March 11, 2004

Mr. Amir K. Gholami, REHS
Alameda County Environmental Health Services (ACEHS)
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Re: **Formal Request for Review for Site Closure**
Former Chevron Service Station 9-0517
3900 Piedmont Avenue
Oakland, California

Dear Mr. Gholami,

On behalf of Chevron Environmental Management Company (ChevronTexaco), Cambria Environmental Technology, Inc. (Cambria) submits this letter in regard to the former Chevron station 9-0517 located at 3900 Piedmont Avenue in Oakland, California.

The following is a list of the documents submitted to the Alameda County Health Care Services (ACHCS). A copy is attached for your reference.

- *December 14, 2000 Delta Environmental (Delta) on behalf of ChevronTexaco submitted a Risk-Based Corrective Action Evaluation (RBCA) to Mr. Larry Seto.*

Based on the results of previous investigations, lateral extent of hydrocarbon impacted groundwater has been delineated on the site. The lateral extent of hydrocarbon impacted soil has been delineated to 80 ppm of TPHg and 2 ppm of benzene downgradient of the source, and to nondetectable TPHg and benzene concentrations in all other directions. The soil beneath the site does not appear to have been impacted by methyl tertiary butyl ether (MTBE). No response has been received as of this date regarding the review of the RBCA supporting closure of this site. This letter serves as a formal request for the Alameda County Environmental Services to review the RBCA and the site for closure. If this request has not received a response in 60 days, Cambria reserves the right to petition this to the State Water Quality Control Board for closure.

If you have any questions or comments, please contact Bruce Eppler at (916) 630-1855 ext.102.

Sincerely,
Cambria Environmental Technology, Inc.

Nina Knirel
Staff Scientist

Bruce Eppler
Senior Project Geologist

cc: Ms. Karen Streich (cover only), Chevron Environmental Management Company, P.O. Box 6004, San Ramon, CA 94583-0804
Mr. Chuck Headlee (cover only), Alameda County Regional Water Quality Control Board, 1515 Clay Street #1400, Oakland, CA 94612

Attachments: December 14, 2000 Risk-Based Corrective Action Evaluation

Delta
Environmental
Consultants, Inc.

3164 Gold
Suite 200
Rancho Cord
U.S.A.
916/638-2085
FAX: 916/638-838

SITE CONCEPTUAL MODEL
AND RISK-BASED CORRECTIVE ACTION EVALUATION

for
Former Chevron Service Station #9-0517
3900 Piedmont Avenue
Oakland, California

Report No. 346420.04

Prepared for:

Mr. Thomas Bauhs
Chevron Products Company
P.O. Box 6004
San Ramon, California 94583

Prepared by:

Delta Environmental Consultants Inc.
Network Associate
Gettler-Ryan Inc.
6747 Sierra Court, Suite G
Dublin, California 94568

Barbara Sieminski
Project Geologist
R.G. 6676

REGISTERED GEOLOGIST
BARBARA SIEMINSKI
No. 6676
STATE OF CALIFORNIA

Stephen J. Carter
Senior Geologist
R.G. 5577

December 14, 2000

GETTLER-RYAN INC.

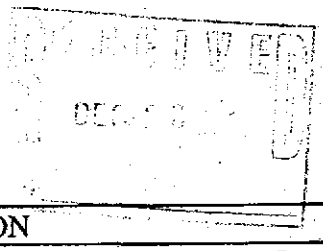
TRANSMITTAL

TO: Mr. Thomas Bauhs
Chevron Products Company
P.O. Box 6004
San Ramon, CA 94583

DATE: December 21, 2000
PROJECT #: 346420.04/DG90517B.3C99

SUBJECT: Site Conceptual Model and RBCA Evaluation Report for Chevron Service Station #9-0517.

FROM:
Barbara Sieminski
Project Geologist
Gettler-Ryan Inc.
6747 Sierra Court, Suite G
Dublin, California 94568



WE ARE SENDING YOU:

COPIES	DATED	DESCRIPTION
1	12/14/00	Site Conceptual Model and Risk-Based Corrective Action Evaluation for Chevron Service Station #9-0517, 3900 Piedmont Avenue, Oakland, California.

THESE ARE TRANSMITTED as checked below:

[ ] For review and comment [ ] Approved as submitted [ ] Resubmit __ copies for approval

[X] As requested [ ] Approved as noted [ ] Submit __ copies for distribution

[ ] For approval [ ] Return for corrections [ ] Return __ corrected prints

[X] For your files

cc: Mr. James Brownell, Delta Environmental Consultants, Inc.
Ms. Bette Owen, Chevron Products Company
Mr. Larry Seto, Alameda County Health Services Agency
Mr. Neil B. Goodhue & Mrs. Diane Goodhue, property owners
GR File

COMMENTS: Attached is a copy of the report for your use. Copies of this report have been submitted to the above listed parties. Please call if you have questions.

TABLE OF CONTENTS

FIGURES

APPENDICES

SITE CONCEPTUAL MODEL
AND RISK-BASED CORRECTIVE ACTION EVALUATION

for
Former Chevron Service Station #9-0517
3900 Piedmont Avenue
Oakland, California

Report No. 346420.04

1.0 INTRODUCTION

At the request of Chevron Products Company (Chevron), Delta Environmental Consultants Inc./Gettler-Ryan Inc. (GR) is submitting this report presenting the site conceptual model (SCM), and documenting the results of the implementation of the Risk-Based Corrective Action (RBCA) planning process, as described in ASTM E-1739 "Standard Guide for Risk-Based Corrective Action Applied at Petroleum Sites" for the former Chevron Service Station located at 3900 Piedmont Avenue in Oakland, California. The purpose of this work was to evaluate whether the implementation of further environmental investigation and/or remediation related to soil and groundwater is warranted at the site. This report was prepared based on information supplied by Chevron, and describes site hydrogeological conditions and distribution of contaminants in space and time, identifies potential current and future receptors, presents the RBCA model results for the site, and recommends the most appropriate action plan for the site.

2.0 SITE DESCRIPTION

2.1 General

The subject site is situated on the eastern corner of Piedmont Avenue and Montell Street in Oakland, California (Figure 1). The subject site was utilized as a service station to approximately 1978. Sometime after October 1978, the service station was demolished, and a commercial building was constructed in the western portion of the site along Piedmont Avenue. The eastern portion of the site was converted to the parking lot. Until sometime before 1998, the building was used by Homestead Federal Savings Association. Presently, PCS Smart Mart (Pacific Bell mobile service agent) occupies the building. Locations of the current site features are shown on Figure 2.

The site vicinity is used for transportation, commercial, and residential purposes. The subject site is bounded by Piedmont Avenue to the northwest, Montell Street to the southwest, a residential property (apartment buildings) to the southeast and a commercial property (restaurant) to the northeast. The apartment building is located approximately 15 feet of the southeastern boundary of the subject site. The restaurant building is situated along the northeastern border of the subject site. A commercial/residential building (stores on the ground floor and apartments on the upper floors) is situated across Piedmont Avenue (approximately 50 feet northwest of the subject site). A restaurant building is located across Piedmont Avenue (approximately 50 feet west of the subject site). A parking lot and a commercial building (Blockbuster Video Store) are located across Montell Street. The Blockbuster Video Store building is located approximately 80 feet southwest of the subject site. The site vicinity is shown on the maps included in Appendix A.

2.2 Previous Environmental Work

Phase I Environmental Investigation

In May 1993, Augeas Corporation (AC) conducted a Phase I environmental investigation at the subject site. Results of this investigation indicated that Chevron owned the subject property from at least December 1940 through February 1979. The property was utilized as the Chevron service station up to approximately 1978. At least four underground storage tanks (USTs) were present at the subject site, based on the site map dated April 12, 1955. These USTs included two waste oil USTs located along the northwestern site boundary, a 7,500-gallon fuel UST, and at least one other UST of an unknown size and contents located further to the east (bordering Montell Street). A permit to remove four USTs was issued by the Oakland Fire Prevention Bureau to Eagan & Paradiso Construction Company on October 5, 1978. The USTs were noted as being 25 feet east of Piedmont Avenue.

A government agency databases search indicated that 30 generators of hazardous waste (Resource Conservation and Recovery Act [RCRA] sites) and 9 sites with leaking underground storage tanks (LUST sites) are located within 1-mile radius of the subject site. However, no registered tanks were identified in the immediate vicinity of the subject site. A map showing environmental problem sites is included in Appendix B. Based on the AC review of State Water Resources Control Board's *Well Investigation Program* of August 1991, contaminated public water wells are not present within a 1-mile radius of the subject site.

Phase II Environmental Site Assessment

In October 1993, Environmental and Science Engineering, Inc (ESE) conducted a soil and groundwater investigation to evaluate petroleum hydrocarbon impact to the soil and groundwater beneath the site. Eight soil borings (FNBO-1 through FNBO-8) were drilled at the site. Eleven soil samples collected from depths between 6 and 11 feet below ground surface (bgs) were submitted for analyses. Soil samples were analyzed for total recoverable petroleum hydrocarbons (TRPH), total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), and the gasoline constituents benzene, toluene, ethylbenzene, and total xylenes (BTEX). Five of the eleven soil samples were analyzed for volatile organic compounds (VOCs).

TRPH were detected in five of the eleven soil samples analyzed at concentrations ranging from 10 parts per million (ppm) to 350 ppm. TPHg were detected in eight of the eleven soil samples analyzed at concentrations ranging from 1.4 ppm to 3,400 ppm. Benzene was detected in two samples at concentrations of 0.03 ppm and 1.0 ppm. VOCs were not detected in any of the analyzed soil samples. Soil analytical data are summarized in ESE *Table 1,Analytical Results for Soil Samples* included in Appendix C.

One grab groundwater sample was collected from boring FNBO-6. TRPH (2,800 parts per billion [ppb]), TPHg (7,800 ppb) and benzene (7.7 ppb) were detected in this sample. VOCs were not detected in this

sample except acetone (30 ppb) and carbon disulfide (33 ppb). Grab groundwater analytical data are summarized in Cambria *Table 1, Soil and Groundwater Analytic Data* included in Appendix D.

Monitoring Well Installation

In July 1998, GR installed two on-site (MW-1 and MW-2) and two off-site (MW-3 and MW-4) groundwater monitoring wells to evaluate soil and groundwater conditions at the subject site. Soil encountered in borings MW-1 through MW-4 consisted predominantly of interbedded clays, silts and clayey gravels to the total depth explored of 20 feet bgs. Groundwater was encountered within the sandy silt layer at depths of approximately 10.2 to 12.0 feet bgs and stabilized at depths of 7.4 to 9.1 feet bgs.

The soil sample collected from boring MW-4 at an approximate depth of 11 feet bgs contained TPHg (80 ppm) and benzene (2.0 ppm). A low concentration of benzene (0.0070 ppm) was also detected in the soil sample collected from boring MW-2 at an approximate depth of 6 feet bgs. TPHg or benzene were not detected in any other soil samples collected from borings MW-1 through MW-4. MTBE was not detected in any of the soil samples.

Laboratory analytical results for the unsaturated sample collected from boring MW-1 at 6 feet bgs indicated 0.059% fraction organic carbon, 1.68 gram per cubic centimeter (gm/cc) dry density, 2.01 gm/cc natural density, 2.52 gm/cc matrix density, 33.1% porosity and 19% moisture content. The results for the Capillary fringe sample collected from boring MW-1 at 11 feet bgs indicated 0.15% fraction organic carbon, 1.60 gm/cc dry density, 1.99 gm/cc natural density, 2.62 gm/cc matrix density and 38.7% porosity. Analytical results of soil samples collected from well borings are summarized in GR *Table2, soil Analytical Results* included in Appendix C.

Groundwater Monitoring and Sampling

Quarterly monitoring and sampling of site wells began in August 1998. During the period of August 1998 to July 2000, depth to shallow groundwater beneath the site fluctuated between 5.5 and 12 feet bgs. The groundwater flow direction fluctuated between southwest, west and northwest, and the average gradient was 0.02. Groundwater monitoring and sampling data are summarized in Blaine Tech *Cumulative Table of Well Data and Analytical Results*, included in Appendix D. Historic potentiometric maps are also included in Appendix D.

Off-site wells MW-3 and MW-4 contained hydrocarbons at concentrations up to 12,000 ppb of TPHg, 3,100 ppb of benzene, and 820 ppb of MtBE. Hydrocarbon concentrations in these wells have not changed significantly since the groundwater monitoring began. Onsite well MW-1 has never contained hydrocarbons. Onsite well MW-2 contained a low concentration of MtBE (3.4 ppb) during the initial sampling in August 1998, and 4,000 ppb of TPHg and 240 ppb of benzene during the May 2000 sampling event. Based on nondetectable concentrations of TPHg and benzene in well MW-2 during all other sampling events including the most recent event conducted in July 2000, the concentrations detected in May 2000 appear to be anomalous.

2.3 Geology and Hydrogeology

The subject site is located at the western edge of the Piedmont Hills, approximately 2 miles east of San Francisco Bay and 1 mile north of Lake Merritt. The site is a relatively flat, paved lot at an elevation of approximately 85 feet above mean sea level. As mapped by Helley and others (1979, *Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943)*, soil in the site vicinity consists of Late Pleistocene alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, irregularly interbedded clay, silt, sand and gravel. The nearest surface water is Glen Echo Creek located approximately 400 feet east of the site. Based on historical monitoring data, the groundwater flow direction in the vicinity of the site fluctuates between southwest, west, and northwest.

The boring logs indicate that the subject site is underlain by interbedded clays, silts and clayey gravels to the total depth explored of 20 feet bgs. Coarser grained materials (clayey gravel and sandy to gravelly silt) were generally encountered immediately below ground surface. These materials extended to depths ranging from 4 to 15.5 feet bgs and were underlain by clays and sandy clays. Groundwater was encountered within the sandy silt layer at depths of between 10 and 12 feet bgs and stabilized at depths between approximately 7.5 and 9 feet bgs. Boring logs, and Cambria's geologic cross section are included in Appendix E.

3.0 SITE CONCEPTUAL MODEL

The site conceptual model was prepared based on the site assessment and quarterly monitoring and sampling data collected at the site to date. A pictorial representation of the site conceptual model is presented on Figure 3.

3.1 Release Scenario and Plume Characterization

A service station operated at the subject site from at least December 1940 to 1978. Fuel and waste oil USTs (potential on-site primary sources of release) were present at the site at that time. Underground and aboveground station facilities were removed sometime at the end of 1978 or beginning 1979, and a commercial building was constructed in the western portion of the property, over the former UST pits area. Data regarding soil conditions or remediation activities (if any implemented) at the time of UST removal are not available.

Environmental investigations conducted at the site indicated that soil and shallow groundwater beneath the subject site have been impacted by petroleum hydrocarbons. The dissolved hydrocarbon plume is located beneath the western corner of the subject site and beneath the adjacent streets. Affected soil appears to be present within the smear zone (5.5 to 12 feet bgs) above the dissolved hydrocarbon plume. The lateral extent of hydrocarbon impacted soil has been delineated to 80 ppm of TPHg and 2 ppm of benzene to the northwest (downgradient), and to nondetectable TPHg and benzene concentrations in all other directions. The extent of TPHg and benzene affected soil is depicted on Figures 4 and 5. MtBE has not been detected in soil beneath the subject site.

Groundwater beneath the subject site has been monitored and sampled since August 1998 through the network of four groundwater monitoring wells. During this period of time groundwater depth ranged from 5.5 to 12 feet bgs, and the groundwater flow direction fluctuated between southwest, west, and northwest. The groundwater sampling data indicate that groundwater beneath the immediate western vicinity of the subject site (wells MW-3 and MW-4) has been impacted by gasoline hydrocarbons at concentrations up to 12,000 ppb of TPHg, 3,100 ppb of benzene, and 820 ppb of MtBE. As MtBE was not added to gasoline when the station was closed in 1978, the presence of MtBE in wells MW-3 and MW-4 appears to be from the secondary source (such as fuel spills from cars parked on the streets, or a recent spill at the upgradient/crossgradient gas station transported through underground utility trenches). Hydrocarbon concentrations in wells MW-3 and MW-4 have not changed significantly since the groundwater monitoring began (Figures 7 through 10). The lateral extent of hydrocarbon impacted groundwater has not been delineated west (downgradient) of the subject site (Figure 6). However, it is possible that the lateral migration of hydrocarbon impacted groundwater is restricted due to the lithology of the water bearing zone (silty and clayey material of low to moderate hydraulic conductivity). Groundwater remediation has not been implemented at this site.

3.2 Potential Receptors

The hydrocarbon plume likely extends beneath PCS Smart Mart building, beneath Montell Street and Piedmont Avenue, and possibly beneath the commercial and commercial/residential (stores on the ground floor/apartments on the upper floors) buildings across the streets. Most of this area is paved with asphalt or concrete. The residential buildings on the property bounding the subject site to the southeast (upgradient), and across Montell Street (approximately 50 feet south [crossgradient to upgradient] of the subject site) are located outside of the plume.

The potential exposure receptors are current and future workers in the on-site commercial building (and possibly in the buildings across the street), current and future site visitors (clients, motorists, pedestrians), and construction workers (underground utility maintenance workers). It appears that the residential occupants of the building across Piedmont Avenue would be affected to the lesser degree than the commercial occupants of the building, due to their location on the upper floors of the building. Potential hydrocarbons volatilizing from groundwater into the building are most likely to accumulate on the ground floor of the building, and then become diluted by ventilation (open doors, windows, etc.).

No water producing wells are located at the site. The presence of water producing wells within the off-site portion of the plume appears to be unlikely based on the land usage, however, it cannot be excluded until a complete well survey confirms the absence of such wells. Potential exposure mediums are ambient air, indoor air in commercial buildings, and soil and groundwater in potential future excavation areas. The major exposure pathway is inhalation of hydrocarbon vapors volatilizing from smear zone soils and groundwater to ambient and indoor air. Dermal contact with hydrocarbon impacted soil and groundwater is the potential exposure pathway for utility maintenance/construction workers. Groundwater ingestion could be a potential exposure pathway but only if public or domestic wells are present within the dissolved plume.

3.3 Other Environmental Issues

The lateral extent of hydrocarbon impacted groundwater has not been delineated in the downgradient direction of the subject site. However, the presence of MtBE in wells MW-3 and MW-4 indicates that an off-site source of hydrocarbons is present in the subject site vicinity. It appears that the hydrocarbons detected in the downgradient vicinity of the subject site partially originated from the off-site secondary source. The location or magnitude of influence of this off-site source is unknown.

Impacted public water wells were not present within 1-mile radius of the subject site, based on AC's review of the SWRCB's *Well Investigation Program* of August 1991. There are no water producing wells at the subject site, based on the site inspection. However, a complete well survey identifying all active, destroyed, and abandoned wells (public, domestic, irrigation, and industrial water producing wells, monitoring wells, cathodic protection wells, etc.) was not performed for the subject site. The wells (if present within the dissolved plume) may act as exposure points, or vertical conduits to deeper water bearing zones.

An underground utility survey has not been conducted, therefore, it is not known if underground utility trenches are a factor in plume migration in the subject site vicinity. The dissolved hydrocarbon plume at the subject site extends beneath the public streets (Piedmont Avenue and Montell Street), in the area where underground utilities are likely to be present. Due to shallow groundwater, the underground utility trenches (if present within the plume area) may act as preferential pathways and conduits that could enhance migration of contaminants from the subject site and also from the off-site secondary source to the vicinity of the subject site.

4.0 RISK-BASED CORRECTIVE ACTION (RBCA)

Tier 1 of the RBCA process involves comparison of the site constituent concentrations to generic Risk-Based Screening Levels (RBSL) to evaluate whether further evaluation and/or active remediation is required. RBSL values are derived from standard exposure equations and reasonable maximum exposure (RME) estimates per U.S. EPA guidelines. RBSL concentration limits are designed to be protective of human health even if exposure occurs directly within the on-site area of affected soil or groundwater and inherently provide conservative estimates of potential threats to human health and the environment. According to the RBCA process, if Tier 1 limits are not exceeded, the user may proceed directly to compliance monitoring and/or no further action. However, if these generic screening levels are exceeded, the affected media may be addressed by 1) remediating to the generic Tier 1 limits, if practicable, 2) conducting Tier 2 evaluation to develop site-specific remediation goals, or 3) implement an interim action to abate risk "hot spots".

4.1 Site Parameters

The complete exposure pathways are those that could pose a reasonable potential for contaminant contact with a human or environmental receptor. Under Tier 1 RBCA, only on-site receptors apply. Based on the land usage within a plume, commercial types of exposure scenarios were evaluated for the site. A construction worker exposure was also evaluated. There are no water supply wells at the site, and an assumption was made that there are no water supply wells within the off-site portion of the plume.

Therefore, groundwater ingestion or subsurface soil leaching to groundwater exposure pathways were not considered complete pathways. The smear zone extends from 5 to 12 feet bgs. The surface soil (<3 feet bgs) is not impacted. There is a commercial building and a parking lot (paved with asphalt) present within the on-site plume area. Therefore, the only complete exposure pathways identified are volatilization to outdoor and indoor air from subsurface soils and from groundwater (commercial and construction worker receptor) and direct ingestion and dermal contact (construction worker only). These exposure pathways were evaluated during this RBCA analysis.

Site specific physical data was used in this RBCA evaluation. These parameters included most conservative values for contaminated soil area (10,000 ft^2), depth to top of affected soil (5 ft), depth to groundwater (5 ft), thickness of affected subsurface soils (7 ft), soil porosity in vadose zone (38%), soil density (1.6 g/cm^3), fraction of organic carbon in vadose zone (0.15%). Where appropriate and consistent with site conditions, default values were used. The mean values were used as representative hydrocarbon concentrations in source media. The representative soil concentrations were calculated based on hydrocarbon concentrations in soil samples collected at depths between 5 and 12 feet bgs (smear zone) from borings FNBO-1 through FNBO-8, and well borings MW-1 through MW-4. The representative groundwater concentrations were calculated based on the current (November 1999) hydrocarbon concentrations in the groundwater samples from wells MW-1 through MW-4.

4.2 Results of RBCA Analysis

Based on the RBCA analysis and review of the RBSLs, site conditions are below generic Tier 1 screening levels and, according to the RBCA decision making process, no further work is necessary (except to confirm assumptions). Pertinent input and output data for the plume including site specific parameters used in the analysis are presented in Appendix G.

5.0 DISCUSSION AND CLOSURE PLAN

Site conditions consist of petroleum impacted soil and groundwater. Hydrocarbon impacted soil appears to be present only within the smear zone (5 to 12 feet bgs). The lateral extent of hydrocarbon impacted soil has been delineated to 80 ppm of TPHg and 2 ppm of benzene to the northwest (downgradient), and to nondetectable TPHg and benzene concentrations in all other directions. The soil beneath the site does not appear to have been impacted by MtBE.

Concentrations of dissolved hydrocarbons in the source area appear to stabilize. The lateral extent of hydrocarbon impacted groundwater has been delineated except downgradient of the subject site. However, it is possible that the lateral migration of hydrocarbon impacted groundwater is restricted due to the lithology of the water bearing zone (silty and clayey material of low to moderate hydraulic conductivity).

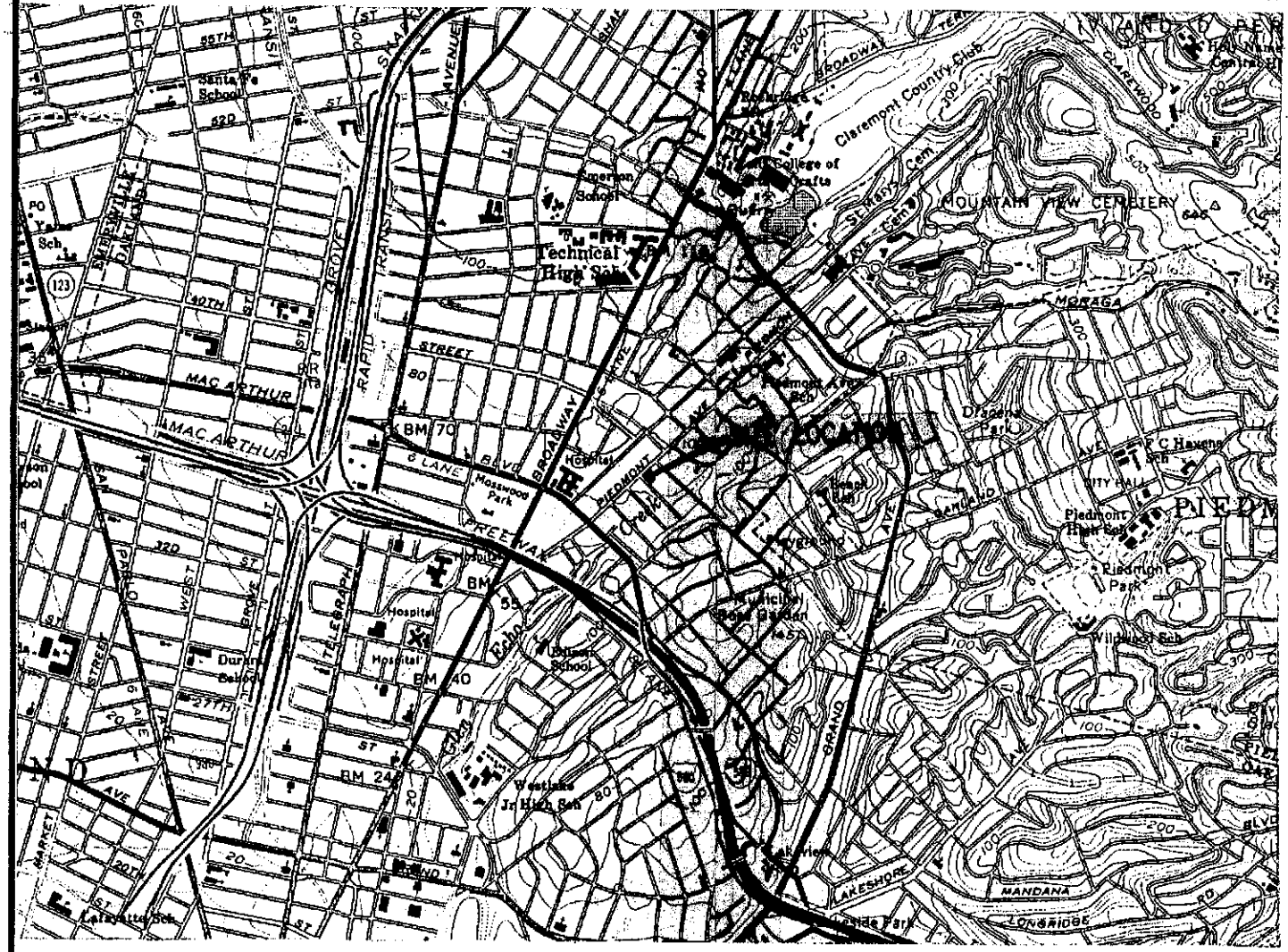
Based on the presence of MtBE, an off-site secondary source of hydrocarbons appears to contribute to groundwater contamination in the western (downgradient) vicinity of the subject site. The location and magnitude of influence of this off-site source is unknown. Underground utilities may be present in the western vicinity of the subject site. Due to shallow groundwater, the utility trenches may act as preferential

pathways enhancing migration of hydrocarbons originated from the subject site and also from the off-site secondary source toward the downgradient vicinity of the subject site. Due to plume commingling, it appears that the additional environmental investigation in the western vicinity of the subject site would not provide significant additional information specific to the subject site plume delineation.

RBCA analysis indicates that modeled concentrations of hydrocarbons volatilizing to outdoor air from subsurface soil and groundwater do not exceed RBSLs for commercial use of the subject property. RBSLs are also not exceeded for a construction worker. However, the RBCA analysis was conducted based on the assumption that there are no water producing wells within a dissolved hydrocarbon plume and groundwater ingestion is not a valid exposure pathway. A well survey is needed to confirm the RBCA assumption. If well survey results indicate that groundwater ingestion shall be considered a valid exposure pathway for the site, the RBCA will need to be re-evaluated.

Based on the site environmental condition, and RBCA analysis it appears that risk mitigation or additional environmental investigation (other than a well survey) is not required at the subject site. There are no potential threats to human health and the environment based on the site current usage. Therefore, natural attenuation appears to be the most appropriate approach to remediate the site.

If well survey results indicate that no well receptors or conduits are located in the immediate downgradient vicinity of the subject site, GR recommends initiating site closure proceedings. Monitoring and sampling of wells MW-1 through MW-4 shall be continued to verify groundwater conditions until a closure status is granted. However, based on nondetectable hydrocarbon concentrations in wells MW-1 and MW-2, GR recommends reducing frequency of sampling of these wells to semiannual. Wells MW-3 and MW-4 shall be sampled quarterly. All wells shall be monitored quarterly.



Base Map: USGS Topographic Map

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

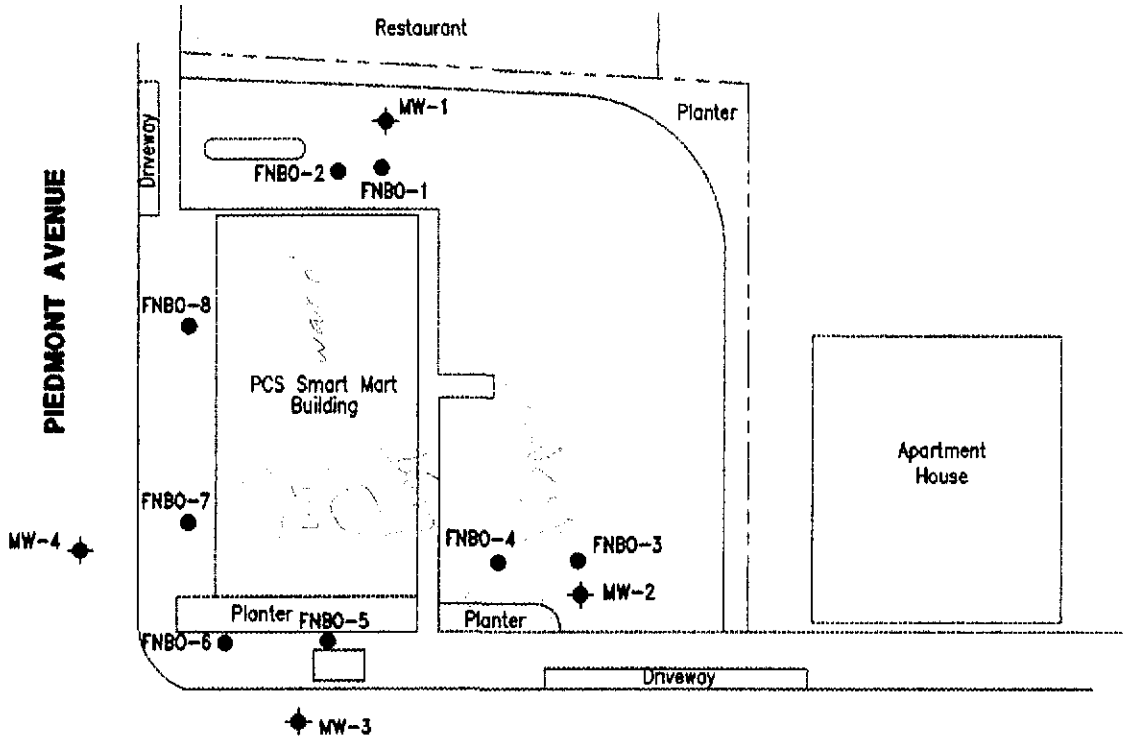
VICINITY MAP
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

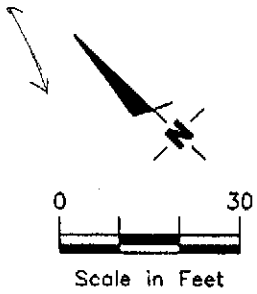
FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420		12/00	

EXPLANATION

- Groundwater monitoring well
- Soil boring





Source: Figure Modified From Drawing Provided By Cambria Environmental.

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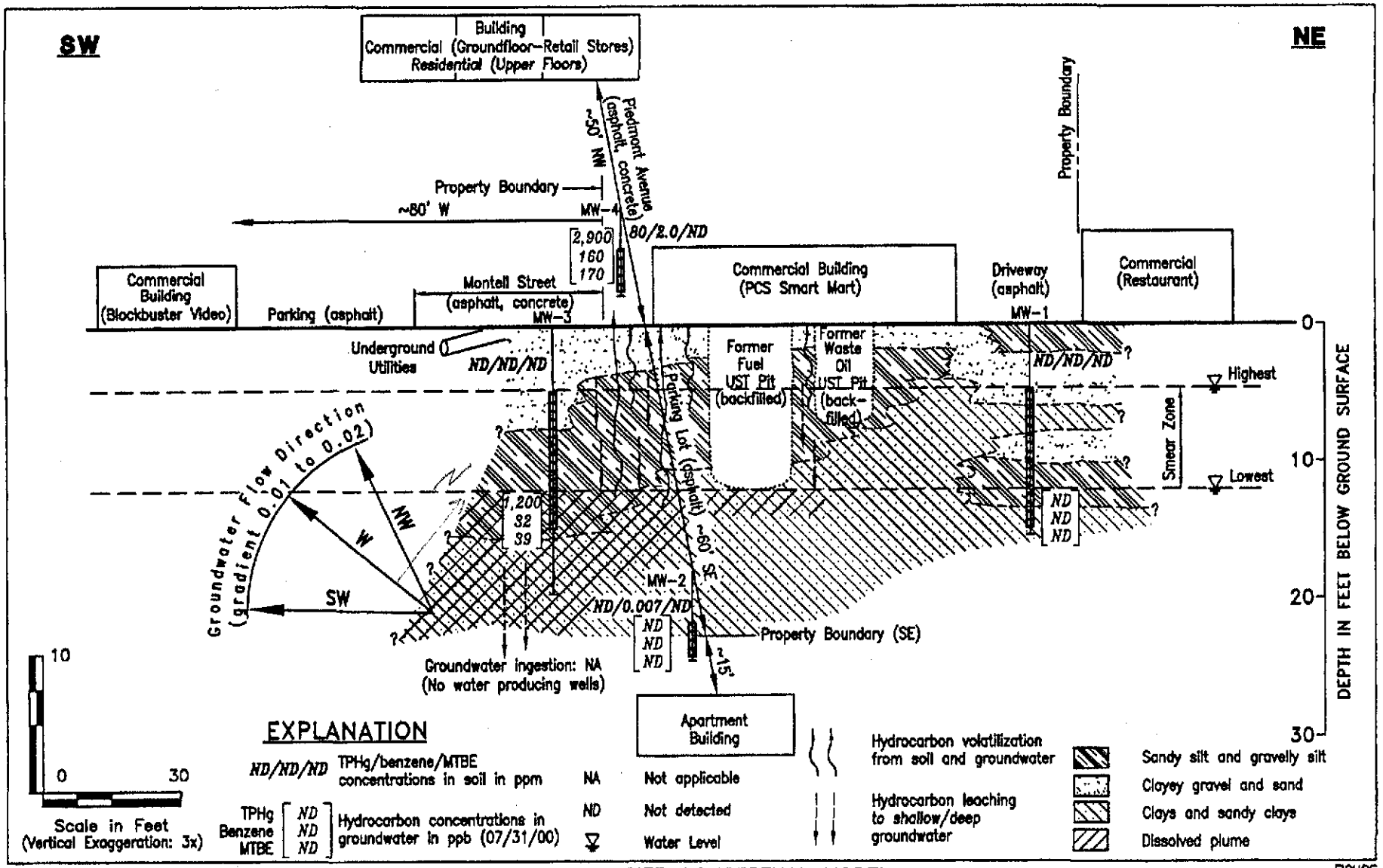
Dublin, CA 94568

SITE PLAN
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
2

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	



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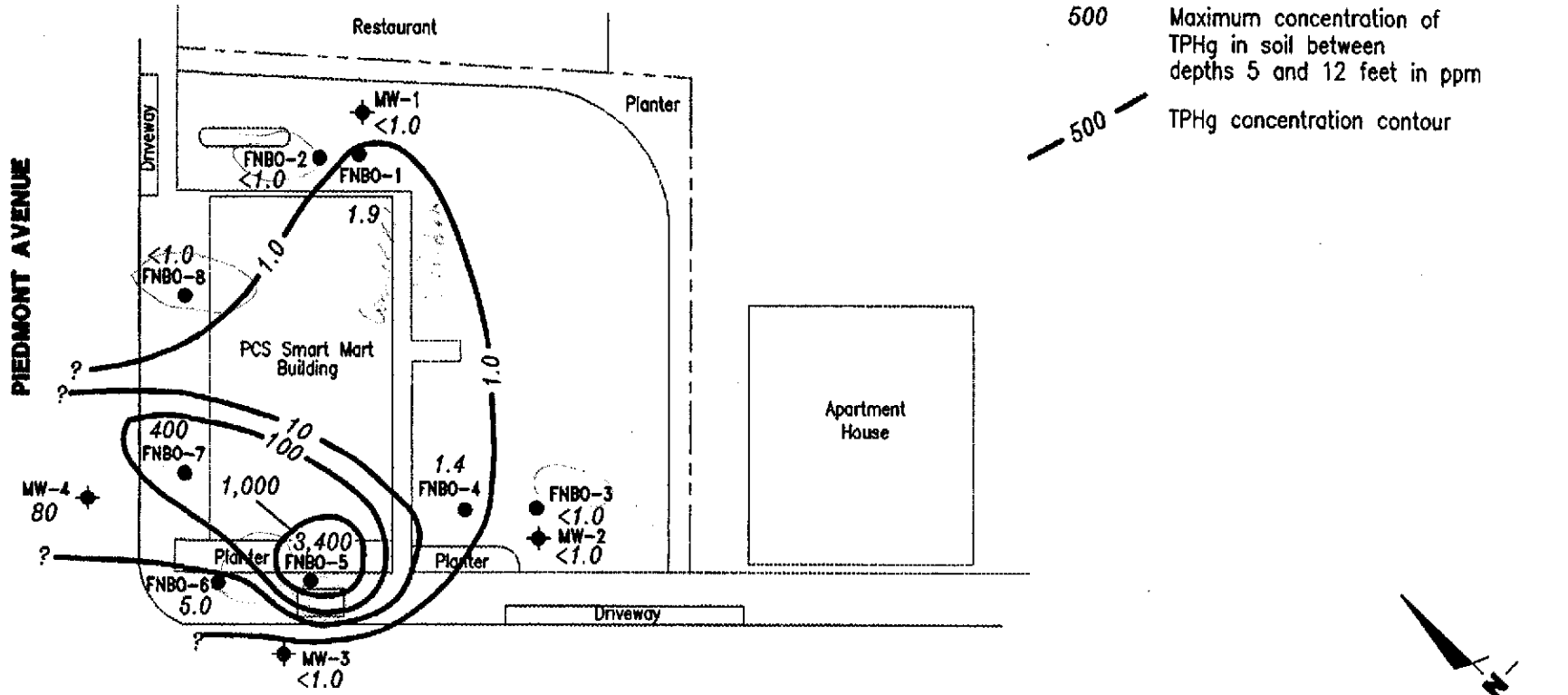
Dublin, CA 94568

SITE CONCEPTUAL MODEL
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
3

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	



Source: Figure Modified From Drawing Provided By Cambria Environmental.

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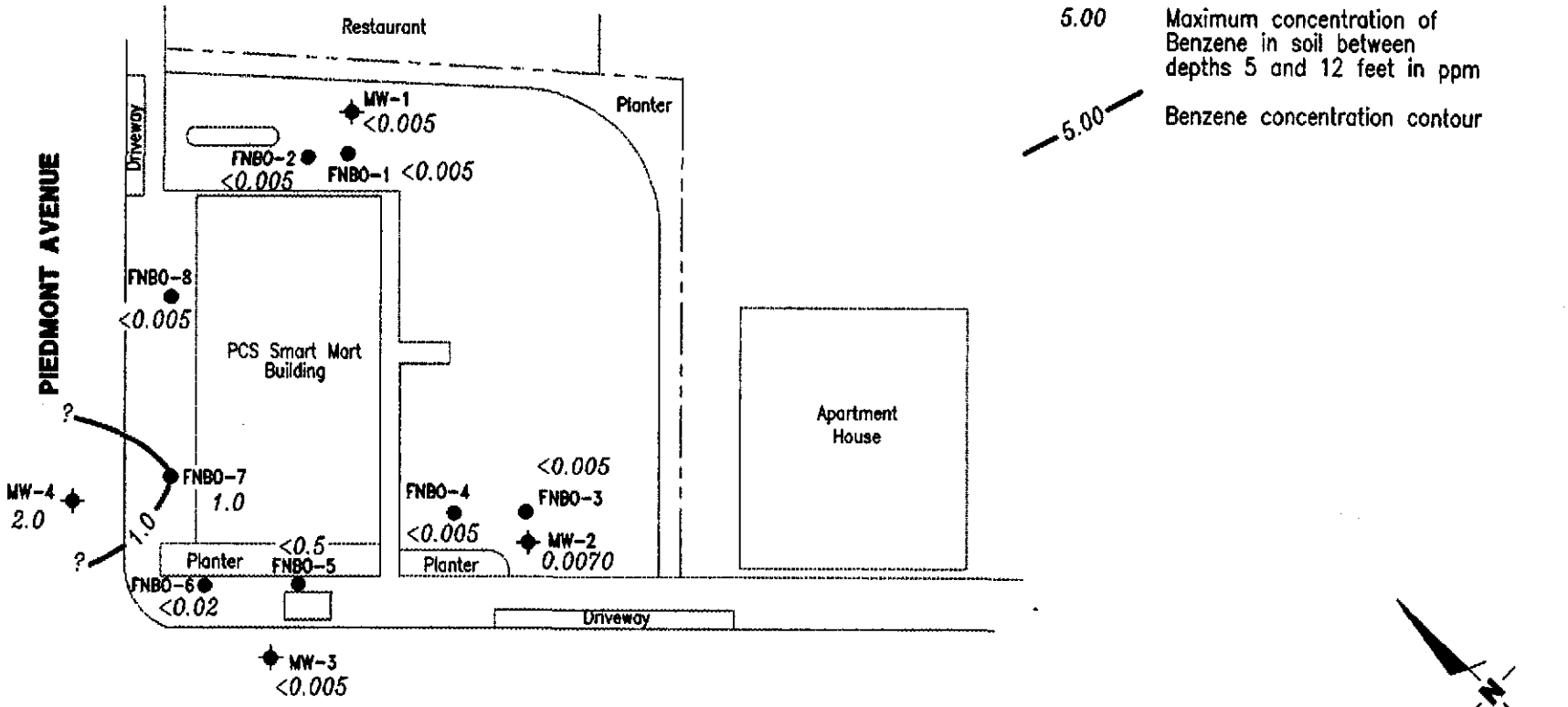
Dublin, CA 94568

TPHg CONCENTRATION IN SOIL
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE 4

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	



Source: Figure Modified From Drawing Provided By Cambria Environmental.

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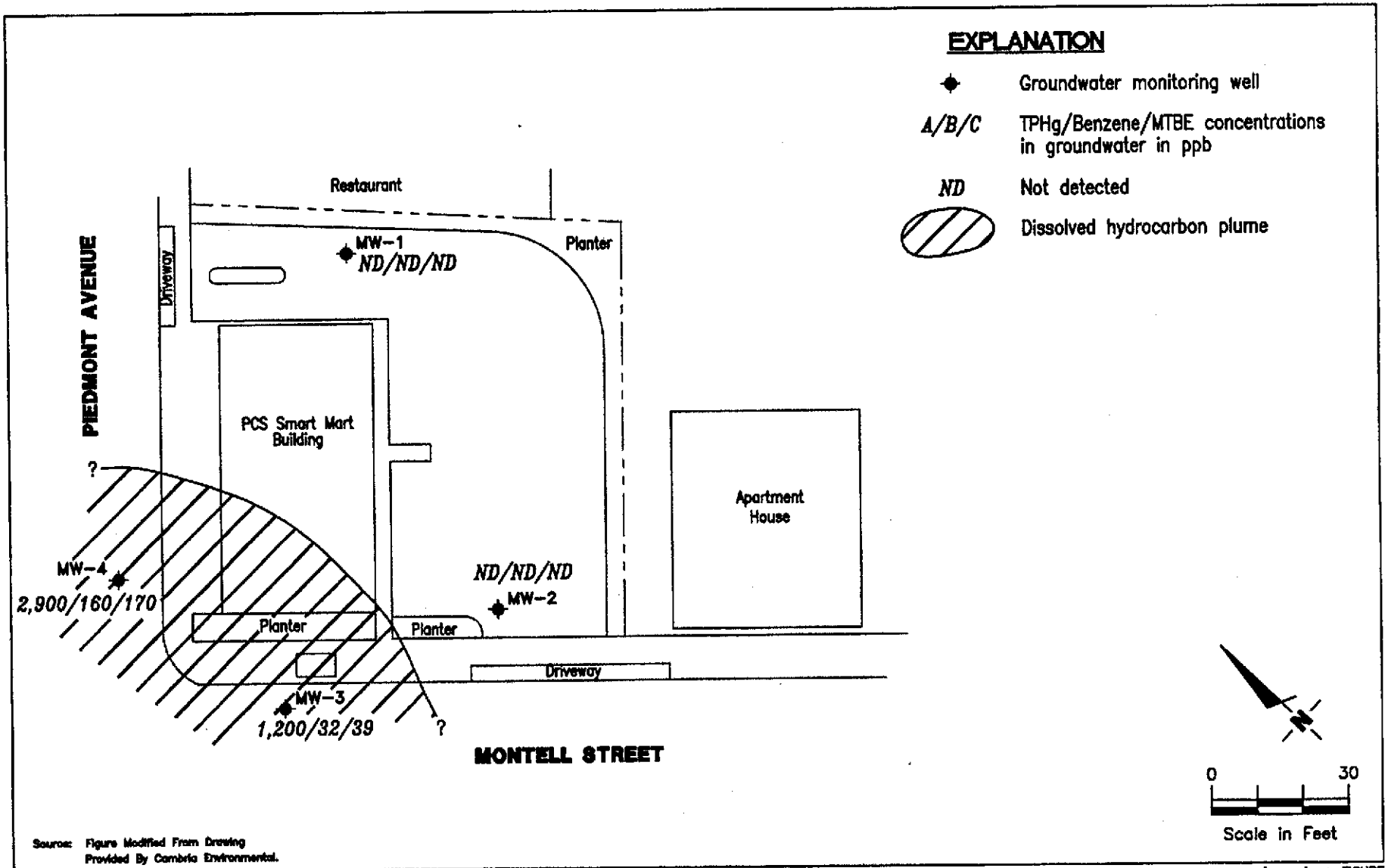
BENZENE CONCENTRATION IN SOIL
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE 5

JOB NUMBER 346420.04 | REVIEWED BY | DATE 12/00 | REVISED DATE



Source: Figure Modified From Drawing Provided By Cambria Environmental.

Gettler - Ryan Inc.

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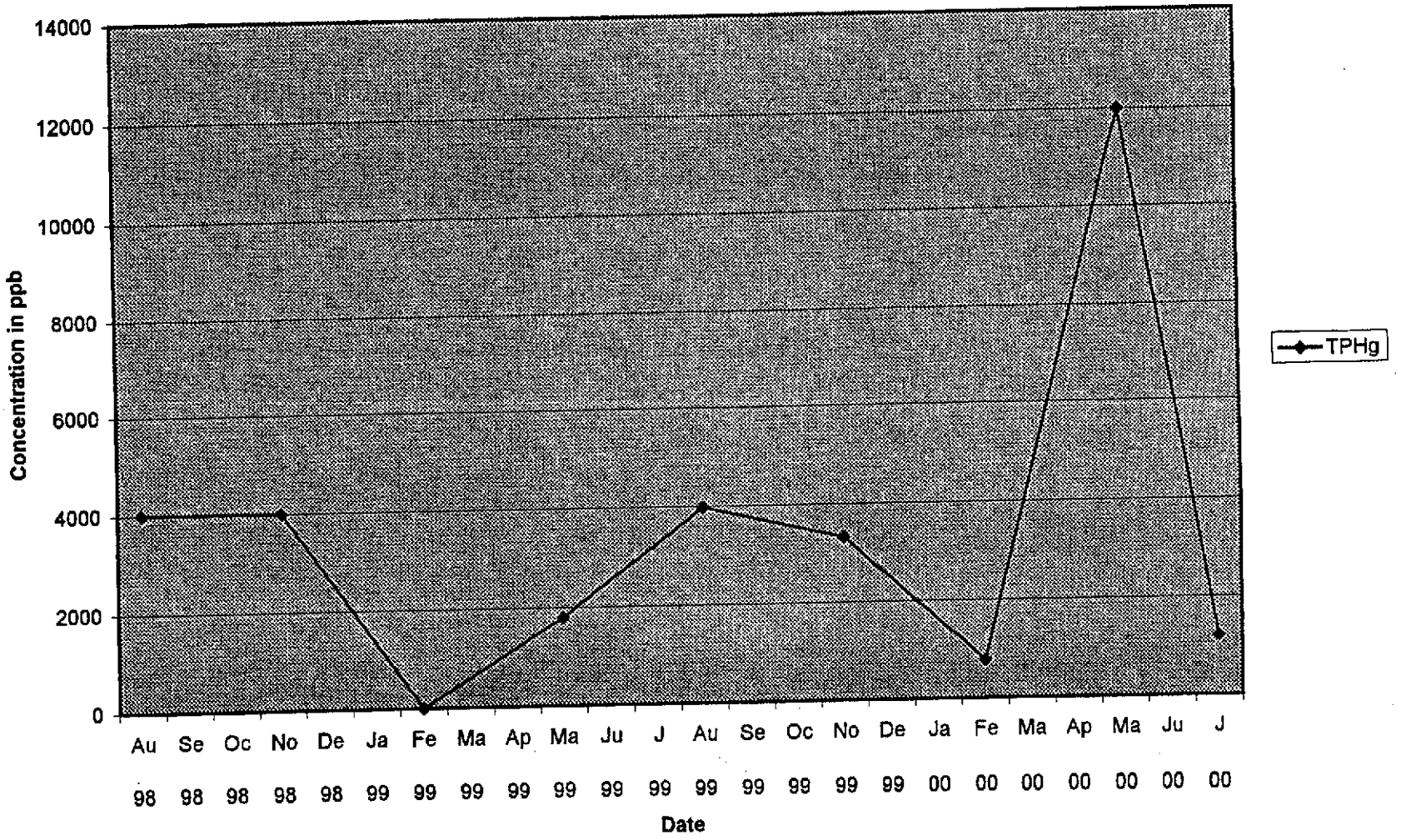
HYDROCARBON CONCENTRATIONS IN GROUNDWATER ON 07/31/00
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE 6

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	



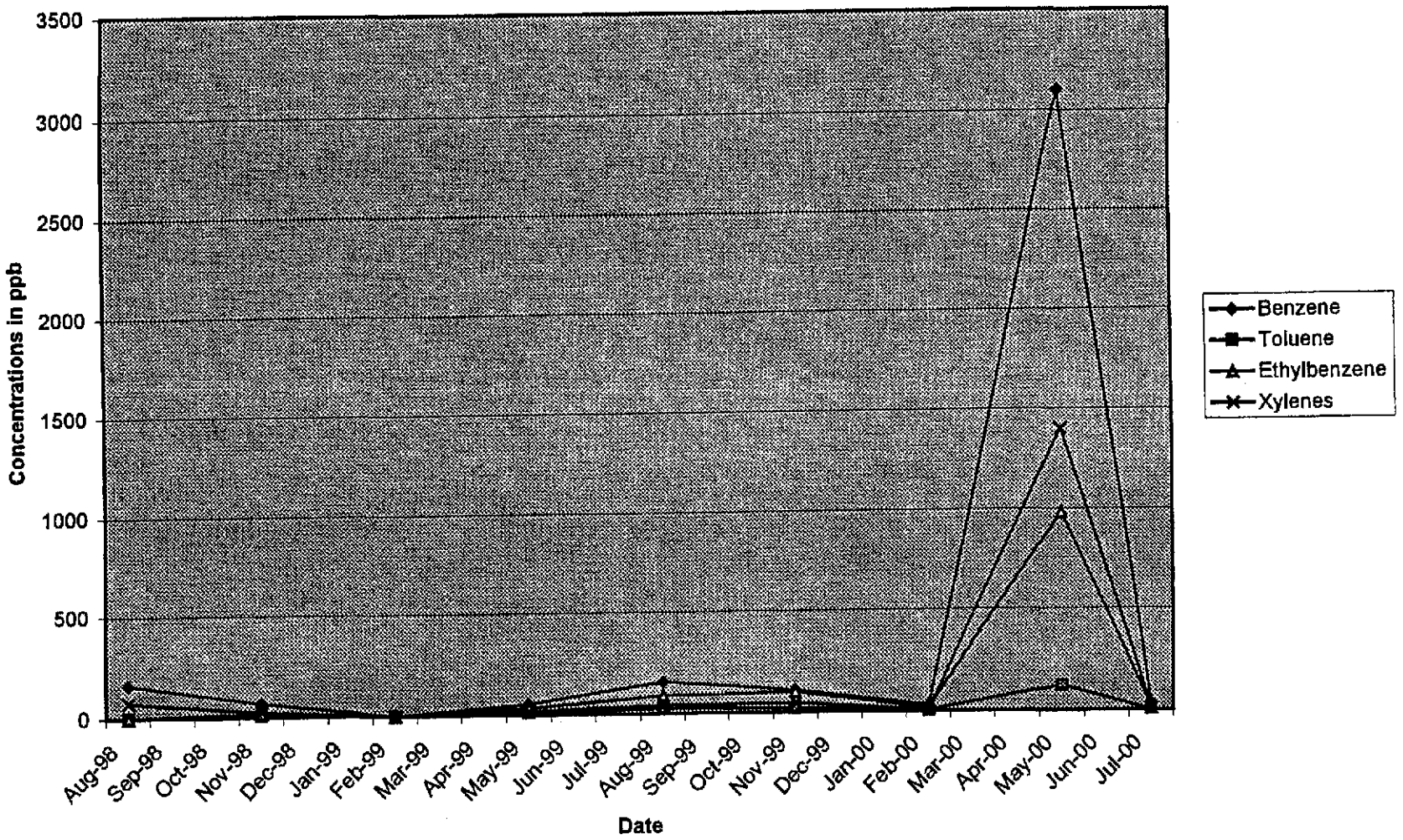
Gettler - Ryan Inc.

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

TPHg CONCENTRATION IN WELL MW-3
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
7

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	

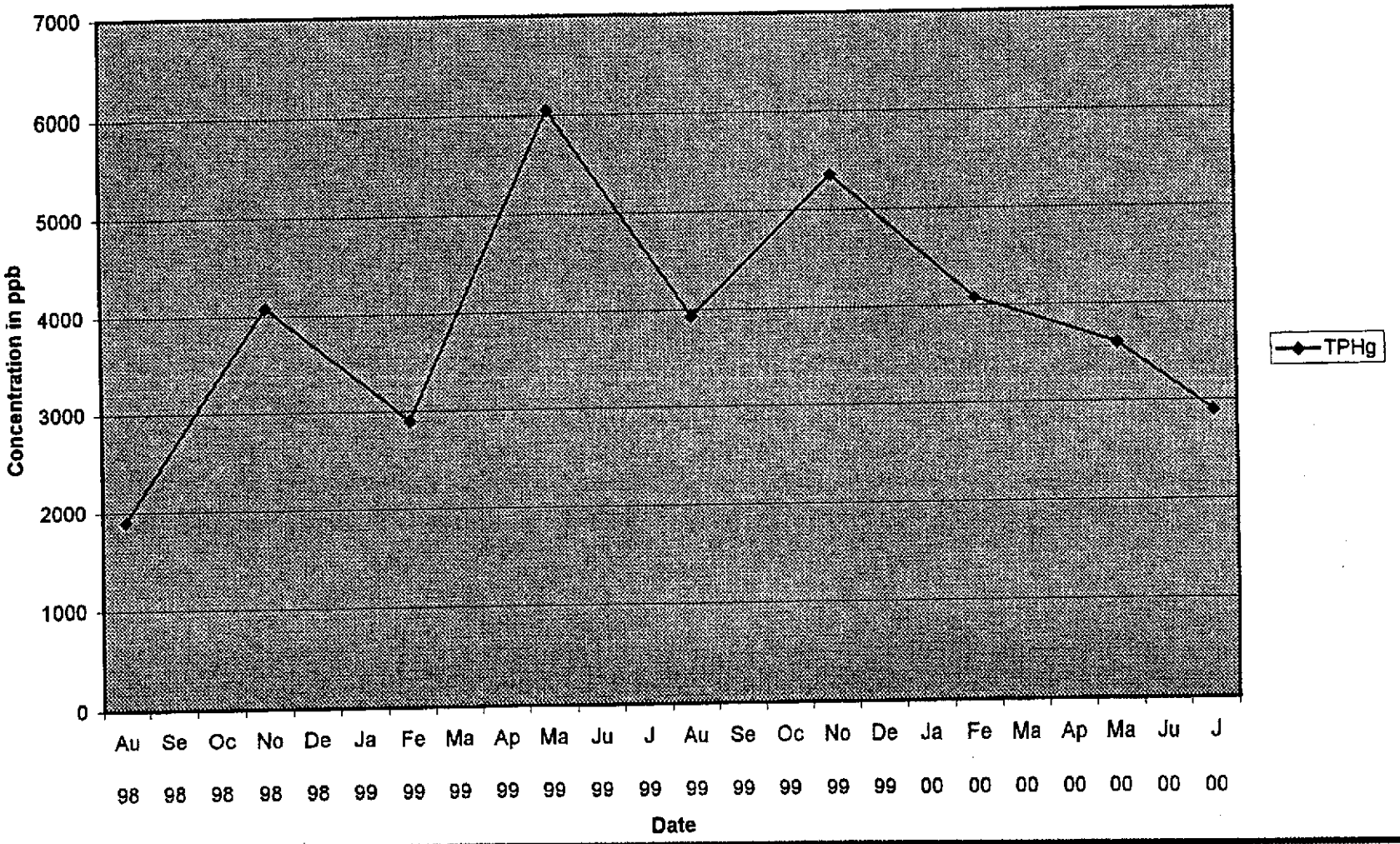


Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

BTEX and MTBE CONCENTRATIONS IN WELL MW-3
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
8

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	



Gettler - Ryan Inc.

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

TPHg CONCENTRATION IN WELL MW-4
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
9

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
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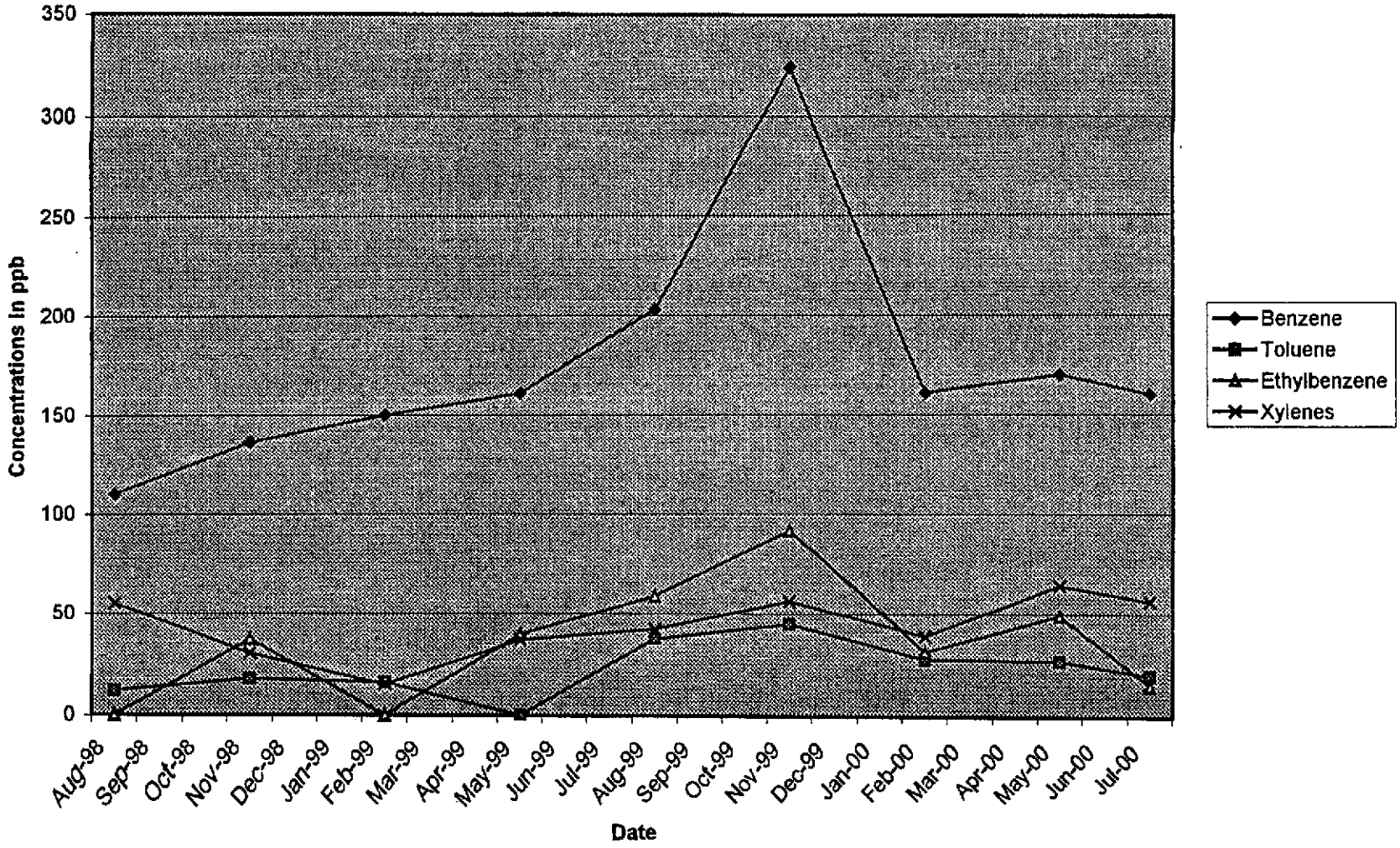


Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (925) 551-7555
Dublin, CA 94568

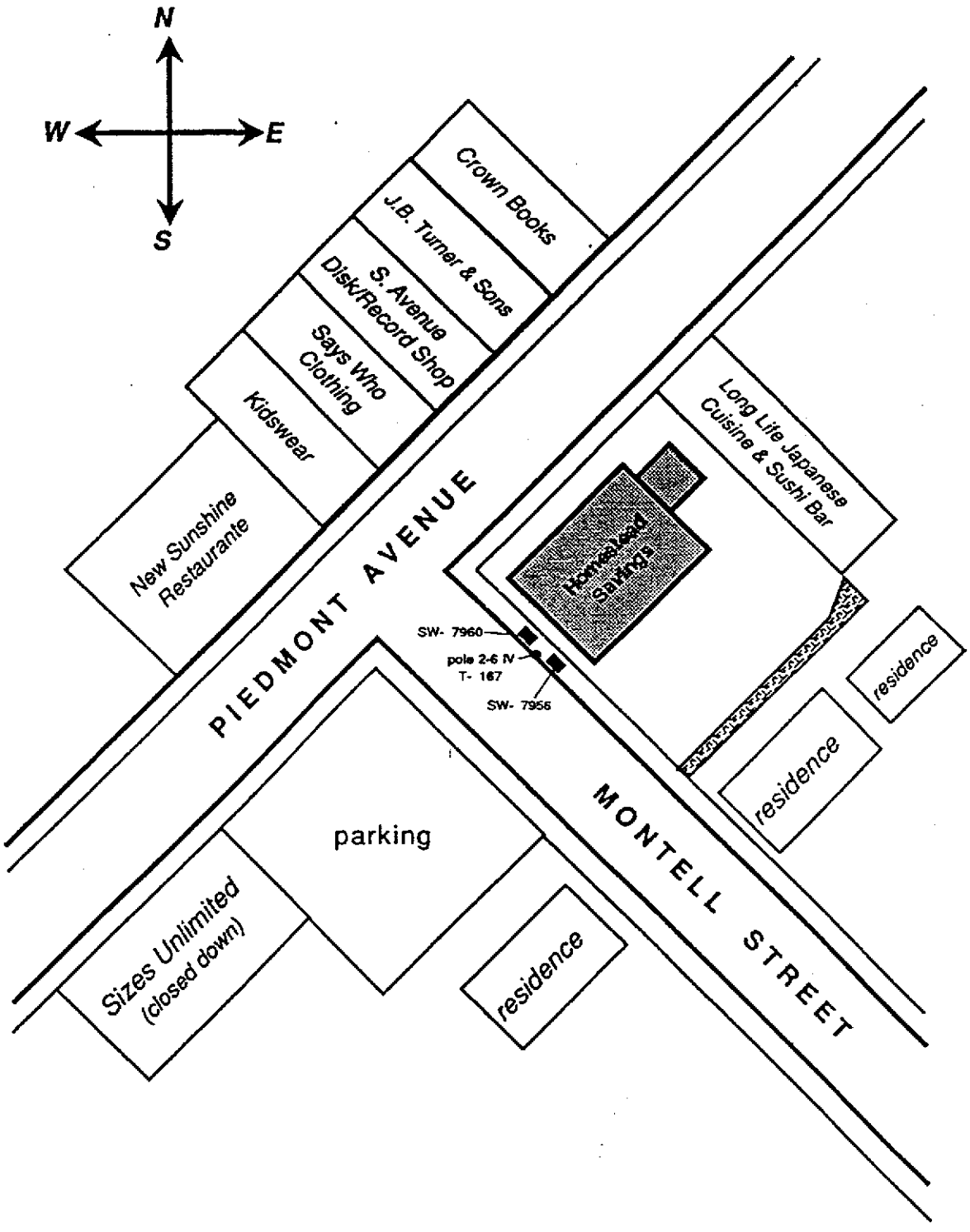
BTEX and MTBE CONCENTRATIONS IN WELL MW-4
Former Chevron Service Station No. 9-0517
3900 Piedmont Avenue
Oakland, California

FIGURE
10

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
346420.04		12/00	

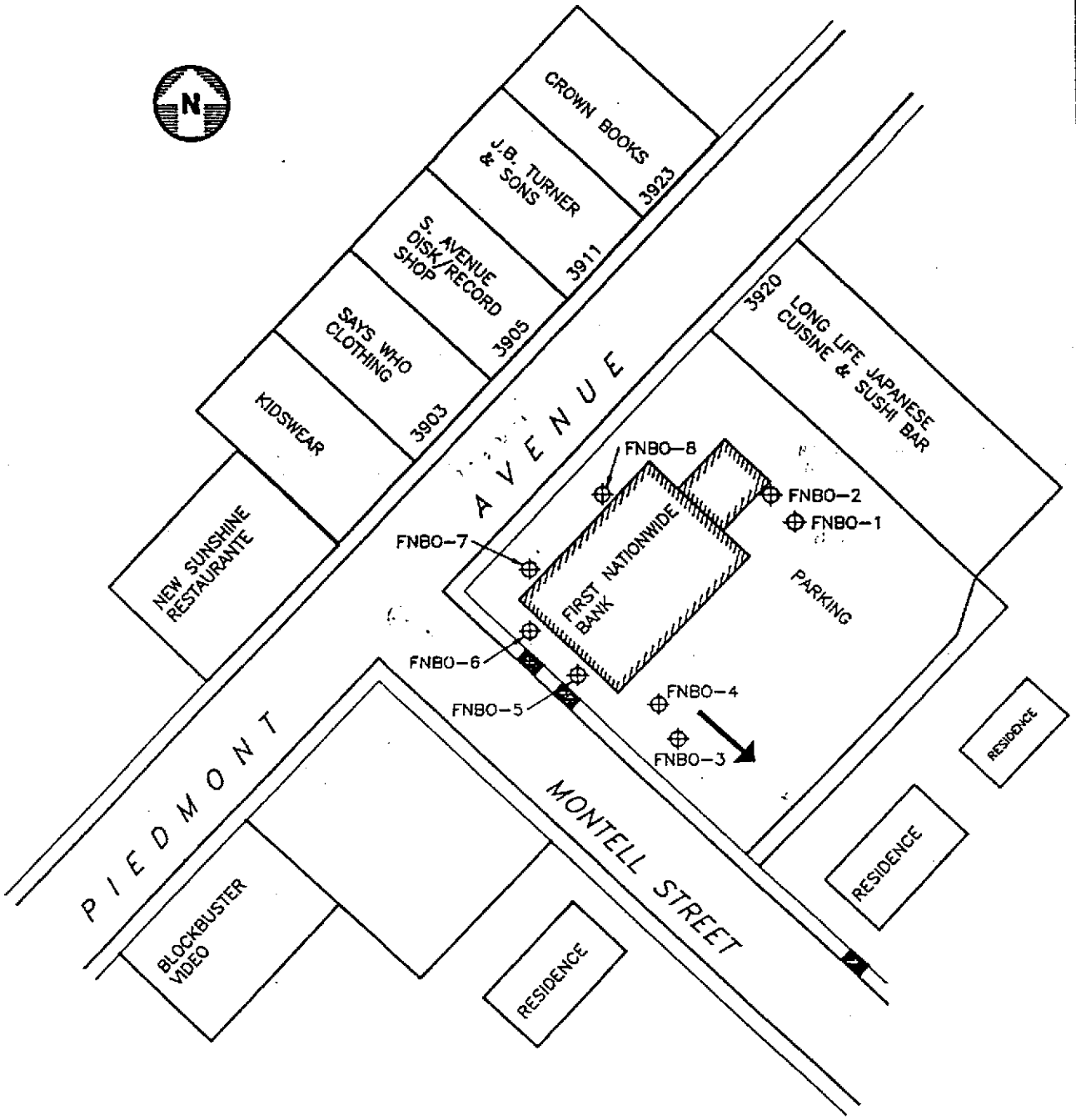
APPENDIX A

VICINITY MAPS



Map Not to Scale
Transformers in black

AUGEAS CORPORATION	**Figure 2B**- Adjacent Properties Map	jf
	Homestead Savings, 3900 Piedmont Ave, Oakland, CA	03/16/93



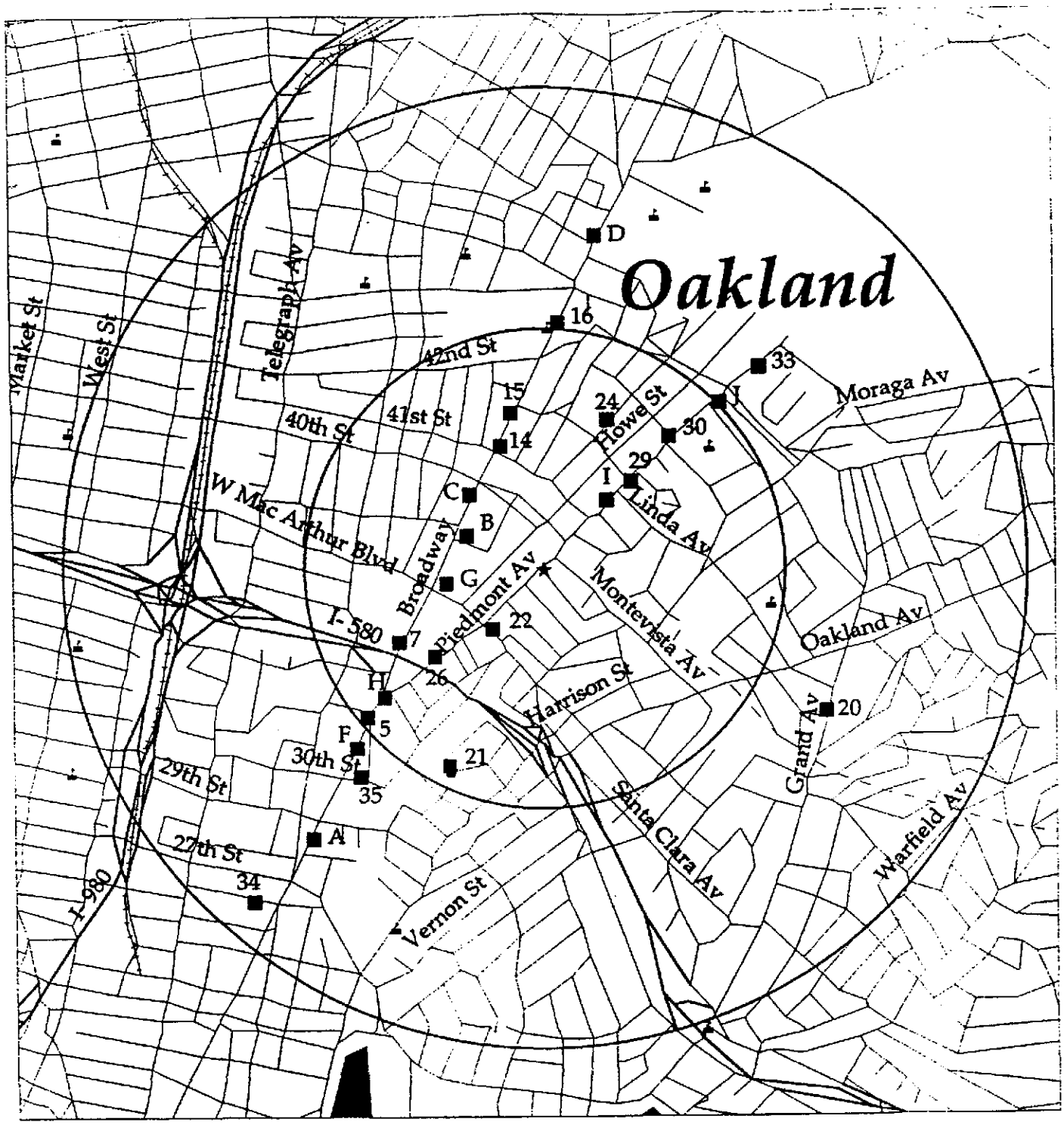
LEGEND

- TRANSFORMER
- SOIL BORING LOCATION
- SURFACE DRAINAGE FLOW

ESE A CECORP Company — Environmental Science & Engineering, Inc.	DATE 11/93	SITE MAP	FIGURE NO. 2
4090 NELSON AVENUE, SUITE J CONCORD, CA 94520	REVISED	FIRST NATIONWIDE BANK 3900 PIEDMONT AVENUE OAKLAND, CALIFORNIA	PROJ. NO. 6-93-5146
	CAD FILE 51461001		

APPENDIX B

ENVIRONMENTAL PROBLEM SITES WITHIN 1-MILE RADIUS



3900 Piedmont Avenue
Oakland, CA 94611

Alameda County

N
W E
S

1 Inch = .30 Miles

1/2 and 1 Mile Radius

★ = Subject Property

TABLE 1

ANALYTICAL RESULTS FOR SOIL SAMPLES

First Nationwide Bank
3900 Piedmont Avenue
Oakland, California

Sample I.D.	Depth (feet bgs)	Date Sampled	TRPH (mg/Kg)	VOCs (mg/Kg)	TPH-G (mg/Kg)	TPH-D (mg/Kg)	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Total Xylenes (mg/Kg)
FNBO-1	10.5	10/20/93	350	ND	1.9*	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-2	10	10/20/93	86	ND	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-3	10.5	10/20/93	NA	NA	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-4	6	10/20/93	320	ND	1.4	<5.0	<0.005	<0.005	<0.005	<0.005
FNBO-5	6	10/21/93	NA	NA	3,400	<500	<0.5	<0.5	19.0	7.5
FNBO-5	10	10/21/93	160	ND	15.0	<5.0	0.03	<0.005	0.31	0.12
FNBO-6	5.5	10/21/93	NA	NA	5.0*	<10	<0.02	<0.02	<0.02	<0.02
FNBO-6	10	10/21/93	10.0	ND	3.6[1]	<5.0	<0.005	<0.005	0.034	0.041
FNBO-7	6	10/21/93	NA	NA	350[1]	<400	<0.40	<0.40	<0.40	<0.40
FNBO-7	11	10/21/93	NA	NA	400[1]	<500	1.0	1.5	5.0	13.0
FNBO-8	11	10/21/93	NA	NA	<1.0	<5.0	<0.005	<0.005	<0.005	<0.005

NOTES:

bgs = below ground surface
TRPH = Total Recoverable Petroleum Hydrocarbons by EPA Method 418.1
VOCs = Volatile Organic Compounds by EPA Method 8260
TPH-G = Total Petroleum Hydrocarbons as Gasoline and/or light petroleum distillate by EPA Method ~~8260~~
TPH-D = Total Petroleum Hydrocarbons as Diesel by EPA Method ~~8260~~
mg/Kg = milligram per kilogram or parts per million (ppm)
ND = None Detected
NA = Not Analyzed

* = quantified as light petroleum distillates
1 = quantified as gasoline and light petroleum distillates
< = less than listed detection limits

F:\6935146\table1

Table 2. Soil Analytical Results - Former Chevron Service Station #9-0517, 3900 Piedmont Avenue, Oakland, California.

Sample ID	Depth (ft)	Date	TPHg	B	T	E	X	MTBE	Fraction Organic Carbon %	Bulk Density Dry gm/cc	Bulk Density Natural gm/cc	Bulk Density Matrix gm/cc	Porosity %	Moisture %
			<----------ppm---------->											
MW1-6	6.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	0.059	1.68	2.01	2.52	33.1	19
MW1-11	11.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	0.15	1.60	1.99	2.62	38.7	—
MW1-16	16.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW2-6	6.0	07/21/98	<1.0	0.0070	<0.0050	0.010	0.0090	<0.025	—	—	—	—	—	—
MW2-11	11.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW2-16	16.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW3-6	6.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW3-10.5	10.5	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW3-16	16.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW4-6	6.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
MW4-11	11.0	07/21/98	80	2.0	1.7	4.7	5.8	<0.25	—	—	—	—	—	—
MW4-16	16.0	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	—	—	—	—	—	—
SP-(A-D)comp	—	07/21/98	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	—	—	—	—	—	—	—

EXPLANATION:
TPHg = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl t-Butyl Ether
ft = Feet
ppm = Parts per million
gm/cc = gram per cubic centimeter
— = Not analyzed/not applicable

ANALYTICAL METHODS:
TPHg, benzene, toluene, ethylbenzene, xylenes, MTBE = EPA Methods 8015Mod/8020
Porosity, densities = Method API RP-40

ANALYTICAL LABORATORY:
Sequoia Analytical (ELAP #1210)

6420.02-2

APPENDIX D

GROUNDWATER DATA AND POTENTIOMETRIC MAPS

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0517
3900 Piedmont Avenue
Oakland, California

Vertical Measurement are in feet.

Analytical values are in parts per billion (ppb).

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW-1									
08/03/98	87.89	75.46	12.43	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/23/98	87.89	78.84	9.05	<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99	87.89	81.39	6.50	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	87.89	80.76	7.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99	87.89	78.74	9.15	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99	87.89	78.35	9.54	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00	87.89	81.99	5.90	<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00[3]	87.89	80.84	7.05	<50	<0.50	<0.50	<0.50	<0.50	<2.5
07/31/00	**87.89**	**79.49**	**8.40**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**
MW-2									
08/03/98	86.09	74.75	11.34	<50	<0.5	<0.5	<0.5	<0.5	3.4
11/23/98	86.09	79.19	6.90	<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99	86.09	80.86	5.23	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	86.09	79.97	6.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99	86.09	79.68	6.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99	86.09	78.80	7.29	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00	86.09	81.60	4.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00	86.09	80.19	5.90	4,000[4]	240	26	100	76	<100
07/31/00	**86.09**	**79.51**	**6.58**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**<2.5**

Table 1. Soil and Ground Water Analytic Data, Homestead Federal Savings, 3900 Piedmont Avenue, Oakland, California

Boring ID	Depth	Date Sampled	TRPH	VOCs	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes
					(Concentration in ppm, mg/kg or mg/l)					
Soil Samples										
FNBO-1	10.5	10/20/93	350	ND	1.9[a]	ND	ND	ND	ND	ND
FNBO-2	10	10/20/93	86	ND	ND	ND	ND	ND	ND	ND
FNBO-3	10.5	10/20/93	NA	NA	ND	ND	ND	ND	ND	ND
FNBO-4	6	10/20/93	320	ND	1.4	ND	ND	ND	ND	ND
FNBO-5	6	10/21/93	NA	NA	3,400	ND	ND	ND	19	7.5
FNBO-5	10	10/21/93	160	ND	15	ND	0.03	ND	0.31	0.12
FNBO-6	5.5	10/21/93	NA	NA	5.0[a]	ND	ND	ND	ND	ND
FNBO-6	10	10/21/93	10	ND	3.6[b]	ND	ND	ND	0.034	0.041
FNBO-7	6	10/21/93	NA	NA	350[b]	ND	ND	ND	ND	ND
FNBO-7	11	10/21/93	NA	NA	400[b]	ND	1.0	1.5	5.0	13
FNBO-8	11	10/21/93	NA	NA	ND	ND	ND	ND	ND	ND
Ground Water Sample										
FNBO-6		10/21/93	3	c	7.8	NA	0.0077	0.021	0.26	0.26

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0517

3900 Piedmont Avenue

Oakland, California

Vertical Measurement are in feet.

Analytical values are in parts per billion (ppb).

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
MW-3									
08/03/98	86.28	74.20	12.08	4000	160	<5.0	<5.0	73	180
11/23/98	86.28	78.59	7.69	4000	67.7	7.56	17.1	24.5	41.2
02/08/99	86.28	80.01	6.27	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	86.28	79.32	6.96	1800	53.6	8.96	33	18.6	21.4
08/23/99	86.28	78.36	7.92	3970	155	24	88.8	39.8	185
11/03/99	86.28	78.36	7.92	3320	108	19.9	98.4	44.8	<25
02/15/00	86.28	80.54	5.74	779	26.7	3.82	15.4	4.24	<12.5
05/12/00	86.28	79.52	6.76	12,000[4]	3,100	120	980	1,400	820
07/31/00	**86.28**	**78.98**	**7.30**	**1,200[4]**	**32**	**<5.0**	**11**	**7.3**	**39**
MW-4									
08/03/98	87.22	74.30	12.92	1900	110	12	<0.5	55	130
11/23/98	87.22	77.82	9.40	4080	136	17.8	37.2	30.1	51.8
02/08/99[1]	87.22	79.40	7.82	2900	150	16	<5.0	15	230/30.7[2]
05/07/99	87.22	79.80	7.42	6050	161	<25	39.8	36.9	<250/30.2[2]
08/23/99	87.22	77.83	9.39	3930	203	37.6	58.6	42.2	255
11/03/99	87.22	77.41	9.81	5350	324	44.7	91.5	56.1	<50
02/15/00	87.22	79.50	7.72	4080	161	27.7	31.1	39.1	73.9
05/12/00	87.22	79.31	7.91	3,600[4]	170	27	49	64	170
07/31/00	**87.22**	**78.57**	**8.65**	**2,900[4]**	**160**	**20**	**15**	**56**	**170**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0517

3900 Piedmont Avenue

Oakland, California

Vertical Measurement are in feet.

Analytical values are in parts per billion (ppb).

DATE	Well Head Elev.	Ground Water Elev.	Depth To Water	TPH-Gasoline	Benzene	Toluene	Ethyl-Benzene	Xylenes	MTBE
TRIP BLANK									
08/03/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/23/98	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.0
02/08/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
05/07/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
08/23/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
11/03/99	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<2.5
02/15/00	--	--	--	<50	<0.5	<0.5	<0.5	<0.5	<5.0
05/12/00	--	--	--	<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**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Chevron Service Station #9-0517

3900 Piedmont Avenue

Oakland, California

EXPLANATIONS:

Groundwater monitoring data and laboratory analytical results prior to May 12, 2000, were compiled from reports prepared by Blaine Tech Services, Inc.

TPH = Total Petroleum Hydrocarbons

ND = Not Detected

MTBE = Methyl tertiary butyl ether

-- = Not Measured/Not Analyzed

[1] Chromatogram pattern indicates gas and an unidentified hydrocarbon.

[2] Confirmation run.

[3] Sheen present.

[4] Laboratory report indicates gasoline C6-C12.

Table 1. Soil and Ground Water Analytic Data, Homestead Federal Savings, 3900 Piedmont Avenue, Oakland, California

Abbreviations

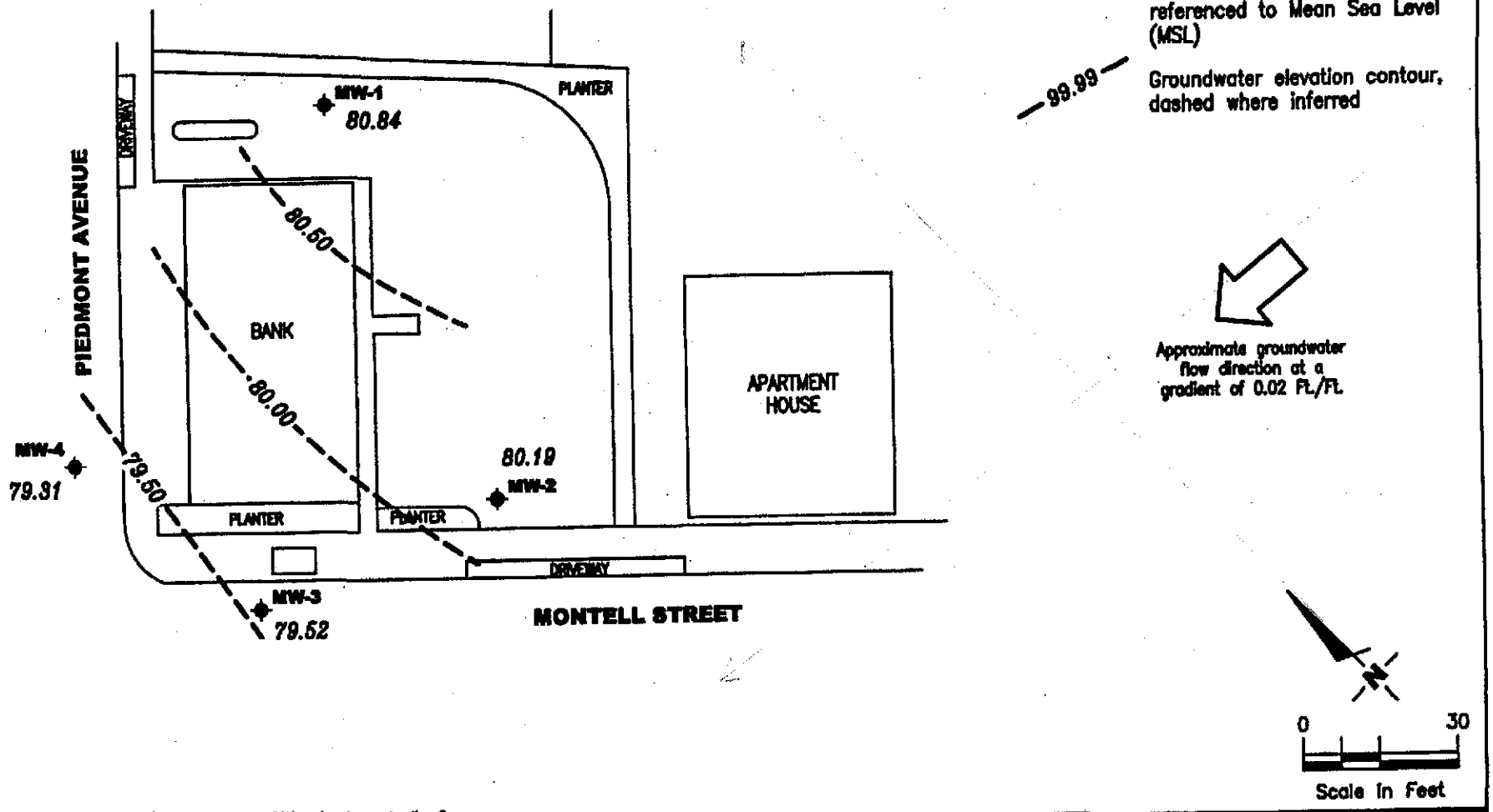
TRPH = Total recoverable petroleum hydrocarbons by EPA method 418.1
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8260
TPHd = Total petroleum hydrocarbons as diesel by modified EPA Method 8260
VOCs = Volatile organic compounds by EPA method 8260
ND = No compounds detected above laboratory detection limit
NA = Not analyzed

Benzene by EPA Method 8260
Ethylbenzene by EPA Method 8260
Toluene by EPA Method 8260
Xylenes by EPA Method 8260

Notes:

All soil and ground water samples collected by Environmental Science and Engineering of Concord California

a = Quantified as light petroleum distillates.
b = Quantified as gasoline and light petroleum distillates
c = 0.03 ppm acetone and 0.035 ppm carbon disulfide detected Notes



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

FIGURE 1

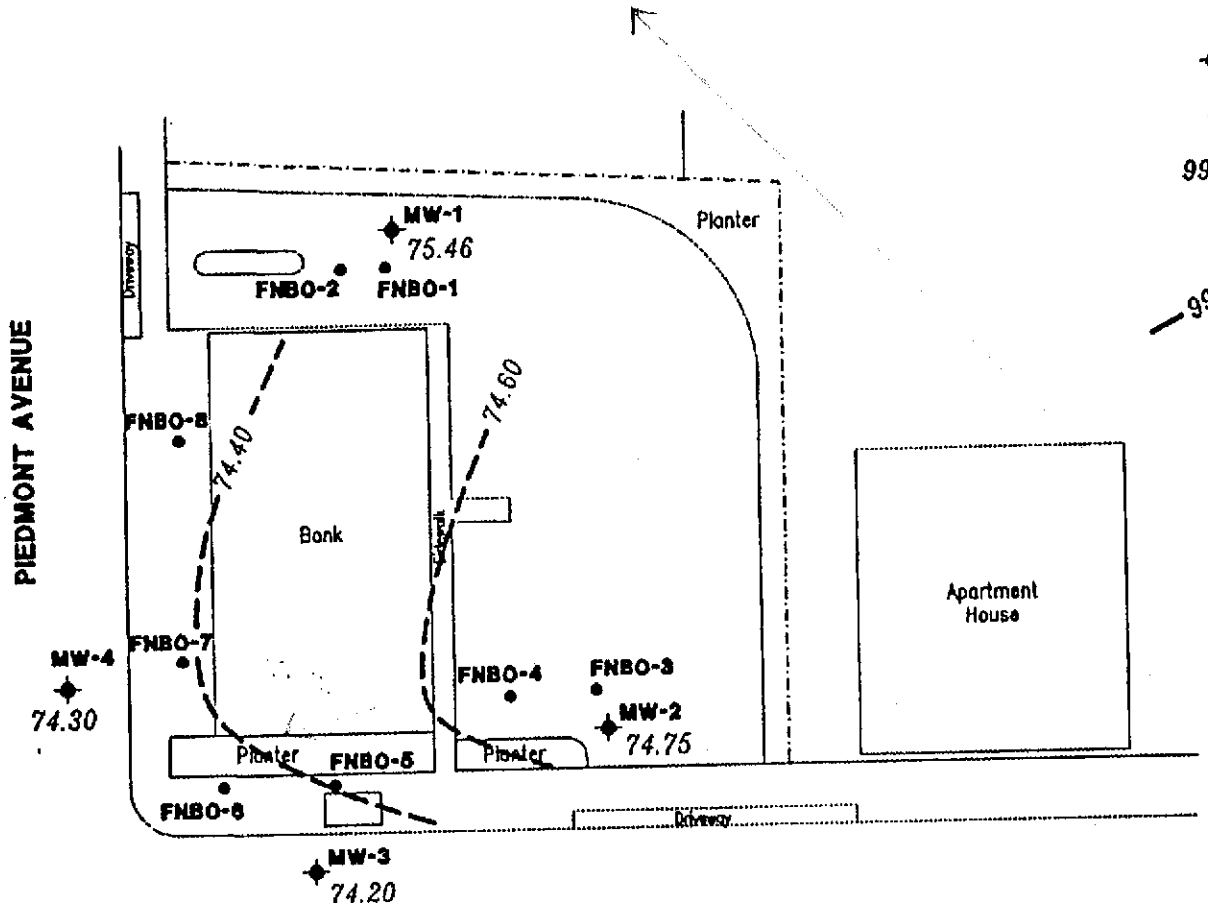
Gettler - Ryan Inc.

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

POTENTIOMETRIC MAP
Former Chevron Service Station #9-0517
3900 Piedmont Avenue
Oakland, California

PROJECT NUMBER	REVIEWED BY	DATE	REVISED DATE
386420		May 12, 2000	

FILE NAME: P:\Enviro\Chevron\9-0517\000-9-0517.DWG | Layout Tab: P012



EXPLANATION

- Groundwater monitoring well
- Soil boring
- 99.99 Groundwater elevation in feet referenced to Mean Sea Level (MSL)
- 99.99 Groundwater elevation contour, dashed where inferred.

Approximate groundwater flow direction at a gradient of 0.005 to 0.01 Ft./Ft.

N

0 30

Scale in Feet

Source: Figure Modified From Drawing Provided By Cambria Environmental.

FIGUI

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

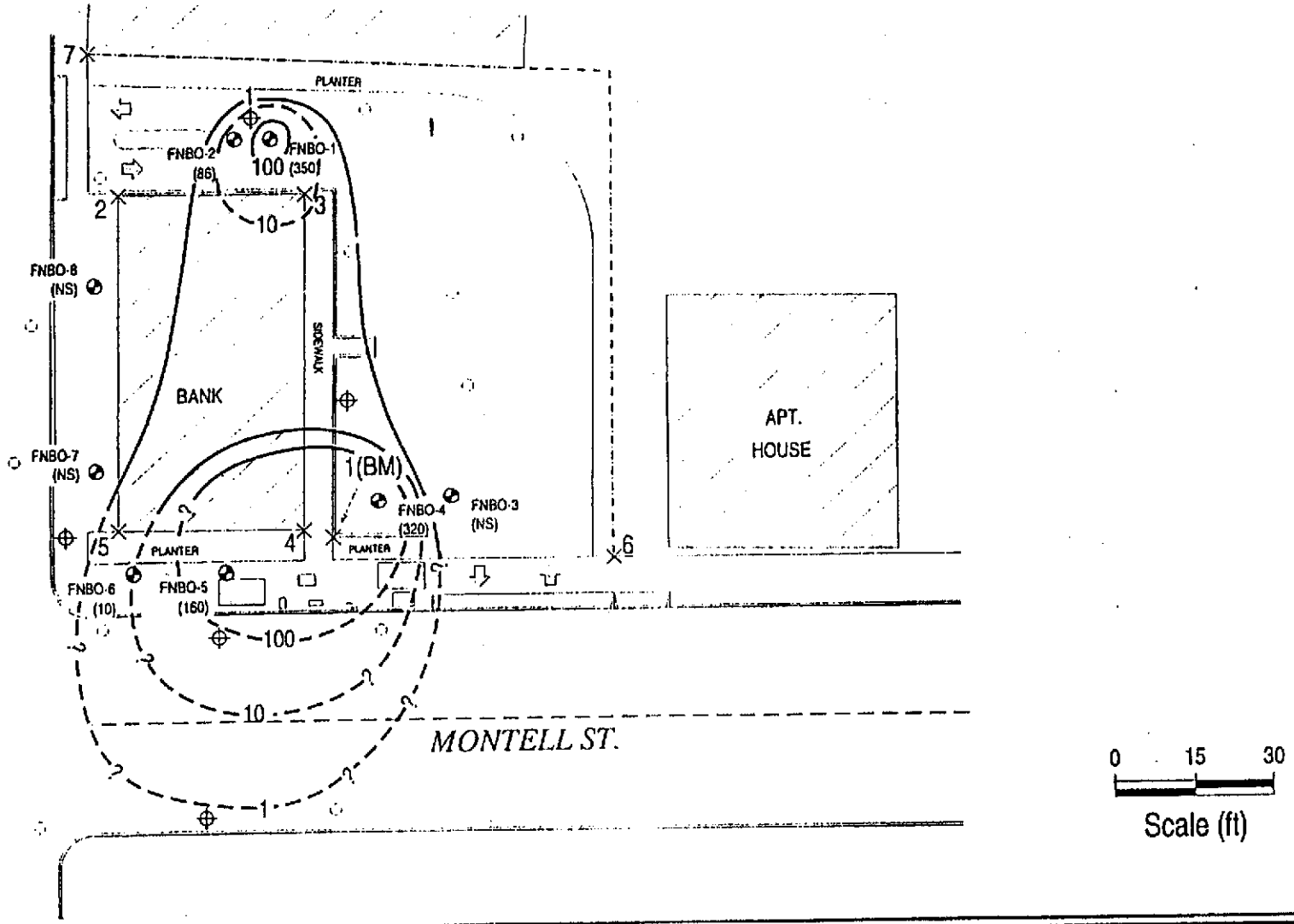
POTENTIOMETRIC MAP
Former Chevron Service Station #0517
3900 Piedmont Avenue
Oakland, California

JOB NUMBER 6420.02

REVIEWED BY

DATE August 3, 1998

REVISED DATE



BASE-MAP

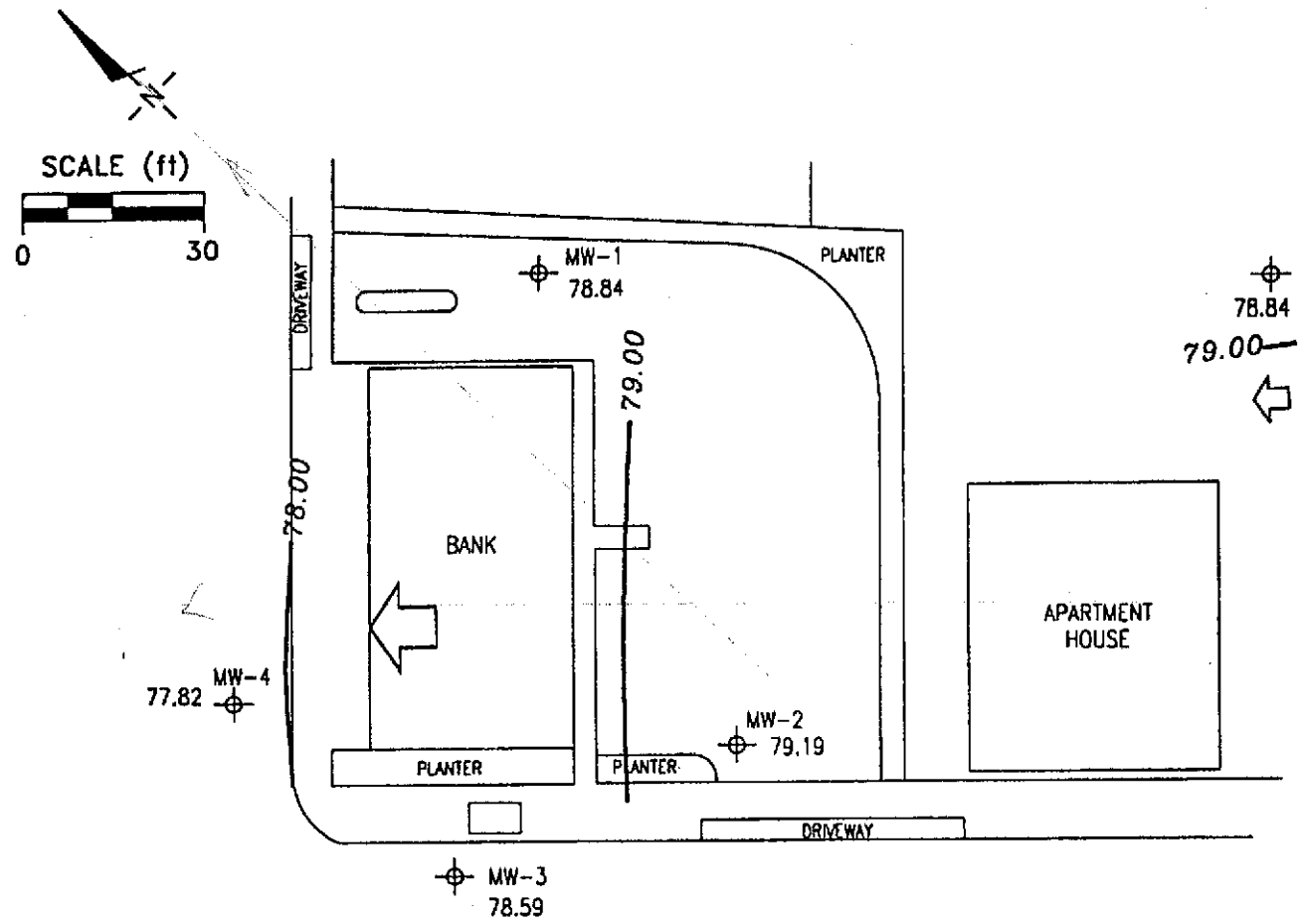
CAMBRIA
Environmental Technology, Inc.

EXPLANATION

- FNBO-7 (350) — PREVIOUSLY DRILLED SOIL BORING (WITH TRPH CONCENTRATIONS - ppm)
- PROPOSED WELL
- PROPOSED SOIL BORING
- PROPERTY LINE
- 5 — SURVEY POINT AND IDENTIFICATION

Estimated Distribution of TRPH in Soil
Between 5 and 11 ft Depths
First Nationwide Bank
3900 Piedmont Avenue
Oakland, California F:\PROJECT\FNB\TRPH

FIGURE
3



EXPLANATION

- MONITORING WELL
- 78.84 GROUNDWATER ELEVATION (FT, MSL)
- 79.00 GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.02

REGISTERED GEOLOGIST
STEVEN E. KRCIK
No. 4976
9/98
STATE OF CALIFORNIA

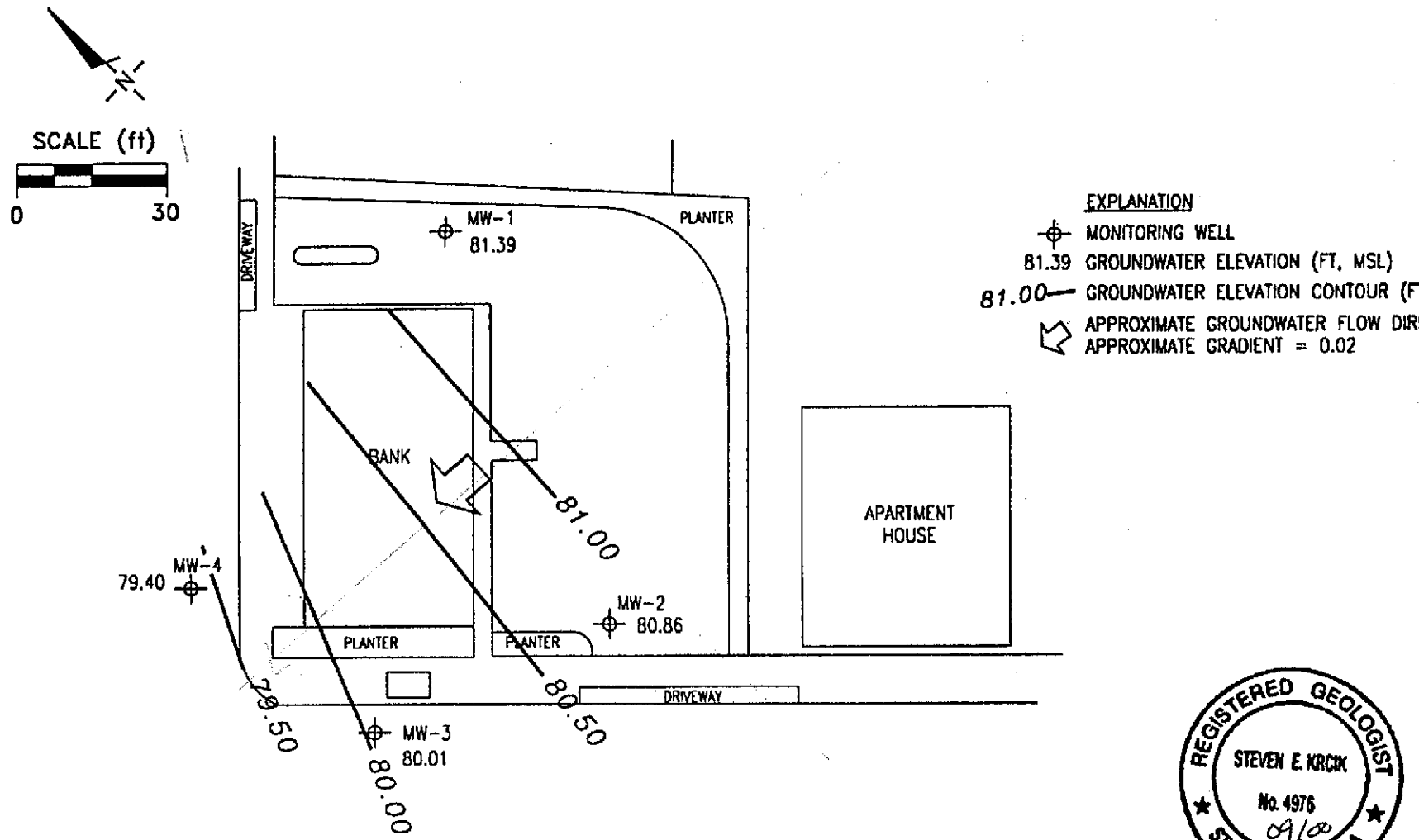
Ref. 0517-gm.dwg
Basemap from Cattler-Ryan, Inc.

PREPARED BY
RRM
engineering contracting firm

Former Chevron Station 9-0517
3900 Piedmont Street
Oakland, California

GROUNDWATER ELEVATION CONTOUR MAP, NOVEMBER 23, 1998

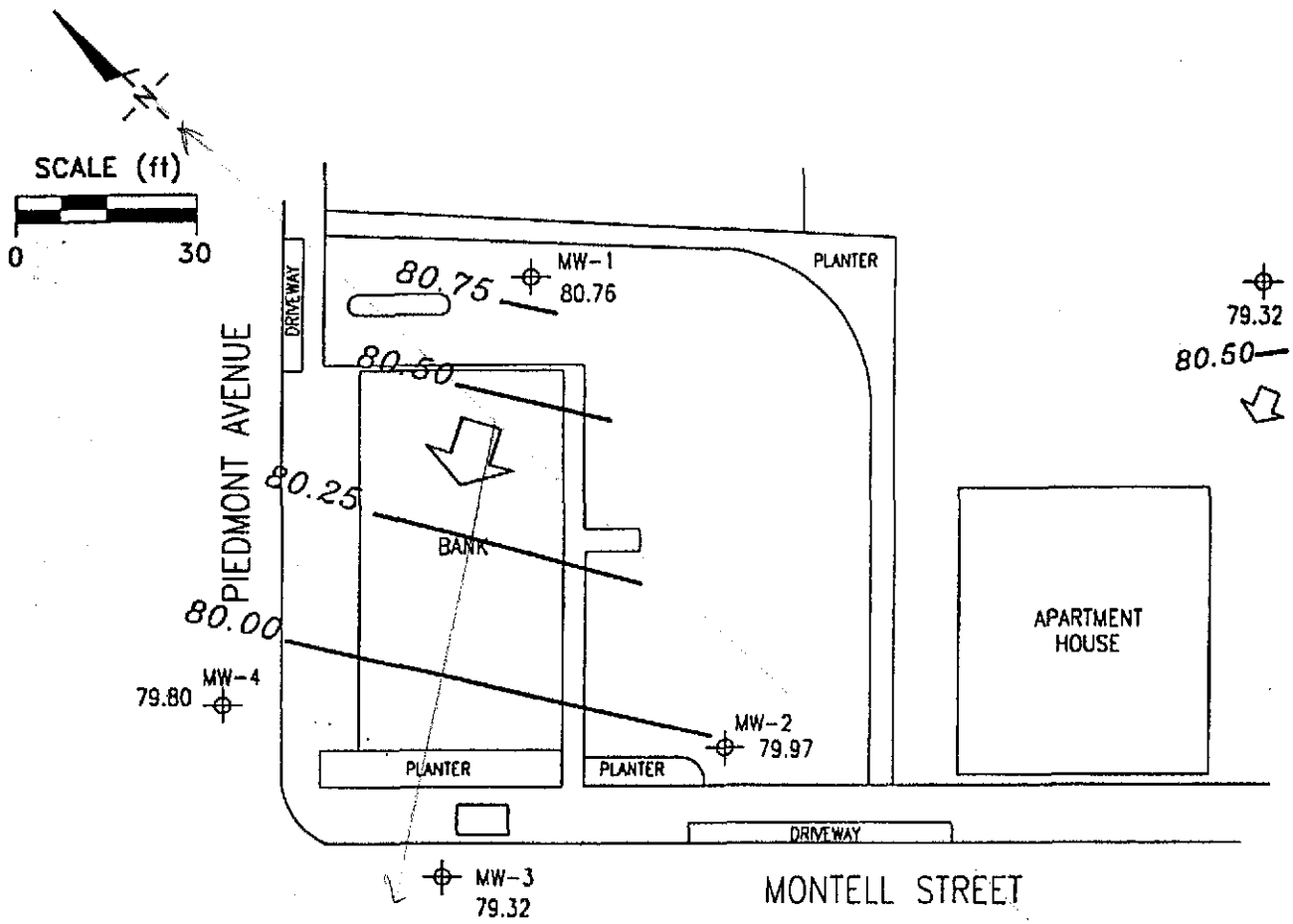
FIGURE: 1
PROJECT: DAC04



REGISTERED GEOLOGIST
STEVEN E. KRCIK
No. 4976
9/00
STATE OF CALIFORNIA

Ref. 0517-qm.dwg
Basemap from Gettler-Ryan, Inc.

PREPARED BY RRM engineering contracting firm	Former Chevron Station 9-0517 3900 Piedmont Street Oakland, California	GROUNDWATER ELEVATION CONTOUR MAP, FEBRUARY 8, 1999	FIGURE: 1 PROJECT: DAC04



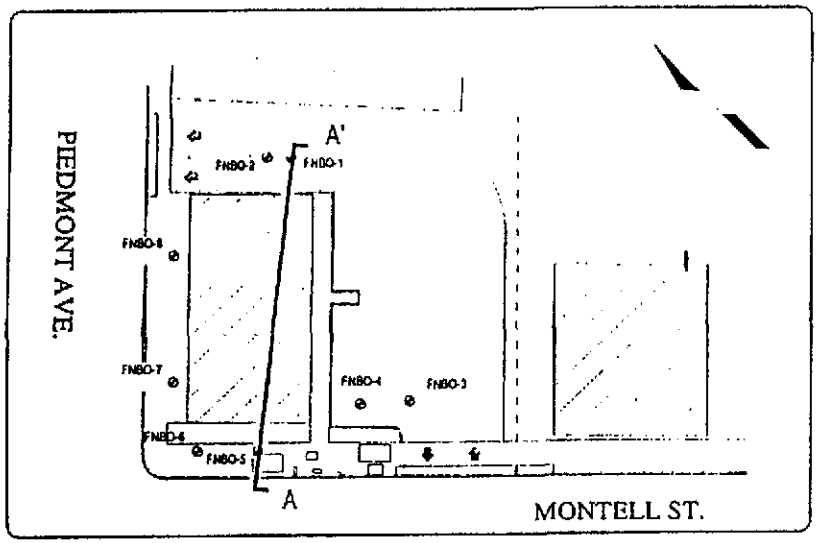
EXPLANATION

- MONITORING WELL
- 79.32 GROUNDWATER ELEVATION (FT, MSL)
- 80.50 GROUNDWATER ELEVATION CONTOUR (FT, MSL)
- APPROXIMATE GROUNDWATER FLOW DIRECTION; APPROXIMATE GRADIENT = 0.02

REGISTERED GEOLOGIST
STEVEN E. KRCIK
No. 4975
STATE OF CALIFORNIA

Ref. 0517-gm.dwg
Basemap from Cellier-Ryan, Inc.

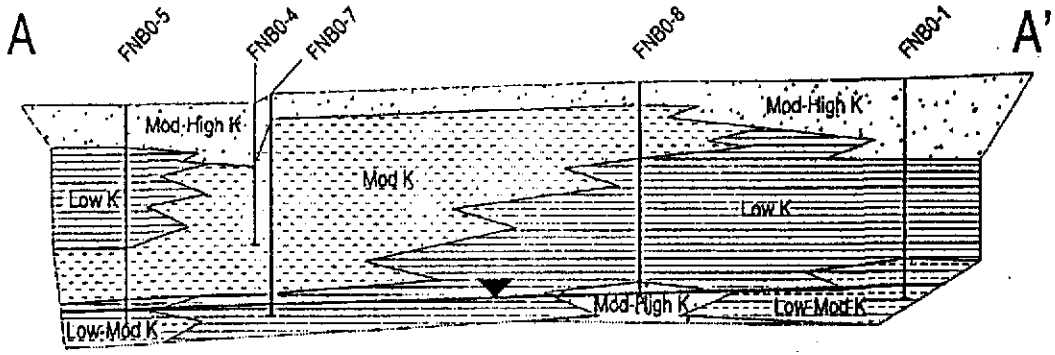
PREPARED BY			
RRM engineering contracting firm	Former Chevron Station 9-0517 3900 Piedmont Street Oakland, California	GROUNDWATER ELEVATION CONTOUR MAP, MAY 7, 1999	FIGURE: 1 PROJECT: DAC04



Cross-Section Location Map

10 ft

20 ft



CAMBRIA
Environmental Technology, Inc.

EXPLANATION

- Low permeability sediments
- Low to moderate permeability sediments
- Moderate permeability sediments
- Moderate to high permeability sediments

Cross-Section A-A'

3900 Piedmont Avenue
Oakland, California

FIGURE
2

APPENDIX E

CROSS SECTIONS AND BORING LOGS

Gettler-Ryan, Inc.

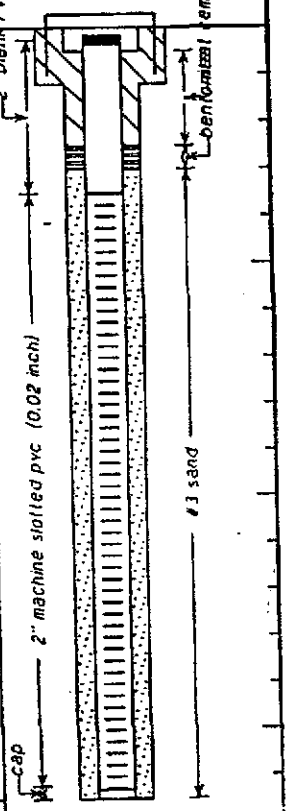
Log of Boring MW-1

PROJECT: *Former Chevron Service Station #9-0517*	LOCATION: *3900 Piedmont Avenue, Oakland, CA*
G-R PROJECT NO.: *346420.02*	SURFACE ELEVATION: *87.89 feet MSL*
DATE STARTED: *07/21/98*	WL (ft. bgs): *10.2* DATE: *07/21/98* TIME: *15:25*
DATE FINISHED: *07/21/98*	WL (ft. bgs): *8.4* DATE: *07/22/98* TIME: *16:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						ML	PAVEMENT - asphalt.
						ML	GRAVELLY SILT (ML) - very dark grayish brown (2.5Y 3/2), damp, medium stiff, low plasticity; 50% silt, 30% fine gravel, 20% fine to coarse sand.
						GC	CLAYEY GRAVEL (GC) - yellowish brown (10YR 5/4), damp, medium dense; 70% fine to coarse gravel, 15% fine to coarse sand, 15% clay.
5	0	14	MW1-8			CL-ML	SILTY CLAY (CL-ML) - light yellowish brown (2.5Y 6/4), moist, stiff, low plasticity; 50% clay, 40% silt, 10% fine sand.
						GC	CLAYEY GRAVEL (GC) - dark yellowish brown (10YR 4/4), moist, medium dense; 50% fine to coarse gravel, 30% clay, 20% fine to coarse sand.
10	0	10	MW1-10 MW1-11			ML	SANDY SILT WITH CLAYEY SILT LENSES (ML) - dark greenish gray (5GY 4/1), saturated, stiff, low plasticity; 45% silt, 30% fine sand, 25% clay; clayey silt lenses up to 2 inches thick. Color changes to light olive brown (2.5Y 5/6) at 11.5 feet.
15	0	13	MW1-16			CL	CLAY (CL) - brown (10YR 5/3), damp to moist, stiff, low plasticity; 90% clay, 10% fine sand.
20							
25							

(* = converted to equivalent standard penetration blows/ft.)

WELL DIAGRAM



JOB NUMBER: *346420.02*

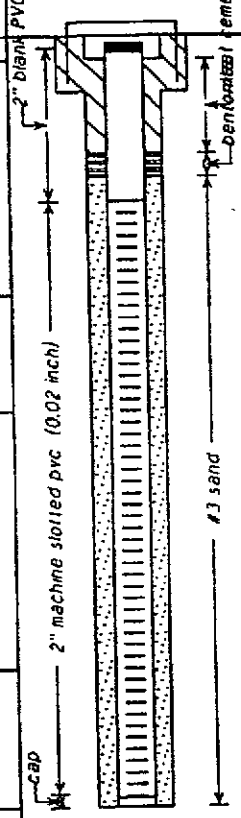
Gettler-Ryan, Inc.

Log of Boring MW-2

PROJECT: *Former Chevron Service Station #9-0517*	LOCATION: *3900 Piedmont Avenue, Oakland, CA*
G-R PROJECT NO.: *346420.02*	SURFACE ELEVATION: *86.09 feet MSL*
DATE STARTED: *07/21/98*	WL (ft. bgs): *12.0* DATE: *07/21/98* TIME: *13:55*
DATE FINISHED: *07/21/98*	WL (ft. bgs): *7.4* DATE: *07/22/98* TIME: *16:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *16.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						CL	PAVEMENT - asphalt.
							SANDY CLAY (CL) - dark brown (10YR 3/3), moist, stiff, low plasticity; 60% clay, 30% fine to coarse sand, 10% fine gravel.
							Color changes to yellowish brown (10YR 5/3) at 3 feet.
5	0	14	MW2-6			GC	CLAYEY GRAVEL WITH SAND (GC) - olive (5Y 5/4) mottled light olive brown (2.5Y 5/4), moist, dense; 50% fine to coarse gravel, 30% fine to coarse sand, 20% clay.
						ML	SANDY SILT (ML) - light olive brown (2.5Y 5/6) mottled light gray (2.5 Y 7/2), moist to saturated, stiff, low plasticity; 45% silt, 30% fine sand, 25% clay.
10	0	10	MW2-11				
						CL	CLAY (CL) - ligh olive brown (2.5Y 5/6), moist, stiff, low plasticity; 70% clay, 25% silt, 5% fine sand.
15	10	13	MW2-16				
							(* = converted to equivalent standard penetration blows/ft.)
20							
25							

WELL DIAGRAM



JOB NUMBER: *346420.02*

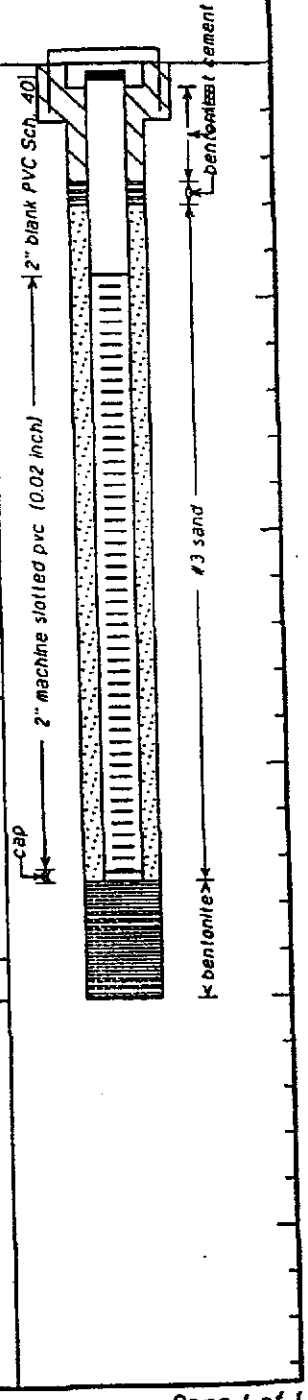
Gettler-Ryan, Inc.

Log of Boring MW-3

PROJECT: *Former Chevron Service Station #9-0517*	LOCATION: *3900 Piedmont Avenue, Oakland, CA*
G-R PROJECT NO.: *346420.02*	SURFACE ELEVATION: *86.28 feet MSL*
DATE STARTED: *07/21/98*	WL (ft. bgs): *11.0* DATE: *07/21/98* TIME: *10:55*
DATE FINISHED: *07/21/98*	WL (ft. bgs): *8.2* DATE: *07/22/98* TIME: *16:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *20 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
						GC	PAVEMENT - asphalt. CLAYEY GRAVEL WITH SAND (GC) - dark yellowish brown (10YR 4/6), moist, medium dense; 55% fine to coarse gravel, 25% fine to coarse sand, 20% clay.
5			MW3-5			SC	CLAYEY SAND (SC) - light yellowish brown (10YR 6/4), moist, medium dense; 60% fine sand, 40% clay.
	32	15	MW3-6			GC	CLAYEY GRAVEL WITH SAND (GC) - light yellowish brown (10YR 6/4), moist , medium dense; 55% fine to coarse gravel, 25% fine to coarse sand, 20 % clay.
						ML	SANDY SILT (ML) - greenish gray (5GY 4/1), moist to saturated, stiff, low plasticity; 55% silt, 30% fine sand, 15% clay.
10	15	10	MW3-10 MW3-10.5				Color changes to olive (5Y 5/3) mottled grenish gray (5GY 5/1) at 11 feet.
						CL	CLAY (CL) - brown (10YR 5/3), damp to moist, stiff, low plasticity; 90% clay, 10% fine sand.
15	4.5	14	MW3-16				
	0	15	MW3-19.5			CL/SC	SANDY CLAY WITH CLAYEY SAND LENSES (CL/SC) - brown (10YR 5/3), moist, stiff, low plasticity; 70% clay, 30% fine sand; clayey sand lenses up to 1 inch thick.
20							(* = converted to equivalent standard penetration blows/ft.)
25							

WELL DIAGRAM



JOB NUMBER: *346420.02*

Gettler-Ryan, Inc.

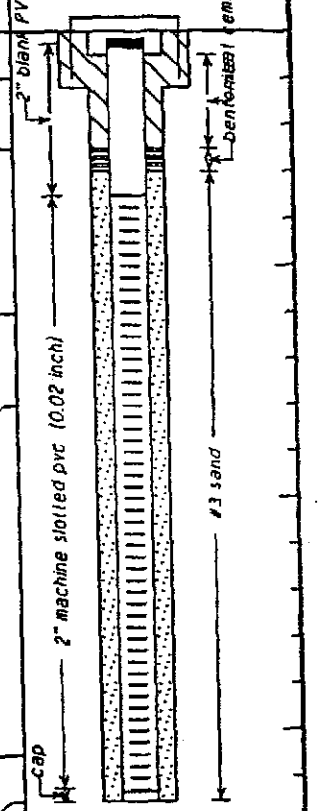
Log of Boring MW-4

PROJECT: *Former Chevron Service Station #9-0517*	LOCATION: *3900 Piedmont Avenue, Oakland, CA*
G-R PROJECT NO.: *346420.02*	SURFACE ELEVATION: *87.22 feet MSL*
DATE STARTED: *07/21/98*	WL (ft. bgs): *12.0* DATE: *07/21/98* TIME: *12:20*
DATE FINISHED: *07/21/98*	WL (ft. bgs): *8.1* DATE: *07/22/98* TIME: *16:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *18.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION
							PAVEMENT – asphalt.
						CL	SANDY CLAY (CL) – very dark gray (5Y 3/1), moist, medium stiff, low plasticity; 90% clay, 10% fine sand.
						CL	SANDY CLAY (CL) – dark greenish gray (5GY 4/1), moist, medium stiff, low plasticity; 70% clay, 30% fine to coarse sand.
5							Sand increases to 35–40%, trace fine gravel at 5 feet.
	0	14	MW4-6			GC	CLAYEY GRAVEL WITH SAND (GC) – dark gray (5Y 4/1) mottled brown (7.5YR 4/4), moist, medium dense; 50% fine to coarse gravel, 35% fine to coarse sand, 15% clay.
						ML	SANDY SILT (ML) – olive (5Y 5/3), moist to saturated, stiff, low plasticity; 55% silt, 30% fine sand, 15% clay.
10	126	11	MW4-11				
							Sand increases to 40% at 15 feet.
15	2.6	12	MW4-16			CL	CLAY (CL) – brown (10YR 5/3), damp, stiff, low plasticity; 90% clay, 10% fine sand.
20							
25							

(* = converted to equivalent standard penetration blows/ft.)

WELL DIAGRAM



JOB NUMBER: *346420.02*