GETTLER-RYAN INC.

SUBSURFACE INVESTIGATION REPORT

for
Chevron Service Station #9-9708
5910 MacArthur Boulevard
Oakland, California

Report No. 6395.01-1

Prepared for:

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PROTECTION
ENVIRONMENTAL

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June 27, 1997

TABLE OF CONTENTS

TABLES

FIGURES

APPENDICES

EXECUTIVE SUMMARY

Gettler-Ryan Inc. (GR) presents this report for a well installation at Chevron Service Station #9-9708 located at 5910 MacArthur Boulevard in Oakland, California. Three on-site soil borings were drilled and groundwater monitoring wells MW-1 through MW-3 were installed in these borings. The purpose of this work was to assess whether soil and groundwater beneath the site have been impacted by petroleum hydrocarbons.

Soil encountered in borings MW-1 through MW-3 consisted predominantly of clay and silt interbedded with clayey to silty sand and clayey gravel to the total depth explored of 41.5 feet below ground surface (bgs). Free groundwater was not encountered in the borings during drilling. However, groundwater was present in the wells at depths ranging from 11.28 to 12.95 feet bgs on June 4, 1997. Based on the groundwater monitoring data collected on that date, shallow groundwater beneath the site appears to flow to the west at an approximate gradient of 0.03.

Based on analytical results from soil samples collected and analyzed during this investigation, it appears that petroleum hydrocarbons are present in soil beneath the site only at depths between 11 and 16 feet bgs. Soil in the vicinity of wells MW-1 and MW-2 has been impacted by Total Petroleum Hydrocarbons as gasoline (TPHg), benzene, and Methyl t-Butyl Ether (MTBE) at concentrations up to 140 parts per million (ppm), 0.027 ppm, and 1.3 ppm, respectively. Soil in the vicinity of well MW-3 has been impacted by Total Oil and Grease (TOG) at concentrations up to 1,000 ppm, but has not been impacted by TPHg, benzene, MTBE, Total Petroleum Hydrocarbons as diesel (TPHd), Volatile Organics (VOs), or Semivolatile Organics (SVOs).

Analytical results from groundwater samples collected during this investigation indicate that groundwater in the vicinity of wells MW-1 and MW-2 has been impacted by TPHg, benzene, and MTBE at concentrations up to 1,600 parts per billion (ppb), 120 ppb, and 2,100 ppb, respectively. Groundwater in the vicinity of well MW-3 has been impacted by TPHd (1,200 ppb) and 1,2-Dichloroethane (1.0 ppb) but has not been impacted by any other VOs, or TPHg, benzene, MTBE, TOG, or SVOs.

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for
Chevron Service Station #9-9708
5910 MacArthur Boulevard
Oakland, California

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1.0 INTRODUCTION

This report summarizes the results of a well installation performed at Chevron Station #9-9708, located at 5910 MacArthur Boulevard in Oakland, California. The work was performed at the request of Chevron Products Company (Chevron) to evaluate whether soil and groundwater beneath the subject site had been impacted by petroleum hydrocarbons, and was initiated due to the proposed sale of the property. The scope of work included: obtaining the required well installation permits; installing three on-site groundwater monitoring wells (MW-1 through MW-3); collecting soil samples for chemical analysis; developing and sampling the wells; surveying wellhead elevations; arranging for Chevron's contractor to dispose of the waste materials; and preparing a report documenting the work.

2.0 SITE DESCRIPTION

2.1 General

The subject site is an operating service station situated on the eastern corner of the intersection of MacArthur Boulevard and Seminary Avenue (Figure 1). Aboveground station facilities consist of a station building and four dispenser islands. Three fuel underground storage tanks (USTs) are located in the common pit immediately northwest of the southern service islands. A former waste oil UST was located behind the station building in the eastern corner of the property. Pertinent site features are shown on Figure 2.

2.2 Geology and Hydrogeology

The subject site is located on the eastern margin of the East Bay Plain at the western edge of the Berkeley Hills, approximately 2 miles northeast of San Leandro Bay. The site is a relatively flat asphalt and concrete covered lot at an elevation of approximately 100 feet above mean sea level. As mapped by Helley and others (1979), 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 Arroyo Viejo creek located approximately 1 mile southeast of the site. Based on the site topography, the regional groundwater flow in the vicinity of the site is inferred to be toward southwest.

3.0 FIELD WORK

Field work was conducted in accordance with GR's Field Methods and Procedures (Appendix A) and the Site Safety Plan dated May 21, 1997. A well installation permit (#97302) was obtained from the Zone 7 Water Agency, and Underground Service Alert was notified prior to drilling at the site. A copy of the permit is included in Appendix B.

3.1 Drilling Activities

On May 22 and 23, 1997, a GR geologist observed Bay Area Exploration Services, Inc. (C57 #522125) install three on-site groundwater monitoring wells (MW-1 through MW-3) at the locations shown on Figure 2. Well borings were drilled to 41.5 feet bgs using 8-inch hollow-stem augers driven by a truck-mounted CME-55 drill rig. Soil samples were collected every 5 feet. The GR geologist prepared logs of each boring and screened the soil samples in the field for the presence of volatile organic compounds. Screening data are presented on the boring logs (Appendix B).

Free groundwater was not encountered in the borings during drilling, therefore, the borings were left open for approximately 24 hours to allow for the possible entry of groundwater. Groundwater was not present in the borings on May 23, 1997. Therefore, the borings were backfilled with bentonite to 20 feet bgs, and then a shallow groundwater monitoring well was constructed in each boring using 10 feet of two-inch diameter, 0.020-inch machine-slotted Schedule 40 PVC screen. Lonestar #3 graded sand was placed in each well across the entire screen interval and extended approximately 1 foot above the top of the screen. Each well was then sealed with 1 foot of hydrated bentonite chips followed by neat cement. Well construction details are presented on the boring logs in Appendix B.

Drill cuttings were placed on and covered with plastic sheeting and stored on-site pending disposal. After completion of drilling, four samples for disposal characterization were collected from the drill cuttings and submitted to the laboratory for compositing and analysis as sample SP-A through SP-D. On June 6, 1997, the drill cuttings were removed from the site and transported to the BFI Landfill in Livermore by Integrated Wastestream Management (IWM).

3.2 Well Development and Sampling

On May 29, 1997, GR personnel inspected wells MW-1 through MW-3 for the presence of groundwater. Groundwater was present in all wells. On June 4, 1997, groundwater monitoring wells MW-1 through MW-3 were developed by GR personnel using a vented surge block and hand-bailing. Depth to water was measured in the wells prior to well development. Upon completion of well development, groundwater samples were collected from the

wells. Water purged during well development and sampling was transported to McKittrick Waste Management by IWM. Groundwater monitoring data are presented in Table 1, and copies of the GR Well Development and Sampling Field Data Sheets are included in Appendix C.

3.3 Wellhead Survey

On June 18, 1997, wells MW-1 through MW-3 were surveyed relative to mean sea level by Virgil Chavez, a California licensed land surveyor (#6323). A copy of the survey report is included in Appendix D, and the survey data is summarized in Table 1.

3.4 Laboratory Analysis

Soil and groundwater samples were analyzed by GTEL Environmental Laboratories, Inc, (GTEL) of Wichita, Kansas (ELAP #2147). Soil samples from the borings and groundwater samples were analyzed for TPHg, BTEX, and MTBE by Environmental Protection Agency (EPA) Methods 8015/8020. In addition the soil sample collected from boring MW-3 at 11 feet bgs and the groundwater sample from well MW-3 were analyzed for TPHd using EPA Method 8015, TOG using Standard Method 5520F, VOs using EPA Method 8240B (soil) or 8010B (water), and SVOs using EPA Method 8270B. The soil sample collected from boring MW-3 at 16 feet bgs was also analyzed for TOG. The soil sample collected from boring MW-3 at 11 feet bgs was analyzed for metals cadmium, chromium, lead, zinc, and nickel using EPA Method 6010. The composite sample from the drill cuttings was analyzed for TPHg and BTEX. Copies of the laboratory analytical reports and chain-of-custody records are included in Appendix E.

4.0 RESULTS

4.1 Subsurface Conditions

Soil encountered in borings MW-1 through MW-3 consisted predominantly of clay and silt interbedded with clayey to silty sand and clayey gravel to the total depth explored of 41.5 feet. Detailed descriptions of the subsurface materials encountered during drilling are presented on the boring logs in Appendix B. Free groundwater was not encountered in the borings during drilling, therefore, the borings were left open for approximately 24 hours to allow for the possible entry of groundwater. Heavy rain (unusual for this time of the year) occurred in the site vicinity during the night of May 22 and morning of May 23, 1997, but no groundwater was present in the borings before well installation or in newly installed wells MW-1 through MW-3 on that day. However, groundwater was present in all wells at depths ranging from 11.28 to 13.06 feet on May 29 and June 4, 1997. Based on the groundwater monitoring data collected on June 4, 1997, shallow groundwater beneath the site appears to flow to the west at an approximate gradient of 0.03 (Figure 2).

4.2 Soil Analytical Results

TPHg and benzene were detected in the soil samples collected from boring MW-1 at 11 feet bgs (7.1 ppm and 0.0062 ppm, respectively) and 15.5 feet bgs (1.6 ppm and 0.027 ppm, respectively). TPHg were also detected in the soil sample collected from boring MW-2 at 11 feet bgs at a concentration of 140 ppm. MTBE was detected in the soil sample collected from boring MW-1 at 15.5 feet bgs (0.015 ppm), and in the soil samples collected from boring MW-2 at 15.5 feet bgs (0.680 ppm) and 16 feet bgs (1.3). TPHg or benzene were not detected in any other soil samples collected and analyzed from borings MW-1 through MW-3. TOG was detected in the soil samples collected from boring MW-3 at 11 and 16 feet bgs at concentrations of 170 ppm and 1,000 ppm, respectively. Chromium (46 ppm), nickel (120 ppm), lead (11 ppm), and zinc (110 ppm) were detected in the soil sample collected from boring MW-3 at 11 feet bgs. TPHd, SVOs or cadmium were not detected in this sample. VOs were not detected in this sample except 11 ppm of methylene chloride, which is a common laboratory contaminant, therefore, could be introduced in the laboratory.

The composite stockpile sample did not contain TPHg or BTEX. Soil chemical analytical data are summarized in Table 2.

4.3 Groundwater Analytical Results

TPHg, benzene, and MTBE were detected in the groundwater samples collected from wells MW-1 (380 ppb, 58 ppb, and 85 ppb respectively) and MW-2 (1,600 ppb, 120 ppb, and 2,100 ppb, respectively). The groundwater sample collected from well MW-3 did not contain TPHg, benzene or MTBE. However, this sample contained TPHd (1,200 ppb) and 1,2-dichloroethane (1.0 ppb). Other VOs or SVOs were not detected in this sample. Groundwater analytical data are summarized in Table 1.

5.0 CONCLUSIONS

Petroleum hydrocarbons appear to be present in soil beneath the site only at depths between 11 and 16 feet bgs. Soil in the vicinity of wells MW-1 and MW-2 has been impacted by TPHg, benzene and MTBE with the highest concentrations of 140 ppm, 0.027 ppm, and 1.3 ppm, respectively. Soil in the vicinity of well MW-3 has been impacted by TOG (up to 1,000 ppm) and has not been impacted by TPHg, benzene, MTBE, TPHd, VOs or SVOs.

Groundwater in the vicinity of wells MW-1 and MW-2 has been impacted by TPHg, benzene, and MTBE at concentrations up to 1,600 ppb, 120 ppb, and 2,100 ppb, respectively. Groundwater in the vicinity of well MW-3 has been impacted by TPHd (1,200 ppb) and 1,2-dichloroethane (1.0 ppb) but has not been impacted by any other VOs, or TPHg, benzene, MTBE, TOG, or SVOs.

6.0 REFERENCES

E. J. Helley and others, 1979, Flatland Deposits of the San Francisco Bay Region, California: U.S. Geological Survey Professional Paper 943.

Gettler-Ryan Inc., May 21, 1997, Site Safety Plan for Chevron Service Station #9-9708, 5910 MacArthur Boulevard, Oakland, California, Job No. 6395.01.

Table 1. Water Level Data and Groundwater Analytical Results - Chevron Service Station #9-9708, 5910 MacArthur Boulevard, Oakland, California.

Well ID/ TOC (feet)	Date	DTW (feet)	GWE (msl)	Product Thickness (feet)	TPHg	TPHd	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TOG	VOs	SVOs
					<----------ppb---------->									
MW-1/	05/29/97	12.20	84.41	0	—	—	—	—	—	—	—	—	—	—
96.61	06/04/97	12.21	84.40	0	380	—	58	1.2	5.4	40	85	—	—	—
MW-2/	05/29/97	13.06	83.85	0	—	—	—	—	—	—	—	—	—	—
96.91	06/04/97	12.95	83.96	0	1,600	—	120	5.9	32	15	2,100	—	—	—
MW-3/	05/29/97	11.45	86.41	0	—	—	—	—	—	—	—	—	—	—
97.86	06/04/97	11.28	86.58	0	<50	1,200	<0.5	<0.5	<0.5	<0.5	<5.0	<5,000	1.0[1]	ND
Trip Blank TBLB	06/04/97	—	—	—	<50	—	<0.5	<0.50	<0.50	<0.50	<5.0	—	—	—

EXPLANATION:

DTW = Depth to water
TOC = Top of casing elevation
GWE = Groundwater elevation
TPHg = Total Petroleum Hydrocarbons as gasoline
TPHd = Total Petroleum Hydrocarbons as diesel
MTBE = Methyl t-Butyl Ether
TOG = Total Oil and Grease
VOs = Volatile Organics
SVOs = Semivolatile Organics
msl = Measurements referenced relative to mean sea level
ppb = Parts per billion
— = Not analyzed/Not applicable
[1] = All compounds analyzed were not detected except 1 ppm of 1,2-Dichloloethane

ANALYTICAL METHODS:

TPHg, benzene, toluene, ethylbenzene, xylenes, MTBE = EPA Methods 8015/8020
TPHd = EPA Method 3510
TOG = Standard Method 5520F
VOs = EPA Method 8010B
SVOs = EPA Method 8270B

ANALYTICAL LABORATORY:

GTEL Environmental Laboratories, Inc. (ELAP #2147)

NOTES:

Wells MW-1 through MW-3 were surveyed on June 18, 1997, by Virgil Chavez of Vallejo, California (PLS 6323).

Table 2. Soil Analytical Results - Chevron Service Station #9-9708, 5910 MacArthur Boulevard, Oakland, California.

Sample Name	Depth (ft)	Date	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	TPHd	TOG	VOs	SVOs	Cadmium	Chromium	Nickel	Lead	Zinc
			<----------ppm---------->														
MW1-11	11.0	05/22/97	7.1	0.0062	0.014	<0.011	<0.011	<0.021	—	—	—	—	—	—	—	—	—
MW1-15.5	15.5	05/22/97	1.6	0.0270	<0.0050	0.032	0.074	0.015	—	—	—	—	—	—	—	—	—
MW1-16	16.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW1-21	21.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW1-31	31.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW1-41	41.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW2-11	11.0	05/22/97	140	<0.05	0.16	0.27	0.58	<1.0	—	—	—	—	—	—	—	—	—
MW2-15.5	15.5	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	0.680	—	—	—	—	—	—	—	—	—
MW2-16	16.0	05/22/97	<2.8	<0.014	<0.014	<0.014	<0.014	1.3	—	—	—	—	—	—	—	—	—
MW2-21	21.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW2-31	31.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW2-41	41.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW3-11	11.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	<10	170	0.011[1]	ND	<2.0	46	120	11	110
MW3-16	16.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	1,000	—	—	—	—	—	—	—
MW3-21	21.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW3-31	31.0	05/22/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
MW3-41	41.0	05/23/97	<1	<0.0050	<0.0050	<0.0050	<0.0050	<0.010	—	—	—	—	—	—	—	—	—
SP-A through SP-D		05/23/97	1.0	<0.0050	<0.0050	<0.0050	<0.0050	—	—	—	—	—	—	—	—	—	—

EXPLANATION:

TPHg = Total Petroleum Hydrocarbons as gasoline
MTBE = Methyl t-Butyl Ether
TPHd = Total Petroleum Hydrocarbons as diesel
TOG = Total Oil and Grease
VOs = Volatile Organics
SVOs = Semivolatile Organics
ppm = Parts per million
ND = Not detected
— = Not analyzed/not applicable
[1] = All compounds analyzed were not detected except 0.011 ppm of methylene chloride which is a common laboratory contaminant.

ANALYTICAL METHODS:

TPHg, benzene, toluene, ethylbenzene, xylenes, MTBE = EPA Methods 8015/8020
TPHd = EPA Method 3550
TOG = Standard Method 5520F
VOs = EPA Method 8240B
SVOs = EPA Method 8270B
Metals = EPA Method 6010

ANALYTICAL LABORATORY:

GTEL Environmental Laboratories, Inc. (ELAP #2147)

Source: Street Atlas USA, Delorme (1995).

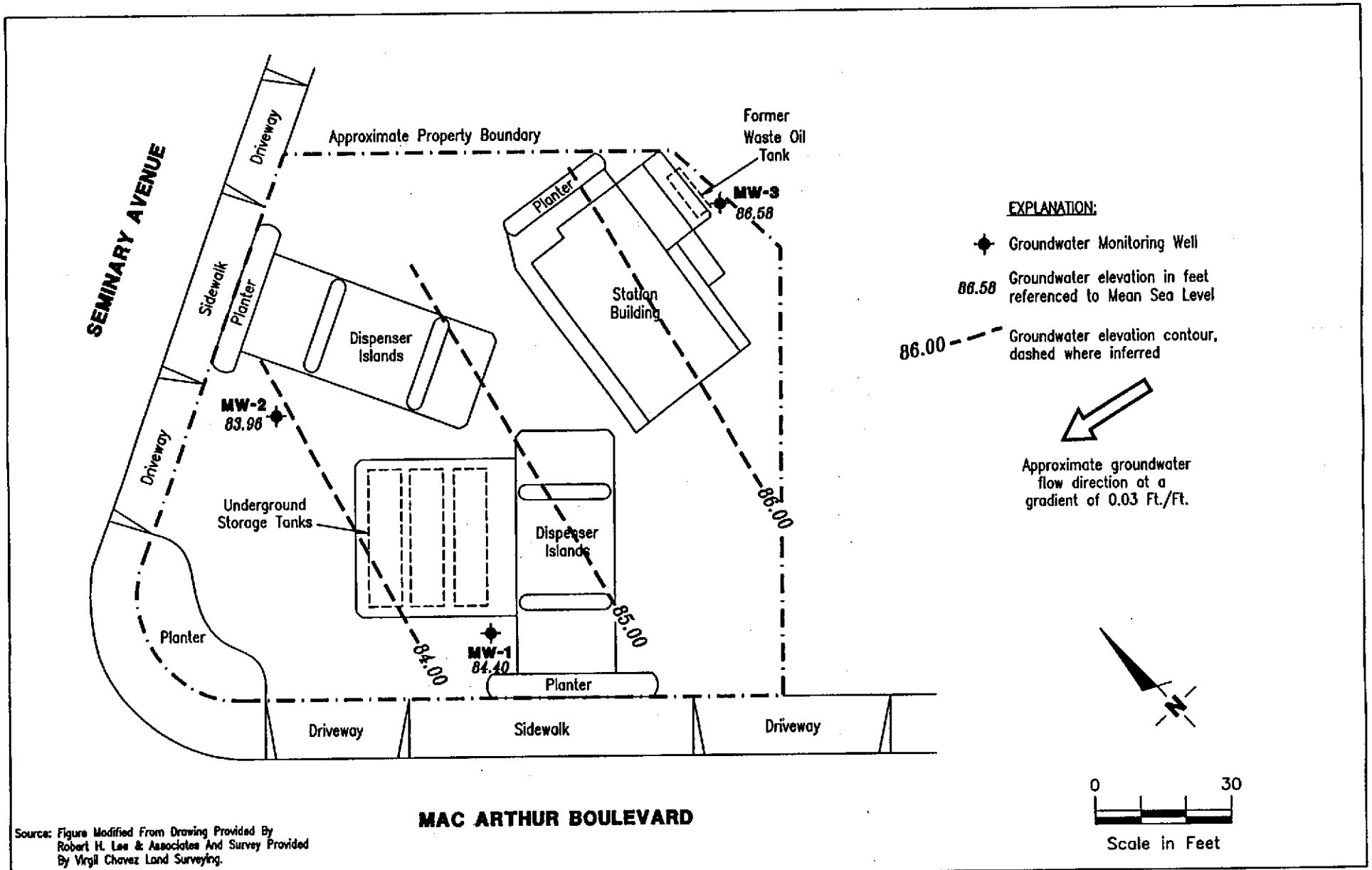
Gettler - Ryan Inc.

6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

VICINITY MAP
Chevron Service Station No. 9-9708
5910 Mac Arthur Boulevard
Oakland, California

FIGURE
1

JOB NUMBER	REVIEWED BY	DATE	REVISED DATE
6395		06/97	



Source: Figure Modified From Drawing Provided By Robert H. Lee & Associates And Survey Provided By Virgil Chavez Land Surveying.

FIGURE 2

Gettler - Ryan Inc.
6747 Sierra Ct., Suite J (510) 551-7555
Dublin, CA 94568

POTENTIOMETRIC MAP
Chevron Service Station No. 9-9708
5910 Mac Arthur Boulevard
Oakland, California

JOB NUMBER 6395
REVIEWED BY
DATE 06/97
REVISED DATE

GETTLER - RYAN
FIELD METHODS AND PROCEDURES

Site Safety Plan

Field work performed by Gettler-Ryan, Inc. (GR) is conducted in accordance with GR's Health and Safety Plan and the Site Safety Plan. GR personnel and subcontractors who perform work at the site are briefed on the of these plans contents prior to initiating site work. The GR geologist or engineer at the site when the work is performed acts as the Site Safety Officer. GR utilizes a photoionization detector (PID) to monitor ambient conditions as part of the Health and Safety Plan.

Collection of Soil Samples

Exploratory soil borings are drilled by a California-licensed well driller. A GR geologist is present to observe the drilling, collect soil samples for description, physical testing, and chemical analysis, and prepare a log of the exploratory soil boring. Soil samples are collected from the exploratory soil boring with a split-barrel sampler or other appropriate sampling device fitted with clean brass or stainless steel liners. The sampling device is driven approximately 18 inches with a 140-pound hammer falling 30 inches. The number of blows required to advance the sampler each successive 6 inches is recorded on the boring log. The encountered soil is described using the Unified Soil Classification System (ASTM 2488-84) and the Munsell Soil Color Chart.

After removal from the sampling device, soil samples for chemical analysis are covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Samples are selected for chemical analysis based on:

a. depth relative to underground storage tanks and existing ground surface
b. depth relative to known or suspected groundwater
c. presence or absence of contaminant migration pathways
d. presence or absence of discoloration or staining
e. presence or absence of obvious gasoline hydrocarbon odors
f. presence or absence of organic vapors detected by headspace analysis

Field Screening of Soil Samples

A PID is used to perform head-space analysis in the field for the presence of organic vapors from the soil sample. This test procedure involves removing some soil from one of the sample tubes not retained for chemical analysis and immediately covering the end of the tube with a plastic cap. The PID probe is inserted into the headspace inside the tube through a hole in the plastic cap. Head-space screening results are recorded on the boring log.

Head-space screening procedures are performed and results recorded as reconnaissance data. GR does not consider field screening techniques to be verification of the presence or absence of hydrocarbons.

Stockpile Sampling

Stockpile samples consist of four individual sample liners collected from each 100 cubic yards (yd^3) of stockpiled soil material. Four arbitrary points on the stockpiled material are chosen, and discrete soil sample is collected at each of these points. Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless steel or brass tube into the stockpiled material with a wooden mallet or hand driven soil sampling device. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, placed in the cooler with blue ice for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Construction of Monitoring Wells

Monitoring wells are constructed in the exploratory borings with Schedule 40 polyvinyl Chloride (PVC) casing. All joints are thread-joined; no glues, cements, or solvents are used in well construction. The screened interval is constructed of machine-slotted PVC well screen which generally extends from the total well depth to a point above the groundwater. An appropriately-sized sorted sand is placed in the annular space adjacent to the entire screened interval. A bentonite transition seal is placed in the annular space above the sand, and the remaining annular space is sealed with neat cement or cement grout.

Wellheads are protected with water-resistant traffic rated vault boxes placed flush with the ground surface. The top of the well casing is sealed with a locking cap. A lock is placed on the well cap to prevent vandalism and unintentional introduction of materials into the well.

Storing and Sampling of Drill Cuttings

Drill cuttings are stockpiled on plastic sheeting or stored in drums depending on site conditions and regulatory requirements. Stockpile samples are collected and analyzed on the basis of one composite sample per 50 cubic yards of soil. Stockpile samples are composed of four discrete soil samples, each collected from an arbitrary location on the stockpile. The four discrete samples are then composited in the laboratory prior to analysis.

Each discrete stockpile sample is collected by removing the upper 3 to 6 inches of soil, and then driving the stainless or brass sample tube into the stockpiled material with a hand, mallet, or drive sampler. The sample tubes are then covered on both ends with teflon sheeting or aluminum foil, capped, labeled, and placed in a cooler with blue ice

for preservation. A chain-of-custody form is initiated in the field and accompanies the selected soil samples to the analytical laboratory. Stockpiled soils are covered with plastic sheeting after completion of sampling.

Wellhead Survey

The top of the newly-installed well casing is surveyed by a California-licensed Land Surveyor to mean sea level (MSL).

Well Development

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

Groundwater Monitoring and Sampling

Decontamination Procedures

All physical parameter measuring and sampling equipment are decontaminated prior to sample collection using Alconox or equivalent detergent followed by steam cleaning with deionized water. During field sampling, equipment placed in a well are decontaminated before purging or sampling the next well by cleaning with Alconox or equivalent detergent followed by steam cleaning with deionized water.

Water-Level Measurements

Prior to sampling each well, the static water level is measured using an electric sounder and/or calibrated portable oil-water interface probe. Both static water-level and separate-phase product thickness are measured to the nearest ± 0.01 foot. The presence of separate-phase product is confirmed using a clean, acrylic or polyvinylchloride (PVC) bailer, measured to the nearest ± 0.01 foot with a decimal scale tape. The monofilament line used to lower the bailer is replaced between borings with new line to preclude the possibility of cross-contamination. Field observations (e.g. product color, turbidity, water color, odors, etc.) are noted. Water-levels are measured in wells with known or suspected lowest dissolved chemical concentrations to the highest dissolved concentrations.

Sample Collection and Labeling

A temporary PVC screen is installed in the boring to facilitate a grab groundwater sample collection. Samples of groundwater are collected from the surface of the water in each well or boring using the teflon bailer or a pump. The water samples are then gently poured into laboratory-cleaned containers and sealed with teflon-lined caps, and inspected for air bubbles to check for headspace. The samples are then labeled by an adhesive label, noted in permanent ink, and promptly placed in an ice storage. A Chain-of-Custody Record is initiated and updated throughout handling of the samples, and accompanies the samples to the laboratory certified by the State of California for analyses requested.

ZONE 7 WATER AGENCY

5997 PARKSIDE DRIVE PLEASANTON, CALIFORNIA 94588 VOICE (510) 484-2600
FAX (510) 462-3914

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

LOCATION OF PROJECT 5910 Mac Arthur Blvd.
Oakland, CA

CLIENT
Name Chevron Products Company
Address P.O. Box 6004 Voice (510) 842-9136
City San Ramon, CA ~~9458~~ Zip 94583

APPLICANT
Name Gettler-Ryan Inc.
Steve Carter Fax (916) 631-1317
Address 3164 Gold Camp Dr. #240 Voice (916) 631-1300
City Rancho Cordova, CA Zip 95670

TYPE OF PROJECT

Well Construction		Geotechnical Investigation	
Cathodic Protection	___	General	___
Water Supply	___	Contamination	___
Monitoring (3)	X	Well Destruction	___

PROPOSED WATER SUPPLY WELL USE
Domestic ___ Industrial ___ Other ___
Municipal ___ Irrigation ___

DRILLING METHOD:
Mud Rotary ___ Air Rotary ___ Auger X
Cable ___ Other ___

DRILLER'S LICENSE NO. C57 - 522125

WELL PROJECTS
Drill Hole Diameter 8 in. Maximum
Casing Diameter 2 in. Depth 23 ft.
Surface Seal Depth 7 ft. Number 3

GEOTECHNICAL PROJECTS
Number of Borings ___ Maximum
Hole Diameter ___ in. Depth ___ ft.

ESTIMATED STARTING DATE 5/19/97
ESTIMATED COMPLETION DATE 6/1/97

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Stephen J. Carter, RG Date 5/2/97

FOR OFFICE USE

PERMIT NUMBER 97302
LOCATION NUMBER ___

PERMIT CONDITIONS

Circled Permit Requirements Apply

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original Department of Water Resources Water Well Drillers Report or equivalent for well Projects, or drilling logs and location sketch for geotechnical projects.
3. Permit is void if project not begun within 90 days of approval date.

(B.) WATER WELLS, INCLUDING PIEZOMETERS
1. Minimum surface seal thickness is two inches of cement grout placed by tremie.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.

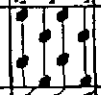
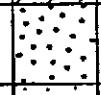
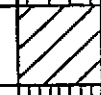
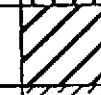
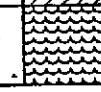
C. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

D. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

E. WELL DESTRUCTION. See attached.

Approved Wyman Hong Date 13 May 97
Wyman Hong

91992

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

LL - Liquid Limit (%)

PI - Plastic Index (%)

PID - Volatile Vapors in ppm

MA - Particle Size Analysis

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

5 GY 5/2 - GSA Rock Color Chart

- No Soil Sample Recovered
- "Undisturbed" Sample
- Bulk or Classification Sample
- First Encountered Ground Water Level
- Piezometric Ground Water Level

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

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

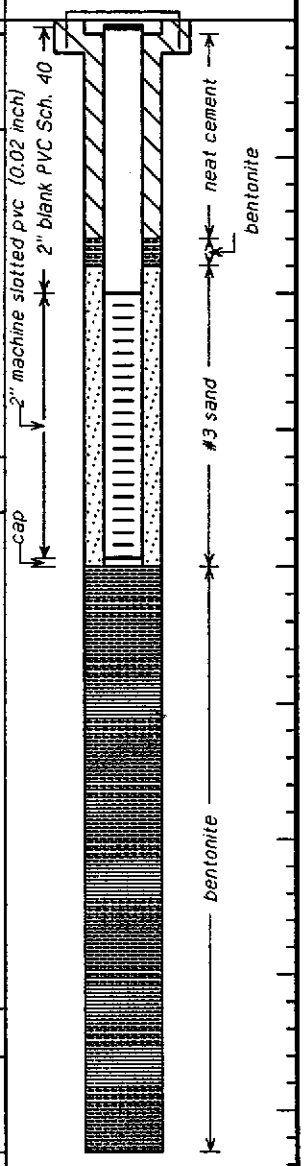
Gettler-Ryan, Inc.

Log of Boring MW-1

PROJECT: *Chevron SS# 9-9708*	LOCATION: *5910 MacArthur Boulevard, Oakland, CA*
G-R PROJECT NO. : *6395.01*	SURFACE ELEVATION: *96.61 feet MSL*
DATE STARTED: *05/22/97*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *05/23/97*	WL (ft. bgs): *12.21* DATE: *06/04/97* TIME: *13:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *41.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
				CL	ASPHALT
					SANDY CLAY (CL) - very dark brown (10YR 2/2), damp, stiff, low plasticity; 70% clay, 30% fine to coarse sand, trace gravel.
5	0	36	MW1-6	GC	CLAYEY GRAVEL (GC) - dark brown (7.5YR 4/2), damp, dense, 80% angular to subrounded gravel, 20% clay.
10	23	34	MW1-11		
15	215	19	MW1-15.5		Color changes to olive gray (5Y 5/2) at 15 feet.
	171	19	MW1-16	CL	SANDY CLAY (CL) - yellowish brown (10YR 5/4), moist, very stiff, low plasticity; 70% clay, 30% fine to coarse sand, trace fine gravel.
20	9	17	MW1-21	CL	CLAY (CL) - pale brown (10YR 6/3), damp, very stiff, medium plasticity ; 100% clay.
25	39	21	MW1-25		
30	7	14	MW1-31		Color changes to brown (10YR 5/3); becomes moist at 30 feet.
35	0	22	MW1-36	SC	CLAYEY SAND (SC) - brown (10YR 5/3), moist, medium dense; 60% fine to coarse sand, 40% clay.
				SW	SAND WITH GRAVEL (SW) - brown (10YR 5/3), moist, dense; 60% fine to coarse sand, 30% angular to well rounded fine gravel, 10% clay.
40	12	36	MW1-41		
45					(* = converted to equivalent standard penetration blows/ft.)

WELL DIAGRAM



JOB NUMBER: *6395.01*

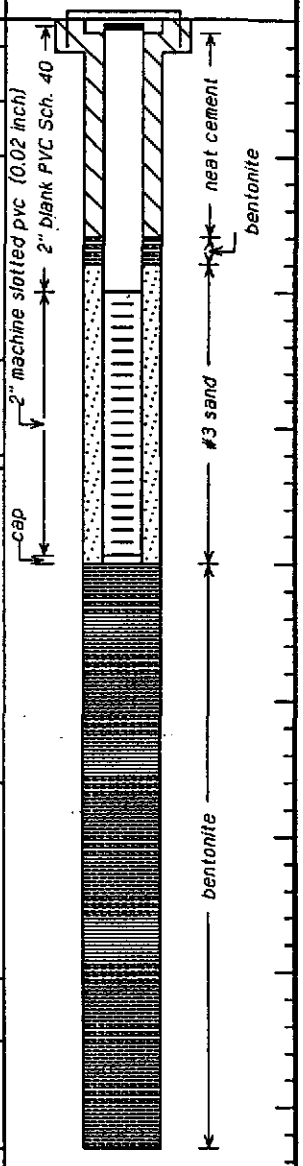
Gettler-Ryan, Inc.

Log of Boring MW-2

PROJECT: *Chevron SS# 9-9708*	LOCATION: *5910 MacArthur Boulevard, Oakland, CA*
G-R PROJECT NO. : *6395.01*	SURFACE ELEVATION: *96.91 feet MSL*
DATE STARTED: *05/22/97*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *05/23/97*	WL (ft. bgs): *12.95* DATE: *06/04/97* TIME: *13:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *41.5 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	ASPHALT OVER BASEROCK
						CL	SANDY CLAY (CL) – very dark brown (10YR 2/2), damp, stiff, low plasticity; 70% clay, 30% fine to coarse sand, trace fine gravel.
5	0	3	MW2-6			CL	CLAY (CL) – dark yellowish brown (10YR 4/6), damp, stiff, medium plasticity; 80% clay, 15% fine to coarse sand, 5% subrounded to well rounded fine gravel.
10	12	4	MW2-11				SANDY CLAY (CL) – dark yellowish brown (10YR 4/6), moist, soft, low plasticity; 60% clay, 30% fine to coarse sand, 10% subrounded to well rounded fine to coarse gravel.
						GC	Color changes to very dark brown (10YR 2/2) mottled reddish brown (5YR 4/4); with lenses of clayey sand; with wood pieces.
15	226	29	MW2-15.5				
	68	29	MW2-16			CL	CLAYEY GRAVEL WITH SAND (GC) – dark grayish brown (2.5Y 4/2), moist, medium dense; 40% angular to subrounded fine to coarse grave, 30% fine to coarse sand, 30% clay.
						CL	
20	16	13	MW2-21				SANDY CLAY (CL) – olive yellow (2.5Y 6/4), moist, stiff, low plasticity; 70% clay, 30% fine sand.
25	22	22	MW2-26				CLAY (CL) – olive yellow (2.5Y 6/4) damp, very stiff, medium plasticity; 100% clay; waited 0.5 hr – no water in the hole.
							Color changes to brown (10YR 5/3) mottled strong brown (7.5YR 5/8) at 20 feet.
						GC	With up to 10% fine to coarse sand, trace well rounded fine gravel at 25 feet.
30	67	66	MW2-31				CLAYEY GRAVEL WITH SAND (GC) – yellowish brown (10YR 5/4), damp, very dense; 40% angular to subrounded fone to coarse gravel, 40 % fine to coarse sand, 20% clay.
35	0	51	MW2-36			SM	SILTY SAND (SM) – yellowish brown (10YR 5/4), moist, very dense; 70% fine sand, 30% silt, trace subrounded to well rounded fine gravel.
						CL	
40	0	24	MW2-41				CLAY (CL) – yellowish brown (10YR 5/4), damp, very stiff, low plasticity; 90% clay, 10% fine sand.
45							(* = converted to equivalent standard penetration blows/ft.)

WELL DIAGRAM



JOB NUMBER: *6395.01*

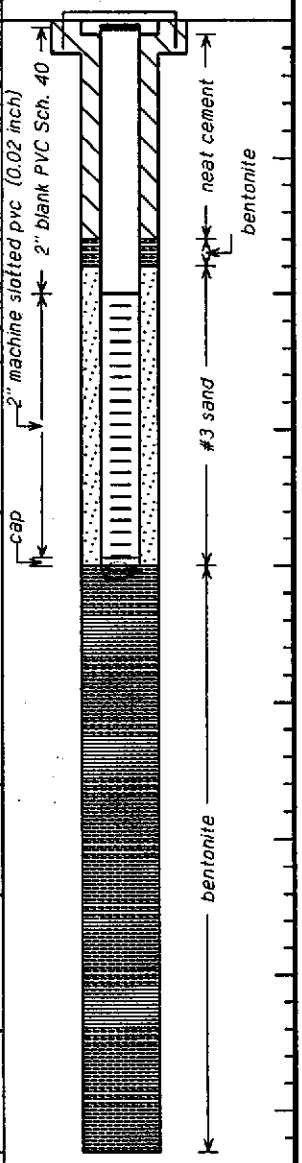
Gettler-Ryan, Inc.

Log of Boring MW-3

PROJECT: *Chevron SS# 9-9708*	LOCATION: *5910 MacArthur Boulevard, Oakland, CA*
G-R PROJECT NO. : *6395.01*	SURFACE ELEVATION: *97.86 feet MSL*
DATE STARTED: *05/22/97*	WL (ft. bgs): DATE: TIME:
DATE FINISHED: *05/23/97*	WL (ft. bgs): *11.28* DATE: *06/04/97* TIME: *13:00*
DRILLING METHOD: *8 in. Hollow Stem Auger*	TOTAL DEPTH: *41.5 Feet*
DRILLING COMPANY: *Bay Area Exploration, Inc.*	GEOLOGIST: *Barbara Sieminski*

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SOIL CLASS	GEOLOGIC DESCRIPTION
5	0	4	MW3-6	CL	ASPHALT
					CLAY (CL) – very dark brown (10YR 2/2), damp, stiff, low plasticity; 85% clay, 15% fine to coarse sand, trace fine gravel.
				SC	CLAYEY SAND (SC) – dark brown (10YR 3/3), moist, loose; 50% fine to coarse sand, 45% clay, 5% subrounded to well rounded fine gravel.
10	17	27	MW3-11	CL	SANDY CLAY WITH GRAVEL (CL) – dark brown (10YR 3/3), moist, very stiff , low plasticity; 65% clay, 30% fine to coarse sand, 5% subrounded to well rounded fine to coarse gravel.
15	35	24	MW3-16	GC	CLAYEY GRAVEL WITH SAND (GC) – dark grayish brown 92.5Y 4/2), moist to saturated (clay matrix), medium dense; 40% angular to subrounded fine to coarse gravel, 30% fine to coarse sand, 30% clay; no water in the hole.
20	0	14	MW3-21	CL	CLAY (CL) – brown (10YR 5/3), moist, stiff, medium plasticity; 100% clay.
					Pulled out 5 feet of augers and waited 20 minutes – no water in the hole at 20 feet.
25	0	10	MW3-26		
30	27	28	MW3-31	ML	SANDY SILT (ML) – light yellowish brown (10YR 6/4), moist, dense; 55% silt, 40% fine sand, 5% well rounded fine gravel.
35	6.7	44	MW3-36	SM	SILTY SAND (SM) – light olive brown (2.5Y 5/6), damp, very dense; 70% fine sand, 30% silt; with lenses (up to 1 inch thick) of fine to coarse sand with subrounded to well rounded fine gravel.
40	102	43	MW3-41	ML	SANDY SILT (ML) – light olive brown (2.5Y 5/6), moist, low lasticity, hard; 60% silt, 40% fine sand.
45					(* = converted to equivalent standard penetration blows/ft.)

WELL DIAGRAM



SAMPLER E. Cline DATE 6-9

ADDRESS 5910 MacArthur Blvd JOB # 639585

CITY Oakland CA SS# 9-9708

Well ID MW-1 Well Condition Clay

Well Location Description 2"

Well Diameter 2 in Hydrocarbon Thickness ~~0~~

Total Depth 20.2 ft

Depth to Liquid 12.21 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

# of casing Volume 7.99 x 0.17 x(VF) 1.4 #Estimated purge Volume 13.5 gal.

Purge Equipment Bailer Sampling Equipment Bailer

Did well dewater N/C If yes, Time ___ Volume ___

Starting Time 1300 Purging Flow Rate ___ gpm.

Sampling Time ___

Time	pH	Conductivity	Temperature	Color	Volume	Clarity
1302	7.35	352	21.3	Clear	0	Clear
1307	7.03	350	21.3	Brown	3	cloudy
1312	7.44	387	21.2	Brown	6	
1318	7.47	385	21.0	Tan	9	
1321	7.49	390	21.0	Tan	12	
1324	7.49	392	21.2	Tan	15	

Weather Conditions Clear Warm

Water Color: Brown - Tan Odor: None

Sediment Description Light silt

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-1	3x40ml VOA	Y	HCl	CalTest	GasBTXE MTBE

Comments Surge Bail sampled.

WELL SAMPLING FIELD DATA SHEET

SAMPLER F. Cline DATE 6-4

ADDRESS 5910 MacArthur Blvd JOB # 639510(1)

CITY Oakland CA SS# 9-9708

Well ID MW-2 Well Condition Okay

Well Location Description

Well Diameter 2" in Hydrocarbon Thickness ~~0~~

Total Depth 20.1 ft

Depth to Liquid 12.95 ft

Volume Factor (VF)			
2" = 0.17	6" = 1.50	12" = 5.80
3" = 0.38		
4" = 0.66		

# of casing Volume 7.15 x 0.17 x(VF) 1.2 #Estimated purge Volume 12.1 gal.

Purge Equipment Bailer ~~Suction~~ Sampling Equipment Bailer

Did well dewater NO If yes, Time ___ Volume ___

Starting Time 1330 Purging Flow Rate ___ gpm.

Sampling Time 1355

Time	pH	Conductivity	Temperature	Color	Volume	Clarity
1335	7.30	188	19.3	clear	2.4	clear
1341	7.47	197	18.8	Brown	4.8	cloudy
1343	7.53	199	18.5	"	7.2	Muddy
1349	7.73	214	18.5	Tan	9.6	Cloudy
1351	7.13	200	18.6	Clear	12.0	cloudy
1355	7.72	210	19.0	Clear	14.4	clear

Weather Conditions clear Warm

Water Color: ~~Cl~~ Brown Odor: None.

Sediment Description Light silt

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-2	3x40ml VOA	Y	HCl	GTEL	Gas, BTXE, MTBE

Comments Surge Bail sample.

SAMPLER F. Cline DATE 6-4

ADDRESS 5910 MacArthur Blvd JOB # 6395.01

CITY Oakland CA SS# 9-9708

Well ID MW-3 Well Condition Okay

Well Location Description

Well Diameter 2" in Hydrocarbon Thickness 0

Total Depth 20.1 ft

Depth to Liquid 11.28 ft

Volume Factor (VF)	2" = 0.17	3" = 0.38	4" = 0.66	6" = 1.50	12" = 5.80

# of casing Volume 8.82 × 0.17 x(VF) 1.5 #Estimated purge Volume 15 gal.

Purge Equipment Bailer Sampling Equipment Bailer

Did well dewater NO If yes, Time ___ Volume

Starting Time 1224 Purging Flow Rate gpm.

Sampling Time 1245

Time	pH	Conductivity	Temperature	Clear/Cloudy	Volume	Clarity
1226	6.31	279	22.5	Clear None	3	Cloudy
1228	6.28	262	20.8		6	
1231	6.66	293	21.0		9	
1234	7.66	294	21.2		12	
1237	7.66	300	21.2		15	
1245	7.64	294	21.2		16	
		300	20.9			

Weather Conditions Clear Warm

Water Color: Clear Odor: None

Sediment Description None

LABORATORY INFORMATION

Sample ID	Container	Refrig	Preservative Type	Lab	Analysis
MW-3	3x40mlVOA	Y	HCl	CoTBL	GcsBTXE MTBE
	3x40mlVOA		HCl		8010
	1x1liter		None		TPH Diesel 8270
	1x1liter		HCl		70G-

Comments Silver Bail & Samples

Virgil Chavez Land Surveying
312 Georgia Street, Suite 200
Vallejo, California 94590
(707) 553-2476

June 23, 1997
Project No. 1104-68

Barbara Sieminski
Gettler-Ryan, Inc.
6747 Sierra Ct. Suite J
Dublin, Ca. 94568

Subject: Monitoring Well Survey
Chevron SS # 9-9708
5910 MacArthur Blvd.
Oakland, Ca.

Dear Barbara:

This is to confirm that we have proceeded at your request to survey the monitoring wells at the above referenced location. Our findings are shown in the tables below. The survey was performed on June 18, 1997. The benchmark for the survey was the top of curb at the southerly end of the return at the easterly corner of MacArthur Blvd. and Seminary Avenue. Measurement locations were marked at the approximate north side of top of box. The second table is for top of casing locations, using the back of sidewalk on MacArthur Blvd. as reference line, beginning at the return described above. Benchmark Elevation 95.88 feet, MSL.

Well No.	Rim Elevation	TOC Elevation
MW - 1	96.96'	96.61'
MW - 2	97.15'	96.91'
MW - 3	98.04'	97.86'

Well No.	Station	Offset
MW - 1	0+59.46	-14.28(Lt.)
MW - 2	0+12.34	-61.57(Lt.)
MW - 3	1+10.73	-106.62(Lt.)
BSW Ret. MacArthur	0+00.00	0.00
BSW-MacArthur Blvd.	---	0.00

Sincerely,

LICENSED LAND SURVEYOR
VIRGIL D. CHAVEZ
No. 6323
Exp.
STATE OF CALIFORNIA

Virgil D. Chavez

Virgil D. Chavez, PLS 6323

NEI/GTEL
ENVIRONMENTAL LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

June 12, 1997

Barbara Sieminski
GETTLER-RYAN
6747 Sierra Ct.
Suite J
Dublin, CA 94568

RE: NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Dear Barbara Sieminski:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 05/28/97.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/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. This report is to be reproduced only in full.

NEI/GTEL is certified by the California Department of Health Service under Certification Number 2147.

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

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Justin Ward, Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: GC
Matrix: Solids

NEI/GTEL Sample Number	W7050411-28	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	06/10/97			
Date Analyzed	06/11/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
TPH as Diesel	10.	mg/kg	< 10.	--	--	--
Percent Solids	--	%	81.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

GC:

Extraction by EPA Method 3550 (sonication). ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel.

W7050411-28:

Chromatographic data indicates the presence of material, which is heavier than diesel fuel, in this sample. Sample was extracted outside of the method recommended holding time.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Solids

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	--	--
Surrogate Recovery	--	X	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	*	--
Blank Contamination	--	X	--

Comments:
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Surrogate Results

QC Batch No.	Reference	Sample ID	OTP
Method: GC		Acceptability Limits:	43.7-111%
061097TPHS-1	BS061097TPH	Method Blank Soil	83.5
061097TPHS-2	LS061097TPH	Laboratory control	72.8
061097TPHS-3	LSD061097TPH	LCS Soil Duplicate	65.3
061097TPHS-4	MS05041128	Matrix Spike	69.7
061097TPHS-5	MD05041128	Matrix Spike Dupli	64.5
--	05041128	MW3-11	72.5

Notes:
*: Indicates values outside of acceptability limits. See Nonconformance Summary.
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020A Units:ug/L	QC Batch:053097GC4-1			
Benzene	20.0	18.4	92.0	77-123%
Toluene	20.0	18.0	90.0	77.5-122.5%
Ethylbenzene	20.0	18.2	91.0	63-137%
Xylenes (Total)	60.0	54.4	90.7	85-115%
TPH as Gasoline	500.	475.	95.0	80-120%

Notes:
QC check source: Supelco #LA12389

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050411-04 MS ID:MS05041104 MSD ID:MD05041104
Analysis Date: 30-MAY-97 30-MAY-97 30-MAY-97

Units: ug/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Benzene	< 5.0 (0.000)	76.3	80.3	59.5	78.0	62.9	78.3	0.400	22.6	61.1-125.9
Toluene	< 5.0 (0.000)	76.3	80.3	58.0	76.0	60.8	75.7	0.400	27.5	59.8-124.6
Ethylbenzene	< 5.0 (0.000)	76.3	80.3	57.7	75.6	60.4	75.2	0.500	26.4	57.5-138
Xylenes (Total)	< 5.0 (0.000)	229.	241.	171.	74.7	179.	74.3	0.500	26.7	54.3-137
TPH as Gasoline	< 1000(23.1)	553.	562.	769.	135	807.	139	2.90	40	60-140

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.

Chain of Custody Record

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

Chevron Facility Number ~~6395.01~~ 9-9708
Facility Address 5910 MacArthur Blvd, Oakland
Consultant Project Number 6395.01
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Barbara Sieminski
(Phone) 510 551-7555 (Fax Number) 510 551-7888

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-9136
Laboratory Name GTEL
Laboratory Release Number 9064504, ZZ02760
Samples Collected by (Name) Barbara Sieminski
Collection Date 05/22/97
Signature [signature]

DO NOT BILL TB-LB ANALYSES

AMENDED C of C

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8015) (8020)	TPH Diesel (8015)	Oil and Grease (5520) E+F	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					Remarks
MW3-6	W7-05-0411	1	S	D	9:45		Yes													
MW3-11		1			9:50			X	(X)	X	X			X	X					5-DAY TURN
MW3-16		1			10:00			X		(X)										
MW3-21		1			10:05			X												
MW3-26		1			10:40															
MW3-31		1			10:55			X												
MW2-6		1			12:00															
MW2-11		1			12:10			X												
MW2-15.5		1			12:15			X												
MW2-16		1			12:15			X												
MW2-21		1			13:05			X												
MW2-26		1			13:15															
MW2-31		1			13:30			X												
MW2-36		1			13:50															

AMENDED COC - QA
6/4/97 - Per Conversation w/ J. Ward
Perform circled analysis -
(TPH Diesel - MW3-11)
(5520F - MW3-16)

Above comments w/ Tom W. GTEL 5/27/97 4:30 passed on analysis.

AMENDED COC

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time	Turn Around Time (Circle Choice)
						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
						As Contracted

COC-3.DWG/03 01/90

Fax copy of Lab Report and COC to Chevron Contact. Chain of Custody Record

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

Chevron Facility Number 6395.01 9-9708
Facility Address 5910 MacArthur Blvd, Oakland
Consultant Project Number 6395.01
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Barbara Sieminski
(Phone) 510 551-7555 (Fax Number) 510 551-7888

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-9136
Laboratory Name GTEL
Laboratory Release Number 9064504, ZZ02760
Samples Collected by (Name) Barbara Sieminski
Collection Date 05/22/97
Signature B Sieminski

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX w/MTBE (8020) (8015)	TPH Diesel (8015)	Oil and Grease (5520) E&F	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)					DO NOT BILL TB-LB ANALYSI Remarks
MW3-6	01	1	S	D	9:45		Yes										HOLD			* 5 DAY TAT on ID# MW3-11 Analysis For 5520 includes Silica gel clean-up. Contracted TAT on all other Analysis
* MW3-11	02	1			9:50			X		X	X			X	X					
MW3-16	03	1			10:00			X												
MW3-21	04	1			10:05			X												
MW3-26	05	1			10:40												HOLD			
MW3-31	06	1			10:55			X												
MW2-16	07	1			12:00												HOLD			
MW2-11	08	1			12:10			X												
MW2-15.5	09	1			12:15			X												
MW2-16	10	1			12:15			X												
MW2-21	11	1			13:05			X												
MW2-26	12	1			13:15												HOLD			
MW2-31	13	1			13:30			X												
MW2-36	14	1	↓	↓	13:50		↓										HOLD			

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Barbara Sieminski	G-R	05/27/97 10:30		Nei/GTEL	5-27-97
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	Nei/GTEL	5/27/97 16:30			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					5/27/97 0845

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

COC-3.DWG/03 P1/HCH

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

Chevron Facility Number 6395.01 9-9708
Facility Address 5910 MacArthur Blvd, Oakland
Consultant Project Number 6395.01
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Barbara Sieminski
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-9136
Laboratory Name GTEL
Laboratory Release Number 9064504, ZZ0276
Samples Collected by (Name) Barbara Sieminski
Collection Date 05/22-23/97
Signature B Sieminski

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil W = Water A = Air C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)						Remarks
MW2-41	15	1	S	D	14:10		Yes	X													
MW1-6	16	1			15:10											HOLD					
MW1-11	17	1			15:25			X													
MW1-15,5	18	1			15:35			X													
MW1-16	19	1			15:35			X													
MW1-21	20	1			15:45			X													
MW1-25	21	1			15:55											HOLD					
MW1-31	22	1			16:10			X													
MW1-36	23	1			16:20											HOLD					
MW1-41	24	1			16:40			X													
MW3-35,5	25	1			11:30											HOLD					Samples collected on 05/23/97
MW3-41	26	1	↓	↓	11:45		↓	X													

DO NOT BILL TB-LB ANALYS

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Barbara Sieminski	G-R	05/27/97	Dale Weber	Nei/GTEL	5-27-97 10:30
Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Dale Weber	Nei/GTEL	5/27/97 16:30			
Relinquished By (Signature)	Organization	Date/Time	Received For Laboratory By (Signature)		Date/Time
					5/27/97 0845

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

COC-3.DWG/03 97/HCH

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Solids

Method Blank Results

QC Batch No: 061097TPHS-1
Date Analyzed: 11-JUN-97

Analyte	Method:GC	Concentration: mg/kg
Diesel Range Organics	< 10.0	

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID: W7050411-28			MS ID: MS05041128		MSD ID: MD05041128				
Analysis Date: 11-JUN-97			11-JUN-97		11-JUN-97				
Units: ug/ml	Sample	Spikes Added	MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Diesel Range Organics	14.7 (14.7)	65.7 65.2	88.8	113	46.4	47.1	82.3*	29.2	34.3-121

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

Acceptability limits are derived from statistical analysis of laboratory samples.

061097TPHS-4: This value differs from the reported diesel value due to the inclusion of all the material in the diesel range.

061097TPHS-4: :Sample spike duplicate RPD is outside of acceptability limits due to sample inhomogeneity. Blank spike RPD is within acceptability limits. therefore demonstrating method precision.

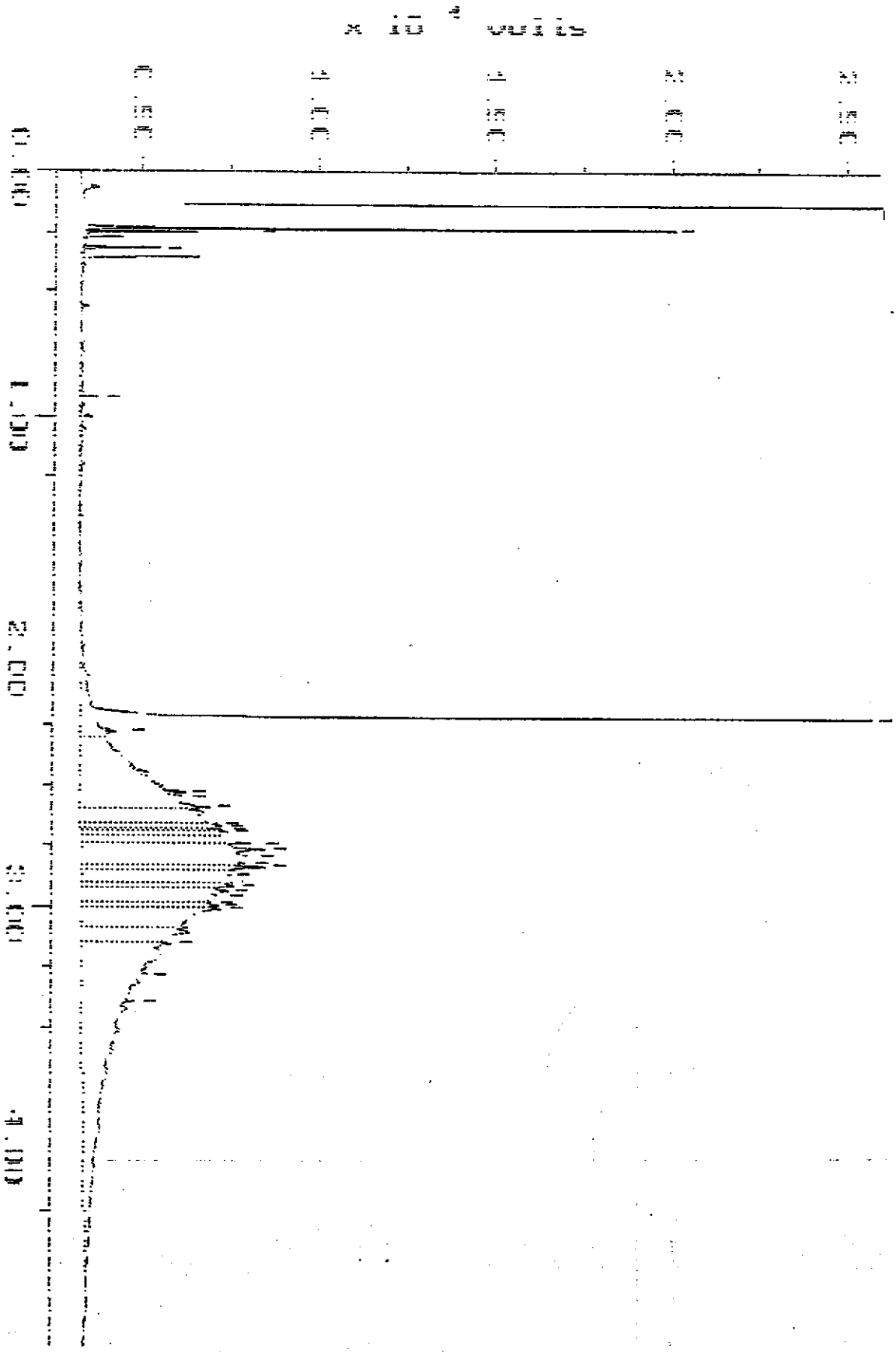
NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
GC Units: mg/kg	QC Batch:061097TPHS-3							
Diesel Range Organics	66.7	47.5	71.4	55.5	84.5	16.8	30.4	39.8-115%

Notes:
Acceptability limits are derived from statistical analysis of laboratory samples.

Sample: 05041128 Channel: GC13A-S1G A Filename: AD021284
Acquired: 11-JUN-97 16:32 Method: d:\GCDATA\GC13\TPHACQU Operator: MAC
Amount: 30.100



ANALYTICAL RESULTS
Metals

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 6010A
Matrix: Solids

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	05/29/97			
Date Analyzed	06/02/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Cadmium	2.0	mg/kg	< 2.0	--	--	--
Chromium	3.0	mg/kg	46.	--	--	--
Lead	7.0	mg/kg	11.	--	--	--
Nickel	4.0	mg/kg	120	--	--	--
Zinc	2.0	mg/kg	110	--	--	--
Percent Solids	--	%	81.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 6010A:

Digestion by EPA Method 3050A. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 2.

W7050411-02:

The recovery limits were exceeded for ZINC in the matrix spike due to sample matrix interferences.

Project Number: 6395.01
Project Name: Chevron #9-9708
5910 MacArthur Blvd.
Oakland, CA
Work Order Number: W7-05-0411
Date Reported: 06-10-97

QA NONCONFORMANCE SUMMARY

1.0 Sample Handling

1.1 Sample handling and holding time criteria were not met for zero samples.

2.0 Initial Calibration Verification

2.1 The validity for the calibration verification was exceeded for zero samples as shown in Table 2.

3.0 Method Blanks

3.1 Zero target elements were found in the method blank as shown in Table 3.

4.0 Matrix Spike (MS) Accuracy

4.1 The recovery limits were exceeded in the matrix and matrix spike duplicate for one element as shown in Tables 4A and 4B.

4.2 The recovery limits were exceeded for zinc in the matrix spike due to matrix interferences.

5.0 Sample Duplicate Precision

5.1 The maximum percent difference (RPD) was exceeded for zero elements in the matrix spike and matrix spike duplicate samples as shown in Tables 4A and 4B.

6.0 Laboratory Control Sample

6.1 The recovery limits were not met for zero elements for the laboratory control samples as shown in Table 5.

Project Number: 6395.01
Project Name: Chevron #9-9708
5910 MacArthur Blvd.
Oakland, CA
Work Order Number: W7-05-0411
Date Reported: 06-10-97

Table 2
INITIAL CALIBRATION VERIFICATION QC CHECK SAMPLE REPORT
Metals in Soil

Analyte	Expected Result, mg/L	Observed Result, mg/L	Recovery, %	Acceptability Limits, %[a]
Cadmium	1.00	1.01	101	90-110
Chromium	1.00	1.01	101	90-110
Lead	1.00	1.03	103	90-110
Nickel	1.00	1.02	102	90-110
Zinc	1.00	1.01	101	90-110

a Acceptability limits as per EPA Contract Laboratory Program

Table 3
BLANK REPORT
Metals in Soil

Analyte	Initial Calibration Blank, mg/L	Preparation Blank, mg/Kg
Cadmium	<0.020	<2.00
Chromium	<0.030	<3.00
Lead	<0.070	<7.00
Nickel	<0.040	<4.00
Zinc	<0.020	<2.00

<# Not detected at the indicated detection limit (#)

Project Number: 6395.01
Project Name: Chevron #9-9708
5910 MacArthur Blvd.
Oakland, CA
Work Order Number: W7-05-0411
Date Reported: 06-10-97

Table 4A
MATRIX SPIKE AND MATRIX SPIKE DUPLICATE SUMMARY
Metals in Soil

Sample Spiked: W7050411-02

Analyte	Spike Added, mg/Kg	Sample Concentration, mg/Kg	MS Concentration, mg/Kg	MS Percent Recovery	Acceptability Limits, %[a]
Cadmium	84.2	<2.00	79.1	93.8	80-120
Chromium	167	46.0	201	92.8	80-120
Lead	167	10.7	171	89.6	80-120
Nickel	167	122	271	89.5	75-125
Zinc	167	106	234	76.4[b]	80-120

a Acceptability limits as per EPA Contract Laboratory Program.

b Value is outside of acceptability limits.

NA Not applicable; sample result greater than four times spike amount.

Table 4B

MATRIX SPIKE AND MATRIX SPIKE DUPLICATE SUMMARY
Metals in Soil

Analyte	Spike Added, mg/Kg	MSD Concentration, mg/Kg	MSD Percent Recovery	RPD %	Acceptability Limits, %[a]	
					RPD	% Recovery
Cadmium	90.2	87.7	97.2	3.56	20.0	80-120
Chromium	179	227	101	8.46	20.0	80-120
Lead	179	191	101	12.0	20.0	80-120
Nickel	179	303	101	12.0	20.0	75-125
Zinc	179	262	87.2	13.2	20.0	80-120

a Acceptability limits as per EPA Contract Laboratory Program.

NA Not applicable; sample result greater than four times spike amount.

Project Number: 6395.01
Project Name: Chevron #9-9708
5910 MacArthur Blvd.
Oakland, CA
Work Order Number: W7-05-0411
Date Reported: 06-10-97

Table 5

LABORATORY CONTROL SAMPLE RESULTS
Metals in Soil

Analyte	Expected Result, mg/Kg	Observed Result, mg/Kg	Recovery, %	Acceptability Limits, %[a]
Cadmium	101	93.3	92.4	80-120
Chromium	200	190	95.2	80-120
Lead	200	188	93.8	80-120
Nickel	200	190	94.8	75-125
Zinc	200	187	93.3	80-120

a Acceptability limits established by laboratory practice

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: SM 5520F
Matrix: Solids

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	06/02/97			
Date Analyzed	06/03/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Total Petroleum Hydrocarbons	10	mg/kg	170	--	--	--
Percent Solids	--	%	81.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

SM 5520F:

This method is equivalent to method 5520CF, Standard Methods For The Examination Of Wastewater, 18th edition, 1992. "Methods for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, USEPA EMSL, Cincinnati, OH, Revised, March 1983.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Semivolatile Organics
Project ID (number): 6395.01 Method: EPA 8270B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	--	--
Surrogate Recovery	--	X	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	X	--
Blank Contamination	--	X	--

Comments:

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: SM 5520F
Matrix: Solids

NEI/GTEL Sample Number	W7050411-29	--	--	--
Client ID	MW3-16	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	06/05/97			
Date Analyzed	06/05/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Total Petroleum Hydrocarbons	10	mg/kg	1000	--	--	--
Percent Solids	--	%	92.1	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

SM 5520F:

This method is equivalent to method 5520CF, Standard Methods For The Examination Of Wastewater, 18th edition, 1992. "Methods for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, USEPA EMSL, Cincinnati, OH, Revised, March 1983.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons
Method: SM 5520F
Matrix: Solids

Method Blank Results

QC Batch No: 060597IRSA-1
Date Analyzed: 05-JUN-97

Analyte	Method: SM 5520F	Concentration: mg/kg
Total Petroleum Hydrocarbons	5.40*	

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
SM 5520F Units:mg/L	QC Batch:060597IRSA-6			
Total Petroleum Hydrocarbons	5.00	5.10	102.	90-110%

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons
Method: SM 5520F
Matrix: Solids

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050411-29 MS ID:MS05041129 MSD ID:MD05041129
Analysis Date: 05-JUN-97 05-JUN-97 05-JUN-97

Units: mg/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Total Petroleum Hydrocarbons	1000 (1020)	150.	150.	3030	1340*	1670	433 *	102.*	50	42-141

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

The spike recovery data may not be representative of the accuracy of the method or demonstrate true matrix interferences due to the ratio of background to spike amount.

The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

060597IRSA-4: Sample spike recovery is outside of acceptability limits due to high sample concentration. Blank spike recovery is within acceptability limits. therefore demonstrating method accuracy.

060597IRSA-5: Sample duplicate spike recovery and RPD are outside of acceptability limits due to high sample concentration. Blank spike recovery and RPD are within acceptability limits. therefore demonstrating method accuracy and precision.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
SM 5520F Units:mg/L	QC Batch:060297IRSA-6			
Total Petroleum Hydrocarbons	5.00	4.96	99.2	90-110%

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Method Blank Results

QC Batch No: 060297IRSA-1
Date Analyzed: 03-JUN-97

Analyte	Method:SM 5520F	Concentration: mg/kg
Total Petroleum Hydrocarbons	< 10.0	

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050431-05 MS ID:MS05043105 MSD ID:MD05043105
Analysis Date: 03-JUN-97 03-JUN-97 03-JUN-97

Units: mg/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Total Petroleum Hydrocarbons	< 10. (9.03)	160.	150.	169.	107.	154.	96.6	10.2	50	42-141

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons
Method: SM 5520F
Matrix: Solids

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
SM 5520F Units: mg/kg QC Batch:060297IRSA-3								
Total Petroleum Hydrocarbons	150.	152.	101.	151.	101.	0.00	50	42-141%

Notes:
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	X	--
Surrogate Recovery	--	--	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	X	--
Blank Contamination	--	X	--

Comments:

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Solids

NEI/GTEL Sample Number	W7050411-08	--	--	--
Client ID	MW2-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Analyzed	05/30/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
MTBE	1.0	mg/kg	< 1.0	--	--	--
Benzene	0.05	mg/kg	< 0.05	--	--	--
Toluene	0.10	mg/kg	0.16	--	--	--
Ethylbenzene	0.10	mg/kg	0.27	--	--	--
Xylenes (total)	0.20	mg/kg	0.58	--	--	--
BTEX (total)	--	mg/kg	1.0	--	--	--
TPH as Gasoline	10.	mg/kg	140	--	--	--
Percent Solids	--	%	76.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7050411-08:

Methanol extraction necessary due to high levels of target or non-target analytes.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-02	W7050411-03	W7050411-04	W7050411-06
Client ID	MW3-11	MW3-16	MW3-21	MW3-31
Date Sampled	05/22/97	05/22/97	05/22/97	05/22/97
Date Analyzed	05/30/97	05/30/97	05/30/97	05/30/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
MTBE	10.	ug/kg	< 10.	< 10.	< 10.	< 10.
Benzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Xylenes (total)	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
BTEX (total)	--	ug/kg	--	--	--	--
TPH as Gasoline	1000	ug/kg	< 1000	< 1000	< 1000	< 1000
Percent Solids	--	%	81.4	92.1	77.9	84.1

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-09	W7050411-10	W7050411-11	W7050411-13
Client ID	MW2-15.5	MW2-16	MW2-21	MW2-31
Date Sampled	05/22/97	05/22/97	05/22/97	05/22/97
Date Analyzed	05/30/97	05/31/97	05/30/97	05/30/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
MTBE	10.	ug/kg	680	1300	< 10.	< 10.
Benzene	5.0	ug/kg	< 5.0	< 14.	< 5.0	< 5.0
Toluene	5.0	ug/kg	< 5.0	< 14.	< 5.0	< 5.0
Ethylbenzene	5.0	ug/kg	< 5.0	< 14.	< 5.0	< 5.0
Xylenes (total)	5.0	ug/kg	< 5.0	< 14.	< 5.0	< 5.0
BTEX (total)	--	ug/kg	--	--	--	--
TPH as Gasoline	1000	ug/kg	< 1000	< 2800	< 1000	< 1000
Percent Solids	--	%	85.6	77.5	83.8	91.3

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7050411-10:

The < value exceeds the reporting limit as a reduced sample amount was necessary for analysis to overcome matrix interferences.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-15	W7050411-17	W7050411-18	W7050411-19
Client ID	MW2-41	MW1-11	MW1-15.5	MW1-16
Date Sampled	05/22/97	05/22/97	05/22/97	05/22/97
Date Analyzed	05/30/97	05/30/97	05/30/97	05/30/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
MTBE	10.	ug/kg	< 10.	< 21.	15.	< 10.
Benzene	5.0	ug/kg	< 5.0	6.2	27.	< 5.0
Toluene	5.0	ug/kg	< 5.0	14.	< 5.0	< 5.0
Ethylbenzene	5.0	ug/kg	< 5.0	< 11.	32.	< 5.0
Xylenes (total)	5.0	ug/kg	< 5.0	< 11.	74.	< 5.0
BTEX (total)	--	ug/kg	--	20.	130	--
TPH as Gasoline	1000	ug/kg	< 1000	7100	1600	< 1000
Percent Solids	--	%	82.3	85.8	86.2	86.0

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7050411-17:

The < value exceeds the reporting limit as a reduced sample amount was necessary for analysis to overcome matrix interferences.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-20	W7050411-22	W7050411-24	W7050411-26
Client ID	MW1-21	MW1-31	MW1-41	MW3-41
Date Sampled	05/22/97	05/22/97	05/22/97	05/23/97
Date Analyzed	05/30/97	05/30/97	05/30/97	05/30/97
Dilution Factor	1.00	1.00	1.00	1.00

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
MTBE	10.	ug/kg	< 10.	< 10.	< 10.	< 10.
Benzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Toluene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Ethylbenzene	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
Xylenes (total)	5.0	ug/kg	< 5.0	< 5.0	< 5.0	< 5.0
BTEX (total)	--	ug/kg	--	--	--	--
TPH as Gasoline	1000	ug/kg	< 1000	< 1000	< 1000	< 1000
Percent Solids	--	%	81.6	80.8	88.2	90.1

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	--	--	--
Blank Contamination	X	--	--

Comments:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Solids

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020A		Acceptability Limits:	43-136%
053097GC14-1	CV0530972014	Calibration Verifi	104.
053097GC14-10	LS05309714	Laboratory control	106.
053097GC14-11	LSD05309714	LCS Soil Duplicate	105.
053097GC14-9	BS05309714	Method Blank Soil	99.2
--	05041108	MW2-11	98.4

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Method Blank Results

QC Batch No: 053097GC14-9
Date Analyzed: 30-MAY-97

Analyte	Method:EPA 8020A Concentration: mg/kg
MTBE	< 1.00
Benzene	< 0.0500
Toluene	< 0.100
Ethylbenzene	< 0.100
Xylenes (Total)	< 0.200
TPH as Gasoline	< 10.0

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020A Units:ug/L	QC Batch:053097GC14-1			
Benzene	20.0	18.5	92.5	77-123%
Toluene	20.0	20.7	104.	77.5-122.5%
Ethylbenzene	20.0	17.9	89.5	63-137%
Xylenes (Total)	60.0	59.5	99.2	85-115%
TPH as Gasoline	500.	590.	118.	80-120%

Notes:
QC check source: Supelco #LA12389

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Solids

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8020A **Units: mg/kg**		**QC Batch:053097GC14-11**						
Benzene	5.00	4.10	82.0	4.20	84.0	2.41	28.3	39-150%
Toluene	5.00	4.77	95.4	4.89	97.8	2.48	30	46-148%
Ethylbenzene	5.00	4.34	86.8	4.46	89.2	2.73	30	32-160%
Xylenes (Total)	15.0	13.5	90.0	13.7	91.3	1.43	30	41-155%

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020A		Acceptability Limits:	43-136%
053097GC4-1	CV053097204	Calibration Verifi	73.9
053097GC4-3	BL0530974	Method blanks low	75.2
053097GC4-6	MS05041104	Matrix Spike	69.2
053097GC4-7	MD05041104	Matrix Spike Dupli	68.5
--	05041102	MW3-11	69.0
--	05041103	MW3-16	65.5
--	05041104	MW3-21	70.4
--	05041106	MW3-31	70.5
--	05041109	MW2-15.5	71.6
--	05041110	MW2-16	70.8
--	05041111	MW2-21	66.9
--	05041113	MW2-31	65.3
--	05041115	MW2-41	71.0
--	05041117	MW1-11	77.2
--	05041118	MW1-15.5	91.1
--	05041119	MW1-16	70.6
--	05041120	MW1-21	71.9
--	05041122	MW1-31	69.8
--	05041124	MW1-41	72.3
--	05041126	MW3-41	79.7

Notes:
*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Method Blank Results

QC Batch No: 053097GC4-3
Date Analyzed: 30-MAY-97

Analyte	Method: EPA 8020A Concentration: ug/kg
MTBE	< 10.0
Benzene	< 1.00
Toluene	< 2.00
Ethylbenzene	< 2.00
Xylenes (Total)	< 4.00
TPH as Gasoline	< 100.

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons
Method: SM 5520F
Matrix: Solids

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	X	--
Surrogate Recovery	--	--	NA
Holding Time	--	X	--
Method Accuracy	--	*	--
Method Precision	--	*	--
Blank Contamination	--	*	--

Comments:
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
SM 5520F Units: mg/kg		QC Batch:060597IRSA-3						
Total Petroleum Hydrocarbons	150.	129.	86.0	142.	94.7	9.63	50	42-141%

Notes:
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

ANALYTICAL RESULTS
Semivolatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8270B
Matrix: Aqueous

NEI/GTEL Sample Number	W7060090-02	--	--	--
Client ID	MW-3	--	--	--
Date Sampled	06/04/97	--	--	--
Date Prepared	06/10/97			
Date Analyzed	06/12/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
Phenol	10.	ug/L	< 10.	--	--	--
bis(2-Chloroethyl) ether	10.	ug/L	< 10.	--	--	--
2-Chlorophenol	10.	ug/L	< 10.	--	--	--
1,3-Dichlorobenzene	10.	ug/L	< 10.	--	--	--
1,4-Dichlorobenzene	10.	ug/L	< 10.	--	--	--
Benzyl alcohol	20.	ug/L	< 20.	--	--	--
1,2-Dichlorobenzene	10.	ug/L	< 10.	--	--	--
2-Methylphenol	10.	ug/L	< 10.	--	--	--
bis(2-Chloroisopropyl) ether	10.	ug/L	< 10.	--	--	--
4-Methylphenol	10.	ug/L	< 10.	--	--	--
N-Nitrosodi-n-propylamine	10.	ug/L	< 10.	--	--	--
Hexachloroethane	10.	ug/L	< 10.	--	--	--
Nitrobenzene	10.	ug/L	< 10.	--	--	--
Isophorone	10.	ug/L	< 10.	--	--	--
2-Nitrophenol	10.	ug/L	< 10.	--	--	--
2,4-Dimethylphenol	10.	ug/L	< 10.	--	--	--
Benzoic acid	50.	ug/L	< 50.	--	--	--
bis(2-Chloroethoxy)methane	10.	ug/L	< 10.	--	--	--
2,4-Dichlorophenol	10.	ug/L	< 10.	--	--	--
1,2,4-Trichlorobenzene	10.	ug/L	< 10.	--	--	--
Naphthalene	10.	ug/L	< 10.	--	--	--
4-Chloroaniline	20.	ug/L	< 20.	--	--	--
Hexachlorobutadiene	10.	ug/L	< 10.	--	--	--
4-Chloro-3-methylphenol	10.	ug/L	< 10.	--	--	--
2-Methylnaphthalene	10.	ug/L	< 10.	--	--	--
Hexachlorocyclopentadiene	10.	ug/L	< 20.	--	--	--
2,4,6-Trichlorophenol	10.	ug/L	< 10.	--	--	--
2,4,5-Trichlorophenol	10.	ug/L	< 10.	--	--	--
2-Chloronaphthalene	10.	ug/L	< 10.	--	--	--
2-Nitroaniline	50.	ug/L	< 50.	--	--	--
Dimethyl phthalate	10.	ug/L	< 10.	--	--	--
Acenaphthylene	10.	ug/L	< 10.	--	--	--
2,6-Dinitrotoluene	10.	ug/L	< 10.	--	--	--
3-Nitroaniline	50.	ug/L	< 50.	--	--	--
Acenaphthene	10.	ug/L	< 10.	--	--	--
2,4-Dinitrophenol	50.	ug/L	< 50.	--	--	--
4-Nitrophenol	50.	ug/L	< 50.	--	--	--
Dibenzofuran	10.	ug/L	< 10.	--	--	--

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Total Petroleum Hydrocarbons By GC
Method: GC
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	--	--
Surrogate Recovery	--	X	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	X	--
Blank Contamination	--	X	--

Comments:
Acceptability limits are derived from statistical analysis of laboratory samples.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons By GC

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

NEI/GTEL Sample Number	W7060090-02	--	--	--
Client ID	MW-3	--	--	--
Date Sampled	06/04/97	--	--	--
Date Prepared	06/09/97			
Date Analyzed	06/10/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
TPH as Diesel	50	ug/L	1200	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

GC:

Extraction by EPA Method 3510 (liquid/liquid). ASTM Method D3328(modified) is used for qualitative identification of fuel patterns. The method has been modified to include quantitation by applying calibration and quality assurance guidelines outlined in "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update 1. This method is equivalent to the California LUFT manual DHS method for diesel fuel.

W7060090-02:

The material present is qualitatively uncertain. Therefore, all material in the C9 to C22 range was quantitated against diesel fuel without respect to pattern. Chromatographic data indicates the presence of material, which is heavier than diesel fuel, in this sample.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Volatile Organics
Method: EPA 8020A
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

ANALYTICAL RESULTS
Semivolatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8270B
Matrix: Solids

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	05/30/97			
Date Analyzed	06/04/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Phenol	330	ug/kg	< 330	--	--	--
bis(2-Chloroethyl) ether	330	ug/kg	< 330	--	--	--
2-Chlorophenol	330	ug/kg	< 330	--	--	--
1,3-Dichlorobenzene	330	ug/kg	< 330	--	--	--
1,4-Dichlorobenzene	330	ug/kg	< 330	--	--	--
Benzyl alcohol	670	ug/kg	< 670	--	--	--
1,2-Dichlorobenzene	330	ug/kg	< 330	--	--	--
2-Methylphenol	330	ug/kg	< 330	--	--	--
bis(2-Chloroisopropyl) ether	330	ug/kg	< 330	--	--	--
4-Methylphenol	330	ug/kg	< 330	--	--	--
N-Nitrosodi-n-propylamine	330	ug/kg	< 330	--	--	--
Hexachloroethane	330	ug/kg	< 330	--	--	--
Nitrobenzene	330	ug/kg	< 330	--	--	--
Isophorone	330	ug/kg	< 330	--	--	--
2-Nitrophenol	330	ug/kg	< 330	--	--	--
2,4-Dimethylphenol	330	ug/kg	< 330	--	--	--
Benzoic acid	1700	ug/kg	< 1700	--	--	--
bis(2-Chloroethoxy)methane	330	ug/kg	< 330	--	--	--
2,4-Dichlorophenol	330	ug/kg	< 330	--	--	--
1,2,4-Trichlorobenzene	330	ug/kg	< 330	--	--	--
Naphthalene	330	ug/kg	< 330	--	--	--
4-Chloroaniline	330	ug/kg	< 330	--	--	--
Hexachlorobutadiene	330	ug/kg	< 330	--	--	--
4-Chloro-3-methylphenol	330	ug/kg	< 330	--	--	--
2-Methylnaphthalene	330	ug/kg	< 330	--	--	--
Hexachlorocyclopentadiene	330	ug/kg	< 330	--	--	--
2,4,6-Trichlorophenol	330	ug/kg	< 330	--	--	--
2,4,5-Trichlorophenol	330	ug/kg	< 330	--	--	--
2-Chloronaphthalene	330	ug/kg	< 330	--	--	--
2-Nitroaniline	1700	ug/kg	< 1700	--	--	--
Dimethyl phthalate	330	ug/kg	< 330	--	--	--
Acenaphthylene	330	ug/kg	< 330	--	--	--
2,6-Dinitrotoluene	330	ug/kg	< 330	--	--	--
3-Nitroaniline	1700	ug/kg	< 1700	--	--	--
Acenaphthene	330	ug/kg	< 330	--	--	--
2,4-Dinitrophenol	1700	ug/kg	< 1700	--	--	--
4-Nitrophenol	1700	ug/kg	< 1700	--	--	--
Dibenzofuran	330	ug/kg	< 330	--	--	--

ANALYTICAL RESULTS
Semivolatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01 Method: EPA 8270B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Prepared	05/30/97			
Date Analyzed	06/04/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
2,4-Dinitrotoluene	330	ug/kg	< 330	--	--	--
Diethyl phthalate	330	ug/kg	< 330	--	--	--
4-Chlorophenyl phenyl ether	330	ug/kg	< 330	--	--	--
Fluorene	330	ug/kg	< 330	--	--	--
4-Nitroaniline	1700	ug/kg	< 1700	--	--	--
4,6-Dinitro-2-methylphenol	1700	ug/kg	< 1700	--	--	--
N-Nitrosodiphenylamine	330	ug/kg	< 330	--	--	--
4-Bromophenyl phenyl ether	330	ug/kg	< 330	--	--	--
Hexachlorobenzene	330	ug/kg	< 330	--	--	--
Pentachlorophenol	1700	ug/kg	< 1700	--	--	--
Phenanthrene	330	ug/kg	< 330	--	--	--
Anthracene	330	ug/kg	< 330	--	--	--
Carbazole	330	ug/kg	< 330	--	--	--
Di-n-butyl phthalate	330	ug/kg	< 330	--	--	--
Fluoranthene	330	ug/kg	< 330	--	--	--
Pyrene	330	ug/kg	< 330	--	--	--
Butyl benzyl phthalate	330	ug/kg	< 330	--	--	--
3,3'-Dichlorobenzidine	670	ug/kg	< 670	--	--	--
Benzo(a)anthracene	330	ug/kg	< 330	--	--	--
Chrysene	330	ug/kg	< 330	--	--	--
bis(2-Ethylhexyl) phthalate	330	ug/kg	< 330	--	--	--
Di-n-octyl phthalate	330	ug/kg	< 330	--	--	--
Benzo(b)fluoranthene	330	ug/kg	< 330	--	--	--
Benzo(k)fluoranthene	330	ug/kg	< 330	--	--	--
Benzo(a)pyrene	330	ug/kg	< 330	--	--	--
Indeno(1,2,3-cd)pyrene	330	ug/kg	< 330	--	--	--
Dibenz(a,h)anthracene	330	ug/kg	< 330	--	--	--
Benzo(g,h,i)perylene	330	ug/kg	< 330	--	--	--
Percent Solids	--	%	81.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8270B:

Extraction by EPA METHOD 3550 (sonication). "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including Update 2.

W7050411-02:

GC/MS Data indicates the presence of non-target compounds.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Semivolatile Organics
Project ID (number): 6395.01 Method: EPA 8270B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Method Blank Results

QC Batch No: 053097BNAS-1
Date Analyzed: 04-JUN-97

Analyte	Method:EPA 8270B Concentration: ug/kg
Phenol	< 330.
bis(2-Chloroethyl) ether	< 330.
2-Chlorophenol	< 330.
1,3-Dichlorobenzene	< 330.
1,4-Dichlorobenzene	< 330.
Benzyl alcohol	< 670.
1,2-Dichlorobenzene	< 330.
2-Methylphenol	< 330.
bis(2-Chloroisopropyl) ether	< 330.
4-Methylphenol	< 330.
N-Nitrosodi-n-propylamine	< 330.
Hexachloroethane	< 330.
Nitrobenzene	< 330.
Isophorone	< 330.
2-Nitrophenol	< 330.
2,4-Dimethylphenol	< 330.
Benzoic acid	< 1700
bis(2-Chlorethoxy)methane	< 330.
2,4-Dichlorophenol	< 330.
1,2,4-Trichlorobenzene	< 330.
Naphthalene	< 330.
4-Chloroaniline	< 670.
Hexachlorobutadiene	< 330.
4-Chloro-3-methylphenol	< 670.
2-Methylnaphthalene	< 330.
Hexachlorocyclopentadiene	< 330.
2,4,6-Trichlorophenol	< 330.
2,4,5-Trichlorophenol	< 330.
2-Chloronaphthalene	< 330.
2-Nitroaniline	< 1700
Dimethyl phthalate	< 330.
Acenaphthylene	< 330.
2,6-Dinitrotoluene	< 330.
3-Nitroaniline	< 1700
Acenaphthene	< 330.
2,4-Dinitrophenol	< 1700
4-Nitrophenol	< 1700
Dibenzofuran	< 330.
2,4-Dinitrotoluene	< 330.
Diethyl phthalate	< 330.
4-Chlorophenyl phenyl ether	< 330.
Fluorene	< 330.
4-Nitroaniline	< 1700
4,6-Dinitro-2-methylphenol	< 1700

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Solids

Method Blank Results

N-Nitrosodiphenylamine	< 330.
4-Bromophenyl phenyl ether	< 330.
Hexachlorobenzene	< 330.
Pentachlorophenol	< 1700
Phenanthrene	< 330.
Anthracene	< 330.
Carbazole	< 330.
Di-n-butyl phthalate	< 330.
Fluoranthene	< 330.
Pyrene	< 330.
Butyl benzyl phthalate	< 330.
3,3'-Dichlorobenzidine	< 670.
Benzo[a]anthracene	< 330.
Chrysene	< 330.
bis(2-Ethyl hexyl) phthalate	< 330.
Di-n-octyl phthalate	< 330.
Benzo[b]fluoranthene	< 330.
Benzo[k]fluoranthene	< 330.
Benzo[a]pyrene	< 330.
Indeno[1,2,3-cd]pyrene	< 330.
Dibenzo[a,h]anthracene	< 330.
Benzo[g,h,i]perylene	< 330.

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Solids

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050411-02 MS ID:MS05041102 MSD ID:MD05041102
Analysis Date: 04-JUN-97 04-JUN-97 04-JUN-97

Units: ug/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Phenol	< 330.(0.000)	6520	6480	5200	79.8	4630	71.5	11.0	35	26-90
2-Chlorophenol	< 330.(0.000)	6520	6480	4620	70.9	4090	63.1	11.6	50	25-102
1,4-Dichlorobenzene	< 330.(0.000)	3260	3240	2180	66.9	2000	61.7	8.10	27	28-104
N-Nitrosodi-n-propylamine	< 330.(0.000)	3260	3240	2360	72.4	2190	67.6	6.90	38	41-126
1,2,4-Trichlorobenzene	< 330.(0.000)	3260	3240	2490	76.4	2200	67.9	11.8	23	38-107
4-Chloro-3-methylphenol	< 330.(0.000)	6520	6480	5140	78.8	4660	71.9	9.20	33	26-103
Acenaphthene	< 330.(0.000)	3260	3240	2510	77.0	2360	72.8	5.60	19	31-137
4-Nitrophenol	< 1700(120.)	6520	6480	4950	74.1	5250	79.2	6.70	50	11-114
2,4-Dinitrotoluene	< 330.(0.000)	3260	3240	2360	72.4	2200	67.9	6.40	47	28-89
Pentachlorophenol	< 1700(0.000)	6520	6480	5370	82.4	5290	81.6	1.00	47	17-109
Pyrene	< 330.(42.9)	3260	3240	2660	80.3	2350	71.2	12.0	36	35-142

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements: Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Semivolatile Organics
Project ID (number): 6395.01 Method: EPA 8270B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8270B Units: ug/kg		QC Batch:053097BNAS-3						
Phenol	6670	5320	80.0	4990	76.1	5.00	35	26- 90%
2-Chlorophenol	6670	4790	72.0	4300	65.5	9.45	50	25-102%
1,4-Dichlorobenzene	3330	2370	71.2	2150	65.5	8.34	27	28-104%
N-Nitrosodi-n-propylamine	3330	2490	74.8	2320	70.7	5.64	38	41-126%
1,2,4-Trichlorobenzene	3330	2470	74.2	2240	68.3	8.28	23	38-107%
4-Chloro-3-methylphenol	6670	4960	74.6	4810	73.3	1.76	33	26-103%
Acenaphthene	3330	2540	76.3	2370	72.3	5.38	19	31-137%
4-Nitrophenol	6670	5070	76.2	4460	68.0	11.4	50	11-114%
2,4-Dinitrotoluene	3330	2430	73.0	2410	73.5	0.683	47	28- 89%
Pentachlorophenol	6670	5340	80.3	5200	79.3	1.25	47	17-109%
Pyrene	3330	2210	66.4	2140	65.2	1.82	36	35-142%

Notes:

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements: Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8240B
Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Analyzed	05/31/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Chloromethane	10.	ug/kg	< 10.	--	--	--
Bromomethane	10.	ug/kg	< 10.	--	--	--
Vinyl chloride	10.	ug/kg	< 10.	--	--	--
Chloroethane	10.	ug/kg	< 10.	--	--	--
Methylene chloride	10.	ug/kg	11.	--	--	--
Acetone	20.	ug/kg	< 20.	--	--	--
Carbon disulfide	5.0	ug/kg	< 5.0	--	--	--
1,1-Dichloroethene	5.0	ug/kg	< 5.0	--	--	--
1,1-Dichloroethane	5.0	ug/kg	< 5.0	--	--	--
cis-1,2-Dichloroethene	5.0	ug/kg	< 5.0	--	--	--
trans-1,2-Dichloroethene	5.0	ug/kg	< 5.0	--	--	--
Chloroform	5.0	ug/kg	< 5.0	--	--	--
1,2-Dichloroethane	5.0	ug/kg	< 5.0	--	--	--
2-Butanone	20.	ug/kg	< 20.	--	--	--
1,1,1-Trichloroethane	5.0	ug/kg	< 5.0	--	--	--
Carbon tetrachloride	5.0	ug/kg	< 5.0	--	--	--
Vinyl acetate	20.	ug/kg	< 20.	--	--	--
Bromodichloromethane	5.0	ug/kg	< 5.0	--	--	--
1,2-Dichloropropane	5.0	ug/kg	< 5.0	--	--	--
cis-1,3-Dichloropropene	5.0	ug/kg	< 5.0	--	--	--
Trichloroethene	5.0	ug/kg	< 5.0	--	--	--
Dibromochloromethane	5.0	ug/kg	< 5.0	--	--	--
1,1,2-Trichloroethane	5.0	ug/kg	< 5.0	--	--	--
Benzene	5.0	ug/kg	< 5.0	--	--	--
2-Chloroethylvinyl ether	10.	ug/kg	< 10.	--	--	--
trans-1,3-Dichloropropene	5.0	ug/kg	< 5.0	--	--	--
Bromoform	5.0	ug/kg	< 5.0	--	--	--
4-Methyl-2-pentanone	20.	ug/kg	< 20.	--	--	--
2-Hexanone	20.	ug/kg	< 20.	--	--	--
Tetrachloroethene	5.0	ug/kg	< 5.0	--	--	--
1,1,2,2-Tetrachloroethane	5.0	ug/kg	< 5.0	--	--	--
Toluene	5.0	ug/kg	< 5.0	--	--	--
Chlorobenzene	5.0	ug/kg	< 5.0	--	--	--
Ethylbenzene	5.0	ug/kg	< 5.0	--	--	--
Styrene	5.0	ug/kg	< 5.0	--	--	--
Xylenes (total)	5.0	ug/kg	< 5.0	--	--	--
1,2-Dichlorobenzene	10.	ug/kg	< 10.	--	--	--
1,3-Dichlorobenzene	10.	ug/kg	< 10.	--	--	--
1,4-Dichlorobenzene	10.	ug/kg	< 10.	--	--	--

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050411
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8240B
Matrix: Low Soil

NEI/GTEL Sample Number	W7050411-02	--	--	--
Client ID	MW3-11	--	--	--
Date Sampled	05/22/97	--	--	--
Date Analyzed	05/31/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Percent Solids	--	%	81.4	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8240B:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

W7050411-02:

Methylene chloride is a common laboratory contaminant.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8240B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Surrogate Results

QC Batch No.	Reference	Sample ID	DCA-D4	TOL-D8	4-BFB
Method: EPA 8240B		Acceptability Limits:	70-121%	81-117%	74-121%
053097JK-1	BL053097AFN1	Method blanks low	95.7	88.1	97.1
053097JK-2	LS053097AFN1	Laboratory control	102.	96.6	105.
053097JK-3	LSD053097FN1	LCS Soil Duplicate	98.7	96.4	103.
053097JK-4	MS05039305	Matrix Spike	104.	97.7	103.
053097JK-5	MD05039305	Matrix Spike Dupli	97.9	96.9	104.
--	05041102	MW3-11	97.3	88.0	90.1

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8240B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Method Blank Results

QC Batch No: 053097JK-1
Date Analyzed: 30-MAY-97

Analyte	Method: EPA 8240B Concentration: ug/kg
Chloromethane	< 10.0
Bromomethane	< 10.0
Vinyl chloride	< 10.0
Chloroethane	< 10.0
Methylene chloride	8.24*
Acetone	< 20.0
Carbon disulfide	< 5.00
1,1-Dichloroethene	< 5.00
1,1-Dichloroethane	< 5.00
cis-1,2-Dichloroethene	< 5.00
trans-1,2-Dichloroethene	< 5.00
Chloroform	< 5.00
1,2-Dichloroethane	< 5.00
2-Butanone	< 20.0
1,1,1-Trichloroethane	< 5.00
Carbon tetrachloride	< 5.00
Vinyl acetate	< 20.0
Bromodichloromethane	< 5.00
1,2-Dichloropropane	< 5.00
cis-1,3-Dichloropropene	< 5.00
Trichloroethene	< 5.00
Dibromochloromethane	< 5.00
1,1,2-Trichloroethane	< 5.00
Benzene	< 5.00
2-Chloroethyl vinyl ether	< 10.0
trans-1,3-Dichloropropene	< 5.00
Bromoform	< 5.00
4-Methyl-2-pentanone	< 20.0
2-Hexanone	< 20.0
Tetrachloroethene	< 5.00
1,1,2,2-Tetrachloroethane	< 5.00
Toluene	< 5.00
Chlorobenzene	< 5.00
Ethylbenzene	< 5.00
Styrene	< 5.00
Xylenes (Total)	< 5.00
1,2-Dichlorobenzene	< 10.0
1,3-Dichlorobenzene	< 10.0
1,4-Dichlorobenzene	< 10.0

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8240B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050393-05 MS ID:MS05039305 MSD ID:MD05039305
Analysis Date: 30-MAY-97 30-MAY-97 30-MAY-97

Units: ug/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
1,1-Dichloroethene	< 5.0 (0.000)	50.0	50.0	50.8	102.	46.9	93.8	8.40	24	59-172
Trichloroethene	< 5.0 (4.41)	50.0	50.0	56.8	105.	53.0	97.2	7.70	22	62-137
Benzene	< 5.0 (0.000)	50.0	50.0	54.3	109.	53.9	108.	0.900	21	66-142
Toluene	< 5.0 (0.114)	50.0	50.0	51.1	102.	52.3	104.	1.90	21	59-139
Chlorobenzene	< 5.0 (0.000)	50.0	50.0	52.2	104.	52.1	104.	0.00	21	60-133

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8240B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8240B Units: mg/kg		QC Batch: 053097JK-3						
1,1-Dichloroethene	50.0	49.0	98.0	47.3	94.6	3.53	22	59-172%
Trichloroethene	50.0	50.8	102.	50.4	101.	0.985	24	62-137%
Benzene	50.0	51.7	103.	52.3	105.	1.92	21	66-142%
Toluene	50.0	52.8	106.	52.2	104.	1.90	21	59-139%
Chlorobenzene	50.0	51.8	104.	52.4	105.	0.957	21	60-133%

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8240B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	*	--	--

Comments:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050411 Semivolatile Organics
Project ID (number): 6395.01 Method: EPA 8270B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Solids

Surrogate Results

QC Batch No.	Reference	Sample ID	2FP	PHL	NBZ	FBP	TBP	TPH
Method: EPA 8270B		Acceptability Limits:	25-121%	24-113%	23-120%	30-115%	19-122%	18-137%
053097BNAS-1	BS053097BNA	Method Blank Soil	72.4	79.9	70.0	58.2	74.8	74.7
053097BNAS-2	LS053097BNA	Laboratory control	79.3	77.3	74.8	66.6	92.4	82.1
053097BNAS-3	LSD053097BNA	LCS Soil Duplicate	86.4	80.5	78.7	70.2	93.3	82.5
053097BNAS-4	MS05041102	Matrix Spike	85.6	81.3	77.9	70.0	93.1	93.3
053097BNAS-5	MD05041102	Matrix Spike Dupli	76.3	75.1	70.7	62.6	85.6	85.7
--	05041102	MW3-11	76.6	81.1	73.9	67.3	84.5	94.4

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements: Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

NEI/GTEL
ENVIRONMENTAL LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

June 13, 1997

Barbara Sieminski
GETTLER-RYAN
6747 Sierra Ct.
Suite J
Dublin, CA 94568

RE: NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Dear Barbara Sieminski:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 06/06/97.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/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. This report is to be reproduced only in full.

NEI/GTEL is certified by the California Department of Health Service under Certification Number 2147.

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

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Justin Ward, Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Aqueous

	NEI/GTEL Sample Number	W7060090-01	W7060090-02	W7060090-03	W7060090-04
	Client ID	TBLB	MW-3	MW-1	MW-2
	Date Sampled		06/04/97	06/04/97	06/04/97
	Date Analyzed	06/12/97	06/12/97	06/12/97	06/12/97
	Dilution Factor	1.00	1.00	1.00	5.00
Analyte	Reporting Limit / Units	Concentration:			
MTBE	5.0 ug/L	< 5.0	< 5.0	85.	2100
Benzene	0.5 ug/L	< 0.5	< 0.5	58.	120
Toluene	0.5 ug/L	< 0.5	< 0.5	1.2	5.9
Ethylbenzene	0.5 ug/L	< 0.5	< 0.5	5.4	32.
Xylenes (total)	0.5 ug/L	< 0.5	< 0.5	40.	15.
BTEX (total)	-- ug/L	--	--	100	170
TPH as Gasoline	50 ug/L	< 50	< 50	380	1600

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. Analyte list modified to include additional compounds. "Test Methods for Evaluating Solid Waste. Physical/Chemical Methods". SW-846. Third Edition including promulgated Update II.

W7060090-03:

The TPH as Gasoline value was 460 ug/L which was attributed to the presence of MTBE.

W7060090-04:

The TPH as Gasoline value was 3600 ug/L which was attributed to the presence of MTBE.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	2FP	PHL	NBZ	FBP	TBP	TPH
Method: EPA 8270B		Acceptability Limits:	21-100%	10- 94%	35-114%	43-116%	10-123%	33-141%
061097625W-1	BW061097625	Method Blank Water	60.7	42.0	85.8	73.4	88.7	89.8
061097625W-2	LW061097625	Laboratory Control	59.6	42.0	85.0	76.2	106.	110.
061097625W-3	LWD061097625	LCS Water Duplicat	56.8	41.5	87.8	75.6	105.	109.
061097625W-4	MS06008802	Matrix Spike	73.2	58.2	88.1	77.0	121.	107.
061097625W-5	MD06008802	Matrix Spike Dupli	77.4	59.3	91.1	80.1	123.	106.
--	06009002	MW-3	44.1	38.6	63.8	63.3	110.	49.0

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements: Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Method Blank Results

QC Batch No: 061097625W-1
Date Analyzed: 12-JUN-97

Analyte	Method:EPA 8270B Concentration: ug/L
Phenol	< 10.0
bis(2-Chloroethyl) ether	< 10.0
2-Chlorophenol	< 10.0
1,3-Dichlorobenzene	< 10.0
1,4-Dichlorobenzene	< 10.0
Benzyl alcohol	< 20.0
1,2-Dichlorobenzene	< 10.0
2-Methylphenol	< 10.0
bis(2-Chloroisopropyl) ether	< 10.0
4-Methylphenol	< 10.0
N-Nitrosodi-n-propylamine	< 10.0
Hexachloroethane	< 10.0
Nitrobenzene	< 10.0
Isophorone	< 10.0
2-Nitrophenol	< 10.0
2,4-Dimethylphenol	< 10.0
Benzoic acid	< 50.0
bis(2-Chlorethoxy)methane	< 10.0
2,4-Dichlorophenol	< 10.0
1,2,4-Trichlorobenzene	< 10.0
Naphthalene	< 10.0
4-Chloroaniline	< 20.0
Hexachlorobutadiene	< 10.0
4-Chloro-3-methylphenol	< 20.0
2-Methylnaphthalene	< 10.0
Hexachlorocyclopentadiene	< 20.0
2,4,6-Trichlorophenol	< 10.0
2,4,5-Trichlorophenol	< 10.0
2-Chloronaphthalene	< 10.0
2-Nitroaniline	< 50.0
Dimethyl phthalate	< 10.0
Acenaphthylene	< 10.0
2,6-Dinitrotoluene	< 10.0
3-Nitroaniline	< 50.0
Acenaphthene	< 10.0
2,4-Dinitrophenol	< 50.0
4-Nitrophenol	< 50.0
Dibenzofuran	< 10.0
2,4-Dinitrotoluene	< 10.0
Diethyl phthalate	< 10.0
4-Chlorophenyl phenyl ether	< 10.0
Fluorene	< 10.0
4-Nitroaniline	< 50.0
4,6-Dinitro-2-methylphenol	< 50.0

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Method Blank Results

N-Nitrosodiphenylamine	< 10.0
4-Bromophenyl phenyl ether	< 10.0
Hexachlorobenzene	< 10.0
Pentachlorophenol	< 50.0
Phenanthrene	< 10.0
Anthracene	< 10.0
Di-n-butyl phthalate	< 10.0
Fluoranthene	< 10.0
Pyrene	< 10.0
Butyl benzyl phthalate	< 10.0
3,3'-Dichlorobenzidine	< 20.0
Benzo[a]anthracene	< 10.0
Chrysene	< 10.0
bis(2-Ethyl hexyl) phthalate	< 10.0
Di-n-octyl phthalate	< 10.0
Benzo[b]fluoranthene	< 10.0
Benzo[k]fluoranthene	< 10.0
Benzo[a]pyrene	< 10.0
Indeno[1,2,3-cd]pyrene	< 10.0
Dibenzo[a,h]anthracene	< 10.0
Benzo[g,h,i]perylene	< 10.0

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7060088-02 MS ID:MS06008802 MSD ID:MD06008802
Analysis Date: 12-JUN-97 12-JUN-97 12-JUN-97

Units: ug/L	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Phenol	< 10.0(0.000)	400.	400.	84.2	21.1	85.3	21.3	0.900	42	12-110
2-Chlorophenol	< 10.0(0.000)	400.	400.	138.	34.5	142.	35.5	2.90	40	27-123
1,4-Dichlorobenzene	< 10.0(0.000)	200.	200.	140.	70.0	134.	67.0	4.40	28	36-97
N-Nitrosodi-n-propylamine	< 10.0(0.000)	200.	200.	150.	75.0	161.	80.5	7.10	38	41-116
1,2,4-Trichlorobenzene	< 10.0(0.000)	200.	200.	152.	76.0	151.	75.5	0.700	28	39-98
4-Chloro-3-methylphenol	< 10.0(0.000)	400.	400.	140.	35.0	148.	37.0	5.60	42	23-97
Acenaphthene	< 10.0(0.000)	200.	200.	174.	87.0	179.	89.5	2.80	31	46-118
4-Nitrophenol	< 50.0(0.000)	400.	400.	90.4	22.6	87.9	22.0	2.70	50	10-80
2,4-Dinitrotoluene	< 10.0(0.000)	200.	200.	189.	94.5	190.	95.0	0.500	38	24-96
Pentachlorophenol	< 50.0(0.000)	400.	400.	112.	28.0	114.	28.5	1.80	50	9-103
Pyrene	< 10.0(0.000)	200.	200.	176.	88.0	179.	89.5	1.70	31	26-127

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements: Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

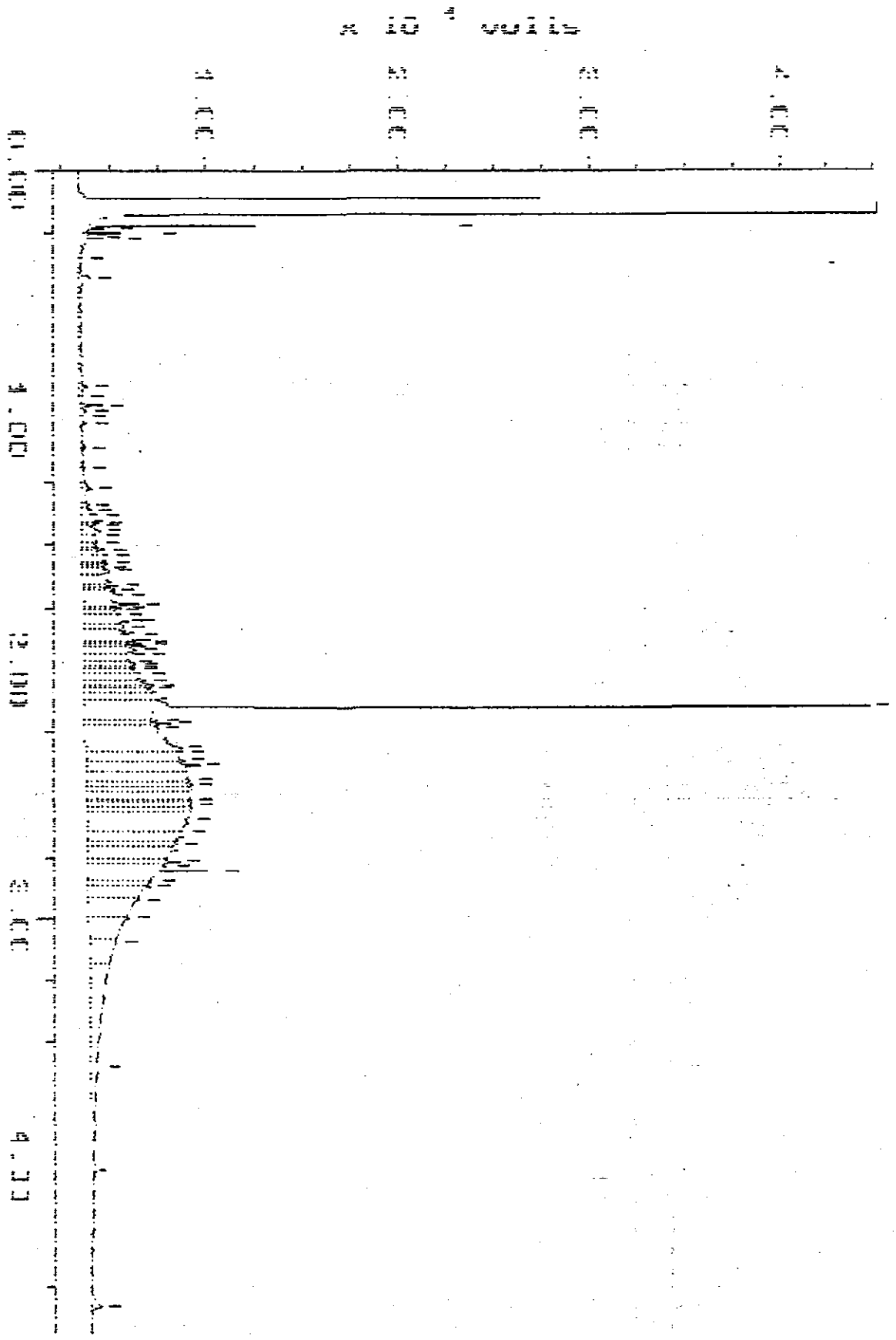
Matrix Spike(MS) Results

GTEL Sample ID:W7050459-04 MS ID:MS05045904
Analysis Date: 10-JUN-97 11-JUN-97

Units: ug/L Analyte	Sample Conc.	Spike Added	MS Conc.	MS % Rec.	Acceptability Limits %Rec.
Dichlorodifluoromethane	< 5.0 (0.000)	20.0	28.7	144.	40-160
Chloromethane	< 2.0 (0.000)	20.0	27.3	137.	10-193
Vinyl chloride	< 0.80(0.000)	20.0	28.3	142.	28-163
Bromomethane	< 1.2 (0.000)	20.0	32.4	162.*	10-144
Chloroethane	< 0.80(0.000)	20.0	28.5	143.*	46-137
Trichlorofluoromethane	< 0.50(0.000)	20.0	23.5	118.	21-156
1,1-Dichloroethene	< 0.50(0.0800)	20.0	30.3	151.	28-167
Methylene chloride	< 0.80(0.000)	20.0	20.2	101.	25-162
trans-1,2-Dichloroethene	< 0.50(0.000)	20.0	21.3	107.	38-155
1,1-Dichloroethane	< 0.50(0.000)	20.0	22.7	114.	47-132
cis-1,2-Dichloroethene	< 0.50(0.000)	20.0	22.5	113.	38-155
Chloroform	< 0.50(0.000)	20.0	23.9	120.	49-133
1,1,1-Trichloroethane	< 0.50(0.000)	20.0	23.3	117.	41-138
Carbon tetrachloride	< 0.50(0.000)	20.0	23.8	119.	43-143
1,2-Dichloroethane	< 0.50(0.000)	20.0	23.5	118.	51-147
Trichloroethene	2.8 (2.82)	20.0	30.8	140.	35-146
1,2-Dichloropropane	< 0.50(0.000)	20.0	23.1	116.	44-156
Bromodichloromethane	< 0.50(0.000)	20.0	27.3	137.	42-172
2-Chloroethyl vinyl ether	< 1.0 (0.000)	20.0	20.9	105.	14-186
cis-1,3-Dichloropropene	< 0.50(0.000)	20.0	20.7	104.	22-178
trans-1,3-Dichloropropene	< 0.50(0.000)	20.0	21.1	106.	22-178
1,1,2-Trichloroethane	< 0.50(0.000)	20.0	22.3	112.	39-136
Tetrachloroethene	< 0.50(0.000)	20.0	24.5	123.	26-162
Dibromochloromethane	< 0.50(0.000)	20.0	26.6	133.	24-191
Chlorobenzene	< 0.50(0.000)	20.0	29.9	150.	38-150
Bromoform	< 1.2 (0.000)	20.0	29.5	148.	13-159
1,1,2,2-Tetrachloroethane	< 0.50(0.000)	20.0	11.9	59.5	10-184
1,3-Dichlorobenzene	< 0.80(0.000)	20.0	22.6	113.	10-187
1,4-Dichlorobenzene	< 0.80(0.000)	20.0	21.4	107.	42-143
1,2-Dichlorobenzene	< 0.80(0.000)	20.0	19.7	98.5	10-208

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.
061097GC11-5: Matrix spike results were outside the acceptibility limits for Bromomethane and Chloroethane.
061097GC11-5: :As the analytes were not present in any of the analyzed samples and instrument sensitivity was sufficient for detection of the analyte at the reporting limit, the reported data is valid.

Sample: 06009002 Channel: GC13B-SIG B Filename: 13B21261
Acquired: 10-JUN-97 13:22 Method: A:\GCDATA\GC13\TPHACQUZ Operator: MAC
Amount: 1.000



ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8010B
Matrix: Aqueous

NEI/GTEL Sample Number	W7060090-02	--	--	--
Client ID	MW-3	--	--	--
Date Sampled	06/04/97	--	--	--
Date Analyzed	06/10/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
Dichlorodifluoromethane	5.0	ug/L	< 5.0	--	--	--
Chloromethane	2.0	ug/L	< 2.0	--	--	--
Vinyl chloride	0.8	ug/L	< 0.8	--	--	--
Bromomethane	1.2	ug/L	< 1.2	--	--	--
Chloroethane	0.8	ug/L	< 0.8	--	--	--
Trichlorofluoromethane	0.5	ug/L	< 0.5	--	--	--
1,1-Dichloroethene	0.5	ug/L	< 0.5	--	--	--
Methylene chloride	0.8	ug/L	< 0.8	--	--	--
trans-1,2-Dichloroethene	0.5	ug/L	< 0.5	--	--	--
1,1-Dichloroethane	0.5	ug/L	< 0.5	--	--	--
cis-1,2-Dichloroethene	0.5	ug/L	< 0.5	--	--	--
Chloroform	0.5	ug/L	< 0.5	--	--	--
1,1,1-Trichloroethane	0.5	ug/L	< 0.5	--	--	--
Carbon tetrachloride	0.5	ug/L	< 0.5	--	--	--
1,2-Dichloroethane	0.5	ug/L	1.0	--	--	--
Trichloroethene	0.5	ug/L	< 0.5	--	--	--
1,2-Dichloropropane	0.5	ug/L	< 0.5	--	--	--
Bromodichloromethane	0.5	ug/L	< 0.5	--	--	--
2-Chloroethylvinyl ether	1.0	ug/L	< 1.0	--	--	--
cis-1,3-Dichloropropene	0.5	ug/L	< 0.5	--	--	--
trans-1,3-Dichloropropene	0.5	ug/L	< 0.5	--	--	--
1,1,2-Trichloroethane	0.5	ug/L	< 0.5	--	--	--
Tetrachloroethene	0.5	ug/L	< 0.5	--	--	--
Dibromochloromethane	0.5	ug/L	< 0.5	--	--	--
Chlorobenzene	0.5	ug/L	< 0.5	--	--	--
Bromoform	1.2	ug/L	< 1.2	--	--	--
1,1,2,2-Tetrachloroethane	0.5	ug/L	< 0.5	--	--	--
1,3-Dichlorobenzene	0.8	ug/L	< 0.8	--	--	--
1,4-Dichlorobenzene	0.8	ug/L	< 0.8	--	--	--
1,2-Dichlorobenzene	0.8	ug/L	< 0.8	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8010B:

"Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

NEI/GTEL Client ID: GTR01CHV08 — QUALITY CONTROL RESULTS
Login Number: W7060090 — Volatile Organics
Project ID (number): 6395.01 — Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA — Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	*	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	*	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	BFB ELCD	BFB PID
Method: EPA 8010B		Acceptability Limits:	52.8-144%	77.3-129%
061097GC11-1	CV0610972011	Calibration Verifi	116.	96.6
061097GC11-2	BW06109711	Method Blank Water	135.	94.0
061097GC11-4	DP05045903	Duplicate	119.	92.0
061097GC11-5	MS05045904	Matrix Spike	126.	95.6
--	06009002	MW-3	122.	92.6

Notes:
*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Method Blank Results

QC Batch No: 061097GC11-2
Date Analyzed: 10-JUN-97

Analyte	Method:EPA 8010B Concentration: ug/L
Dichlorodifluoromethane	< 5.00
Chloromethane	< 2.00
Vinyl chloride	< 1.00
Bromomethane	< 2.00
Chloroethane	< 1.00
Trichlorofluoromethane	< 1.00
1,1-Dichloroethene	< 1.00
Methylene chloride	< 1.00
trans-1,2-Dichloroethene	< 1.00
1,1-Dichloroethane	< 1.00
cis-1,2-Dichloroethene	< 1.00
Chloroform	< 1.00
1,1,1-Trichloroethane	< 1.00
Carbon tetrachloride	< 1.00
1,2-Dichloroethane	< 1.00
Trichloroethene	< 1.00
1,2-Dichloropropane	< 1.00
Bromodichloromethane	< 1.00
2-Chloroethyl vinyl ether	< 1.00
cis-1,3-Dichloropropene	< 1.00
trans-1,3-Dichloropropene	< 1.00
1,1,2-Trichloroethane	< 1.00
Tetrachloroethene	< 1.00
Dibromochloromethane	< 1.00
Chlorobenzene	< 1.00
Bromoform	< 2.00
1,1,2,2-Tetrachloroethane	< 1.00
1,3-Dichlorobenzene	< 1.00
1,4-Dichlorobenzene	< 1.00
1,2-Dichlorobenzene	< 1.00

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7060090-02 MS ID:MS06009002 MSD ID:MD06009002
Analysis Date: 10-JUN-97 11-JUN-97 11-JUN-97

Units: ug/L	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Diesel Range Organics	1580 (1580)	4210	4210	5230	86.7	6200	110.	23.7	40.9	35.9-115

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.
Acceptability limits are derived from statistical analysis of laboratory samples.
060997TPHW-4: This diesel value differs from the reported concentration due to the inclusion of all the material in the diesel range.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
GC Units: ug/L	QC Batch:060997TPHW-3							
Diesel Range Organics	2000	1330	66.5	1270	63.5	4.62	25.4	34.5-105%

Notes:
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	X	--
Surrogate Recovery	--	--	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	X	--
Blank Contamination	--	X	--

Comments:

ANALYTICAL RESULTS
Semivolatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8270B
Matrix: Aqueous

NEI/GTEL Sample Number	W7060090-02	--	--	--
Client ID	MW-3	--	--	--
Date Sampled	06/04/97	--	--	--
Date Prepared	06/10/97			
Date Analyzed	06/12/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
2,4-Dinitrotoluene	10.	ug/L	< 10.	--	--	--
Diethyl phthalate	10.	ug/L	< 10.	--	--	--
4-Chlorophenyl phenyl ether	10.	ug/L	< 10.	--	--	--
Fluorene	10.	ug/L	< 10.	--	--	--
4-Nitroaniline	50.	ug/L	< 50.	--	--	--
4,6-Dinitro-2-methylphenol	50.	ug/L	< 50.	--	--	--
N-Nitrosodiphenylamine	10.	ug/L	< 10.	--	--	--
4-Bromophenyl phenyl ether	10.	ug/L	< 10.	--	--	--
Hexachlorobenzene	10.	ug/L	< 10.	--	--	--
Pentachlorophenol	50.	ug/L	< 50.	--	--	--
Phenanthrene	10.	ug/L	< 10.	--	--	--
Anthracene	10.	ug/L	< 10.	--	--	--
Di-n-butyl phthalate	10.	ug/L	< 10.	--	--	--
Fluoranthene	10.	ug/L	< 10.	--	--	--
Pyrene	10.	ug/L	< 10.	--	--	--
Butyl benzyl phthalate	10.	ug/L	< 10.	--	--	--
3,3'-Dichlorobenzidine	20.	ug/L	< 20.	--	--	--
Benzo(a)anthracene	10.	ug/L	< 10.	--	--	--
Chrysene	10.	ug/L	< 10.	--	--	--
bis(2-Ethylhexyl) phthalate	10.	ug/L	< 10.	--	--	--
Di-n-octyl phthalate	10.	ug/L	< 10.	--	--	--
Benzo(b)fluoranthene	10.	ug/L	< 10.	--	--	--
Benzo(k)fluoranthene	10.	ug/L	< 10.	--	--	--
Benzo(a)pyrene	10.	ug/L	< 10.	--	--	--
Indeno(1,2,3-cd)pyrene	10.	ug/L	< 10.	--	--	--
Dibenz(a,h)anthracene	10.	ug/L	< 10.	--	--	--
Benzo(g,h,i)perylene	10.	ug/L	< 10.	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8270B:

Extraction by EPA Method 3510 (liquid/liquid). "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods". SW-846, Third Edition including Update 2.

W7060090-02:

GC/MS Data indicates the presence of non-target compounds. The reporting limit for hexachlorocyclopentadiene is elevated because of column conditioning effects.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	--	--	--
Surrogate Recovery	--	X	NA
Holding Time	--	X	--
Method Accuracy	--	X	--
Method Precision	--	X	--
Blank Contamination	--	X	--

Comments:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020A		Acceptability Limits:	43-136%
061197GC14-1	CV0611972014	Calibration Verifi	102.
061197GC14-3	BW06119714	Method Blank Water	95.3
061197GC14-7	MS06007502	Matrix Spike	103.
061197GC14-8	DP06007508	Duplicate	111.
--	06009001	TBLB	90.1
--	06009002	MW-3	90.9
--	06009003	MW-1	100.
--	06009004	MW-2	97.2

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
SM 5520F Units:mg/L	QC Batch:061197IRWA-6			
Total Petroleum Hydrocarbons	5.00	5.32	106.	90-110%

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability Limits, %	
SM 5520F Units: mg/L	QC Batch: 061197IRWA-5	GTEL Sample ID: W7060059-01			Client ID: Batch QC
Total Petroleum Hydrocarbons	4.17	4.67	11.3	70	

Notes:
NA: Not Applicable: % RPD is not calculated when sample values are less than ten (10) times the reporting limit.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) Results

GTEL Sample ID:W7060108-01 MS ID:MS06010801
Analysis Date: 11-JUN-97 11-JUN-97

Units: mg/L Analyte	Sample Conc.	Spike Added	MS Conc.	MS % Rec.	Acceptability Limits %Rec.
Total Petroleum Hydrocarbons	< 0.5 (0.0545)	5.10	5.21	101.	66-136

Notes:

Values in parentheses in the sample concentration column are used for % recovery calculations.

The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
SM 5520F Units: mg/L		QC Batch:061197IRWA-3						
Total Petroleum Hydrocarbons	5.00	4.94	98.8	4.79	95.8	3.08	50	66-136%

Notes:
The accuracy limits are for a fuel oil #2 spike when the calibration is based on the standard reference oil.

ANALYTICAL RESULTS
Total Petroleum Hydrocarbons

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

NEI/GTEL Sample Number	W7060090-02	--	--	--
Client ID	MW-3	--	--	--
Date Sampled	06/04/97	--	--	--
Date Prepared	06/11/97			
Date Analyzed	06/11/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:			
Total Petroleum Hydrocarbons	5.0	mg/L	< 5.0	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

SM 5520F:

This method is equivalent to method 5520CF, Standard Methods For The Examination Of Wastewater, 18th edition, 1992. "Methods for Chemical Analysis of Water and Wastes", EPA 600/4-79-020, USEPA EMSL, Cincinnati, OH, Revised, March 1983.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons
Project ID (number): 6395.01 Method: SM 5520F
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Method Blank Results

QC Batch No: 061197IRWA-1
Date Analyzed: 11-JUN-97

Analyte	Method:SM 5520F	Concentration: mg/L
Total Petroleum Hydrocarbons	< 0.500	

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Calibration Verification Sample Summary

Analyte		Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020A	Units:ug/L	QC Batch:061197GC14-1			
Benzene		20.0	17.7	88.5	77-123%
Toluene		20.0	20.0	100.	77.5-122.5%
Ethylbenzene		20.0	17.8	89.0	63-137%
Xylenes (Total)		60.0	57.6	96.0	85-115%
TPH as Gasoline		500.	538.	108.	80-120%

Notes:
QC check source: Supelco #LA12389

Project ID (Number): 6395.01
Project ID (Name): Chevron SS #9-9708
5910 MacArthur Blvd.
Oakland, CA
Work Order Number: W7060090
Date Reported: 06-13-97

METHOD BLANK REPORT

Volatile Organics in Water
EPA Method 8020A

Date of Analysis: 11-JUN-97 QC Batch No: 061197GC14-3

Analyte	Concentration, ug/L
MTBE	<5.0
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylene (total)	<0.5
TPH as Gasoline	<50

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability Limits, %
EPA 8020A Units: ug/L	QC Batch: 061197GC14-8	GTEL Sample ID: W7060075-08		Client ID: Batch QC
Benzene	69.3	67.2	3.08	23.9
Toluene	292.	286.	2.08	27.2
Ethylbenzene	240.	218.	9.61	21.6
Xylenes (Total)	9970	10000	0.300	22.0

Notes:
NA - The concentration of the analyte is less than the reporting limit.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Matrix Spike(MS) Results

GTEL Sample ID:W7060075-02 MS ID:MS06007502
Analysis Date: 11-JUN-97 11-JUN-97

Units: ug/L Analyte	Sample Conc.	Spike Added	MS Conc.	MS % Rec.	Acceptability Limits %Rec.
Benzene	< 0.5 (0.000)	20.0	18.7	93.5	67-110
Toluene	< 0.5 (0.370)	20.0	17.0	83.2	68-115
Ethylbenzene	< 0.5 (0.000)	20.0	17.0	85.0	65-120
Xylenes (Total)	< 0.5 (0.490)	60.0	55.7	92.0	62-119

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Surrogate Results

QC Batch No.	Reference	Sample ID	OTP
Method: GC		Acceptability Limits:	50.2-115%
060997TPHW-1	BW060997TPH	Method Blank Water	70.4
060997TPHW-2	LW060997TPH	Laboratory Control	74.3
060997TPHW-3	LWD060997TPH	LCS Water Duplicat	75.8
060997TPHW-4	MS06009002	Matrix Spike	66.8
060997TPHW-5	MD06009002	Matrix Spike Dupli	79.4
--	06009002	MW-3	79.7

Notes:
*: Indicates values outside of acceptability limits. See Nonconformance Summary.
Acceptability limits are derived from statistical analysis of laboratory samples.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Total Petroleum Hydrocarbons By GC
Project ID (number): 6395.01 Method: GC
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Method Blank Results

QC Batch No: 060997TPHW-1
Date Analyzed: 10-JUN-97

Analyte	Method:GC	Concentration: ug/ml
Diesel Range Organics	< 50.0	

Notes:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Calibration Verification Sample Summary

Analyte	Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8010B Units:ug/L	QC Batch:061097GC11-1			
Dichlorodifluoromethane	20.0	15.3	76.5	40-160%
Chloromethane	20.0	19.3	96.5	59.5-140.5%
Vinyl chloride	20.0	20.5	103.	68.5-131.5%
Bromomethane	20.0	27.5	138.	58.5-141.5%
Chloroethane	20.0	24.2	121.	77-123%
Trichlorofluoromethane	20.0	18.9	94.5	66.5-133.5%
1,1-Dichloroethene	20.0	27.3	137.	63-137%
Methylene chloride	20.0	18.9	94.5	77.5-122.5%
trans-1,2-Dichloroethene	20.0	20.2	101.	64-136%
1,1-Dichloroethane	20.0	22.1	111.	71.5-116%
cis-1,2-Dichloroethene	20.0	21.2	106.	64-116%
Chloroform	20.0	21.4	107.	75-125%
1,1,1-Trichloroethane	20.0	21.1	106.	71-129%
Carbon tetrachloride	20.0	21.1	106.	68.5-131.5%
1,2-Dichloroethane	20.0	23.1	116.	71.5-128.5%
Trichloroethene	20.0	21.7	109.	77-123%
1,2-Dichloropropane	20.0	21.4	107.	74-126%
Bromodichloromethane	20.0	22.0	110.	76-124%
2-Chloroethyl vinyl ether	20.0	20.8	104.	60-140%
cis-1,3-Dichloropropene	20.0	22.0	110.	64-136%
trans-1,3-Dichloropropene	20.0	22.4	112.	64-136%
1,1,2-Trichloroethane	20.0	22.2	111.	78.5-121.5%
Tetrachloroethene	20.0	22.2	111.	70-130%
Dibromochloromethane	20.0	24.6	123.	65.5-134.5%
Chlorobenzene	20.0	21.4	107.	72-128%
Bromoform	20.0	26.5	133.*	73.5-126.5%
1,1,2,2-Tetrachloroethane	20.0	21.1	106.	49-151%
1,3-Dichlorobenzene	20.0	22.0	110.	49.5-150.5%
1,4-Dichlorobenzene	20.0	20.5	103.	69.5-130.5%
1,2-Dichlorobenzene	20.0	20.3	102.	70-130%

Notes:

061097GC11-1: QC check results were outside the acceptibility limits for Bromomethane.

061097GC11-1: :As the analyte was not present in any of the analyzed samples and instrument sensitivity was sufficient for detection of the analyte at the reporting limit. the reported data is valid.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7060090 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8010B
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Aqueous

Duplicate Sample Results

Analyte	Original Concentration	Duplicate Concentration	RPD, %	Acceptability Limits, %
EPA 8010B Units: ug/L	QC Batch: 061097GC11-4	GTEL Sample ID: W7050459-03		Client ID: Batch QC
Dichlorodifluoromethane	< 50.0	< 50.0	NA	35.4
Chloromethane	< 20.0	< 20.0	NA	24.2
Vinyl chloride	< 10.0	< 10.0	NA	18.6
Bromomethane	< 20.0	< 20.0	NA	24.8
Chloroethane	< 10.0	< 10.0	NA	14.4
Trichlorofluoromethane	< 10.0	< 10.0	NA	19.6
1,1-Dichloroethene	221	198	11.0	21.6
Methylene chloride	< 10.0	< 10.0	NA	13.1
trans-1,2-Dichloroethene	< 10.0	< 10.0	NA	20.9
1,1-Dichloroethane	49.2	48.6	1.23	10.5
cis-1,2-Dichloroethene	108	110	1.83	20.9
Chloroform	< 10.0	< 10.0	NA	14.7
1,1,1-Trichloroethane	162	166	2.44	16
Carbon tetrachloride	< 10.0	< 10.0	NA	18.3
1,2-Dichloroethane	< 10.0	< 10.0	NA	17
Trichloroethene	2120	2060	2.87	13.7
1,2-Dichloropropane	< 10.0	< 10.0	NA	17
Bromodichloromethane	< 10.0	< 10.0	NA	13.1
2-Chloroethyl vinyl ether	< 10.0	< 10.0	NA	27.1
cis-1,3-Dichloropropene	< 10.0	< 10.0	NA	23.8
trans-1,3-Dichloropropene	< 10.0	< 10.0	NA	23.8
1,1,2-Trichloroethane	< 10.0	< 10.0	NA	12.8
Tetrachloroethene	< 10.0	< 10.0	NA	17.7
Dibromochloromethane	< 10.0	< 10.0	NA	20.6
Chlorobenzene	< 10.0	< 10.0	NA	16.4
Bromoform	< 20.0	< 20.0	NA	15.4
1,1,2,2-Tetrachloroethane	< 10.0	< 10.0	NA	30
1,3-Dichlorobenzene	< 10.0	< 10.0	NA	29.7
1,4-Dichlorobenzene	< 10.0	< 10.0	NA	18
1,2-Dichlorobenzene	< 10.0	< 10.0	NA	18

Notes:
NA - The concentration of the analyte is less than the reporting limit.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7060090
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Semivolatile Organics
Method: EPA 8270B
Matrix: Aqueous

Laboratory Control Sample (LCS) and Laboratory Control Duplicate Results

Analyte	Spike Amount	LCS Concentration	LCS Recovery, %	LCS Duplicate Concentration	LCS Duplicate Recovery, %	RPD, %	Acceptability Limits RPD, %	Acceptability Limits Recovery, %
EPA 8270B Units: ug/L		QC Batch:061097625W-3						
Phenol	200.	30.4	15.2	27.6	13.8	9.66	42	12-110%
2-Chlorophenol	200.	69.8	34.9	67.6	33.8	3.20	40	27-123%
1,4-Dichlorobenzene	100.	68.6	68.6	66.7	66.7	2.81	28	36- 97%
N-Nitrosodi-n-propylamine	100.	80.7	80.7	74.6	74.6	7.86	38	41-116%
1,2,4-Trichlorobenzene	100.	75.8	75.8	70.4	70.4	7.39	28	39- 98%
4-Chloro-3-methylphenol	200.	73.1	36.6	65.2	32.6	11.6	42	23- 97%
Acenaphthene	100.	87.2	87.2	81.5	81.5	6.76	31	46-118%
4-Nitrophenol	200.	23.3	11.7	21.6	10.8	8.00	50	10- 80%
2,4-Dinitrotoluene	100.	91.9	91.9	83.7	83.7	9.34	38	24- 96%
Pentachlorophenol	200.	49.0	24.5	49.6	24.8	1.22	50	9-103%
Pyrene	100.	92.1	92.1	90.6	90.6	1.64	31	26-127%

Notes:

Acceptability limits are derived from USEPA Contract Laboratory Program (CLP) requirements; Statement of Work (SOW) for organic analysis OLM02.0 and OLM02.1.

Fax copy of Lab Report and COC to Chevron Contact: ☐ No

Chain-of-Custody-Recor

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

Chevron Facility Number: 9-9708
Facility Address: 5910 MacArthur Oakland CA
Consultant Project Number: 639510 1
Consultant Name: Gettler-Ryan
Address: 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name): ~~Deanna Harding~~ Barbara Sieminski
(Phone): 551-7555 (Fax Number): 551-7888

Chevron Contact (Name): Phil Briggs
(Phone): 510-842-9136
Laboratory Name: GTEL Service Code: ZZ02760
Laboratory Service Order #: 9064504
Samples Collected by (Name): F. Cline
Collection Date: 6-4-97
Signature:

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	Analyses To Be Performed: TPH Gas + BTEX w/MTBE (8015)	TPH Diesel (8015)	Oil and Grease (5520) E&C	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	DO NOT BILL TB-LB ANALYSIS / Remarks
TB-LB		2	W	TB	—	HCl	Y	X								
MW-3		11		G		HCl None		X	X	X	X			X		
MW-1		3				HCl		X								
MW-2		3				HCl		X								
	970606001															
	970606002															
	970606003															
	970606004															
	970606005															
	970606006															
	970606007															
	970606008															
	970606009															
	970606010															

Fax Results to Barbara Sieminski - 5-DAY turnaround

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
	G-R Inc.	6597 08a	D. Harding	G-R Inc.	6/6/97 8
D. Harding	G-R	6/6/97 1300	John Weber	Nei/GTEL	6/5/97 1300
John Weber	Nei/GTEL	6/5/97 1630	Received For Laboratory By (Signature)		Date/Time 6/6/97 0910

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

NEI/GTEL
ENVIRONMENTAL LABORATORIES, INC.

Midwest Region
4211 May Avenue
Wichita, KS 67209
(316) 945-2624
(800) 633-7936
(316) 945-0506 (FAX)

May 29, 1997

Barbara Sieminski
GETTLER-RYAN
6747 Sierra Ct.
Suite J
Dublin, CA 94568

RE: NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Dear Barbara Sieminski:

Enclosed please find the analytical results for the samples received by NEI/GTEL Environmental Laboratories, Inc. on 05/28/97.

A formal Quality Assurance/Quality Control (QA/QC) program is maintained by NEI/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. This report is to be reproduced only in full.

NEI/GTEL is certified by the California Department of Health Service under Certification Number 2147.

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

Sincerely,
NEI/GTEL Environmental Laboratories, Inc.

Justin Ward, Project Coordinator for
Terry R. Loucks
Laboratory Director

ANALYTICAL RESULTS
Volatile Organics

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Method: EPA 8020A
Matrix: Low Soil

NEI/GTEL Sample Number	W7050413-01	--	--	--
Client ID	SP-A THRU SP-D	--	--	--
Date Sampled	05/23/97	--	--	--
Date Analyzed	05/29/97	--	--	--
Dilution Factor	1.00	--	--	--

Analyte	Reporting Limit	Units	Concentration:Wet Weight			
Benzene	5.0	ug/kg	< 5.0	--	--	--
Toluene	5.0	ug/kg	< 5.0	--	--	--
Ethylbenzene	5.0	ug/kg	< 5.0	--	--	--
Xylenes (total)	5.0	ug/kg	< 5.0	--	--	--
BTEX (total)	--	ug/kg	--	--	--	--
TPH as Gasoline	1000	ug/kg	1000	--	--	--
Percent Solids	--	%	85.8	--	--	--

Notes:

Dilution Factor:

Dilution factor indicates the adjustments made for sample dilution.

EPA 8020A:

Gasoline range hydrocarbons (TPH) quantitated by GC/FID with purge and trap and modified EPA Method 8015. "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", SW-846, Third Edition including promulgated Update II.

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Conformance/Non-Conformance Summary

(X = Requirements Met * = See Comments -- = Not Required NA = Not Applicable)

Conformance Item	Volatile Organics	Semi-Volatile Organics	Inorganics (MT, WC)
GC/MS Tune	--	--	NA
Initial Calibration	--	--	--
Continuing Calibration	X	--	--
Surrogate Recovery	X	--	NA
Holding Time	X	--	--
Method Accuracy	X	--	--
Method Precision	X	--	--
Blank Contamination	X	--	--

Comments:

NEI/GTEL Client ID: GTR01CHV08 QUALITY CONTROL RESULTS
Login Number: W7050413 Volatile Organics
Project ID (number): 6395.01 Method: EPA 8020A
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA Matrix: Low Soil

Surrogate Results

QC Batch No.	Reference	Sample ID	TFT
Method: EPA 8020A		Acceptability Limits:	43-136%
052997GC4-1	CV052997204	Calibration Verifi	76.9
052997GC4-3	BL0529974	Method blanks low	77.6
052997GC4-4	MS05041301	Matrix Spike	60.9
052997GC4-5	MD05041301	Matrix Spike Dupli	74.4
--	05041301	SP-A THRU SP-D	70.4

Notes:

*: Indicates values outside of acceptability limits. See Nonconformance Summary.

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Method Blank Results

QC Batch No: 052997GC4-3
Date Analyzed: 29-MAY-97

Analyte	Method: EPA 8020A Concentration: ug/kg
Benzene	< 1.00
Toluene	< 2.00
Ethylbenzene	< 2.00
Xylenes (Total)	< 4.00
TPH as Gasoline	< 100.

Notes:

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Calibration Verification Sample Summary

Analyte		Spike Amount	Check Sample Concentration	QC Percent Recovery	Acceptability Limits Recovery
EPA 8020A	Units:ug/L	QC Batch:052997GC4-1			
Benzene		20.0	18.5	92.5	77-123%
Toluene		20.0	17.9	89.5	77.5-122.5%
Ethylbenzene		20.0	18.1	90.5	63-137%
Xylenes (Total)		60.0	53.9	89.8	85-115%
TPH as Gasoline		500.	455.	91.0	80-120%

Notes:
QC check source: Supelco #LA12389

NEI/GTEL Client ID: GTR01CHV08
Login Number: W7050413
Project ID (number): 6395.01
Project ID (name): CHEVRON/9-9708/5910 MACARTHUR BLVD/OAKLAND/CA

QUALITY CONTROL RESULTS

Volatile Organics
Method: EPA 8020A
Matrix: Low Soil

Matrix Spike(MS) and Matrix Spike Duplicate(MSD) Results

GTEL Sample ID:W7050413-01 MS ID:MS05041301 MSD ID:MD05041301
Analysis Date: 29-MAY-97 29-MAY-97 29-MAY-97

Units: ug/kg	Sample	Spikes Added		MS	MS	MSD	MSD		Acceptability Limits	
Analyte	Conc.	MS	MSD	Conc.	% Rec.	Conc.	% Rec.	RPD	RPD	%Rec.
Benzene	< 5.0 (0.981)	83.7	81.1	64.8	76.2	65.1	79.1	3.70	22.6	61.1-125.9
Toluene	< 5.0 (0.165)	83.7	81.1	62.8	74.8	62.8	77.2	3.20	27.5	59.8-124.6
Ethylbenzene	< 5.0 (0.832)	83.7	81.1	60.4	71.2	58.6	71.2	0.00	26.4	57.5-138
Xylenes (Total)	< 5.0 (0.177)	251.	243.	182.	72.4	177.	72.8	0.600	26.7	54.3-137

Notes:
Values in parentheses in the sample concentration column are used for % recovery calculations.

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

Chevron Facility Number 6395 9-9708
Facility Address 5910 MacArthur Blvd, Oakland
Consultant Project Number 6395.01
Consultant Name Gettler-Ryan
Address 6747 Sierra Ct, Ste J, Dublin 94568
Project Contact (Name) Barbara Sieminski
(Phone) 551-7555 (Fax Number) 551-7888

Chevron Contact (Name) Phil Briggs
(Phone) (510) 842-9136
Laboratory Name GTEL
Laboratory Release Number 206450 4, 220276 0
Samples Collected by (Name) Barbara Sieminski
Collection Date 05/23/97
Signature

Sample Number	Lab Sample Number	Number of Containers	Matrix S = Soil A = Air W = Water C = Charcoal	Type G = Grab C = Composite D = Discrete	Time	Sample Preservation	Iced (Yes or No)	TPH Gas + BTEX (8015) (8020)	TPH Diesel (8015)	Oil and Grease (5520)	Purgeable Halocarbons (8010)	Purgeable Aromatics (8020)	Purgeable Organics (8240)	Extractable Organics (8270)	Metals Cd,Cr,Pb,Zn,Ni (ICAP or AA)	Total lead Dw				DO NOT BIL TB-LB ANAL Remarks
SP-A (composite)	27	1	S	G	15:00		Yes	X								X				Analyze for TPH-Gx & BTEX on
SP-B		1			15:02			X								X				
SP-C		1			15:04			X								X				
SP-D	4173	1			15:06			X								X				
	05-0																			
	07-																			

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
Barbara Sieminski	G-R	05/27/97 1030	John Weber	Nei/GTEL	5-27-97 1030
John Weber	Nei-GTEL	5/27/97 1630			
			Received For Laboratory By (Signature)		Date/Time 5/27/97 1615

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

COC-3.DWG/03 91/HCH