# SITE ASSESSMENT REPORT

for

# CHEVRON SERVICE STATION #9-1583
# OAKLAND, CALIFORNIA

12/15/90

Submitted to

CHEVRON U. S. A., Inc.

December 15, 1990

by

Geraghty & Miller, Inc.
*Environmental Services*
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January 2, 1991

Mr. Gil Wister
Alameda County
Environmental Health
80 Swan Way, Room 200
Oakland, California 94621

Re: Chevron Service Station #9-1583
5509 Martin Luther King Way
Oakland, CA

Dear Mr. Wister:

Enclosed we are forwarding the Site Assessment Report dated December 15, 1990, conducted by our consultant Geraghty & Miller, Inc. for the above referenced site. As indicated in the report, three (3) borings were advanced and completed into groundwater monitoring wells. Analytic testing of the soils sampled detected TPH-gasoline at concentrations ranging from ND to 190 ppm at or below the groundwater interface. Groundwater analysis showed no petroleum hydrocarbon contamination above the MCL's.

A discrepancy exists between the chemical concentrations detected in the existing wells in comparison to the recently installed wells. In March, 1990, the well caps were replaced on the existing wells due to corrosion and possible surface leakage into the wells. Analytic testing of these wells at that time detected concentrations of Benzene ranging from 400 ppb to 3,000 ppb. Based on this discrepancy, Chevron has instructed Geraghty & Miller, Inc. to initiate a quarterly monitoring program and to conduct a field investigation to ascertain if these wells are valid monitoring points. At completion of 3-4 rounds of sampling the data will be evaluated to assess if the wells have been purged of any surface contamination that may have infiltrated into the wells prior to the well head replacement.

Chevron will proceed with the above proposed work under self direction unless otherwise informed by your office.

If you have any questions or comments please do not hesitate to contact Nancy Vukelich at (415) 842-9581.

Very truly yours,
C. G. Trimbach

By Nancy Vukelich
Nancy Vukelich

NLV/jmr
Enclosure

cc: Mr. Lester Feldman
RWQCB-Bay Area
1800 Harrison Street
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Oakland, CA 94612

Mr. W.T. Scudder
Chevron Property Management Specialist

# SITE ASSESSMENT REPORT

**for**

**Chevron Service Station #9-1583**
**5509 Martin Luther King, Jr. Way**
**Oakland, California**

December 15, 1990

Respectfully Submitted

Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, California

James Wilmesher
Geologist

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Senior Geologist

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*Project. No. RC02603*

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## EXECUTIVE SUMMARY

To date, a total of six ground-water monitor wells have been drilled and installed at the Chevron facility. Monitor Wells #1, #2, and #3 were installed during 1983, by a previous consultant. Monitor Wells MW-4, MW-5, and MW-6 were installed by Geraghty & Miller to assess whether hydrocarbons had impacted the soil and shallow ground water in the vicinity of the facility.

The site is underlain by primarily silty and clayey sands, sands, and gravels to a depth of approximately 26.5 feet, the total depth explored in Monitor Well MW-4. Depth to ground water in the vicinity of the site during November 1990, ranged from 9.69 feet below the ground surface (Monitor Well MW-6) to 14.25 feet below the ground surface (Monitor Well MW-4). The approximate direction of ground-water flow beneath the site is generally toward the northwest.

Soil analytical results collected from exploratory borings had detectable concentrations of petroleum hydrocarbons in the soil samples collected at or beneath the water table (Exploratory Borings MW-5 and MW-6). Concentrations of petroleum hydrocarbons were not detected in soil samples collected from Exploratory Boring MW-4.

Concentrations of petroleum hydrocarbons were detected in ground-water samples collected from monitor wells in the vicinity of the underground storage tanks (Wells #1, #2, and #3). Concentrations of petroleum hydrocarbons were not detected in ground-water samples collected from Monitor Well MW-4 located in the northeast corner of the site. Petroleum hydrocarbons were detected in the ground-water sample collected in Monitor Well MW-5 (southeast of the site), and in Monitor Well MW-6 (south southwest of the site). Based on the available ground-water data the extent of dissolved petroleum hydrocarbons has not been defined in the direction west northwest of the underground storage tanks and the pump islands.

# 1. INTRODUCTION

This report presents the results of the soil and ground-water assessment activities performed by Geraghty & Miller, Inc. (Geraghty & Miller) at Chevron U.S.A., Inc. (Chevron) Service Station #9-1583, located at 5509 Martin Luther King, Jr. Way, Oakland, California (Figure 1) during October and November 1990. The objective of the assessment activities was to better define the extent of petroleum hydrocarbons in the soil and shallow ground water beneath, and in the vicinity of, the Chevron site.

The scope of work for the assessment activities was presented to Chevron in Geraghty & Miller's letter dated April 23, 1990.

## 1.1 SCOPE OF WORK

Task 1 - Pre-Field Activities

Schedule subcontractors and materials and obtain the required drilling ,well installation, and encroachment permits.

Task 2 - Drilling and Well Installation

Drill three borings to a depth of approximately 20 feet below the depth of first encountered water using 8-inch diameter hollow stem auger drilling equipment. Collect soil samples in brass sample tubes at approximately 5-foot depth intervals using a California split-spoon sampler. Upon completion, convert the exploratory borings to ground-water monitor wells by installing 2-inch diameter schedule 40 PVC casing. Soil generated during the drilling activities was stored on site.

Task 3 - Ground-Water Sampling and Laboratory Analysis

Collect ground-water samples for laboratory analyses from the three monitor wells proposed for installation in Task 2. Purge each well so that a water sample representative of the formation water in the vicinity of the monitor well is obtained. Collect samples into appropriate USEPA approved containers and transported to the laboratory specified by Chevron. Analyze the water samples collected from the monitoring wells for total

petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified), and benzene, toluene, ethylbenzene, and xylenes (BTXE, USEPA Method 8020).

Task 4 - Generate Site Assessment Report

Detail the field activities, drilling, well installation, and sampling activities. Provide exploratory borings and well completion details. Discuss findings and analytical results.

## 2. BACKGROUND

The project site is located at the northwest corner of the intersection of Martin Luther King, Jr. Way and 55th Street, in Oakland, California (Figure 1), in a commercial and residential area. An active British Petroleum service station (BP) is located to the south of the Chevron site across 55th Street.

According to information supplied to Geraghty & Miller by Chevron, product piping was removed from the site on December 14, 1989. A total of seven soil samples were collected by Geotest from the piping trenches and analyzed for total petroleum hydrocarbons (TPH) as gasoline (USEPA Method 8015, modified) and benzene, toluene, xylenes, and ethyl-benzene (BTXE) (USEPA Method 8020). The approximate locations of the soil samples are shown in Figure 2 and a summary of the analytical results is presented in Table 1. The location and extent of the trenches was not included in the information supplied to Geraghty & Miller.

The highest concentration of TPH as gasoline (1,700 mg/kg) was detected in soil sample B. The sampler reportedly encountered water before the concentrations of hydrocarbons "attenuated to below levels of concern". Based on these results, the Alameda County Health Care Services Agency, Department of Environmental Health (ACDEH) requested that Chevron install three ground-water monitor wells to assess whether shallow ground water in the vicinity of the former location of the product piping had been impacted by petroleum hydrocarbons. The ACDEH also requested Chevron to submit an unauthorized release form (ACDEH, January 22, 1990).

According to information supplied to Geraghty & Miller by Chevron, three ground-water monitor wells (Wells #1, #2, and #3) were installed at the project site by Gettler-Ryan, Inc. during December 1983 (Figure 2). The exploratory borings were drilled to a total depth of 21 feet below the ground surface and encountered clay and silty clay to the total depth explored. Depth to water ranged from 10.25 feet to 11.58 feet below the ground surface on December 22, 1983, and phase-separated hydrocarbons were reportedly not observed. Well completion and top of casing elevation data were not available for the wells. A summary of the depth-to-water data is presented in Table 2.

On March 6, 1990, a representative of Geraghty and Miller visited the site to perform ground-water sampling. At that time it was found that the well caps needed to be replaced

because of corrosion and possible surface leakage into the well and ground water. Water was observed in the Christy box enclosure of Monitor Well #1. The water in the well head enclosure was at approximately the same level as the ruptured brass well cap. Stains were observed on the inside of the PVC casing of Monitor Well #1. The brass well cap for Monitor Well #2 was removed easily by hand twisting and the rubber seal was found to be ruptured. Stains were also observed on the inside of the PVC casing of Monitor Well #2. The brass well cap for Monitor Well #3 was very difficult to remove. A strong hydrocarbon odor was noted upon removal of the well caps. Ground-water sampling activities scheduled for March 6, 1990, were postponed until March 12, 1990, to allow for the replacement of the well caps. The brass well caps were replaced, on March 12, 1990, with water-tight PVC locking well caps and secured with Chevron locks.

On March 12, 1990 depth-to-water measurements and ground-water samples were collected from Monitor Wells #1 through #3 and analyzed for TPH as gasoline (USEPA Method 8015, modified) and BTXE (USEPA Method 8020). Summaries of the depth-to-water and ground-water analytical data are presented in Tables 2 and 4 respectively. TPH as gasoline was detected at concentrations ranging from 800 µg/L (Well #2) to 50,000 µg/L (Well #1). BTXE was detected at concentrations ranging from 18 µg/L (toluene, Well #2) to 18,000 µg/L (xylenes, Well #1) (Geraghty & Miller, April 2, 1990).

On March 25, 1990, the top of casing elevation for each well was surveyed relative to the City of Oakland Bench Mark #1967 located on the curb at the southwest corner of 55th Street and Martin Luther King Jr. Way. The elevation of the bench mark is reported as 84.457 feet above mean sea level. Depth-to-water measurements were also obtained from each well. The top of casing elevations and depth-to-water data are included in Table 2. Depth to water ranged from 10.46 feet below the top of casing (Monitor Well #1) to 12.55 feet below the top of casing (Monitor Well #3). Based on these data, the approximate direction of shallow ground-water flow beneath the southern portion of the site was toward the southwest (Figure 2).

A BP Service Station is located at 5425 Martin Luther King Jr. Way to the south-southwest of the Chevron site (Figure 3). According to information contained in the project files at the Regional Water Quality Control Board (RWQCB) located in Oakland, California, (reviewed during April 1990) three underground gasoline storage tanks (one 8,000-gallon regular gasoline, one 10,000-gallon unleaded gasoline, and one 6,000-gallon super unleaded gasoline) were excavated and removed from the site during October 1987. One soil sample was collected from approximately 2 to 3 feet beneath the tank invert

(approximately 12 feet to 15 feet below the ground surface) from each end of the three tanks and analyzed for volatile hydrocarbons by USEPA Method 8015, modified. Concentrations of volatile hydrocarbons ranged from below the detection limits (<0.8 mg/kg) to 1.1 mg/kg (Applied GeoSystems, October 23 1989). There were no references to the presence of monitoring wells on the BP property.

In order to better define the extent of petroleum hydrocarbons in the soil and shallow ground water beneath and in the vicinity of the Chevron site, three additional ground-water monitor wells were installed during October 1990 at the approximate locations shown in Figure 3. The locations of the monitor wells were based on the available depth-to-water and water elevation data, and were designed to better assess the extent of petroleum hydrocarbons in the vicinity of the Chevron site.

# 3. SOIL AND GROUND-WATER ASSESSMENT ACTIVITIES

## 3.1 PRE-FIELD ACTIVITIES

During May, 1990, Geraghty & Miller began negotiations with the City of Oakland to obtain an encroachment permit for the installation of two monitor wells located in the parking area of 55th Street (see Figure 3). On October 15, 1990, the City of Oakland approved the encroachment permit for Monitor Wells MW-5 and MW-6 within the parking area on the south side of 55th Street. Drilling was scheduled with H.E.W. Drilling Inc.(HEW), located in Palo Alto, California. As required by the encroachment permit, HEW acquired an excavation permit for coring two 14-inch diameter holes in 55th Street to allow for drilling of the exploratory borings. Geraghty & Miller obtained an obstruction permit from the City of Oakland on October 17, 1990, to prevent automobiles from parking over the proposed well locations. Copies of the encroachment permit, excavation permit, and obstruction permit are included in Appendix C.

On October 16, 1990, West Coast Locators, located in San Jose, California, were on site to locate underground utilities in a 10-foot by 10-foot area around each proposed boring. Underground utilities located beneath 55th Street were delineated on October 16 and 17, 1990, by contacting and providing site specific information to local utility companies through Underground Service Alert (USA).

Before drilling, a safety meeting was conducted by the Geraghty & Miller site safety officer. Safety equipment, USEPA Level of Protection D (coveralls, and rubber or leather steel-toe boots) was modified by Geraghty & Miller to include hard hats and gloves and was required of all participants prior to beginning the on-site activities.

## 3.2 EXPLORATORY DRILLING, SOIL SAMPLING, AND MONITOR WELL INSTALLATION

A total of three exploratory soil borings (MW-4, MW-5, and MW-6) were drilled during October 1990 at the approximate locations shown in Figure 3. Boring locations were selected based on ground-water analytical data from Monitor Wells MW-1, MW-2, and MW-3, approximate direction of ground-water flow based on the historical depth-to-water data, location of underground and overhead utilities, and access for the drill rig.

The exploratory borings were drilled using a Central Mine Equipment (CME-55) truck-mounted drill rig equipped with 8-inch outside diameter (O.D.) hollow-stem auger drilling equipment. All drilling equipment which entered the borehole was steam-cleaned prior to drilling each boring. Soil samples were collected at approximately 5-foot depth intervals from 5 feet below the ground surface to the total depth of each boring and logged by a Geraghty & Miller geologist. The samples were collected by advancing a California modified split-spoon sampler equipped with three brass sample liners into the undisturbed soil beyond the tip of the augers. Prior to each use, the sampler was washed in a tri-sodium phosphate (TSP) solution and rinsed with potable water. The soils encountered during drilling were classified and described according to the Unified Soil Classification System (ASTM D-2488). The exploratory boring logs are included in Appendix A.

The bottom brass liner from each 18-inch sample was emptied into a one-quart jar, sealed with aluminum foil, allowed to equilibrate, and the headspace sampled for volatile organic compounds using a flammable-gas detector (GASTECH Model 1314) calibrated to hexane. The field screening results are reported on the exploratory boring logs. Results of the headspace analysis were used to select samples for laboratory analysis and provide information for segregating the soil generated during the drilling activities.

The soil in the middle brass liner from each sampling interval was retained in the brass liner, sealed with Teflon™ tape and plastic end caps, placed on ice and transported to GTEL Environmental Laboratories Inc., located in Concord, California along with chain of custody documentation.

Upon completion, each exploratory boring was converted into a ground-water monitor well by installing 2-inch diameter Schedule 40 polyvinylchloride (PVC) casing. The annular space surrounding the screened interval was backfilled with Lonestar #3 sand from the total depth to approximately one foot above the top of the screened interval. A 1-foot layer of bentonite followed by Portland Type II neat cement was used to seal the remaining annular space. Monitor well construction details are presented on the exploratory boring logs included in Appendix A. The monitor wells were secured at the surface with water-tight locking caps. The locks were provided by Chevron. The wellhead of each well is protected by a traffic-rated utility box. Monitor Wells MW-5 and MW-6, located in the parking zone along the south side of 55th Street, are protected by Phoenix Iron Works traffic-rated utility boxes as required by the encroachment permit from the City of Oakland.

The location and top of casing elevation for Monitor Wells #1 through #3 and MW-4 through MW-6 were surveyed by Bates & Bailey Land Surveyors Inc. (Bates & Bailey), located in Berkeley, California. The top of casing elevations were surveyed relative to the City of Oakland Benchmark # 1967 (84.457 feet above mean sea level). The top of casing elevations are included in Table 1. The horizontal locations (northing and easting)were surveyed with respect to City of Oakland pin monument #6SE4, located 19 feet east of the center line of Martin Luther King Jr. Way and 13 feet north of the centerline of 55th Street. A copy of the surveyors report is included in Appendix D.

During drilling, the soils generated were segregated based on results of headspace analyses and placed in a lined soil bin provided by Erickson Inc. (Erickson), located in Richmond, California. In order to provide recommendations to Chevron for the proper disposal of the soil, one composite soil sample (MLK-1) was collected from the stockpiled soil on November 5, 1990, and submitted to Superior Analytical Laboratories Inc. (Superior Labs), located in Martinez, California, along with chain-of-custody documentation.

During the drilling activities, Exploration Drilling Inc., located in Vacaville, California, was observed drilling two 10-inch diameter borings on the BP property. The borings, drilled to a depth of approximately 35 feet below the ground surface, were completed as two 4-inch diameter ground-water monitor wells for site assessment activities conducted by Weiss Associates (Verbal communication, Robert Kitay, Weiss Associates, October 18, 1990). One well was located approximately 5 feet north of the BP facility structure and a second well was located approximately 10 feet east of the southeast corner of the facility structure.

## 3.3 GROUND-WATER SAMPLING

Ground-water samples were collected from Monitor Wells MW-4 through MW-6 on October 31, 1990. Prior to sampling, depth-to-water and total well depth measurements were obtained for each well and each well was checked for the presence of phase-separated hydrocarbons. Phase-separated hydrocarbons were not observed in any of the monitor wells. A minimum of 3 casing volumes of water was purged from each well using an above ground pneumatic pump prior to sample collection. The purged water was monitored for pH, temperature, and specific conductance and placed into 55-gallon drums and stored on-site for proper disposal by Chevron. A summary of the field data is presented in Table 3.

Following purging, ground-water samples were collected using a new polyethylene disposal bailer for each well. The water samples were placed into the appropriate USEPA approved containers, placed on ice, and transported to Superior Analytical Laboratories Inc. located in San Francisco, California along with chain of custody documentation.

A field blank was collected during the sampling of Monitor Well MW-4, MW-5 and MW-6. A field blank consists of a sample vial filled in the field with laboratory grade water in order to determine whether any of the compounds analyzed for may have been imparted to the samples by air in the vicinity of the sampling location, the sample container, the preservative (if used), or other exogenous sources. The field blank was collected during the sampling of Monitor Well MW-4 because of the proximity to the fuel dispensing islands, automobiles parked for repair, and traffic on Martin Luther King Jr. Way.

## 3.4 SOIL AND GROUND-WATER ANALYTICAL PROCEDURES

Soil samples collected from Exploratory Borings MW-4 through MW-6 were analyzed for TPH as gasoline (USEPA Method 8015, modified). Soil Sample MLK-1, collected from the soil stored in the soil bin, was analyzed for TPH as gasoline (USEPA Method 8015, modified), BTXE (USEPA Method 8020), and organic lead (DHS, LUFT manual, May 1988).

Soil samples collected during the drilling of Exploratory Borings MW-4 through MW-6 were only analyzed for TPH as gasoline as a means of quantifying petroleum hydrocarbons in the subsurface. Soil samples were selected for analysis based on the results of the headspace analysis and the depth to first encountered water measured October 18, 1990. Soil samples collected above first-encountered water were submitted for analyses to assess petroleum hydrocarbons in the soils of the vadose zone. Soil samples collected near the water table surface were submitted for analysis to determine concentrations of petroleum hydrocarbons smeared on soils due to fluctuations in the elevation of the water table. Soil samples collected at depths below the water surface were submitted for analysis to determine the presence of petroleum hydrocarbons from dissolved petroleum hydrocarbons in the ground-water being adsorbed on clay and silt soils.

Ground-water samples collected from Monitor Wells MW-4 through MW-6 and the field blank were analyzed for TPH as gasoline (USEPA Method 8015, modified) and BTEX (USEPA Method 8020).

Soil samples collected during the drilling of Exploratory Borings MW-4 through MW-6 were submitted to GTEL according to Chevron's designated-laboratory protocol (June 1989), subsequent soil and ground-water samples were submitted to Superior Analytical according to an update of Chevron's protocol (October 15, 1990).

# 4. ASSESSMENT RESULTS

## 4.1 HYDROGEOLOGIC CONDITIONS

The project site and vicinity were found to be underlain by primarily by silt and clay with occasional interbedded silty sand, sand, and gravel to a depth of approximately 26.5 feet below ground surface, the total depth explored (Monitor Well MW-4). According to the U.S. Geological Survey (USGS) Oakland West 7.5-minute series Quadrangle map the surface drainage in the vicinity of the site is west towards San Francisco Bay approximately 1.5-miles away. Depth-to-water measurements collected from Monitor Wells #1 through MW-6, on November 16, 1990, indicate shallow ground water ranged from 9.74 feet to 14.25 feet below the ground surface. Based on the data collected during November 1990, the approximate direction of ground-water flow is generally toward the northwest (Figure 3).

## 4.2 SOIL ANALYTICAL RESULTS

A total of three soil samples were analyzed from Exploratory Boring MW-4 from depths of approximately 10.5 fee, 15.5 feet, and 20.5 feet below ground surface. The depth to water measured on October 18, 1990, was approximately 15.75 feet below ground surface in Monitor Well MW-4. Concentrations of TPH as gasoline were not detected in the soil samples collected from Exploratory Boring MW-4.

A total of two soil sample were collected from Exploratory Boring MW-5 at depths of 10.5 feet and 15.5 feet below the ground surface. The depth to water on October 18, 1990, was measured at 10.78 feet below the ground surface in Monitor Well MW-5. The soil sample, collected from Monitor Well MW-5 at a depth of 10.5 feet below the ground surface, near the water table surface, was also selected for analysis because of relatively high readings from headspace analysis (see Exploratory Boring Log MW-5, Appendix A). TPH as gasoline were detected at a concentration of 190 mg/kg in the soil sample collected at 10.5 feet below the ground surface in exploratory boring MW-5. TPH as gasoline was not detected in the soil sample collected from 15.5 feet below the ground surface in Exploratory Boring MW-5.

One soil sample from Exploratory Boring MW-6, from a depth of 10.5 feet below the ground surface, was analyzed. The depth to water measured on October 18, 1990, in Monitor Well MW-6 was approximately 9.79 feet below the ground surface. A soil sample from the vadose zone was not retained in the brass sample liners during the sampling event at 5 feet to 6.5 feet below the ground surface in Exploratory Boring MW-6. TPH as gasoline were detected at a concentration of 11 mg/kg in the soil sample collected at 10.5 feet below the ground surface in Exploratory Boring MW-6. A summary of the soil analytical results is presented in Table 3 and copies of the certified analytical reports and chain-of-custody form are included in Appendix B.

## 4.3 GROUND-WATER ANALYTICAL RESULTS

A summary of the ground-water analytical results is presented in Table 4. Copies of the certified laboratory results and chain of custody documentation are included in Appendix B. TPH as gasoline were not detected in the ground-water samples collected from Monitor Wells MW-4 and MW-6. TPH as gasoline were detected at a concentration of 110 µg/L in the ground-water sample collected from Monitor Well MW-5. The only other petroleum hydrocarbons detected were xylenes at concentrations of 1 µg/L and 3 µg/L in ground-water samples collected from Monitor Well MW-4 and MW-6, respectively. Concentrations of TPH as gasoline and BTEX were not detected in the Field Blank.

## 5. DISCUSSION

Based on the data which was available prior to the installation of Monitor Wells MW-4 through MW-6, the direction of shallow ground-water flow beneath the southern portion of the site was toward the southwest (see Figure 2). Based on these data, Monitor Wells MW-5 and MW-6 were installed to better define the extent of petroleum hydrocarbons in the shallow ground water down-gradient of the site. Monitor Well MW-4 was installed to better define the extent of petroleum hydrocarbons hydraulically up-gradient of the fueling facilities and asses the quality of ground water entering the site.

Based on the data collected during November 1990, the direction of shallow ground water flow beneath the site is toward the west northwest. Monitor Wells MW-5 and MW-6 are located generally up-gradient and cross-gradient of the site. Monitor Well MW-4 is located generally cross-gradient of the fueling facility in the northeast corner of the site. Monitor Well #1 is located generally cross-gradient and somewhat down-gradient of the fuel dispensing islands. Monitor Wells #1 and #3 are down-gradient of the underground storage tanks, and Monitor Well #2 is up-gradient of the underground storage tanks. The highest concentration of petroleum hydrocarbons were detected in the ground-water samples collected from the monitor wells hydraulically down-gradient from the underground storage tanks (Monitor Well #1 and #3). Based on the available ground-water data the extent of dissolved petroleum hydrocarbons in the subsurface has not been defined to the west northwest of the on site fueling facilities.

Soil samples collected from Exploratory Borings MW-5 and MW-6 had detectable concentrations of petroleum hydrocarbons at a depth of approximately 10.5 feet below the ground surface near the water table surface. Concentrations of petroleum hydrocarbons were not detected in the soil samples collected from Exploratory Boring MW-4. The highest concentration of petroleum hydrocarbons was detected in the soil sample collected at a depth of 10.5 feet in Exploratory Boring MW-5, located south southwest of the site. Based on the available data, concentrations of petroleum hydrocarbons exist in the subsurface at or near the water table hydraulically up-gradient and cross-gradient from the southern portion of the site.

## 6. REFERENCES


ACDEH, January 22, 1990, Notice of Violation.

Applied Geosystems, October 23, 1987, Letter report No. 87117-1 on tank inspection and laboratory analyses of soil samples collected beneath gasoline storage tanks, Mobil service station No. 10LVW, 5425 Grove Street, Oakland, California..

Geraghty & Miller, Inc., April 23, 1990, Site Assessment Workplan, Chevron U.S.A., Inc. Service Station #9-1583, 5509 Martin Luther King, Jr. Way, Oakland, California.

Helley, E.J., LaJoie, K.R., U.S. Geological Survey et al. 1979. Flatland Deposits of the San Francisco Bay Region, California--Their Geology and Engineering Properties, and Their Importance to Comprehensive Planning. U.S. Department of the Interior.

State of California Leaking Underground Fuel Tank Task Force. 1989. Leaking Underground Fuel Tank Field Manual: Guidelines for Site Assessment, Cleanup, and Underground Storage Tank Closure. State Water Resources Control Board, Sacramento, California.

United States Geological Survey. Topographic Map, West Oakland Quadrangle, 7.5 Minute Series, Issued 1959, Photorevised 1980. Department of the Interior, United States Geological Survey, Reston, Virginia.

Table 1- Analytical Results For Soil Samples.
Chevron Service Station #9-1583, Oakland, California.

| Sample (A) | Depth (Feet) | Date | TPH(B) (mg/kg) | Benzene (C) (mg/kg) | Toluene (C) (mg/kg) | Xylenes (C) (mg/kg) | Ethyl-benzene (C) (mg/kg) | Organic lead (E) (mg/kg) | Laboratory |
|---|---|---|---|---|---|---|---|---|---|
| A | 2 | 14-Dec-89 | ND (<10) | NA | NA | NA | NA | NA | Geotest |
| B | 3 | 14-Dec-89 | 1,700 | NA | NA | NA | NA | NA | Geotest |
| C1 | 3.5 | 14-Dec-89 | ND (<10) | NA | NA | NA | NA | NA | Geotest |
| D | 4.5 | 14-Dec-89 | ND (<10) | NA | NA | NA | NA | NA | Geotest |
| E | 4.5 | 14-Dec-89 | ND (<10) | NA | NA | NA | NA | NA | Geotest |
| F | 3.5 | 14-Dec-89 | ND (<10) | NA | NA | NA | NA | NA | Geotest |
| SS-1 (C) | — | 15-Dec-89 | 670 | 0.70 | 1.20 | 1.50 | 0.96 | NA | Superior |
| MW-4B | 10.5 | 18-Oct-90 | ND (<10) | NA | NA | NA | NA | NA | GTEL |
| MW-4C | 15.5 | 18-Oct-90 | ND (<10) | NA | NA | NA | NA | NA | GTEL |
| MW-4D | 20.5 | 18-Oct-90 | ND (<10) | NA | NA | NA | NA | NA | GTEL |
| MW-5B | 10.5 | 18-Oct-90 | 190 | NA | NA | NA | NA | NA | GTEL |
| MW-5C | 15.5 | 18-Oct-90 | ND (<10) | NA | NA | NA | NA | NA | GTEL |
| MW-6B | 10.5 | 18-Oct-90 | 11 | NA | NA | NA | NA | NA | GTEL |
| MLK-1 | (F) | 5-Nov-90 | ND (<1) | ND(<0.005) | ND(<0.005) | ND(<0.005) | ND(<0.005) | ND(<2) | Superior |

**Notes:**

(A) Samples A, B, C, D, E, F, and SS-1 were collected by Geotest prior to project involvement by Geraghty & Miller.
(B) Total petroleum hydrocarbons as gasoline. Analyzed by USEPA 8015, Modified.
(C) Analyzed USEPA Method 8020.
(D) Sample location and depth not reported.
(E) Organic lead analyzed by procedures described in California DHS, LUFT manual, May 1988.
(F) Sample MLK-1 was collected from the stockpiled soil generated during drilling activities 10/18/90.
NA - Not analyzed.
ND - Not detected.
(<10) - Reported detection limit.

*Project No. RC02603*

Table 2 - Summary of Depth-to-Water and Water Elevation Data
Chevron Service Station #9-1583, Oakland, California

| Well | Date | Depth to Water (1) (feet) | Top of Casing Elevation (feet) | | Water Level Elevation (feet) |
|---|---|---|---|---|---|
| Well #1 | 22-Dec-83 | 10.25 | 81.97 | (A) | 71.72 |
| | 30-Dec-83 | 9.17 | | | 72.80 |
| | 12-Mar-90 | 10.08 | | | 71.90 |
| | 25-Mar-90 | 10.46 | | | 71.51 |
| | 16-Nov-90 | 11.58 | 82.42 | (B) | 70.84 |
| Well #2 | 22-Dec-83 | 10.50 | 83.48 | (A) | 72.98 |
| | 30-Dec-83 | 9.92 | | | 73.56 |
| | 12-Mar-90 | 11.02 | | | 72.46 |
| | 25-Mar-90 | 11.33 | | | 72.15 |
| | 16-Nov-90 | 12.31 | 83.48 | (B) | 71.17 |
| Well #3 | 22-Dec-83 | 11.58 | 84.36 | (A) | 72.22 |
| | 30-Dec-83 | 11.17 | | | 71.81 |
| | 12-Mar-90 | 12.14 | | | 70.74 |
| | 25-Mar-90 | 12.55 | | | 84.36 |
| | 16-Nov-90 | 13.62 | 84.38 | (B) | 70.76 |
| MW-4 | 18-Oct-90 | 15.75 | 84.25 | (B) | 68.50 |
| | 31-Oct-90 | 13.90 | | | 70.35 |
| | 16-Nov-90 | 14.25 | | | 70.00 |
| MW-5 | 18-Oct-90 | 10.78 | 81.95 | (B) | 71.17 |
| | 31-Oct-90 | 10.63 | | | 71.32 |
| | 16-Nov-90 | 10.68 | | | 71.27 |
| MW-6 | 18-Oct-90 | 9.79 | 80.60 | (B) | 70.81 |
| | 31-Oct-90 | 9.69 | | | 70.91 |
| | 16-Nov-90 | 9.74 | | | 70.86 |

**Notes:**

(1) Measured from top of casing.

(A) Surveyed March 26, 1990, by Geraghty & Miller Inc..
(B) Surveyed November 30, 1990, by Bates & Bailey Land Surveyors.

-- Elevations are reported in feet above mean sea level.

-- Elevations were measured relative to City of Oakland Bench Mark #1967 located on the curb at the southwest corner of 55th Street and Martin Luther King Way. Reported elevation of bench mark is 84.457 feet above mean sea level.

Table 3 - Summary of Field Sampling Data
Chevron Service Station #9-1583, Oakland, California

| Well | Date | Calculated Purge Volume (B) (gallons) | Actual Purge Volume (gallons) | Stabilized pH | Stabilized SC (ms/cm) | Stabilized Temperature (F) | Depth to Water (A) (feet) | Measured Depth of Well (A) (feet) | Casing Diameter (inches) |
|---|---|---|---|---|---|---|---|---|---|
| Well #1 | 12-Mar-90 | 10.83 | 13 | 6.61 | 62 | 73.4 | 10.08 | 19.13 | 3 |
| Well #2 | 12-Mar-90 | 9.58 | 13 | 6.28 | 51 | 74.4 | 11.02 | 19.02 | 3 |
| Well #3 | 12-Mar-90 | 8.45 | 13 | 6.48 | 75 | 75.6 | 12.14 | 19.20 | 3 |
| MW-4 | 31-Oct-90 | 5.81 | 3 (C) | 8.10 | 93 | 78 | 13.90 | 24.82 | 2 |
| MW-5 | 31-Oct-90 | 4.87 | 16 | 7.20 | 35 | 81 | 10.63 | 19.79 | 2 |
| MW-6 | 31-Oct-90 | 5.35 | 13 | 7.80 | 36 | 78 | 9.69 | 19.74 | 2 |

**Notes:**

(A) Measured from top of PVC casing.
(B) Based on three casing volumes.
(C) Monitor Well MW-4 was dry after pumping 3 gallons during purging, October 31, 1990.
SC = Specific conductance.

*Project No. RC02603*

Table 4 - Ground-Water Analytical Results
Chevron Service Station #9-1583, Oakland, California.

| Sample | Date | TPH (A) µg/l | Benzene (B) µg/l | Toluene (B) µg/l | Xylenes (B) µg/l | Ethylbenzene (B) µg/l |
|---|---|---|---|---|---|---|
| Well #1 | 12-Mar-90 | 50,000 | 3,000 | 7,300 | 18,000 | 1,900 |
| Well #2 | 12-Mar-90 | 800 | 400 | 22 | 55 | 18 |
| Well #3 | 12-Mar-90 | 47,000 | 1,000 | 9,900 | 9,800 | 1,700 |
| Well MW-4 | 31-Oct-90 | ND(<50) | ND(<0.5) | ND(<0.5) | 1 | ND(<0.5) |
| Well MW-5 | 31-Oct-90 | [illegible] | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) |
| Well MW-6 | 31-Oct-90 | ND(<50) | ND(<0.5) | ND(<0.5) | 3 | ND(<0.5) |
| Trip Blank | 12-Mar-90 | ND(<50) | ND(<0.3) | ND(<0.3) | ND(<0.6) | ND(<0.3) |
| Field Blank | 31-Oct-90 | ND(<50) | ND(<0.5) | ND(<0.5) | ND(<0.5) | ND(<0.5) |

**Notes:**

(A) TPH - Total petroleum hydrocarbons as gasoline. Analyzed by USEPA 8015
(B) BTXE analyzed by USEPA 8020.
(C) Wells #1, #2, and #3 were installed by Gettler Ryan, Inc., December 22, 1989.
ND - Not detected within the method detection limit.
(<0.3) - Detection Limit

*Project No. RC02603*


Contour Interval 40 Feet
Contours and Elevations in Feet

1 Mile

1:24,000

N

Reference: USGS 7.5' Quadrangle; Oakland West, California

GERAGHTY & MILLER, INC.
*Environmental Services*

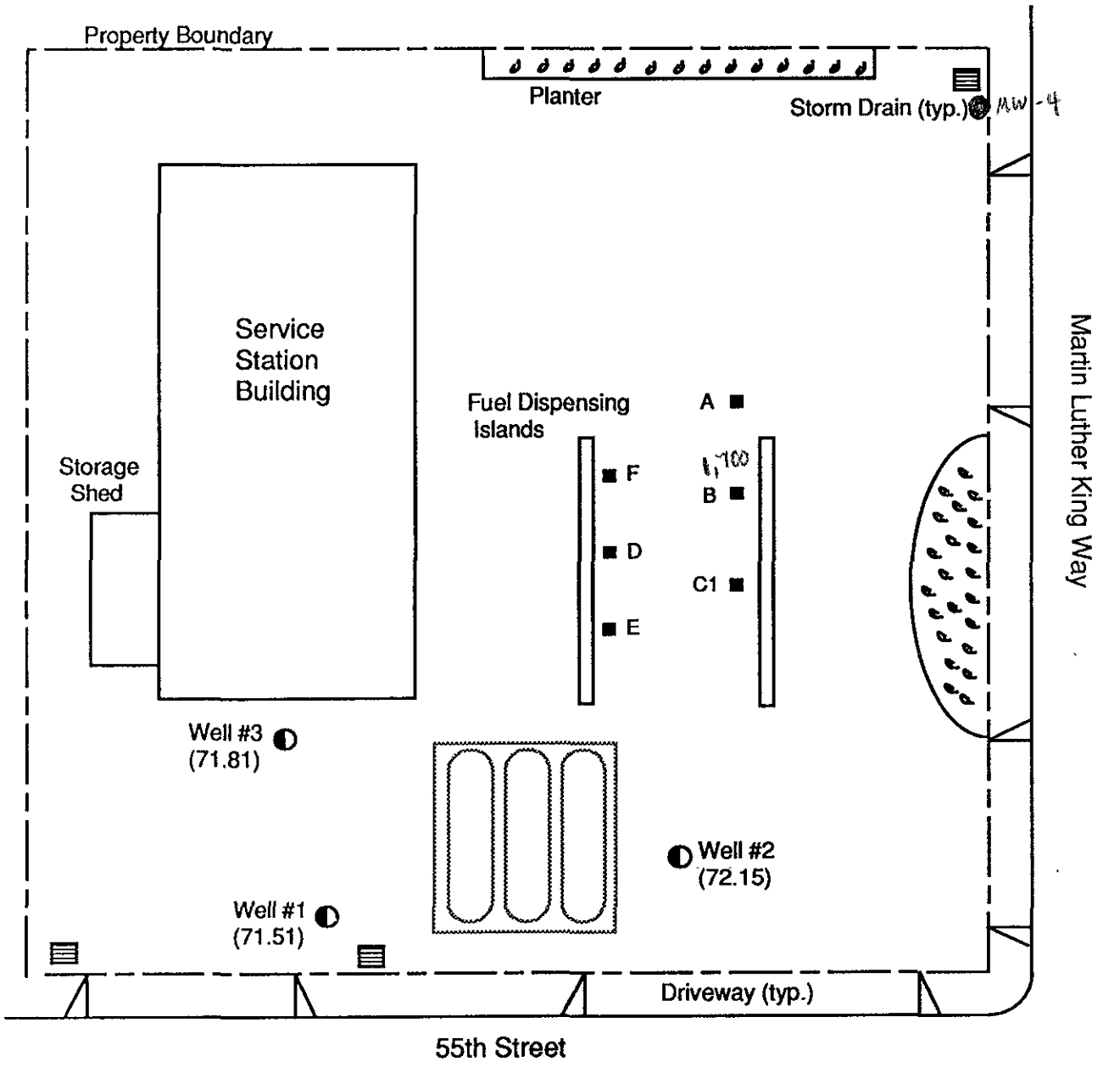
Proj. No.RCO2603

## SITE LOCATION MAP

CHEVRON STATION #9-1583
5509 Martin Luther King Way
Oakland, California

FIGURE

1




LEGEND

A ■ Soil sample taken by Geotest (12/14/1989)

Well #1 ◐ Ground-water monitoring well installed by Gettler-Ryan, Inc. (12/22/1983)

(71.52) *Ground-water elevation (feet-MSL); measured 3/25/1990*

N

0 40

Scale feet

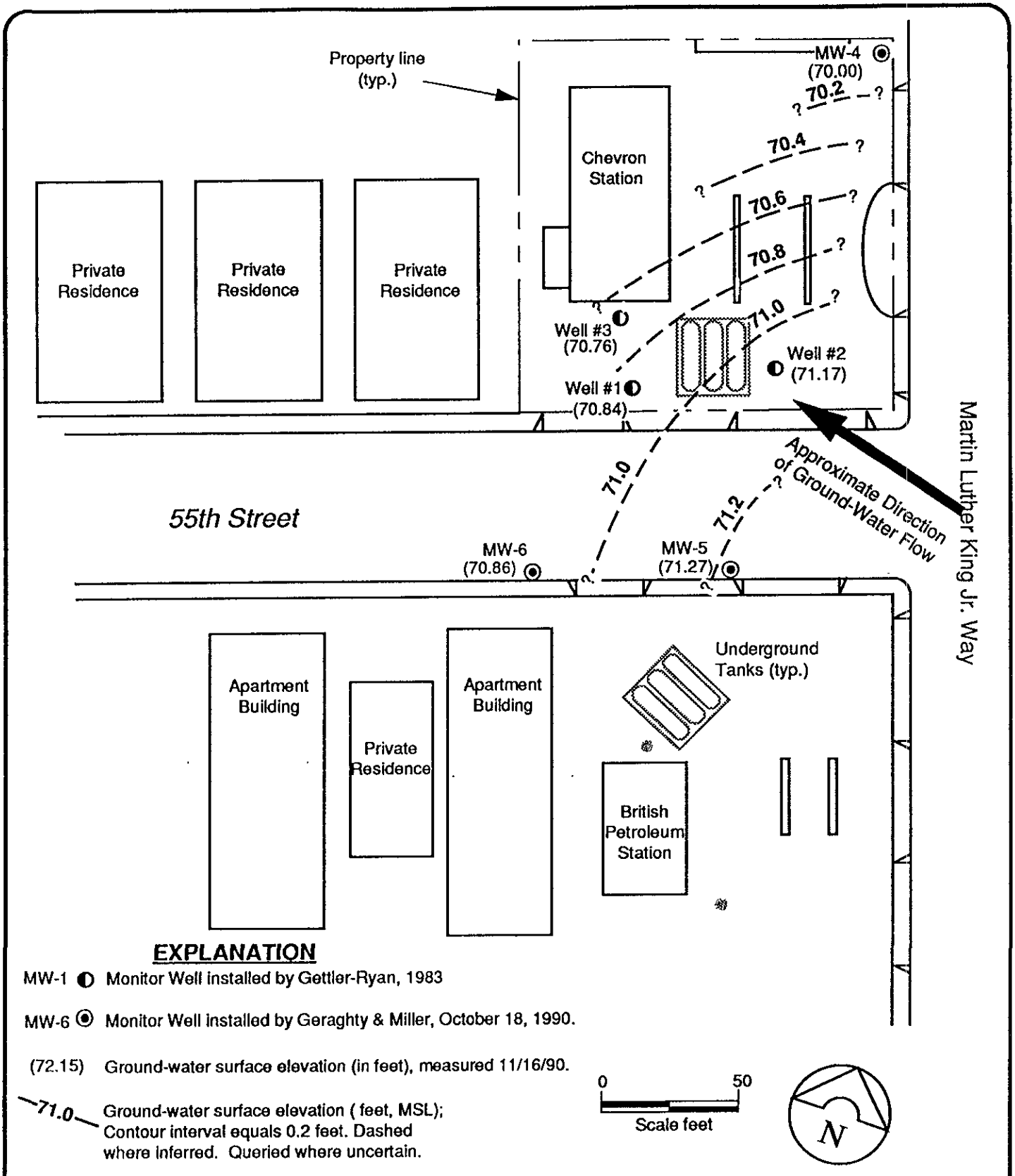
GERAGHTY & MILLER, INC.
*Environmental Services*

Proj. No. HCO2603

**SITE PLAN**

CHEVRON STATION #9-1583
5509 Martin Luther King Way
Oakland, California

FIGURE
**2**




GERAGHTY & MILLER, INC.
*Environmental Services*

Proj. No.RCO2603

**GROUND-WATER CONTOUR MAP**
**NOVEMBER 1990**
CHEVRON STATION #9-1583
5509 Martin Luther King Way
Oakland, California

FIGURE
**3**

# KEY TO BORING LOG SYMBOLS

| UNIFIED SOIL CLASSIFICATION SYSTEM - ASTM D2487 | | | | | |
|---|---|---|---|---|---|
| MAJOR DIVISIONS | | | SYMBOL/ GRAPHIC | | DESCRIPTIONS |
| COARSE GRAINED SOILS (>50% by weight larger than #200 sieve) | GRAVELS (More than 50% of coarse fraction is larger than the #4 sieve size.) | Clean gravels with little or no fines | GW | | Well Graded Gravels, Gravel - Sand Mixtures |
| | | | GP | | Poorly Graded Gravels, Gravels - Sand Mixtures |
| | | Gravels with over 12% fines | GM | | Silty Gravels, Poorly Graded Gravel - Sand - Silt Mixtures |
| | | | GC | | Clayey Gravels, Poorly Graded Gravel - Sand - Clay Mixtures |
| | SANDS (More than 50% of coarse fraction is smaller than #4 sieve size.) | Clean sands with little or no fines | SW | | Well Graded Sands, Gravelly Sands |
| | | | SP | | Poorly Graded Sands, Gravelly Sands |
| | | Sands with over 12% fines | SM | | Silty Sands, Poorly Graded Sand - Silt Mixtures |
| | | | SC | | Clayey Sands, Poorly Graded Sand - Clay Mixtures |
| FINE GRAINED SOILS (>50% smaller than #200 sieve) | SILTS AND CLAYS (liquid limit less than 50) | | ML | | Inorganic Silts and Very Fine Sands, Silty or Clayey Fine Sands |
| | | | CL | | Inorganic Clays of Low to Medium Plasticity; Gravelly, Sandy or Silty Clays; Lean Clays |
| | | | OL | | Organic Clays and Organic Silty Clays of Low Plasticity |
| | SILTS AND CLAYS (liquid limit greater than 50) | | MH | | Inorganic Silts, Micaceous or Diatomacious Fine Sandy or Silty Soils, Elastic Silts |
| | | | CH | | Inorganic Clays of High Plasticity, Fat Clays |
| | | | OH | | Organic Clays of Medium to High Plasticity, Organic Silts |
| HIGHLY ORGANIC SOILS | | | Pt | | Peat and other Highly Organic Soils |

Stabilized water level (date)

Water level encountered during drilling

Shaded interval represents soil sample. Blackened interval indicates portion of sample prepared for laboratory analysis.

Indicates no recovery of sample

Monitoring well

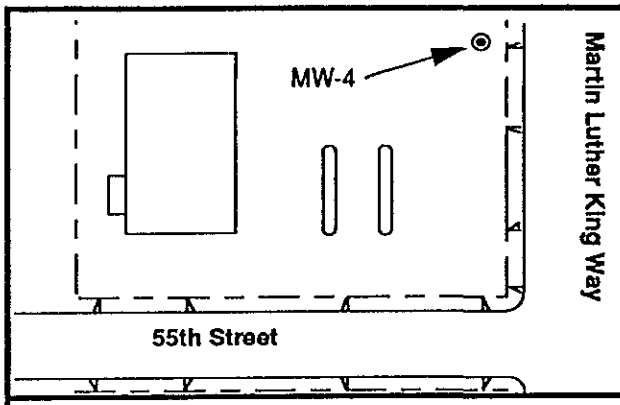
Soil boring

| | |
|---|---|
| | Asphaltic Concrete |
| | Portland Cement Concrete |
| | Cement Grout |

PID Photo-ionization detector readings (ppm)

FID Flame-ionization detector readings (ppm)

EXP Gastech explosimeter readings (ppm)

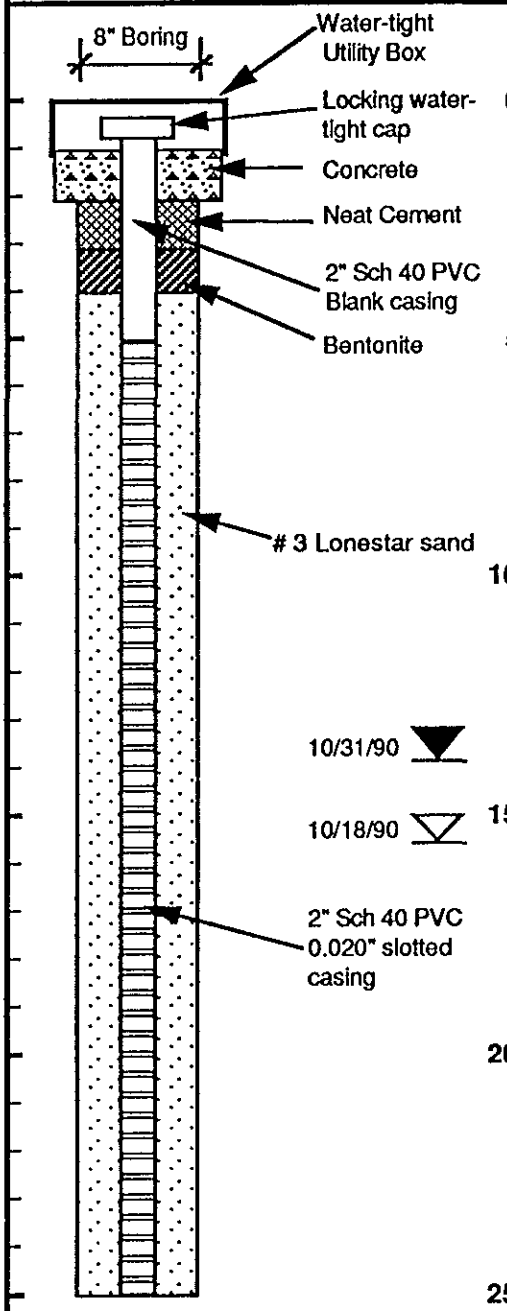



# LOG OF BORING MW-4

## Chevron Service Station #9-1583
## 5509 Martin Luther King Way
## Oakland, California

Project No.: RC2603
Logged By:Jim Wilmersher
Drilling Co.: HEW
Driller: Hanibal

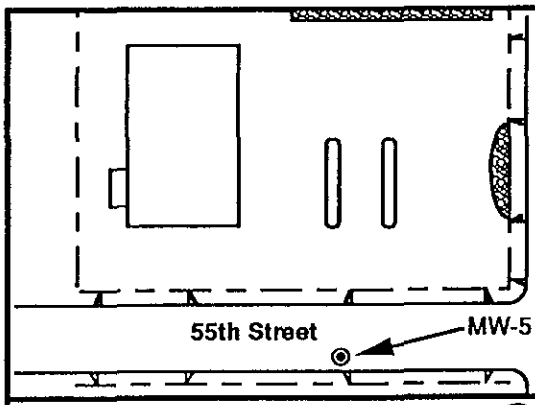
Date Drilled:October 18,1990
Drilling Method: 8" Hollow Stem Auger.
Sampling Method: 2" Split spoon
Inclination: Vertical




| Depth (ft.) | Blows/ft. | Exp (ppm) | Samples | Graphic | DESCRIPTION |
|---|---|---|---|---|---|
| | | | | | Surface Elevation: 84.50'<br>Casing Elevation:84.25' |
| 0 | | | | | Asphaltic Concrete |
| | | | | | GRAVELLY SILT (ML), dark yellowish brown (10YR 3/4); sand backfill; gravel up to 30mm dia.; 10-20% sand; 10-20% coarse gravel; dry. |
| 5 | 8 | 0 | | | CLAYEY SILT (ML ),dark grayish brown (2.5Y4/2); 10-20% clay; firm; moist. |
| 10 | 8 | 0 | | | SILTY CLAY (CL), olive brown (2.5Y 4/4) mottled gray (7.5Y 5/1); 10 to 30% silt; firm; moist. |
| 15 | 3 | 25 | | | @ 15 feet: gray (7.5Y 5/1) motled strong brown (7.5YR 4/6); 10 to 20% silt; trace fine sand; ferro-magnesium staining; firm; wet. |
| 20 | 5 | 10 | | | @ 20 feet: dark greenish gray (5GY 4/1); 5 to 15% silt; roots; charcoal (less than 5mm dia.); calciferous nodules (less than 5mm dia.); firm; moist to wet. |
| 25 | | | | | SILTY SAND (SM), dark greenish gray (5GY 4/1) to (BG 4/1); fine grain; trace to 10% fine to coarse gravel (10 to 30 mm; trace to 10% clay; very dense; wet |

## LOG OF BORING MW-4 (continued)

| WELL CONSTRUCTION | Depth (ft.) | Blows/ft. | PID | Samples | Graphic | DESCRIPTION |
|---|---|---|---|---|---|---|
| #3 Lonestar sand | | 52 | 0 | | | SILTY SAND (SM), continued. |
| | | | | | | Bottom of Boring: 26.5 Feet. Time: 9:25 AM Date: 10/18/90 |
| | 30 | | | | | |
| | 35 | | | | | |
| | 40 | | | | | |
| | 45 | | | | | |
| | 50 | | | | | |
| | 55 | | | | | |
| | 60 | | | | | |

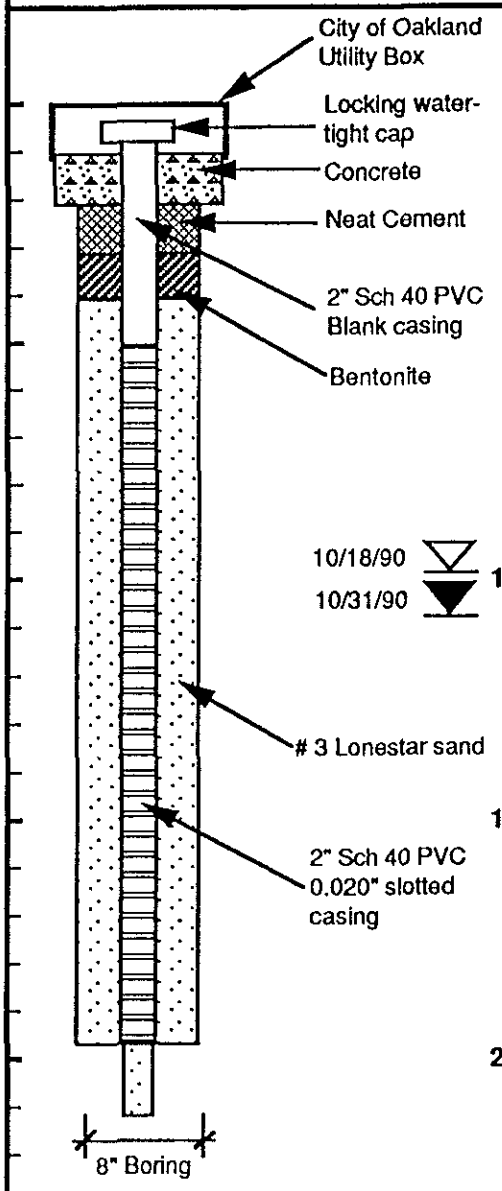



# LOG OF BORING MW-5

## Chevron Service Station #9-1583
## 5509 Martin Luther King Way
## Oakland, California

Project No.: RC2603
Logged By:Jim Wilmersher
Drilling Co.: HEW
Driller: Hanibal

Date Drilled:October 18,1990
Drilling Method: 8" Hollow Stem Auger.
Sampling Method: 2" Split spoon
Inclination: Vertical




**DESCRIPTION**

Surface Elevation: 82.24'
Casing Elevation: 81.95'

Asphaltic Concrete

GRAVELLY SILT (ML), backfill, dark yellowish brown (10 YR 3/4); 10 to 20% coarse gravel (less than 30mm dia.); 10 to 20% medium sand; dry.

SANDY CLAY (CL), dark brown (10YR 3/3); 20 to 30% fine to medium sand; trace to 10% silt; stiff; moist.

CLAYEY SAND (SC), dark greenish gray (5GY 4/1); fine grain; 10 to 20% clay; loose; wet.

GRAVELLY CLAY (CL), dark greenish gray (5GY 4/1); 10 to 20% fine gravel; trace to 10% coarse sand; wet.

SAND (SP) light olive brown (2.5Y 5/4); fine to medium grain (30% medium grain); 10 to 20% silt; dense; wet.

@ 16.5 feet: 10 to 20% coarse sand; trace to 5% fine gravel; moist.

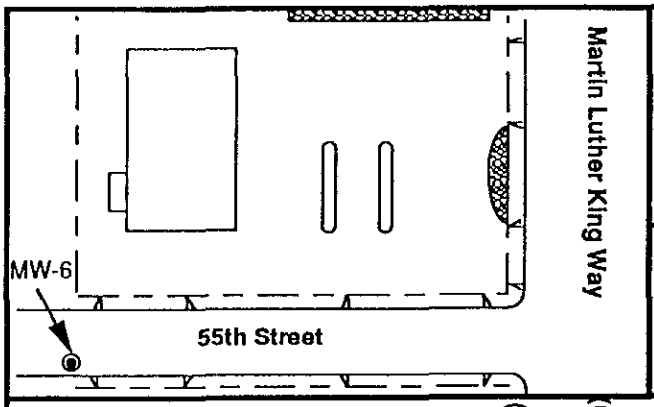
@ 20 feet: medium to coarse sand; trace to 10% fine gravel; trace coarse gravel.

@ 20.5 feet: olive gray (5Y 5/2); trace fine gravel; wet.

@ 21.5 feet: 10 to 15% silt; moist.

CLAYEY GRAVEL (GC), olive gray (5Y 5/2); coarse gravel; 20 to 30% clay (gray); 10 to 15% silt; very stiff; moist.

Bottom of Boring: 21.5 feet
Time: 12:05 PST Date: 10/18/90




# LOG OF BORING MW-6

## Chevron Service Station #9-1583
## 5509 Martin Luther King Way
## Oakland, California

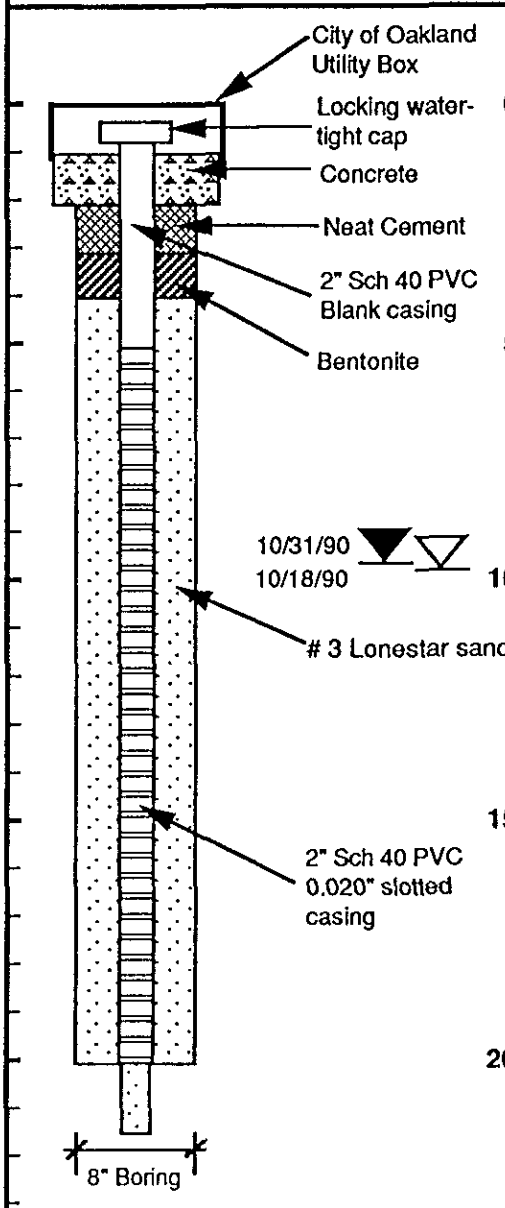
Project No.: RC2603
Logged By:Jim Wilmersher
Drilling Co.: HEW
Driller: Hanibal

Date Drilled:October 18,1990
Drilling Method: 8" Hollow Stem Auger.
Sampling Method: 2" Split spoon
Inclination: Vertical

**WELL CONSTRUCTION**

**DESCRIPTION**

Depth (ft.) | Blows/ft. | Exp (ppm) | Samples | Graphic





Surface Elevation: 80.94'
Casing Elevation: 80.60'

Asphaltic Concrete

SANDY SILT (ML), very dark grayish brown (2.5Y 3/2); 10 to 30% fine to medium sand; roots; worm borings; medium dense; moist.

SILTY CLAY (CL), gray (2.5 N/4) mottled light olive brown (2.5 4/3); 10 to 30% silt; stiff; moist.

SANDY SILT (ML), gray (5Y 6/1) mottled olive brown (2.5Y 4/4); 20 to 30% medium to fine sand; 10 to 20% clay; charcoal; stiff; wet.

CLAYEY SILT (ML), gray (5Y 6/1) mottled olive brown (2.5Y 4/4); 10 to 20% clay; trace to 10% fine gravel; moist to wet

SANDY GRAVEL (GP), yellow brown (10YR 5/3); fine gravel; 20 to 30% coarse sand; dense; wet.

GRAVELLY CLAY (CL), yellowish red (5YR 5/6); 10 to 20% coarse gravel; subangular; trace to 10% medium sand; ferro-magnesium staining; wet.

Bottom of Boring: 20 feet
Time: 07:53 PST Date: 10/18/90

GTEL
ENVIRONMENTAL
LABORATORIES, INC.

**Northwest Region**
4080-C Pike Lane
Concord, CA 94520
(415) 685-7852
(800) 544-3422 *from inside California*
(800) 423-7143 *from outside California*
(415) 825-0720 (FAX)

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 8, 1990

James Wilmesher
Geraghty & Miller
1050 Marina Way South
Richmond, CA 94804

Dear Mr. Wilmesher:

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories on 10/22/90.

A formal quality control/quality assurance program is maintained by GTEL, which is designed to meet or exceed the EPA requirements. Analytical work for this project met QA/QC criteria unless otherwise stated in the footnotes.

GTEL is certified by the California State Department of Health Services to perform analyses for drinking water, wastewater, and hazardous waste materials according to approved protocols.

If you have any questions concerning this analysis, or if we can be of further assistance, please call our Customer Service Representative.

Sincerely,

GTEL Environmental Laboratories, Inc.

Emma P. Popek
Laboratory Director

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 13, 1990

Table 1

ANALYTICAL RESULTS

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015[1]

| GTEL Sample Number | | 01 | 02 | 03 | 04 |
|---|---|---|---|---|---|
| Client Identification | | MW-4B | MW-4C | MW-4D | MW-5B |
| Date Sampled | | 10/18/90 | 10/18/90 | 10/18/90 | 10/18/90 |
| Date Extracted | | 10/24/90 | 10/24/90 | 10/24/90 | 10/24/90 |
| Date Analyzed | | 10/28/90 | 10/28/90 | 10/28/90 | 10/28/90 |
| Analyte | Detection Limit, mg/Kg | Concentration, mg/Kg | | | |
| Gasoline | 10 | <10 | <10 | <10 | 190 |

| GTEL Sample Number | | 05 | 06 | | |
|---|---|---|---|---|---|
| Client Identification | | MW-5C | MW-6B | | |
| Date Sampled | | 10/18/90 | 10/18/90 | | |
| Date Extracted | | 10/24/90 | 10/24/90 | | |
| Date Analyzed | | 10/28/90 | 10/28/90 | | |
| Analyte | Detection Limit, mg/Kg | Concentration, mg/Kg | | | |
| Gasoline | 10 | <10 | 11 | | |

1 = Extraction by EPA Method 5030



GTEL ENVIRONMENTAL LABORATORIES, INC

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 13, 1990

# QA Conformance Summary

## Total Petroleum Hydrocarbons as Gasoline in Soil EPA Method 8015

1.0 Blanks

One of 1 target compound were below detection limits in the reagent water blank and reagent methanol blank as shown in Tables 2a and 2b.

2.0 Independent QC Check Sample

The control limits were met for 1 out of 1 QC check compound as shown in Table 3.

3.0 Surrogate Compound Recoveries

Percent recovery limits were met for the surrogate compound (naphthalene) for all samples as shown in Table 4.

4.0 Matrix Spike (MS) and Matrix Spike Duplicate (MSD) Accuracy and Precision

4.1 Percent recovery limits were met for 4 of 4 compounds in the MS and MSD as shown in Table 5.

4.2 Relative percent difference (RPD) criteria was met for 4 of 4 analytes in the MS and MSD as shown in Table 5.

5.0 Sample Handling

5.1 Sample handling and holding time criteria were met for all samples.

5.2 There were no exceptional conditions requiring dilution of samples.

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 13, 1990

Table 2a

REAGENT WATER BLANK DATA

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

Date of Analysis: 10/28/90

| Analyte | Concentration, ug/L |
|---|---|
| Gasoline | <50 |

< # = Not detected above the indicated detection limit.

Table 2b

REAGENT METHANOL BLANK DATA

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

Date of Analysis: 10/28/90
MeOH Lot No: AX659

| Analyte | Concentration, mg/Kg |
|---|---|
| Gasoline | <10 |

< # = Not detected above the indicated detection limit.

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 13, 1990

Table 3

INDEPENDENT QC CHECK SAMPLE RESULTS

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

Date of Analysis: 10/27/90

| Analyte | Expected Result, ug/L | Observed Result, ug/L | Recovery, % | Acceptability Limits, % |
|---|---|---|---|---|
| Gasoline | 1040 | 1030 | 99 | 85 - 115 |

Table 3a

INDEPENDENT QC CHECK SAMPLE SOURCE

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

| Analyte | Source |
|---|---|
| Gasoline | LA19042 |

Table 4

SURROGATE COMPOUND RECOVERY

Naphthalene

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

Acceptability Limits[1]: 60 - 130 %

| GTEL No. | Expected Result, ug/L | Surrogate Result, ug/L | Surrogate Recovery, % |
|---|---|---|---|
| Water Blank | 200 | 198 | 99 |
| MeOH Blank | 200 | 171 | 86 |
| 01 | 200 | 185 | 93 |
| 02 | 200 | 173 | 87 |
| 03 | 200 | 178 | 89 |
| 04 | 200 | 245 | 122 |
| 05 | 200 | 214 | 107 |
| 06 | 200 | 193 | 96 |
| MS | 200 | 195 | 98 |
| MSD | 200 | 188 | 94 |

MS = Matrix Spike
MSD = Matrix Spike Duplicate
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.

Project Number: SFB-175-0204.72
Consultant Project Number: Not Applicable
Contract Number: N46CWC0244-9-X
Facility Number: 9-1583
Work Order Number: C010603
Report Issue Date: November 13, 1990

Table 5

MATRIX SPIKE (MS) AND MATRIX SPIKE DUPLICATE (MSD) RECOVERY
AND RELATIVE PERCENT DIFFERENCE (RPD) REPORT

Total Petroleum Hydrocarbons
as Gasoline in Soil
EPA Method 8015

Date of Analysis: 10/28/90
Sample Used: C010645-02

Units: mg/Kg
Client ID TANK A-7

| Analyte | Sample Result | Concentration Added | MS Result | MS, % Recovery | MSD Result | MSD, % Recovery |
|---|---|---|---|---|---|---|
| Benzene | ND | 2.86 | 1.83 | 64 | 1.94 | 68 |
| Toluene | ND | 2.86 | 1.80 | 63 | 1.92 | 67 |
| Ethylbenzene | ND | 2.86 | 1.84 | 64 | 1.96 | 69 |
| Xylene (total) | ND | 8.58 | 5.41 | 63 | 5.84 | 68 |

| Analyte | RPD, % | Maximum RPD, % | Acceptability Limits[1] % Recovery |
|---|---|---|---|
| Benzene | 6 | 30 | 50 - 112 |
| Toluene | 6 | 30 | 50 - 108 |
| Ethylbenzene | 8 | 30 | 50 - 113 |
| Xylene (total) | 8 | 30 | 50 - 114 |

< # = Not detected at the indicated detection limit.
1 = Acceptability limits are derived from the 99% confidence interval of all samples during the previous quarter.



GTEL ENVIRONMENTAL LABORATORIES, INC

# Chain-of-Custody Record

Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583
FAX (415) 842-9591

Chevron Facility Number #9-1583
Consultant Release Number ____ Consultant Project Number ____
Consultant Name GERAGHTY & MILLER, INC.
Address 1050 MARINA WAY SOUTH
Fax Number (415) 233-3204
Project Contact (Name) JAMES WILMESHER
(Phone) (415) 233-3200

Chevron Contact (Name) Ms. NANCY VUKELICH
(Phone) ____
Laboratory Name GTEL ENVIRONMENTAL LAB
Contract Number ____
Samples Collected by (Name) JAMES WILMESHER
Collection Date 10/18/90
Signature James Wilmesher

| Sample Number | Lab Number | Number of Containers | Matrix S = Soil W = Water A = Air C = Charcoal | Type G = Grab C = Composite | Time | Sample Preservation | Iced | Analyses To Be Performed: Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline | Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel | 503 Oil and Grease | Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602 | Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624 | Total Lead DHS-Luft | EDB DHS-AB 1803 | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW-4A@5.5 | | 1 | S | G | 0837 | Ice | X | [redacted] | | | | | | | | | | Hold |
| MW-4B@ | | 1 | S | G | 0841 | | | X | | | | | | | | | | |
| MW-4C | | 1 | S | G | 0855 | | | X | | | | | | | | | | |
| MW-4D | | 1 | S | G | 0905 | | | X | | | | | | | | | | |
| MW-4E | | 1 | S | G | 0921 | | | | | | | | | | | | | Hold |
| MW-5A | | 1 | S | G | 1125 | | | | | | | | | | | | | |
| MW-5B | | 1 | S | G | 1139 | | | X | | | | | | | | | | |
| MW-5C | | 1 | S | G | 1150 | | | X | | | | | | | | | | |
| MW-5D | | 1 | S | G | 1155 | | | | | | | | | | | | | Hold |
| MW-6A | | 1 | S | G | 1403 | | | | | | | | | | | | | Hold |
| MW-6B | | 1 | S | G | 1411 | | | X | | | | | | | | | | |
| MW-6D | | 1 | S | G | 1448 | | | | | | | | | | | | | Hold |
| MW-6E | | 1 | S | G | 1453 | | | | | | | | | | | | | Hold |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| [signature] | G+M | 10/22 | [signature] | FAX-LL | 10-22-90 9:55 |
| [signature] | FX-LL | 10-22-90 10:25 | Received By (Signature) | Organization | Date/Time |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time |
| | | | [signature] | | 10-22 10:40 |

Turn Around Time (Circle Choice)
STANDARD TURNAROUND
24 Hrs
48 Hrs
5 Days
10 Days

Printed in U.S.A.

MS 5136 (6 89)

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

# C E R T I F I C A T E  O F  A N A L Y S I S

LABORATORY NO.: 11161
CLIENT: Geraghty & Miller Inc.
CLIENT JOB NO.: RCO2603

DATE RECEIVED: 11/05/90
DATE REPORTED: 11/11/90



| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|---|---|---|---|
| 11161- 1 | MLK-1 | 11/05/90 | 11/08/90 |

Laboratory Number: 11161
1

| ANALYTE LIST | Amounts/Quantitation Limits (mg/kg) |
|---|---|
| OIL AND GREASE: | NA |
| TPH/GASOLINE RANGE: | ND<1 |
| TPH/DIESEL RANGE: | NA |
| BENZENE: | ND<.005 |
| TOLUENE: | ND<.005 |
| ETHYL BENZENE: | ND<.005 |
| XYLENES: | ND<.005 |

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

# CERTIFICATE OF ANALYSIS

LABORATORY NO.: 11161
CLIENT: Geraghty & Miller Inc.
CLIENT JOB NO.: RCO2603

DATE RECEIVED: 11/05/90
DATE REPORTED: 11/14/90

## ANALYSIS FOR TOTAL ORGANIC LEAD
by DHS Method MAY 1988 LUFT Manual

| LAB NO. | Sample Idetnification | Concentration (mg/kg) |
|---|---|---|
| 1 | MLK-1 | ND<2 |

mg/kg - parts per million (ppm)

Minimum Detection limit for Organic Lead in Soil: 2mg/kg

QAQC Summary:
MS/MSD Average Recovery:87 %
Duplicate RPD = 7

Richard Srna, Ph.D.

Cecilia G. Jongsma (FIP)
Laboratory Director

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

# C E R T I F I C A T E  O F  A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
Diesel by Modified EPA SW-846 Method 8015
Gasoline by Purge and Trap: EPA MEthod 8015/5030
ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020


QA/QC INFORMATION
SET: 11161

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

Mg/Kg = part per million (ppm)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Duplicate RPD NA
Minimum Detection Limit in Soil: 20mg/kg

Modified EPA Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Soil: 10mg/kg
Daily Standard run at 200mg/L; %Diff Diesel = NA
MS/MSD Average Recovery = NA: Duplicate RPD = NA

8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Soil: 1mg/kg
Daily Standard run at 2mg/L; %Diff Gasoline = <15%
MS/MSD Average Recovery = 90%: Duplicate RPD = 2

8020/BTXE
Minimum Quantitation Limit in Soil: 0.005mg/kg
Daily Standard run at 20ug/L; %Diff 8020 = <15%
MS/MSD Average Recovery = 102%: Duplicate RPD = <1

Richard Srna, Ph.D.
Laboratory Director

SF # 11161

# Chain-of-Custody Record

Chevron U.S.A. Inc.
P.O. Box 5004
San Ramon, CA 94583
FAX (415) 842-9591

Chevron Facility Number: 9-1583
Consultant Release Number: 444-6580
Consultant Project Number: RLO2603
Consultant Name: Geraghty & Miller, Inc.
Address: 1050 Marina Way S
Fax Number: 415 233 3204
Project Contact (Name): Jim Wimberly
(Phone): 415 233-3200

Chevron Contact (Name): Ms. Nancy Lic
(Phone):
Laboratory Name: Superior Laboratory, Inc.
Contract Number:
Samples Collected by (Name): N.M. Shais
Collection Date: 5 Nov 90
Signature: N.M. Shais

| Sample Number | Lab Number | Number of Containers | Matrix S = Soil W = Water A = Air C = Charcoal | Type G = Grab C = Composite | Time | Sample Preservation | Iced | Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline | Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel | 503 Oil and Grease | Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602 | Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624 | Total Lead Oxygenate DHS-Luft | EDB DHS-AB 1803 | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MLK-1 | | 4 | | C | 1350 | ICE | | 4 | | | 4 | | 4 | | | | | COMPOSITE SAMPLE |

Please initial:
Samples Stored in ice. OKN
Appropriate containers. yes
Samples preserved: yes
VOA's w/o headspace:
Custody seals: OK

CHECK CUSTODY SEALS

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time |
|---|---|---|---|---|---|
| N.M. Shais | G&M Inc | 5 Nov 90 | Don Lason | Express It | 11/5/90 1525 |
| Don Lason | Express It | 11/5/90 1559 | | | |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time |
| | | | Carolyn G Joaquin | | 11/5/90 4pm |

Turn Around Time (Circle Choice)
24 Hrs
48 Hrs
5 Days
(10 Days)

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

# C E R T I F I C A T E  O F  A N A L Y S I S

LABORATORY NO.: 11142
CLIENT: Geraghty & Miller Inc.
CLIENT JOB NO.: RCO2603

DATE RECEIVED: 11/02/90
DATE REPORTED: 11/08/90



| Lab Number | Customer Sample Identification | Date Sampled | Date Analyzed |
|---|---|---|---|
| 11142- 1 | MW4 | 10/31/90 | 11/07/90 |
| 11142- 2 | MW5 | 10/31/90 | 11/07/90 |
| 11142- 3 | MW6 | 10/31/90 | 11/07/90 |
| 11142- 4 | FIELD BLANK | 10/31/90 | 11/07/90 |

| Laboratory Number: | 11142 1 | 11142 2 | 11142 3 | 11142 4 |
|---|---|---|---|---|
| ANALYTE LIST | Amounts/Quantitation Limits (ug/L) | | | |
| OIL AND GREASE: | NA | NA | NA | NA |
| TPH/GASOLINE RANGE: | ND<50 | 110* | ND<50 | ND<50 |
| TPH/DIESEL RANGE: | NA | NA | NA | NA |
| BENZENE: | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 |
| TOLUENE: | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 |
| ETHYL BENZENE: | ND<0.5 | ND<0.5 | ND<0.5 | ND<0.5 |
| XYLENES: | 1 | ND<0.5 | 3 | ND<0.5 |

SUPERIOR ANALYTICAL LABORATORY, INC.
1555 BURKE, UNIT I • SAN FRANCISCO, CA 94124 • PHONE (415) 647-2081

# C E R T I F I C A T E  O F  A N A L Y S I S

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS
Diesel by Modified EPA SW-846 Method 8015
Gasoline by Purge and Trap: EPA MEthod 8015/5030
ANALYSIS FOR BENZENE, TOLUENE, ETHYL BENZENE & XYLENES
by EPA SW-846 Methods 5030 and 8020


QA/QC INFORMATION
SET: 11142

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT

ug/L = part per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 503E:
Duplicate RPD NA
Minimum Detection Limit in Water: 5000ug/L

Modified EPA Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 1000ug/L
Daily Standard run at 200mg/L; %Diff Diesel = NA
MS/MSD Average Recovery = NA: Duplicate RPD = NA

8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L
Daily Standard run at 2mg/L; %Diff Gasoline = <15%
MS/MSD Average Recovery = 96%: Duplicate RPD = 8

8020/BTXE
Minimum Quantitation Limit in Water: 0.50ug/L
Daily Standard run at 20ug/L; %Diff 8020 = <15%
MS/MSD Average Recovery = 100%: Duplicate RPD = <2

* Analysis does not match typical gasoline pattern.

Richard Srna, Ph.D.
Carla G. Joaquin (for)
Laboratory Director

# Chain-of-Custody Record

**Chevron U.S.A. Inc.**
P.O. Box 5004
San Ramon, CA 94583
FAX (415) 842-9591

Chevron Facility Number: 9-1583
Consultant Release Number: 444-6580
Consultant Project Number: RLO2603
Consultant Name: Geraghty & Miller, Inc.
Address: 1050 Marina Way S. 94804
Fax Number: 415 233 3204
Project Contact (Name): Jim Wilmesher
(Phone): 415 233-3200

Chevron Contact (Name): Ms Nancy Ohlelich
(Phone):
Laboratory Name: Superior Laboratory Inc
Contract Number:
Samples Collected by (Name): N.M. Shears
Collection Date: 31 Oct 90
Signature: N.M. Shears

| Sample Number | Lab Number | Number of Containers | Matrix S = Soil W = Water A = Air C = Charcoal | Type G = Grab C = Composite | Time | Sample Preservation | Iced | Analyses To Be Performed: Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline | Modified EPA 8015 Total Petro. Hydrocarb. as Gasoline + Diesel | 503 Oil and Grease | Arom. Volatiles - BTXE Soil: 8020/Wtr.: 602 | Arom. Volatiles - BTXE Soil: 8240/Wtr.: 624 | Total Lead DHS-Luft | EDB DHS-AB 1803 | | | | Remarks |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| MW4 | | 3 | W | G | 1635 | HCL | Y | Y | | | Y | | | | | | | |
| MW5 | | 3 | " | " | 1547 | " | " | " | | | " | | | | | | | |
| MW6 | | 3 | " | " | 1532 | " | " | " | | | " | | | | | | | |
| Field Blank | | 1 | " | " | — | — | " | " | | | " | | | | | | | CHECK PACKAGE CUSTODY SEAL |

| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time | Turn Around Time (Circle Choice) |
|---|---|---|---|---|---|---|
| N.M. Shears | G&M Inc | 2 Nov 90 | [illegible] | Express IT | 11/2/90 12:27 | 24 Hrs |
| Relinquished By (Signature) | Organization | Date/Time | Received By (Signature) | Organization | Date/Time | 48 Hrs |
| | | | | | | 5 Days |
| Relinquished By (Signature) | Organization | Date/Time | Received For Laboratory By (Signature) | | Date/Time | 10 Days |
| | | | | | | |

CITY OF OAKLAND

CITY HALL • ONE CITY HALL PLAZA • OAKLAND, CALIFORNIA 94612

Office of Public Works

TDD 839-6451

September 24, 1990

Chevron USA Inc.
c/o Jeff Hawkins
Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804

Re: Encroachment Permit for
5509 Martin Luther King Jr. Way

Dear Mr. Hawkings:

Enclosed is a Minor Encroachment Permit and Agreement allowing you to place monitoring wells within the street right-of-way of 55th Street.

Before the permit will become effective, however, it must be signed by the person(s) having the legal authority to do so, properly notarized with notary acknowledgement attached, and returned to this office for recordation.

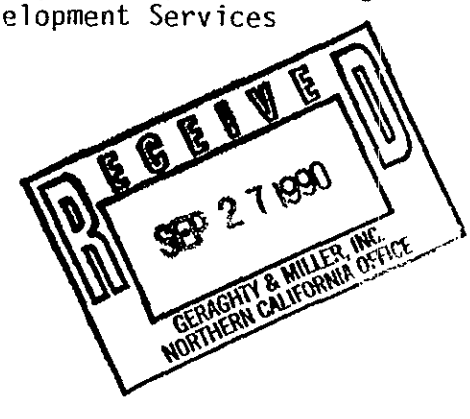
You must also obtain a street Excavation Permit from the Development Services Department, 2nd Floor, prior to the start of the propsoed work in the City right-of-way.

If you have any questions, please call Ana Gonsalves at 273-2259.

Very truly yours,

TERRY E. ROBERTS
Director of Public Works

By Phillip Grubstick
PHILLIP GRUBSTICK
Acting Principal Civil Engineer
Development Services




AG:ge

CITY OF OAKLAND

# LETTER OF TRANSMITTAL

| DATE 9/26/90 | JOB NO |
|---|---|
| ATTENTION Jim Wilmsher | |
| RE: Encroachment Permit 5509 Martin Luther King Jr. Way | |

TO Geraghty & Miller, Inc.
1050 Marina Way South
Richmond, CA 94804

WE ARE SENDING YOU ☐ Attached ☐ Under separate cover via _____ the following items:

☐ Shop drawings ☐ Prints ☐ Plans ☐ Samples ☐ Specifications
☐ Copy of letter ☐ Change order ☐ _____

| COPIES | DATE | NO. | DESCRIPTION |
|---|---|---|---|
| 1 | | | Minor Encroachment for 5509 Martin Luther King Jr. Way |
| 1 | | | Cover letter from the City of Oakland dated 9/24/90 |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

THESE ARE TRANSMITTED as checked below:

☐ For approval ☐ Approved as submitted ☐ Resubmit ____ copies for approval
☐ For your use ☐ Approved as noted ☐ Submit ____ copies for distribution
☐ As requested ☐ Returned for corrections ☐ Return ____ corrected prints
☐ For review and comment ☐ _____
☐ FOR BIDS DUE _____ 19____ ☐ PRINTS RETURNED AFTER LOAN TO US

REMARKS Please have Chevron sign and properly notarize the enclosed encroachment permit. Because Chevron is a corporation a corporate acknowledgement must be attached. Also please send the original notarized letter of permission from the owner.
If you have any questions, call me at 273-2259.

COPY TO _____

SIGNED: Ana Gonsalves

City of Oakland
Director of Public Works
1300 Broadway, 2nd Floor
Oakland, CA 94612

When Recorded Mail to:

Director of Public Works
City of Oakland
1330 Broadway, 2nd Floor
Oakland, CA 94612

TAX ROLL PARCEL NUMBER
(ASSESSOR'S REFERENCE NUMBER)

| 14 | 1198 | 4 | 2 |
|---|---|---|---|
| MAP | BLOCK | PARCEL | SUB |

Space Above for Recorder's Use Only

Address: 5509 Martin Luther King Jr. Way

MINOR ENCROACHMENT PERMIT AND AGREEMENT

Chevron U.S.A. Incorporated, tenant of Dorty S. Doane, Henry W. Doane, Meredith Gail Tizzard and Stephanie Faye Doane who are the owners of the property commonly known as 5509 Martin Luther King Jr. Way is hereby granted a conditional revocable permit to encroach into the street area of 55th Street with two monitoring wells. The location of said encroachment and the type of casting and cover used shall be as delineated in Exhibits "A" and "B" attached hereto and made a part hereof.

The permittee agrees to comply with and be bound by the conditions for granting a Minor Encroachment Permit attached hereto and made a part hereof.

This agreement shall be binding upon the undersigned, and the present owner(s) of the property described above, and their successors in interest thereof.

In witness whereof we have set our signature this day of

By: _____

Dated _____

By: _____
RANDALL A. LUM
Deputy Director

For

TERRY E. ROBERTS
Director of Public Works

CONDITIONS FOR GRANTING A MINOR ENCROACHMENT PERMIT

TO: Chevron U.S.A
ADDRESS: 5509 Martin Luther King Jr. Way

1. That this permit shall be revocable at the pleasure of the Director of Public Works.

2. That the permittee, by the acceptance, either expressed or implied, of the minor encroachment permit hereby disclaims any right, title, or interest in or to any portion of the public sidewalk or street area, and agrees that said temporary use of said area does not constitute an abandonment on the part of the City of Oakland of any of its rights for street purposes and otherwise.

3. The permittee shall maintain in force and effect at all times that said encroachment occupies said public sidewalk area, good and sufficient public liability insurance in the amount of $300,000 for each occurrence, and property damage insurance in the amount of $50,000 for each occurrence, both including contractual liability insuring the City of Oakland against any and all claims arising out of the existence of said encroachment in said sidewalk area, and that a certificate of such insurance and subsequent notices of the renewal thereof, shall be filed with the Director of Public Works of the City of Oakland, and that such certificate shall state that said insurance coverage shall not be canceled or be permitted to lapse without thirty (30) days written notice to said Director of Public Works. The Permittee also agrees that the City may review the type and amount of insurance required of the Permittee every five (5) years and may require the permittee to increase the amount of and/or change the type of insurance coverage required.

4. That the permittee, by the acceptance, either expressed or implied, of this revocable permit shall be solely and fully responsible for the repair or replacement of any portion or all of said improvements in the event that said improvements shall have failed or have been damaged to the extent of creating a menace or of becoming a hazard to the safety of the general public; and that the permittee shall be liable for the expenses connected therewith.

5. That upon the termination of the permission herein granted, permittee shall immediately remove said encroachment from the sidewalk and street area, and any damage resulting therefrom shall be repaired to the satisfaction of the Director of Public Works.

6. That the permittee shall file with the City of Oakland for recordation a Minor Encroachment Permit and Agreement, and shall be bound by and comply with all the terms and conditions of said permit.

7. That said Minor Encroachment Permit and Agreement shall take effect when all the conditions hereinabove set forth shall have been complied with to the satisfaction of the Director of Public Works, and shall become null and void upon the failure of the permittee to comply with all conditions hereinabove set forth.

8. That said permittee shall obtain an excavation permit prior to construction and a separate excavation permit prior to the removal of the ground water monitoring wells.

9. That said permittee shall provide to the City of Oakland an AS BUILT plan showing the actual location of the ground water monitoring wells and the results of all data collected from the monitoring wells.

10. That said permittee shall remove the monitoring well and repair any damage to the street area in accordance with City standards 2 years after construction or as soon as monitoring is complete.

11. That said permittee shall notify the Office of Public Works after the monitoring well is removed and the street area restored to initiate the procedure to rescind the minor encroachment permit.

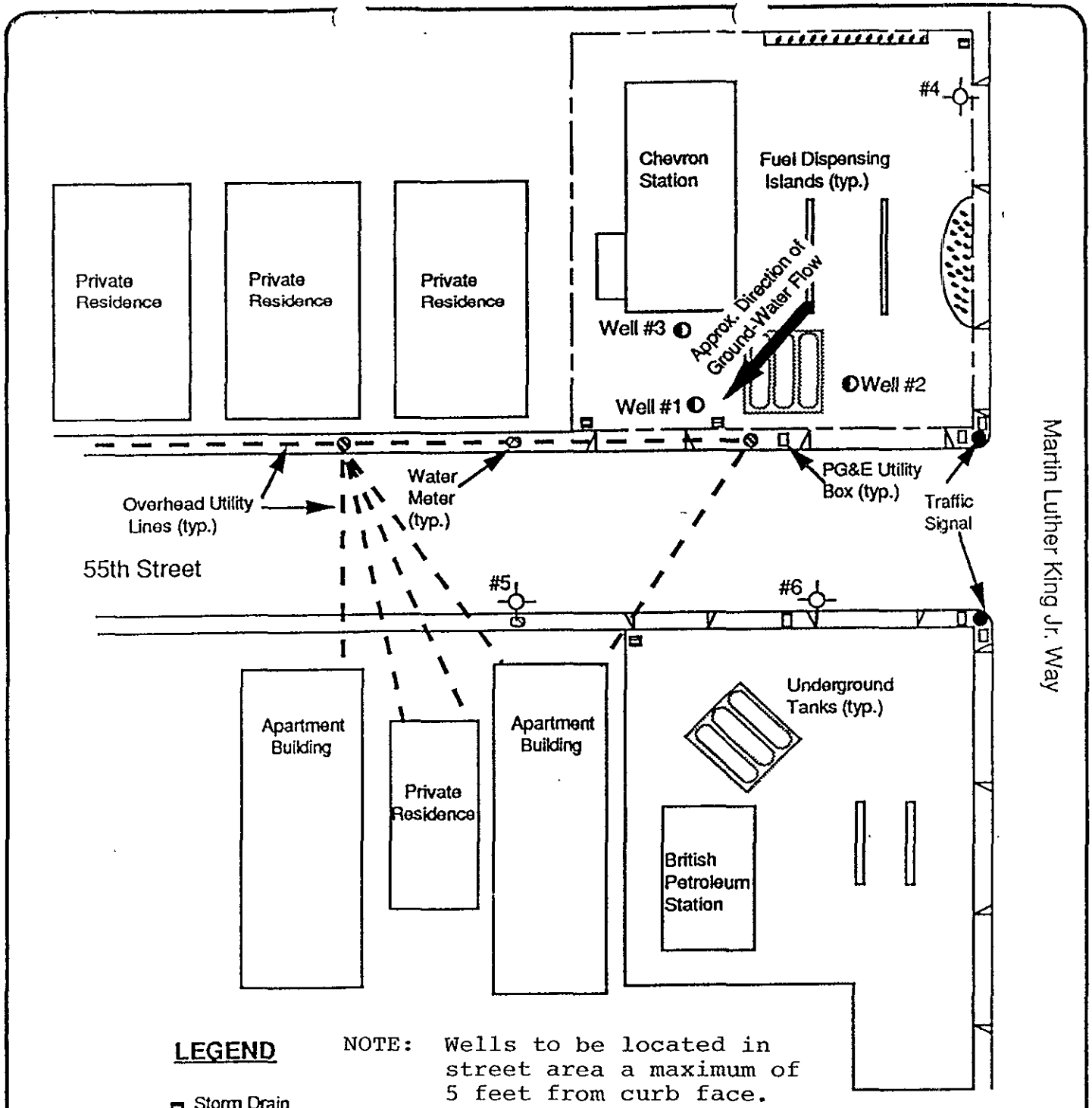


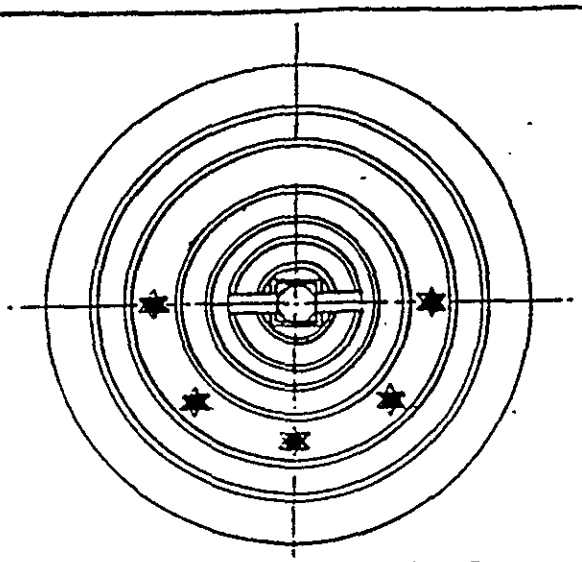

EXHIBIT "A"

**SITE PLAN**

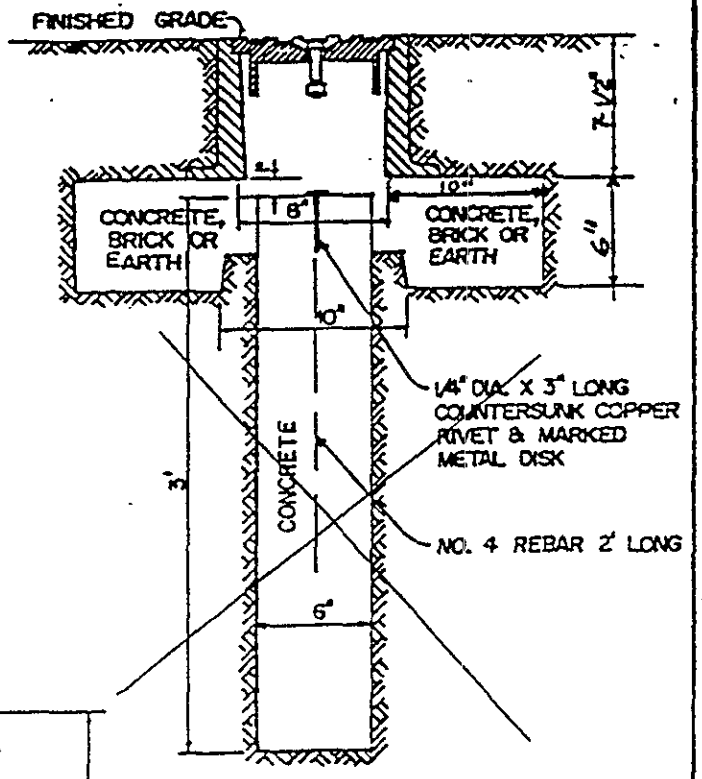
CHEVRON STATION #9-1583
5509 Martin Luther King Way
Oakland, California

FIGURE
1

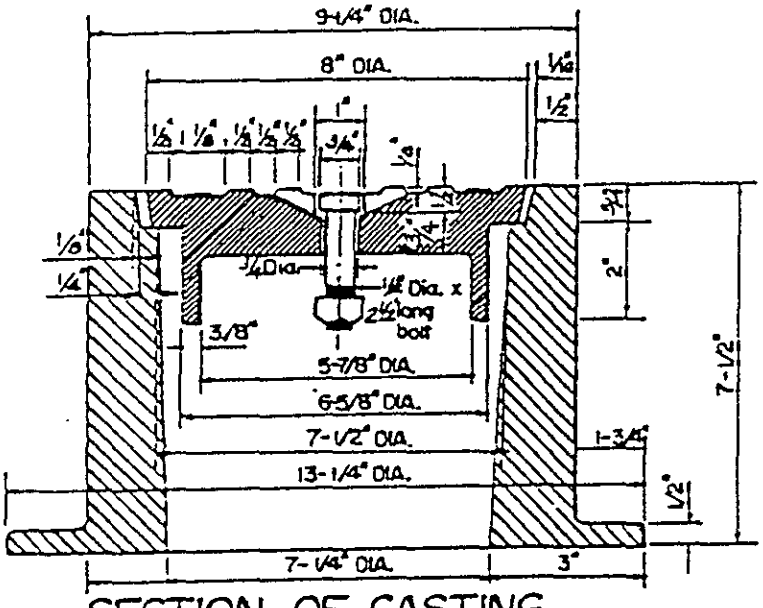
Proj. No.RCO2602



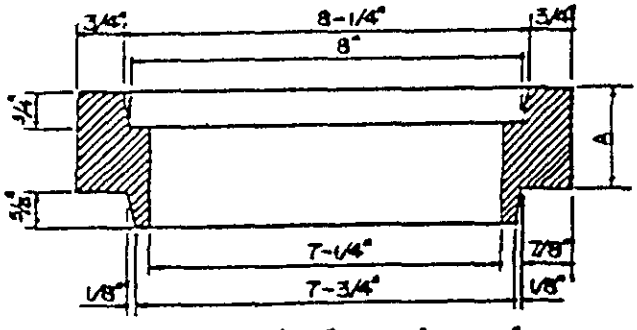
PLAN OF CASTING




SECTION OF MONUMENT




SECTION OF CASTING




A = 1-1/2", 2", 2-1/2", OR 3"

SECTION OF RISER RINGS

NOTE:

ALL DIMENSIONS TO BE ACCURATE WITHIN 1/16 INCH.

APPROXIMATE WEIGHTS:

FRAME = 59.5 LBS.
COVER = 15.5 LBS.

CITY OF OAKLAND | ENGINEERING AND DESIGN SERVICES DIVISION

EXHIBIT "B"

S-9

350-2 (REV 6/90)

# CITY OF OAKLAND
## PERMIT TO EXCAVATE IN STREETS OR OTHER WORK AS SPECIFIED

X9001964
EXC = 135
P. FEE = 30
TOTAL 165

PERMISSION TO EXCAVATE IN THE PUBLIC RIGHT-OF-WAY IS HEREBY GRANTED TO:

APPLICANT HEWI Drilling Co.

ADDRESS 1045 Hicks St., E. Palo Alto, Ca. 94303

LOCATION OF WORK: 5509 Hartley Ave (Street or Address) BETWEEN 55th St (Street/Ave.) AND _____ (Street/Ave.)

TYPE OF WORK: GAS____ ELECTRIC____ WATER____ TELEPHONE____ CABLE TV____ SEWER____ OTHER M-Wells (Specify)

NATURE OF WORK: Drilling

**OWNER/BUILDER**

I hereby affirm that I am exempt from the Contractor's License Law for the following reason (Sec. 7031.5. Business and Professions Code: Any city or county which requires a permit to construct, alter, improve, demolish, or repair any structure, prior to it's issuance, also requires the applicant for such permit to file a signed statement that he is licensed pursuant to the provisions of the Contractor's License Law Chapter 9 (commencing with Sec. 7000) of Division 3 of the Business and Professions Code, or that he is exempt therefrom and the basis for the alleged exemption. Any violation of Section 7031.5 by any applicant for a permit subjects the applicant to a civil penalty of not more than $500):

☐ I, as owner of the property, or my employees with wages as their sole compensation, will do the work, and the structure is not intended or offered for sale (Sec 70044, Business and Professions Code. The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who does such work himself or through his own employees, provided that such improvements are not intended or offered for sale. If, however, the building or improvement is sold within one year of completion, the owner-builder will have the burden of proving that he did not build or improve for the purpose of sale).

☐ I, as owner of the property, am exempt from the sale requirements of the above due to. (1) I am improving my principal place of residence or appurtenances thereto, (2) the work will be performed prior to sale (3) I have resided in the residence for the 12 months prior to completion of the work, and (4) I have not claimed exemption in this subdivision on more than two structures more than once during any three-year period. (Sec 7044, Business and Professions Code)

☐ I, as owner of the property, am exclusively contracting with licensed contractors to construct the project (Sec 7044, Business and Professions Code The Contractor's License Law does not apply to an owner of property who builds or improves thereon, and who contracts for such projects with a contractor(s) licensed pursuant to the Contractor's License Law).

☐ I am exempt under Sec. _____, B&P.C for this reason _____

Signature _____ Date _____

**WORKER'S COMPENSATION**

I hereby affirm that I have a certificate of consent to self-insure, or a certificate of Workers' Compensation Insurance, or a certified copy thereof (Sec 3800, Lab C.)

Policy # [redacted]-000155 Company Name STATE COMPENS. FUND

☐ Certified copy is hereby furnished

Signature _____ Date 10/16/90

(This section need not be completed if the permit is for one hundred dollars ($100) or less)

I certify that in the performance of the work for which this permit is issued, I shall not employ any person in any manner so as to become subject to the Workers' Compensation Laws of California

Signature _____ Date 10/16/90

NOTICE TO APPLICANT: If, after making this Certificate of Exemption you should become subject to the Workers' Compensation provisions of the Labor Code, you must forthwith imply with such provisions or this permit shall be deemed revoked

PERMIT VOID 90 DAYS FROM DATE OF ISSUE UNLESS EXTENSION GRANTED BY DIRECTOR OF PUBLIC WORKS.

| | | |
|---|---|---|
| Approximate Starting Date | DATE 10-18-90 | |
| Approximate Completion Date | DATE _____ | |
| HOLIDAY RESTRICTION | (YES) _____ | NO _____ |
| LIMITED OPERATION AREA | (YES) _____ | NO _____ |
| DATE STREET LAST RESURFACED | DATE 1968 | |
| SPECIAL PAVING DETAIL REQUIRED | YES _____ | (NO) _____ |

24-HOUR EMERGENCY PHONE NUMBER _____
PERMIT NOT VALID WITHOUT 24 HOUR NUMBER.

*Telephone 273-3668 Forty-eight (48) HOURS BEFORE ACTUAL CONSTRUCTION.*

### ATTENTION

State law requires that contractor/owner call Underground Service Alert two working days before excavating to have below-ground utilities located. This permit is not valid uness applicant has secured an inquiry identification number issued by Underground Service Alert.

Call Toll Free: 800-642-2444 USA ID Number _____

This permit issued pursuant to all provisions of Chapter 6, Article 2 of the Oakland Municipal Code.

This permit is granted upon the express condition that the permittee shall be responsible for all claims and liabilities arising out of work performed under the permit or arising out of permittee's failure to perform the obligations with respect to street maintenance. The permittee shall, and by acceptance of the permit agrees to defend, indemnify, save and hold harmless the City, its officers and employees, from and against any and all suits, claims or actions brought by any person for or on account of any bodily injuries, disease or illness or damage to persons and/or property sustained or arising in the construction of the work performed under the permit or in consequence of permittee's failure to perform the obligations with respect to street maintenance

### CONTRACTOR

I hereby affirm that I am licensed under provisions of Chapter 9 (commencing with Section 7000) of Division 3 of the Business and Professions Code, and my license is in full force and effect.

LICENSE # AND CLASS C57 #384167 CITY BUSINESS TAX # _____

X _____ Date 10/16/90
Signature of Contractor Owner or Agent

☐ Agent for ☒ Contractor ☐ Owner

### OFFICIAL USE ONLY
**UTILITY COMPANY REPORT**

Supervisor _____

Completion Date _____

**CITY INSPECTOR'S REPORT**

| | BACKFILL | PAVING |
|---|---|---|
| Initials | EXC. 135. | |
| Hours | Appl. 30 | |
| Date | | |
| Concrete | FL CK 165. | 10/16/90 |
| Asphalt | Recpt #4539 | |
| Sidewalk | | |

Size of Cut: Sq Ft. _____ Inches _____

Paved by _____ Type _____

Bill No. _____

Charges Backfill _____
Paving _____
Paving Insp. _____

Traffic Striping Replaced _____ Date

**APPROVED**

Engineering Services _____ Date 10-16-90

Field Services _____ Date _____

Construction _____ Date _____

Traffic Engineering _____ Date _____

Electrical Engineering _____ Date _____

DIRECTOR OF PUBLIC WORKS
APPROVED BY: _____
DATE: 10-16-90

EXTENSION GRANTED BY: _____
DATE: _____

**PARKING METER COVER REQUEST**

**TRAFFIC ENGINEERING AND PARKING DEPARTMENT**

**Subject To All Posted Traffic Regulations On This Block**

| Effective Date | Expiration Date | No. of Covers Issued | Amount Received |
|---|---|---|---|
| 10/18/90 | 10/19/90 | 2-50 & spaces 2-signs | $ 22.00 |

Site Address: 5809 Martin Luther King

Reason for Request: Paving Equipment. - Not to obstruct traffic lane

Requested By: Geraghty & Miller

Address: 1050 MARINA WAY SOUTH RICHMOND, CA 94804

Telephone Number: 415-233-3200

Signature of Person Requesting: James Palmerlee 10/17/90 for Geraghty & Miller

Date: 10/17/90

Issued By: PSC

BATES AND BAILEY
LAND SURVEYORS
15 SHATTUCK SQUARE • BERKELEY, CA 94704
TELEPHONE (415) 843-2007

P.O. BOX 592
BERKELEY, CA 94701-0592

November 14, 1990

Geraghty & Miller Inc.
1050 Marina Way So.
Richmond, CA 94804

Attn: Jim Wilmesher

Dear Mr. Wilmesher,

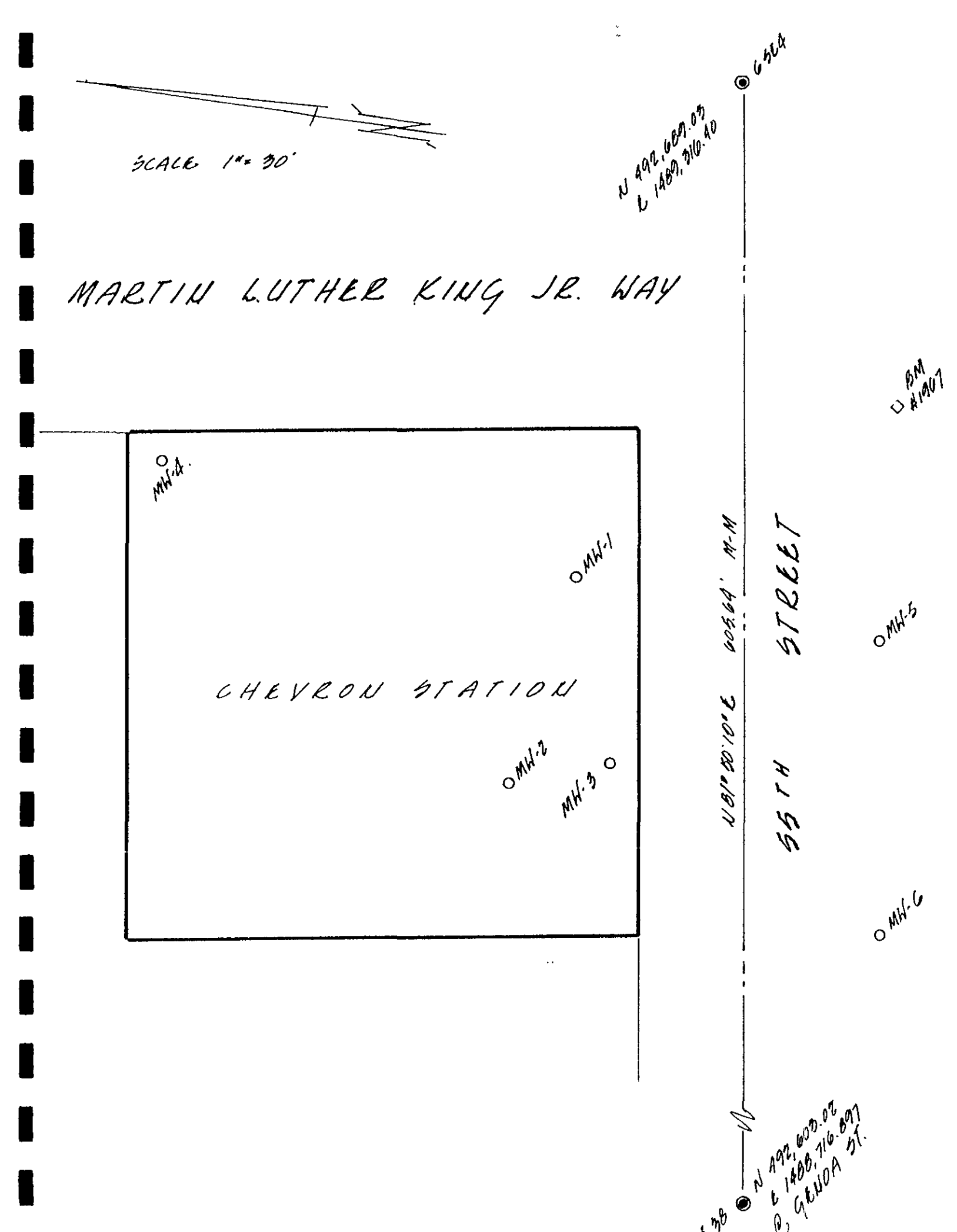
Listed below is the horizontal and vertical information for the 6 monitor wells at 5509 Martin Luther King Jr. Way, Oakland. The coordinates and elevations are based on data received from Geraghty and Miller.

| MW | Casing Elevation | Ground Elevation | Coordinates North | East |
|---|---|---|---|---|
| 1 | 83.48 | 83.90 | 492,713.0 | 1,489,180.0 |
| 2 | 84.38 | 84.54 | 492,722.9 | 1,489,123.7 |
| 3 | 82.42 | 82.71 | 492,697.3 | 1,489,132.9 |
| 4 | 84.25 | 84.50 | 492,827.1 | 1,489,196.0 |
| 5 | 81.95 | 82.24 | 492,630.0 | 1,489,174.5 |
| 6 | 80.60 | 80.94 | 492,619.3 | 1,489,097.9 |

Yours truly,

Robert W. Wilson

RWW/dd


SCALE 1" = 30'
N 492,689.03
L 1488,310.40
6564
MARTIN LUTHER KING JR. WAY
BM
#1907
MW-4
MW-1
CHEVRON STATION
MW-2
MW-3
MW-5
MW-6
N18°50'10"E 605.64' M-M
SOUTH STREET
N 492,603.02
L 1488,716.897
TO GENOA ST.
38