011
- (NS) NOT SAMPLED

figure 3

TPHg GROUNDWATER ISOCONCENTRATION MAP - MARCH 14, 2011
FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
Oakland, California

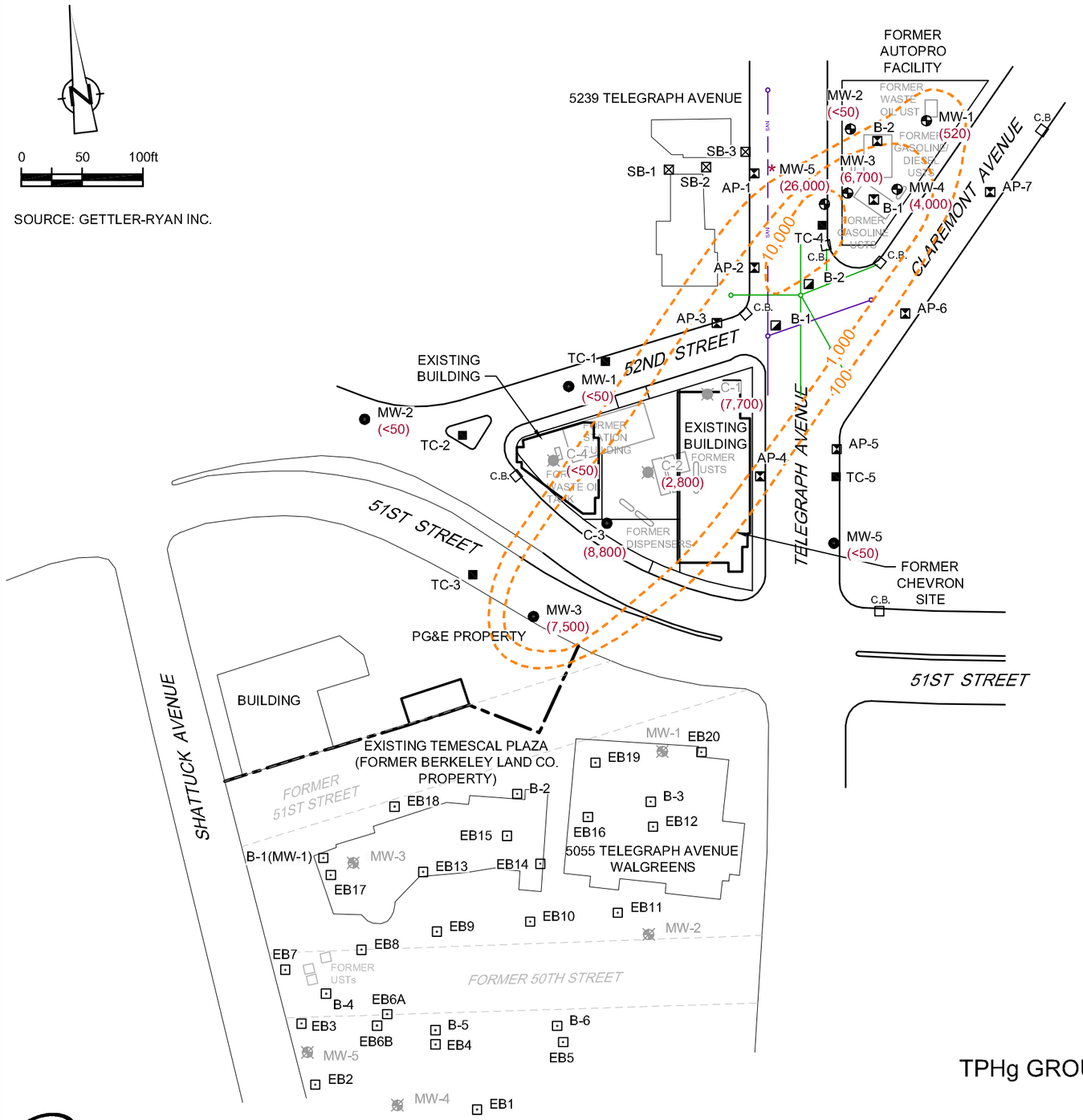


figure 4

TPHg GROUNDWATER ISOCONCENTRATION MAP - DECEMBER 11, 1996
FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
Oakland, California

611951-400(006)GN-WA006 JUN 27/2011

TABLES

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CA

Boring/ Sample ID	*Sample Date*	*Sample Depth (fbg)*	*TPHd*	*TPHg*	*TOG*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*HVOCs*
			←		*concentrations in millgrams per kilogram (mg/kg)*					→
Exploratory and Monitoring Well Borings										
C-1	11/14/90	15.5	NA	**48**	NA	<0.025	**0.29**	**0.28**	**0.6**	NA
C-2	11/14/90	10.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
	11/14/90	15.5	NA	**25**	NA	**0.04**	**0.092**	**0.18**	**0.4**	NA
C-3	11/15/90	10.5	NA	<1	NA	**0.006**	**0.016**	**0.006**	**0.021**	NA
	11/15/90	15.5	NA	**270**	NA	<0.25	**0.87**	**1.5**	**3.4**	NA
C-4	11/15/90	10.5	NA	<1	<50	<0.005	<0.005	<0.005	<0.005	ND
	11/15/90	15.5	NA	<1	<50	<0.005	<0.005	<0.005	<0.005	ND
TC-1	11/30/92	10	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
	11/30/92	15	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
TC-2	11/30/92	10	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
	11/30/92	15	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
TC-3	11/30/92	10	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
	11/30/92	15	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
TC-4	12/1/92	7	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
	12/1/92	10	NA	**4.4**	NA	<0.005	**0.019**	**0.013**	**0.019**	NA
	12/1/92	13	NA	**46**	NA	<0.05	**0.18**	**0.12**	**0.07**	NA
	12/1/92	16	NA	**0.7**	NA	<0.005	<0.005	<0.005	<0.005	NA

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CA

Boring/ Sample ID	*Sample Date*	*Sample Depth (fbg)*	*TPHd*	*TPHg*	*TOG*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*HVOCs*
			← *concentrations in millgrams per kilogram (mg/kg)* →							
TC-5	12/1/92	10	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
	12/1/92	16	NA	<0.3	NA	<0.005	<0.005	<0.005	<0.005	NA
B-1 (MW-1)	9/16/93	6.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	10.8	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
B-2 (MW-2)	9/20/93	6	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/20/93	11.3	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
B-3 (MW-3)	9/16/93	6.3	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	11.4	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	14.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	16.3	NA	**1**	NA	**0.007**	**0.01**	**0.005**	**0.017**	NA
B-4 (MW-4)	9/15/93	6.3	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/15/93	11.3	NA	**300**	NA	<0.025	**0.53**	**0.15**	**1.8**	NA
B-5 (MW-5)	9/16/93	6.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	11.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
	9/16/93	14.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.015	NA
Gasoline UST Excavation										
#1	9/18/91	13.5	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#2	9/18/91	13.5	NA	**1,300**	NA	<0.25	**2.3**	**2.8**	**7.6**	NA
#3	9/18/91	13.5	NA	**46**	NA	**0.1**	**0.07**	**0.21**	**0.18**	NA
#4	9/18/91	13.5	NA	**160**	NA	<0.12	<0.12	**1.6**	**3.2**	NA
#5	9/18/91	13.5	NA	**64**	NA	**0.04**	**0.04**	**0.13**	**0.32**	NA

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CA

Boring/ Sample ID	*Sample Date*	*Sample Depth (fbg)*	*TPHd*	*TPHg*	*TOG*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*HVOCs*
			← *concentrations in millgrams per kilogram (mg/kg)* →							
#6	9/18/91	13.5	NA	**190**	NA	**0.33**	**0.38**	**0.81**	**1.8**	NA
#7	9/18/91	10	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#8	9/18/91	10	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#9	9/18/91	10	NA	<1	NA	<0.005	<0.005	<0.005	0.007	NA
Dispenser and Product Line Excavation										
#10	9/18/91	2	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#11	9/18/91	3	NA	<1	NA	**0.008**	**0.009**	<0.005	**0.01**	NA
#12	9/18/91	2	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#13	9/18/91	2	NA	**53**	NA	**0.9**	**3.5**	**1.2**	**6.9**	NA
Used-Oil UST Excavation										
#14	9/18/91	11	<10	<1	<50	<0.005	<0.005	<0.005	<0.005	ND
#15	9/18/91	11.5	<10	<1	<50	<0.005	<0.005	<0.005	<0.005	ND
Gasoline UST Over-Excavation										
#1	9/26/91	15.5	NA	**580**	NA	<0.12	**1.4**	**1.5**	**3.9**	NA
#3	9/26/91	15.5	NA	**71**	NA	**0.069**	**0.12**	**0.22**	**0.57**	NA
#4	9/26/91	15.5	NA	**980**	NA	<0.12	**2.7**	**2.5**	**5.5**	NA
#5	9/26/91	15.5	NA	**330**	NA	<0.12	**0.81**	**1**	**2.7**	NA
#6	9/26/91	15.5	NA	**460**	NA	<0.12	**0.92**	**1.3**	**3**	NA
Product Line Over-Excavation										
#2	9/26/91	5	NA	**2**	NA	**0.069**	**0.092**	**0.022**	**0.18**	NA

TABLE 1

SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CA

Boring/ Sample ID	*Sample Date*	*Sample Depth (fbg)*	*TPHd*	*TPHg*	*TOG*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*HVOCs*
			←		*concentrations in millgrams per kilogram (mg/kg)*					→
Samples of Excavated Soil Aerated and Used as Backfill										
#7	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#8	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#9	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#10	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#11	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#12	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#13	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#14	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#15	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#16	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#17	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#18	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#19	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#20	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA
#21	10/10/91	N/A	NA	<1	NA	<0.005	<0.005	<0.005	<0.005	NA

Notes/Abbreviations:
TPHd/TPHg = Total petroleum hydrocarbons as diesel/gasoline
TOG = Total oil and grease
HVOCs = Halogenated volatile organic compounds by EPA Method 8010
fbg = feet below grade
NA = Not analyzed
< = Not detected at or above laboratory reporting limit
ND = Not detected; reporting limits vary
N/A = Not applicable
Note: Shaded samples were collected from soil that was later excavated

TABLE 2

GROUNDWATER SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CA

Boring ID	*Sample Date*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*
		Concentrations reported in micrograms per liter (ug/L)				
TC-1	11/30/92	<50	<0.4	<0.3	<0.3	<0.4
TC-2	11/30/92	<50	<0.4	<0.3	<0.3	<0.4
TC-3	11/30/92	<50	<0.4	<0.3	<0.3	<0.4
TC-4	12/1/92	**120,000**	<200	<200	**500**	**400**
TC-5	12/1/92	**2,400**	<2	<2	<2	**3**

Abbreviations:
TPHg = Total petroleum hydrocarbons as gasoline
< = Not detected at or above stated laboratory reporting limit

APPENDIX A

SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION

SUMMARY OF ENVIRONMENTAL INVESTIGATION AND REMEDIATION
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE, OAKLAND, CALIFORNIA

November 1990 Monitoring Well Installations
GeoStrategies, Inc. (GSI) installed onsite monitoring wells C-1 through C-4. Soil samples collected from the well borings at 10.5 and/or 15.5 feet below grade (fbg) contained up to 270 milligrams per kilogram (mg/kg) total petroleum hydrocarbons as gasoline (TPHg) and 0.04 mg/kg benzene. Details were presented in GSI's January 17, 1991 *Well Installation Report*.

September 1991 Station Demolition and Underground Storage Tank (UST) Removal
Blaine Tech Services, Inc. (Blaine Tech) oversaw the removal of three (two 10,000-gallon and one 5,000-gallon) steel gasoline USTs, a 1,000-gallon steel used-oil UST, dispensers, and product piping during station demolition. Soil samples collected beneath the gasoline USTs (13.5 fbg) and from the excavation sidewalls (10 fbg) contained up to 1,300 mg/kg TPHg and 0.33 mg/kg benzene. Soil samples collected at 2 or 3 fbg from the piping trenches contained up to 53 mg/kg TPHg and 0.9 mg/kg benzene. No hydrocarbons were detected in soil samples collected beneath the former used-oil UST.

The gasoline UST excavation was subsequently deepened to 17.5 to 18 fbg and the former piping trench was deepened to 5 fbg. Additional soil samples collected at 15.5 fbg from the sidewalls of the UST excavation contained up to 980 mg/kg TPHg and 0.069 mg/kg benzene. An additional soil sample collected at 5 fbg from the product line trench contained 2 mg/kg TPHg and 0.069 mg/kg benzene. Approximately 600 cubic yards of soil were removed; 300 cubic yards were disposed offsite and 300 were aerated, sampled, and re-used as backfill material. Details were presented in Blaine Tech's October 28, 1991 *Multiple Event Sampling Report*.

November/December 1992 Subsurface Investigation
Pacific Environmental Group, Inc. (PEG) advanced exploratory borings TC-1 through TC-5. Boring TC-4 was located adjacent to an upgradient former Shell service station to evaluate this potential offsite source. Soil samples collected at depths of 7 to 16 fbg contained up to 46 mg/kg TPHg, but no benzene. Groundwater samples were also collected from each boring. TPHg was only detected in the samples collected from TC-4 (120,000 micrograms per liter [µg/L]) and TC-5 (2,400 µg/L); no benzene was detected in the samples. Details were presented in PEG's untitled letter report dated December 18, 1992.

December 1992 Risk Assessment
Geraghty & Miller, Inc. (G&M) performed a risk assessment. The results indicated no significant threat to human health from residual petroleum hydrocarbons under a residential or commercial land use scenario, thus it was concluded no further remediation was necessary. Details were presented in G&M's December 29, 1992 *Risk-Based Analysis for the Former Chevron Service Station #9-3864*.

September 1993 Monitoring Well Installations
RESNA Industries (RESNA) installed offsite wells MW-1 through MW-5 adjacent to previous borings TC-1 through TC-5. Soil samples collected at depths of 6 to 16.3 fbg from the well borings contained up to 300 mg/kg TPHg and 0.007 mg/kg benzene (one sample). A well and

offsite source survey were also conducted. Details were presented in RESNA's October 18, 1993 *Report-Additional Subsurface Investigation*.

December 1996 and January 1997 Well Destructions

Gettler-Ryan Inc. (G-R) destroyed wells C-1, C-2, and C-4 to accommodate site redevelopment. Details were presented in G-R's January 14, 1997, and March 7, 1997 *Well Abandonment* reports.

1999-2004 Oxygen Release Compound® (ORC) Enhanced Oxygenation

ORC socks were placed in wells C-3 and MW-3 to reduce petroleum hydrocarbon concentrations in groundwater via enhanced biodegradation.

APPENDIX B

HISTORICAL BORING LOGS

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 15% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACIOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

LL - Liquid Limit (%)

PI - Plastic Index (%)

PID - Volatile Vapors In ppm

MA - Particle Size Analysis

2.5 YR 6/2 - Soil Color according to Munsell Soil Color Charts (1975 Edition)

5 GY 5/2 - GSA Rock Color Chart

 - No Soil Sample Recoverd

 - "Undisturbed" Sample

 - Bulk or Classification Sample

 - First Encountered Ground Water Level

 - Piezometric Ground Water Level

Penetration - Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs

GeoStrategies Inc.

Unified Soil Classification - ASTM D 2488-85 and Key to Test Data

Field location of boring: (See Plate 2)	Project No.: 7277	Date: 11/14/90	Boring No: C-1
	Client: Chevron Service Station No. 3864		
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 2
	Logged by: RCM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation: 117.45		Datum: MSL

Water Level	15.00'	19.25'	
Time	10:20	11:45	
Date	11/14/90	11/14/90	

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION - 1.0 feet.
				2				
				3				
				4				
	500	S&H	C-1-	5				SILT (ML) - very dark gray (10YR 3/1), damp, medium
0	500	push	5.0					stiff, low plasticity; 75% silt; 10% clay; 10% sand; 5% fine gravel; rootholes; organic matter.
				6				
				7				
				8				
				9				
	11			10				SAND (SW) - brownish yellow (10YR 6/6), damp,
0	11	S&H	C-1-					medium dense; 85% sand; 10% fine gravel; 5% silt;
	13		10.5					Fe-oxide staining.
				11				
				12				
				13				
				14				
	11							CLAYEY GRAVEL with SAND (GC) - dark greenish gray
808	11	S&H	C-1-	15		▽		(5GY 4/1), saturated, medium dense; 65% gravel; 20%
	15		15.5					sand; 15% clay.
				16				
				17				
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. C-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/14/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-1
	Location: 5101 Telegraph Avenue		Sheet 2
	City: Oakland, California		of 2
	Logged by: RCM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data:		
Hole diameter: 8-Inches	Top of Box Elevation:	Datum:	

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	7							
14.2	8	S&H	C-1-	20				CLAYEY SAND (SC) - light olive brown (2.5Y 6/6), saturated, medium dense; 75% sand; 15% clay; 10% gravel.
	6		20.5					
				21				CLAYEY SILT (ML/CL) - yellowish brown (10YR 5/6), saturated, stiff; 65% silt; 25% clay; 10% fine sand.
				22				
				23				
				24				SAND with CLAY (SW-SC) - dark yellowish brown (10YR 4/4), saturated, medium dense; 85% coarse sand; 10% clay; 5% gravel.
	7							
42.8	10	S&H	C-1-	25				
	19		25.5					
				26				
				27				
				28				
				29				
	4							SANDY CLAY (CL) - dark yellowish brown (10YR 4/6), damp, very stiff, medium plasticity; 70% clay; 25% sand; 5% silt.
19.0	7	S&H	C-1-	30				
	12		30.5					
				31				
				32				
				33				
	7							COLOR CHANGE to strong brown (7.5YR 4/6), hard; increasing sand to 30% at 33.5 feet.
	16	SPT		34				
	29							
				35				
								Bottom of sample at 34.5 feet.
				36				Bottom of boring at 34.5 feet.
								11/14/90
				37				
				38				
				39				

Remarks:

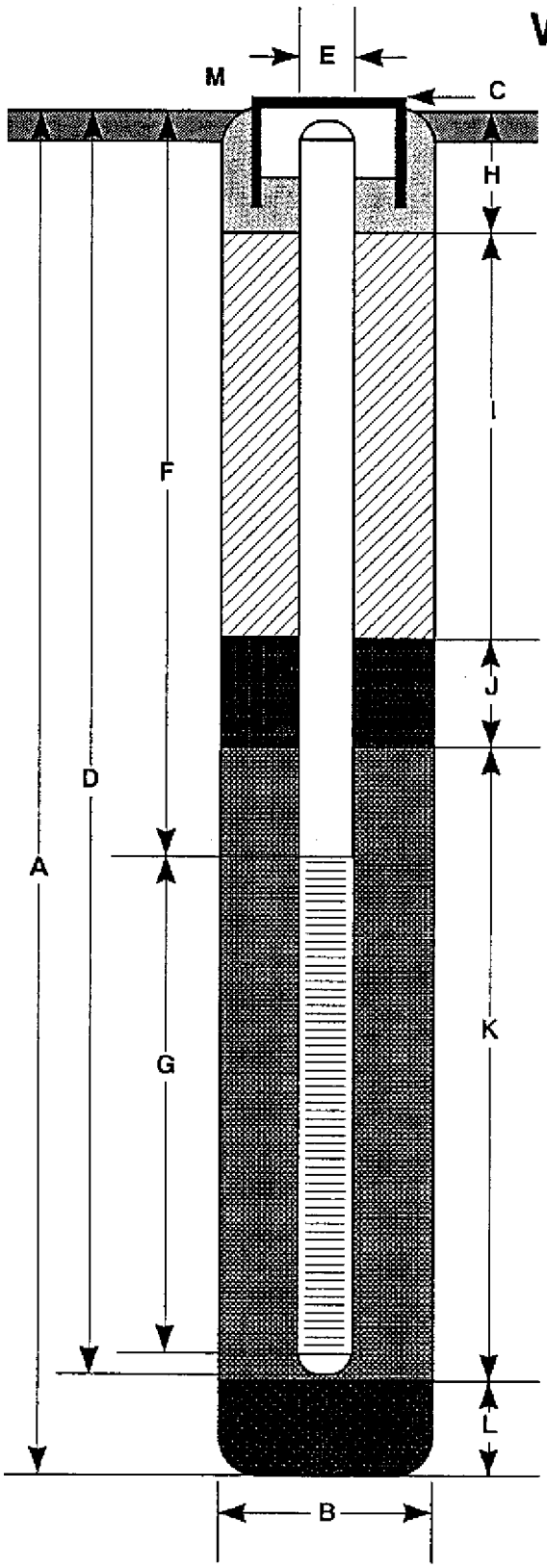
GeoStrategies Inc.

Log of Boring

BORING NO. C-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHR	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 34.5 ft.

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

C Top of Box Elevation 117.45 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 30 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 10 ft.

G Perforated Length 19.5 ft.
Perforated Interval from 10 to 29.5 ft.
Perforation Type Factory Slotted
Perforation Size 0.020 in.

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

I Backfill from 1.5 to 6 ft.
Backfill Material Concrete

J Seal from 6 to 8 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 8 to 30 ft.
Pack Material Lonestar #2/12 Sand

L Bottom Seal 4.5 ft.
Seal Material Bentonite Pellets

M Vault box with locking cap, lock and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-1

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/14/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-2
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 2
	Logged by: RCM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation: 116.16		Datum: MSL

Water Level	15.5'	15.4'	
Time	14:45	8:45	
Date	11/14/90	11/15/90	

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION - 1.0 feet.
				2				CLAYEY SILT (ML/CL) - very dark gray (10YR 3/1), moist, medium stiff, medium plasticity; 60% silt; 40% clay.
				3				
				4				
	200							
0	200	S&H	C-2-	5				Increasing sand to 10%; gravel to 5%; organic matter at 5.5 feet.
	250	push	5.5					
				6				
				7				
				8				
				9				
	3							CLAYEY SAND (SC) - dark yellowish brown (10YR 4/4), moist, medium dense; 70% sand; 20% clay; 10% gravel
0	4	S&H	C-2-	10				COLOR CHANGE to olive (5Y 4/4); increasing silt to 5% at 10.5 feet.
	7		10.5					
				11				
				12				
				13				
				14				GRAVEL with CLAY and SAND (GW-GC) - greenish gray (5G 5/1), saturated; medium dense; 65% gravel; 25% sand; 10% clay; strong chemical odor.
	6							
914	8	S&H	C-2-	15				
	11		15.5			▽ ▼		
				16				
				17				
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/14/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-2
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 2
	Logged by: RCM	Driller: Bayland	of 2
	Casing installation data: -		
Drilling method: Hollow Stem Auger			
Hole diameter: 8-Inches	Top of Box Elevation:		Datum:

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	6			20				GRAVEL with SAND (GW) - olive (5Y 4/4), saturated,
86.5	14	S&H	C-2-					dense; 60% gravel; 35% sand; 5% silt; Fe-oxide staining.
	17		20.5					
				21				
				22				
				23				
				24				
	0							
	0	S&H		25				Very loose at 25.5 feet.
	1							
				26				
				27				
				28				
				29				SAND with CLAY and GRAVEL (SW-SC) - dark yellowish
	14		C-2-					brown (10YR 4/4), saturated, medium dense; 55% sand;
5.0	11	S&H	30.0	30				35% gravel; 10% clay.
	12							SANDY CLAY (CL) - brownish yellow (10YR 6/6), damp,
				31				very stiff, medium plasticity; 65% clay; 35% sand.
				32				
				33				Bottom of sample at 30.5 feet.
								Bottom of boring at 30.5 feet.
				34				11/14/90
				35				
				36				
				37				
				38				
				39				

Remarks:

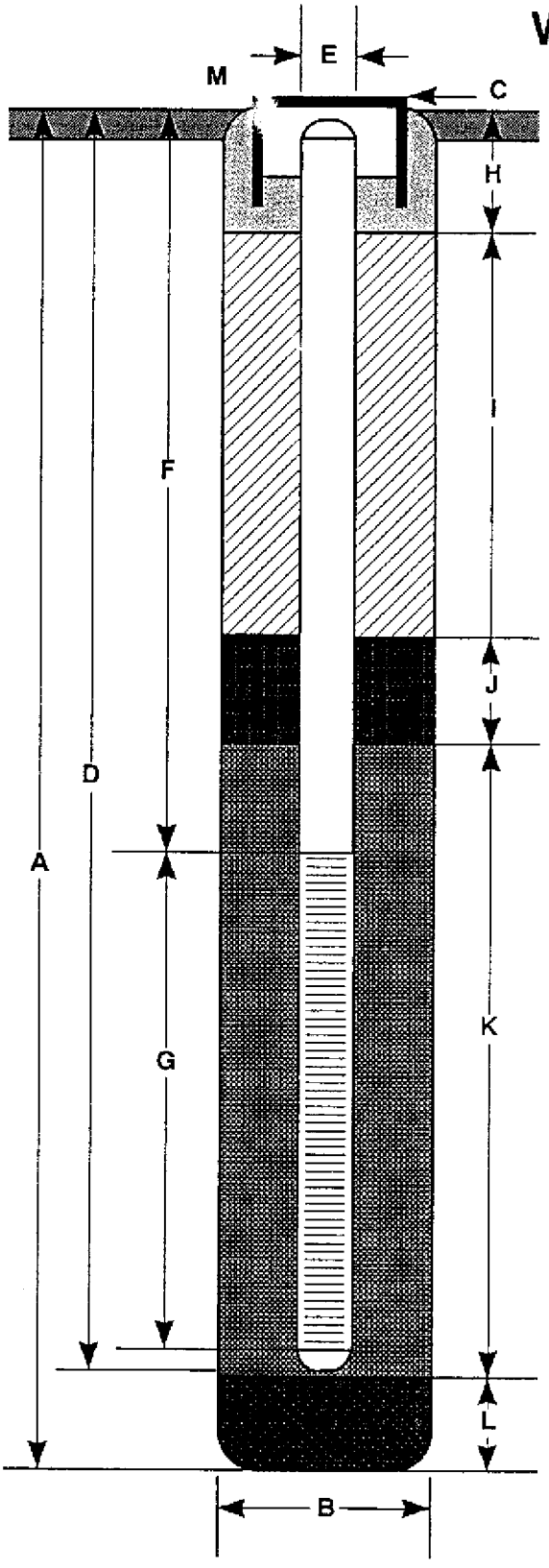
GeoStrategies Inc.

Log of Boring

BORING NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	PHP	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 30.5 ft.

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

C Top of Box Elevation 116.16 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 30 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 10 ft.

G Perforated Length 19.5 ft.
Perforated Interval from 10 to 29.5 ft.
Perforation Type Factory Slotted
Perforation Size 0.020 in.

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

I Backfill from 1.5 to 6 ft.
Backfill Material Concrete

J Seal from 6 to 8 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 8 to 30 ft.
Pack Material Lonestar #2/12 Sand

L Bottom Seal 0.5 ft.
Seal Material Bentonite Pellets

M Vault box with locking cap, lock and cover.

Note: Depths measured from initial ground surface.

GSI GeoStrategies Inc.

Well Construction Detail

WELL NO. C-2

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring: (See Plate 2)	Project No.: 7277	Date: 11/15/90	Boring No.: C-3
	Client: Chevron Service Station No. 3864		
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 1 of 2
	Logged by: RCM	Driller: Bayland	
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation: 115.70		Datum: MSL

Water Level	15.5'	17.1'
Time	10:05	15:30
Date	11/15/90	11/15/90

PID (ppm)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION - 1.0 feet.
				2				CLAYEY SILT (ML/CL) - very dark brown (10YR 2/2), damp, medium plasticity; 60% silt; 35% clay; 5% fine sand.
				3				
				4				
0	500	S&H	C-3-	5				Medium stiff, damp; organic matter at 4.5 feet.
		push	4.5	6				
				7				
				8				
				9				
	7			10				SAND with SILT (SW-SM) - dark yellowish brown (10YR 3/4), damp, dense; 85% sand; 10% silt; 5% fine gravel; organic matter; Fe-oxide staining.
0	15	S&H	C-3-					
	17		10.5	11				
				12				
				13				
				14				
	7			15				CLAYEY SAND with GRAVEL (SC) - dark greenish gray (5GY 4/1), saturated, dense; 65% sand; 20% clay; 15% fine gravel.
890	14	S&H	C-3-					
	16		15.5	16		▽		
	8							
995	13	SPT		17		▼		
	16							
				18				
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/15/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-3
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 2
	Logged by: RCM	Driller: Bayland	of 2
Drilling method: Hollow Stem Auger	Casing installation data:		
Hole diameter: 8-Inches	Top of Box Elevation:	Datum:	

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	2							SILTY SAND (SM) - yellowish brown (10YR 5/4),
32.8	5	S&H	C-3-	20				saturated, medium dense; 65% sand; 30% silt; 5% fine
	10		20.5					gravel; gray green staining to 20.0 feet.
				21				CLAYEY GRAVEL with SAND (GC) - dark yellowish
								brown (10YR 3/4), saturated, medium dense; 55% gravel;
				22				25% sand; 20% clay.
				23				
				24				
	8							
24.1	15	S&H	C-3-	25				
	18		25.5					Dense at 25.5 feet.
				26				
				27				
				28				CLAYEY SAND (SC) - brownish yellow (10YR 6/6),
								damp, dense; 70% sand; 30% clay.
				29				
	8							SANDY CLAY (CL) - brownish yellow (10YR 6/6), damp,
9.0	15	S&H	C-3-	30				hard; 65% clay; 30% sand; 5% silt.
	18		30.5					
				31				
				32				Bottom of sample at 30.5 feet.
								Bottom of boring at 30.5 feet.
				33				11/15/90
				34				
				35				
				36				
				37				
				38				
				39				

Remarks:

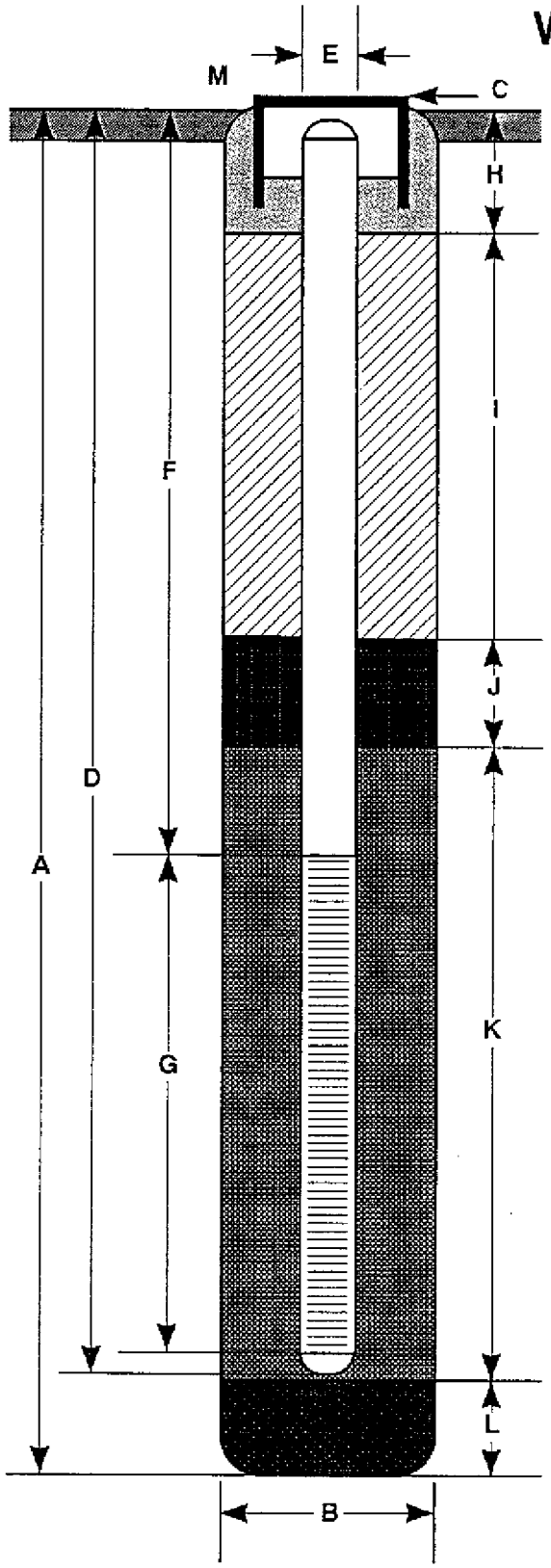
GeoStrategies Inc.

Log of Boring

BORING NO. C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

WELL CONSTRUCTION DETAIL



A	Total Depth of Boring	30.5	ft.
B	Diameter of Boring	8	in.
	Drilling Method	Hollow Stem Auger	
C	Top of Box Elevation	115.70	ft.
	[X] Referenced to Mean Sea Level		
	[ ] Referenced to Project Datum		
D	Casing Length	30	ft.
	Material	Schedule 40 PVC	
E	Casing Diameter	2	in.
F	Depth to Top Perforations	10	ft.
G	Perforated Length	19.5	ft.
	Perforated Interval from 10 to 29.5		ft.
	Perforation Type	Factory Slotted	
	Perforation Size	0.020	in.
H	Surface Seal from 0 to 1.5		ft.
	Seal Material	Concrete	
I	Backfill from 1.5 to 6		ft.
	Backfill Material	Concrete	
J	Seal from 6 to 8		ft.
	Seal Material	Bentonite Pellets	
K	Gravel Pack from 8 to 30		ft.
	Pack Material	Lonestar #2/12 Sand	
L	Bottom Seal	0.5	ft.
	Seal Material	Bentonite Pellets	
M	Vault box with locking cap, lock and cover.		

Note: Depths measured from initial ground surface.

GSI GeoStrategies Inc.

Well Construction Detail

WELL NO.

C-3

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/15/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-4
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 1
	Logged by: RCM	Driller: Bayland	of 2
Drilling method: Hollow Stem Auger	Casing installation data: (See Well Construction Detail)		
Hole diameter: 8-Inches	Top of Box Elevation: 116.10	Datum: MSL	

Water Level	16.5'	18.1'
Time	13:28	15:30
Date	11/15/90	11/15/90

PID (ppm)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				0				
				1				PAVEMENT SECTION - 1.0 feet.
				2				CLAYEY SILT (ML/CL) - very dark grayish brown (10YR 3/2), damp, medium plasticity; 65% silt; 35% clay; trace fine gravel.
				3				
				4				
	300			5				
0	500	S&H	C-4-					Medium stiff; organic matter; Fe-oxide staining at 5.5 feet.
	500	push	5.5					
				6				
				7				
				8				
				9				
	6			10				CLAYEY SAND with GRAVEL (SC) - yellowish brown (10YR 5/4), damp, medium dense; 60% sand; 25% clay; 15% gravel; Fe-oxide staining.
0	6	S&H	C-4-					
	13		10.5					
				11				
				12				
				13				
				14				
	8			15				Increasing gravel to 25%; dense at 15.5 feet.
0	17	S&H	C-4-					
	19		15.5					
	15			16				
0	16	S&H	C-4-			▽		
	18		17.0	17				Saturated at 16.5 feet.
				18		▼		
				19				

Remarks:

GeoStrategies Inc.

Log of Boring

BORING NO. C-4

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

Field location of boring:	Project No.: 7277	Date: 11/15/90	Boring No:
(See Plate 2)	Client: Chevron Service Station No. 3864		C-4
	Location: 5101 Telegraph Avenue		
	City: Oakland, California		Sheet 2
	Logged by: RCM	Driller: Bayland	of 2
Drilling method: Hollow Stem Auger	Casing installation data:		
Hole diameter: 8-Inches	Top of Box Elevation:	Datum:	

	Water Level			
	Time			
	Date			

PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
	3							SILTY SAND (SM) - yellowish brown (10YR 5/4), saturated, medium dense; 65% sand; 35% silt; slight gray green discoloration.
0	7	S&H	C-4-20.5	20				
	12			21				
				22				
				23				
				24				Increasing gravel to 25% at 24.5 feet.
	7							SAND (SW) - pale yellow (2.5Y 7/6), saturated, dense; 95% sand; 5% silt.
0	18	S&H	C-4-25.5	25				
	29			26				GRAVEL with SILT and SAND (GW-GM) - yellowish brown (10YR 5/4), saturated, dense; 70% gravel; 20% sand; 10% silt.
				27				
				28				
				29				
	4							CLAY with SAND (CL) - light gray (5Y 7/1), damp, very stiff, medium to high plasticity; 70% clay; 20% sand; 10% silt.
0	13	S&H	C-4-30.5	30				
	11			31				
				32				
				33				
				34				
	7							Increasing sand to 30% at 35.5 feet.
0	8	S&H	C-4-35.5	35				
	8			36				Bottom of sample at 35.5 feet.
				37				Bottom of boring at 35.5 feet.
				38				11/15/90
				39				

Remarks:

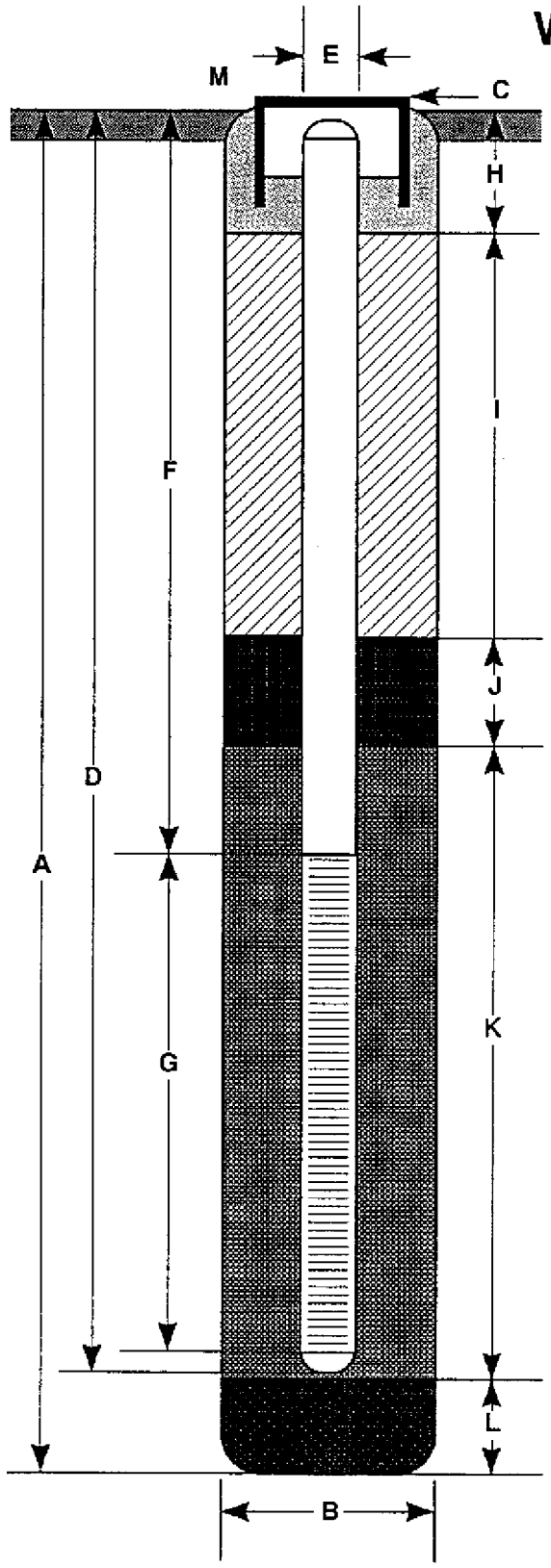
GeoStrategies Inc.

Log of Boring

BORING NO. C-4

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

WELL CONSTRUCTION DETAIL



A Total Depth of Boring 35.5 ft.

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

C Top of Box Elevation 116.10 ft.
[X] Referenced to Mean Sea Level
[ ] Referenced to Project Datum

D Casing Length 30 ft.
Material Schedule 40 PVC

E Casing Diameter 2 in.

F Depth to Top Perforations 10 ft.

G Perforated Length 19.5 ft.
Perforated Interval from 10 to 29.5 ft.
Perforation Type Factory Slotted
Perforation Size 0.020 in.

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

I Backfill from 1.5 to 6 ft.
Backfill Material Concrete

J Seal from 6 to 8 ft.
Seal Material Bentonite Pellets

K Gravel Pack from 8 to 30 ft.
Pack Material Lonestar #2/12 Sand

L Bottom Seal 5.5 ft.
Seal Material Bentonite Pellets

M Vault box with locking cap, lock and cover.

Note: Depths measured from initial ground surface.

GeoStrategies Inc.

Well Construction Detail

WELL NO. C-4

JOB NUMBER	REVIEWED BY RG/CEG	DATE	REVISED DATE	REVISED DATE
7277	DHP	11/90		

WELL LOG
KEY TO ABBREVIATIONS

Drilling Method

HSA - Hollow stem auger
CFA - Continous flight auger
Air - Reverse air circulation

Gravel Pack

CA - Coarse aquarium sand

Sampling Method

Cal. Mod. - California modified split-spoon sampler (2" inner diameter) driven 18" by a 140-pound hammer having a 30" drop. Where penetration resistance is designated "P", sampler was instead pushed by drill rig.
Disturbed - Sample taken from drill-return materials as they surfaced.
Shelby - Shelby Tube thin-walled sampler (3" diameter), where sampler is pushed by drill-rig.

Moisture Content

Dry - Dry
Dp - Damp
Mst - Moist
Wt - Wet
Sat - Saturated

Sorting

PS - Poorly sorted
MS - Moderately sorted
WS - Well sorted

Plasticity

L - Low
M - Moderate
H - High

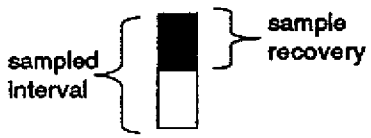
H-NU (ppm)

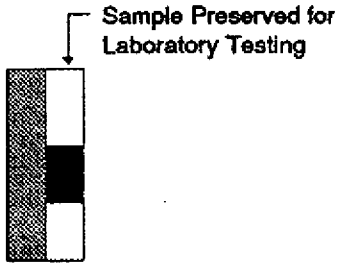
ND - No detection

Symbols

▽ - First encountered ground water

▼ - Static ground water level





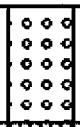
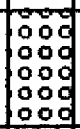
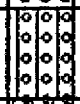
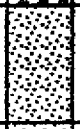
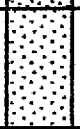
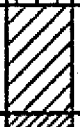
Density (Blows/Foot - Cal Mod Sampler)

Sands and gravels		Silts and Clays	
0 - 5	- Very Loose	0 - 2	- Very Soft
5 - 13	- Loose	2 - 4	- Soft
13 - 38	- Medium dense	4 - 9	- Firm
38 - 63	- Dense	9-17	- Stiff
over 63	- Very dense	17 - 37	- Very Stiff
		37 - 72	- Hard
		over 72	- Very Hard

GRAIN - SIZE SCALE

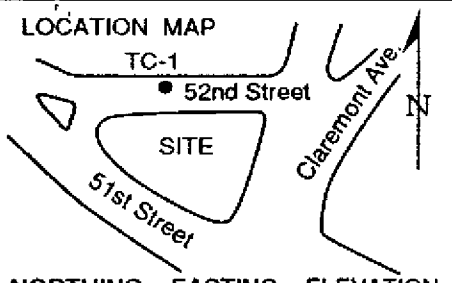
GRADE LIMITS U.S. Standard			GRADE NAME
inch	sieve size		
12.0			Boulders
3.0	3.0 in.		Cobbles
0.19	No. 4		Gravels
		coarse	
0.08	No. 10		
	No. 40	medium	Sand
	No. 200	fine	
			Silt
			Clay Size

PACIFIC ENVIRONMENTAL GROUP, INC.

Primary Divisions			Group Symbol/Graphic		Typical Names
COARSE GRAINED SOILS more than half is larger than #200 sieve	GRAVELS half of coarse fraction larger than #4 sieve	CLEAN GRAVELS (less than 5% fines)	GW		Well graded gravels, gravel-sand mixtures; little or no fines
			GP		Poorly graded gravels or gravel-sand mixtures; little or no fines
		GRAVEL WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures
			GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS half of coarse fraction smaller than #4 sieve	CLEAN SANDS (less than 5% fines)	SW		Well graded sands, gravelly sands, little or no fines
			SP		Poorly graded sands or gravelly sands; little or no fines
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sand-clay mixtures, plastic fines
FINE GRAINED SOILS more than half is smaller than #200 sieve	SILTS AND CLAYS liquid limit less than 50%		ML		Inorganic silts and very fine sand, rock flour, silty or clayey fine sands or 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 liquid limit more than 50%		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils

PACIFIC ENVIRONMENTAL GROUP, INC.

Unified Soil Classification System



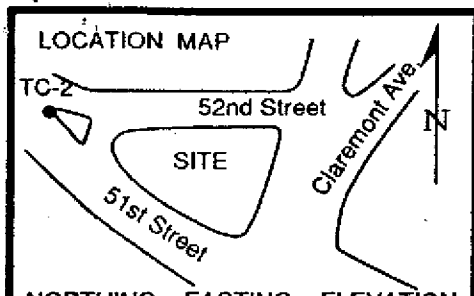
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TC-1
PAGE 1 OF 1

PROJECT NO. 325-17.01
LOGGED BY: AW
DRILLER: PRECISION
DRILLING METHOD: HYDRAULIC
SAMPLING METHOD: CONTINUOUS
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 11-30-92
LOCATION: Telegraph-Oakland
HOLE DIAMETER: 2.5"
HOLE DEPTH: 19'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Back Filled With Grout				1–3			ASPHALT ROAD BASE TO APPROXIMATELY 3'
				3		SC	CLAYEY SAND: medium brown; 30-40% fines; very fine sand; no product odor; very little recovery in 5-7' sample.
	Mst			6			
	Mst			10			@10': very little recovery; chert.
	Mst			12		CL	SANDY CLAY: medium brown with gray mottling; low plasticity; 10-15% very fine to fine sand; iron oxide staining; small rootholes; no product odor.
				13		ML	SANDY SILT: blue gray; low plasticity; 10-20% very fine sand; brown mottling; shell material; sulfur odor; no product odor.
				15			LANDSLIDE DEPOSITS: mixture of sand, gravel and clay.
	Mst-Wt			16		ML	SILT: light to medium brown; low plasticity; trace very fine to fine sand; mottled light gray to medium brown tan; no product odor.
	Wt			18			
				19			BOTTOM OF BORING AT 19'
				20–22			



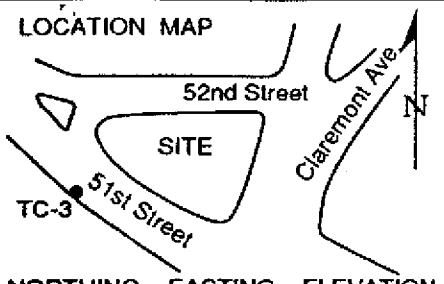
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TC-2
PAGE 1 OF 1

PROJECT NO. 325-17.01
LOGGED BY: AW
DRILLER: PRECISION
DRILLING METHOD: HYDRAULIC
SAMPLING METHOD: CONTINUOUS
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 11-30-92
LOCATION: Telegraph-Oakland
HOLE DIAMETER: 2.5"
HOLE DEPTH: 21'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				0		ASPHALT
				1		ROADBASE
Back Filled With Grout				2	CL	CLAY: gray black.
				3	SM	SILTY SAND: no recovery 3-8.5'.
				4		
				5		
				6		
				7		
				8		
				9		@8.5': very dark brown; 20-30% fines; dual classification sandy silt; high moisture content; very soft; no product odor.
	Mst-Wt			10		
				11	CL	CLAY: medium to light gray; low plasticity; iron oxide mottling; trace-10% very fine to fine sand; dense; no product odor.
	Mst			12		
				13		
				14		
	Mst			15		
				16		
				17		
	Mst			18		@19': increase in medium to coarse sand.
				19		
				20	GM	SILTY GRAVEL: medium to light brown; 20-30% fines; 10-20% very fine to fine sand; angular coarse sand and gravel.
	Mst-Wt			21		
				22		BOTTOM OF BORING AT 21'



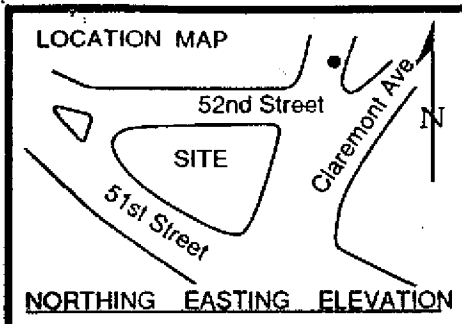
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TC-3
PAGE 1 OF 1

PROJECT NO. 325-17.01
LOGGED BY: AW
DRILLER: PRECISION
DRILLING METHOD: HYDRAULIC
SAMPLING METHOD: CONTINUOUS
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 11-30-92
LOCATION: Telegraph-Oakland
HOLE DIAMETER: 2.5"
HOLE DEPTH: 22'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				0		CONCRETE
				1		ROADBASE
Back Filled With Grout				2	FL	GRAVELLY CLAYEY FILL
				3		
				4		
				5		
	Dp			6		
				7		
				8	CL	SANDY CLAY: medium to dark brown; low plasticity; 20-30% very fine to medium sand; 20-30% medium to coarse sand; 5-10% gravel; angular to subangular gravel; iron oxide staining; no product odor.
	Dp			9		
				10		
				11		
				12	GC	CLAYEY GRAVEL: medium brown; 20-30% fines; fine to coarse sand; 20-30% angular to rounded gravels chert; sandstone clasts; no product odor.
	Mst			13		
				14		
▼				15	ML	GRAVELLY SILT: medium brown; low plasticity; 10-30% very coarse sand and fine gravel; no product odor.
				16		
▽	Mst-Wt			17		
				18	SM	SILTY SAND: medium brown; 30-40% fines; fine to coarse sand; trace sub-well rounded gravel; wet; no product odor.
				19		
	Mst-Wt			20	GM	SILTY GRAVEL: medium brown; highly angular coarse fragment; 20-40% fines; 10-20% very fine to medium sand; siltstone and chert pebbles; iron oxide staining; no product odor.
				21		
				22		BOTTOM OF BORING AT 22'



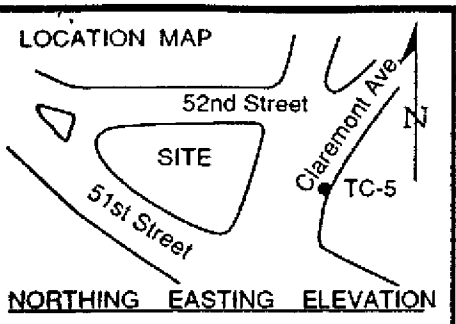
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TC-4
PAGE 1 OF 1

PROJECT NO. 325-17.01
LOGGED BY: AW
DRILLER: PRECISION
DRILLING METHOD: HYDRAULIC
SAMPLING METHOD: CONTINUOUS
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 12-1-92
LOCATION: Telegraph-Oakland
HOLE DIAMETER: 2.5"
HOLE DEPTH: 22'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1					CONCRETE ROADBASE
Back Filled With Grout				2					
	Dp	280		3				CL	CLAY: very dark brownish black; low plasticity; 10-20% fine to medium sand; trace to coarse sand; iron oxide staining; faint to medium product odor.
				4					
				5					
				6					
	Dp	134		7					@7': faint to moderate product odor.
				8					
				9				GC	CLAYEY GRAVEL: medium dark grayish brown; angular coarse sand and fine gravel; subrounded to well rounded clasts; blue gray staining; moderate to strong product odor.
	Dp	88.8		10					
				11					
▼				12					
	Mst	180		13					@13': strong product odor.
▽				14					
				15					
	Wt	389		16					@16': discolored; strong product odor.
				17					
				18					
	Wt	22.3		19					@19': no to faint product odor.
				20				ML	SILT: sandy; light to medium brown; low plasticity; 20-30% fine sand; trace gravel at 20'; no product odor.
				21					
				22					BOTTOM OF BORING AT 22'



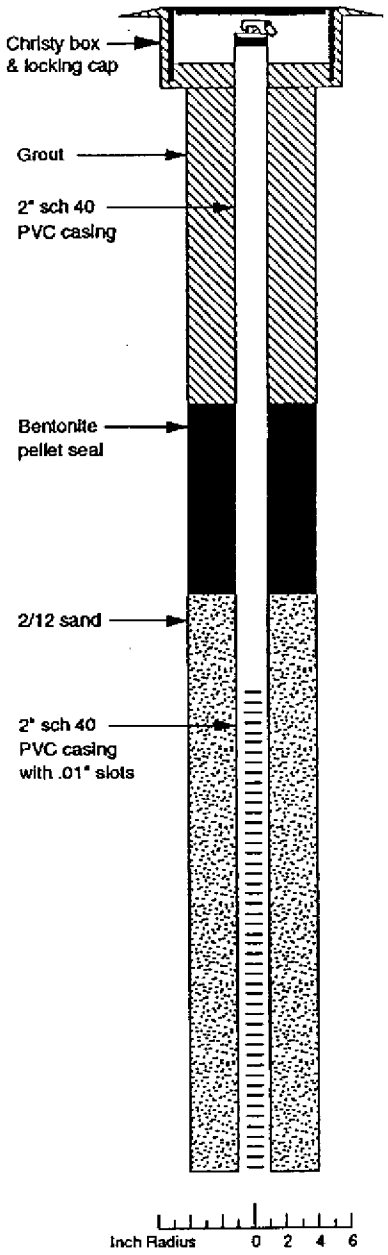
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. TC-5
PAGE 1 OF 1

PROJECT NO. 325-17.01
LOGGED BY: AW
DRILLER: PRECISION
DRILLING METHOD: HYDRAULIC
SAMPLING METHOD: CONTINUOUS
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 12-1-92
LOCATION: Telegraph-Oakland
HOLE DIAMETER: 2.5"
HOLE DEPTH: 22'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				0		CONCRETE
Back Filled With Grout				1		ROADBASE
				2		
				3	CL	CLAY: dark brown; low plasticity; 10-20% very fine to fine sand; roots; organics; no product odor.
				4		
				5	ML	SILT: medium; dark brown; low plasticity; 20-30% very fine to fines and; no product odor.
	Dp	261		6		
				7		
				8		
				9		
	Dp	99		10		@10': increase in fine sand; no product odor.
				11		
				12		
				13		
				14		
				15		
				16		@16': little recovery; no product odor.
	Mst	110		17		
	Wt	142		18	GC	CLAYEY GRAVEL: medium brownish gray; 20-40% fines; subrounded to angular gravels; iron oxide staining; saturated; faint to no product odor.
				19		
				20		
				21		
				22		BOTTOM OF BORING AT 22'



Measured Depth (Feet)	Blow Counts	PID (ppmv)	GRAPHIC LOG	DESCRIPTION
0				Asphalt
1				Sandy GRAVEL (GW) (fill)
2				SILT (ML) with fine- to medium-grained sand; brown; damp
3				
4				
5	4	3.6		SILT (ML); same as above; soft
6	5			
7	5			
8				
9				
10	11	4.6		Silty CLAY (CL) with trace fine-grained sand; gray with black mottling; damp; dense
11	15			
12	21	NR		

continues

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

Logged by:	Erich Neupert
Project Mgr:	Justin Power
Dates Drilled:	9/16/93
Drilling Company:	Kvilhaug
Drilling Method:	8" Hollow Stem Auger
Driller:	Paul Santos
Well Head Completion:	Christy box & locking cap
Type of Sampler:	1½" & 2½" split spoon
TD (Total Depth):	26.5 feet

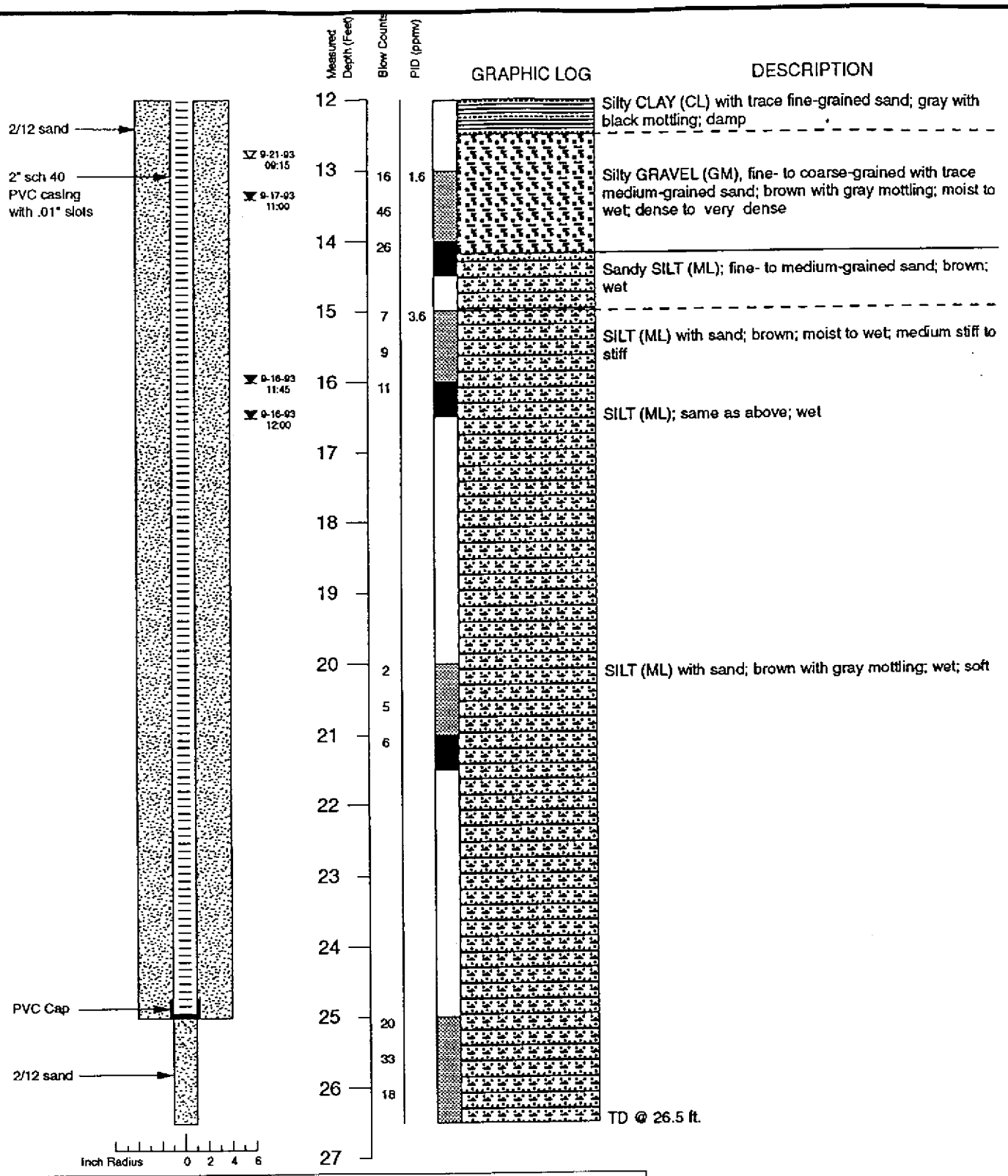
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-1 (Monitoring Well MW-1)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-1



EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

- Solid where certain
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- Dashed where uncertain
- Hachured where gradational

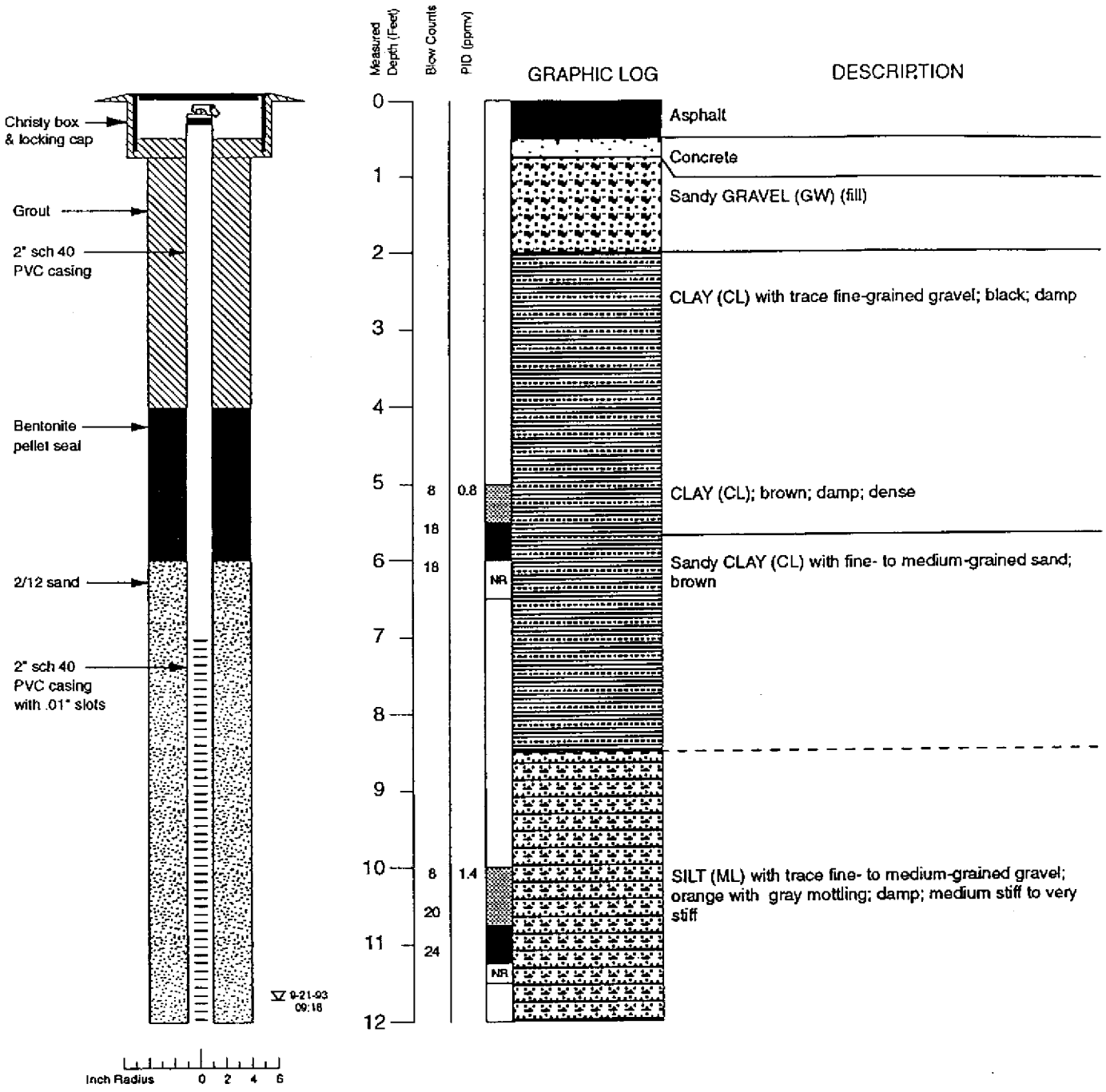
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-1 (Monitoring Well MW-1)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-1



continues

Logged by:	Erich Neupert
Project Mgr:	Justin Power
Dates Drilled:	9/20/93
Drilling Company:	Kvilhaug
Drilling Method:	8" Hollow Stem Auger
Driller:	Paul Santos
Well Head Completion:	Christy box & locking cap
Type of Sampler:	1½" & 2½" split spoon
TD (Total Depth):	26.5 feet

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

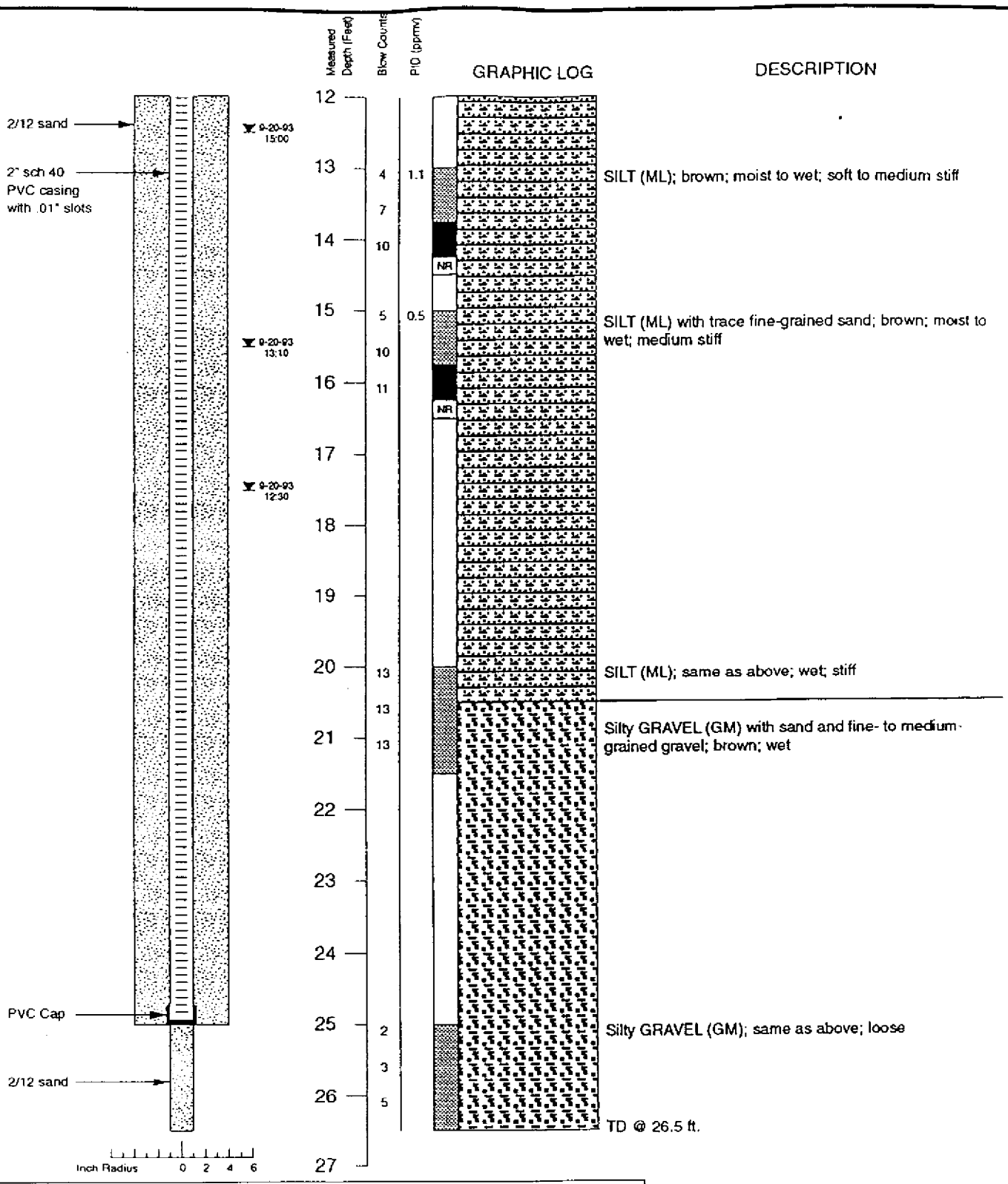
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-2 (Monitoring Well MW-2)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-2



EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

RESNA

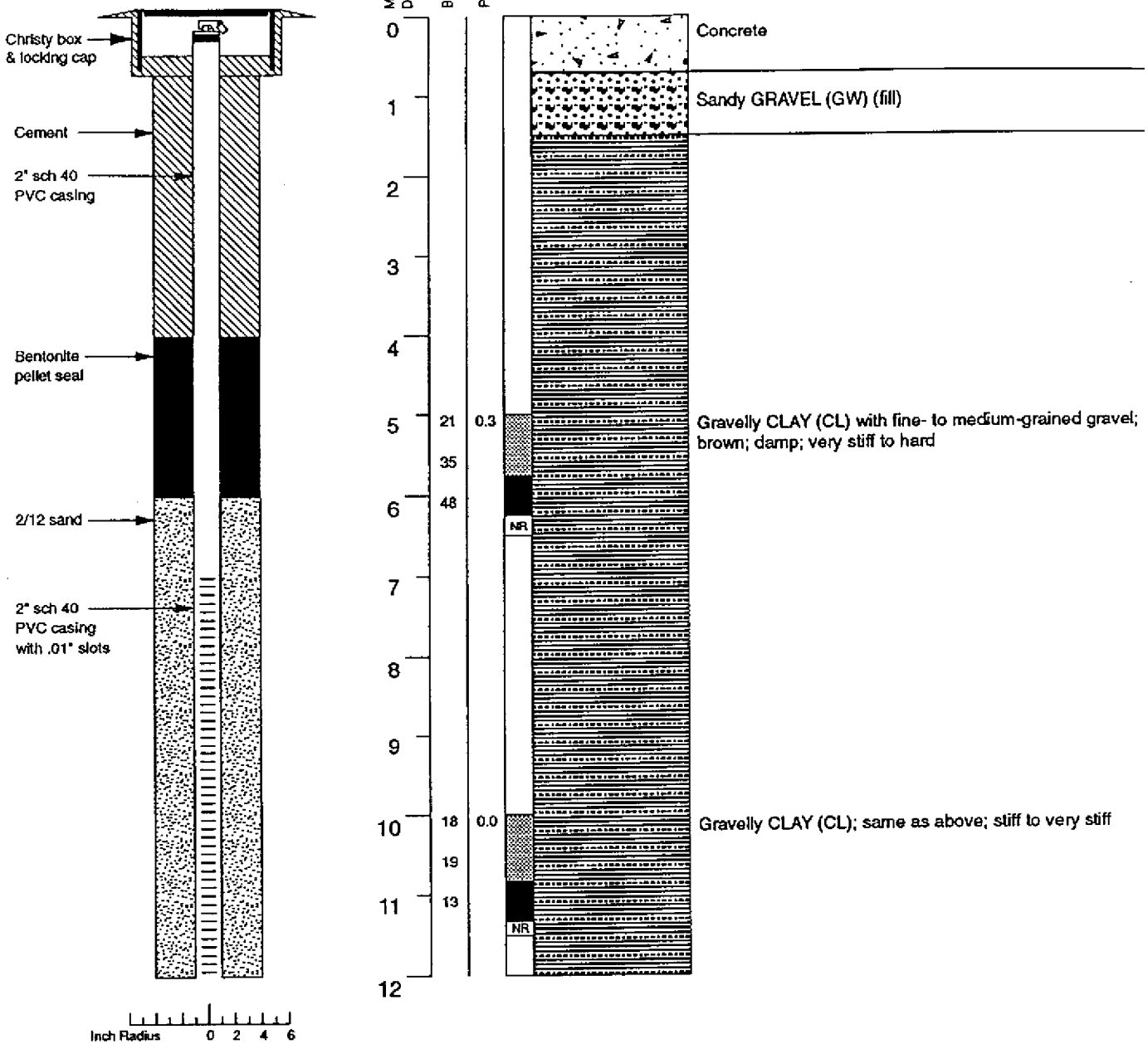
PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-2 (Monitoring Well MW-2)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING

B-2



continues

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

Logged by:	Erich Neupert
Project Mgr:	Justin Power
Dates Drilled:	9/16/93
Drilling Company:	Kvilhaug
Drilling Method:	8" Hollow Stem Auger
Driller:	Paul Santos
Well Head Completion:	Christy box & locking cap
Type of Sampler:	2½" split spoon
TD (Total Depth):	28.0 feet

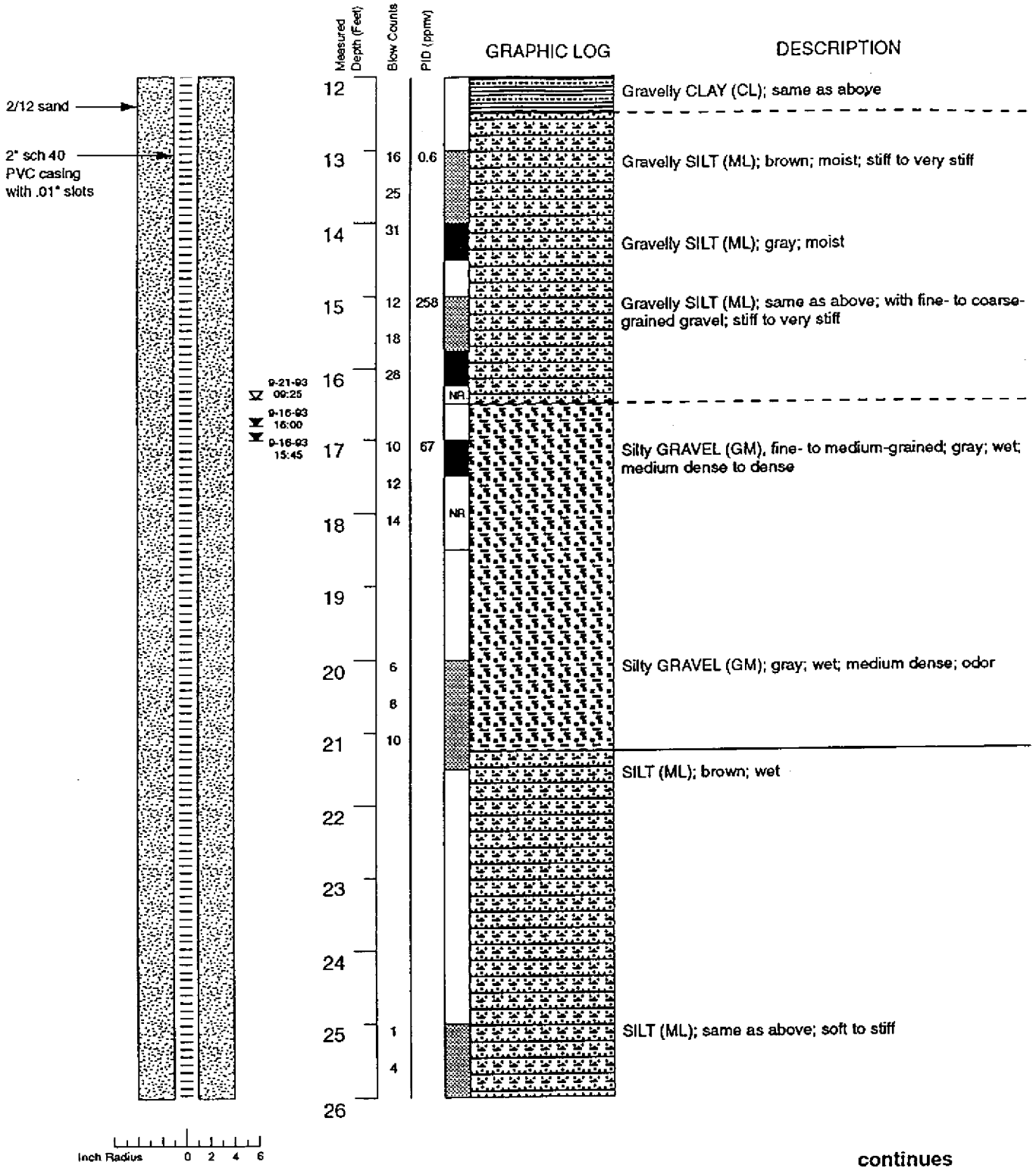
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-3 (Monitoring Well MW-3)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING **B-3**



continues

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

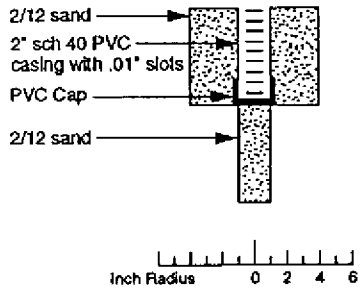
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-3 (Monitoring Well MW-3)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-3



Measured Depth (Feet)	Blow Counts	PID (ppmv)	GRAPHIC LOG	DESCRIPTION
26	13			SILT (ML); brown; wet; soft to stiff
27	12			SILT (ML) with trace fine-grained gravel; brown; damp
28	12			TD @ 28.0 ft.
29				
30				
31				
32				
33				
34				
35				
36				
37				
38				
39				
40				

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

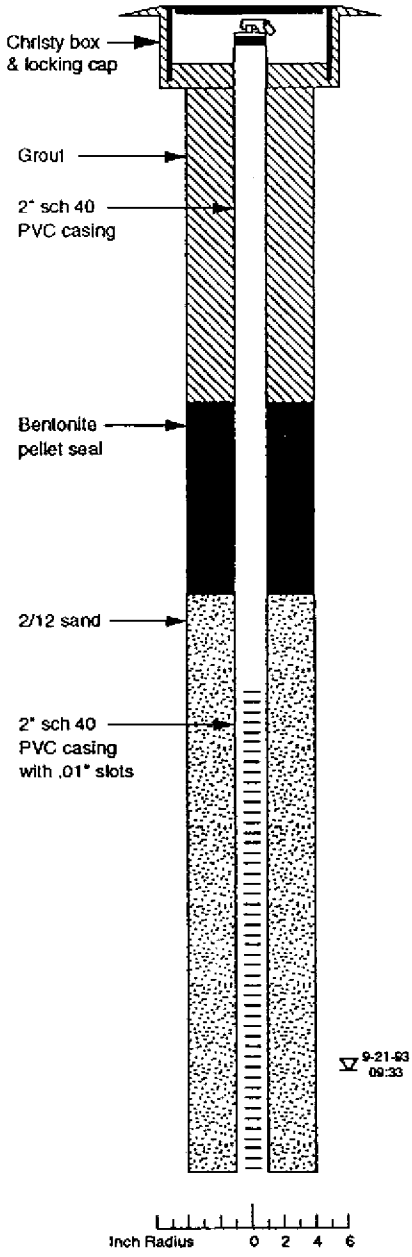
RESNA

BORING LOG—Boring B-3 (Monitoring Well MW-3)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-3

PROJECT NO. 17075.01 | 10/93



Measured Depth (Feet)	Blow Counts	PID (ppmv)	GRAPHIC LOG	DESCRIPTION
0				Asphalt
1				Cement
2				CLAY (CL) with gravel and cobbles; black; damp
3				
4				
5	9	0.5		CLAY (CL) with fine- to medium-grained gravel; black; damp; medium stiff to very stiff
6	16			
7	24			
8	NR			
9				
10	8	349		Gravelly CLAY (CL) with sand; gray; medium stiff to very stiff; odor
11	15			
12	38			
	NR			

continues

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

Logged by:	Erich Neupert
Project Mgr:	Justin Power
Dates Drilled:	9/15/93
Drilling Company:	Kvilhaug
Drilling Method:	8" Hollow Stem Auger
Driller:	Paul Santos
Well Head Completion:	Christy box & locking cap
Type of Sampler:	1½" & 2½" split spoon
TD (Total Depth):	23.0 feet

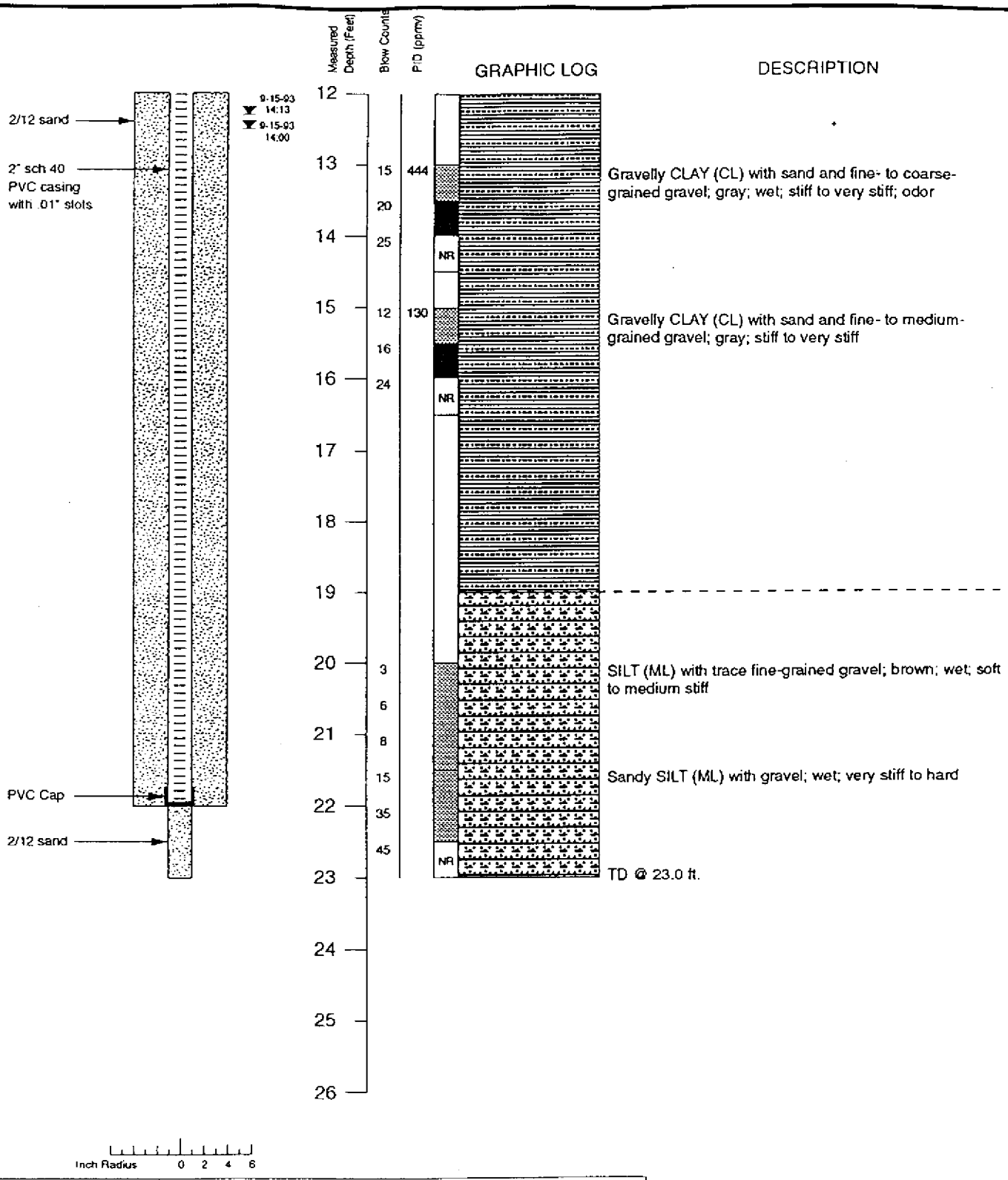
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-4 (Monitoring Well MW-4)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-4



EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

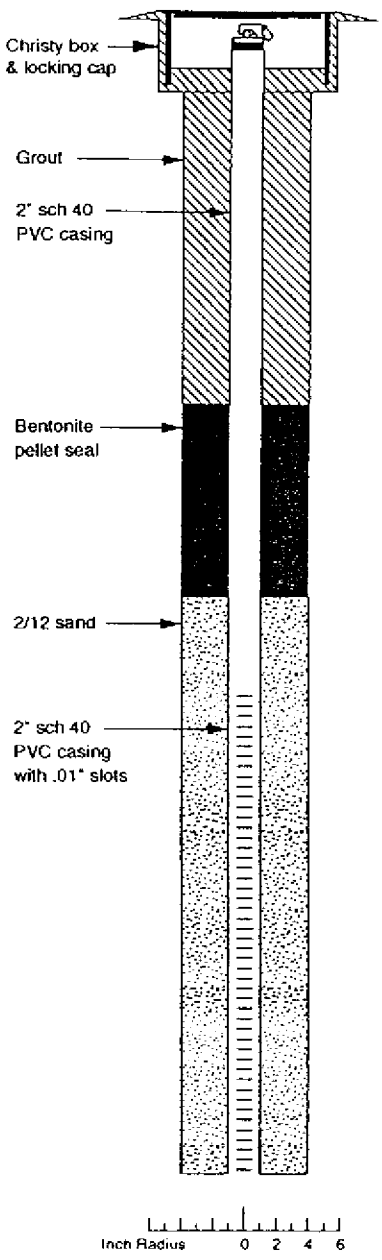
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-4 (Monitoring Well MW-4)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-4



Measured Depth (Feet)	Blow Counts	PID (ppmv)	GRAPHIC LOG	DESCRIPTION
0				Concrete
1				Sandy GRAVEL (GW) (fill)
2				CLAY (CL); black
3				
4				
5	3	0.9		SILT (ML) with trace fine-grained gravel; brown; damp; soft
6	4 7			
7				
8				
9				
10	3	0.6		SILT (ML); same as above
11	4 5			
12				

continues

EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample

- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

Logged by:	Erich Neupert
Projed Mgr:	Justin Power
Dates Drilled:	9/16/93
Drilling Company:	Kvilhaug
Drilling Method:	8" Hollow Stem Auger
Driller:	Paul Santos
Well Head Completion:	Christy box & locking cap
Type of Sampler:	1½" & 2½" split spoon
TD (Total Depth):	22.0 feet

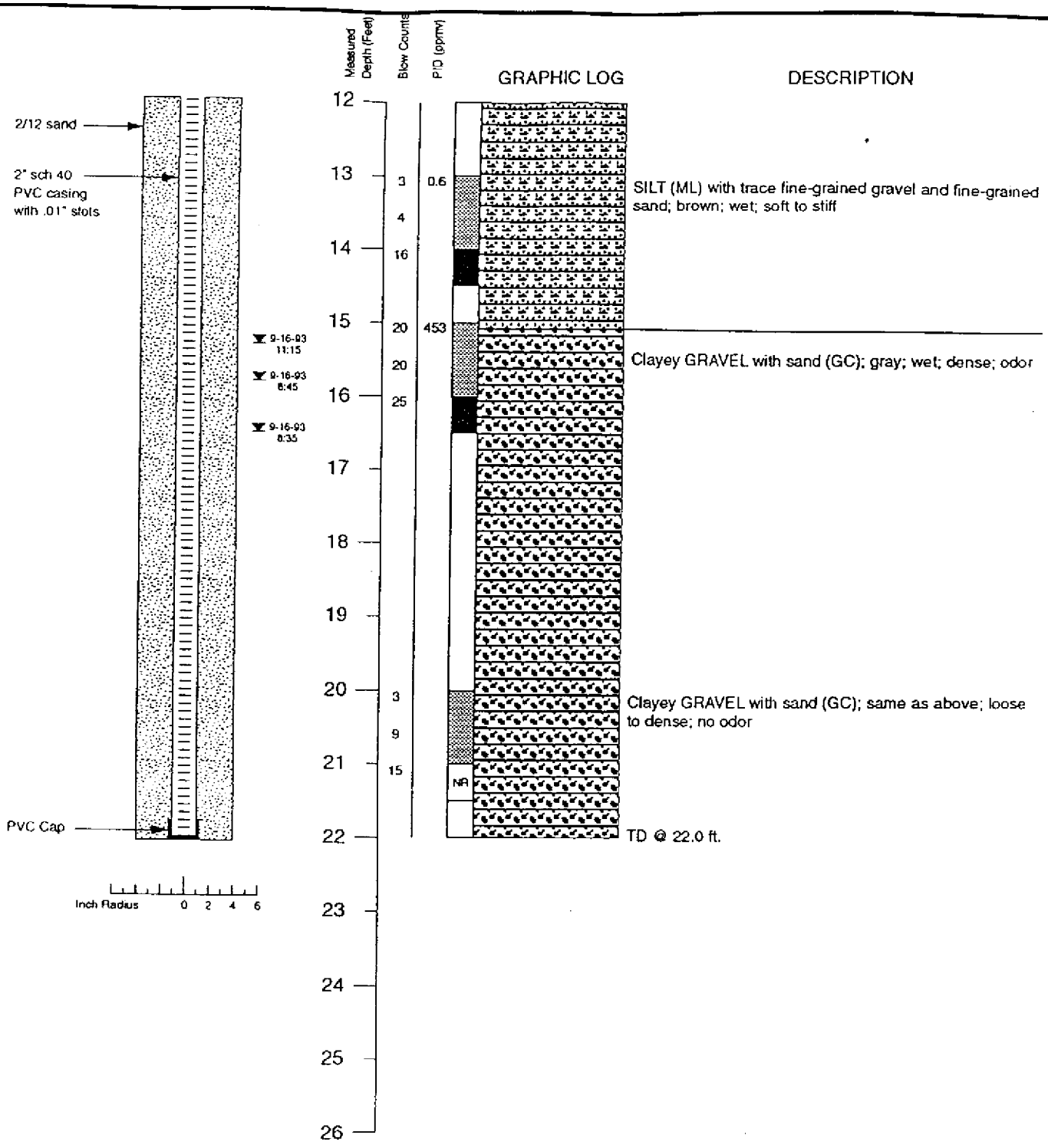
RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-5 (Monitoring Well MW-5)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

BORING B-5



EXPLANATION

- Recovered drill sample
- Sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Core sample
- est K — Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR — No recovery
- Water level during drilling
- Water level in completed well

CONTACTS:

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

RESNA

PROJECT NO. 17075.01 | 10/93

BORING LOG—Boring B-5 (Monitoring Well MW-5)

Former Chevron Service Station No. 9-3864
5101 Telegraph Avenue
Oakland, California

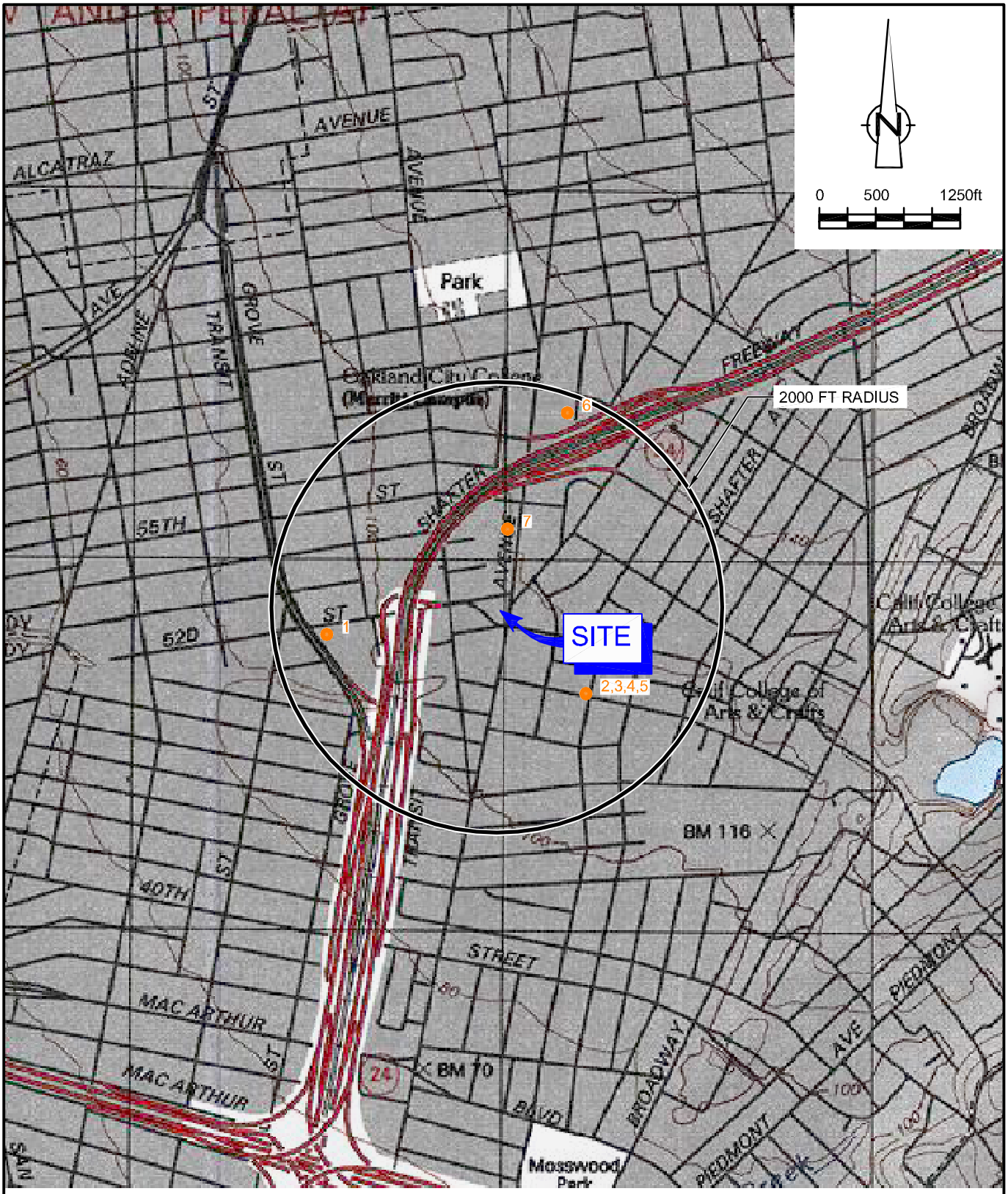
BORING B-5

APPENDIX C

WELL SURVEY INFORMATION AND TEMESCAL CREEK MAP

WELL SURVEY RESULTS
FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

Well No./ Figure ID	*Well Owner*	*Well Address Street*	*City*	*Total Well Depth (ft)*	*Date Installed*	*Distance/Direction from Site (ft) (approx)*	*Well Use*
1	Children's Hospital	747 52nd Street	Oakland	125	1/20/1992	1,500 W	Irrigation
2	Pacific Gas & Electric	49th Street and Webster	Oakland	120	2/19/1976	1,150 SE	Cathodic Protection
3	EBMUD	49th Street and Webster	Oakland	13	12/1/1997	1,150 SE	Cathodic Protection
4	EBMUD	49th Street and Webster	Oakland	53	5/1/1975	1,150 SE	Cathodic Protection
5	EBMUD	Webster	Oakland	53	5/1/1975	1,150 SE	Cathodic Protection
6	Angela Delucchi	5629 Vincente Street	Oakland	75	Unknown	1,900 NE	Domestic
7	Marshall Steel Co.	5427 Telegraph	Oakland	40	Unknown	750 N	Industrial



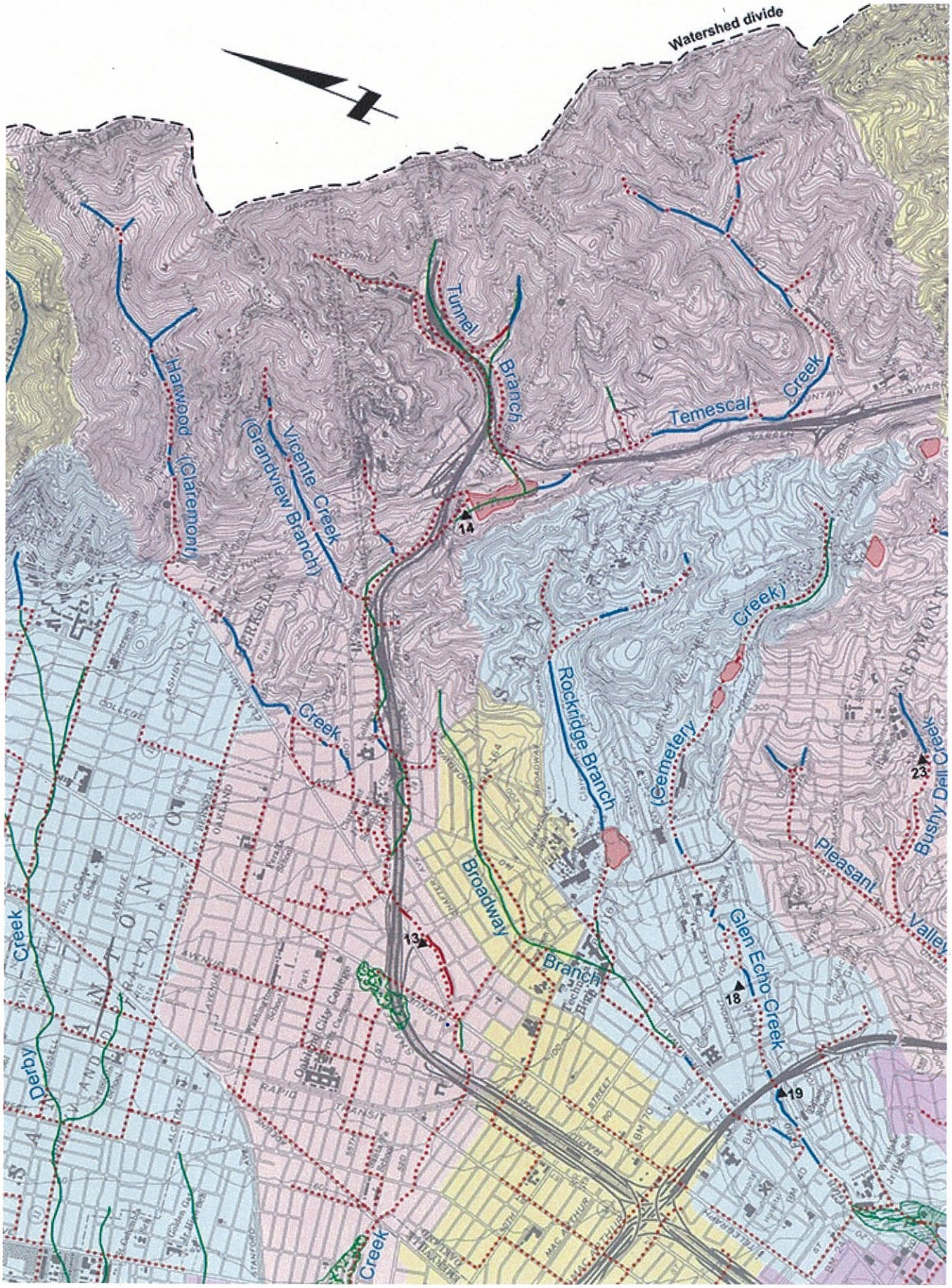
SOURCE: TOPO! MAPS.

WELL SURVEY MAP
FORMER CHEVRON SERVICE STATION 9-3864
5101 TELEGRAPH AVENUE
Oakland, California

LEGEND

- APPROXIMATE WELL LOCATION

611951-400(006)GN-WA007 AUG 02/2011


Watershed divide
Tunnel Branch
Temescal Creek
Harwood (Claremont)
Vicente Creek (Grandview Branch)
Creek
Rockridge Branch
(Cemetery Creek)
Broadway Branch
Glen Echo Creek
Pleasant Valley
Bushy Dell Creek
Derby Creek
Creek
14
13
18
19
23

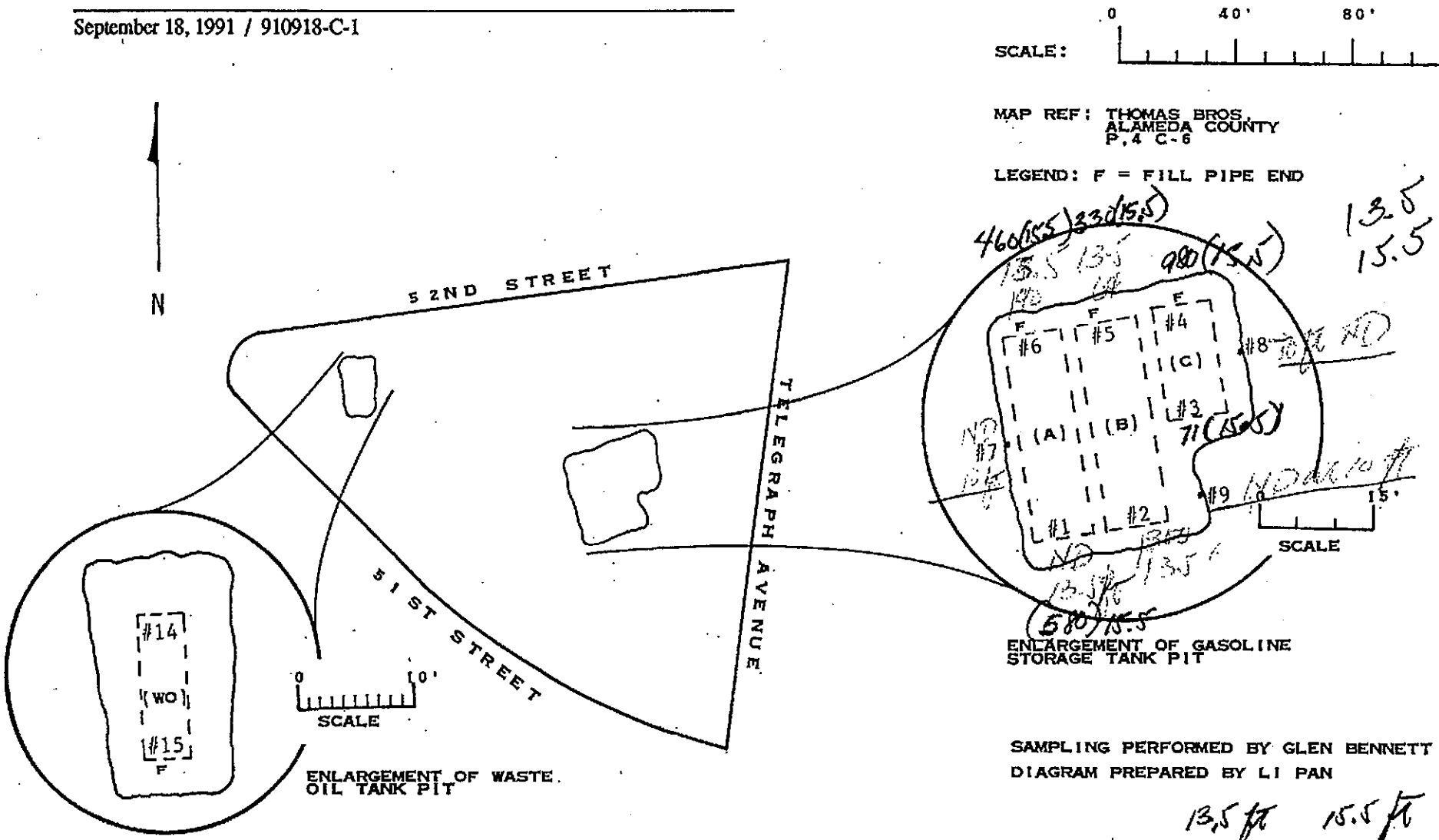
APPENDIX D

PREVIOUS SITE PLANS

TANK REMOVAL DIAGRAM

September 18, 1991 / 910918-C-1

DIAGRAM ONE



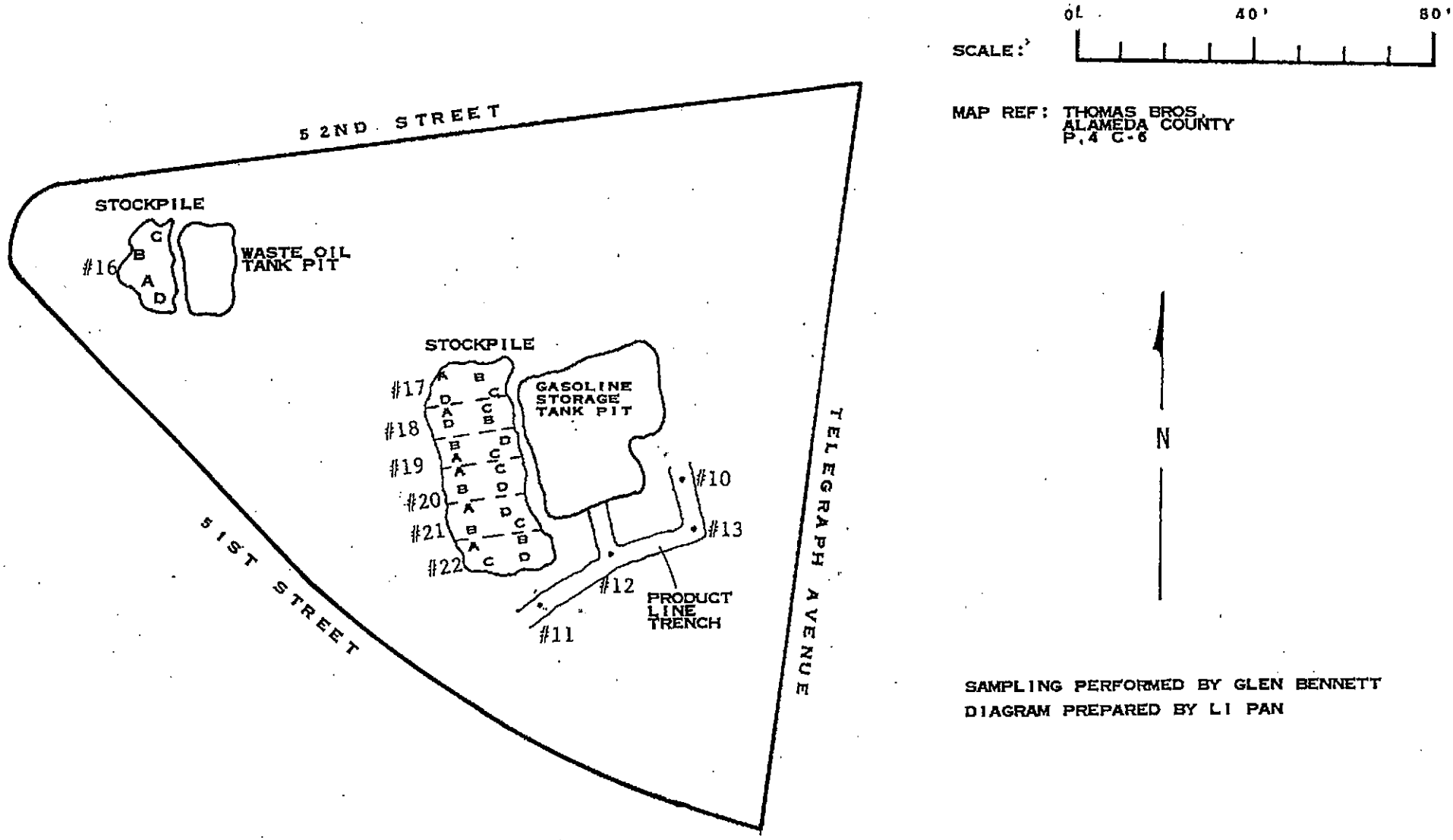
SAMPLING PERFORMED BY GLEN BENNETT
DIAGRAM PREPARED BY LI PAN

	13.5 ft	15.5 ft
1	ND	580
2	1300	
3		71
4		980
5	64	330
6	190	460

TANK REMOVAL DIAGRAM

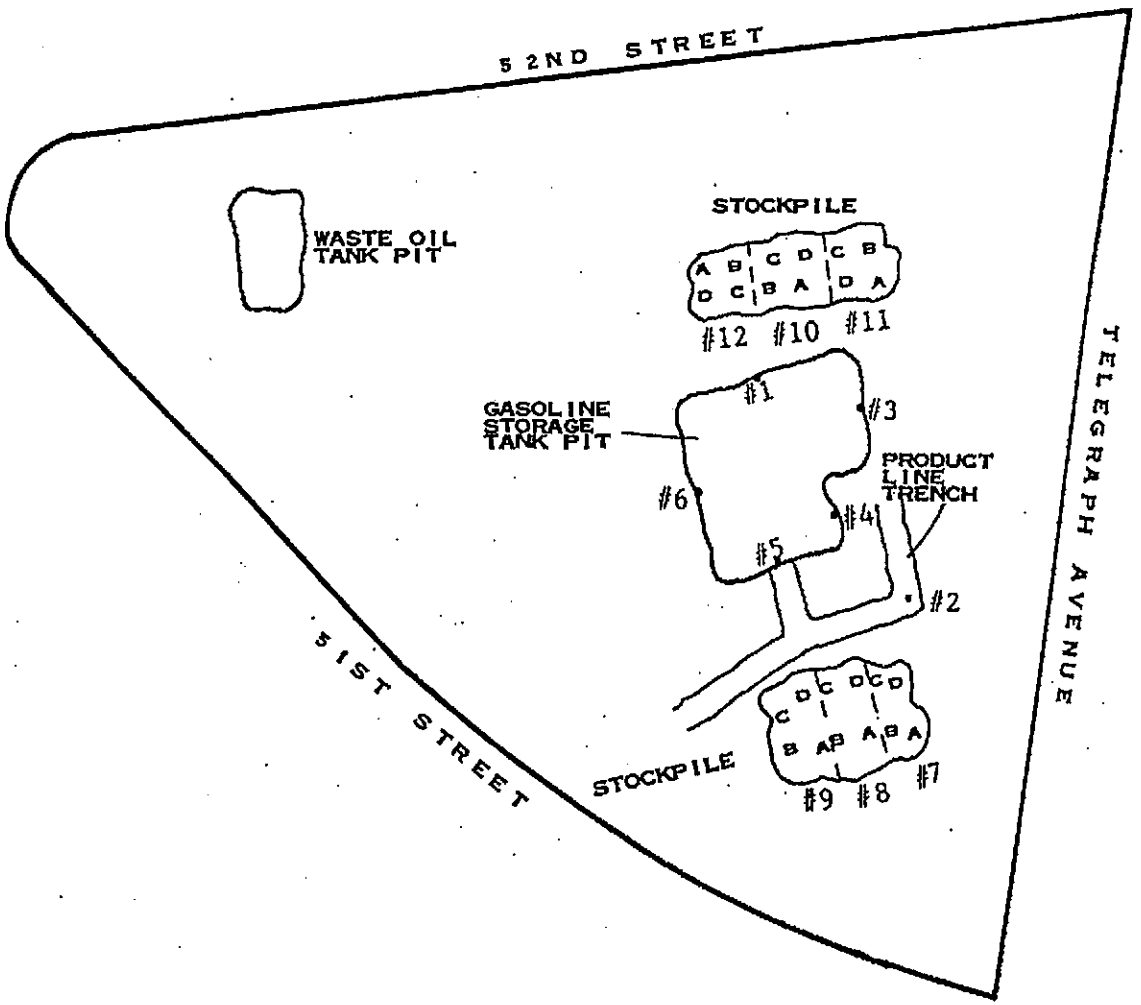
September 18, 1991 / 910918-C-1

DIAGRAM TWO



ADDITIONAL EXCAVATION DIAGRAM

September 26, 1991 / 910926-C-1



SCALE: 0 40' 80'

MAP REF: THOMAS BROS., ALAMEDA COUNTY P.4 C-6

N

SAMPLING PERFORMED BY GLEN BENNETT

DIAGRAM PREPARED BY LI PAN

APPENDIX E

FIRST SEMI-ANNUAL 2011 GROUNDWATER MONITORING REPORT

GETTLER-RYAN INC.

TRANSMITTAL

May 4, 2011
G-R #386358

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 Chevron Service Station
#9-3864 (MTI)
5101 Telegraph Avenue
Oakland, California
RO 0000351

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
1	April 29, 2011	Groundwater Monitoring and Sampling Report **First Semi-Annual Event of March 14, 2011**

COMMENTS:

Pursuant to your request, we are providing you with copies of the above referenced report for **your use and distribution to the following (including PDF submittal of the entire report to GeoTracker):**

Enclosures

trans/9-3864-SHF

WELL CONDITION STATUS SHEET

Client/Facility #: Chevron #9-3864
Site Address: 5101 Telegraph Avenue
City: Oakland, CA

Job # 386358
Event Date: 3-14-11
Sampler: Joe

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y/N	REPLACE CAP Y/N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
C-3	O.K	O.K	1-S	O.K	O.K	O.K	O.K	N	N	12" EMCO/2	No
MW-1	↓	↓	1-S	↓	↓	↓	↓	↓	↓	8" EMCO/2	↓
MW-2	↓	↓	1-S	↓	↓	↓	↓	↓	↓	8" EMCO/2	
MW-3	↓	↓	3-S	↓	↓	↓	↓	↓	↓	8" Boart L. /3	
MW-5	↓	↓	O.K	↓	↓	↓	↓	↓	↓	8" EMCO/2	↓

Comments Installed gasket – MW-3

GETTLER-RYAN INC.

April 29, 2011
G-R Job #386358

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

RE: First Semi-Annual Event of March 14, 2011
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

Dear Ms. Frerichs:

This report documents the most recent groundwater monitoring and sampling event performed by Gettler-Ryan Inc. (G-R) at the referenced site. All field work was conducted in accordance with G-R Standard Operating Procedure - Groundwater Sampling (attached). A joint groundwater monitoring and sampling event was conducted on a different date with the former Autopro, located at 5200 Telegraph Avenue, Oakland, California, however data was not received.

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

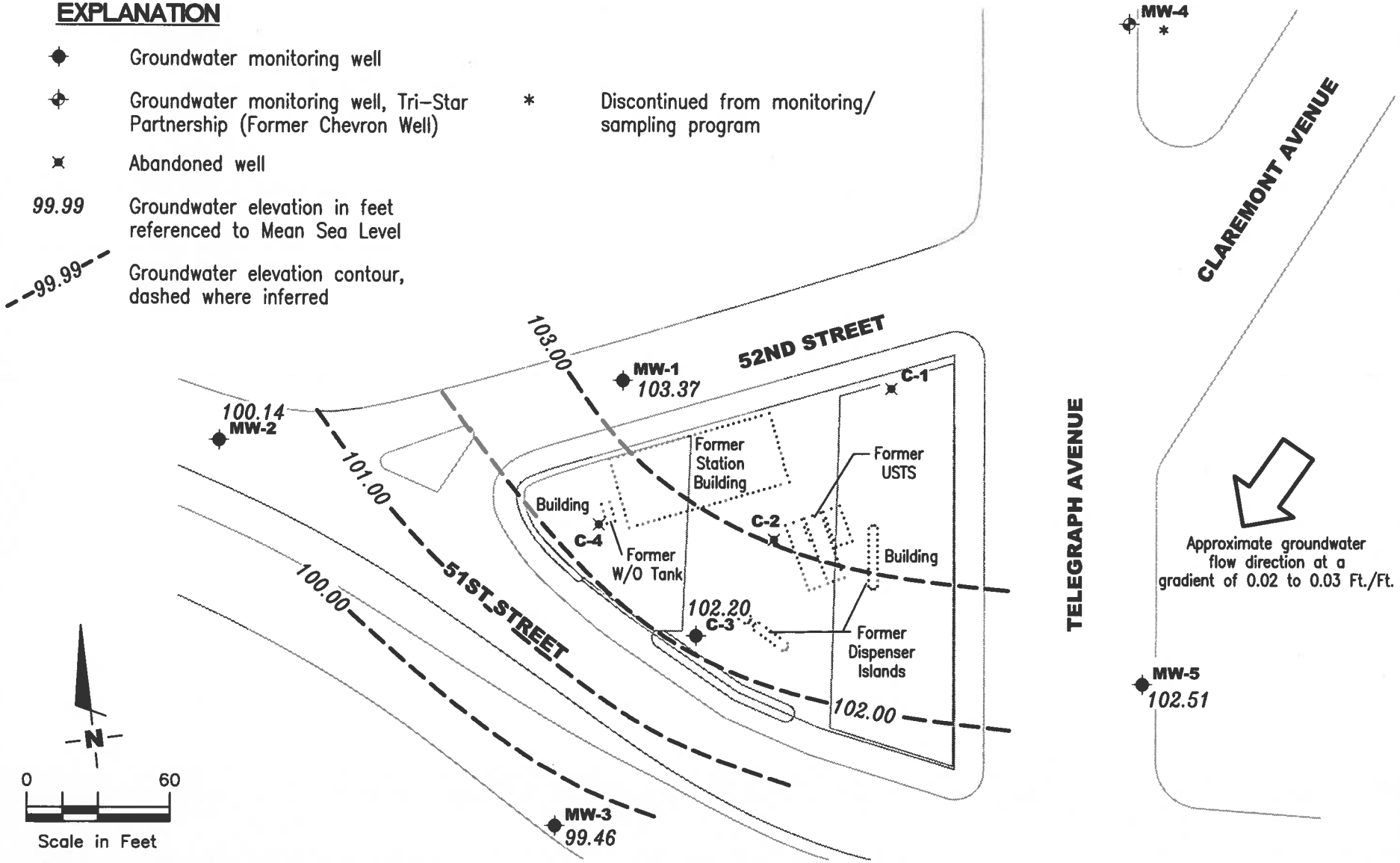
Douglas J. Lee
Senior Geologist, P.G. No. 6882

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

Figure 1: Potentiometric Map
Table 1: Groundwater Monitoring Data and Analytical Results
Table 2: Dissolved Oxygen Concentrations
Table 3: Groundwater Analytical Results - Oxygenate Compounds
Attachments: Standard Operating Procedure - Groundwater Sampling
Field Data Sheets
Chain of Custody Document and Laboratory Analytical Reports

EXPLANATION

- Groundwater monitoring well
- Groundwater monitoring well, Tri-Star Partnership (Former Chevron Well)
- Abandoned well
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level
- --99.99-- — Groundwater elevation contour, dashed where inferred
- * — Discontinued from monitoring/ sampling program



Source: Figure modified from drawing provided by RRM engineering contracting firm.

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

POTENTIOMETRIC MAP
Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386358		March 14, 2011	

FILE NAME: P:\Enviro\Chevron\9-3864\Q11-9-3864.DWG | Layout Tab: Pot1

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE		TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
C-3										
12/06/90		115.70	98.84	16.86	210	2.0	<0.5	<0.5	1.0	--
12/06/90	(D)	--	--	--	220	2.0	0.6	<0.5	2.0	--
06/06/91		115.70	100.01	15.69	6,400	310	21	16	21	--
09/16/92		115.70	99.81	15.89	7,100	130	26	12	30	--
12/04/91		115.70	100.32	15.38	5,100	120	18	17	20	--
06/02/92		115.70	100.30	15.40	6,700	140	44	17	37	--
12/21/92		115.70	101.79	13.91	13,000	390	360	100	410	--
03/11/93		115.70	101.95	13.75	5,100	86	20	12	23	--
06/11/93		115.70	101.03	14.67	7,200	91	38	19	38	--
09/13/93		115.70	100.17	15.53	6,800	100	52	41	75	--
12/14/93		115.70	101.30	14.40	8,600	74	23	18	36	--
03/16/94		115.70	101.44	14.26	6,000	100	42	27	30	--
06/17/94		115.70	100.60	15.10	15,000	170	120	120	270	--
08/29/94		115.70	100.30	15.40	26,000	51	<0.5	58	107	--
12/06/94		115.70	101.90	13.80	34,000	88	140	98	390	--
03/31/95		115.70	102.91	12.79	2,800	42	<5.0	<5.0	6.6	--
06/24/95		115.70	100.84	14.86	5,200	34	<10	<10	13	--
09/12/95		115.70	100.76	14.94	7,000	45	<10	28	42	--
12/29/95		115.70	102.12	13.58	5,100	20	<10	<10	19	<50
02/29/96		115.70	102.88	12.82	2,600	15	<5.0	17	16	<25
06/26/96		115.70	101.32	14.38	4,400	<10	<10	<10	<10	<50
09/12/96		115.70	100.75	14.95	5,800	73	22	18	17	61
12/11/96		115.70	103.08	12.62	8,800	81	<20	<20	37	200
03/31/97		115.70	100.70	15.00	8,100	38	62	30	42	38
06/29/97		115.70	100.08	15.62	5,800	<10	<10	<10	67	<50
09/30/97		115.70	100.70	15.00	6,200	<10	28	21	27	130
12/12/97		115.70	103.68	12.02	330	1.6	1.1	<1.0	3.4	<5.0
02/19/98		115.70	103.26	12.44	110	1.7	<0.5	<0.5	0.51	<2.5
06/16/98		115.70	102.29	13.41	7,400	63	16	<10	<10	170
08/31/98		115.70	101.70	14.00	4,400	6.4	<2.5	5.4	16	15
12/23/98		115.70	102.91	12.79	11,000	83	37	69	76	86
03/09/99		115.70	102.70	13.00	6,500	45	38	17	30	110
06/23/99[1]		115.70	101.92	13.78	--	--	--	--	--	--
09/30/99		115.70	99.70	16.00	3,870	29.7	8.72	7.08	7.75	<50
02/29/00		115.70	102.14	13.56	2,660	22.5	<5.0	11.2	11.6	<50

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
C-3 (cont)									
09/18/00[3]	115.70	103.25	12.45	740[4]	6.0	4.5	<2.5	6.0	<13
03/21/01[3]	115.70	102.05	13.65	1,700[4]	21	12	14	19	59
09/04/01[3]	115.70	101.09	14.61	4,100	<10	4.8	6.5	14	<5.0/<2[5]
03/22/02[3,6]	115.70	102.49	13.21	3,600	<5.0	<5.0	6.1	<15	<2.5
09/16/02[3]	115.70	100.39	15.31	4,000	<10	<5.0	4.3	<10	7.9
03/28/03[3]	115.70	101.38	14.32	2,400	<2.5	<2.5	5.5	<7.5	<13
09/02/03[3,7]	115.70	101.33	14.37	2,800	1	0.9	0.9	4	<0.5
03/18/04[7,8]	115.70	101.56	14.14	5,300	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/04[7]	115.70	101.50	14.20	3,200	0.8	0.8	1	3	10
03/11/05[7]	115.70	102.79	12.91	4,200	0.6	0.5	1	3	<0.5
09/29/05[7]	115.70	101.13	14.57	4,900	0.6	0.5	2	3	<0.5
03/24/06	115.70	INACCESSIBLE - VEHICLE PARKED OVER WELL			--	--	--	--	--
09/12/06[7]	115.70	101.29	14.41	5,900	<1	<1	<1	2	<1
03/05/07[7]	115.70	102.81	12.89	4,600	<0.5	<0.5	0.8	2	<0.5
09/21/07[7]	115.70	101.39	14.31	5,000	<0.5	<0.5	0.6	1	<0.5
03/06/08[7]	115.70	102.15	13.55	3,600	<0.5	<0.5	1	1	<0.5
09/05/08[7]	115.70	101.00	14.70	2,700	<0.5	<0.5	0.9	1	<0.5
03/30/09[7]	115.70	102.28	13.42	4,200	<0.5	<0.5	0.8	3	<0.5
09/15/09[7]	115.70	100.55	15.15	4,700	<0.5	<0.5	<0.5	1	<0.5
03/02/10[7]	115.70	102.22	13.48	3,600	<0.5	<0.5	<0.5	1	<0.5
09/09/10[7]	115.70	100.73	14.97	3,800	<0.5	<0.5	<0.5	1	<0.5
03/14/11[7]	**115.70**	**102.20**	**13.50**	**3,400**	**<0.5**	**<0.5**	**0.6**	**1**	**<0.5**
MW-1									
09/20/93	115.05	102.37	12.68	<50	<0.5	<0.5	<0.5	<1.5	--
12/14/93	115.05	105.01	10.04	<50	<0.5	<0.5	<0.5	<0.5	--
03/16/94	115.05	103.10	11.95	<50	<0.5	1.7	<0.5	2.1	--
06/17/94	115.05	102.51	12.54	350	1.2	3.7	2.0	12	--
08/29/94	115.05	101.98	13.07	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	115.05	104.45	10.60	140	0.9	2.8	1.1	4.2	--
03/31/95	115.05	104.74	10.31	<50	<0.5	<0.5	<0.5	<0.5	--
06/24/95	115.05	102.44	12.61	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/95	115.05	102.00	13.05	<50	<0.5	<0.5	<0.5	<0.5	--
02/02/96	115.05	106.19	8.86	<50	<0.5	<0.5	<0.5	<0.5	<2.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-1 (cont)									
02/29/96	115.05	105.39	9.66	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/26/96	115.05	102.85	12.20	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/96	115.05	101.55	13.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/11/96	115.05	105.90	9.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	115.05	102.30	12.75	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/29/97	115.05	102.01	13.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/97	115.05	101.80	13.25	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/12/97	115.05	106.06	8.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/19/98	115.05	105.64	9.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	115.02	103.48	11.54	<50	<0.5	<0.5	<0.5	<0.5	2.6
08/31/98	115.02	102.51	12.51	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/23/98	115.02	103.03	11.99	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/09/99	115.02	104.57	10.45	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/99	115.02	102.07	12.95	SAMPLED ANNUALLY		--	--	--	--
02/29/00	115.02	105.90	9.12	<50	<0.5	0.816	<0.5	<0.5	<5.0
09/18/00	115.02	104.14	10.88	--	--	--	--	--	--
03/21/01	115.02	104.01	11.01	<50	<0.50	<0.50	<0.50	<0.50	<2.5
09/04/01	115.02	103.60	11.42	--	--	--	--	--	--/<2[5]
03/22/02[6]	115.02	104.68	10.34	100	<0.50	24	0.80	4.9	15
09/16/02	115.02	102.35	12.67	SAMPLED ANNUALLY		--	--	--	--
03/28/03	115.02	103.29	11.73	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/02/03	115.02	102.74	12.28	SAMPLED ANNUALLY		--	--	--	--
03/18/04[7]	115.02	103.11	11.91	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/04	115.02	101.89	13.13	SAMPLED ANNUALLY		--	--	--	--
03/11/05[7]	115.02	104.29	10.73	<50	<0.5	2	<0.5	<0.5	<0.5
09/29/05	115.02	101.97	13.05	SAMPLED ANNUALLY		--	--	--	--
03/24/06[7]	115.02	104.61	10.41	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/12/06	115.02	101.91	13.11	SAMPLED ANNUALLY		--	--	--	--
03/05/07[7]	115.02	103.93	11.09	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07	115.02	102.07	12.95	SAMPLED ANNUALLY		--	--	--	--
03/06/08[7]	115.02	102.92	12.10	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/05/08	115.02	102.54	12.48	SAMPLED ANNUALLY		--	--	--	--
03/30/09[7]	115.02	103.64	11.38	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/09	115.02	102.06	12.96	SAMPLED ANNUALLY		--	--	--	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-1 (cont)									
03/02/10[7]	115.02	103.27	11.75	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/09/10	115.02	102.24	12.78	SAMPLED ANNUALLY		--	--	--	--
03/14/11[7]	**115.02**	**103.37**	**11.65**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-2									
09/20/93	112.08	99.93	12.15	<50	<0.5	<0.5	<0.5	<1.5	--
12/14/93	112.08	97.36	14.72	<50	<0.5	<0.5	<0.5	<0.5	--
03/16/94	112.08	100.92	11.16	<50	<0.5	1.1	<0.5	0.9	--
06/17/94	112.08	100.41	11.67	330	1.4	3.3	1.9	11	--
08/29/94	112.08	100.08	12.00	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	112.08	102.57	9.51	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	112.08	103.24	8.84	<50	<0.5	<0.5	<0.5	<0.5	--
06/24/95	112.08	100.44	11.64	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/95	112.08	100.00	12.08	<50	<0.5	<0.5	<0.5	<0.5	--
12/29/95	112.08	101.58	10.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/29/96	112.08	104.08	8.00	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/26/96	112.08	100.58	11.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/96	112.08	99.81	12.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/11/96	112.08	104.17	7.91	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	112.08	100.20	11.88	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/29/97	112.08	99.89	12.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/97	112.08	99.46	12.62	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/12/97	112.08	102.85	9.23	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/19/98	112.08	104.87	7.21	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	112.03	101.10	10.93	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/31/98	112.03	99.69	12.34	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/23/98	112.03	100.59	11.44	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/09/99	112.03	103.23	8.80	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/99	112.03	101.22	10.81	SAMPLED ANNUALLY		--	--	--	--
02/29/00	112.03	105.12	6.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/18/00	112.03	101.00	11.03	--	--	--	--	--	--
03/21/01	112.03	101.61	10.42	<50	<0.50	<0.50	<0.50	<0.50	<2.5
09/04/01	112.03	101.04	10.99	--	--	--	--	--	--/<2[5]
03/22/02	112.03	102.14	9.89	<50	<0.50	<0.50	<0.50	<1.5	<2.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-2 (cont)									
09/16/02	112.03	100.02	12.01	SAMPLED ANNUALLY		--	--	--	--
03/28/03	112.03	101.23	10.80	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/02/03	112.03	100.15	11.88	SAMPLED ANNUALLY		--	--	--	--
03/18/04[7]	112.03	101.04	10.99	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/04	112.03	99.15	12.88	SAMPLED ANNUALLY		--	--	--	--
03/11/05[7]	112.03	102.13	9.90	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/29/05	112.03	99.33	12.70	SAMPLED ANNUALLY		--	--	--	--
03/24/06[7]	112.03	103.04	8.99	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/12/06	112.03	98.97	13.06	SAMPLED ANNUALLY		--	--	--	--
03/05/07[7]	112.03	101.57	10.46	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07	112.03	99.35	12.68	SAMPLED ANNUALLY		--	--	--	--
03/06/08[7]	112.03	100.98	11.05	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/05/08	112.03	99.22	12.81	SAMPLED ANNUALLY		--	--	--	--
03/30/09[7]	112.03	101.23	10.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/09	112.03	98.84	13.19	SAMPLED ANNUALLY		--	--	--	--
03/02/10[7]	112.03	101.34	10.69	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/09/10	112.03	99.00	13.03	SAMPLED ANNUALLY		--	--	--	--
03/14/11[7]	**112.03**	**100.14**	**11.89**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-3									
09/20/93	113.67	97.25	16.42	6,600	400	11	32	23	--
12/14/93	113.67	98.95	14.72	8,400	390	9.4	13	<2.5	--
03/16/94	113.67	98.45	15.22	6,900	260	30	32	27	--
06/17/94	113.67	97.62	16.05	10,000	190	61	58	190	--
08/29/94	113.67	97.44	16.23	7,200	74	9.8	26	24	--
12/06/94	113.67	99.35	14.32	13,000	610	86	88	140	--
03/31/95	113.67	99.98	13.69	4,300	120	<10	12	<10	--
06/24/95	113.67	98.02	15.65	6,200	210	24	29	12	--
09/12/95	113.67	97.68	15.99	7,200	190	<20	<20	<20	--
12/29/95	113.67	99.67	14.00	7,100	200	<10	45	24	<50
02/29/96	113.67	100.91	12.76	1,200	30	<5.0	<5.0	<5.0	<25
06/26/96	113.67	98.44	15.23	7,900	180	<20	35	28	240
09/12/96	113.67	97.73	15.94	11,000	150	<5.0	35	28	170
12/11/96	113.67	99.86	13.81	7,500	75	8.8	30	45	110

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-3 (cont)									
03/31/97	113.67	98.23	15.44	8,700	100	<10	20	23	50
06/29/97	113.67	97.99	15.68	9,300	120	28	22	19	150
09/30/97	113.67	97.76	15.91	8,200	78	<10	22	25	96
12/12/97	113.67	100.82	12.85	68	1.8	<0.5	<0.5	<0.5	<2.5
02/19/98	113.67	100.41	13.26	220	5.6	1.5	<0.5	<0.5	6.1
06/16/98	113.63	99.12	14.51	7,500	97	21	21	27	160
08/31/98	113.63	98.62	15.01	7,600	24	<2.5	9.5	16	38
12/23/98	113.63	100.03	13.60	5,800	69	<50	<50	<50	<250
03/09/99	113.63	99.59	14.04	5,300	<10	<10	16	20	88
06/23/99[1]	113.63	--	--	--	--	--	--	--	--
07/19/99[1]	113.63	--	--	--	--	--	--	--	--
09/30/99	113.63	96.74	16.89	8,660	53.7	16.9	17	19.6	132
02/29/00	113.63	INACCESSIBLE	--	--	--	--	--	--	--
09/18/00[3]	113.63	100.41	13.22	2,400[4]	14	6.8	4.7	7.4	28
03/21/01[3]	113.63	98.88	14.75	7,600[4]	41	30	<25	50	160
09/04/01	113.63	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--
03/22/02[3]	113.63	99.46	14.17	7,600	<10	4.2	11	<25	<5.0
09/16/02[3]	113.63	97.34	16.29	5,900	<20	<10	7.7	<15	21
03/28/03[3]	113.63	98.67	14.96	3,500	<20	3.3	7.3	10	<13
09/02/03[3,7]	113.63	98.20	15.43	4,500	3	2	2	5	<0.5
03/18/04[7,8]	113.63	98.91	14.72	5,300	3	1	3	4	<0.5
09/15/04	113.63	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--	--
03/11/05[7]	113.63	99.72	13.91	4,500	2	1	2	4	<0.5
09/29/05[7]	113.63	98.06	15.57	5,300	3	1	2	4	<0.5
03/24/06[7]	113.63	100.10	13.53	3,300	1	0.6	1	2	<0.5
09/12/06[7]	113.63	98.16	15.47	6,100	2	1	2	4	<0.5
03/05/07[7]	113.63	99.69	13.94	4,000	1	0.6	0.8	2	<0.5
09/21/07[7]	113.63	98.24	15.39	5,900	2	1	1	4	<0.5
03/06/08[7]	113.63	99.02	14.61	3,900	2	0.8	2	3	<0.5
09/05/08[7]	113.63	98.13	15.50	5,100	1	0.7	2	3	<0.5
03/30/09[7]	113.63	99.13	14.50	4,800	2	0.7	1	3	<0.5
09/15/09	113.63	INACCESSIBLE	--	--	--	--	--	--	--
03/02/10[7]	113.63	99.41	14.22	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/09/10[7]	113.63	98.32	15.31	4,000	1	0.5	0.7	3	<0.5
03/14/11[7]	**113.63**	**99.46**	**14.17**	**1,300**	**<0.5**	**<0.5**	**<0.5**	**0.6**	**<0.5**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-5									
09/20/93	116.74	101.43	15.31	590	25	1.8	0.6	2.0	--
12/14/93	116.74	102.19	14.55	210	11	6.3	2.3	6.1	--
03/16/94	116.74	101.77	14.97	270	12	16	4.8	17	--
06/17/94	116.74	101.36	15.38	220	24	17	6.7	28	--
08/29/94	116.74	101.54	15.20	1,000	<0.5	<0.5	<0.5	<0.5	--
12/06/94	116.74	102.09	14.65	110	9.2	9.7	2.2	11	--
03/31/95	116.74	103.04	13.70	<50	<0.5	<0.5	<0.5	<0.5	--
06/24/95	116.74	101.95	14.79	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/95	116.74	102.15	14.59	<50	<0.5	<0.5	<0.5	<0.5	--
12/29/95	116.74	101.76	14.98	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/29/96	116.74	103.07	13.67	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/26/96	116.74	102.50	14.24	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/96	116.74	102.12	14.62	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/11/96	116.74	102.93	13.81	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	116.74	101.29	15.45	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/29/97	116.74	102.07	14.67	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/97	116.74	101.89	14.85	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/12/97	116.74	102.99	13.75	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/19/98	116.74	103.68	13.06	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	116.70	102.35	14.35	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/31/98	116.70	101.54	15.16	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/23/98	116.70	102.15	14.55	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/09/99	116.70	102.63	14.07	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/99	116.70	100.80	15.90	SAMPLED ANNUALLY		--	--	--	--
02/29/00	116.70	103.40	13.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/18/00	116.70	101.62	15.08	--	--	--	--	--	--
03/21/01	116.70	102.04	14.66	<50	<0.50	<0.50	<0.50	<0.50	<2.5
09/04/01	116.70	101.26	15.44	--	--	--	--	--	--/<2[5]
03/22/02[6]	116.70	101.99	14.71	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/16/02	116.70	101.02	15.68	SAMPLED ANNUALLY		--	--	--	--
03/28/03	116.70	101.65	15.05	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/02/03	116.70	101.34	15.36	SAMPLED ANNUALLY		--	--	--	--
03/18/04[7]	116.70	102.14	14.56	<50	1	0.7	1	3	<0.5
09/15/04	116.70	101.30	15.40	SAMPLED ANNUALLY		--	--	--	--
03/11/05[7]	116.70	102.50	14.20	<50	<0.5	<0.5	<0.5	<0.5	<0.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-5 (cont)									
09/29/05	116.70	101.23	15.47	SAMPLED ANNUALLY		--	--	--	--
03/24/06[7]	116.70	102.77	13.93	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/12/06	116.70	102.03	14.67	SAMPLED ANNUALLY		--	--	--	--
03/05/07[7]	116.70	102.03	14.67	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07	116.70	101.10	15.60	SAMPLED ANNUALLY		--	--	--	--
03/06/08[7]	116.70	102.20	14.50	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/05/08	116.70	101.24	15.46	SAMPLED ANNUALLY		--	--	--	--
03/30/09[7]	116.70	101.90	14.80	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/09	116.70	100.83	15.87	SAMPLED ANNUALLY		--	--	--	--
03/02/10[7]	116.70	102.40	14.30	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/09/10	116.70	101.00	15.70	SAMPLED ANNUALLY		--	--	--	--
03/14/11[7]	**116.70**	**102.51**	**14.19**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
C-1									
12/06/90	117.45	102.11	15.34	1,900	17	11	3.0	21	--
06/06/91	117.45	102.83	14.62	3,400	21	15	11	18	--
12/04/91	117.45	102.97	14.48	2,700	22	16	13	23	--
06/02/92	117.45	102.92	14.53	1,900	170	170	13	83	--
09/16/92	117.45	102.52	14.93	810	5.8	5.7	2.0	6.3	--
12/21/92	117.45	103.72	13.73	75	2.4	2.9	1.4	4.7	--
03/11/93	117.45	103.62	13.83	150	2.4	20	3.3	23	--
06/11/93	117.45	103.26	14.19	400	4.3	2.3	1.0	3.5	--
09/13/93	117.45	102.85	14.60	4,100	62	43	34	57	--
12/14/93	117.45	103.67	13.78	3,100	9.5	4.5	1.2	11	--
03/16/94	117.45	103.44	14.01	410	6.3	3.1	1.3	4.5	--
06/17/94	117.45	102.90	14.55	3,700	100	42	30	91	--
08/29/94	117.45	102.96	14.49	2,600	15	<0.5	6.7	9.7	--
12/06/94	117.45	104.04	13.41	510	2.0	2.2	1.7	9.4	--
03/31/95	117.45	105.33	12.12	5,440	9.0	2.3	2.0	3.6	--
06/24/95	117.45	103.45	14.00	260	5.8	1.0	0.94	0.88	--
09/12/95	117.45	103.42	14.03	650	14	1.1	1.6	2.4	--
12/29/95	117.45	104.50	12.95	990	32	6.3	4.0	3.2	46
02/29/96	117.45	105.27	12.18	840	2.5	<1.0	2.6	7.3	<5.0

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
C-1									
06/26/96	117.45	103.72	13.73	290	3.6	0.73	1.0	1.1	9.9
09/12/96	117.45	103.32	14.13	1,200	17	1.8	4.0	4.4	24
12/11/96	117.45	104.66	12.79	7,700	<10	53	19	44	87
ABANDONED									
C-2									
12/06/90	116.16	100.82	15.34	210	140	9.0	2.0	11	--
06/06/91	116.16	101.54	14.62	4,800	340	23	19	23	--
12/04/91	116.16	100.73	15.43	3,900	85	15	9.1	15	--
06/02/92	116.16	101.74	14.42	3,300	76	9.2	14	15	--
09/16/92	116.16	101.35	14.81	3,000	16	15	3.4	7.5	--
12/21/92	116.16	102.79	13.37	2,200	21	12	7.1	15	--
03/11/93	116.16	102.69	13.47	2,200	33	24	12	25	--
06/11/93	116.16	102.18	13.98	2,600	21	25	11	26	--
09/13/93	116.16	101.61	14.55	2,100	31	25	18	39	--
12/14/93	116.16	102.46	13.70	3,800	<2.5	24	12	20	--
03/16/94	116.16	102.51	13.65	2,600	12	15	10	17	--
06/17/94	116.16	102.87	13.29	2,400	17	19	28	71	--
08/29/94	116.16	111.60	4.56	3,000	29	15	20	4.2	--
12/06/94	116.16	102.98	13.18	1,900	7.9	30	14	31	--
03/31/95	116.16	104.10	12.06	890	<1.3	<1.3	2.6	<1.3	--
06/24/95	116.16	102.19	13.97	730	4.8	<0.5	5.4	0.96	--
09/12/95	116.16	102.28	13.88	1,600	<2.5	<2.5	5.4	<2.5	--
12/29/95	116.16	103.31	12.85	1,000	9.1	2.7	8.7	2.7	19
02/29/96	116.16	104.09	12.07	850	<2.5	<2.5	8.7	11	<12
06/26/96	116.16	102.50	13.66	2,500	14	<5.0	13	6.3	<25
09/12/96	116.16	102.25	13.91	1,800	26	19	17	31	37
12/11/96	116.16	103.82	12.34	2,800	<5.0	34	14	<5.0	41
ABANDONED									
C-4									
12/06/90	116.10	98.42	17.68	<50	<0.5	<0.5	<0.5	<0.5	--
12/18/90	116.10	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/06/91	116.10	99.61	16.49	<50	1.0	1.0	<0.5	0.7	--
12/04/91	116.10	99.28	16.82	70	6.5	9.8	1.7	8.6	--

Table 1
Groundwater Monitoring Data and Analytical Results
Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
C-4 (cont)									
06/02/92	116.10	99.18	16.92	70	3.0	4.4	1.8	9.0	--
09/16/92	116.10	98.39	17.71	<50	1.4	1.8	<0.5	1.1	--
12/21/92	116.10	100.74	15.36	<50	0.6	0.7	<0.5	1.5	--
03/11/93	116.10	100.61	15.49	<50	<0.5	<0.5	<0.5	<1.5	--
06/11/93	116.10	99.83	16.27	52	0.9	3.1	0.7	3.8	--
09/13/93	116.10	98.92	17.18	64	0.9	1.0	<0.5	1.7	--
12/14/93	116.10	101.03	15.07	<50	<0.5	0.8	<0.5	0.7	--
03/16/94	116.10	100.19	15.91	<50	<0.5	1.0	<0.5	0.8	--
06/17/94	116.10	99.46	16.64	230	0.6	2.2	2.2	11	--
08/29/94	116.10	99.05	17.05	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	116.10	101.52	14.58	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	116.10	102.26	13.84	<50	<0.5	<0.5	<0.5	<0.5	--
06/24/95	116.10	100.05	16.05	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/95	116.10	99.87	16.23	<50	<0.5	<0.5	<0.5	<0.5	--
12/29/95	116.10	101.35	14.75	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/29/96	116.10	102.40	13.70	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/26/96	116.10	100.30	15.80	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/96	116.10	99.67	16.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/11/96	116.10	103.18	12.92	<50	<0.5	<0.5	<0.5	<0.5	<2.5
ABANDONED									
MW-4									
09/20/93	118.10	107.17	10.93	5,800	16	4.2	35	48	--
12/14/93	118.10	108.33	9.77	7,100	19	6.5	24	35	--
03/16/94	118.10	107.99	10.11	8,500	83	43	60	70	--
06/17/94	118.10	107.20	10.90	21,000	150	20	140	350	--
08/29/94	118.10	107.28	10.82	10,000	86	71	44	85	--
12/06/94	118.10	108.70	9.40	13,000	68	56	67	110	--
03/31/95	118.10	109.31	8.79	6,700	100	9.4	26	23	--
06/24/95	118.10	107.60	10.50	6,300	<20	<20	<20	24	--
09/12/95	118.10	107.90	10.20	7,100	65	16	<10	21	--
12/29/95	118.10	108.86	9.24	3,300	<10	<10	12	14	720
02/29/96	118.10	111.85	6.25	5,100	<10	37	23	21	85
06/26/96	118.10	107.92	10.18	6,800	<20	<20	<20	<20	<100
09/12/96	118.10	107.53	10.57	13,000	150	<10	38	35	240

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
MW-4 (cont)									
12/11/96	118.10	109.39	8.71	26,000	<20	<20	<20	170	<100
03/31/97	118.10	107.18	10.92	12,000	120	74	45	70	240
06/29/97	118.10	106.43	11.67	8,800	24	<10	35	36	62
09/30/97	118.10	107.20	10.90	10,000	<10	<10	37	35	72
12/12/97	118.10	105.16	12.94	4,600	95	41	20	25	91
02/19/98	118.10	110.33	7.77	5,400	87	16	32	31	110
06/16/98[2]	118.08	107.82	10.26	10,000	<20	<20	35	37	150
NOT MONITORED/SAMPLED									
TRIP BLANK									
12/06/90	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/18/90	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/06/91	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/04/91	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/02/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/16/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/21/92	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/11/93	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
06/11/93	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
09/13/93	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--
12/14/93	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/16/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/17/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
08/29/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/06/94	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
03/31/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
06/24/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
09/12/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/29/95	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
02/29/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/26/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/12/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--
12/11/96	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
03/31/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID/ DATE	TOC (ft.)	GWE (msl)	DTW (ft.)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)
TRIP BLANK (cont)									
06/29/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/12/97	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/19/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
06/16/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
08/31/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
12/23/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	2.9
03/09/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
09/30/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
02/29/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
09/18/00	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
03/21/01	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5
09/04/01	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
QA									
03/22/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/16/02	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
03/28/03	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5
09/02/03[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/18/04[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/15/04[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/11/05[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/29/05[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/24/06[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/12/06[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/05/07[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/21/07[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/06/08[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
09/05/08[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
03/30/09[7]	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5
DISCONTINUED									

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to February 9, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TOC = Top of Casing
(ft.) = Feet
GWE = Groundwater Elevation
(msl) = Mean sea level
DTW = Depth to Water
TPH = Total Petroleum Hydrocarbons

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

(µg/L) = Micrograms per liter
-- = Not Measured/Not Analyzed
(D) = Duplicate
QA = Quality Assurance/Trip Blank

1 ORC installed.
2 Transfer of title to Tri-Star Partnership, Inc. effective July 14, 1998.
3 ORC in well.
4 Laboratory report indicates gasoline C6-C12.
5 MTBE by EPA Method 8260.
6 Split samples taken by Harding ESE.
7 BTEX and MTBE by EPA Method 8260.
8 ORC removed from well.

Table 2

Dissolved Oxygen Concentrations

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID	DATE	PRE-PURGE *(mg/L)*	POST-PURGE *(mg/L)*
C-3[1]	09/18/00	3.64	--
	03/21/01	1.00	--
	09/04/01	1.40	--
	03/22/02	1.10	--
	09/16/02	1.20	--
	03/28/03[2]	--	--
	09/02/03	0.80	--
	03/18/04[3]	0.56	--
MW-3[1]	09/18/00	4.01	--
	03/21/01	1.30	--
	09/04/01	INACCESSIBLE - CAR PARKED OVER WELL	
	03/22/02	1.30	--
	09/16/02	1.00	--
	03/28/03[2]	--	--
	09/02/03	0.90	--
	03/18/04[3]	1.21	--

EXPLANATIONS:

(mg/L) = Milligrams per liter

-- = Not Measured

[1] ORC in well.

[2] Meter inoperable; unable to take Dissolved Oxygen measurements

[3] ORC removed from well.

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

WELL ID	DATE	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
C-3	09/04/01	<100	<2	<2	<2	<2	<2	<2
	09/02/03	--	<0.5	--	--	--	--	--
	03/18/04	--	<0.5	--	--	--	--	--
	09/15/04	--	10	--	--	--	--	--
	03/11/05	--	<0.5	--	--	--	--	--
	09/29/05	--	<0.5	--	--	--	--	--
	03/24/06	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--
	09/12/06	--	<1	--	--	--	--	--
	03/05/07	--	<0.5	--	--	--	--	--
	09/21/07	--	<0.5	--	--	--	--	--
	03/06/08	--	<0.5	--	--	--	--	--
	09/05/08	--	<0.5	--	--	--	--	--
	03/30/09	--	<0.5	--	--	--	--	--
	09/15/09	--	<0.5	--	--	--	--	--
	03/02/10	--	<0.5	--	--	--	--	--
	09/09/10	--	<0.5	--	--	--	--	--
	03/14/11	--	**<0.5**	--	--	--	--	--
MW-1	09/04/01	<100	<2	<2	<2	<2	<2	<2
	03/18/04	--	<0.5	--	--	--	--	--
	09/15/04	SAMPLED ANNUALLY		--	--	--	--	--
	03/11/05	--	<0.5	--	--	--	--	--
	03/24/06	--	<0.5	--	--	--	--	--
	03/05/07	--	<0.5	--	--	--	--	--
	03/06/08	--	<0.5	--	--	--	--	--
	03/30/09	--	<0.5	--	--	--	--	--
	03/02/10	--	<0.5	--	--	--	--	--
	03/14/11	--	**<0.5**	--	--	--	--	--
MW-2	09/04/01	<100	<2	<2	<2	<2	<2	<2
	03/18/04	--	<0.5	--	--	--	--	--
	09/15/04	SAMPLED ANNUALLY		--	--	--	--	--
	03/11/05	--	<0.5	--	--	--	--	--
	03/24/06	--	<0.5	--	--	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

WELL ID	DATE	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-2 (cont)	03/05/07	--	<0.5	--	--	--	--	--
	03/06/08	--	<0.5	--	--	--	--	--
	03/30/09	--	<0.5	--	--	--	--	--
	03/02/10	--	<0.5	--	--	--	--	--
	03/14/11	--	**<0.5**	--	--	--	--	--
MW-3	09/02/03	--	<0.5	--	--	--	--	--
	03/18/04	--	<0.5	--	--	--	--	--
	09/15/04	INACCESSIBLE - CAR PARKED OVER WELL			--	--	--	--
	03/11/05	--	<0.5	--	--	--	--	--
	09/29/05	--	<0.5	--	--	--	--	--
	03/24/06	--	<0.5	--	--	--	--	--
	09/12/06	--	<0.5	--	--	--	--	--
	03/05/07	--	<0.5	--	--	--	--	--
	09/21/07	--	<0.5	--	--	--	--	--
	03/06/08	--	<0.5	--	--	--	--	--
	09/05/08	--	<0.5	--	--	--	--	--
	03/30/09	--	<0.5	--	--	--	--	--
	09/15/09	INACCESSIBLE	--	--	--	--	--	--
	03/02/10	--	<0.5	--	--	--	--	--
	09/09/10	--	<0.5	--	--	--	--	--
	03/14/11	--	**<0.5**	--	--	--	--	--
MW-5	09/04/01	<100	<2	<2	<2	<2	<2	<2
	03/18/04	--	<0.5	--	--	--	--	--
	09/15/04	SAMPLED ANNUALLY		--	--	--	--	--
	03/11/05	--	<0.5	--	--	--	--	--
	03/24/06	--	<0.5	--	--	--	--	--
	03/05/07	--	<0.5	--	--	--	--	--
	03/06/08	--	<0.5	--	--	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-3864

5101 Telegraph Avenue

Oakland, California

WELL ID	DATE	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)
MW-5 (com)	03/30/09	--	<0.5	--	--	--	--	--
	03/02/10	--	<0.5	--	--	--	--	--
	03/14/11	--	**<0.5**	--	--	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-3864
5101 Telegraph Avenue
Oakland, California

EXPLANATIONS:

TBA = t-Butyl alcohol
MTBE = Methyl Tertiary Butyl Ether
DIPE = di-Isopropyl ether
ETBE = Ethyl t-butyl ether
TAME = t-Amyl methyl ether
1,2-DCA = 1,2-Dichloroethane
EDB = 1,2-Dibromoethane
(µg/L) = Micrograms per liter
-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

After water levels are collected and prior to sampling, if purging is to occur, each well is purged a minimum of three well casing volumes of water using pre-cleaned pumps (stack, peristaltic or Grundfos), or disposable bailers. Temperature, pH and electrical conductivity are measured a minimum of three times during the purging (additional parameters such as dissolved oxygen, oxidation reduction potential, turbidity may also be measured, depending on specific scope of work.). Purging continues until these parameters stabilize.

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-3864** Job Number: **386358**

Site Address: **5101 Telegraph Avenue** Event Date: 3-14-11 (inclusive)

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

Well ID C-3 Date Monitored: 3-14-11

Well Diameter 2 in.

Total Depth 29.10 ft.

Depth to Water 13.50 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

☐ Check if water column is less then 0.50 ft.

15.60 xVF 0.17 = 2.65 x3 case volume = Estimated Purge Volume: 8 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.62

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): 0720 Weather Conditions: Rain

Sample Time/Date: 0850 / 3-14-11 Water Color: clear Odor: Y / N moderate

Approx. Flow Rate: — gpm. Sediment Description: none

Did well de-water? no If yes, Time: — Volume: — gal. DTW @ Sampling: 13.80

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - mS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0726	3	7.21	846	17.5		
0732	5	7.36	841	17.2		
0738	8	7.27	849	17.3		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
C-3	6 x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-3864** Job Number: **386358**

Site Address: **5101 Telegraph Avenue** Event Date: 3-14-11 (inclusive)

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

Well ID MW-1 Date Monitored: 3-14-11

Well Diameter 2 in.

Total Depth 21.61 ft.

Depth to Water 11.65 ft.

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

☐ Check if water column is less then 0.50 ft.

9.96 xVF 0.17 = 1.69 x3 case volume = Estimated Purge Volume: 5.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 13.64

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): 1015 Weather Conditions: Rain

Sample Time/Date: 1038 / 3-14-11 Water Color: clear Odor: Y / (N)

Approx. Flow Rate: — gpm. Sediment Description: none

Did well de-water? no If yes, Time: — Volume: — gal. DTW @ Sampling: 11.78

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - ~~µS~~)	Temperature ((C) / F)	D.O. (mg/L)	ORP (mV)
1020	1.5	7.48	1315	16.9		
1024	3.5	7.43	1292	17.0		
1028	5.5	7.36	1287	17.1		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-1	x voa vial	YES	HCL	LANCASTER	TPH-GRO(8015)/BTEX+MTBE(8260)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-3864** Job Number: **386358**

Site Address: **5101 Telegraph Avenue** Event Date: 3-14-11 (inclusive)

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

Well ID MW-2 Date Monitored: 3-14-11

Well Diameter 2 in.

Total Depth 24.38 ft.

Depth to Water 11.89 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.

12.49 xVF 0.17 = 2.12 x3 case volume = Estimated Purge Volume: 6.5 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 14.38

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): 1050 Weather Conditions: Rain

Sample Time/Date: 1115 / 3-14-11 Water Color: clear Odor: Y / (N)

Approx. Flow Rate: ~ gpm. Sediment Description: none

Did well de-water? no If yes, Time: — Volume: — gal. DTW @ Sampling: 12.16

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1056	2	7.25	1161	17.4		
1100	4	7.30	1147	17.7		
1104	6.5	7.32	1154	17.5		

LABORATORY INFORMATION

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

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-3864** Job Number: **386358**

Site Address: **5101 Telegraph Avenue** Event Date: 3-14-11 (inclusive)

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

Well ID MW-3 Date Monitored: 3-14-11

Well Diameter 2 in.

Total Depth 26.79 ft.

Depth to Water 14.17 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.

12.62 xVF 0.17 = ~~2.5~~ 2.15 x3 case volume = Estimated Purge Volume: ~~6.5~~ 6.4 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 16.69

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 Weather Conditions: Rain

Sample Time/Date: 0930 / 3-14-11 Water Color: clear Odor: Y / N light

Approx. Flow Rate: ~ gpm. Sediment Description: none

Did well de-water? no If yes, Time: — Volume: gal. DTW @ Sampling: 14.46

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0906	1.5	6.77	753	17.6		
0912	3.5	6.89	761	17.4		
0917	5.5	6.85	760	17.3		

LABORATORY INFORMATION

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

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: **Chevron #9-3864** Job Number: **386358**

Site Address: **5101 Telegraph Avenue** Event Date: 3-14-11 (inclusive)

City: **Oakland, CA** Sampler: Jor

Well ID MW-5 Date Monitored: 3-14-11

Well Diameter 2 in.

Total Depth 21.65 ft.

Depth to Water 14.19 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.

7.46 xVF 0.17 = 1.27 x3 case volume = Estimated Purge Volume: 4 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 15.68

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): 0942 Weather Conditions: Rain

Sample Time/Date: 1005 / 3-14-11 Water Color: clear Odor: Y / N

Approx. Flow Rate: ~ gpm. Sediment Description: none

Did well de-water? no If yes, Time: ~ Volume: gal. DTW @ Sampling: 14.30

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
0947	1.5	7.63	1097	16.9		
0951	3	7.38	1125	17.4		
0955	4	7.42	1129	17.8		

LABORATORY INFORMATION

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

COMMENTS:

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

03 14 11-03

Acct. #: 12099 | For Lancaster Laboratories use only Sample # 6229978-82 | Group #: 005908

CRA MTI Project #: 61H-1951

Grp #1237309

Facility #: SS#9-3864 G-R#386358 Global ID#T0600100343

Site Address: 5101 TELEGRAPH AVENUE, OAKLAND, CA

Chevron PM: MTI | Lead Consultant: CRAKJ Kiernan

Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568

Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)

Consultant Phone #: 925-551-7555 | Fax #: 925-551-7899

Sampler: JOE AJEMIAN

Sample Identification	Date Collected	Time Collected	Grab	Composite	Matrix: Soil	Matrix: Water	Matrix: Oil	Matrix: Air	Matrix: Potable	Matrix: NPDES	Total Number of Containers	BTEX + MTBE 8260 ☒ 8021 ☐ (H)	TPH 8015 MOD GRO (H)	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates	Total Lead Method	Dissolved Lead Method
C-3	1-14-11	0850	✓			✓					6	✓	✓					
MW-1	↓	1038	↑			↓					6	✓	✓					
MW-2		1115									6	✓	✓					
MW-3		0930									6	✓	✓					
MW-5	↓	1005	↓			↓					6	✓	✓					

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
Collection date 3-14-11 per M. Chalender. jmp 3/16/11

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:	3-14-1	1246	Received by: A. Aulger 14MAR11		1246
Relinquished by: A. Aulger 14MAR11		1636	Received by: FED EX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS ~~FedEx~~ Other			Received by:	3/16/11	0930
Temperature Upon Receipt 1.3-1.8 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 by:

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

Prepared for:

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

March 21, 2011

Project: 93864

Submittal Date: 03/15/2011
Group Number: 1237309
PO Number: 93864
Release Number: MTI
State of Sample Origin: CA

Client Sample Description	Lancaster Labs (LLI) #
C-3-W-110314 Grab Water	6229978
MW-1-W-110314 Grab Water	6229979
MW-2-W-110314 Grab Water	6229980
MW-3-W-110314 Grab Water	6229981
MW-5-W-110314 Grab Water	6229982

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: Rachelle Munoz
ELECTRONIC COPY TO	Chevron c/o CRA	Attn: Report Contact
ELECTRONIC COPY TO	Chevron	Attn: Anna Avina

Lancaster Laboratories

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

Analysis Report

Questions? Contact your Client Services Representative
Jill M Parker at (717) 656-2300 Ext. 1241

Respectfully Submitted,

Maria S. Lord
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

Sample Description: C-3-W-110314 Grab Water
Facility# 93864 Job# 386358 MTI# 61H-1951 GRD
5101 Telegraph-Oakland T0600100343 C-1

LLI Sample # WW 6229978
LLI Group # 1237309
Account # 12099

Project Name: 93864

Collected: 03/14/2011 08:50 by JA

Submitted: 03/15/2011 09:30
Reported: 03/21/2011 11:59

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

TOC1-

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	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	0.6	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	1	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	3,400	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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P110762AA	03/17/2011 04:01	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P110762AA	03/17/2011 04:01	Holly Berry	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11076A07A	03/18/2011 23:53	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	11076A07A	03/18/2011 23:53	Katrina T Longenecker	1

Lancaster Laboratories

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

Analysis Report

Sample Description: MW-1-W-110314 Grab Water
Facility# 93864 Job# 386358 MTI# 61H-1951 GRD
5101 Telegraph-Oakland T0600100343 MW-1

LLI Sample # WW 6229979
LLI Group # 1237309
Account # 12099

Project Name: 93864

Collected: 03/14/2011 10:38 by JA

Submitted: 03/15/2011 09:30
Reported: 03/21/2011 11:59

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

TOMW1

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	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P110762AA	03/17/2011 04:28	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P110762AA	03/17/2011 04:28	Holly Berry	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11076A07A	03/18/2011 18:15	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	11076A07A	03/18/2011 18:15	Katrina T Longenecker	1

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Analysis Report

Sample Description: MW-2-W-110314 Grab Water
Facility# 93864 Job# 386358 MTI# 61H-1951 GRD
5101 Telegraph-Oakland T0600100343 MW-2

LLI Sample # WW 6229980
LLI Group # 1237309
Account # 12099

Project Name: 93864

Collected: 03/14/2011 11:15 by JA

Submitted: 03/15/2011 09:30
Reported: 03/21/2011 11:59

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

TOMW2

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	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F110761AA	03/17/2011 06:59	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F110761AA	03/17/2011 06:59	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11076A07A	03/18/2011 19:13	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	11076A07A	03/18/2011 19:13	Katrina T Longenecker	1

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Analysis Report

Sample Description: MW-3-W-110314 Grab Water
Facility# 93864 Job# 386358 MTI# 61H-1951 GRD
5101 Telegraph-Oakland T0600100343 MW-3

LLI Sample # WW 6229981
LLI Group # 1237309
Account # 12099

Project Name: 93864

Collected: 03/14/2011 09:30 by JA

Submitted: 03/15/2011 09:30
Reported: 03/21/2011 11:59

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

TOMW3

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	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	0.6	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	1,300	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
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	P110762AA	03/17/2011 04:56	Holly Berry	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	P110762AA	03/17/2011 04:56	Holly Berry	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11076A07A	03/18/2011 19:39	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	11076A07A	03/18/2011 19:39	Katrina T Longenecker	1

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Analysis Report

Sample Description: MW-5-W-110314 Grab Water
Facility# 93864 Job# 386358 MTI# 61H-1951 GRD
5101 Telegraph-Oakland T0600100343 MW-5

LLI Sample # WW 6229982
LLI Group # 1237309
Account # 12099

Project Name: 93864

Collected: 03/14/2011 10:05 by JA

Submitted: 03/15/2011 09:30
Reported: 03/21/2011 11:59

Chevron c/o CRA
Suite 107
10969 Trade Center Dr
Rancho Cordova CA 95670

TOMW5

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	
10943	Benzene	71-43-2	N.D.	0.5	1
10943	Ethylbenzene	100-41-4	N.D.	0.5	1
10943	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	1
10943	Toluene	108-88-3	N.D.	0.5	1
10943	Xylene (Total)	1330-20-7	N.D.	0.5	1
GC Volatiles	**SW-846 8015B**		ug/l	ug/l	
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	1

General Sample Comments

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

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

Laboratory Sample Analysis Record

CAT No.	Analysis Name	Method	Trial#	Batch#	Analysis Date and Time	Analyst	Dilution Factor
10943	BTEX/MTBE 8260 Water	SW-846 8260B	1	F110761AA	03/17/2011 07:21	Anita M Dale	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	F110761AA	03/17/2011 07:21	Anita M Dale	1
01728	TPH-GRO N. CA water C6-C12	SW-846 8015B	1	11076A07A	03/18/2011 20:04	Katrina T Longenecker	1
01146	GC VOA Water Prep	SW-846 5030B	1	11076A07A	03/18/2011 20:04	Katrina T Longenecker	1

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 03/21/11 at 11:59 AM

Group Number: 1237309

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: F110761AA	Sample number(s): 6229980,6229982							
Benzene	N.D.	0.5	ug/l	99		79-120		
Ethylbenzene	N.D.	0.5	ug/l	97		79-120		
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		76-120		
Toluene	N.D.	0.5	ug/l	98		79-120		
Xylene (Total)	N.D.	0.5	ug/l	95		80-120		
Batch number: P110762AA	Sample number(s): 6229978-6229979,6229981							
Benzene	N.D.	0.5	ug/l	100	100	79-120	0	30
Ethylbenzene	N.D.	0.5	ug/l	96	96	79-120	0	30
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	101	103	76-120	2	30
Toluene	N.D.	0.5	ug/l	98	98	79-120	1	30
Xylene (Total)	N.D.	0.5	ug/l	95	96	80-120	0	30
Batch number: 11076A07A	Sample number(s): 6229978-6229982							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	100	109	75-135	9	30

Sample Matrix Quality Control

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

Analysis Name	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD MAX	BKG Conc	DUP Conc	DUP RPD	Dup RPD Max
Batch number: F110761AA	Sample number(s): 6229980,6229982 UNSPK: 6229982								
Benzene	102	103	80-126	1	30				
Ethylbenzene	101	101	71-134	1	30				
Methyl Tertiary Butyl Ether	95	97	72-126	2	30				
Toluene	101	101	80-125	0	30				
Xylene (Total)	99	100	79-125	0	30				

Surrogate Quality Control

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

Analysis Name: UST VOCs by 8260B - Water
Batch number: F110761AA

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

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

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 03/21/11 at 11:59 AM

Group Number: 1237309

Surrogate Quality Control

6229980	95	100	100	92
6229982	94	100	99	92
Blank	95	100	100	92
LCS	94	100	99	95
MS	94	102	99	97
MSD	93	101	99	96
Limits:	80-116	77-113	80-113	78-113

Analysis Name: UST VOCs by 8260B - Water
Batch number: P110762AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
6229978	99	98	97	99
6229979	100	98	100	92
6229981	101	99	99	96
Blank	100	99	99	91
LCS	101	102	97	93
LCSD	101	101	98	94
Limits:	80-116	77-113	80-113	78-113

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 11076A07A

	Trifluorotoluene-F
6229978	118
6229979	86
6229980	84
6229981	115
6229982	85
Blank	90
LCS	95
LCSD	96
Limits:	63-135

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

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Explanation of Symbols and Abbreviations

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

RL	Reporting Limit	**BMQL**	Below Minimum Quantitation Level
N.D.	none detected	**MPN**	Most Probable Number
TNTC	Too Numerous To Count	**CP Units**	cobalt-chloroplatinate units
IU	International Units	**NTU**	nephelometric turbidity units
umhos/cm	micromhos/cm	**ng**	nanogram(s)
C	degrees Celsius	**F**	degrees Fahrenheit
meq	milliequivalents	**lb.**	pound(s)
g	gram(s)	**kg**	kilogram(s)
ug	microgram(s)	**mg**	milligram(s)
ml	milliliter(s)	**l**	liter(s)
m3	cubic meter(s)	**ul**	microliter(s)

< less than - The number following the sign is the limit of quantitation, the smallest amount of analyte which can be reliably determined using this specific test.

> greater than

J estimated value – The result is ≥ the Method Detection Limit (MDL) and < the Limit of Quantitation (LOQ).

ppm parts per million - One ppm is equivalent to one milligram per kilogram (mg/kg), or one gram per million grams. For aqueous liquids, ppm is usually taken to be equivalent to milligrams per liter (mg/l), because one liter of water has a weight very close to a kilogram. For gases or vapors, one ppm is equivalent to one microliter of gas per liter of gas.

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture. All other results are reported on an as-received basis.

U.S. EPA CLP Data Qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

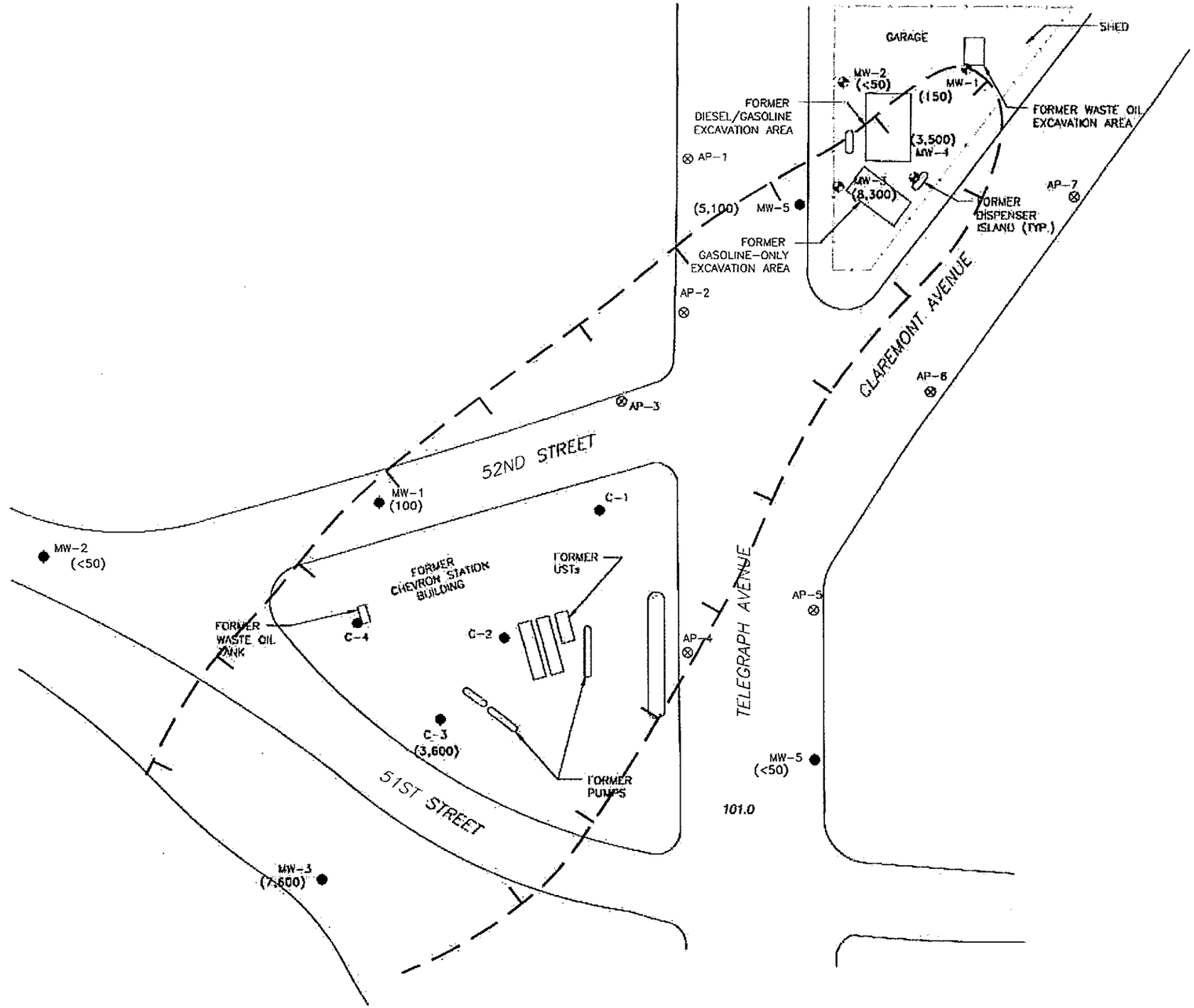
Analytical test results meet all requirements of NELAC unless otherwise noted under the individual analysis.

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

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

APPENDIX F

HISTORICAL ISOCONCENTRATION MAPS AND NEARBY GROUNDWATER DATA



LEGEND

- MW-1 ⊕ GROUND WATER MONITORING WELLS INSTALLED BY QST
- MW-1 C-1 ● GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
- AP-1 ⊗ SOIL BORING BY QST
- —×— FENCE
- CONCENTRATION ISOPLETH

60 0 60 120

SCALE IN FEET

51644D09.DWG 1.0
20020520.1005

CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

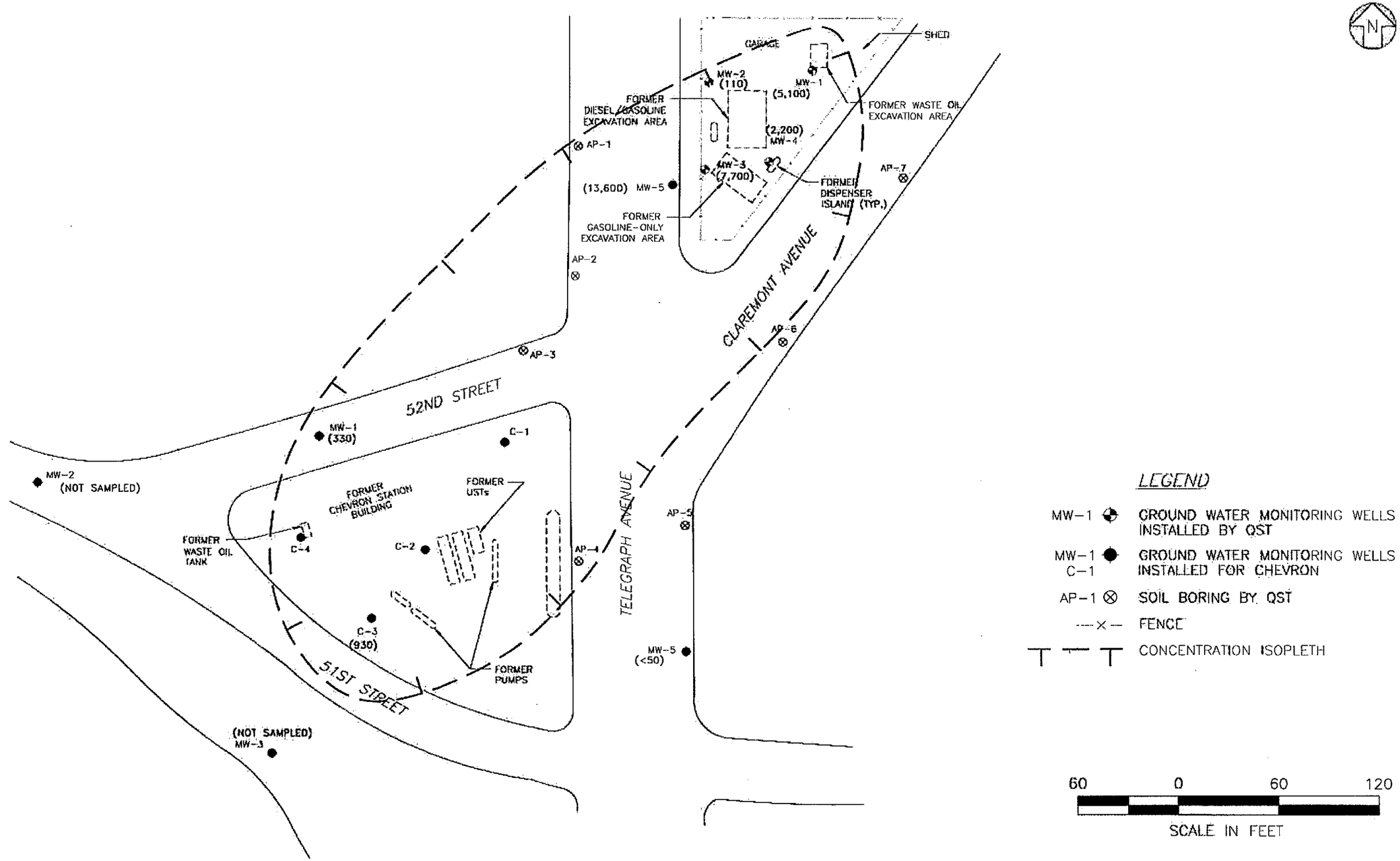
Harding ESE
A MACTEC Company

TPH-G Plume

Autopro Inc.
5200 Telegraph Avenue
Oakland, California

FIGURE **4**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	51644 030		04/02	



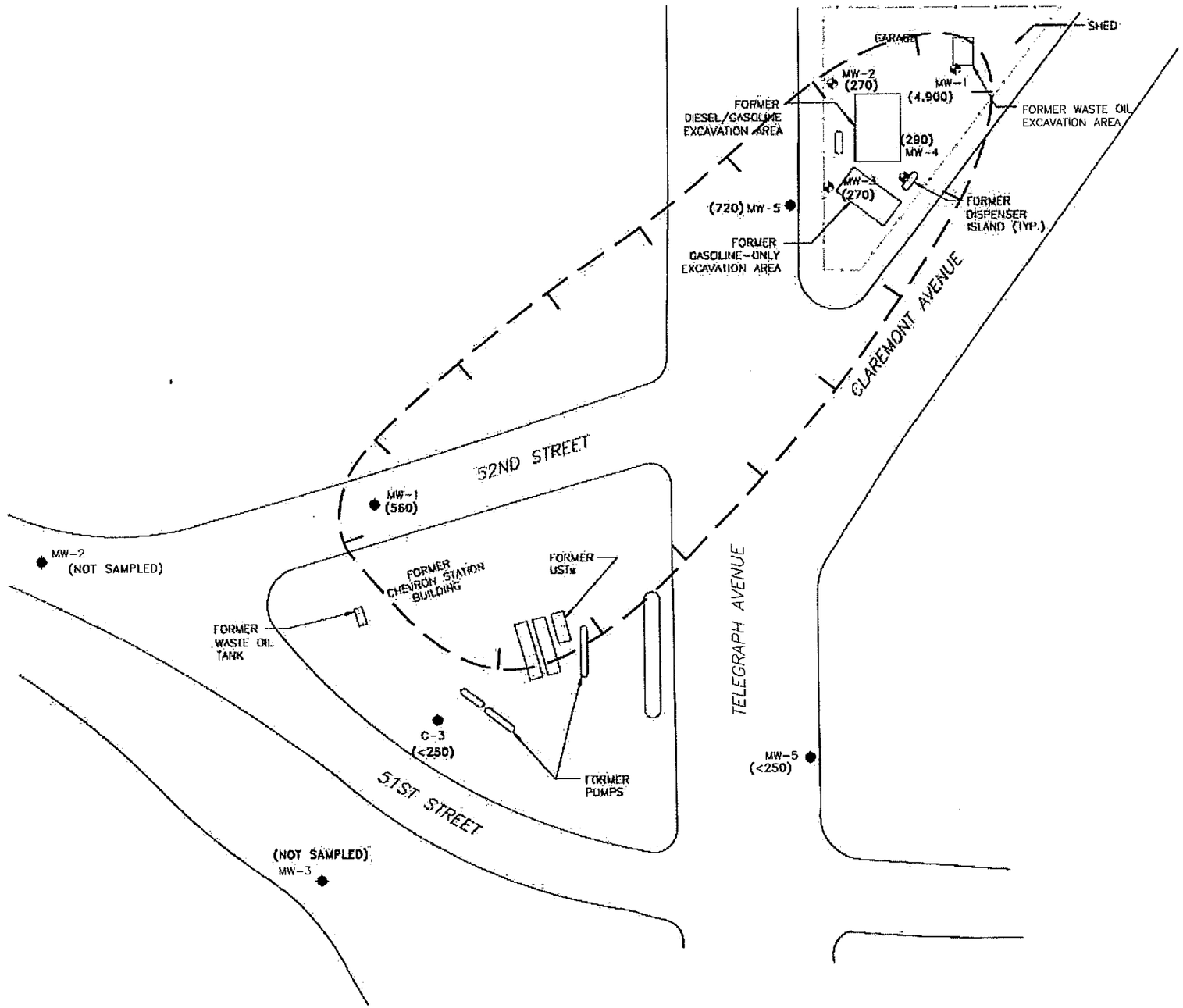
CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

Harding ESE
A MACTEC COMPANY

TPH-D Plume
March 22, 2002
Autopro Inc.
5200 Telegraph Avenue
Oakland, California

FIGURE **5**

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	51644 030		04/02	



LEGEND

MW-1 ✦	GROUND WATER MONITORING WELLS INSTALLED BY QST
MW-1 ● C-1	GROUND WATER MONITORING WELLS INSTALLED FOR CHEVRON
AP-1 ⊗	SOIL BORING BY QST
—x—	FENCE
T — T	CONCENTRATION ISOPLETH

60 0 60 120

SCALE IN FEET

51644011.DWG 1.0
20020520.1006

CHEVRON SITE BASE MAP FROM CAMBRIA ENVIRONMENTAL TECHNOLOGY, INC.

Harding ESE
A MACTEC COMPANY

TPH-MO Plume

Autopro Inc.
5200 Telegraph Avenue
Oakland, California

FIGURE
6

DRAWN	JOB NUMBER	APPROVED	DATE	REVISED DATE
SS	51644 030		04/02	

TABLE 2

ANALYTICAL RESULTS FOR GRAB GROUND WATER SAMPLES

Tri-Star Partnership
Autopro Facility
5200 Telegraph Avenue
Oakland, California

Sample I.D.	Date Sampled	TPH-D (µg/L)	TPH-G (µg/L)	TPH-MO (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)
AP-1	07/02/96	190[d,i]	1,400[b,d,i]	<250	<0.5	2.9	<0.5	3.1	<5.0
AP-2	07/02/96	74,000[d,h,i]	7,900[b,d,h,i]	<250	69	12	20	43	60
AP-3	07/02/96	47,000[d,h,i]	14,000[b,d,h,i]	<250	130	16	45	44	100
AP-4	07/02/96	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<5.0
AP-5	07/02/96	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<5.0
AP-6	07/02/96	410[g,i]	<50	1,900	<0.5	<0.5	<0.5	<0.5	<5.0
AP-7	07/02/96	<50	<50	<250	<0.5	<0.5	<0.5	<0.5	<5.0
MCL	–	–	–	–	1.0	150	700	1,750	35*

Notes:
TPH-D = Total Petroleum Hydrocarbons as Diesel.
TPH-G = Total Petroluem Hydrocarbons as Gasoline.
TPH-MO = Total Petroleum Hydrocarbons as Motor Oil.
MTBE = methyl tertiary butyl ether.
µg/L = micrograms per liter or parts per billion (ppb).
< = less than listed detection limit.
– = not applicable.
* = DHS Action Level.

MCL = primary Maximum Contaminant Limit as defined by the California Department of Health Services (DHS) Drinking Water Standards.
[b] = heavier gasoline-range compounds are significant (aged gasoline?).
[d] = gasoline-range compounds having broad chromatographic peaks are significant; biologically altered gasoline?
[g] = strongly aged gasoline or diesel-range compounds are significant.
[h] = lighter than water immiscible sheen is present.
[i] = liquid sample that contains greater than ~ 5 vol. % sediment.
[j] = no recognizable pattern.

TABLE 3

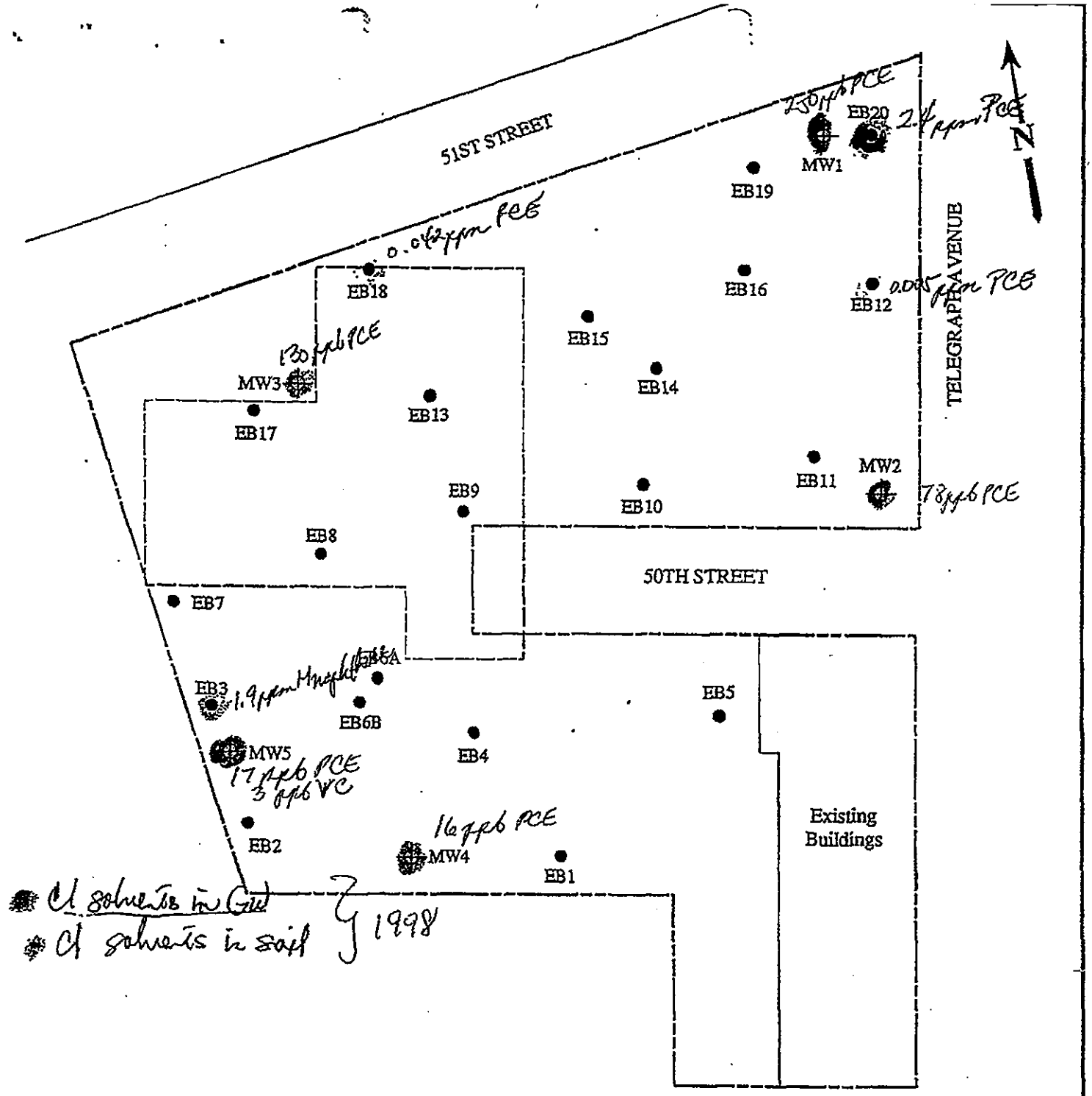
GROUNDWATER ANALYTICAL RESULTS - UTILITY TRENCH BACKFILL BORING

Autopro Facility
5200 Telegraph Avenue
Oakland, California

Boring ID	Date Sampled	TPHd (ug/L)	TPHmo (ug/L)	TPHg (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	Oxygenates (ug/L)
SB-1	08/07/04	29,000	<2,500	57,000	9.5	11	36	29	<5.0	ND*
MCL					1	150	300	1,750	13	

Notes:
TPHd = Total Petroleum Hydrocarbons as Diesel
TPHmo = Total Petroleum Hydrocarbons as Motor Oil
TPHg = Total Petroleum Hydrocarbons as Gasoline
MTBE = methyl tertiary butyl ether.
MCL = (Maximum Contaminant Level) -
ND* = Not detected for all oxygenates
µg/L = micrograms per liter or parts per billion (ppb).
< = less than listed detection limits.

Checked GAL
Approved



LEGEND

- Exploratory boring (by KEI)
- Monitoring well (by others)

0 60 120

Approx. scale feet

Base map modified from an Advanced Soil Technology Inc. site plan

EXPLORATORY BORING AND MONITORING WELL LOCATION MAP

KAPREALIAN ENGINEERING INCORPORATED

BERKELEY FARMS
51ST STREET & TELEGRAPH AVE.
OAKLAND, CALIFORNIA

FIGURE 2

Table 9
Summary of Laboratory Analyses
Water

Date	Well #	TPH as Kerosene	TOG	TPH as Gasoline	Benzene	Toluene	Ethyl-benzene	Xylenes
11/25/96	MW1	~~WELL WAS INACCESSIBLE~~	ND	ND	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE						
	MW5	ND	ND	ND	ND	ND	ND	ND
8/30/96	MW1	–	ND	ND	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE						
	MW5	64	ND	ND	ND	ND	ND	ND
5/21/96	MW1	–	ND	ND	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW3	WELL WAS DESTROYED ON FEBRUARY 29, 1996						
	MW4	WELL WAS INACCESSIBLE						
	MW5	200+	ND	ND	ND	ND	ND	ND
2/19/96	MW1	–	ND	ND	1.0	6.2	0.60	3.9
	MW2	–	ND	ND	0.82	4.8	0.52	3.5
	MW3	–	ND	ND	1.4	8.1	0.73	4.4
	MW4	WELL WAS INACCESSIBLE						
	MW5	ND	ND	ND	1.1	6.7	0.63	4.2
10/6/95	MW1	–	ND	69♦	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW3	–	ND	ND	ND	ND	ND	ND
	MW4	–	ND	ND	ND	ND	ND	ND
	MW5	–	ND	ND	ND	ND	ND	ND
9/18/95**	MW1	–	ND	81♦	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW3	–	ND	ND	ND	ND	ND	ND
	MW4	–	ND	ND	ND	ND	ND	ND
	MW5	–	ND	ND	ND	ND	ND	ND
8/24/95**	MW1	–	–	63	ND	1.1	ND	0.86
	MW2	–	–	ND	ND	0.57	ND	0.56
	MW3	–	–	ND	ND	0.50	ND	0.70
	MW4	–	–	ND	ND	0.53	ND	0.60
	MW5	–	–	ND	ND	0.81	ND	0.72

Table 4
Summary of Laboratory Analyses
Water

Date	Well #	TPH as Kerosene	TOG	TPH as Gasoline	Benzene	Toluene	Ethyl Benzene	Xylenes
5/23/95	MW1	–	ND	100♦	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW3	–	ND	ND	ND	ND	ND	ND
	MW4	–	ND	ND	ND	ND	ND	ND
	MW5	–	ND	ND	ND	ND	ND	ND
2/25/95	MW1	–	ND	81♦	ND	ND	ND	ND
	MW2	–	ND	ND	ND	ND	ND	ND
	MW3	–	ND	ND	ND	ND	ND	ND
	MW4	–	ND	ND	ND	ND	ND	ND
	MW5	–	ND	ND	ND	ND	ND	ND
6/29/93	MW1*	–	ND	76♦	ND	ND	ND	ND
	MW2*	–	ND	ND	ND	ND	ND	ND
	MW3*	–	ND	ND	ND	ND	ND	ND
	MW4*	–	ND	ND	ND	ND	ND	ND
	MW5*	–	ND	ND	0.64	ND	ND	ND

♦ Sequoia Analytical Laboratory reported that the hydrocarbons detected did not appear to be gasoline.

* TPH as diesel and all EPA method 8270 constituents were non-detectable.

** TOG was sampled on September 8, 1995, instead of August 24, 1995. Furthermore, the analytical results of the ground water samples (toluene and xylenes) collected on August 24, 1995, were inconsistent with the previous analytical results for these wells.

\+ Sequoia Analytical Laboratory reported that the hydrocarbons detected appeared to be a kerosene and non-kerosene mixture.

ND = Non-detectable.

– Indicates analysis was not performed.

Results are in micrograms per liter (µg/L), except for TOG, which is in milligrams per liter (mg/L).

Table 10
Summary of Laboratory Analyses
~~SOIL~~ WATER

Date	Sample Number	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Chloroform
5/29/97	MW1	WELL WAS INACCESSIBLE				
	MW2	ND	18	0.88	ND	1.4
	MW4	WELL WAS INACCESSIBLE				
	MW5	10	86	17	ND	ND
2/27/97	MW1	ND	450	10	ND	ND
&	MW2♦♦	ND	17	68	ND	2.0
3/19/97	MW4	WELL WAS INACCESSIBLE				
	MW5	0.57	14	1.4	ND	ND
11/25/96	MW1	ND	18	60	ND	2.6
	MW2	ND	16	0.54	ND	2.8
	MW4	WELL WAS INACCESSIBLE				
	MW5	ND	ND	ND	ND	0.8
8/30/96	MW1	2.1	ND	4.4	ND	ND
	MW2	ND	10	1.1	ND	ND
	MW4	WELL WAS INACCESSIBLE				
	MW5♦	7.0	12	6.0	ND	ND
5/21/96	MW1+	4.1	ND	4.8	ND	53
	MW2++	ND	10	ND	ND	16
	MW3	WELL WAS DESTROYED ON FEBRUARY 29, 1996				
	MW4	WELL WAS INACCESSIBLE				
	MW5+++	14	15	8.3	ND	13
2/19/96	MW1	ND	8.7	ND	ND	2.9
	MW2	ND	8.0	ND	ND	2.6
	MW3	ND	ND	ND	ND	ND
	MW4	WELL WAS INACCESSIBLE				
	MW5	2.1	9.3	1.9	ND	ND
10/6/95	MW1	1.7	19	3.7	ND	1.3
	MW2	ND	8.9	1.0	ND	5.9
	MW3	5.7	13	6.2	ND	1.1
	MW4	5.4	12	6.1	ND	0.53
	MW5	9.1	8.2	5.3	ND	ND
8/24/95	MW1	3.4	240	5.0	ND	3.2
	MW2*	ND	28	1.1	ND	15
	MW3**	5.1	50	9	ND	0.78
	MW4	ND	9.7	ND	ND	2.4
	MW5**	17	49	11	ND	ND
8/26/97	MW-1	WELL WAS INACCESSIBLE				
	MW-2	ND	18	0.88	ND	1.4
	MW-4	WELL WAS INACCESSIBLE				
	MW-5	WELL OBSTRUCTED AT 4.50 FT BGS				

Table 10

Summary of Laboratory Analyses

Soil WATER

Date	Sample Number	cis-1,2-Dichloroethene	Tetrachloroethene	Trichloroethene	Vinyl Chloride	Chloroform
5/23/95	MW1	ND	450	ND	ND	ND
	MW2	ND	45	ND	ND	ND
	MW3	5.1	74	9.1	ND	ND
	MW4	ND	8.8	ND	ND	ND
	MW5	16	58	11	ND	ND
2/25/95	MW1	ND	360	ND	ND	ND
	MW2	ND	41	1.9	ND	ND
	MW3	6.9	52	9.4	ND	ND
	MW4	ND	6.4	ND	ND	ND
	MW5	8.3	25	6.6	ND	ND
6/29/93	MW1	ND	250	ND	ND	ND
	MW2	ND	78	ND	ND	ND
	MW3	5.5	130	11	ND	ND
	MW4	ND	16	0.68	ND	ND
	MW5	24	17	5.9	3.0	ND

All EPA method 8010 constituents were non-detectable, except for the above compounds.

♦ Trans-1,2-Dichloroethene was detected at a concentration of 0.60 µg/L.

♦♦ Chloroform was detected at a concentration of 7.0 µg/L.

* 1,1,1-Trichlorethane was detected at a concentration of 0.73 µg/L.

** Trans-1,2-Dichlorethene was detected at concentrations of 0.59 µg/L and 0.76 µg/L in MW3 and MW5, respectively.

\+ Bromodichloromethane was detected at 19 mg/L and Dibromochloromethane at 5.7 µg/L.

\+\+ Bromodichloromethane was detected at 5.8 µg/L and Dibromochloromethane at 3.3 µg/L.

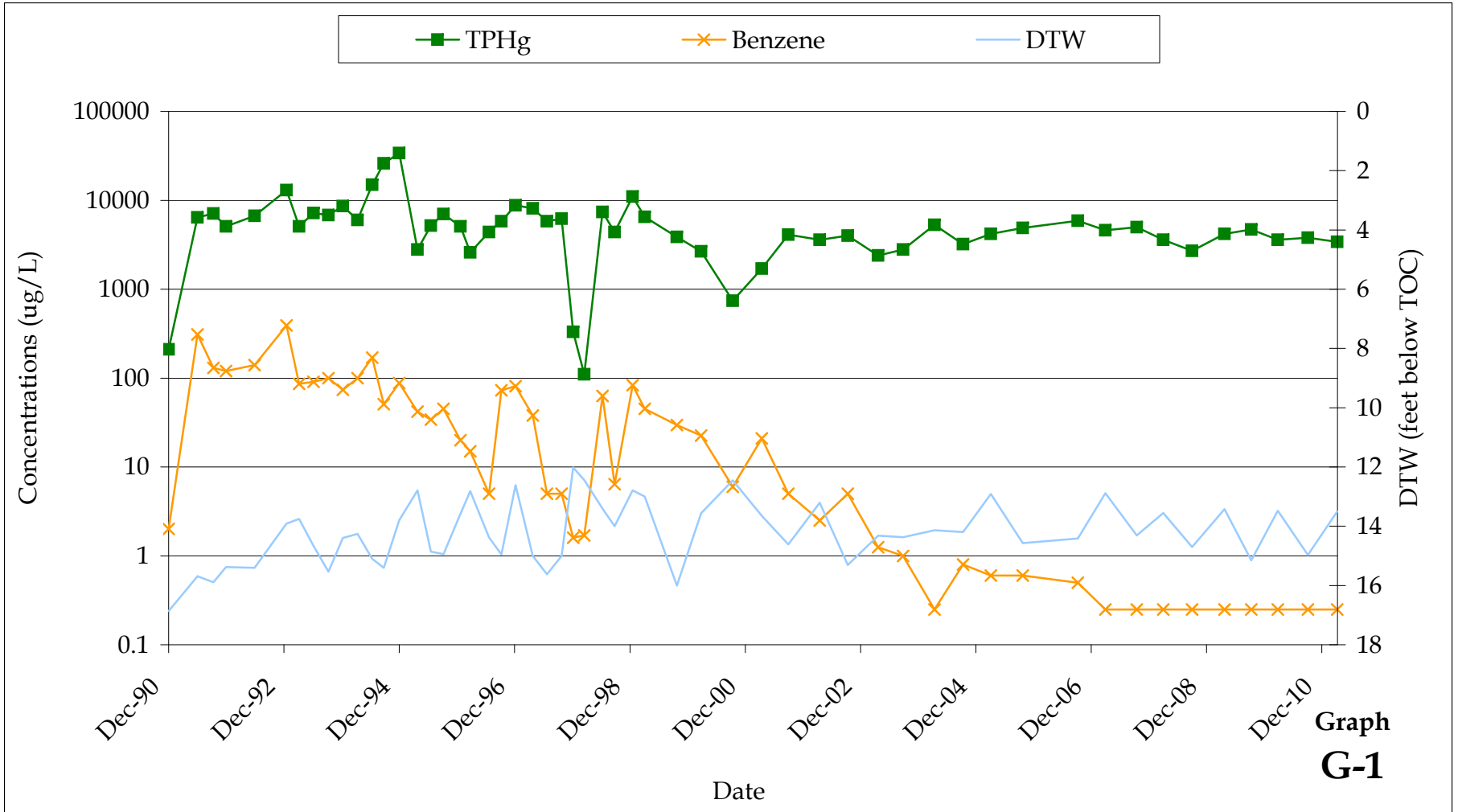
\+\+\+ Bromodichloromethane was detected at 5.0 µg/L and Dibromochloromethane at 4.3 µg/L.

ND = Non-detectable.

Results are in micrograms per liter (µg/L), unless otherwise indicated.

APPENDIX G

CONCENTRATION VERSUS TIME AND TREND GRAPHS AND DEGRADATION CALCULATIONS

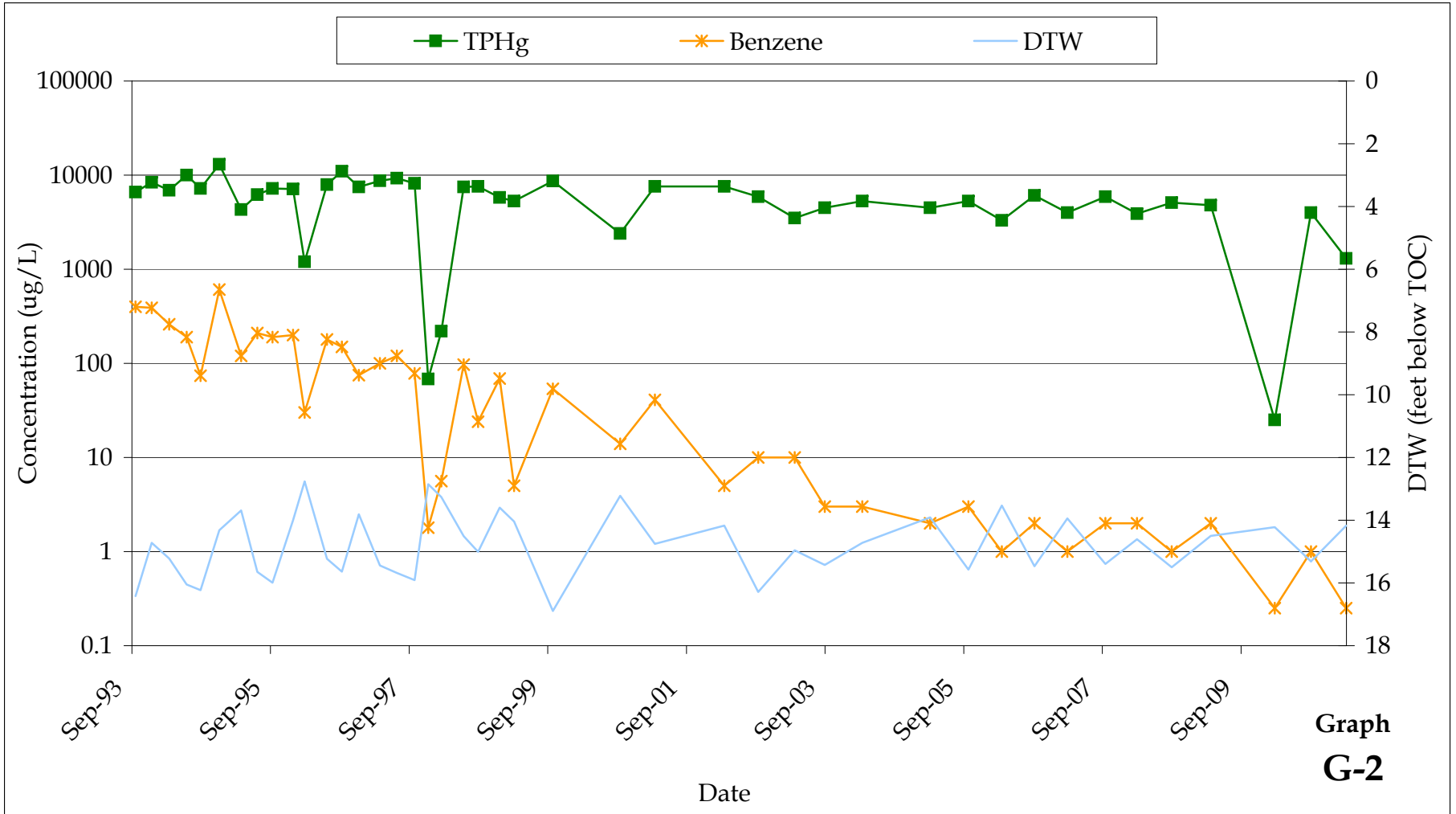


Graph
G-1

FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

CONESTOGA-ROVERS & ASSOCIATES

C-3: TPHg AND BENZENE CONCENTRATIONS OVER TIME



Graph

G-2

FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

CONESTOGA-ROVERS & ASSOCIATES

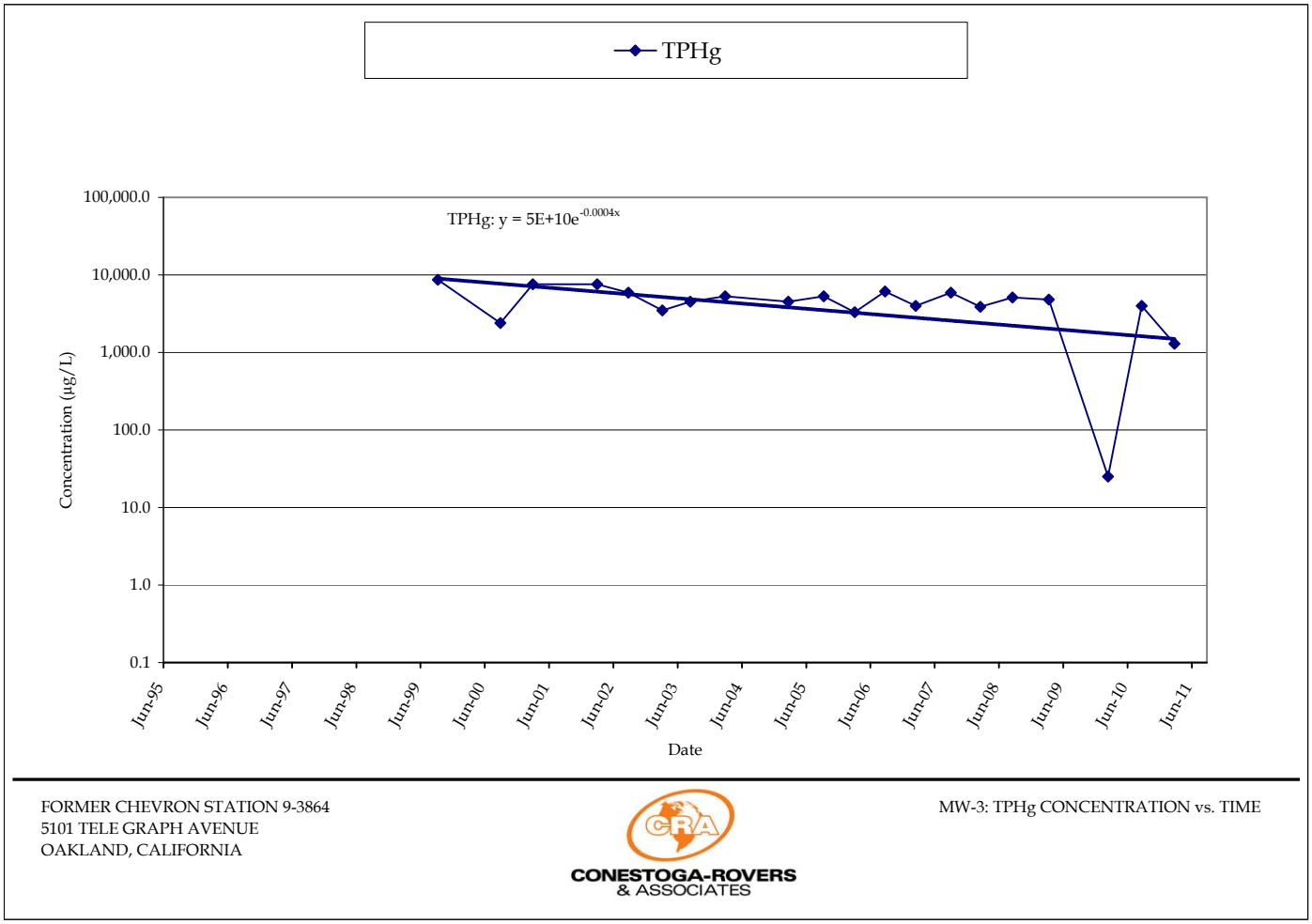
MW-3: TPHg AND BENZENE CONCENTRATIONS OVER TIME

PREDICTED TIME TO REACH TPHg ESL IN MW-3
FORMER CHEVRON STATION 9-3864
5101 TELEGRAPH AVENUE
OAKLAND, CALIFORNIA

$y = b\,e^{ax}$ **===>** $x = \ln(y/b) / a$

where: y = concentration in µg/L, a = decay constant
b = concentration at time (x), x = time in days

		Constituent: Total Petroleum Hydrocarbons as Gasoline (TPHg)
Given		
ESL:	y	100
Constant:	b	5.00E+10
Constant:	a	-4.00E-04
Starting date for current trend:		6/24/1995
Calculate		
Attenuation Half Life (years):	(-ln(2)/a)/365.25	4.74
Estimated Date to Reach ESL:	(x = ln(y/b) / a)	Feb 2037



FORMER CHEVRON STATION 9-3864
5101 TELE GRAPH AVENUE
OAKLAND, CALIFORNIA

CONESTOGA-ROVERS & ASSOCIATES

MW-3: TPHg CONCENTRATION vs. TIME

APPENDIX H

PREVIOUS RISK ASSESSMENT RESULTS

Table 8-1. Comparison of Calculated Health-Based Remediation Goals to Site-Related Concentrations, Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California.

Constituent	Calculated HBGs				Site-Related Concentrations			Does Site Exceed HBG ?
	Construction Worker	Adult Resident	Child Resident	Minimum HBG	Current Data UCL	Current Data Maximum	Historical Maximum	
SOIL								
VOCs								
Benzene	20	0.53	0.56	0.53	0.022	0.069	NA	No
Ethylbenzene	800	2,400	480	480	0.39	2.5	NA	No
Toluene	1,300	960	190	190	0.34	2.7	NA	No
Xylenes	700	8,100	1,700	700	0.93	5.5	NA	No
TPH								
TPH as diesel	5,600	14,000	1,900	1,900	#N/A	78	NA	No
TPH as gasoline	63,000	11,000	1,700	1,700	130	980	NA	No
Metal								
Lead *	340	1,600	200	200	0.43	0.60	NA	No
GROUND WATER								
VOCs								
Benzene	NE	190	200	190	0.11	0.13	0.34	No
Ethylbenzene	NE	89,000	19,000	19,000	0.011	0.012	0.019	No
Toluene	NE	87,000	19,000	19,000	0.025	0.026	0.17	No
Xylenes	NE	20,000	4,400	4,400	0.026	0.030	0.083	No
TPH as Gasoline	NE	310	70	70	6.5	7.1	7.1	No

Footnotes appear on page 2.

Table 8-1. Comparison of Calculated Health-Based Remediation Goals to Site-Related Concentrations, Former Chevron Service Station #9-3864, 5101 Telegraph Avenue, Oakland, California.

Soil concentrations are reported in milligrams per kilogram (mg/kg); ground-water concentrations are reported in milligrams per liter (mg/L).

*	HBGs for lead were calculated using the biokinetic/uptake model.
HBG	Health-based remediation goal.
NA	Historical maximum concentrations are not relevant for soil, only for ground water.
NE	Not evaluated. Ground water exposure was not evaluated for the construction worker since the residential exposure is a more significant potential exposure scenario.
TPH	Total petroleum hydrocarbons.
UCL	Upper 95 percent confidence limit on the mean.
VOCs	Volatile organic compounds.