CONESTOGA-ROVERS
& ASSOCIATES

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February 2, 2009

Reference No. 611996

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

Re: Case Closure Request
Former Chevron Service Station 9-4612
3616 San Leandro Street
Oakland, California
LOP Case #RO0000233

Dear Mr. Plunkett:

Conestoga-Rovers & Associates (CRA) is submitting this *Case Closure Request* on behalf of Chevron Environmental Management Company (Chevron) for the referenced site. Based on our review of the site background and conditions, the site meets the Regional Water Quality Control Board (RWQCB) criteria for classification as a low-risk groundwater case, as described in the January 5, 1996 RWQCB memorandum *Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*. Discussions of the site background, site conditions, and our rationale for closure based on the low-risk groundwater case criteria are presented in the following report.

Please contact Mr. James Kiernan at (916) 751-4102 if you have any questions or require additional information.

Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

James P. Kiernan, P.E. #C68498
Project Engineer

REGISTERED PROFESSIONAL ENGINEER
JAMES P. KIERNAN
No. 68498
Exp. 9/30/09
CIVIL
STATE OF CALIFORNIA
2/3/09

JPK/kw/2
Encl.

cc: Ms Stacie Frerichs, Chevron Environmental Management Company
Mr Leonard B. Ratto, Ratto Land Company
Mr Terry McIlraith

Stacie H. Frerichs
Team Lead
Marketing Business Unit

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

February 2, 2009
(date)

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

Re: Chevron Facility #_9-4612_____

Address: 3616 San Leandro Street, Oakland, California_____

I have reviewed the attached report titled *Case Closure Request*_____ and dated February 2, 2009.

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

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

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

Sincerely,

SH Frerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

CASE CLOSURE REQUEST

FORMER CHEVRON SERVICE STATION 9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Prepared For:

Mr. Steven Plunkett
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

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FEBRUARY 2009
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EXECUTIVE SUMMARY

Conestoga-Rovers & Associates (CRA) has prepared this *Case Closure Request* on behalf of Chevron Environmental Management Company (Chevron) for former Chevron Service Station No. 9-4612 located at 3616 San Leandro Street, Oakland, California. A summary of CRA's findings is presented below:

- The site was occupied by a Chevron service station from approximately 1967 to 1976. An existing warehouse building was constructed on the eastern portion of the site in 1988. The building is currently occupied by an appliance parts distributor. The remainder of the site is a paved parking lot.
- Impacted groundwater (primarily total petroleum hydrocarbons as gasoline [TPHg]) remains beneath the site. Low concentrations of benzene, toluene, ethylbenzene, and xylenes (BTEX) remain in groundwater. The source appears to be the former gasoline underground storage tanks (USTs) and dispenser islands, which were removed by 1976. The presence of MTBE and TPHd in soil and/or groundwater indicates potential contributions from an offsite source.
- Based on historical soil sample analytical results, little to no residual impact is present in soil beneath the site.
- Based on monitoring results, concentrations of hydrocarbon constituents in groundwater are generally decreasing, indicating that the hydrocarbon plume is naturally attenuating. The extent of the impacted groundwater has been adequately defined.
- The results of soil vapor sampling performed at the site indicate that potential vapor intrusion is not a concern.
- No sensitive receptors were identified in the site vicinity that appear likely to be impacted.
- Based on the site conditions and analytical data, the site meets the Regional Water Quality Control Board (RWQCB) definition of a low-risk groundwater case, as described in the January 5, 1996, RWQCB memorandum *Interim Guidance on Required Cleanup at Low-Risk Fuel Sites*. Therefore, CRA recommends case closure.

1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) has prepared this *Case Closure Request* on behalf of Chevron Environmental Management Company (Chevron) for former Chevron Service Station No. 9-4612 located at 3616 San Leandro Street in Oakland, California. Based on our review of the site background and conditions, the site meets the San Francisco Bay Regional Water Quality Control Board (RWQCB) criteria for classification as a low-risk groundwater case as described in their memorandum, *Interim Guidance on Required Cleanup of Low-Risk Fuel Sites*, dated January 5, 1996. Discussions of the site background, site conditions, and our rationale for closure based on the low-risk groundwater case criteria are presented in the following sections.

1.1 SITE DESCRIPTION AND BACKGROUND

The site is a former Chevron service station located on the northwest corner of the intersection of San Leandro Street and 37th Avenue in Oakland, California (Figure 1). The station reportedly was constructed in 1967. Former station facilities included a station building with two hydraulic hoists, two 10,000-gallon and one 5,000-gallon gasoline underground storage tanks (USTs), a 1,000-gallon used-oil UST, and two dispenser islands (Figure 2). The station was demolished and all aboveground and belowground facilities were removed in 1976. The site remained a vacant lot until the existing warehouse building was constructed on the western portion of the site in 1988. The remainder of the site is a paved parking lot. The warehouse building is currently occupied by Appliance Parts & Equipment Distributors. Surrounding land use is mixed commercial and residential. The site is bounded by a residential property to the west, a Bay Area Rapid Transit (BART) parking lot and tracks to the north, 37th Avenue to the east, and San Leandro Street to the south.

Environmental investigation at the site has been ongoing since 1988. To date, four groundwater monitoring wells (VH-1 and MW-2 through MW-4) have been installed, 10 borings (SB-1 through SB-4, GP-1 through GP-3, and HA-1 through HA-3) have been drilled, and six soil vapor samples (VB-1, VB-2, and VP-1 through VP-4) have been collected. Remedial activities performed at the site have consisted of the placement of Oxygen Releasing Compound® (ORC) in wells VH-1, MW-2, and MW-3 in February 1999 in an attempt to enhance natural biodegradation; however, the ORC had a limited effect and was discontinued shortly thereafter. A summary of the environmental work performed to date is presented in Appendix A. The approximate well, boring, and sample locations are presented on Figure 2.

2.0 SITE CHARACTERISTICS

2.1 REGIONAL GEOLOGY AND HYDROGEOLOGY

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

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

2.2 SITE GEOLOGY AND HYDROGEOLOGY

Based on previous investigations, the site is underlain by silt and clay interbedded with silty to clayey sand and gravel to 31 feet below grade (fbg), the maximum depth of exploration. Fine-grained materials (silt and clay) were encountered immediately beneath the ground surface. A silty to clayey sand layer was encountered within fine-grained material at depths between 12 and 21.5 fbg. This layer appeared to pinch-out towards the west. In the northern portion of the site, the sandy layer was overlain by a 6-foot-thick gravel layer. An additional clayey sand layer was encountered at depths of 28 to 31 fbg. Copies of boring logs are presented in Appendix B.

Groundwater was encountered in the borings drilled at the site and in the site vicinity at depths ranging from approximately 8.5 to 22.5 fbg. Depth to groundwater in the site monitoring wells has ranged from approximately 5.05 to 15.69 feet below top of casing (btoc). The groundwater flow direction has generally been to the southwest at gradients ranging from 0.007 to 0.02. A groundwater rose diagram is presented on Figure 2.

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

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

Geologic cross-sections presenting soil encountered beneath the site and the historic range of groundwater elevations are presented on Figures 3 and 4.

2.3 NEARBY SENSITIVE RECEPTORS

A review of Department of Water Resources (DWR) files performed in 1993 indicated that 36 active wells were located within a ½-mile radius of the site. Two of the wells were identified as water-supply wells (one irrigation and one industrial). Both of these wells were located approximately 1,000 feet east-northeast (upgradient) of the site. The nearest active well was a cathodic well located approximately 500 feet northeast (upgradient) of the site. The nearest active wells located downgradient of the site were two "other use" wells approximately 2,400 feet southwest of the site. The nearest surface water body is the Oakland-Alameda Estuary located approximately 2,400 feet southwest (downgradient) of the site. A figure showing the nearby well locations and the well survey data are presented in Appendix C.

2.4 PREFERENTIAL PATHWAY EVALUATION

Underground utilities present beneath San Leandro Street (downgradient of the site) include gas, sanitary sewer, and water lines. A Shell fuel pipeline reportedly is also present on the south side of San Leandro Street. The depth and flow directions of these utilities are unknown. In March 2002, borings HA-1 through HA-3 were advanced to evaluate if these utility lines were acting as preferential pathways. Borings HA-1 and HA-2 were located adjacent to both sides of the sanitary sewer line located in the middle of San Leandro Street, and boring HA-3 was located just on the upgradient side of the gas line (Figure 2). Groundwater samples collected from the three borings did not contain total petroleum hydrocarbons as gasoline (TPHg), benzene, toluene, ethylbenzene, and xylenes (BTEX), or methyl tertiary butyl ether (MTBE); therefore, these utility lines do not appear to be acting as preferential pathways. A site plan showing the approximate utility locations is presented in Appendix D.

3.0 IMPACT TO SOIL, GROUNDWATER, AND SOIL VAPOR

3.1 HYDROCARBON DISTRIBUTION IN SOIL

Since 1988, soil samples have been collected for chemical analysis from four monitoring well borings, ten soil borings, and four soil vapor well borings to evaluate the horizontal and vertical extent of hydrocarbons in soil. Based on the analytical results, little to no residual hydrocarbon impact is present in soil. TPHg was only detected in the soil samples collected at 21.5 fbg from well boring MW-4 and boring SB-1 in 1995, and the detected concentrations were low at 2.0 milligrams per kilogram (mg/kg) and 16 mg/kg, respectively. Benzene was only detected in the soil samples collected at 20. fbg (0.042 mg/kg) and 25.5 fbg (0.036 mg/kg) from well boring VH-1 in 1988. Low to trace concentrations of toluene, ethylbenzene, and xylenes (up to 1. mg/kg) were detected in a few of the samples. Trace concentrations of MTBE were detected in the soil samples collected at 11.5 fbg from boring VP-4 (0.0005 mg/kg), 12 fbg from boring SB-3 (0.0007 mg/kg), and 12 fbg from boring SB-4 (0.001 mg/kg) in 2008. However, the MTBE appears to be due to an offsite source as the station ceased operation at the site in 1976, prior to the use of MTBE in California. A documented fuel release with MTBE contamination (Tony's Express Auto Services) is located approximately 750 feet northeast (upgradient) of the site; and significant MTBE has been detected in the two furthest downgradient wells at this facility. In addition, a Kinder Morgan pipeline is also present to the north of the site near the BART tracks that is known to have carried fuel products. TPH as diesel (TPHd), 1,2-dichloroethane (1,2-DCA), or 1,2-dibromoethane (EDB) were not detected in any of the soil samples. The historical soil sample analytical results are presented in Table 1. The TPHg, TPHd, benzene, and MTBE analytical results in soil are also presented on Figure 5. Based on the analytical results, the extent of impacted soil has been adequately defined at the site.

3.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

Groundwater beneath the site has been monitored and sampled since 1988 through the network of four monitoring wells. The groundwater samples have been analyzed for TPHg, BTEX, and MTBE; the samples collected from well MW-3 adjacent to the former used-oil UST have also been analyzed for TPHd. During the most recent event (fourth quarter 2008), TPHg was detected in wells VH-1, MW-2, and MW-3 at 2,500 micrograms per liter (µg/L), 3,800 µg/L, and 1,800 µg/L, respectively. Low concentrations of benzene were detected in wells VH-1 (6 µg/L) and MW-2 (2 µg/L); low concentrations of toluene (up to 1 µg/L), ethylbenzene (2 µg/L [MW-2 only]), and xylenes (up to 1 µg/L) were also detected. MTBE was detected in wells VH-1 (12 µg/L), MW-2

(4 µg/L), and MW-3 (2 µg/L); however, as mentioned above the MTBE appears to be from an offsite source. TPHd was detected in well MW-3 at 880 µg/L, and has consistently been detected in this well over the years. Based on a station as-built site plan, it does not appear that diesel was dispensed at the site, and well MW-3 is located on the upgradient side of the site. In addition, as mentioned above TPHd was not detected in any of the soil samples collected at the site; therefore, it appears the TPHd impact is due to an offsite source. TPHg, BTEX, and MTBE were not detected in offsite well MW-4; petroleum hydrocarbons generally have not been detected in this well throughout the course of monitoring. The concentrations detected during fourth quarter 2008 generally were less than or similar to those detected during the previous quarter. A copy of the fourth quarter 2008 groundwater monitoring and sampling report is presented in Appendix E. Table A below presents the most recent TPHd, TPHg, benzene, and MTBE concentrations in the site wells.

TABLE A. GROUNDWATER ANALYTICAL RESULTS
NOVEMBER 13, 2008

Well	*TPHd (µg/L)*	*TPHg (µg/L)*	*Benzene (µg/L)*	*MTBE (µg/L)*
VH-1	NA	**2,500**	**6**	**12**
MW-2	NA	**3,800**	**2**	**4**
MW-3	**880**	**1,800**	<0.5	**2**
MW-4	NA	<50	<0.5	<0.5

< = Not detected at or above stated laboratory detection limit
NA = Not analyzed

Elevated concentrations of TPHg (21,000 µg/L) and benzene (240 µg/L) were detected in the grab-groundwater sample collected from boring SB-1 adjacent to the former northern dispenser island in 1995; however, concentrations in this area appear to have decreased over the years due to natural attenuation as TPHg and BTEX were not detected in the groundwater sample collected from nearby (less than 10 feet away) boring SB-2 in May 2008. In May 2008, slightly elevated concentrations of TPHg (1,100 µg/L) and benzene (36 µg/L) were detected in the grab-groundwater sample collected from boring VP-3 located on the upgradient side of the former fuel USTs. Only a low concentration of TPHg (71 µg/L) was detected in boring SB-3 located just west of the former fuel USTs. Low concentrations of TPHd (up to 560 µg/L) were detected in borings VP-3 and SB-2, and low concentrations of MTBE (up to 15 µg/L) were detected in borings VP-3, VP-4, SB-3, and SB-4. However, as mentioned above the TPHd and MTBE appear to be from an offsite source. The historical grab-groundwater sample analytical results are presented in Table 2.

Based on the analytical results, impacted groundwater (primarily TPHg) remains beneath the site in the area of the former USTs and dispenser islands. Based on the consistent MTBE and TPHd detections on the upgradient side of the site in well MW-3, at least a portion of the impacted groundwater beneath the site appears to be due to an offsite source. In general, concentrations in wells VH-1, MW-2, and MW-3 have consistently decreased since the start of monitoring. The plume appears to be stable and the extent has been adequately defined by borings SB-3, SB-4, HA-1, HA-2, and HA-3, and well MW-4. Hydrocarbon concentrations in groundwater are presented on Figure 6. Iso-concentration maps of TPHg, benzene, and MTBE in groundwater are presented on Figures 7 through 9, respectively.

3.3 HYDROCARBON DISTRIBUTION IN SOIL VAPOR

In February 1999, two soil vapor samples (VB-1 and VB-2) were collected in an area adjacent to the east side of the former fuel USTs and analyzed for volatile organic compounds (VOCs). Low concentrations of various VOCs were detected in both of the samples. In June 2008, soil vapor samples were collected from vapor wells VP-1 through VP-4 installed beneath the existing warehouse building to evaluate potential vapor intrusion concerns for site occupants and the adjacent residence. TPHg was detected in all four of the soil vapor samples at concentrations ranging from 2,200 to 4,500 micrograms per cubic meter ($\mu g/m^3$). TPHd was also detected in all four of the soil vapor samples at concentrations ranging from 950 to 1,200 $\mu g/m^3$. BTEX generally were not detected in the four samples with the exception of low concentrations of benzene (8.2 $\mu g/m^3$), toluene (5.5 $\mu g/m^3$), and m,p-xylenes (20 $\mu g/m^3$) in sample VP-1; and m,p-xylenes (8.4 $\mu g/m^3$) in sample VP-3. MTBE, 1,2-DCA, and EDB were not detected in the four samples. The historical soil vapor analytical results are presented in Table 3. Please note that in CRA's August 27, 2008 *Subsurface and Soil Vapor Sampling Report*, which documented the sampling of VP-1 through VP-4, the units of the TPHg concentrations in soil vapor were incorrectly reported as $\mu g/m^3$, but were actually $\mu g/L$. Table 3 has been updated to show the corrected concentrations.

4.0 CLOSURE EVALUATION

Table B below presents a comparison of the historical maximum petroleum hydrocarbon concentrations detected in soil to the respective deep (greater than 3 meters) soil environmental screening levels (ESLs) for residential or commercial/industrial land use (values are identical) at sites where groundwater is not a current or potential source of drinking water; established by the RWQCB in their May 2008 document entitled *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*.

TABLE B. COMPARISON OF MAXIMUM SOIL CONCENTRATIONS TO ESLS

Constituent	*Maximum Historical Detected Concentration (mg/kg) (boring, depth, sample date)*	*ESL for Deep Soil (>3 meters) – Residential or Commercial/Industrial Land Use (mg/kg)*
TPHg	16 (SB-1, 21.5 fbg, 1995)	180
Benzene	0.042 (VH-1, 20.5 fbg, 1988)	2.0
Toluene	0.12 (SB-1, 21.5 fbg, 1995)	9.3
Ethylbenzene	0.21 (SB-1, 21.5 fbg, 1995)	4.7
Xylenes	1.1 (SB-1, 21.5 fbg, 1995)	11
MTBE	0.001 (SB-4, 12 fbg, 2008)	8.4

As shown above, the maximum detected concentrations in soil were well below the respective ESLs for residential land use. Additionally, residual hydrocarbons in soil do not appear to be a continuing source of contaminants to groundwater as concentrations in groundwater have been steadily decreasing. The residual hydrocarbons in soil beneath the site do not appear to pose a significant risk to human health or the environment.

Table C below presents a comparison of the most recent (2008) maximum groundwater concentrations to the respective groundwater ESLs at sites where groundwater is not a current or potential source of drinking water.

TABLE C. COMPARISON OF MAXIMUM GROUNDWATER CONCENTRATIONS TO ESLS		
Constituent	***Recent Maximum Detected Concentration***	***ESL (µg/L)***
TPHd	880 (MW-3)	210
TPHg	3,800 (MW-2)	210
Benzene	36 (VP-3)	46
Toluene	3 (VP-3)	130
Ethylbenzene	13 (VP-3)	43
Xylenes	1 (VH-1)	100
MTBE	15 (VP-3)	1,800

As shown above, with the exception of TPHg and TPHd, the maximum detected concentrations in groundwater did not exceed the respective ESLs; however, as previously mentioned the plume is decreasing and appears stable, and the TPHd appears to be due to an offsite source. Trend graphs of TPHg concentrations versus time in wells VH-1, MW-2, and MW-3 are presented in Appendix F. These graphs indicate declining trends. Trend calculations predicting when TPHg concentrations in wells VH-1, MW-2, and MW-3 would decrease to the ESL are also presented in Appendix F. Based on the trend calculations, the TPHg concentrations in wells VH-1, MW-2, and MW-3 are expected to decrease to the ESL by January 2026 (approximately 17 years), April 2045 (approximately 36 years), and February 2025 (approximately 16 years), respectively.

Table D below presents a comparison of the maximum detected petroleum hydrocarbon and VOC concentrations in soil vapor to the respective shallow soil gas ESLs associated with vapor intrusion concerns at residential sites (most conservative). Detected VOCs not included in Table D do not have established ESLs.

TABLE D. COMPARISON OF MAXIMUM SOIL VAPOR CONCENTRATIONS TO ESLS

Constituent	*Maximum Detected Concentration ($\mu g/m^3$)*	*ESL for Shallow Soil Gas at Residential Sites ($\mu g/m^3$)*
TPHd	1,200 (VP-4)	10,000
TPHg	4,500 (VP-4)	10,000
Benzene	9 (VB-1)	84
Toluene	200 (VB-1)	63,000
Xylenes	20 (VP-1)	21,000
Chloromethane	2.27 (VB-2)	19,000
Methylene Chloride	2.36 (VB-1)	5,200
TCE	3.6 (VB-1)	1,200
Styrene	5.11 (VB-1)	190,000
Acetone	211 (VB-1)	660,000

As shown above, the maximum detected concentrations in soil vapor did not exceed the respective ESLs. When considering this data with the soil and groundwater data, the residual concentrations of hydrocarbons in soil, groundwater, and soil vapor do not appear to pose a significant risk to human health or the environment.

5.0 REGULATORY STATUS REVIEW AND RECOMMENDATIONS

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

- The leak has been stopped and ongoing sources, including 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; and
- The site presents no significant risk to human health or the environment.

Each low-risk groundwater case criteria, as it relates to the site, is discussed below.

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

All original potential onsite sources of the gasoline release (former gasoline USTs, dispensers, and product piping) were removed by 1976. The site is no longer used as a service station, and is currently occupied by a warehouse and parking lot. With the removal of all USTs, dispensers, and product piping, the potential onsite sources of hydrocarbons have been removed. As mentioned above, concentrations in groundwater have been steadily decreasing, indicating that any residual impact in soil is not acting as a continuing source of hydrocarbons that will reverse improving groundwater quality trends.

5.2 THE SITE HAS BEEN ADEQUATELY CHARACTERIZED

As described in Section 3.1, based on the soil sample analytical results, little to no impact was identified in soil beneath the site.

As described in Section 3.2, groundwater quality at the site has been monitored for 20 years by monitoring wells installed in all directions of the source area(s). Residual impacted groundwater (primarily TPHg) is present in the area of the former USTs and dispensers; however, at least a portion of the impacted groundwater beneath the site

appears to be due to an offsite source (TPHd and MTBE). In general, concentrations have consistently decreased since the start of monitoring. The plume appears to be stable and the extent has been adequately defined by borings SB-3, SB-4, HA-1, HA-2, and HA-3, and well MW-4. Concentrations are expected to continue to decrease over time due to natural attenuation. In addition, the results of the soil vapor sampling performed at the site indicate that potential vapor intrusion is not a concern.

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.

5.3 THE DISSOLVED HYDROCARBON PLUME IS NOT MIGRATING

Petroleum hydrocarbons were not detected in groundwater samples collected from the downgradient borings, and concentrations in groundwater have been steadily decreasing since the start of monitoring. The plume appears stable, shrinking, and not migrating. Natural attenuation is expected to continue to reduce the remaining concentrations to background levels.

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

Two active water-supply wells (one irrigation and one industrial) were identified within a ½-mile radius of the site. Both of these wells were located approximately 1,000 feet east-northeast (upgradient) of the site. The nearest active wells located downgradient of the subject site were two "other use" wells approximately 2,400 feet southwest of the site. Based on the distance or hydrogeologic position relative to the site, it appears highly unlikely these wells would be impacted by hydrocarbons from the site. The nearest surface water body is the Oakland-Alameda Estuary located approximately 2,400 feet southwest (downgradient) of the site, which is not a source for drinking water. Based on the distance from the site, it is highly unlikely this surface water body would be impacted by hydrocarbons from the site. Based on this information, it does not appear that any water wells, deeper drinking water aquifers, surface water, or other sensitive receptors are likely to be impacted.

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

Little to no residual impact was identified in soil beneath the site, and petroleum hydrocarbons were only detected in soil beneath the site at depths greater than 10 fbg. Additionally, as the site is generally capped with the existing building and parking lot, potential exposure to any residual impacted soil is minimized. Although impacted groundwater remains beneath the site, the plume appears stable and concentrations are decreasing, and no sensitive receptors appear likely to be impacted. Natural attenuation is expected to continue to decrease concentrations in groundwater to background levels. The results of soil vapor sampling indicate that potential vapor intrusion is not a concern at the site, even under a residential scenario. Based on this information, the site does not appear to pose a significant risk to human health or the environment.

6.0 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. Residual hydrocarbons in soil, groundwater, and soil vapor do not appear to pose a significant threat to human health or the environment. Therefore, on behalf of Chevron, CRA requests no further action and case closure for the site.

7.0 CLOSING

CRA appreciates your assistance on this project. If you have any questions or comments regarding this submittal, please contact James Kiernan at (916) 751-4102.

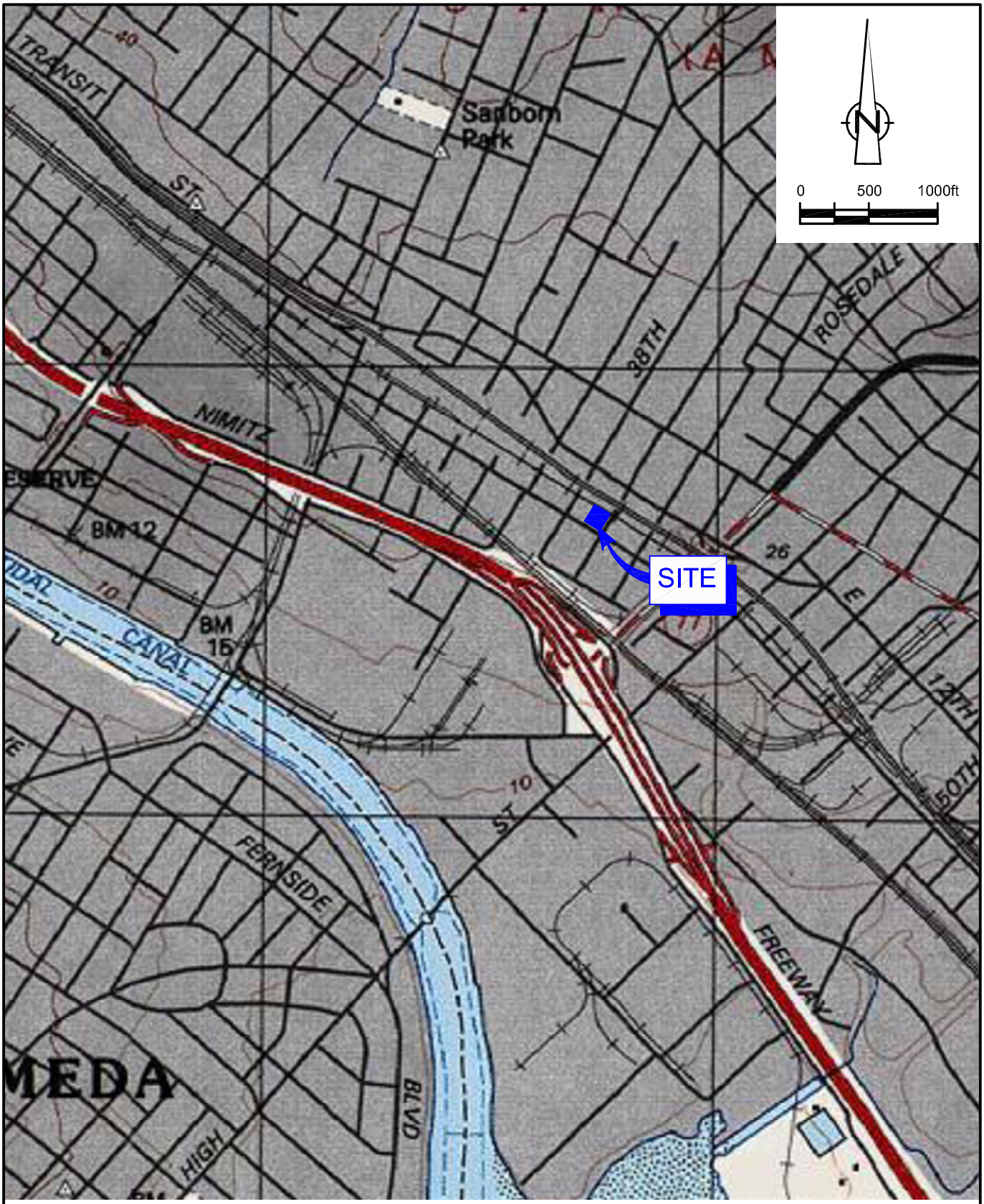
Sincerely,

CONESTOGA-ROVERS & ASSOCIATES

Christopher J. Benedict

James P. Kiernan, P.E. #C68498

jpk 2/3/09



SOURCE: TOPO! MAPS.

figure 1

VICINITY MAP
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

RESIDENTIAL

HA-3

SB-4

VP-1

VP-2

B-1

EXISTING OFFICES

VH-1

SB-3

EXISTING WAREHOUSE

B-3

B-2

VP-4

FORMER UST'S

VP-3

HA-1

HA-2

GP-1

VB-1

VB-2

GP-3

FORMER U/O TANK

B.A.R.T. PARKING LOT

FORMER DISPENSER ISLANDS

GP-2

MW-2

MW-3

SB-2

SB-1

FORMER STATION BUILDING

SAN LEANDRO STREET

B.A.R.T. tracks

MW-4

APPROXIMATE PROPERTY LINE

SIDEWALK

37TH AVENUE

N

0 10 20ft

BASEMAP MODIFIED FROM DRAWING PROVIDED BY GETTLER RYAN INC.

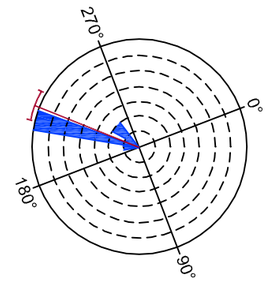
LEGEND

VB-1 ▲ VAPOR BORING LOCATION

GP-1 ⊠ SOIL BORING LOCATION

MW-1 ● MONITORING WELL LOCATION

B-1 ■ GEOTECHNICAL SOIL BORING LOCATION



HISTORICAL GROUNDWATER FLOW DIRECTION

figure 2

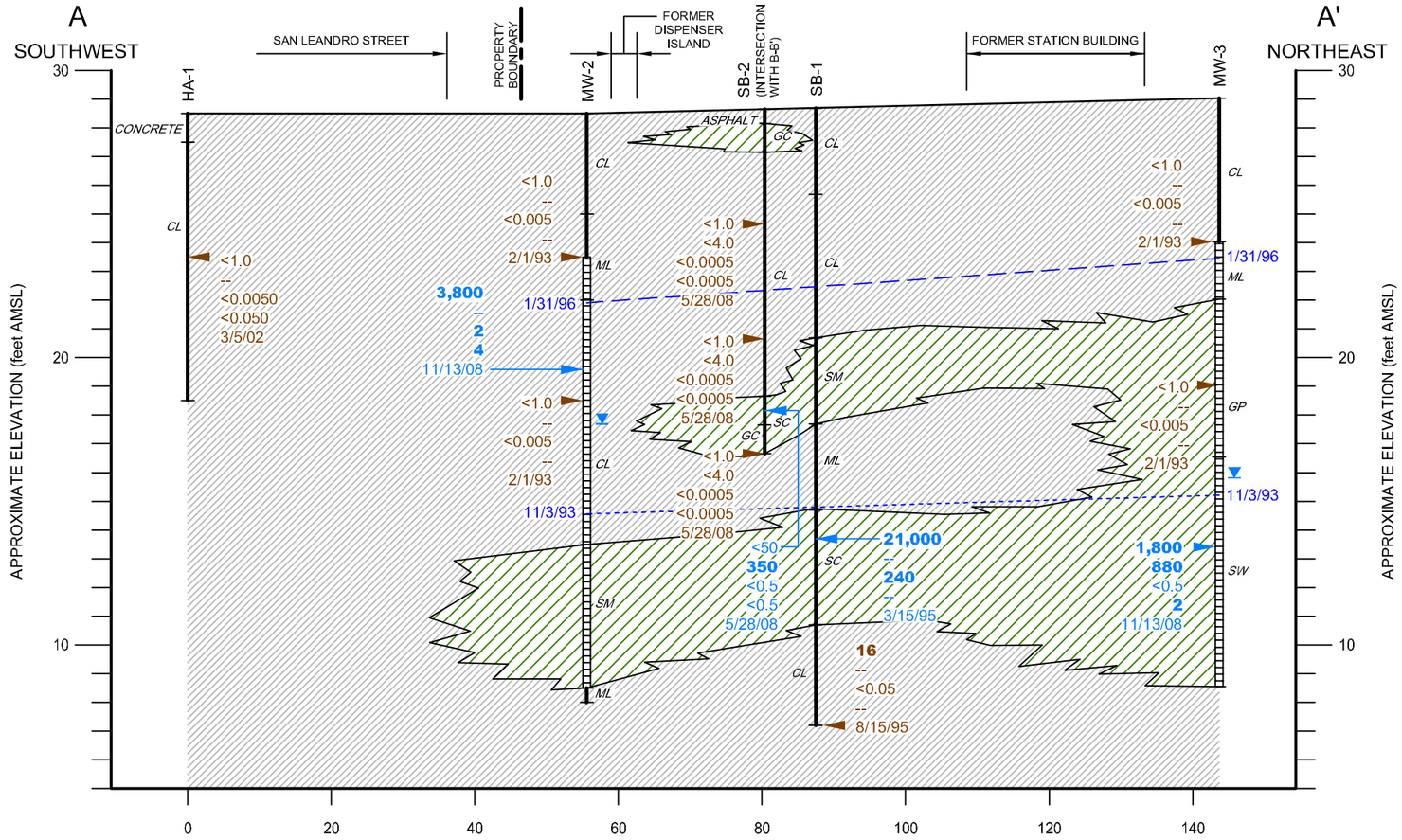
SITE PLAN

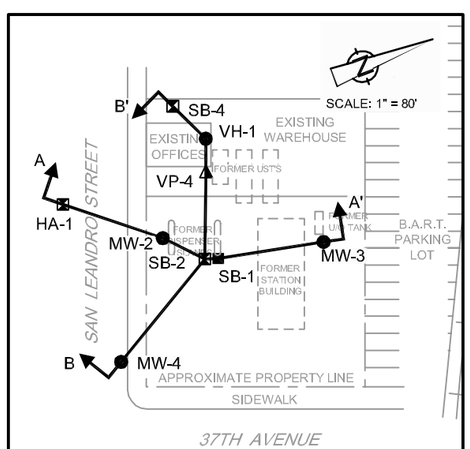
FORMER CHEVRON SERVICE STATION 9-4612

3616 San Leandro Street, Oakland, California

CRA

611996-400(PRES005)GN-WA001 NOV 20/2008





LEGEND

- MW-2 — WELL / BORING DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- TPHg / TPHd / BENZENE / MTBE / DATE — APPROXIMATE SOIL SAMPLE LOCATION HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- TPHg / TPHd / BENZENE / MTBE / DATE — APPROXIMATE GROUNDWATER SAMPLE LOCATION HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)

- COARSE GRAINED SOILS : GRAVELS, SANDY GRAVELS, SANDS, GRAVELY SANDS, SILTY CLAYEY GRAVELS AND SANDS (SP/SW/SC/GL/CM/GW)
- FINE GRAINED SOILS : SILTS, CLAYS AND SILTY CLAYS (ML/CL)
- -- NOT ANALYZED
- GROUNDWATER DEPTH
- LOWEST GROUNDWATER ELEVATION
- HIGHEST GROUNDWATER ELEVATION
- < NOT DETECTED AT OR ABOVE REPORTING LIMIT

figure 3

CROSS SECTION A-A'
FORMER CHEVRON SERVICE STATION 9-4612
3616 SAN LEANDRO STREET
Oakland, California

LEGEND

MW-4 — WELL / BORING DESIGNATION

GROUND SURFACE

OBSERVATION WELL INSTALLATION

STRATIGRAPHIC BOUNDARY

CL — TYPICAL SOIL CLASSIFICATION

SCREENED INTERVAL

BOTTOM OF BORING

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

TPHg
TPHd
BENZENE
MTBE
DATE — APPROXIMATE GROUNDWATER SAMPLE LOCATION; HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)

COARSE GRAINED SOILS : GRAVELS, SANDY GRAVELS, SANDS, GRAVELY SANDS, SILTY CLAYEY GRAVELS AND SANDS (SP/SW/SC/GL/CM/GW)

FINE GRAINED SOILS : SILTS, CLAYS AND SILTY CLAYS (ML/CL)

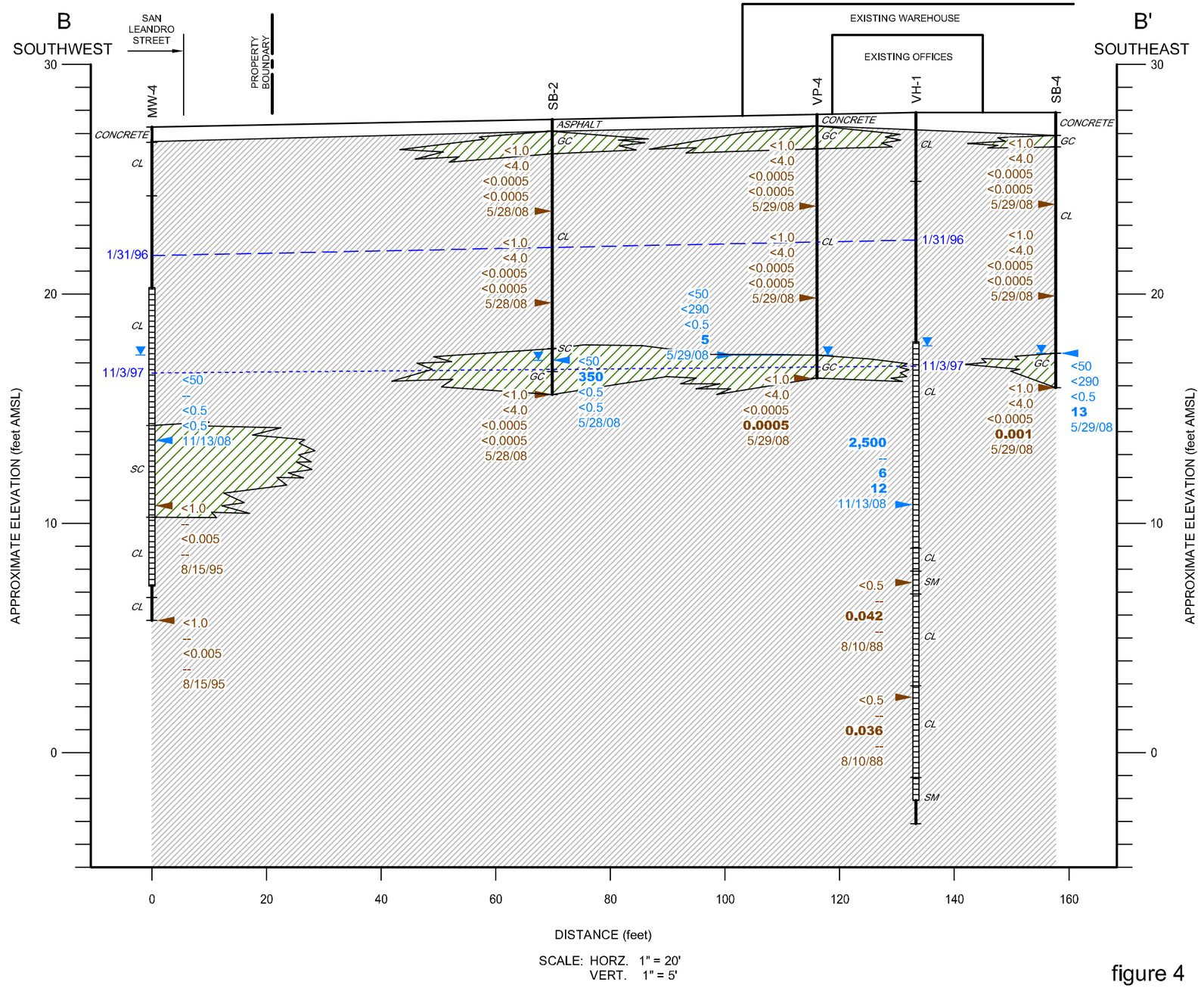
-- NOT ANALYZED

GROUNDWATER DEPTH

LOWEST GROUNDWATER ELEVATION

HIGHEST GROUNDWATER ELEVATION

< NOT DETECTED AT OR ABOVE REPORTING LIMIT



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

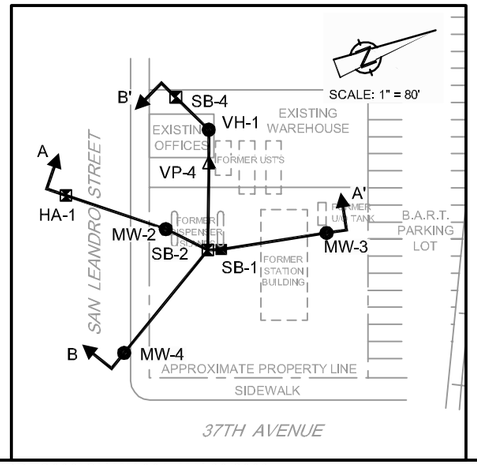


figure 4

CROSS SECTION B-B'
FORMER CHEVRON SERVICE STATION 9-4612
3616 SAN LEANDRO STREET
Oakland, California

611996-400(PRES003)GN-WA001 JAN 30/2009

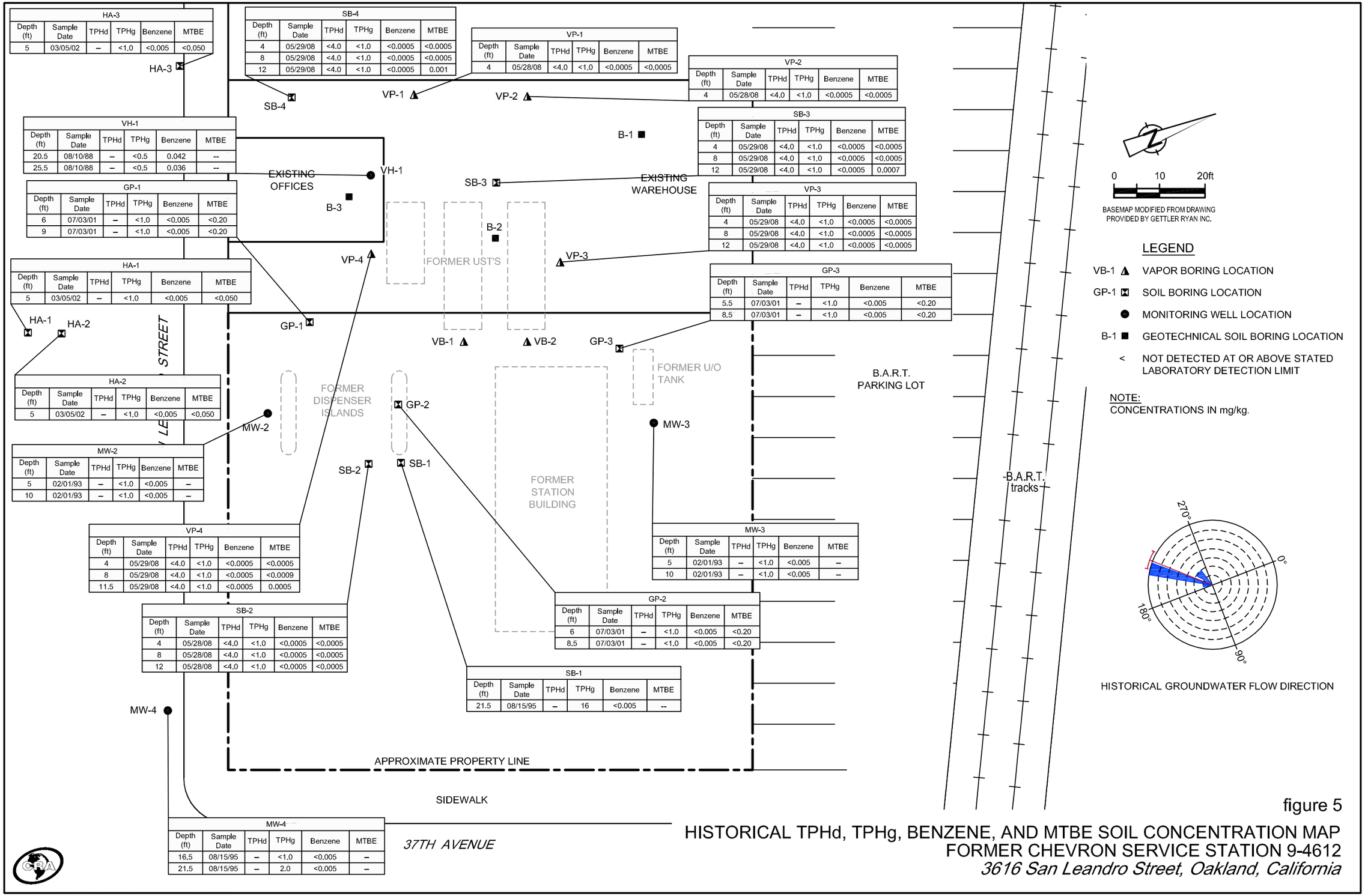


figure 5

HISTORICAL TPHd, TPHg, BENZENE, AND MTBE SOIL CONCENTRATION MAP
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

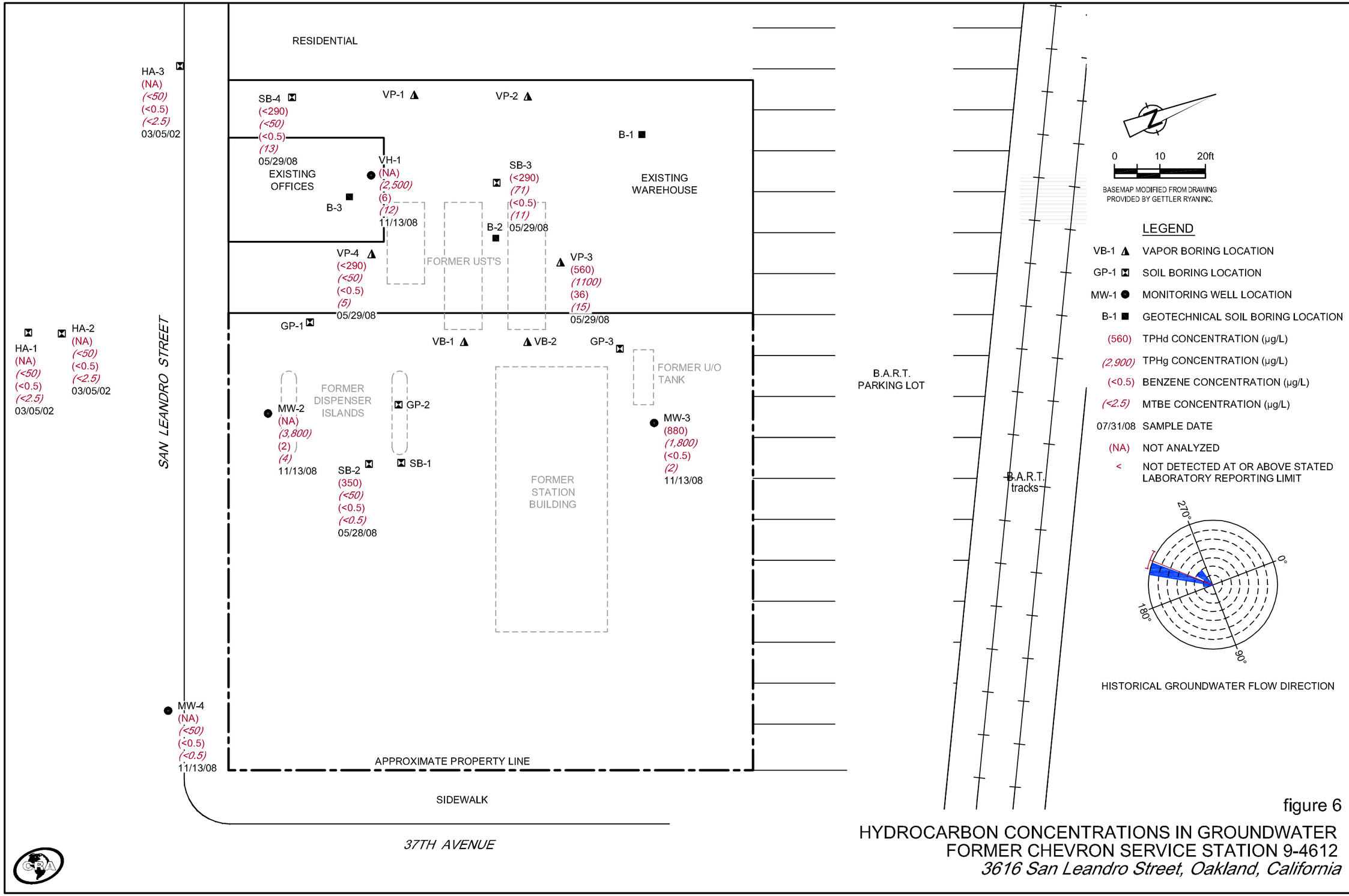


figure 6

HYDROCARBON CONCENTRATIONS IN GROUNDWATER
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

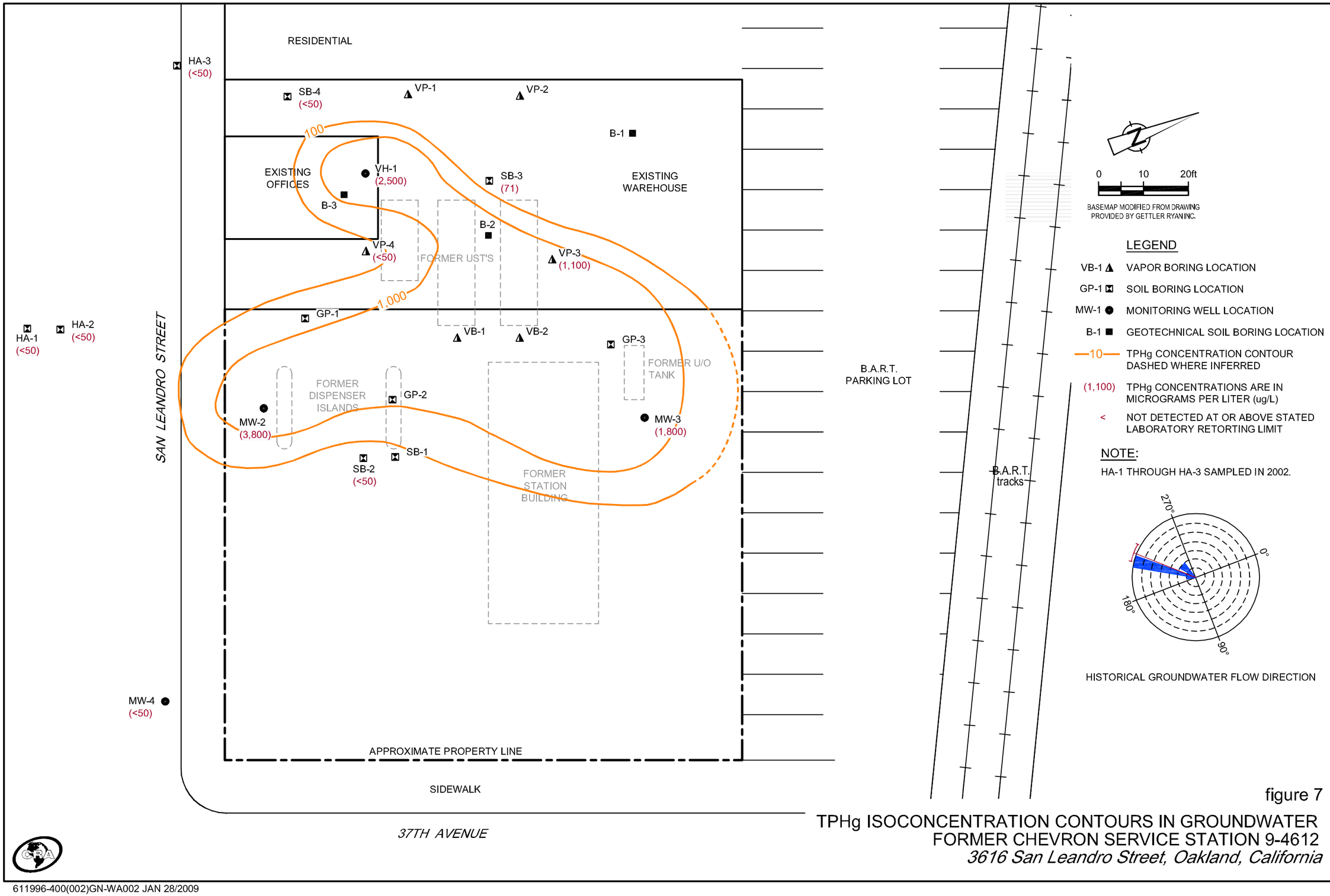


figure 7

TPHg ISOCONCENTRATION CONTOURS IN GROUNDWATER
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

611996-400(002)GN-WA002 JAN 28/2009

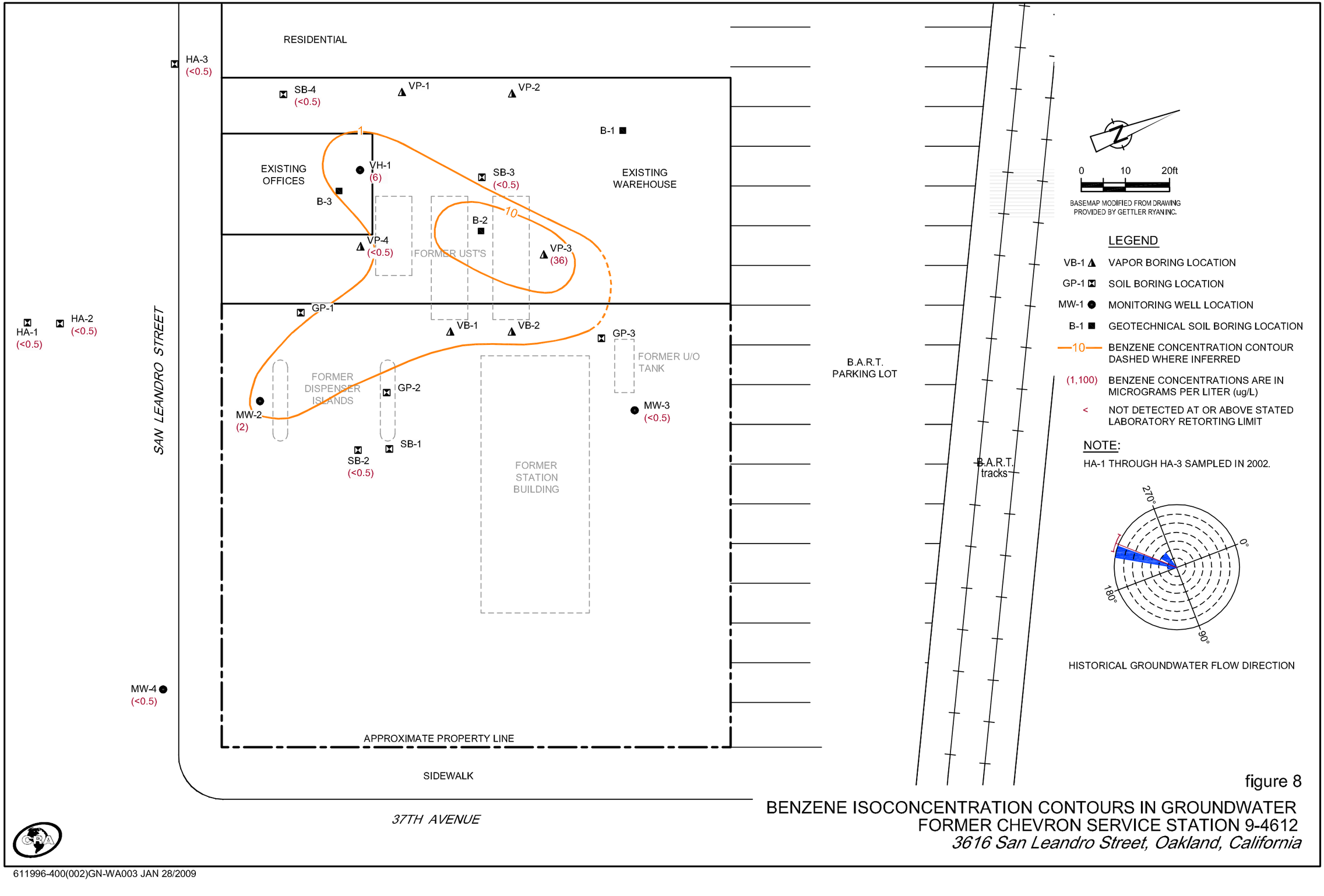


figure 8

BENZENE ISOCONCENTRATION CONTOURS IN GROUNDWATER
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

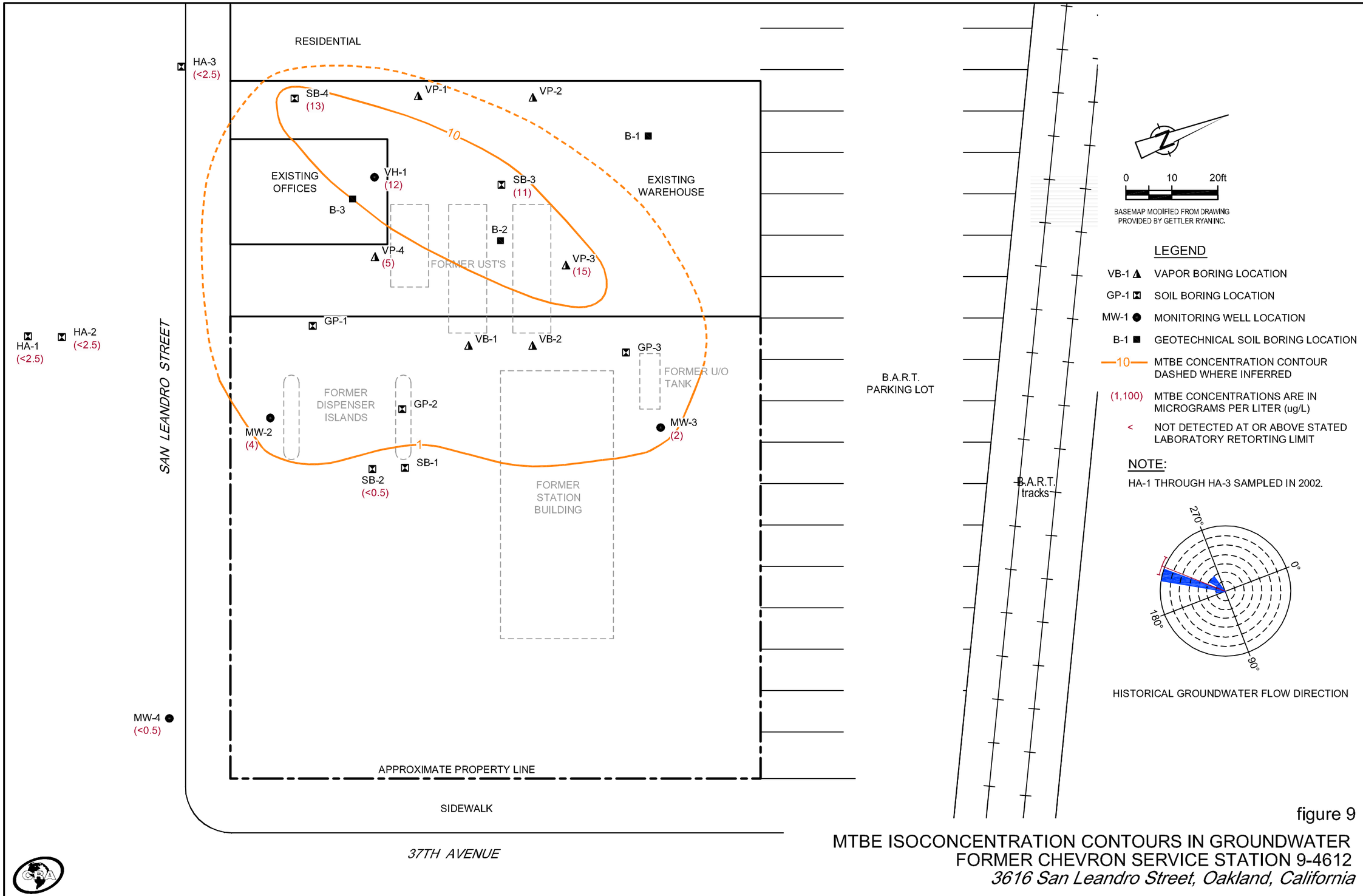


figure 9

MTBE ISOCONCENTRATION CONTOURS IN GROUNDWATER
FORMER CHEVRON SERVICE STATION 9-4612
3616 San Leandro Street, Oakland, California

TABLE 1

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION #9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Boring ID	*Depth (fbg)*	*Sample Date*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*1,2-DCA*	*EDB*	*Lead*
					Concentrations reported in milligram per kilogram - mg/kg							
VH-1	20.5	8/10/88	--	<0.5	**0.042**	<0.005	<0.005	<0.005	--	--	--	**6.0**
VH-1	25.5	8/10/88	--	<0.5	**0.036**	<0.005	<0.005	<0.005	--	--	--	**6.0**
MW-2	5	2/1/93	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-2	10	2/1/93	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-3	5	2/1/93	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-3	10	2/1/93	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-4	16.5	8/15/95	--	<1.0	<0.005	<0.005	<0.005	<0.005	--	--	--	--
MW-4	21.5	8/15/95	--	**2.0**	<0.005	**0.014**	**0.007**	**0.01**	--	--	--	--
SB-1	21.5	8/15/95	--	**16**	<0.005	**0.12**	**0.21**	**1.1**	--	--	--	--
GP1	6	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
GP1	9	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
GP2	6	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
GP2	8.5	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
GP3	5.5	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
GP3	8.5	7/3/01	--	<1.0	<0.005	<0.005	<0.005	<0.005	<0.20	--	--	--
HA-1	5	3/5/02	--	<1.0	<0.005	**0.0098**	**0.016**	**0.089**	<0.050	--	--	--
HA-2	5	3/5/02	--	<1.0	<0.005	<0.005	<0.005	<0.015	<0.050	--	--	--
HA-3	5	3/5/02	--	<1.0	<0.005	<0.005	<0.005	<0.015	<0.050	--	--	--
VP-1	4	5/28/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
VP-2	4	5/28/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--

TABLE 1

HISTORICAL SOIL SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION #9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Boring ID	*Depth (fbg)*	*Sample Date*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*1,2-DCA*	*EDB*	*Lead*
			Concentrations reported in milligram per kilogram - mg/kg									
VP-3	4	5/29/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-3	8	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
VP-3	12	5/29/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-4	4	5/29/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-4	8	5/29/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
VP-4	11.5	5/29/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	**0.0005**	<0.0009	<0.0009	--
SB-2	4	5/28/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
SB-2	8	5/28/08	<4.0	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.0009	<0.0009	--
SB-2	12	5/28/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	4	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	8	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-3	12	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	**0.0007**	<0.001	<0.001	--
SB-4	4	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-4	8	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.001	<0.001	--
SB-4	12	5/29/08	<4.0	<1.0	<0.0005	<0.001	<0.001	<0.001	**0.001**	<0.001	<0.001	--

Abbreviations / Notes

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8015
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
MTBE = methyl tert-butyl ether by EPA Method 8260B
1,2-DCA = 1,2-dichloroethane by EPA Method 8260B
EDB = 1,2-dibromoethane by EPA Method 8260B
<x = not detected at or above stated laboratory reporting limit x
-- = Not analyzed

TABLE 2

HISTORICAL GRAB-GROUNDWATER SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON STATION #9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Sample ID	*Date Sampled*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Xylenes*	*MTBE*	*1,2-DCA*	*EDB*
		Concentrations in micrograms per liter (µg/L)								
SB-1	8/15/95	NA	**21,000**	**240**	**760**	**900**	**2,800**	NA	NA	NA
HA-1	3/5/02	NA	<50	<0.50	<0.50	<0.50	<1.5	<2.5	NA	NA
HA-2	3/5/02	NA	<50	<0.50	<0.50	<0.50	<1.5	<2.5	NA	NA
HA-3	3/5/02	NA	<50	<0.50	<0.50	<0.50	<1.5	<2.5	NA	NA
VP-3	5/29/08	**560**	**1,100**	**36**	**3**	**13**	**2**	**15**	<0.5	<0.5
VP-4	5/29/08	<290	<50	<0.5	<0.5	<0.5	<0.5	**5**	<0.5	<0.5
SB-2	5/28/08	**350**	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5
SB-3	5/29/08	<290	**71**	<0.5	<0.5	<0.5	<0.5	**11**	<0.5	<0.5
SB-4	5/29/08	<290	<50	<0.5	<0.5	<0.5	<0.5	**13**	<0.5	<0.5

Abbreviations:
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015B
TPHd = Total petroleum hydrocarbons as diesel by EPA Method 8015
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8260B
MTBE = Methyl tertiary butyl ether by EPA Method 8260B
1,2 DCA= 1,2-Dichloroethane by EPA Method 8260B
EDB= 1,2-Dibromoethane by EPA Method 8260B
NA = Not analyzed
<x = not detected at or above stated laboratory detection limit

TABLE 3

HISTORICAL SOIL VAPOR SAMPLE ANALYTICAL RESULTS
FORMER CHEVRON #9-4612
3616 SAN LEANDRO STREET
OAKLAND, CALIFORNIA

Sample ID	*Date Sampled*	*TPHd*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*m,p-Xylene*	*o-Xylene*	*MTBE*	*1,2-DCA*	*Freon 12*	*Chloro-methane*	*Methylene Chloride*	*TCE*	*Styrene*	*1,2,4-Trimethyl-benzene*	*Acetone*	*2-propanol*	*Ethanol*	*EDB*	*O_2*	*CO_2*	*He*
		Concentrations in micrograms per cubic meter (µg/m^3)																			Concentrations in percent (%)		
VB-1*	2/16/99	NA	NA	**9**	**200**	<2.91	**10.86**	**3.56**	<9.73	<2.71	**21.27**	<1.38	**2.36**	**3.6**	**5.11**	**3.88**	**211**	**909**	**32.03**	<5.84	NA	NA	NA
VB-2*	2/16/99	NA	NA	**6**	**22**	<3.3	**7.82**	<3.3	<10.82	<3.08	**23.74**	**2.27**	<2.64	<4.08	<3.24	<3.74	**28.51**	**93.39**	**35.8**	<3.84	NA	NA	NA
VP-1	6/18/08	**950**	**2,600**	**8.2**	**5.5**	<5.6	**20**	<5.6	<4.6	<5.2	NA	NA	NA	NA	NA	NA	NA	NA	NA	<9.9	**7.5**	**5.8**	<0.13
VP-2	6/18/08	**1,000**	**2,600**	<3.8	<4.5	<5.2	<5.2	<5.2	<4.3	<4.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	<9.1	**2.5**	**6.1**	<0.12
VP-3	6/18/08	**1,100**	**2,200**	<3.8	<4.5	<5.2	**8.4**	<5.2	<4.3	<4.8	NA	NA	NA	NA	NA	NA	NA	NA	NA	<9.1	**9.4**	**7.5**	<0.12
VP-4	6/18/08	**1,200**	**4,500**	<3.7	<4.4	<5.0	<5.0	<5.0	<4.2	<4.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	<9.0	**12**	**6.6**	<0.12
Dup**	6/18/08	**990**	**2,100**	<3.7	<4.4	<5.0	<5.0	<5.0	<4.2	<4.7	NA	NA	NA	NA	NA	NA	NA	NA	NA	<9.0	**9.4**	**7.6**	<0.12
Residential ESL		10,000	10,000	84	63,000	980	21,000		9,400	94	NE	19,000	5,200	1,200	190,000	NE	660,000	NE	NE	4.1			

Abbreviations/Notes:
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method TO-3
TPHd = Total petroleum hydrocarbons as diesel by EPA Method TO-17
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method TO-15
MTBE = Methyl tertiary butyl ether by EPA Method TO-15
1,2 DCA= 1,2-Dichloroethane by EPA Method TO-15
EDB= 1,2-Dibromoethane by EPA Method TO-15
O_2 = % Oxygen by ASTM D-1946
CO_2 = % carbon dioxide by ASTM D-1946
He = % helium by ASTM D-1946
* = Samples analyzed for VOCs by EPA Method TO-14
NA = Not analyzed
<x = not detected at or above stated laboratory detection limit
** = Duplicate sample collected from VP-3
ESL = Environmental Screening Level for shallow soil gas associated with vapor intrusion concerns-RWQCB May 2008 (Table E)

APPENDIX A

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

SUMMARY OF PREVIOUS ENVIRONMENTAL WORK

September 1976 Station Demolition: In September 1976, all aboveground and underground station facilities including three fuel underground storage tanks (USTs), a used-oil UST, and two dispenser islands were removed. No soil samples were collected during the UST removal.

February 1988 Geotechnical Investigation: In February 1988, Rogers/Pacific advanced three geotechnical borings (B-1 through B-3) in the western portion of the site in the area of the former USTs for a proposed warehouse. Groundwater was encountered in the borings at 10 to 15 feet below grade (fbg). The boring logs indicated a strong gasoline odor was observed at approximately 20 fbg in the three borings.

August 1988 Subsurface Investigation: In August 1988, Vonder Haar Hydrogeology (VHH) installed groundwater monitoring well VH-1 to evaluate groundwater quality beneath the site. Soil samples were collected at 20.5 fbg and 25.5 fbg from the well boring and analyzed for total fuel hydrocarbons (TFHC), benzene, toluene, ethylbenzene, and xylenes (BTEX), and total lead. Only benzene (0.042 milligrams per kilograms [mg/kg] and 0.036 mg/kg) and total lead (6 mg/kg) were detected in the soil samples. The initial groundwater sample collected from the well contained TFHC at 11,000 micrograms per liter (µg/L), benzene at 3,300 µg/L, toluene at 200 µg/L, ethylbenzene at 520 µg/L, and xylenes at 540 µg/L. Lead was also detected in the groundwater sample at 43 µg/L. Details of this investigation were presented in VHH's letter report dated September 16, 1988.

February 1993 Subsurface Investigation: In February 1993, Groundwater Technology, Inc. (GTI) installed monitoring wells MW-2 and MW-3 to further evaluate the extent of petroleum hydrocarbons in soil and groundwater. Well MW-2 was located adjacent to the former southern dispenser island, and well MW-3 was located adjacent to the former used-oil UST. Soil samples were collected at 5 and 10 fbg from the borings and analyzed for total petroleum hydrocarbons as gasoline (TPHg) and BTEX, which were not detected. GTI also reviewed Department of Water Resources (DWR) records to evaluate the presence of wells within ½ mile of the site; 52 monitoring and test wells were identified within the search radius. Details of this investigation were presented in GTI's *Additional Environmental Assessment Report* dated April 12, 1993.

August 1995 Subsurface Investigation: In August 1995, GTI advanced onsite soil boring SB-1 and installed monitoring well MW-4 in San Leandro Street to further evaluate the extent of petroleum hydrocarbons in soil and groundwater. Boring SB-1 was located adjacent to the former northern dispenser island, and well MW-4 was located to the south of the site. Soil samples were collected from boring SB-1 at 21.5 fbg and from boring MW-4 at 16.5 fbg and 21.5 fbg and analyzed for TPHg and BTEX. TPHg was detected in the soil samples collected at 21.5 fbg from borings SB-1 and MW-4 at 16 mg/kg and 2 mg/kg, respectively; toluene, ethylbenzene, and xylenes (up to 1.1 mg/kg) were also detected in the two samples. Benzene was not detected in any of the soil samples. A grab-groundwater sample collected from boring SB-1 contained TPHg at 21,000 µg/L, benzene at 240 µg/L, toluene at 760 µg/L, ethylbenzene at 900 µg/L, and

xylenes at 2,800 µg/L. Details of this investigation were presented in GTI's *Additional Site Assessment Report* dated September 29, 1995.

February 1999 Soil Vapor investigation: In February 1999, Gettler-Ryan Inc. (GR) collected two soil vapor samples (VB-1 and VB-2) at 3 fbg adjacent to the southwest of the former USTs. The two samples were analyzed for volatile organic compounds (VOCs) using EPA Method TO-14. The compounds detected in the samples included Freon 12 (up to 24 micrograms per cubic meter (µg/m^3), methylene chloride (2 µg/m^3), benzene (up to 9 µg/m^3), trichloroethene (TCE) (4 µg/m^3), toluene (up to 200 µg/m^3), xylenes (up to 15 µg/m^3), styrene (5 µg/m^3), 1,2,4-trimethylbenzene (4 µg/m^3), acetone (up to 215 µg/m^3), 2-propanol (up to 924 µg/m^3), ethanol (up to 36 µg/m^3), and chloromethane (2 µg/m^3). The detected concentrations were compared to the permissible exposure limits (PELs). The detected concentrations did not exceed the respective PELs; therefore, it was concluded that the soil vapor did not pose a threat to human health or the environment. Details of this investigation were presented in GR's *Limited Soil Vapor Survey Report* dated March 31, 1999.

July 2001 and March 2002 Subsurface Investigation: In July 2001, GR advanced three direct-push borings (GP-1, GP-2, and GP-3) to further evaluate the extent of the hydrocarbon plume to the north, south, and east. The borings were advanced to 15 or 16 fbg, at which depth drilling refusal was encountered. Two soil samples were collected from each boring and analyzed for TPHg, BTEX, and methyl tertiary butyl ether (MTBE), which were not detected. In March 2002, GR advanced three hand-augered borings (HA-1, HA-2, and HA-3) in San Leandro Street to further evaluate the extent of the hydrocarbon plume to the southwest and to evaluate if nearby utility trenches were acting as preferential pathways. Borings HA-1 and HA-2 were located adjacent to a sanitary sewer line, and boring HA-3 was located adjacent to a gas line. A soil sample was collected from each boring at 5 fbg and analyzed for TPHg, BTEX, and MTBE. TPHg, BTEX, and MTBE generally were not detected in the three soil samples with the exception of toluene (0.0098 mg/kg), ethylbenzene (0.016 mg/kg), and xylenes (0.089 mg/kg) in the sample collected from boring HA-2. Grab-groundwater samples were also collected from borings HA-1 through HA-3 and analyzed for TPHg, BTEX, and MTBE, which were not detected. Based on the results of the investigation, it was concluded that residual hydrocarbons in soil were delineated with concentrations limited to a small area around the former gasoline USTs. Also, dissolved hydrocarbons were delineated downgradient of the former USTs and dispensers. Finally, the utility lines in San Leandro Street did not appear to be acting as preferential pathways. Details of the investigations were presented in GR's *Additional Site Investigation Report* dated May 3, 2002.

June 2002 RBCA Evaluation: In June 2002, Delta Environmental Consultants, Inc. (Delta) performed a Tier 2 RBCA evaluation for the site to evaluate if residual hydrocarbons in soil and groundwater posed a risk to human health (residential land use scenario) or the environment. Based on the results of the evaluation, the site conditions did not exceed the Site-Specific Target Levels (SSTLs) with the exception of the groundwater ingestion pathway. However, since the groundwater beneath the site was neither currently utilized as a drinking water source, nor was it expected to be used

as a drinking water source in the future, and the fact that the site was developed for commercial use, it was concluded that no further work was warranted at the site and case closure was recommended.

2003 Offsite Source Survey: In July 2002, GR reviewed Alameda County Environmental Health (ACEH) files pertaining to two nearby fuel releases (Guy's Service Station at 3820 San Leandro Street and Tony's Express Auto Services at 3609 International Boulevard) to evaluate if they may be a source of contamination beneath the site. Tony's Express Auto Services was located approximately 750 feet northeast (upgradient) of the site. MTBE was detected in the two furthest downgradient wells at this facility. As the service station at the site ceased operation in 1976, prior to the use of MTBE in California, it was concluded that the Tony's Express Auto Services facility may be the source of the MTBE in the site wells. The results of the investigation were presented in Delta's *Offsite Source Evaluation Report* dated January 17, 2003.

May and June 2008 Subsurface Investigation: In May 2008, CRA advanced three borings (SB-2 through SB-4) to 12 fbg to further evaluate the extent of residual hydrocarbons. Soil samples were collected at depths of 4, 8, and 12 fbg from each boring and analyzed for TPHg, BTEX, MTBE, 1,2-dibromoethane (EDB), 1,2-dichloroethane (1,2-DCA), and TPH as diesel (TPHd). The analytes generally were not detected n any of the soil samples with the exception of MTBE in the samples collected at 12 fbg from borings SB-3 (0.0007 mg/kg) and SB-4 (0.001 mg/kg). Grab-groundwater samples were also collected from borings SB-2 through SB-4 and analyzed for the same constituents. TPHg (71 µg/L) and TPHd (350 µg/L) were only detected in the groundwater samples collected from borings SB-3 and SB-2, respectively. MTBE was detected in the groundwater samples collected from borings SB-3 and SB-4 at 11 µg/L and 13 µg/L, respectively. No other analytes were detected in the three groundwater samples. CRA also installed and sampled four soil vapor points (VP-1 through VP-4) to further evaluate soil vapor quality beneath the site. Soil samples were collected at depths of 4, 8, 11.5, and/or 12 fbg from the borings; TPHg, TPHd, BTEX, MTBE, EDB, and 1,2-DCA generally were not detected in the soil samples with the exception of MTBE at 0.0005 mg/kg in the sample collected at 11.5 fbg from boring VP-4. TPHg and TPHd were detected in all of the soil vapor samples at concentrations ranging from of 2,100 to 4,500 µg/m^3 and 950 to 1,200 µg/m^3, respectively. Benzene (8.2 µg/m^3) was only detected in sample VP-1. The detected soil vapor concentrations did not exceed the applicable screening levels for residential land use. Details of this investigation were presented in CRA's *Subsurface and Soil Vapor Sampling Report,* dated August 25, 2008.

APPENDIX B

HISTORICAL BORING LOGS

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
CLAY, homogeneous, less than 2% of sample is comprised of charred fragments	Dusky yellowish brown			1 2 3 4					
CLAY, silty, charred fragments common Plasticity Data: depth 5'-6" L.L.= 55 P.I.= 37	Light olive gray	STIFF	CH	5 6 7 8 9	X	15*	15 15	111 108	
CLAY, sandy, mottled, increasing number of clasts with depth, transition zone	Dark yellowish brown			10					
CONGLOMERATE, 20-30% of matrix is very coarse grain, subangular to rounded fragments of quartzite, chert and greenstone. < 5% of sample is comprised of ½-1½" dia. angular quartzite.		VERY STIFF		11 12 13 14	X	19*	12 ATOD	108	
CLAY, silty, fine sand with occasional clast, homogeneous.	Moderate yellowish brown	FIRM		15 16 17 18 19	X	5*	27	104	
strong gasoline odor		STIFF		20	X	8*	23	100	

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, sandy, silty, occasionally	Moderate yellowish brown			21	⊠	8*	23	100	
Bottom of borring 21.5 feet				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					

ROGERS/PACIFIC
PROFESSIONAL ENGINEERING CONSULTANTS

EXPLORATORY BORING LOG

Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING B-1 (cont.)

DRILL RIG Continuous flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE	DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
SAND, angular gravels, increases clay content with depth, fill material sieve data: % passing #200: 21%	Dark yellowish brown		SC	1–10			9		
CLAY, silty, occasional angular clasts, 20-30% of sample is comprised of subangular to rounded pebble size clasts composed of quartzite sandstone and weathered feldspars	Dark yellowish brown	STIFF		11	⊠	10*	11	109	
				12–13			21		
				14 ▽					
transition into conglomerate population of clasts, clast size, consistency, and roundness increases with depth		VERY STIFF		15–16	⊠	20*	15	110	
				17–19			31		
very strong gasoline odor				20					

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION	LOGGED BY KS
DEPTH TO GROUNDWATER 14 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT %	DRY DENSITY PCF	% COMPACTION
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CONGLOMERATE, approximately 85% of sample is comprised of greater than 1/8" rounded clasts, composed of chert, quartzite, and greenstone	Moderate yellowish brown	VERY STIFF		21 22 23 24 25 26	☒	20*	13	114	
Bottom of borring 26.5 feet				27 28 29 30 31 32 33 34 35 36 37 38 39 40					

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 Feet	LOGGED BY KS
DEPTH TO GROUNDWATER 9 feet	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COMPACTION
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, very plastic, minor abundance of roots	Brownish black	STIFF	CH	1					
				2					
		STIFF	CH	3	X	12*	23	101	84
				4					
		VERY STIFF		5	X	18*	12	109	
CLAY, silty, sandy	Moderate yellowish brown			6					
				7					
				8					
				9			▽		
				10					
CLAY, sandy, abundant course grain size, rounded clasts of quartzite and greenstone. ½-2" dia. clasts of angular greenstone, comprise 20% of a given sample	Moderate yellowish brown	STIFF		11	X	12*	17	113	
				12					
				13					
				14					
CLAY, silty, slightly mottled, occasional charred fragments, homogeneous	Moderate yellowish brown	STIFF		15					
				16	X	10*	22	104	
				17					
				18					
				19			31		
				20					

ROGERS/PACIFIC

EXPLORATORY BORING LOG

Lot 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING B-2

DRILL RIG Continuous Flight Auger	SURFACE ELEVATION 30 feet	LOGGED BY KS
DEPTH TO GROUNDWATER 9 feet ATOD	BORING DIAMETER 6 inches	DATE DRILLED 2/10/88

DESCRIPTION AND CLASSIFICATION				DEPTH (FEET)	SAMPLER	PENETRATION RESISTANCE (BLOWS/FT)	WATER CONTENT (%)	DRY DENSITY PCF	% COM-
DESCRIPTION AND REMARKS	COLOR	CONSIST.	SOIL TYPE						
CLAY, silty, sandy, subangular gravels, strong gasoline odor	Moderate yellowish brown	VERY STIFF		21	X	24*	17	112	
BOTTOM OF BORRING 21.5 FEET				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					

ROGERS/PACIFIC
PROFESSIONAL ENGINEERING CONSULTANTS

EXPLORATORY BORING LOG

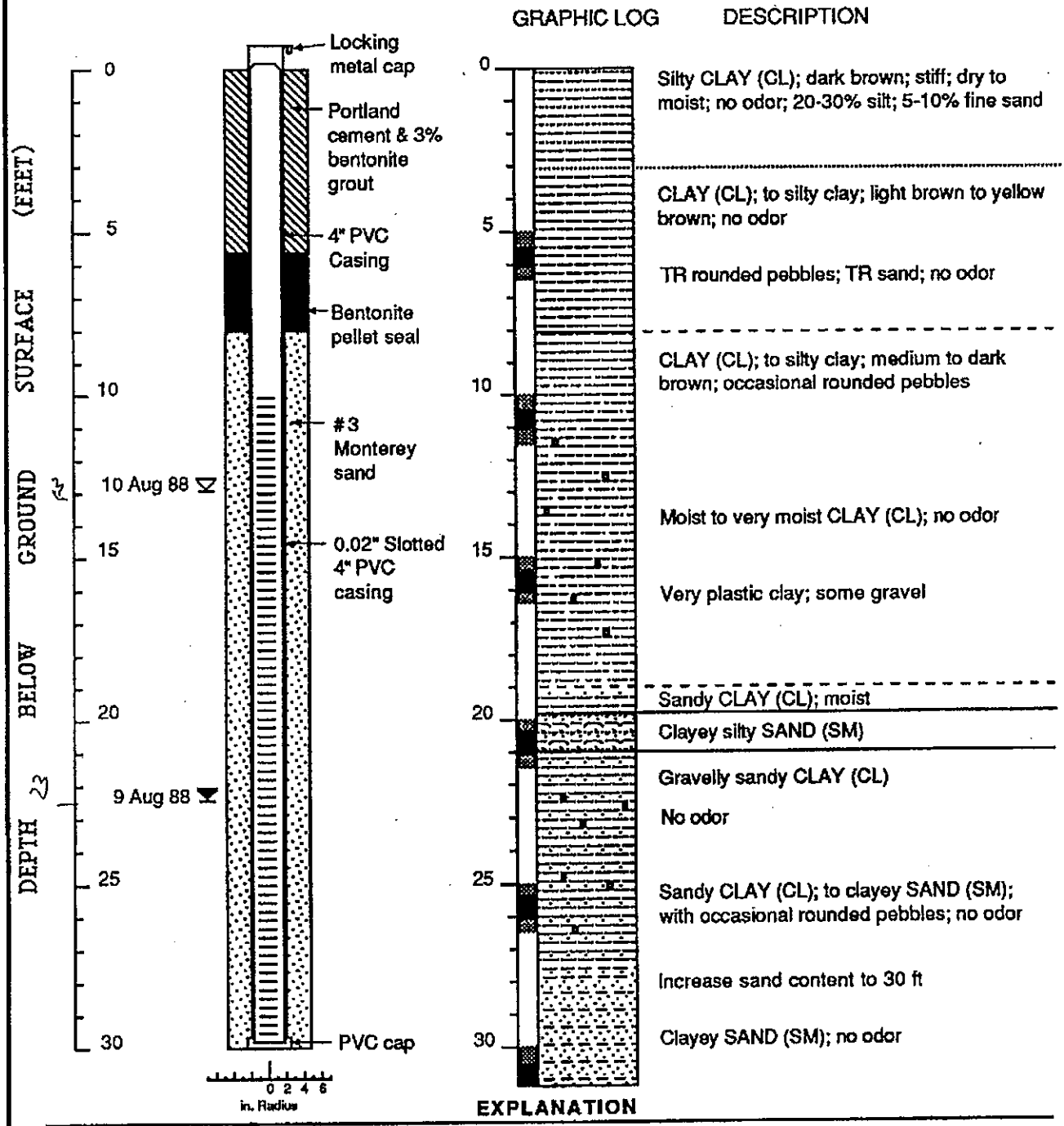
Lots 18 & 19 San Leandro Street
Oakland, Calif.

PROJECT NO	DATE	BORING

Confined aquifer

Vonder Haar Hydrogeology

WELL VH-1



- Water level during drilling (date)
- Water Level (date)
- Contact (dashed where approx.)
- Gradational Contact
- Location of recovered drive sample
- Location of drive sample collected for chemical analysis

Logged by: Stephen Vonder Haar
Drilling Company: Datum Drilling, Long Beach, CA
Driller: Anthony Randy
Drilling Method: Hollow stem auger
Dates Drilled: 8-9-88
Type of sampler: Split Barrel (2.0" ID)

Boring Log and Well Construction Details - Well VH-1

Chevron Facility #4612
3614 San Leandro St. Oakland, CA

Drilling Log

GROUNDWATER TECHNOLOGY

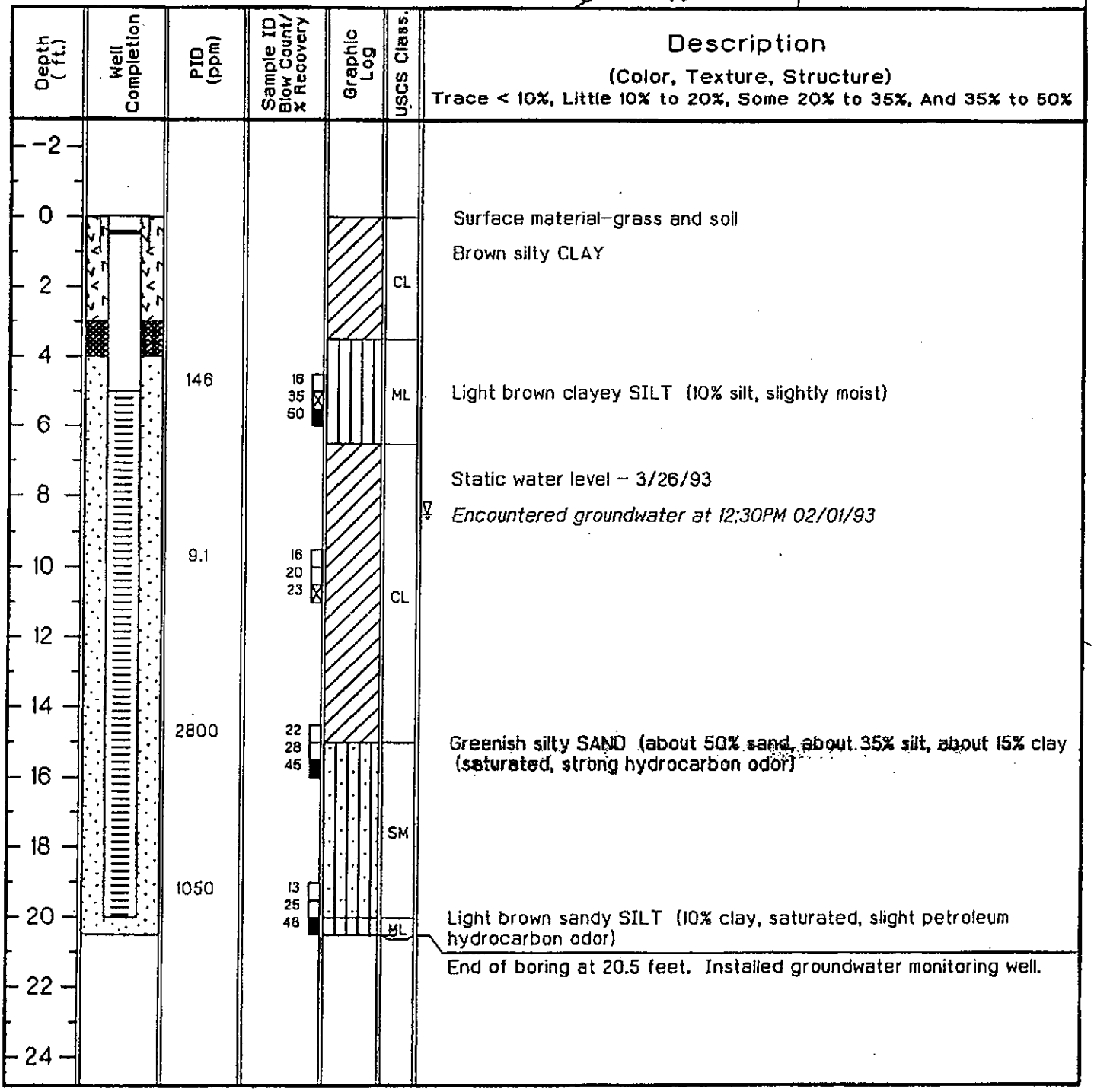
Monitoring Well MW-2

Project Chev/3616 San Leandro Street Owner Chevron U.S.A. Products Co.
Location Oakland, California Project No. 02020 2892 Date drilled 02/01/93
Surface Elev. 28.80 ft. Total Hole Depth 20.5 ft. Diameter 8.5 in.
Top of Casing 28.5 ft. Water Level Initial 8.5 ft. Static 03/26/93 7.62 ft.
Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
Casing: Dia 2 in. Length 5 ft. Type SCH 40 PVC
Filter Pack Material #3 sand Rig/Core Type Mobile B-53/Split Spoon
Drilling Company Kvilhaug Well Drilling Method Hollow Stem Auger Permit # 92366
Driller Rod Furlow Log By S.C. Hurley
Checked By David Kleesattel License No. RG# 5136

See Site Map For Boring Location

COMMENTS:

The well was set at approximately 20.5 feet below grade. the soil cuttings were placed on plastic and was left on site until it could be analyzed and disposed of properly.



Description

(Color, Texture, Structure)
Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%

Surface material-grass and soil

Brown silty CLAY

Light brown clayey SILT (10% silt, slightly moist)

Static water level - 3/26/93

Encountered groundwater at 12:30PM 02/01/93

Greenish silty SAND (about 50% sand, about 35% silt, about 15% clay (saturated, strong hydrocarbon odor)

Light brown sandy SILT (10% clay, saturated, slight petroleum hydrocarbon odor)

End of boring at 20.5 feet. Installed groundwater monitoring well.

Drilling Log

GROUNDWATER TECHNOLOGY

Monitoring Well MW-3

Project Chev/3616 San Leandro St. Owner Chevron U.S.A. Products Co.
Location Oakland, California Project No. 02020 2892 Date drilled 02/01/93
Surface Elev. 28.30 ft. Total Hole Depth 20.5 ft. Diameter 8.5 in.
Top of Casing 27.51 ft. Water Level Initial 8.5 ft. Static 03/26/93 7.18 ft.
Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.
Casing: Dia 2 in. Length 5 ft. Type SCH 40 PVC
Filter Pack Material #3 sand Rig/Core Type Mobile B-53/Split Spoon
Drilling Company Kvilhaug Well Drilling Method Hollow Stem Auger Permit # 92383
Driller Rod Furlow Log By S.C. Hurley
Checked By David Kleesattel License No. RG# 5136 David Kleesattel

See Site Map For Boring Location

COMMENTS:

The well wa set at approximately 20.5 feet below grade. The soil cuttingswere placed on plastic and was left on site until it could be analyzed and disposed of properly.

Depth (ft.)	Well Completion	PID (ppm)	Sample ID / Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
0						Surface material- grass and soil
2					CL	Brown silty CLAY (moist)
4			35			
6		12.3	50		ML	Brown clayey SILT (10% fine sand, slightly moist)
8						Static level - 3/26/93
						▽ *Encountered groundwater at 9:30AM 02/01/93*
10		8.6	38 50		GP	Brown sandy GRAVEL (about 75% gravel, about 20% course sand, about 5% silt, water saturated, no hydrocarbon odor).
12						
14			25			
16		186	38 45		SW	Brown silty SAND (50% coarse sand, 30% fine sand, 20% silt, saturated)
18						
20			22 25 45			No recovery
22						End of boring at 20.5 feet. Installed groundwater monitoring well.
24						

Drilling Log

GROUNDWATER TECHNOLOGY

Monitoring Well **MW-4**

Project Chevron - Oakland — Owner Chevron USA Products Company
Location 3616 San Leandro Street, Oakland, CA — Proj. No. 02020 4530
Surface Elev. 27.68 ft. — Total Hole Depth 21.5 ft. — Diameter 8 in.
Top of Casing 27.27 ft. — Water Level Initial 15 ft. — Static 8.76 ft.
Screen: Dia 2 in. — Length 13 ft. — Type/Size Sch 40 PVC/0.020 in.
Casing: Dia 2 in. — Length 7 ft. — Type Sch 40 PVC
Fill Material Neat Cement — Rig/Core CME-55/Modified Split-Spoon
Drill Co. SES, Inc. — Method Hollow Stem Auger/PID
Driller Morris Peterson — Log By Brian McAloon — Date 08/15/95 — Permit # 95503
Checked By Ed Simonis — License No. RG#4422

See Site Map For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count / % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0							8" concrete.
2						CL	Silty CLAY (15,85): brown, dry.
4							Pebbly sandy CLAY (20,30,50): brown, dry, no hydrocarbon odor.
6		0	MW-4 -6.5'	5, 8, 12		CL/SC	
8							*Static water, 08/15/95, 1400 hrs.*
10		0	MW-4 -11.5'	5, 8, 10		CL	Pebbly sandy CLAY (10,40,50): brown, dry, no hydrocarbon odor.
12							
14				7, 14, 17		SC	Pebbly silty clayey SAND (15,25,30,30): brown, moist, no hydrocarbon odor. *Encountered water (driller's call), 08/15/95, 1255 hrs.*
16			MW-4 -16.5'				
18						CL	Silty CLAY (40,60): brown, moist, slight hydrocarbon odor.
20		40		1, 5, 6		CL	Pebbly sandy silty CLAY (10,20,20,50): brown with orange and gray mottling, moist, hydrocarbon odor.
22			MW-4 -21.5'				End of boring. Installed groundwater monitoring well.
24							

Drilling Log

GROUNDWATER TECHNOLOGY

Soil Boring **SB-1**

Project Chevron - Oakland Owner Chevron USA Products Company
Location 3616 San Leandro Street, Oakland, CA Proj. No. 02020 4530
Surface Elev. ____ Total Hole Depth 21.5 ft. Diameter 8 in.
Top of Casing ____ Water Level Initial 15 ft. Static 18.35 ft.
Screen: Dia ____ Length ____ Type/Size ____
Casing: Dia ____ Length ____ Type ____
Fill Material Neat Cement Rig/Core CME-55/Modified Split-Spoon
Drill Co. SES, Inc. Method Hollow Stem Auger/PID
Driller Morris Peterson Log By Brian McAloon Date 08/15/95 Permit # 95503
Checked By Ed Simonis License No. RG#4422 EK

See Site Map For Boring Location

COMMENTS:

"GRAB" groundwater samples collected.

Depth (ft.)	PID (ppm)	Sample ID	Blow Count/ % Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
0						Top soil and weeds.
2					CL	Sandy CLAY (20,80): brown.
4						Pebbly sandy CLAY (5,20,75): brown, dry, no hydrocarbon odor.
6	0	SB-1 -6.5'	8 8 12		CL	
8						Clayey silty pebbly SAND (10,10,20,60): brown, damp, no hydrocarbon odor, grading to clayey sandy pebbly (up to 30mm) SILT (10,10,30,50): brown, dry to damp, no hydrocarbon odor.
10	0	SB-1 -11.5'	8 11 14		SM	
12					ML	
14						
16	9	SB-1 -16.5'	3 4 9		SC	*Encountered water (driller's call), 08/15/95* Pebbly clayey SAND (10,30,60): brown with 5% gray staining along rootlet casts, damp to moist, no hydrocarbon odor.
18						*Static water, 08/15/95, 0953 hrs.*
20			2 4		CL	Sandy silty CLAY (10,30,60): light brown with 5% light gray mottling, moist to wet, slight hydrocarbon odor.
22	3.75 170	SB-1 -21.5'	5			End of boring. Backfilled with grout 08/15/95.
24						

Gettler-Ryan, Inc.

Log of Boring GP-1

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *16 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel – 6 inches thick.	Hand augered to 5 feet.
					CL	CLAY (CL) – dark brown (7.5YR 3/3), moist; 90% clay, 5% sand, 5% gravel.	Boring backfilled with neat cement from the bottom to the ground surface.
3							
6	30	GP1-6 GP1-6G					
						Becomes 95% clay, 5% gravel.	
9	0	GP1-9			SP	POORLY GRADED SAND (SP) – dark brown (7.5YR 3/3), moist; 95% fine to medium sand, 5% silt.	
	0	GP1-11					
12							
15	1413	GP1-15.5 GP1-15.5G				Refusal at 16 feet.	
						Bottom of boring at 16 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler-Ryan, Inc.

Log of Boring GP-2

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *15 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel - 6 inches thick.	Hand augered to 5 feet.
					CL	CLAY (CL) - dark brown (7.5YR 3/3), moist; 100% clay.	
3					SP	POORLY GRADED SAND (SP) - dark brown (7.5YR 3/3), moist; 90% fine to medium sand, 5% clay, 5% gravel.	Boring backfilled with neat cement from the bottom to the ground surface.
6	0	GP2-6					
					CL	CLAY (CL) - dark brown (7.5YR 3/3), moist; 95% clay, 5% sand.	
	0	GP2-8.5					
9		GP2-8.5G					
12	20	GP2-12.5				Becomes saturated; 90% clay, 5% sand, 5% gravel.	
		GP2-12.5G					
	0	GP2-14.5				Refusal at 15 feet.	
15						Bottom of boring at 15 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler–Ryan, Inc.

Log of Boring GP-3

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612C.4C02*	SURFACE ELEVATION:
DATE STARTED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *07/03/01*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *2 in. Geoprobe (direct push)*	TOTAL DEPTH: *15 feet*
DRILLING COMPANY: *Gregg Drilling*	GEOLOGIST: *Geoff Risse*

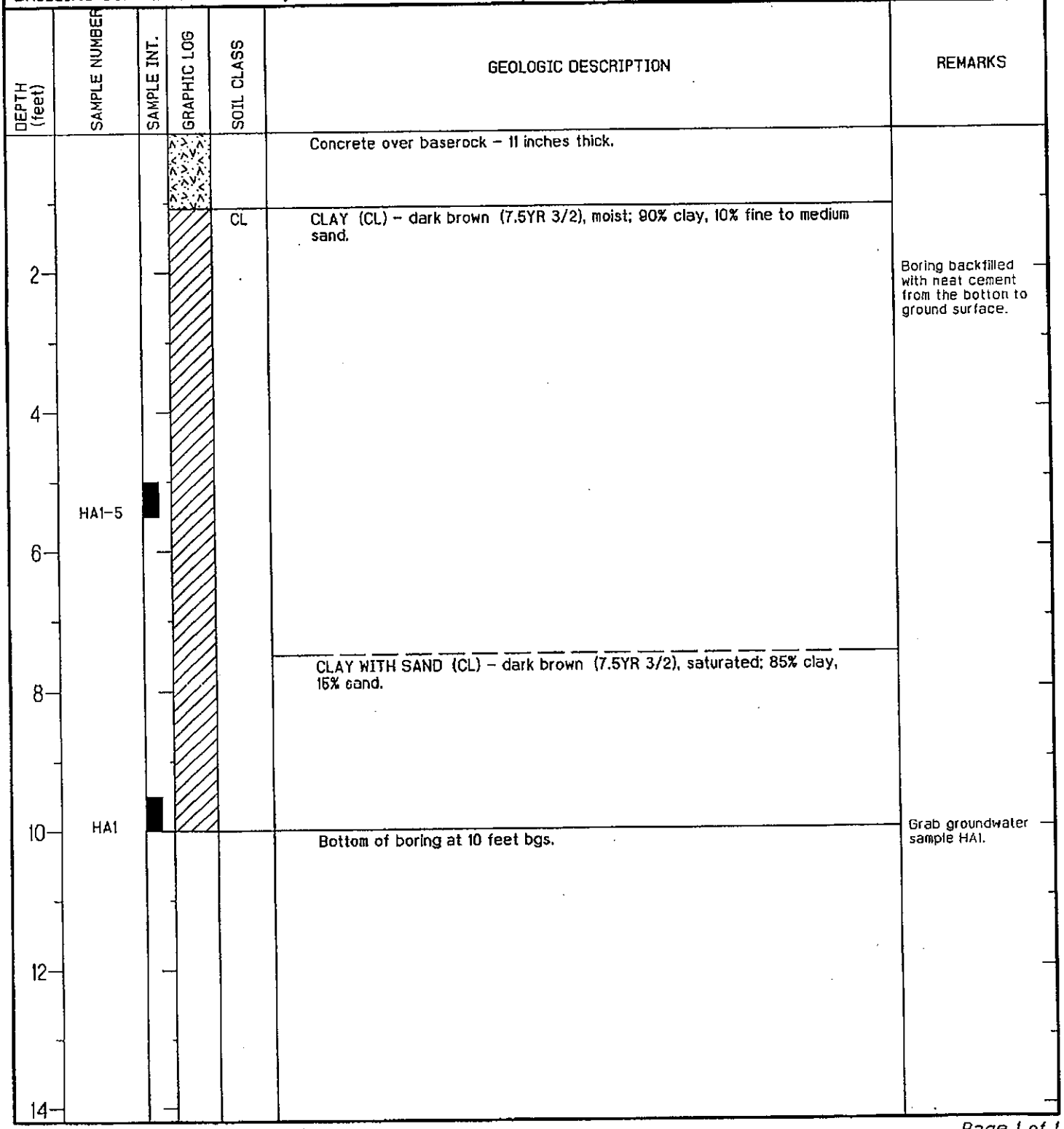
DEPTH (feet)	PID (ppm)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
						Topsoil and coarse gravel – 6 inches thick.	Hand augered to 5 feet.
					SP	POORLY GRADED SAND (SP) – dark brown (7.5YR 3/3), moist; 95% fine to medium sand, 5% silt.	Boring backfilled with neat cement from the bottom to the ground surface.
3							
6	11	GP3-5.5					
9	0	GP3-8.5 GP3-8.5G					
12	0	GP3-12.5			CL	CLAY (CL) – dark reddish brown (2.5YR 3/4), saturated; 95% clay, 5% sand.	
15	0	GP3-14.5				Refusal at 15 feet. Bottom of boring at 15 feet bgs.	
18							
21							

JOB NUMBER: *DG94612C.4C02*

Gettler-Ryan, Inc.

Log of Boring HA-1

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612G.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *10 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*



JOB NUMBER: *DG94612G.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-2

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO. : *DG94612G.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *9.5 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*

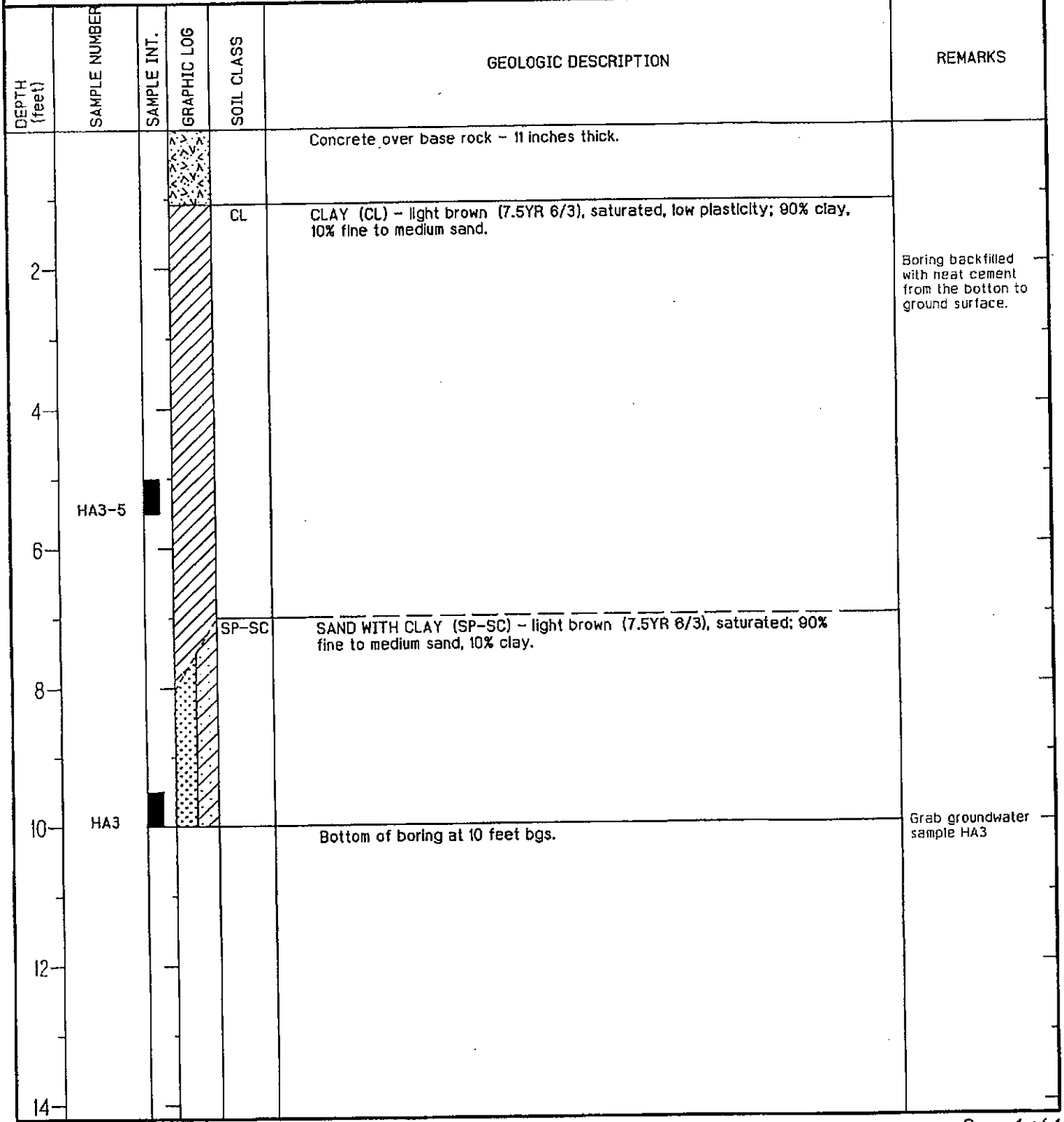
DEPTH (feet)	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	REMARKS
					Concrete over baserock – 11 inches thick.	
2				CL	CLAY (CL) – dark brown (7.5YR 3/2), saturated, low plasticity; 90% clay, 10% fine sand.	Boring backfilled with neat cement from the botton to ground surface.
4						
	HA2-5					
6						
				SC	CLAYEY SAND (SC) – dark brown (7.5YR 3/2), saturated; 85% fine to medium sand, 15% clay.	
8						
	HA2					Grab groundwater sample HA2.
10					Bottom of boring at 9.5 feet bgs.	
12						
14						

JOB NUMBER: *DG94612G.4C01*

Gettler-Ryan, Inc.

Log of Boring HA-3

PROJECT: *Former Chevron Service Station No. 9-4612*	LOCATION: *3616 San Leandro Street, Oakland, California*
GR PROJECT NO.: *DG94612G.4C01*	SURFACE ELEVATION:
DATE STARTED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *03/05/02*	WL (ft. bgs): DATE: TIME:
DRILLING METHOD: *3 in. Hand Auger*	TOTAL DEPTH: *10 feet*
DRILLING COMPANY: *Gettler-Ryan*	GEOLOGIST: *Geoff Risse*



JOB NUMBER: *DG94612G.4C01*

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-2
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (28-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Asphalt	0.5	Concrete
					GC		Clayey GRAVEL with sand: Brown; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5	
0		SB-2-4			CL		CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; high plasticity; low estimated permeabilty; fine-medium grained sand.		
				5				6.0	Portland Type I/II
0		SB-2-8			CL		Sandy CLAY: Brown; moist; 50% clay, 40% sand, 10% silt; medium plasticity; moderate estimated permeability; firm; coarse grained sand.		
				10				10.0	
					SC		Sandy CLAY: Light brown; moist; 60% clay, 35% sand, 5% gravel; medium plasticity; moderate estimated pemeability; fine grained sand; 1/2-1 inch diameter gravel. ▽	11.0	
0		SB-2-12			GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-3
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Concrete	1.0	Concrete
					GC		Clayey GRAVEL with sand: Dark grey; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5	
							CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; low estimated permeability..		
0		SB-3-4			CL				
				5			Sandy CLAY: Brown; moist; 50% clay, 40% sand, 10% silt; medium plasticity; moderate estimated permeability.	5.0	
0		SB-3-8			CL				Portland Type I/II
								9.5	
				10	SC		Clayey SAND: Brown; moist; 45% sand, 30% clay, 15% silt, 10% gravel; low plasticity; high estimated permeability.		
							▽	10.5	
					GC		Clayey GRAVEL with sand: Light brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.		
0		SB-3-12						12.0	Bottom of Boring @ 12 fbg

WELL LOG (PID) \\SAC-S1\SHAREDROCK\1-1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	SB-4
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-Inch	SCREENED INTERVAL	NA
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Concrete	1.0	
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5	
					CL		CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; moderate estimated permeability.		
0		SB-4-4							
							Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	4.0	
				5					
					CL				
0		SB-4-8							
				10					
								▽ 10.5	
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 20% clay, 20% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.		
0		SB-4-11.5						12.0	Bottom of Boring @ 12 fbg

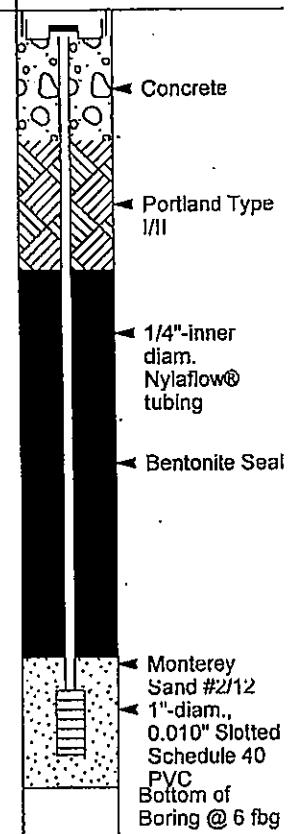
WELL LOG (PID) \\SAC-S11\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-1
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 45% gravel, 30% sand, 15% clay, 10% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY with sand: Dark grey; moist; 60% clay, 20% sand, 20% silt; medium plasticity; moderate esimated permeability.	3.0
0		VP-1-4		5	CL		Sandy CLAY: Brown; moist; 40% sand, 30% clay, 30% silt; medium plasticity; moderate estimated permeability.	6.0



WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

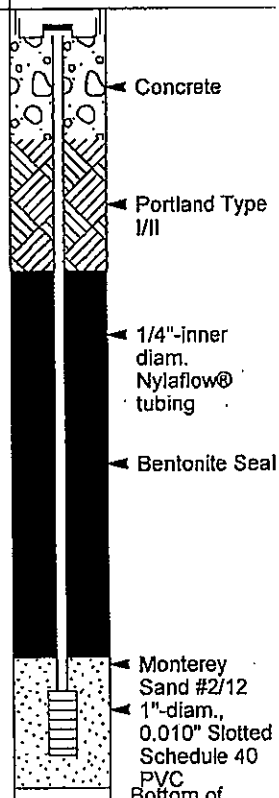
Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-2
JOB/SITE NAME	9-4612	DRILLING STARTED	28-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	28-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-Inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	NA ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY : Dark grey; moist; 60% clay, 25% silt, 15% sand; medium plasticity; moderate estimated permeability.	
0		VP-2-4					Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	3.0
				5				6.0

WELL DIAGRAM



WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
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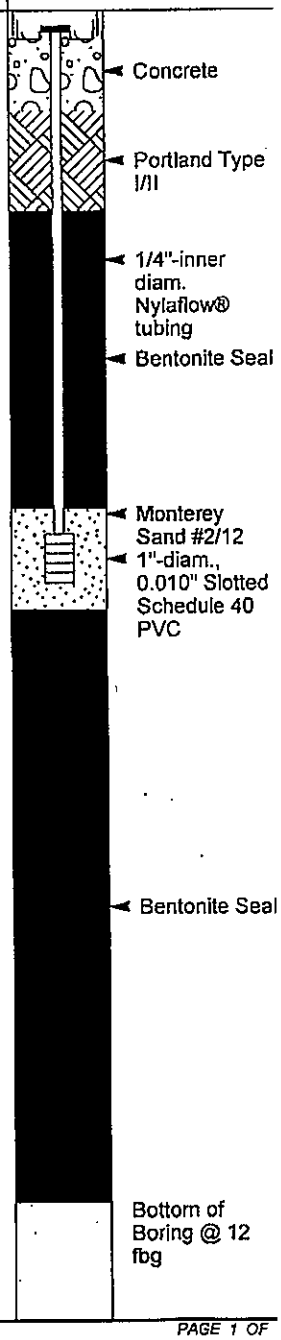
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-3
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel.	1.5
					CL		CLAY with sand: Dark grey; moist; 70% clay, 20% sand, 10% silt; medium plasticity; moderate estimated permeability.	
0		VP-3-4						4.0
				5			CLAY with sand: Brown; moist; 60% clay, 25% sand, 15% silt; medium plasticity; moderate estimated permeability.	
0		VP-3-8			CL			
				10				
							▽	10.5
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 25% clay, 15% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	
0		VP-3-12						12.0

WELL DIAGRAM



WELL LOG (PID) \\SAC-S1\SHARED\ROCKLI~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

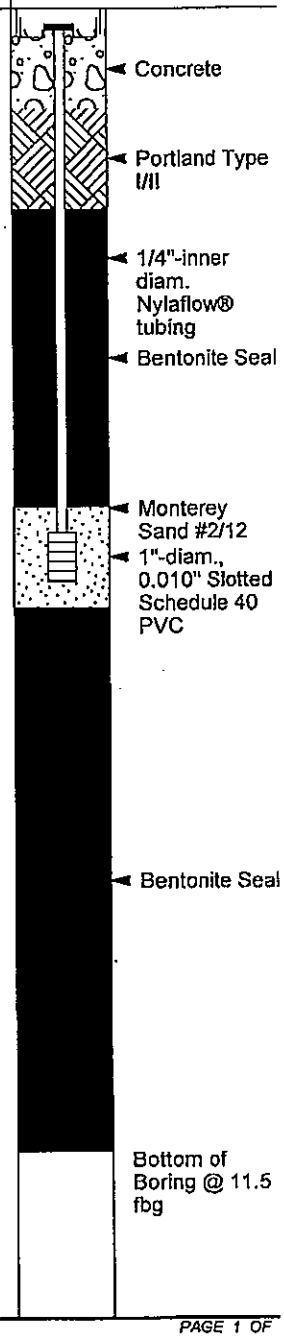
Conestoga-Rovers & Associates
2000 Opportunity Drive, Suite 110
Roseville, CA 95678
Telephone: (916) 677-3407
Fax: (916) 677-3687

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Co.	BORING/WELL NAME	VP-4
JOB/SITE NAME	9-4612	DRILLING STARTED	29-May-08
LOCATION	3616 San Leandro Street	DRILLING COMPLETED	29-May-08
PROJECT NUMBER	611996	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling & Testing, Inc.	GROUND SURFACE ELEVATION	Not Surveyed
DRILLING METHOD	Hand-auger	TOP OF CASING ELEVATION	Not Surveyed
BORING DIAMETER	3-inch	SCREENED INTERVAL	5.25 to 5.75 fbg
LOGGED BY	C. Benedict	DEPTH TO WATER (First Encountered)	10.5 fbg (29-May-08) ▽
REVIEWED BY	B. Carey, PG# 7820	DEPTH TO WATER (Static)	NA ▼
REMARKS			

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
							Concrete	1.0
					GC		Clayey GRAVEL with sand: Brown; moist; 40% gravel, 30% sand, 15% clay, 15% silt; low plasticity; high estimated permeability; 3/4 inch diameter angular gravel. CLAY: Brown; moist; 70% clay, 20% silt, 10% sand; high plasticity; low estimated permeability.	1.5
0		VP-4-4			CL			
				5				
							Sandy CLAY: Brown; moist; 45% clay, 30% sand, 25% silt; medium plasticity; moderate estimated permeability.	7.0
0		VP-4-8			CL			
				10			Rocks encountered- difficult hand-augering.	
							▽	10.5
					GC		Clayey GRAVEL with sand: Brown; wet; 40% gravel, 20% sand, 25% clay, 15% silt; low plasticity; high estimated permeability; 1/4 inch diameter angular gravel.	
0		VP-4-11.5						11.5

WELL DIAGRAM



WELL LOG (PID) \\SAC-S1\SHARED\ROCKL\~1.CHE\9-4612~1\GINTBO~1\9-4612.GPJ DEFAULT.GDT 8/11/08

APPENDIX C

WELL SURVEY DATA

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

VICINITY MAP
Former Chevron Service Station No. 9-4612
3516 San Leandro Street
Oakland, California

FIGURE
1

JOB NUMBER
346473.04

REVIEWED BY

DATE

REVISED DATE

CP = Cathodic Protection M = Monitoring
O = Oakland I = Irrigation
NG = Not given N = Industrial

020202892 030522
Post #20653

Inventory of Wells Located in Township 2S Range 3W Section 5, County Alameda

Owner	Owner's Address	Well Location	Year Drilled	Use
PG+E	4801 Oakport, Oakland	18th S/o 34th St.	76	CP
		Section 6		
There are no wells logged for subsection R				
		Section 7		
Coca Cola	3001 Chapman, O.	Subsection H	NG	NG
State Shingle	880 Fruitvale, O.	Same (3 wells)	90	other
U.S. Army Corps of Engineers	650 Capitol Mall, Sacramento	Fruitvale	87	Destroyed
Wickland Oil	1765 Challenge, Sac'to	1725 Park St. (3 wells)	88	M
		Section 8		
Trust for Public Land	82 2nd St. SF	1601 39th St.	77	I
PG+E	4801 Oakport, O.	39th + Foothill	75	CP
"	"	37th N/o E. 12	73	CP
Vernon McIlraith	1990 N. CA. Blvd. Walnut Creek	Bart Fruitvale Station	88	M
I.E.S.	499 High, O.	Same	87	Destroyed
Atlee Oil	PO Box 4848 Anaheim	3750 E. 14th	90	M
I.E.S.	499 High, O.	Same	87	N
Mobil Oil	3800 W. Alameda, Burbank	4280 Foothill (6 wells)	89	Test
Chevron	PO Box 5004, San Ramon	4265 Foothill (2 wells)	90	M
Unocal Corp.	2000 Crow Cyn Pl. (?) #400, San Ramon	4251 E 14th	90	M
Peterson Corp.	1939 Harrison #605, O.	1066 47th (3 wells)	89	Test

3616 San Leandro

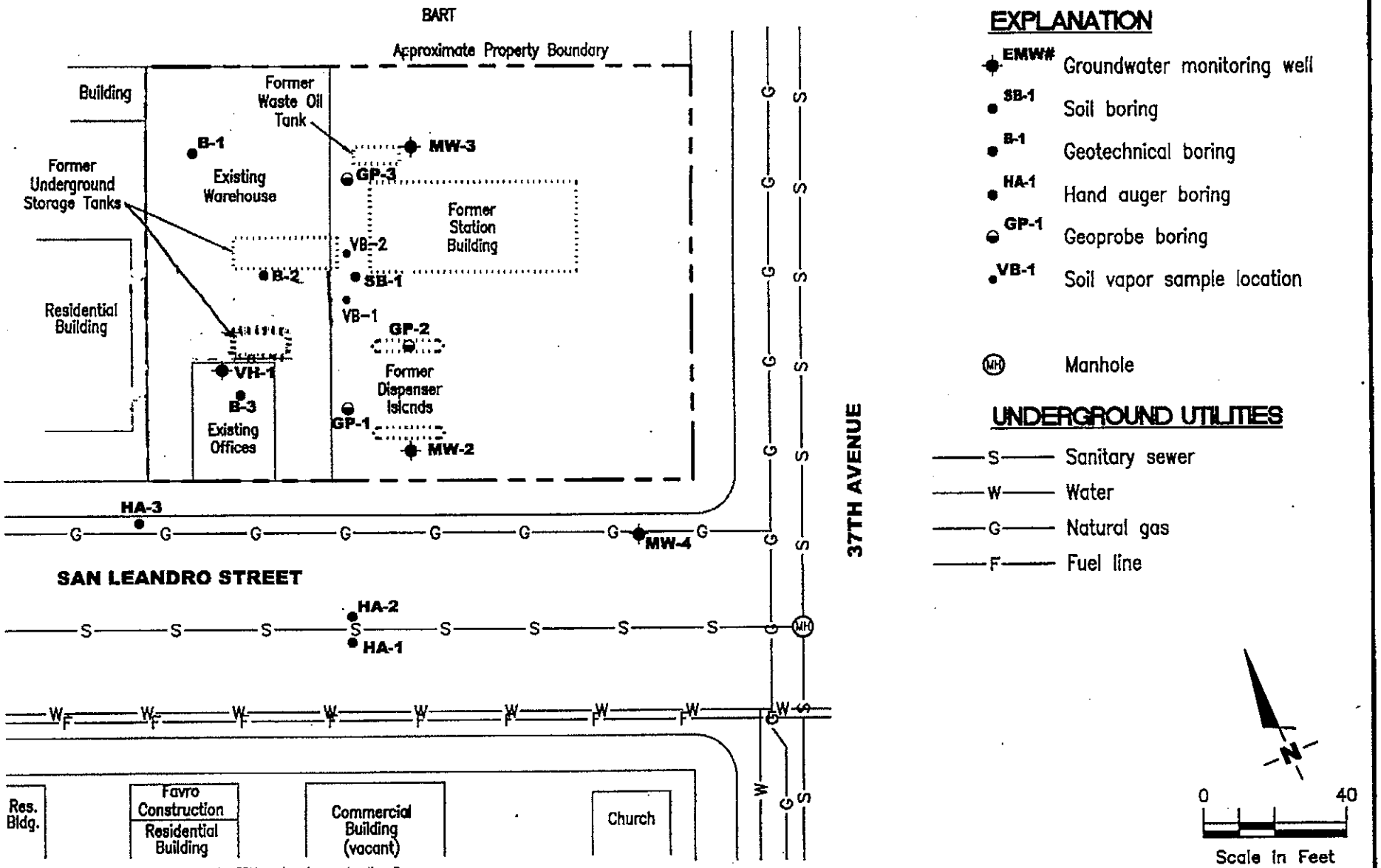
Inventory of Wells Located in Township 2S Range 3W Section 8, County Alameda

Owner	Owner's Address	Well Location	Year Drilled	Use
Chevron	PO Box 493, Pleasanton	860 42nd (13 wells)	82	Irr
Exxon	1646 N. CA., Walnut Cr.	High St. 7 wells total 1 destroyed	87	M
Exxon	PO Box 4415, Houston, TX	720 High (15 wells)	88-90	M

Information is only as accurate as DWR's current files - 2/11/93

APPENDIX D

UNDERGROUND UTILITY MAP



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

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

SITE PLAN/SAMPLE LOCATION MAP
Former Chevron Service Station No. 9-4612
3616 San Leandro Street
Oakland, California

FIGURE
2

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
DG94612G.4C01		3/02	

FILE NAME: P:\ENVIRO\CHEVRON\9-4612\A02-9-4612.DWG | Layout Tab: Sampling Rpt. 3-02

APPENDIX E

FOURTH QUARTER 2008 GROUNDWATER MONITORING REPORT

GETTLER-RYAN INC.

TRANSMITTAL

December 19, 2008
G-R #386473

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

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

RE: Former Chevron Service Station
#9-4612 (MTI)
3616 San Leandro Street
Oakland, California
RO 0000233

WE HAVE ENCLOSED THE FOLLOWING:

COPIES	DATED	DESCRIPTION
2	December 19, 2008	Groundwater Monitoring and Sampling Report **Fourth Quarter Event of November 13, 2008**

COMMENTS:

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

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

Please provide any comments/changes and propose any groundwater monitoring modifications for the next event prior to ***January 2, 2009,*** at which time this final report will be distributed to the following:

cc: Mr. Leonard B. Ratto, Ratto Land Company, P.O. Box 6104, Oakland, CA 94603-0104
Mr. Terry McIlraith, 407 Castello Road, Lafayette, CA 94549
Mr. Steven Plunkett, Alameda County Health Care Services, Dept. of Environmental Health, 1131 Harbor Bay Parkway, Suite 250, Alameda, CA 94502-6577 **(No Hard Copy-UPLOAD TO ALAMEDA CO.)**

Enclosures

Chevron

Stacie H. Frerichs
Team Lead
Marketing Business Unit

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

December 19, 2008
(date)

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

Re: Chevron Facility # 9-4612

Address: 3616 San Leandro Street, Oakland, California

I have reviewed the attached routine groundwater monitoring report dated December 19, 2008.

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

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

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

Sincerely,

SH Frerichs

Stacie H. Frerichs
Project Manager

Enclosure: Report

WELL CONDITION STATUS SHEET

Client/Facility #: Chevron #9-4612
Site Address: 3616 San Leandro Street
City: Oakland, CA

Job # 386473
Event Date: 11.13.08
Sampler: FT

WELL ID	Vault Frame Condition	Gasket/ O-Ring (M)missing	BOLTS (M) Missing (R) Replaced	Bolt Flanges B= Broken S= Stripped R=Retap	APRON Condition C=Cracked B=Broken G=Gone	Grout Seal (Deficient) inches from TOC	Casing (Condition prevents tight cap seal)	REPLACE LOCK Y / N	REPLACE CAP Y / N	WELL VAULT Manufacture/Size/ # of Bolts	Pictures Taken Yes / No
VH-1	OK	NA	NA	NA	OK	OK	OK	N	N	WELL IS IN A UTILITY BOX 16"x12"	
MW-2	OK	→	→	S=2	OK	→	→	↓	↓	MORRISON / 8" / 2	
MW-3	OK	→	→	S=2	OK	→	→			MORRISON / 8" / 2	
MW-4	OK	→					→			ENVO / 8" / 2	

Comments

GETTLER-RYAN INC.

December 19, 2008
G-R Job #386473

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

RE: Fourth Quarter Event of November 13, 2008
Groundwater Monitoring & Sampling Report
Former Chevron Service Station #9-4612
3616 San Leandro Street
Oakland, California

Dear Ms. H. Frerichs:

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

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

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

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

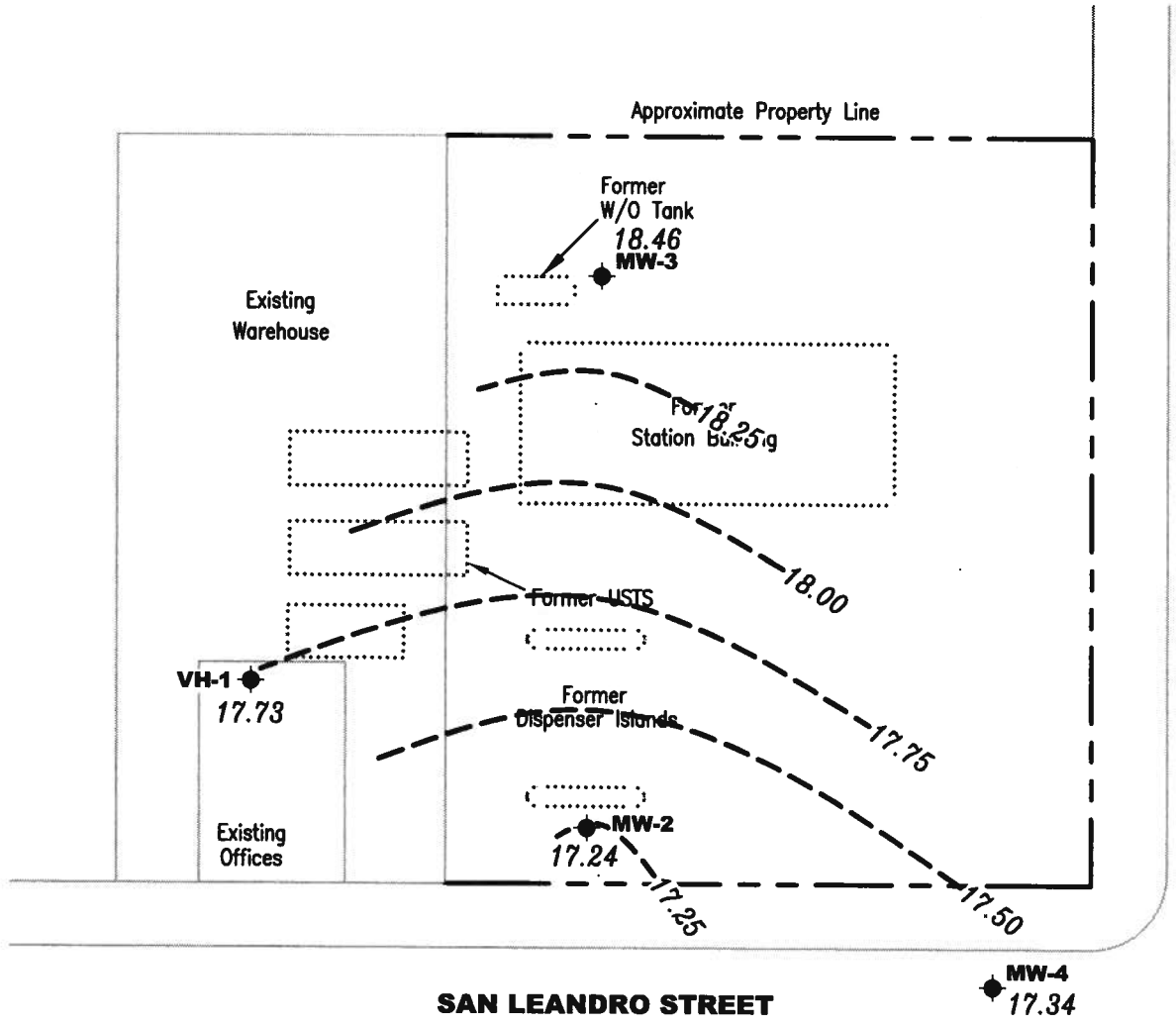
Sincerely,

Deanna L. Harding
Project Coordinator

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

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

Figure 1: Potentiometric Map
Table 1: Groundwater Monitoring Data and Analytical Results
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
- 99.99 — Groundwater elevation in feet referenced to Mean Sea Level
- 99.99 — Groundwater elevation contour, dashed where inferred

Approximate groundwater flow direction at a gradient of 0.01 to 0.02 Ft./Ft.

N

0 30

Scale in Feet

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 #9-4612
3616 San Leandro Street
Oakland, California

FIGURE
1

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386473		November 13, 2008	

FILE NAME: P:\Enviro\Chevron\9-4612\Q08-9-4612.dwg | Layout Tab: Pot4

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
VH-1											
08/10/88	--	--	13.00	--	11,000	3,300	200	520	540	--	--
06/01/89	--	--	10.32	--	15,000	2,200	120	540	310	--	--
09/15/89	--	--	15.69	--	5,600	1,900	90	350	160	--	--
12/08/89	--	--	14.77	--	11,000	1,900	69	270	99	--	--
03/07/91	--	--	11.26	--	4,500	820	39	120	77	--	--
09/24/91	--	--	12.98	--	3,300	520	19	39	27	--	--
01/08/92	--	--	13.77	--	5,000	600	34	81	76	--	--
04/20/92	--	--	8.18	--	7,400	670	60	110	140	--	--
03/26/93	27.85	21.14	6.71	--	4,900	600	40	72	94	--	--
05/27/93	27.85	19.27	8.58	--	13,000	1,600	120	230	220	--	--
08/18/93	27.85	17.39	10.46	--	2,700	210	10	8.1	18	--	--
11/03/93	27.85	15.28	12.57	--	4,600	680	42	35	68	--	--
02/10/94	27.85	18.77	9.08	--	1,900	260	19	22	29	--	--
05/12/94	27.85	19.76	8.09	--	2,000	390	28	3.9	29	--	--
08/26/94	27.85	17.10	10.75	--	4,900	500	<5.0	23	31	--	--
11/14/94	27.85	18.40	9.45	300	760	69	<2.0	<2.0	2.2	--	--
02/01/95	27.85	21.88	5.97	--	1,300	120	5.9	<0.5	13	--	--
05/12/95	27.85	20.14	7.71	--	4,400	460	31	45	49	--	--
08/22/95	27.85	18.59	9.26	--	2,900	310	15	28	32	--	--
12/19/95	27.85	19.05	8.80	--	930	53	<2.5	<2.5	<2.5	39	--
01/31/96	27.85	22.35	5.50	--	3,700	320	<10	41	40	180	--
04/30/96	27.85	19.81	8.04	--	3,900	270	<20	<20	<20	120	--
08/01/96	27.85	18.67	9.18	--	2,700	140	11	18	28	200	--
10/30/96	27.85	18.67	10.76	--	2,700	140	<12	<12	<12	280	--
02/07/97	27.85	19.75	8.10	--	220	13	0.6	<0.5	1.6	15	--
05/07/97	27.85	18.33	9.52	--	5,200	33	12	21	26	330	--
07/22/97	27.85	17.43	10.42	--	4,200	80	<10	16	24	400	--
11/03/97	27.85	16.85	11.00	--	2,400	150	6.8	6.5	9.5	510	--
01/28/98	27.85	20.75	7.10	--	850	69	4.8	5.0	11	38/48[12]	--
05/08/98	27.85	20.14	7.71	--	4,200	200	30	40	42	310/200[12]	--
07/29/98	27.85	18.40	9.45	--	3,800	54	10	27	30	35/290[12]	--
11/06/98	27.85	17.15	10.70	--	4,800	100	20	12	23	360/210[12]	--
02/09/99[5]	27.85	21.87	5.98	--	2,950	79.5	<10	<10	<10	435/312[12]	--
05/13/99	27.85	19.71	8.14	--	4,180	147	12.8	16.5	20.3	433245[12]	--
09/07/99	27.85	17.94	9.91	--	2,750	57.6	<5.0	6.53	<5.0	297/233[12]	--
11/24/99	27.85	17.36	10.49	--	2,550	38	3.18	2.54	5.21	--/216[1,12]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE		TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
VH-1 (cont)												
02/25/00		27.85	21.20	6.65	--	120	2.7	<0.5	<0.5	<0.5	20.5/11.9[12]	--
05/10/00		27.85	19.76	8.09	--	1,400[8]	63	3.3	3.1	4.9	230/110[12]	--
7/31/00[11]		27.85	18.30	9.55	--	360[8]	22	2.7	1.6	3.1	100/88[12]	--
10/30/00[11]		27.85	17.91	9.94	--	987[10]	47.0	1.00	<0.500	1.80	153/130[12]	--
02/05/01		27.91	19.23	8.68	--	2,670	42.7	<5.00	<5.00	<5.00	225/160[12]	--
05/07/01[11]		27.91	19.61	8.30	--	1,800[6]	100	8.2	10	7.9	440/110[12]	--
08/06/01[11]		27.91	18.09	9.82	--	1,000[6]	67	6.1	2.1	7.1	270/140[12]	--
11/12/01[11]		27.91	17.29	10.62	--	220	1.2	<0.50	<0.50	<1.5	63/61[12]	--
02/11/02[11]		27.91	19.83	8.08	--	1,700	33	<5.0	6.3	3.8	64/52[12]	--
05/13/02[11]		27.91	19.21	8.70	--	2,700	54	4.1	5.6	6.2	100/80[12]	--
08/09/02[11]		27.91	18.50	9.41	--	2,400	37	2.4	1.2	3.4	86/89[12]	--
11/07/02[11]		27.91	17.34	10.57	--	150	1.3	<0.50	<0.50	<1.5	56/50[12]	--
02/04/03[11]		27.91	19.63	8.28	--	1,700	40	3.1	7.8	5.0	100/53[12]	--
05/05/03[11]		27.91	20.41	7.50	--	2,100	44	3.4	3.7	5.2	96/62[12]	--
09/06/03[11,14]		27.91	18.31	9.60	--	690	7	0.6	<0.5	0.6	59	--
11/14/03[11,14]		27.91	17.99	9.92	--	1,000	3	0.6	2	0.7	47	--
02/13/04[14,15]		27.91	19.98	7.93	--	2,400	30	2	4	3	47	--
05/13/04[14]		27.91	19.24	8.67	--	1,900	49	4	3	5	74	--
08/17/04[14]		27.91	18.26	9.65	--	1,800	11	1	0.9	2	58	--
11/10/04		27.91	INACCESSIBLE		--	--	--	--	--	--	--	--
02/08/05[14]		27.91	20.08	7.83	--	2,700	26	3	4	5	48	--
06/03/05[14]		27.91	19.71	8.20	--	3,100	40	5	6	9	45	--
08/05/05[14]		27.91	17.81	10.10	--	2,500	34	4	0.6	6	46	--
12/02/05[14]		27.91	18.93	8.98	--	3,500	69	7	2	8	57	--
03/03/06[14]	NP[18]	27.91	20.66	7.25	--	4,100	37	6	6	8	40	--
05/31/06[14]	NP[18]	27.91	19.74	8.17	--	4,100	33	5	3	8	34	--
08/18/06[14]		27.91	18.79	9.12	--	3,300	23	4	1	5	33	--
11/17/06[14]		27.91	18.64	9.27	--	3,200	18	3	0.6	3	33	--
02/09/07[14]	NP[18]	27.91	19.53	8.38	--	3,600	23	4	2	5	28	--
05/11/07[14]	NP[18]	27.91	19.53	8.38	--	3,200	14	3	1	5	26	--
08/10/07[14]	NP[18]	27.91	18.41	9.50	--	2,400	10	2	0.6	3	21	--
11/08/07[14]	NP[18]	27.91	18.25	9.66	--	3,000	10	2	0.5	2	18	--
02/07/08[14]	NP[18]	27.91	20.76	7.15	--	4,000	14	3	5	5	14	--
05/02/08[14]	NP[18]	27.91	18.96	8.95	--	3,000	14	3	2	4	17	--
07/31/08[14]	NP[18]	27.91	18.23	9.68	--	2,700	13	2	0.8	3	14	--
11/13/08[14]	**NP[18]**	**27.91**	**17.73**	**10.18**	**--**	**2,500**	**6**	**1**	**<0.5**	**1**	**12**	**--**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-2											
02/16/93	27.51	--	--	--	9,200	720	110	250	170	--	--
03/26/93	27.51	19.89	7.62	--	--	--	--	--	--	--	--
05/27/93	27.51	18.04	9.47	--	360	5.3	2.1	1.8	2.5	--	--
08/18/93	27.51	16.46	11.05	--	9,400	1,100	76	110	100	--	--
11/03/93	27.51	14.56	12.95	--	8,600	390	20	2.7	120	--	--
02/10/94	27.51	17.72	9.79	--	2,700	370	38	44	41	--	--
05/12/94	27.51	18.59	8.92	--	3,800	650	76	15	62	--	--
08/26/94	27.51	16.14	11.37	--	16,000	1,300	270	28	120	--	--
11/14/94	27.51	17.48	10.03	--	5,100	390	10	43	27	--	--
02/01/95	27.51	20.47	7.04	--	6,900	520	82	170	110	--	--
05/12/95	27.51	18.76	8.75	--	7,700	510	83	110	100	--	--
08/22/95	27.51	17.35	10.16	--	4,500	220	16	61	47	--	--
12/19/95	27.51	18.05	9.46	--	2,900	240	<10	19	18	220	--
01/31/96	27.51	21.91	5.60	--	3,900	320	18	72	39	<25	--
04/30/96	27.51	18.68	8.83	--	5,600	200	36	55	47	170	--
08/01/96	27.51	17.25	10.26	--	6,200	190	15	62	59	220	--
10/30/96	27.51	17.25	11.48	--	5,700	190	<25	67	36	260	--
02/07/97	27.51	18.11	9.40	--	8,300	210	34	70	59	330	--
05/07/97	27.51	17.57	9.94	--	6,900	190	12	38	37	530	--
07/22/97	27.51	16.36	11.15	--	10,000	18	25	62	41	630	--
11/03/97	27.51	15.93	11.58	--	6,500	260	8.5	26	14	590/9.6[4,12]	--
01/28/98	27.51	19.38	8.13	--	6,700	65	13	67	54	280/94[12]	--
05/08/98	27.51	18.89	8.62	--	5,500	91	38	43	61	220/62[12]	--
07/29/98	27.51	17.06	10.45	--	3,600	41	8.9	3.6	14	16/94[12]	--
11/06/98	27.51	15.89	11.62	--	6,900	77	<5.0	14	17	290/110[12]	--
02/09/99[5]	27.51	20.61	6.90	--	8,070	75.6	<10	<10	<10	397/144[12]	--
05/13/99	27.51	18.21	9.30	--	5,890	120	<5.0	12.5	26.6	401/69.4[12]	--
09/07/99	27.51	16.57	10.94	--	5,820	41.2	<5.0	14.6	<5.0	260/145[12]	--
11/24/99	27.51	15.98	11.53	--	5,940	40.9	<10	10.8	<10	--/120[1,12]	--
02/25/00	27.51	21.00	6.51	--	6,370	101	9.37	39.8	33.2	321/121[12]	--
05/10/00	27.51	18.49	9.02	--	6,100[8]	110	13	27	31	'560/120[12]	--
07/31/00[11]	27.51	17.18	10.33	--	3,000[8]	75	14	28	28	200/130[12]	--
10/30/00[11]	27.51	16.95	10.56	--	6,810[10]	162	<5.00	8.05	<15.0	372/140[12]	--
02/05/01[11]	28.05	18.47	9.58	--	5,860	28.4	6.86	16.2	11.8	285/140[12]	--
05/07/01[11]	28.05	18.85	9.20	--	4,700[6]	120	15	30	42	540/88[12]	--
08/06/01[11]	28.05	17.31	10.74	--	3,700[6]	120	<20	28	33	490/110[12]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-2 (cont)											
11/12/01[11]	28.05	16.60	11.45	--	7,000	29	<10	27	22	93/98[12]	--
02/11/02[11]	28.05	18.99	9.06	--	5,900	43	15	24	27	90/86[12]	--
05/13/02[11]	28.05	18.41	9.64	--	5,500	26	5.2	23	26	120/47[12]	--
08/09/02[11]	28.05	17.76	10.29	--	5,700	26	3.7	26	50	100/69[12]	--
11/07/02[11]	28.05	16.78	11.27	--	5,900	33	4.4	23	21	<100/69[12]	--
02/04/03[11]	28.05	18.92	9.13	--	5,400	22	4.7	13	14	<50/55[12]	--
05/05/03[11]	28.05	19.67	8.38	--	4,500	23	4.7	12	15	<50/31[12]	--
09/06/03[11,14]	28.05	17.65	10.40	--	3,200	13	2	7	7	54	--
11/14/03[11,14]	28.05	17.43	10.62	--	4,000	11	2	7	6	55	--
02/13/04[14,15]	28.05	19.26	8.79	--	6,200	6	2	8	8	31	--
05/13/04[14]	28.05	18.49	9.56	--	3,200	6	3	13	11	34	--
08/17/04[14]	28.05	17.57	10.48	--	4,300	7	1	6	5	46	--
11/10/04[14]	28.05	18.52	9.53	--	3,000	5	1	6	7	37	--
02/08/05[14]	28.05	19.34	8.71	--	4,700	3	2	10	8	22	--
06/03/05[14]	28.05	19.04	9.01	--	4,100	4	3	15	11	23	--
08/05/05[14]	28.05	18.29	9.76	--	3,500	4	1	<0.5	8	23	--
12/02/05[14]	28.05	18.41	9.64	--	2,900	4	2	3	3	24	--
03/03/06[14]	28.05	20.01	8.04	--	3,800	5	6	4	5	9	--
05/31/06[14]	28.05	19.04	9.01	--	4,600	2	1	3	3	8	--
08/18/06[14]	28.05	18.14	9.91	--	4,300	2	1	11	7	14	--
11/17/06[14]	28.05	18.10	9.95	--	4,600	2	0.7	7	4	14	--
02/09/07[14]	28.05	18.95	9.10	--	3,600	1	0.6	3	3	9	--
05/11/07[14]	28.05	18.93	9.12	--	3,600	2	1	5	5	8	--
08/10/07[14]	28.05	17.85	10.20	--	3,600	1	1	7	4	9	--
11/08/07[14]	28.05	17.70	10.35	--	3,600	2	0.7	5	2	7	--
02/07/08[14]	28.05	20.13	7.92	--	5,000	1	1	5	3	5	--
05/02/08[14]	28.05	18.56	9.49	--	3,300	1	0.9	3	2	4	--
07/31/08[14]	28.05	17.70	10.35	--	3,000	2	0.6	2	1	5	--
11/13/08[14]	**28.05**	**17.24**	**10.81**	**--**	**3,800**	**2**	**0.5**	**2**	**0.8**	**4**	**--**
MW-3											
02/16/93	28.50	--	--	--	3,500	<0.5	8.1	4.6	7.7	--	--
03/26/93	28.50	21.32	7.18	--	--	--	--	--	--	--	--
05/27/93	28.50	19.17	9.33	--	4,200	580	84	150	100	--	--
08/18/93	28.50	16.50	12.00	1,400	910	12	3.7	6.2	3.8	--	<5,000

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-3 (cont)											
11/03/93	28.50	15.21	13.29	--	5,300	29	1.9	0.6	27	--	--
02/10/94	28.50	18.87	9.63	<50	63	<0.5	0.7	<0.5	<0.5	--	--
05/12/94	28.50	19.73	8.77	84	<50	<0.5	0.5	<0.5	<0.5	--	--
08/26/94	28.50	17.08	11.42	--	2,100	12	<0.5	5.0	0.5	--	--
11/14/94	28.50	18.43	10.07	--	140	0.78	<0.5	<0.5	<0.5	--	--
02/01/95	28.50	22.21	6.29	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/95	28.50	20.43	8.07	540[2]	330	13	1.1	1.9	0.69	--	--
08/22/95	28.50	18.55	9.95	550[2]	980	32	<1.0	<1.0	<1.0	--	--
12/19/95	28.50	19.10	9.40	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	28.50	23.45	5.05	<50	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	28.50	20.10	8.40	240[2]	320	2.4	<0.5	0.75	<0.5	7.8	--
08/01/96	28.50	18.70	9.80	470[2]	980	9.6	<0.5	0.98	2.2	54	--
10/30/96	28.50	18.70	11.48	760[2]	2,000	14	<10	<10	<10	140	--
02/07/97	28.50	19.90	8.60	61[2]	200[2]	<0.5	<0.5	<0.5	<0.5	8.9	--
05/07/97	28.50	19.49	9.01	550[2]	3,500	14	3.9	3.6	8.0	160	--
07/22/97	28.50	17.38	11.12	800[2]	3,500	55	<10	<10	<10	150	--
11/03/97	28.50	16.99	11.51	910[2]	4,100	140	<5.0	<5.0	<5.0	380	--
01/28/98	28.50	21.16	7.34	--	1,100	24	<1.2	<1.2	2.8	33/6.1[12]	--
05/08/98	28.50	20.44	8.06	250[2]	990	3.6	7.7	0.7	2.2	37/7.5[12]	--
07/29/98	28.50	18.25	10.25	290[2]	1,200	13	<0.5	<0.5	1.4	11/28[12]	--
11/06/98	28.50	17.11	11.39	390[2]	2,600	5.3	<2.5	<2.5	3.0	91/41[12]	--
02/09/99[5]	28.50	22.40	6.10	184[2]	406	<1.0	4.03	<1.0	<1.0	17.7/1.97[12]	--
05/13/99	28.50	19.38	9.12	--	615	13.8	1.05	<0.5	<0.5	43.5/21.2[12]	--
09/07/99	28.50	17.77	10.73	528[2]	2,710	<5.0	<5.0	<5.0	<5.0	96.3/57.9[12]	--
11/24/99	28.50	17.37	11.13	1,070[2]	5,530	<5.0	<5.0	5.59	<5.0	--/66[1,12]	--
02/25/00	28.50	22.22	6.28	--	189	4.68	<0.5	<0.5	<0.5	11.9/<2.0[12]	--
03/01/00	28.50	21.80	6.70	380[2]	--	--	--	--	--	--	--
05/10/00	28.50	19.90	8.60	830[7]	1,600[6]	22	<10	<10	<10	'100/51[12]	--
07/31/00[11]	28.50	18.43	10.07	490[7]	2,200[6]	76	10	<5.0	13	230/52[12]	--
10/30/00[11]	28.50	17.97	10.53	580[9]	3,320[10]	<5.00	<5.00	<5.00	<15.0	147/64[12]	--
02/05/01[11]	29.04	19.78	9.26	--	3,960	<5.00	6.02	<5.00	<5.00	159/70[12]	--
05/07/01[11]	29.04	20.29	8.75	--	2,800[6]	61	12	<10	20	230/49[12]	--
05/10/01[11]	29.04	20.21	8.83	390[13]	--	--	--	--	--	--	--
08/06/01[11]	29.04	18.59	10.45	870[7]	1,600[6]	39	14	1.3	5.6	130/43[12]	--
11/12/01[11]	29.04	17.82	11.22	1,400	3,100	3.6	23	2.3	5.6	40/46[12]	--
02/11/02[11]	29.04	20.66	8.38	700	4,000	10	<5.0	4.2	5.5	44/42[12]	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-3 (cont)											
05/13/02[11]	29.04	19.84	9.20	730	2,500	18	<5.0	<5.0	5.2	44/32[12]	--
08/09/02[11]	29.04	18.87	10.17	560	2,700	17	<5.0	<5.0	<10	45/33[12]	--
11/07/02[11]	29.04	17.91	11.13	660	2,600	24	<5.0	2.0	4.8	51/37[12]	--
02/04/03[11]	29.04	20.44	8.60	370	2,200	13	1.5	2.7	5.0	<50/24[12]	--
05/05/03[11]	29.04	21.22	7.82	580	2,100	14	1.8	2.0	3.9	<20/19[12]	--
09/06/03[11,14]	29.04	18.79	10.25	780	1,800	2	0.6	0.6	1	28	--
11/14/03[11,14]	29.04	18.52	10.52	860	2,000	1	0.6	0.6	0.9	30	--
02/13/04[14,15]	29.04	20.76	8.28	590	3,600	1	0.6	1	2	21	--
05/13/04[14]	29.04	19.87	9.17	670	1,600	1	<0.5	0.5	1	20	--
08/17/04[14]	29.04	18.79	10.25	900	2,500	1	<0.5	<0.5	0.7	25	--
11/10/04[14]	29.04	19.81	9.23	780	1,500	1	0.6	0.5	1	27	--
02/08/05[14]	29.04	20.92	8.12	530	2,500	1	0.6	2	3	11	--
06/03/05[14]	29.04	20.47	8.57	600	1,700	1	<0.5	0.7	1	9	--
08/05/05[14]	29.04	18.44	10.60	530[16]	980	0.6	<0.5	<0.5	0.8	9	--
12/02/05[14]	29.04	19.46	9.58	1,400[17]	2,400	1	2	0.8	1	7	--
03/03/06[14]	29.04	21.46	7.58	530	2,300	0.8	1	<0.5	1	4	--
05/31/06[14]	29.04	20.51	8.53	480	2,700	0.6	<0.5	<0.5	0.8	4	--
08/18/06[14]	29.04	19.33	9.71	410	2,700	<0.5	<0.5	<0.5	0.6	6	--
11/17/06[14]	29.04	19.23	9.81	390	2,600	<0.5	<0.5	<0.5	1	4	--
02/09/07[14]	29.04	20.16	8.88	640	2,100	<0.5	<0.5	<0.5	1	3	--
05/11/07[14]	29.04	20.33	8.71	350	1,400	<0.5	<0.5	<0.5	2	2	--
08/10/07[14]	29.04	19.06	9.98	340	1,300	<0.5	<0.5	<0.5	1	2	--
11/08/07[14]	29.04	18.93	10.11	440	1,400	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/07/08[14]	29.04	21.76	7.28	320	2,100	<0.5	0.7	1	2	0.7	--
05/02/08[14]	29.04	19.86	9.18	260	1,300	<0.5	<0.5	<0.5	<0.5	2	--
07/31/08[14]	29.04	18.91	10.13	500	2,900	<0.5	<0.5	<0.5	<0.5	1	--
11/13/08[14]	**29.04**	**18.46**	**10.58**	**880**	**1,800**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**2**	**--**
MW-4											
08/22/95	27.27	18.16	9.11	--	9,600	100	<10	<10	<10	--	--
12/19/95	27.27	18.97	8.30	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	27.27	21.67	5.60	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	27.27	20.27	7.00	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
08/01/96	27.27	18.12	9.15	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
10/30/96	27.27	18.12	10.74	--	110	<0.5	<0.5	<0.5	<0.5	<2.5	--

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Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-4 (cont)											
02/07/97	27.27	19.47	7.80	--	80	<0.5	<0.5	<0.5	<0.5	4.1	--
05/07/97	27.27	21.42	5.85	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/22/97	27.27	17.22	10.05	--	150	<0.5	<0.5	<0.5	<0.5	<2.5	--
11/03/97	27.27	16.55	10.72	--	52	0.9	<0.5	<0.5	<0.5	--[3]	--
01/28/98	27.27	20.76	6.51	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
05/08/98	27.27	20.25	7.02	--	56	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
07/29/98	27.27	18.32	8.95	--	<50	0.9	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
11/06/98	27.27	16.68	10.59	--	72	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
02/09/99	27.27	21.41	5.86	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0/<1.1[12]	--
05/13/99	27.27	19.32	7.95	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0[12]	--
09/07/99	27.27	17.79	9.48	--	70.2	<0.5	<0.5	<0.5	<0.5	<2.0/<1.0[12]	--
11/24/99	27.27	17.22	10.05	--	227	<0.5	<0.5	<0.5	<0.5	--/<0.5[12]	--
02/25/00	27.27	INACCESSIBLE		--	--	--	--	--	--	--	--
03/01/00	27.27	21.10	6.17	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0[12]	--
05/10/00	27.27	INACCESSIBLE - CAR PARKED OVER WELL				--	--	--	--	--	--
07/31/00	27.27	17.90	9.37	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0[12]	--
10/30/00	27.27	17.80	9.47	--	54.0[10]	<0.500	<0.500	<0.500	<1.50	<2.50/<2.0[12]	--
02/05/01	27.27	INACCESSIBLE - CAR PARKED OVER WELL				--	--	--	--	--	--
05/07/01	27.27	19.46	7.81	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5/<2.0[12]	--
08/06/01	27.27	17.49	9.78	--	<50	1.1	0.52	<0.50	1.1	6.0/<2.0[12]	--
11/12/01	27.27	16.86	10.41	--	93	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
02/11/02	27.27	19.63	7.64	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
05/13/02	27.27	18.95	8.32	--	54	<0.50	0.84	<0.50	<1.5	<2.5/<2[12]	--
08/09/02	27.27	18.02	9.25	--	54	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
11/07/02	27.27	16.85	10.42	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<2[12]	--
02/04/03	27.27	19.52	7.75	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5/<0.5[12]	--
05/05/03	27.27	20.37	6.90	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5/<0.5[12]	--
09/06/03[14]	27.27	17.77	9.50	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/14/03[14]	27.27	17.47	9.80	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/13/04[14]	27.27	19.91	7.36	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/13/04[14]	27.27	18.99	8.28	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/17/04[14]	27.27	17.64	9.63	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/10/04[14]	27.27	18.81	8.46	--	52	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/08/05[14]	27.27	20.07	7.20	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/03/05[14]	27.27	19.66	7.61	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/05/05[14]	27.27	17.83	9.44	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

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3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
MW-4 (cont)											
12/02/05[14]	27.27	18.92	8.35	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/03/06[14]	27.27	20.82	6.45	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/31/06[14]	27.27	19.76	7.51	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/18/06[14]	27.27	18.85	8.42	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/17/06[14]	27.27	18.31	8.96	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/09/07[14]	27.27	19.54	7.73	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/11/07[14]	27.27	19.67	7.60	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/07[14]	27.27	18.26	9.01	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/08/07[14]	27.27	18.01	9.26	--	<50	<0.5	<0.5	<0.5	1	1	--
02/07/08[14]	27.27	20.89	6.38	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/08[14]	27.27	19.15	8.12	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/31/08[14]	27.27	17.99	9.28	--	75	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/13/08[14]	**27.27**	**17.34**	**9.93**	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--
TRIP BLANK											
05/27/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	--	--
08/18/93	--	--	--	1,400	<50	<0.5	<0.5	<0.5	<1.5	--	<5,000
11/03/93	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/10/94	--	--	--	<50	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/94	--	--	--	84	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/26/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
11/14/94	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
02/01/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
05/12/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
08/22/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--
12/19/95	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/31/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
04/30/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
08/01/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
10/30/96	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/07/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/07/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
07/22/97	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
01/28/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--/<2.0[12]	--
05/08/98	--	--	--	--	--	--	--	--	--	--/<2.0[12]	--

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3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
TRIP BLANK (cont)											
07/29/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	--/<2.0[12]	--
11/06/98	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/09/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
05/13/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0/<2.0[12]	--
09/07/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0	--
11/24/99	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
02/25/00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--
03/01/00	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--
05/10/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
07/31/00	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
10/30/00	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<1.50	<2.50	--
02/05/01	--	--	--	--	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	--
05/07/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
05/10/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
08/06/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<0.50	<2.5	--
QA											
11/12/01	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/11/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/13/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
08/09/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
11/07/02	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
02/04/03	--	--	--	--	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--
05/05/03	--	--	--	--	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--
09/06/03[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/14/03[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/13/04[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/13/04[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/17/04[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/10/04[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/08/05[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
06/03/05[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/05/05[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
12/02/05[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
03/03/06[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/31/06[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/18/06[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID/ DATE	TOC* (ft.)	GWE (msl)	DTW (ft.)	TPH-D (µg/L)	TPH-G (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TOG (µg/L)
QA (cont)											
11/17/06[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/09/07[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/11/07[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
08/10/07[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/08/07[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
02/07/08[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
05/02/08[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
07/31/08[14]	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--
11/13/08[14]	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	--

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 10, 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-D = Total Petroleum Hydrocarbons as Diesel
TPH-G = Total Petroleum Hydrocarbons as Gasoline
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
MTBE = Methyl tertiary butyl ether
TOG = Total Oil and Grease
(µg/L) = Micrograms per liter
NP = No purge
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank

* TOC elevations were re-surveyed on March 8, 2001, by Virgil Chavez Land Surveying. The benchmark for the survey was a City of Oakland benchmark, being a cut square top of curb at the centerline return at the northwest corner of East 14th and 37th Avenue, (Benchmark Elevation = 38.21 feet, NGVD 29).

1 Lab could not get a good ion chromatogram match for MTBE. See laboratory report.
2 Chromatogram pattern indicates an unidentified hydrocarbon.
3 No value for MTBE could be determined; see lab report for analyses.
4 Confirmation run.
5 ORC was installed.
6 Laboratory report indicates gasoline C6-C12.
7 Laboratory report indicates unidentified hydrocarbons <C16.
8 Laboratory report indicates gasoline C6-C12 + unidentified hydrocarbons <C6.
9 Laboratory report indicates unidentified hydrocarbons >C16.
10 Laboratory report indicates hydrocarbon pattern present in the requested fuel quantization range but does not resemble the pattern of the requested fuel.
11 ORC in well.
12 MTBE by EPA Method 8260.
13 Laboratory report indicates unidentified hydrocarbons C9-C17.
14 BTEX and MTBE by EPA Method 8260.
15 ORC removed from well.
16 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range earlier and later than #2 fuel.
17 Laboratory report indicates the observed sample pattern is not typical of #2 fuel/diesel. It elutes in the DRO range earlier than #2 fuel.
18 No Purge, unable to access well with truck.

Table 2

Dissolved Oxygen Concentrations

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID	DATE	Before Purging (mg/L)	After Purging (mg/L)
VH-1	05/10/00	0.90	--
	07/31/00	1.25	--
	10/30/00	1.97	--
	05/07/01	1.10	--
	08/06/01	1.40	--
	11/12/01	0.90	--
	02/11/02	1.10	--
	05/13/02	0.70	--
MW-2	05/10/00	0.57	--
	07/31/00	1.26	--
	10/30/00	1.25	--
	05/07/01	0.90	--
	08/06/01	1.10	--
	11/12/01	0.80	--
	02/11/02	0.60	--
	05/13/02	0.80	--
MW-3	05/10/00	1.56	--
	07/31/00	1.46	--
	10/30/00	1.18	--
	05/07/01	0.70	--
	08/06/01	0.90	--
	11/12/01	0.50	--
	02/11/02	0.80	--
	05/13/02	1.80	--
MW-4	05/10/00	INACCESSIBLE - CAR PARKED OVER WELL	
	07/31/00	0.64	--
	10/30/00	0.97	--
	02/05/01	INACCESSIBLE - CAR PARKED OVER WELL	
	05/07/01	0.50	--
	08/06/01	0.70	--
	11/12/01	1.00	--
	02/11/02	1.00	--
	05/13/02	2.90	--

EXPLANATIONS:

(mg/L) = Milligrams per liter

-- = Not Measured

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
VH-1	02/05/01	<500	<50	160	<2.0	<2.0	<2.0
	05/07/01	--	--	110	--	--	--
	08/06/01	--	--	140	--	--	--
	11/12/01	--	--	61	--	--	--
	02/11/02	--	--	52	--	--	--
	05/13/02	--	--	80	--	--	--
	08/09/02	--	--	89	--	--	--
	11/07/02	--	--	50	--	--	--
	02/04/03	--	--	53	--	--	--
	05/05/03	--	--	62	--	--	--
	09/06/03	--	--	59	--	--	--
	11/14/03	--	--	47	--	--	--
	02/13/04	--	--	47	--	--	--
	05/13/04	--	--	74	--	--	--
	08/17/04	--	--	58	--	--	--
	11/10/04	INACCESSIBLE	--	--	--	--	--
	02/08/05	--	--	48	--	--	--
	06/03/05	--	--	45	--	--	--
	08/05/05	--	--	46	--	--	--
	12/02/05	--	--	57	--	--	--
	03/03/06	--	--	40	--	--	--
	05/31/06	--	--	34	--	--	--
	08/18/06	--	--	33	--	--	--
	11/17/06	--	--	33	--	--	--
	02/09/07	--	--	28	--	--	--
	05/11/07	--	--	26	--	--	--
	08/10/07	--	--	21	--	--	--
	11/08/07	--	--	18	--	--	--
	02/07/08	--	--	14	--	--	--
	05/02/08	--	--	17	--	--	--
	07/31/08	--	--	14	--	--	--
	11/13/08	**--**	**--**	**12**	**--**	**--**	**--**

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-2	02/05/01	<500	<50	140	<2.0	<2.0	<2.0
	05/07/01	--	--	88	--	--	--
	08/06/01	--	--	110	--	--	--
	11/12/01	--	--	98	--	--	--
	02/11/02	--	--	86	--	--	--
	05/13/02	--	--	47	--	--	--
	08/09/02	--	--	69	--	--	--
	11/07/02	--	--	69	--	--	--
	02/04/03	--	--	55	--	--	--
	05/05/03	--	--	31	--	--	--
	09/06/03	--	--	54	--	--	--
	11/14/03	--	--	55	--	--	--
	02/13/04	--	--	31	--	--	--
	05/13/04	--	--	34	--	--	--
	08/17/04	--	--	46	--	--	--
	11/10/04	--	--	37	--	--	--
	02/08/05	--	--	22	--	--	--
	06/03/05	--	--	23	--	--	--
	08/05/05	--	--	23	--	--	--
	12/02/05	--	--	24	--	--	--
	03/03/06	--	--	9	--	--	--
	05/31/06	--	--	8	--	--	--
	08/18/06	--	--	14	--	--	--
	11/17/06	--	--	14	--	--	--
	02/09/07	--	--	9	--	--	--
	05/11/07	--	--	8	--	--	--
	08/10/07	--	--	9	--	--	--
	11/08/07	--	--	7	--	--	--
	02/07/08	--	--	5	--	--	--
	05/02/08	--	--	4	--	--	--
	07/31/08	--	--	5	--	--	--
	11/13/08	--	--	**4**	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-3	02/05/01	<500	<50	70	<2.0	<2.0	<2.0
	05/07/01	--	--	49	--	--	--
	08/06/01	--	--	43	--	--	--
	11/12/01	--	--	46	--	--	--
	02/11/02	--	--	42	--	--	--
	05/13/02	--	--	32	--	--	--
	08/09/02	--	--	33	--	--	--
	11/07/02	--	--	37	--	--	--
	02/04/03	--	--	24	--	--	--
	05/05/03	--	--	19	--	--	--
	09/06/03	--	--	28	--	--	--
	11/14/03	--	--	30	--	--	--
	02/13/04	--	--	21	--	--	--
	05/13/04	--	--	20	--	--	--
	08/17/04	--	--	25	--	--	--
	11/10/04	--	--	27	--	--	--
	02/08/05	--	--	11	--	--	--
	06/03/05	--	--	9	--	--	--
	08/05/05	--	--	9	--	--	--
	12/02/05	--	--	7	--	--	--
	03/03/06	--	--	4	--	--	--
	05/31/06	--	--	4	--	--	--
	08/18/06	--	--	6	--	--	--
	11/17/06	--	--	4	--	--	--
	02/09/07	--	--	3	--	--	--
	05/11/07	--	--	2	--	--	--
	08/10/07	--	--	2	--	--	--
	11/08/07	--	--	<0.5	--	--	--
	02/07/08	--	--	0.7	--	--	--
	05/02/08	--	--	2	--	--	--
	07/31/08	--	--	1	--	--	--
	11/13/08	--	--	**2**	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-4612

3616 San Leandro Street

Oakland, California

WELL ID	DATE	ETHANOL (µg/L)	TBA (µg/L)	MTBE (µg/L)	DIPE (µg/L)	ETBE (µg/L)	TAME (µg/L)
MW-4	05/07/01	--	--	<2.0	--	--	--
	08/06/01	--	--	<2.0	--	--	--
	11/12/01	--	--	<2	--	--	--
	02/11/02	--	--	<2	--	--	--
	05/13/02	--	--	<2	--	--	--
	08/09/02	--	--	<2	--	--	--
	11/07/02	--	--	<2	--	--	--
	02/04/03	--	--	<0.5	--	--	--
	05/05/03	--	--	<0.5	--	--	--
	09/06/03	--	--	<0.5	--	--	--
	11/14/03	--	--	<0.5	--	--	--
	02/13/04	--	--	<0.5	--	--	--
	05/13/04	--	--	<0.5	--	--	--
	08/17/04	--	--	<0.5	--	--	--
	11/10/04	--	--	<0.5	--	--	--
	02/08/05	--	--	<0.5	--	--	--
	06/03/05	--	--	<0.5	--	--	--
	08/05/05	--	--	<0.5	--	--	--
	12/02/05	--	--	<0.5	--	--	--
	03/03/06	--	--	<0.5	--	--	--
	05/31/06	--	--	<0.5	--	--	--
	08/18/06	--	--	<0.5	--	--	--
	11/17/06	--	--	<0.5	--	--	--
	02/09/07	--	--	<0.5	--	--	--
	05/11/07	--	--	<0.5	--	--	--
	08/10/07	--	--	<0.5	--	--	--
	11/08/07	--	--	1	--	--	--
	02/07/08	--	--	<0.5	--	--	--
	05/02/08	--	--	<0.5	--	--	--
	07/31/08	--	--	<0.5	--	--	--
	11/13/08	--	--	**<0.5**	--	--	--

Table 3

Groundwater Analytical Results - Oxygenate Compounds

Former Chevron Service Station #9-4612

3616 San Leandro Street

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

(µg/L) = Micrograms per liter

-- = Not Analyzed

ANALYTICAL METHOD:

EPA Method 8260 for Oxygenate Compounds

STANDARD OPERATING PROCEDURE - GROUNDWATER SAMPLING

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

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

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

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

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

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

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-4612 Job Number: 386473
Site Address: 3616 San Leandro Street Event Date: 11.13.08 (inclusive)
City: Oakland, CA Sampler: FT

Well ID VH-1 Date Monitored: 11.13.08
Well Diameter 2 (4) in.
Total Depth 28.49 ft.
Depth to Water 10.18 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.

18.31 xVF ____ = ____ x3 case volume = Estimated Purge Volume: ____ gal.

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

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

Sampling Equipment:
Disposable Bailer
Pressure Bailer
Discrete Bailer
Peristaltic Pump
QED Bladder Pump
Other: GRAB

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

Start Time (purge): ____ Weather Conditions: SUNNY
Sample Time/Date: 1240 / 11.13.08 Water Color: CLEAR Odor: (Y) / N
Approx. Flow Rate: ____ gpm. Sediment Description: ____
Did well de-water? ____ If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: ____

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

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
VH-1	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	x 500ml ambers	YES	NP	LANCASTER	TPH-D (8015)

COMMENTS: ____

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #9-4612 Job Number: 386473
Site Address: 3616 San Leandro Street Event Date: 11.13.08 (inclusive)
City: Oakland, CA Sampler: FT

Well ID MW-2 Date Monitored: 11.13.08
Well Diameter 2/4 in.
Total Depth 19.39 ft.
Depth to Water 10.81 ft.

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

☐ Check if water column is less then 0.50 ft.

8.58 xVF .17 = 1.45 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.52

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Discrete Bailer	
Suction Pump		Peristaltic Pump	
Grundfos		QED Bladder Pump	
Peristaltic Pump		Other:	
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): 1340 Weather Conditions: SUNNY
Sample Time/Date: 1358 / 11.13.08 Water Color: CLEAR Odor: (Y) / N
Approx. Flow Rate: ~ gpm. Sediment Description:
Did well de-water? NO If yes, Time: Volume: gal. DTW @ Sampling: 10.95

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1343	1.5	6.98	732	21.8		
1346	3.0	6.95	740	21.6		
1350	4.5	6.92	748	21.5		

LABORATORY INFORMATION

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

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING
FIELD DATA SHEET

Client/Facility#: Chevron #9-4612 | Job Number: 386473
Site Address: 3616 San Leandro Street | Event Date: 11.13.08 (inclusive)
City: Oakland, CA | Sampler: FT

Well ID: MW-3 | Date Monitored: 11.13.08
Well Diameter: (2) 4 in.
Total Depth: 18.06 ft.
Depth to Water: 10.58 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.

7.48 xVF .17 = 1.27 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 12.07

Purge Equipment:		Sampling Equipment:	
Disposable Bailer	✓	Disposable Bailer	✓
Stainless Steel Bailer		Pressure Bailer	
Stack Pump		Discrete Bailer	
Suction Pump		Peristaltic Pump	
Grundfos		QED Bladder Pump	
Peristaltic Pump		Other:	
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): 1315 | Weather Conditions: Sunny
Sample Time/Date: 1330 / 11.13.08 | Water Color: Lt. Gray. Odor: (Y) / N
Approx. Flow Rate: — gpm. | Sediment Description: S. Silty
Did well de-water? No If yes, Time: ____ Volume: ____ gal. DTW @ Sampling: 10.65

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C) F	D.O. (mg/L)	ORP (mV)
1318	1.5	7.08	752	21.9		
1321	3.0	7.05	761	21.7		
1324	4.0	7.01	770	21.5		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-3	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	2 x 500ml ambers	YES	NP	LANCASTER	TPH-D (8015)

COMMENTS:

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

GETTLER-RYAN INC.

WELL MONITORING/SAMPLING FIELD DATA SHEET

Client/Facility#: Chevron #9-4612 | Job Number: 386473
Site Address: 3616 San Leandro Street | Event Date: 11.13.08 (inclusive)
City: Oakland, CA | Sampler: FT

Well ID: MW-4
Well Diameter: 2 4 in.
Total Depth: 17.88 ft.
Depth to Water: 9.93 ft.
Date Monitored: 11.13.08

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.

7.95 xVF .17 = 1.35 x3 case volume = Estimated Purge Volume: 4.0 gal.

Depth to Water w/ 80% Recharge [(Height of Water Column x 0.20) + DTW]: 11.52

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): 1250
Sample Time/Date: 1305 / 11.13.08
Approx. Flow Rate: — gpm.
Did well de-water? NO If yes, Time: Volume: gal.
Weather Conditions: SUNNY
Water Color: LT-BRN Odor: Y / (N)
Sediment Description:
DTW @ Sampling: 10.01

Time (2400 hr.)	Volume (gal.)	pH	Conductivity (µmhos/cm - µS)	Temperature (C / F)	D.O. (mg/L)	ORP (mV)
1253	1.5	7.32	581	22.3		
1254	3.0	7.30	580	21.9		
1259	4.0	7.28	578	21.7		

LABORATORY INFORMATION

SAMPLE ID	(#) CONTAINER	REFRIG.	PRESERV. TYPE	LABORATORY	ANALYSES
MW-4	6 x voa vial	YES	HCL	LANCASTER	TPH-G(8015)/BTEX+MTBE(8260)
	x 500ml ambers	YES	NP	LANCASTER	TPH-D (8015)

COMMENTS:

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

Chevron California Region Analysis Request/Chain of Custody

Lancaster Laboratories

11 1308-06

For Lancaster Laboratories use only
Acct. #: 12099 Sample #: 5528853-57 Group #: 308889

CRA MTI Project #: 61H-1995

1120124

Facility #: SS#9-4612 G-R#386473 Global ID#T0600100333
Site Address: 3616 SAN LEANDRO STREET, OAKLAND, CA
Chevron PM: MTI Lead Consultant: CRAKJ
Consultant/Office: G-R, Inc., 6747 Sierra Court, Suite J, Dublin, CA 94568
Consultant Prj. Mgr.: Deanna L. Harding (deanna@grinc.com)
Consultant Phone #: 925-551-7555 Fax #: 925-551-7899
Sampler: FRANK TERRINONI

Matrix: ☐ Potable ☐ NPDES; Soil / Water / ☐ Oil ☐ Air

Analyses Requested / Preservation Codes

Sample Identification	Date Collected	Time Collected	Grab	Composite	Soil	Water	Oil	Air	Total Number of Containers	BTEX + MTBE 8260 ☒ 8021 ☐	TPH 8015 MOD GRO	TPH 8015 MOD DRO ☐ Silica Gel Cleanup	8260 full scan	Oxygenates	Method	Total Lead	Method	Dissolved Lead	Method
QA	11.13.08					W			2	X	X								
VH-1	↓	1240	X			↓			6	X	X								
MW-2		1358	X						6	X	X								
MW-3		1330	X						8	X	X	X							
MW-4	↓	1305	X			↓			6	X	X								

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

☐ J value reporting needed
☒ Must meet lowest detection limits possible for 8260 compounds
8021 MTBE Confirmation
☐ Confirm highest hit by 8260
☐ Confirm all hits by 8260
☐ Run ____ oxy's on highest hit
☐ Run ____ oxy's on all hits

Comments / Remarks

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

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

	Date	Time		Date	Time
Relinquished by:	11.13.08	1550	Received by: A. Salazar 131NOV08	131NOV08	1550
Relinquished by: A. Salazar 131NOV08		1630	Received by: FEDEX		
Relinquished by:			Received by:		
Relinquished by Commercial Carrier: UPS FedEx Other			Received by:		0855
Temperature Upon Receipt 0.4-2 C°			Custody Seals Intact? Yes No		

Lancaster Laboratories

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Analysis Report

ANALYTICAL RESULTS

Prepared for:

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

916-677-3407

Prepared by:

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

SAMPLE GROUP

The sample group for this submittal is 1120124. Samples arrived at the laboratory on Friday, November 14, 2008. The PO# for this group is 94612 and the release number is MTI.

Client Description	Lancaster Labs Number
QA-T-081113 NA Water	5528853
VH-1-W-081113 Grab Water	5528854
MW-2-W-081113 Grab Water	5528855
MW-3-W-081113 Grab Water	5528856
MW-4-W-081113 Grab Water	5528857

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

Lancaster Laboratories

Analysis Report

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

Respectfully Submitted,

Christine Dulaney
Senior Specialist

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5528853 **Group No. 1120124**

QA-T-081113 NA Water
Facility# 94612 Job# 386473 MTI# 61H-1996 GRD
3616 San Leandro-Oakland T0600100333 QA
Collected:11/13/2008

Account Number: 12099

Submitted: 11/14/2008 08:55
Reported: 11/26/2008 at 14:56
Discard: 12/27/2008

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

4612Q

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/20/2008 19:29	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/23/2008 01:11	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/20/2008 19:29	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2008 01:11	Kelly E Brickley	1

Lancaster Laboratories

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Analysis Report

Lancaster Laboratories Sample No. WW5528854 **Group No. 1120124**

VH-1-W-081113 Grab Water
Facility# 94612 Job# 386473 MTI# 61H-1996 GRD
3616 San Leandro-Oakland T0600100333 VH-1
Collected:11/13/2008 12:40 by FT

Account Number: 12099

Submitted: 11/14/2008 08:55
Reported: 11/26/2008 at 14:56
Discard: 12/27/2008

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

46121

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	2,500	1,000	ug/l	20
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	12	0.5	ug/l	1
05401	Benzene	71-43-2	6	0.5	ug/l	1
05407	Toluene	108-88-3	1	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	1	0.5	ug/l	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/21/2008 01:12	Kathie J Bowman	20
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/23/2008 01:33	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/21/2008 01:12	Kathie J Bowman	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/23/2008 01:33	Kelly E Brickley	1

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Analysis Report

Lancaster Laboratories Sample No. WW5528855 **Group No. 1120124**

MW-2-W-081113 Grab Water
Facility# 94612 Job# 386473 MTI# 61H-1996 GRD
3616 San Leandro-Oakland T0600100333 MW-2
Collected:11/13/2008 13:58 by FT

Account Number: 12099

Submitted: 11/14/2008 08:55
Reported: 11/26/2008 at 14:56
Discard: 12/27/2008

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

46122

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	3,800	1,000	ug/l	20
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	4	0.5	ug/l	1
05401	Benzene	71-43-2	2	0.5	ug/l	1
05407	Toluene	108-88-3	0.5	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	2	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	0.8	0.5	ug/l	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/21/2008 01:36	Kathie J Bowman	20
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 02:59	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/21/2008 01:36	Kathie J Bowman	20
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 02:59	Florida A Cimino	1

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Analysis Report

Lancaster Laboratories Sample No. WW5528856 **Group No. 1120124**

MW-3-W-081113 Grab Water
Facility# 94612 Job# 386473 MTI# 61H-1996 GRD
3616 San Leandro-Oakland T0600100333 MW-3
Collected:11/13/2008 13:30 by FT

Account Number: 12099

Submitted: 11/14/2008 08:55
Reported: 11/26/2008 at 14:56
Discard: 12/27/2008

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

46123

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
06609	DRO (C10-C28)	n.a.	880	50	ug/l	1
01728	TPH-GRO N. CA water C6-C12	n.a.	1,800	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	2	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
06609	DRO (C10-C28)	SW-846 8015B	1	11/20/2008 19:51	Diane V Do	1
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/24/2008 19:54	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 03:41	Florida A Cimino	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/24/2008 19:54	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 03:41	Florida A Cimino	1
02376	Extraction - Fuel/TPH (Waters)	SW-846 3510C	1	11/19/2008 09:15	Kerrie A Freeburn	1

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Analysis Report

Lancaster Laboratories Sample No. WW5528857 **Group No. 1120124**

MW-4-W-081113 Grab Water
Facility# 94612 Job# 386473 MTI# 61H-1996 GRD
3616 San Leandro-Oakland T0600100333 MW-4
Collected:11/13/2008 13:05 by FT

Account Number: 12099

Submitted: 11/14/2008 08:55
Reported: 11/26/2008 at 14:56
Discard: 12/27/2008

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

46124

CAT No.	Analysis Name	CAS Number	As Received Result	As Received Method Detection Limit	Units	Dilution Factor
01728	TPH-GRO N. CA water C6-C12	n.a.	N.D.	50	ug/l	1
06054	BTEX+MTBE by 8260B					
02010	Methyl Tertiary Butyl Ether	1634-04-4	N.D.	0.5	ug/l	1
05401	Benzene	71-43-2	N.D.	0.5	ug/l	1
05407	Toluene	108-88-3	N.D.	0.5	ug/l	1
05415	Ethylbenzene	100-41-4	N.D.	0.5	ug/l	1
06310	Xylene (Total)	1330-20-7	N.D.	0.5	ug/l	1

State of California Lab Certification No. 2116

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

Laboratory Chronicle

CAT No.	Analysis Name	Method	Trial#	Analysis Date and Time	Analyst	Dilution Factor
01728	TPH-GRO - Waters	SW-846 8015B modified	1	11/24/2008 20:19	Kathie J Bowman	1
06054	BTEX+MTBE by 8260B	SW-846 8260B	1	11/22/2008 17:08	Kelly E Brickley	1
01146	GC VOA Water Prep	SW-846 5030B	1	11/24/2008 20:19	Kathie J Bowman	1
01163	GC/MS VOA Water Prep	SW-846 5030B	1	11/22/2008 17:08	Kelly E Brickley	1

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Analysis Report

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 11/26/08 at 02:56 PM

Group Number: 1120124

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: 083230030A	Sample number(s): 5528856							
DRO (C10-C28)	N.D.	32.	ug/l	103	105	63-119	2	20
Batch number: 08324A07A	Sample number(s): 5528853-5528855							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	100	109	75-135	9	30
Batch number: 08329A07A	Sample number(s): 5528856-5528857							
TPH-GRO N. CA water C6-C12	N.D.	50.	ug/l	109	118	75-135	8	30
Batch number: F083263AA	Sample number(s): 5528855-5528856							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	98		73-119		
Benzene	N.D.	0.5	ug/l	102		78-119		
Toluene	N.D.	0.5	ug/l	105		85-115		
Ethylbenzene	N.D.	0.5	ug/l	106		82-119		
Xylene (Total)	N.D.	0.5	ug/l	107		83-113		
Batch number: F083273AA	Sample number(s): 5528853-5528854							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	96		73-119		
Benzene	N.D.	0.5	ug/l	97		78-119		
Toluene	N.D.	0.5	ug/l	102		85-115		
Ethylbenzene	N.D.	0.5	ug/l	100		82-119		
Xylene (Total)	N.D.	0.5	ug/l	102		83-113		
Batch number: F083274AA	Sample number(s): 5528857							
Methyl Tertiary Butyl Ether	N.D.	0.5	ug/l	95		73-119		
Benzene	N.D.	0.5	ug/l	99		78-119		
Toluene	N.D.	0.5	ug/l	101		85-115		
Ethylbenzene	N.D.	0.5	ug/l	100		82-119		
Xylene (Total)	N.D.	0.5	ug/l	102		83-113		

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: 08324A07A	Sample number(s): 5528853-5528855 UNSPK: P528859								
TPH-GRO N. CA water C6-C12	136		63-154						
Batch number: 08329A07A	Sample number(s): 5528856-5528857 UNSPK: P530633								
TPH-GRO N. CA water C6-C12	111		63-154						

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

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 11/26/08 at 02:56 PM

Group Number: 1120124

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: F083263AA	Sample number(s): 5528855-5528856 UNSPK: P529922								
Methyl Tertiary Butyl Ether	101	102	69-127	1	30				
Benzene	107	107	83-128	0	30				
Toluene	106	108	83-127	2	30				
Ethylbenzene	105	105	82-129	1	30				
Xylene (Total)	106	108	82-130	2	30				
Batch number: F083273AA	Sample number(s): 5528853-5528854 UNSPK: P530737								
Methyl Tertiary Butyl Ether	101	102	69-127	1	30				
Benzene	108	108	83-128	0	30				
Toluene	111	108	83-127	3	30				
Ethylbenzene	111	110	82-129	1	30				
Xylene (Total)	111	107	82-130	3	30				
Batch number: F083274AA	Sample number(s): 5528857 UNSPK: P528859								
Methyl Tertiary Butyl Ether	100	94	69-127	6	30				
Benzene	108	101	83-128	7	30				
Toluene	109	101	83-127	7	30				
Ethylbenzene	110	101	82-129	8	30				
Xylene (Total)	111	103	82-130	7	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: DRO (C10-C28)
Batch number: 083230030A

	Orthoterphenyl
5528856	89
Blank	83
LCS	93
LCSD	99
Limits:	59-131

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 08324A07A

	Trifluorotoluene-F
5528853	114
5528854	114
5528855	115
Blank	112
LCS	122
LCSD	125
MS	126
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.

Quality Control Summary

Client Name: Chevron c/o CRA
Reported: 11/26/08 at 02:56 PM

Group Number: 1120124

Surrogate Quality Control

Analysis Name: TPH-GRO N. CA water C6-C12
Batch number: 08329A07A

	Trifluorotoluene-F
5528856	137*
5528857	105
Blank	112
LCS	118
LCSD	119
MS	123
Limits:	63-135

Analysis Name: BTEX+MTBE by 8260B
Batch number: F083263AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5528855	89	89	95	101
5528856	93	92	100	107
Blank	94	92	98	96
LCS	91	89	95	93
MS	95	96	99	95
MSD	94	93	97	94
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: F083273AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5528853	93	90	94	92
5528854	95	94	99	98
Blank	96	93	98	95
LCS	95	94	101	98
MS	97	95	101	101
MSD	97	97	99	100
Limits:	80-116	77-113	80-113	78-113

Analysis Name: BTEX+MTBE by 8260B
Batch number: F083274AA

	Dibromofluoromethane	1,2-Dichloroethane-d4	Toluene-d8	4-Bromofluorobenzene
5528857	92	89	93	96
Blank	92	90	94	93
LCS	93	93	96	99
MS	94	93	95	98
MSD	93	92	95	98
Limits:	80-116	77-113	80-113	78-113

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

Lancaster Laboratories
Explanation of Symbols and Abbreviations

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

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

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

> greater than

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

ppb parts per billion

Dry weight basis Results printed under this heading have been adjusted for moisture content. This increases the analyte weight concentration to approximate the value present in a similar sample without moisture.

U.S. EPA data qualifiers:

Organic Qualifiers

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

Inorganic Qualifiers

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

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

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

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APPENDIX F

CONCENTRATION TREND CALCULATIONS

Predicted Time to Cleanup of TPHg in Well VH-1, Former Chevron Station 9-4612, San Leandro Street, Oakland, CA

Calculate "time to cleanup" given the first-order decay equation:

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

Given

Water Quality Objective:	y	210 ug/L
Constant:	b	3,847
Constant:	a	-4.00E-04
Date of first sample:		3/3/2006

Calculate

Days from first sample:	x	7,270 Days
Years from first sample:		19.9 Years
Estimated date of cleanup:		Jan-2026

Calculated Half Life = -ln(2)/a

1,733 Days

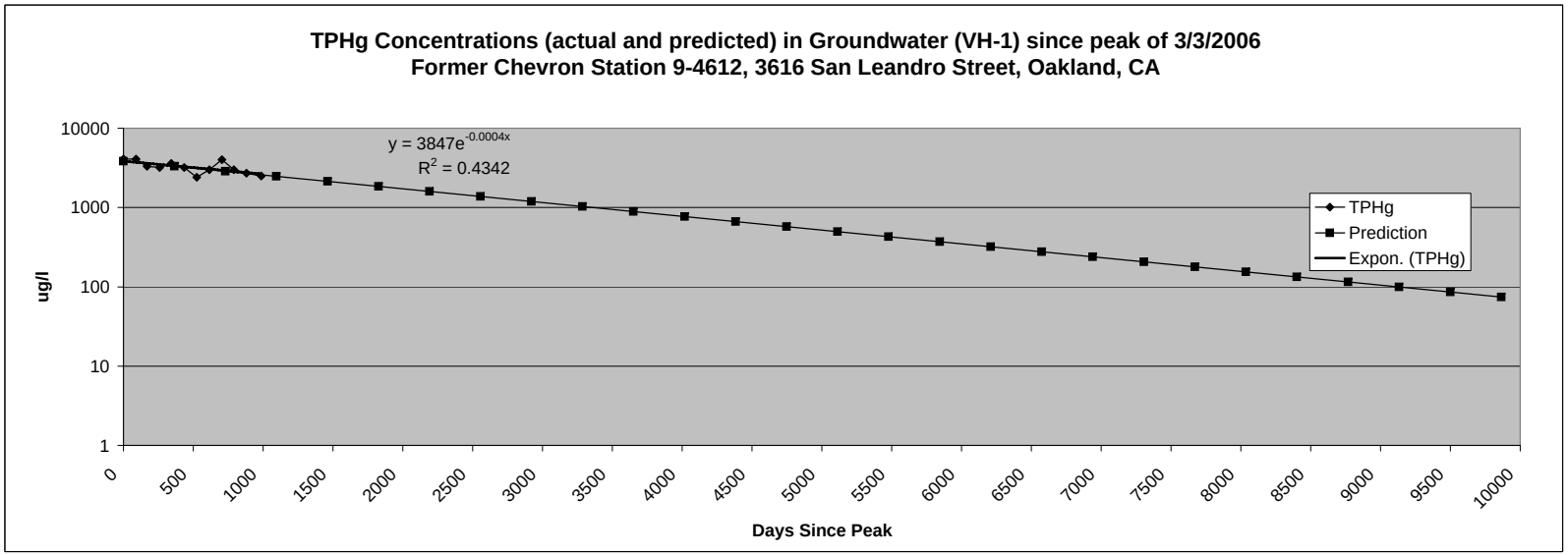
4.75 years

Equation of Trendline

$y = 3847e^{-0.0004x}$

Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
3/3/2006	0	3,847
3/3/2007	365	3,324
3/2/2008	730	2,873
3/2/2009	1,095	2,483
3/3/2010	1,461	2,144
3/3/2011	1,826	1,853
3/2/2012	2,191	1,601
3/2/2013	2,556	1,384
3/3/2014	2,922	1,195
3/3/2015	3,287	1,033
3/2/2016	3,652	893
3/2/2017	4,017	771
3/3/2018	4,383	666
3/3/2019	4,748	576
3/2/2020	5,113	498
3/2/2021	5,478	430
3/3/2022	5,844	371
3/3/2023	6,209	321
3/3/2024	6,575	277
3/3/2025	6,940	240
3/4/2026	7,306	207
3/4/2027	7,671	179
3/4/2028	8,037	155
3/4/2029	8,402	134
3/5/2030	8,768	115
3/5/2031	9,133	100
3/5/2032	9,499	86
3/5/2033	9,864	74



Predicted Time to Cleanup of TPHg in Well MW-2, Former Chevron Station 9-4612, 3616 San Leandro Street, Oakland, CA

Calculate "time to cleanup" given the first-order decay equation:

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

Given

Water Quality Objective:	y	210	ug/L
Constant:	b	5,198	
Constant:	a	-2.00E-04	
Date of first sample:		5/7/2001	

Calculate

Days from first sample:	x	16,044	Days
Years from first sample:		44.0	Years
Estimated date of cleanup:		Apr-2045	

Calculated Half Life = -ln(2)/a

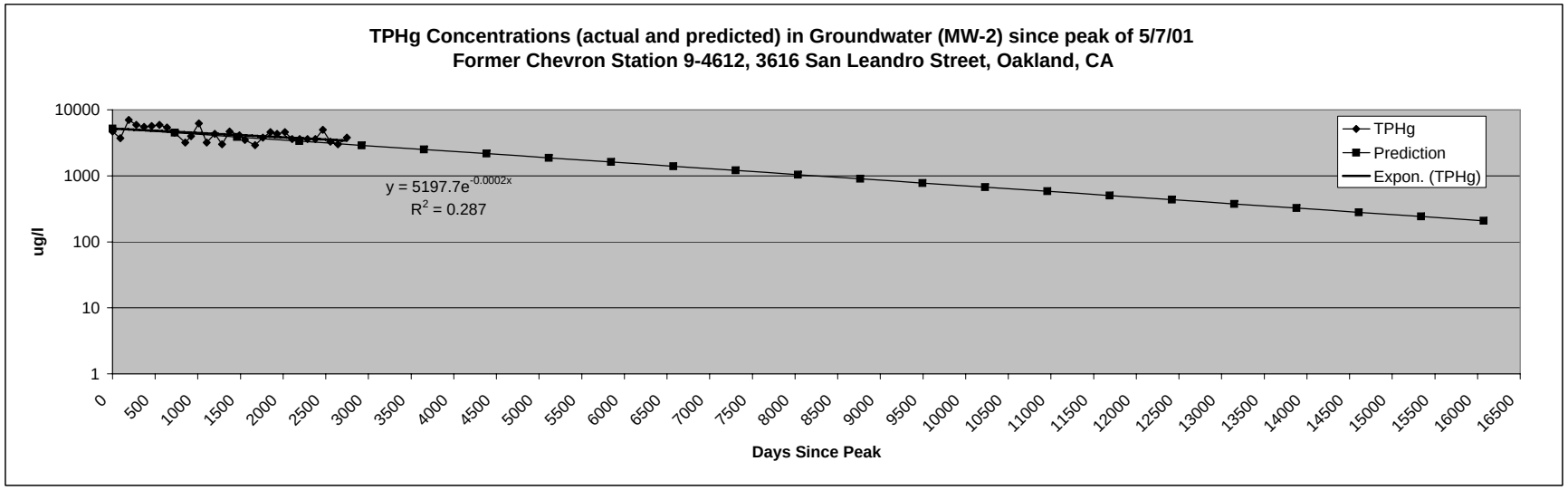
3,466	Days
9.50	years

Equation of trendline

$y = 5197.7e^{-0.0002x}$

Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
5/7/2001	0	5,198
5/7/2003	730	4,492
5/7/2005	1,461	3,881
5/7/2007	2,191	3,354
5/7/2009	2,922	2,897
5/7/2011	3,652	2,504
5/7/2013	4,383	2,163
5/7/2015	5,113	1,869
5/7/2017	5,844	1,615
5/7/2019	6,574	1,396
5/7/2021	7,305	1,206
5/7/2023	8,035	1,042
5/7/2025	8,766	900
5/7/2027	9,496	778
5/7/2029	10,227	672
5/7/2031	10,957	581
5/7/2033	11,688	502
5/7/2035	12,418	434
5/7/2037	13,149	375
5/7/2039	13,879	324
5/7/2041	14,610	280
5/7/2043	15,340	242
5/7/2045	16,071	209



Predicted Time to Cleanup of TPHg in Well MW-3, Former Chevron Station 9-4612, 3616 San Leandro Street, Oakland, CA

Calculate "time to cleanup" given the first-order decay equation:

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

Given

Water Quality Objective:	y	210	ug/L
Constant:	b	2,844	
Constant:	a	-3.00E-04	
Date of first sample:		5/7/2001	

Calculate

Days from first sample:	x	8,686	Days
Years from first sample:		23.8	Years
Estimated date of cleanup:		Feb-2025	

Calculated Half Life = -ln(2)/a

2,310 Days

6.33 years

Equation of trendline

$y = 2844.2e^{-0.0003x}$

Concentration Trend Prediction

Date	Days from First Sample	Predicted Concentration (ug/l)
5/7/2001	0	2,844
5/7/2003	730	2,285
5/7/2005	1,461	1,835
5/7/2007	2,191	1,474
5/7/2009	2,922	1,184
5/7/2011	3,652	951
5/7/2013	4,383	764
5/7/2015	5,113	613
5/7/2017	5,844	493
5/7/2019	6,574	396
5/7/2021	7,305	318
5/7/2023	8,035	255
5/7/2025	8,766	205