

Page 2
Former Chevron Service Station 9-7127 Tracy
March 23, 1993

Chevron has notified the owner of the supply well of this situation.

Please refer to the report for additional information. If you have any questions or comments, please feel free to call me at (510) 842-8752.

Sincerely,

Chevron U.S.A. Products Co.



Kenneth Kan
Engineer

LKAN
MacFile 9-7127R3

Enclosure

cc: Mr. Eddy So
RWQCB-S.F. Bay Region
2101 Webster Street, Suite 500
Oakland, CA 94612

William S. Carnazzo, M.D.
Carnazzo Land Company, Inc.
P.O. Box 6031, Atascadero, CA 93423

Ms. Bette Owen
Chevron U.S.A. Products Co.



PACIFIC
ENVIRONMENTAL
GROUP, INC.

March 22, 1993
Project 325-04.01

Mr. Kenneth Kan
Chevron U.S.A. Products Company
P.O. Box 5004
San Ramon, California 94583-0804

Re: Former Chevron U.S.A. Service Station 9-7127
Highway I-580 at Grant Line Road
Tracy, California

Dear Mr. Kan:

This report presents the results of a recent soil and groundwater investigation performed by Pacific Environmental Group, Inc. (PACIFIC) at the site referenced above. This investigation was performed in response to the Alameda County Health Care Services (ACHCS) letter dated June 5, 1991 which required further investigation of hydrocarbons detected beneath the tank complex. The investigation was performed in accordance with the PACIFIC Work Plan dated July 3, 1991 and Work Plan Addendum dated October 20, 1992.

This report includes a discussion of site background, regional hydrogeologic setting, previous site investigations, scope of work, and findings. Field and analytical procedures are presented as Attachment A. Boring logs and well completion data are presented as Attachment B. Certified analytical reports and chain-of-custody documentation are presented as Attachment C.

BACKGROUND

The site is a former Chevron U.S.A. service station and is located at the southeast corner of the junction between Grant Line Road and I-580 in Tracy, California (Figure 1). The site lies adjacent the freeway and is situated within rolling foothills northwest of Tracy. With the exception of a water-supply well, all site improvements have been removed. The site is currently used for cattle-grazing. Grant

3/26/93

Need:

1) determine GW
contam. plume

2) CAP

Line Road terminates at the south-end of the site creating a cul-de-sac which commuters use for daily parking.

The station was operational for 15 years, between 1971 and 1986. The service station had three underground gasoline storage tanks (two 9,500-gallon and one 5,750-gallon) in a common excavation. Based on the extent of backfill materials northeast of the tank complex, it appears that the fuel tank complex may have formerly contained a fourth tank. A 1,500-gallon waste oil tank and a 850-gallon heating fuel tank were located in a common excavation northeast of the station building (Figure 2). All tanks were constructed of single-walled fiberglass. The underground tanks and associated piping were removed on April 4, 1991.

REGIONAL HYDROGEOLOGIC SETTING

The site is located in a small basin in the eastern foothills of the Diablo Range, in eastern Alameda County, California. The Diablo Range is a northwest-southeast trending range of mountains bounded to the west by the flatlands of the San Francisco Bay area, and to the east by the San Joaquin Valley. Site elevation is approximately 326 feet above mean sea level.

The site is underlain by approximately 6 to 17 feet of fill and Quaternary alluvial fan and fluvial deposits which overly bedrock. Bedrock in the vicinity of the site belongs to two formations, the Upper Cretaceous Panoche Formation and the Miocene Neroly Formation (Bishop, 1970). The Panoche Formation was not encountered during drilling activities, but has been mapped to the northwest and west of the site. The Neroly Formation has been described as a marine blue to gray sandstone, which is pebbly in some locations (Dibblee, 1980).

PREVIOUS SITE INVESTIGATIONS

Previous work has been conducted at the site by EA Engineering Science and Technology (EA), Kleinfelder Associates (Kleinfelder), Gettler-Ryan Inc. (Gettler-Ryan), and GeoStrategies Inc. (GeoStrategies). The following is a description of previous investigations and findings.

- o EA conducted a soil vapor investigation at the site in October 1987. Thirteen soil vapor points were sampled. Soil vapor concentrations ranged from nondetectable to 28,500 parts per million (ppm). The highest concentrations were detected in the vicinity of the gasoline storage tank complex and associated product piping (EA, November 13, 1987).

- o In December 1987, Kleinfelder conducted a site investigation which consisted of drilling seven soil borings to depths ranging from 6 to 20 feet. Kleinfelder encountered auger refusal at these depths due to the sandstone bedrock which underlies the surficial fill beneath the site.

Soil samples were collected for laboratory analysis from these borings within the surficial fill. Total petroleum hydrocarbons calculated as gasoline (TPH-g) was detected in soil samples at concentrations ranging from non-detectable to 2,300 ppm. The highest concentrations were detected in the northeast end of the gasoline tank complex backfill at a depth of 14 to 15 feet below ground surface (bgs) (Kleinfelder Associates, January 6, 1988).

Kleinfelder conducted a well survey to identify documented water-supply wells (in addition to the water-supply well located on site) in the vicinity of the site. This survey identified two nearby wells; the first is located approximately 1/2 mile southeast of the site on the opposite side of a hill, and would not be expected to be impacted by site conditions. The second well is located approximately 300 yards uphill (upgradient) of the site. This well was reportedly damaged in 1980 and is not used.

- o In May 1989, Gettler-Ryan installed a carbon adsorption treatment system on the on-site water-supply well, and performed subsequent sampling of the treated well water. Gettler Ryan's sampling data is included in reports prepared by GeoStrategies dated September 14, 1989, October 1, 1990, and April 9, 1991.
- o On April 4, 1991, Golden West Builders removed the five underground storage tanks and the product lines from the site. Blaine Tech Services, Inc. (Blaine) visually inspected the tanks and collected and analyzed soils from the tank and product line excavations. At this time, Chevron initiated overexcavation activities. Overexcavation was limited; however, due to the sandstone bedrock, which was not rippable with the excavating equipment.

The results of the tank inspection and the results of soil samples collected and analyzed from the tank and product line excavations are documented in Blaine's report of June 24, 1991 and are summarized below.

A detailed inspection of each tank was conducted following their removal from the excavation. The tanks were visually inspected and likely failure points were probed with small pointed metal examination tools. No holes were observed in any of the tanks. A total of 33 soil samples were collected from the tank and product line excavations (8 samples from the tank excavation, 2 from the product line excavation, 2 from the dispenser island locations, and 21 stockpiled soil samples). Analysis of these soil samples included TPH-g, benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), and waste oil tank parameters.

The results of the soil analytical data from the soil samples collected beneath the tank complex and product lines indicated that hydrocarbon-affected soils are primarily limited to the northeast and southern portion of the tank complex. TPH-g concentrations in these areas range from 710 to 5,700 ppm. Overexcavation of contaminated areas was performed to remove elevated levels of hydrocarbons, but was limited at approximately 14 feet bgs due to encountered bedrock.

The results of soil analytical data from the soil samples collected beneath the waste oil tank were not detected at a depth of 11 to 18 feet for the following parameters: TPH-g, BTEX compounds, TPH-d, volatile organics, and waste oil.

Under the direction of Chevron, soils generated from the excavation activities were stockpiled and aerated on site until concentrations were reduced to less than 10 ppm TPH-g. The aerated soils, along with the clean overburden materials, were used to backfill the excavations.

SCOPE OF WORK

Based on the gasoline contamination detected within the former tank excavation, the ACHCS requested a preliminary contaminant assessment to be initiated at the site. The ACHCS is the local implementing agency in this area.

The specific scope of work for this investigation is summarized below.

- o **Groundwater Monitoring Well Installation.** Three groundwater monitoring wells designated MW-1, MW-2, and MW-3 were installed on site (Figure 2) to enable determination of the groundwater flow direction beneath the site, and to investigate groundwater conditions. These wells were screened from approximate depths of 21 to 37.5 feet bgs. After a minimum 24-hour waiting period, the groundwater monitoring wells were developed, depth to groundwater measurements were taken, and groundwater samples were collected for laboratory analysis.

- o **Soil Boring.** Soil Boring B-1 was drilled south of the former tank complex to determine the lateral extent of hydrocarbons in this area. This boring was drilled to 22 feet bgs. Groundwater was not encountered. The soil boring for Well MW-1 was drilled in the northern portion of the tank complex. The purpose of this boring was to determine the vertical extent of hydrocarbons beneath the tank complex. Additional exploratory soil borings were outlined by ACHCS; however, after discussion with an ACHCS representative in the field, it was concluded that these borings were unnecessary based on the findings of Well MW-1 which indicated that hydrocarbons beneath the tank complex had penetrated the underlying bedrock.
- o **Soil Analysis.** Soils analyzed from Boring B-1 were collected at depths between 7 and 21.5 feet bgs. Soils analyzed from Boring MW-1 were collected between 19 and 38.5 feet bgs. These soil samples were analyzed for TPH-g and BTEX compounds.
Soils were not analyzed from the boring for Wells MW-2 or MW-3 because these wells were not located in potential source areas. In addition, no odor was detected in either boring with the exception of capillary fringe samples from Well MW-3 at a depth of approximately 30 feet.
- o **Groundwater Analysis.** Groundwater samples were collected from site Wells MW-2 and MW-3. These samples were analyzed for TPH-g and BTEX compounds (EPA Methods 8020 and 8015). Groundwater was not sampled from Monitoring Well MW-1 due to the presence of separate-phase hydrocarbons (SPH).

FINDINGS

The following sections summarize the results of PACIFIC's soil and groundwater investigation.

Subsurface Conditions

Borings encountered primarily sand, clayey sand, and clay-fill to depths of 2.5 to 17 feet bgs, which is underlain by sandstone bedrock to the total depth explored. Fill and alluvium thicken toward the south. Neroly Formation sandstone was first encountered from 2.5 feet bgs in the boring for Well MW-2 to 17 feet bgs in Boring B-1 (Figure 3). Blue-gray to black sandstone is comprised of moderately

cemented quartz, feldspar, and volcanic-derived medium sand. The unit is locally conglomeratic with subrounded pebbles up to 2 inches in diameter. Alteration veins of chlorite and epidote are evident. Iron oxidation and rare manganese oxide are locally developed throughout the matrix and concentrated within weak to locally strong parting and fracturing. Bedding observed during drilling and bedrock outcrops indicate the Neroly Formation strike is from 150 to 175 degrees and dips 27 degrees east.

Groundwater was first encountered in the borings for Wells MW-1, MW-2, and MW-3 at approximate depths of 26.5 to 28 feet bgs on December 8 through 10, 1992. The first encountered groundwater stabilized on December 28, 1992 at 26.5 to 28.5 feet bgs within the bedrock. Groundwater flow direction (Figure 2) was determined to be to the north-northwest with a gradient of approximately 0.005. Groundwater elevation data are presented in Table 1.

Soils Analysis

Soil samples collected on December 8 and 9, 1992, were analyzed for TPH-g and BTEX compounds. Detectable concentrations of petroleum hydrocarbons were detected in Boring B-1 and from the boring for Well MW-1. TPH-g was detected at 4.0 ppm in the soil sample collected from Boring B-1 at 12.5 feet. TPH-g and benzene concentrations were 8,100 and 21 ppm, respectively at 29 feet bgs in the capillary fringe. TPH-g was non-detectable at depth in the saturated zone in samples collected from Well MW-1. Trace levels of BTEX compounds were detected in other samples from both borings. The soil analytical results are presented in Table 2.

Groundwater Analysis

Groundwater samples collected from site wells were analyzed for TPH-g and BTEX compounds to determine if, and to what extent, groundwater has been affected by petroleum hydrocarbons. Groundwater samples were collected from Monitoring Wells MW-2 and MW-3 on December 28, 1992; sample collection procedures are presented in Attachment A. The groundwater sample collected from Well MW-2 did not contain detectable concentrations of TPH-g. Xylenes were detected at 0.6 parts per billion (ppb), however, the trip blank (sample TB-1) also detected xylenes at 0.9 ppb. The groundwater sample from Well MW-3 contained TPH-g at a concentration of 19,000 ppb and benzene at 8,900 ppb. Toluene, ethylbenzene, and xylenes compounds were also detected and are presented in Table 3.

Groundwater Monitoring Well MW-1 was not sampled on December 28, 1992 due to the presence of SPH in the well. The SPH was measured at a thickness of 1.67 feet which was subsequently bailed from the well. The well was then bailed on a weekly basis through January 29, 1993 at which time the SPH had been reduced to a sheen. To ensure the removal of any recurring SPH, a passive skimmer was installed in the well on January 29, 1993. The skimmer has been emptied every two weeks since its installation. The amount of bailed SPH from December 28, 1992 through January 29, 1993 was approximately 6.7 liters. The amount of SPH removed from the well via the skimmer has been approximately 1.05 liters. SPH removed from the well is stored in a double-contained storage drum pending disposal at Chevrans Richmond Refinery.

Total
7.75 liters

The on-site water-supply well has been tested numerous times during previous investigations (*Final Report, Domestic Water Contaminant Source Evaluation*, Kleinfelder Associates, August 2, 1989). The well has been sampled approximately 26 times from December 1987 to March 1991. During sampling from December 1987 through January 1988, groundwater samples were collected from a drain spigot located approximately 30 feet from the well head. Samples collected at this location contained low levels of benzene which ranged from 1 to 4 ppb. Kleinfelder denoted that these hydrocarbons could likely be from a source that is located between the well head and the drain spigot.

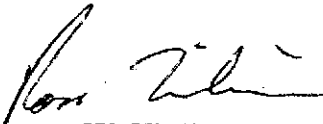
During sampling from August 1989 through March 1991, groundwater samples were collected directly from the well head through a water discharge valve. Twenty-six groundwater samples collected from this location were non-detectable for TPH-g and benzene with the exception of one sample which contained 320 ppb TPH-g and one sample which contained 0.07 ppb benzene.

At the request of Chevron, PACIFIC initiated weekly groundwater sampling of the on-site water-supply well in January 1993. Groundwater samples are analyzed for TPH-g and BTEX compounds. Toluene and benzene were detected during the January 29, 1993 sampling event at concentrations of 3 and 2 ppb, respectively. Groundwater samples analyzed from all other sampling events did not detect TPH-g or BTEX compounds. Table 4 summarizes the weekly data; the certified analytical reports are presented in Attachment C.

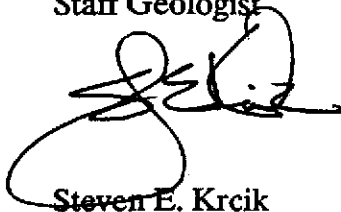
If there are any questions regarding the contents of this report, please do not hesitate to call.

Sincerely,

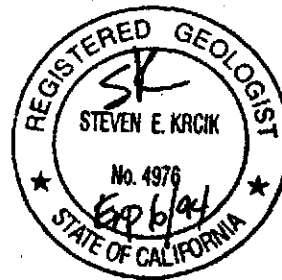
Pacific Environmental Group, Inc.



Ross W. Tinline
Staff Geologist



Steven E. Krcik
Senior Geologist
RG 4976



- Attachments:
- Table 1 - Groundwater Elevation Data
 - Table 2 - Soil Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
 - Table 3 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
 - Table 4 - Water Well Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
 - Figure 1 - Site Location Map
 - Figure 2 - Site Map
 - Figure 3 - Geologic Cross-Section A-A'
 - Attachment A - Field and Analytical Procedures
 - Attachment B - Boring Logs and Well Completion Data
 - Attachment C - Certified Analytical Reports and Chain-of-Custody Documentation

Table 1
Groundwater Elevation Data

Former Chevron U.S.A. Service Station 9-7127
Highway I-580 at Grant Line Road
Tracy, California

Well Number	Sample Date	Well Elevation (feet)	Depth to Water (feet, TOC)	Groundwater Elevation (feet)
MW-1	12/28/92	329.18	30.78*	299.09*
MW-2	12/28/92	327.22	28.59	298.63
MW-3	12/28/92	329.26	30.69	298.57

TOC = Top of casing
* Separate-phase hydrocarbons (1.67 feet) were reported; level measured represents the top of liquid.
Elevations relative to bench mark 477-R at 309.20 feet, USC & GS datum.

Table 2
Soil Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7127
 Highway I-580 at Grant Line Road
 Tracy, California

Boring Number	Sample Date	Sample Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
B-1	12/09/92	7	ND	ND	ND	ND	ND
		12.5	4.0	ND	ND	ND	0.015
		17.5	ND	ND	0.014	ND	0.025
		21.5	ND	ND	0.013	ND	0.018
NW-1	12/08/92	19	ND	ND	0.0056	ND	0.0079
		24	200*	<5.0*	79	30	200
		29	2100*	21	560	150	840
		30.5	ND	ND	ND	ND	ND
		38.5	ND	ND	0.013	ND	0.024
Detection Limits:			1.0	0.005	0.005	0.005	0.005
ppm = Parts per million ND = Not detected * Elevated method reporting limit.							

*no soil analysis for
 MW-2 and MW-3?*

.w

Table 3
Groundwater Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7127
 Highway I-580 at Grant Line Road
 Tracy, California

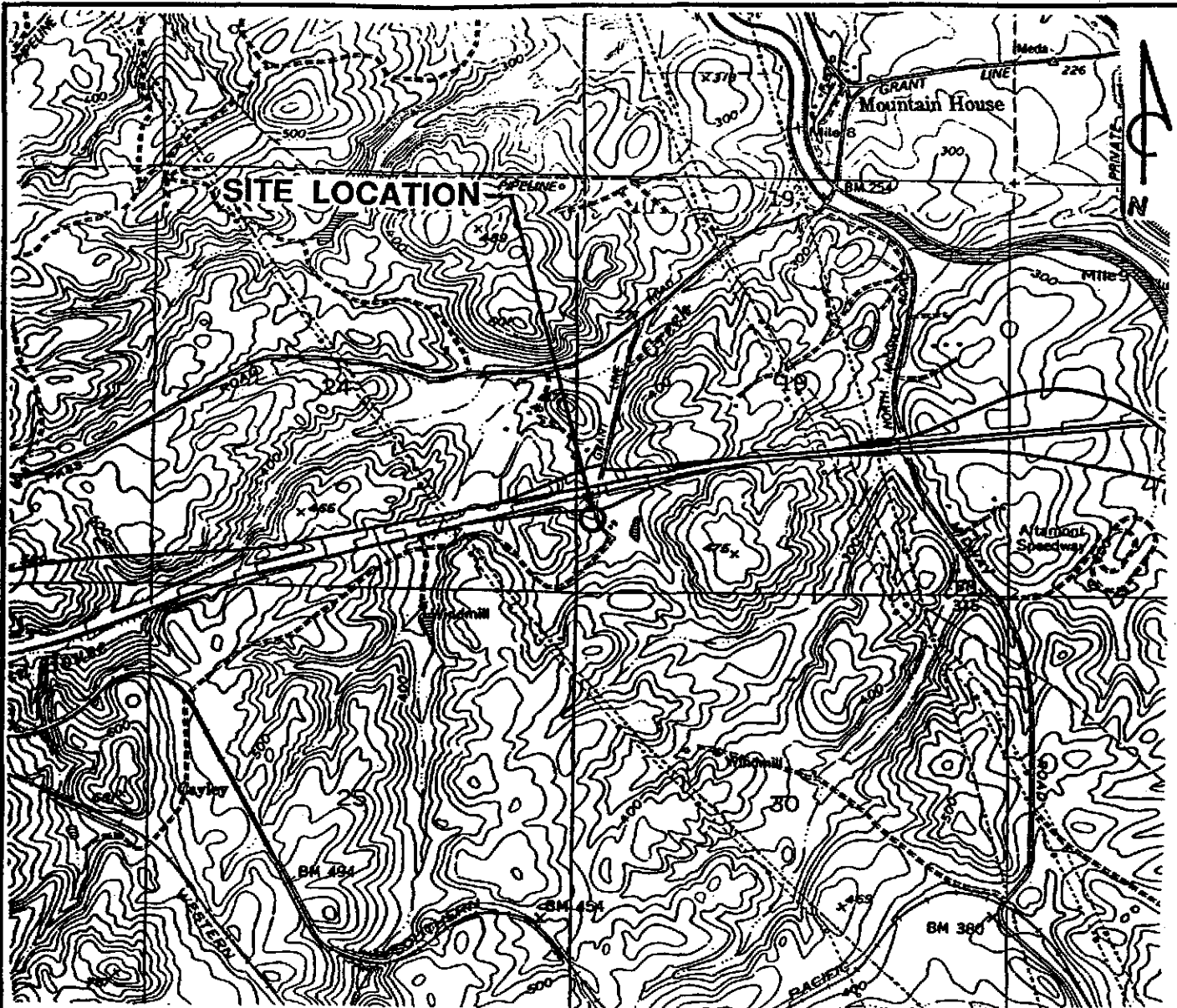
Well Number	Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-2	12/28/92	ND	ND	ND	ND	0.6*
MW-3	12/28/92	19,000	8,900	660	380	720
Detection Limits:		50	0.4	0.3	0.3	0.4
ppb = Parts per billion ND = Not detected at or above limit of detection * The trip blank (TB-1) also contained detectable xylenes at 0.9 ppb.						

MW-1 12/28/92 Flooding Product

Table 4
Water Well Analytical Data
 Total Petroleum Hydrocarbons
 (TPH as Gasoline and BTEX Compounds)

Former Chevron U.S.A. Service Station 9-7127
 Highway I-580 at Grant Line Road
 Tracy, California

Sample Date	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
01/07/93	ND	ND	ND	ND	ND
01/22/93	ND	ND	ND	ND	ND
01/29/93	ND	ND	3	ND	2
02/04/93	ND	ND	ND	ND	ND
02/12/93	ND	ND	ND	ND	ND
02/19/93	ND	ND	ND	ND	ND
02/26/93	ND	ND	ND	ND	ND
03/04/93	ND	ND	ND	ND	ND
03/11/93	ND	ND	ND	ND	ND
Detection Limits:	0.5	0.5	0.5	0.5	50
ppb = Parts per billion ND = Not detected at or above limit of detection * The trip blank (TB-1) also contained detectable xylenes at 0.9 ppb.					

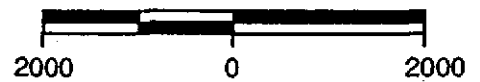


QUADRANGLE
LOCATION

REFERENCES:

USGS 7.5 MIN. TOPOGRAPHIC MAP
 TITLED: MIDWAY, CALIFORNIA
 DATED: 1953 REVISED: 1980
 TITLED: CLIFTON COURT FOREBAY, CALIFORNIA
 DATED: 1978

SCALE IN FEET

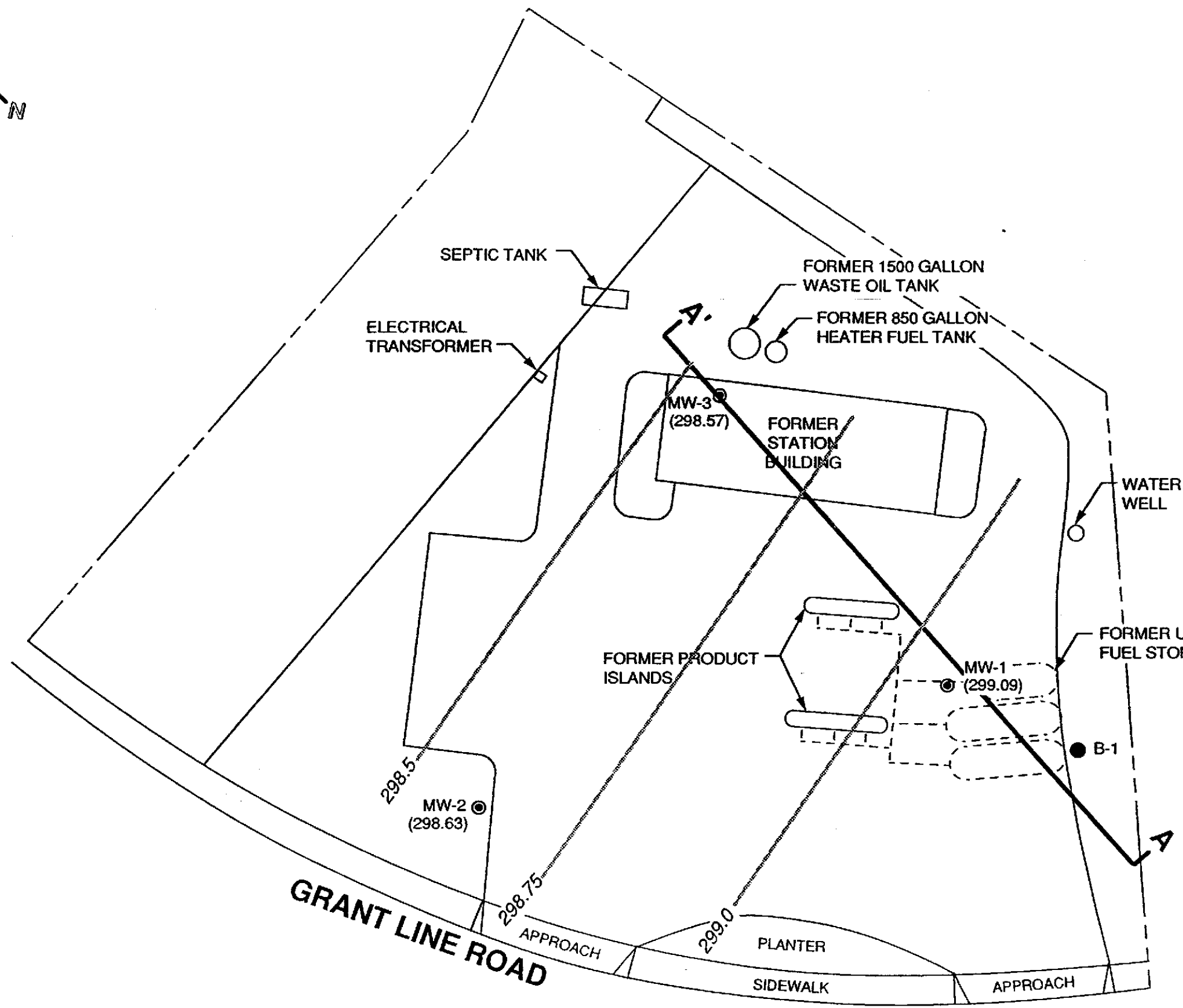


PACIFIC
 ENVIRONMENTAL
 GROUP, INC.

FORMER CHEVRON STATION 9-7127
 I-580 at Grant Line Road
 Tracy, California

SITE LOCATION MAP

FIGURE:
1
 PROJECT:
 325-04.01



LEGEND

- MW-1 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- B-1 ● SOIL BORING LOCATION AND DESIGNATION
- (299.09) GROUNDWATER OR LIQUID ELEVATION IN FEET
- 298.5 POTENTIOMETRIC SURFACE ELEVATION CONTOUR IN FEET, 12-28-92
- A A' GEOLOGIC CROSS SECTION

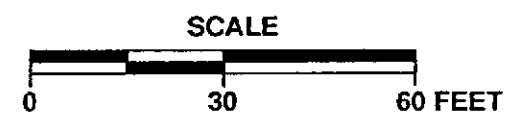
NOTE: ALL ELEVATIONS RELATIVE TO BENCH MARK 477-R ELEVATION 309.20, U.S.C. AND G.S. DATUM



APPROXIMATE DIRECTION OF GROUNDWATER FLOW
APPROXIMATE GRADIENT = 0.005



PACIFIC ENVIRONMENTAL GROUP, INC.



FORMER CHEVRON USA SERVICE STATION 9-7127
I-580 at Grant Line Road
Tracy, California

SITE MAP

FIGURE: 2
PROJECT: 325-04.01

ATTACHMENT A

FIELD AND ANALYTICAL PROCEDURES

ATTACHMENT A

FIELD AND ANALYTICAL PROCEDURES

Exploratory Soil Boring and Monitoring Well Installation

The soil borings were drilled using air rotary drilling equipment, and logged by a Pacific Environmental Group, Inc. (PACIFIC) geologist using the Unified Soil Classification System and standard geologic techniques. Soil samples for logging and chemical analysis from Wells MW-1 through MW-3 were collected continuously using a dry-core sampling system with brass sample liners. Soil samples for chemical analysis were retained in the brass liners, capped with Teflon squares and plastic end caps, and sealed in zip-lock bags. The samples were placed on ice and transported to the laboratory accompanied by the appropriate chain-of-custody documentation. The drilling equipment was steam-cleaned after each boring.

Selected borings were converted to groundwater monitoring wells by the installation of 2- and 4-inch diameter flush-threaded Schedule 40 PVC casing with 0.020-inch factory-slotted screen. Graded 2-/16 sand pack was placed in the annular space across the screened interval, and the wells were surge-blocked to remove void spaces in the sand pack. A bentonite and concrete seal was placed from the top of the sand pack to the ground surface. A locking cap and protective vault box were installed on the top of each well. Well elevations were surveyed by a licensed surveyor to an accuracy of 0.01 foot, relative to a benchmark. Three hundred feet must be added to all elevations to bring them to the USGS mean sea level datum.

Organic Vapor Analysis

Soil samples collected during drilling were analyzed in the field for ionizable organic compounds using the HNU Model PI-101 photo-ionization detector with a 10.2 eV lamp. The test procedure involves measuring approximately 30 grams from an undisturbed soil sample, placing this subsample in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The jar is warmed for approximately 20 minutes, then the foil is pierced and the headspace within the jar is tested for total organic vapor, measured in parts per million as benzene (ppm). The instrument

was previously calibrated using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 0.7, which relates the photo-ionization sensitivity of benzene (10.0 ppm) to the ionization potential of isobutylene (7.0 ppm). Results of these tests were used to assist in selection of samples for laboratory analysis.

Groundwater Sampling

The groundwater sampling was performed using techniques approved by the Regional Water Quality Control Board (RWQCB). The sampling procedure consists of first measuring the water level in each well and checking each well for the presence of floating petroleum product using an optic probe or a clear Teflon bailer. If no free product is detected, the wells are purged of a minimum of four casing volumes of water (or until dryness). During purging, temperature, pH, and electrical conductivity were monitored until stable in order to ensure that a representative sample was obtained. After the water levels partially recover, groundwater samples were collected using a Teflon bailer and placed into appropriate EPA-approved containers. The samples were labeled, logged onto chain-of-custody documents, and transported on ice to the laboratory using appropriate chain-of-custody documentation.

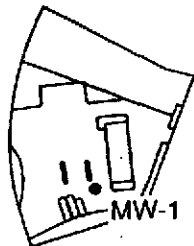
Laboratory Analysis

Selected soil and groundwater samples were analyzed in the laboratory for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). The method of analysis for TPH-g was by modified EPA Methods 8015. Final analysis was performed by the purge-and-trap technique with final detection by gas chromatography using a flame-ionization detector and a photo-ionization detector. All analyses were performed by a state-certified laboratory.

ATTACHMENT B

BORING LOGS AND WELL COMPLETION DATA

LOCATION MAP



NORTHING 154.6 EASTING 172.9 ELEVATION 29.18

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-1
PAGE 1 OF 2

PROJECT NO. 325-04.01
LOGGED BY: RWNT
DRILLER: GREAT SIERRA
DRILLING METHOD: AIR ROTARY
SAMPLING METHOD: DRY CORE
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: #2-/16 Lonestar

CLIENT: CHEVRON
DATE DRILLED: 12-8-92
LOCATION: Grant Line Road
HOLE DIAMETER: 10"
HOLE DEPTH: 39.5'
WELL DIAMETER: 4"
WELL DEPTH: 38'
CASING STICKUP: ~2.3

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
		Dp	0	0	1			SC	CLAYEY SAND - FILL: dark grayish brown; low to moderate plasticity; 40% clay; 15% silt; 45% fine to medium sand; weak subangular blocky; minor angular gravel fragments; loose; no product odor.
	1				2				
	3				3				
	1		16		4			GC-SC	CLAYEY GRAVEL to CLAYEY SAND - FILL: dark gray; 60% clay; 10% silt; 30% medium to coarse sand with 1" angular gravel fragments throughout; minor iron oxide staining and caliche; medium dense; weak product odor.
	5				5				
	2			0	6				CLAYEY SAND: dark greenish gray; low to medium plasticity; 50% clay; 15% silt; 35% medium to coarse sand; granular; loose texture; paleosol odor; no product odor.
	7				7			SC	
	9				8				
	3			12	10				CLAYEY SAND: dark greenish gray; low to medium plasticity; 50% clay; 15% silt; 35% medium to coarse sand; granular; loose texture; paleosol odor; no product odor.
	11				11				
	3			12	12				CLAYEY SAND: dark greenish gray; low to medium plasticity; 50% clay; 15% silt; 35% medium to coarse sand; granular; loose texture; paleosol odor; no product odor.
	13				12				
	1				13				CLAYEY SAND: dark greenish gray; low to medium plasticity; 50% clay; 15% silt; 35% medium to coarse sand; granular; loose texture; paleosol odor; no product odor.
	14				13				
	1				14			GC	SILTY GRAVEL: silica cemented 1/4 - 1 1/4" diameter rounded quartz pebbles; poor core recovery.
	15				14				
	1				15			SS	SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	16				15				
	4			16	16				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	17				16				
	4	Dry			17				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	18				17				
	3				18				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	19				18				
	3				19				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	20				19				
	5				20				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	21				20				
	5				21				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	22				21				
	5				22				SANDSTONE - (Neroly Formation): very dark greenish brown; 80-90% medium quartz, feldspar and mafic mineral grains subrounded with 10-20% coarse rounded 1/4 - 1" diameter conglomeratic pebbles; minor mica; local 1/4" band of white altered feldspar rich zone perpendicular TCA; sandstone is granular; poorly sorted and is derived from intermediate volcanic rocks (andesite); low hardness; no product odor.
	32				22				

GROUT

BENTONITE

SAND

@19': weak product odor increasing to strong product odor at 23'.

See Page One

PACIFIC ENVIRONMENTAL GROUP, INC.

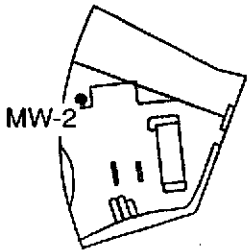
WELL MW-1
PAGE 2 OF 2

PROJECT NO. 325-04.01
LOGGED BY:
DRILLER:
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

CLIENT:
DATE DRILLED:
LOCATION:
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE ANALYZED	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
SAND CAP SLOUGH	5	Dp-Mst	>200	22	23			SS	SANDSTONE (Neroly Formation): continued @23': 1/2" altered epidotized vein at 35° TCA, horizontal parting common; very strong product odor at 25' and continues with depth. @29': bedding at 80° TCA. @31': moderate product odor; equigranular sandstone. @32': poor core recovery due to saturation of sandstone; weak product odor. @38': 5" bed of subrounded conglomerate pebbles from 1/4" to 2" diameter; no product odor. @39': 1mm wide chlorite veinlets at 12° TCA. BOTTOM OF BORING AT 39.5'
	6	Dp	>220		24				
	2	Dp	>220		25				
	7	Dp	53	26					
	8	Wt	70	27					
	9	Wt	12	28					
		Dp		29					
		Dp		30					
		Dp		31					
		Dp		32					
		Dp		33					
		Dp		34					
		Dp		35					
		Dp		36					
		Dp		37					
	Dp		38						
	Dp		39						
			40						
			41						
			42						
			43						
			44						

LOCATION MAP



NORTHING 270.1 EASTING 131.9 ELEVATION 27.22

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. MW-2
PAGE 1 OF 2

PROJECT NO. 325-04.01
LOGGED BY: RWNT
DRILLER: GREAT SIERRA
DRILLING METHOD: AIR ROTARY
SAMPLING METHOD: DRY CORE
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: #2-/16 Lonestar

CLIENT: CHEVRON
DATE DRILLED: 12-10-92
LOCATION: Grant Line Road
HOLE DIAMETER: 8"
HOLE DEPTH: 37'
WELL DIAMETER: 2"
WELL DEPTH: 36'
CASING STICKUP: ~2.1

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	FOID (%)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
		Dp			1			SC	CLAYEY SAND - FILL: brown to dark brown; low plasticity; 25% clay; 15% silt; 60% medium sand; abundant subangular lithic fragments throughout; loose; no product odor.
					2				
					3			SS	SANDSTONE (Neroly Formation): >90% fine to medium sand as subangular quartz and mafic mineral grains and weakly altered feldspar; sucrosic texture; weak alteration; moderate to hard; no product odor. @2-5.5': moderate alteration evident as iron oxide surrounding up to 10% rounded 1/4 - 1" conglomeratic pebbles; 50% pebbles from 2-3'. @5': bedding attitude at 55° TCA. @14-19': loose; unconsolidated sandstone; no core recovery. @20': pebbles; brown to dark brown; matrix is >90% quartz and altered chloritic minerals; ~5-20% intergranular porosity; angular grains; pebbles are subangular, 1/4 - 1" diameter pebbles weathered by iron oxide and manganese oxide; hard; no product odor.
					4				
	1			16	5				
					6				
					7				
					8				
					9				
					10				
					11				
	2	Dp		8	12				
					13				
					14				
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

GROUT

BENTONITE

SAND

See Page One

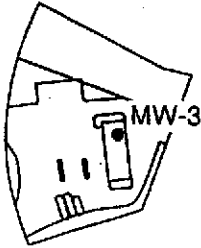
PROJECT NO. 325-04.01
 LOGGED BY:
 DRILLER:
 DRILLING METHOD:
 SAMPLING METHOD:
 CASING TYPE:
 SLOT SIZE:
 GRAVEL PACK:

CLIENT:
 DATE DRILLED:
 LOCATION:
 HOLE DIAMETER:
 HOLE DEPTH:
 WELL DIAMETER:
 WELL DEPTH:
 CASING STICKUP:

WELL COMPLETION	CORE BOX	RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE ANALYZED	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
						23			SS	SANDSTONE (Neroly Formation): continued
				0		24				
		5				25				@25-26': sandy claystone; brown to dark brown; fine sandy texture; horizontal platy fracturing; rare mineral grain solution cavities; moderate hardness; no product odor.
			Dp-Mst		6	26				
		2				27				@27.5': parting common at 80° TCA.
				0		28				@28.5-29.3': sandy claystone; brown to dark brown; fine sandy texture; horizontal platy fracturing; rare mineral grain solution cavities; moderate hardness; no product odor.
			Wt			29				
				0		30				
		3				31				@31.5': bedding at 75° TCA.
			Mst			32				
				0		33				@33.3-34': brecciated claystone as described above; rare biotite; moderate hardness; crushed fracturing; no product odor.
			Wt			34				@34-36': Neroly Formation; intense parting at 76° TCA.
		7				35				
			Dp			36				@36-36.2': brecciated claystone as described above; rare biotite; moderate hardness; crushed fracturing; no product odor.
			Wt			37				
				1		38				
						39				
						40				
						41				
						42				
						43				
						44				

BOTTOM OF BORING AT 37'

LOCATION MAP



NORTHING 220.3 EASTING 242.3 ELEVATION 29.26

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. 3333
PAGE 1 OF 2

PROJECT NO. 325-04.01
 LOGGED BY: RWNT
 DRILLER: GREAT SIERRA
 DRILLING METHOD: AIR ROTARY
 SAMPLING METHOD: DRY CORE
 CASING TYPE: Sch 40 PVC
 SLOT SIZE: 0.020"
 GRAVEL PACK: #2-/16 Lonestar

CLIENT: CHEVRON
 DATE DRILLED: 12-10-92
 LOCATION: Grant Line Road
 HOLE DIAMETER: 8"
 HOLE DEPTH: 40'
 WELL DIAMETER: 2"
 WELL DEPTH: 37.5'
 CASING STICKUP: ~2.3

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
					1		CL	SC	CLAYEY SAND - FILL: moderate plasticity; 50% clay; 10% silt; 40% fine to medium sand; occasional to 3" angular lithic fragments throughout; minor roots; soft; no product odor. @1': 3-4" asphalt layer
					2				
	1		Dp		3				SANDY CLAY - FILL: yellowish brown; medium plasticity; 65% clay; 10% silt; 25% fine to medium sand; subangular blocky peds; calcium carbonate and iron oxide blebs and fracture fills; in part lithified with low hardness; minor rounded to 1" pebbles; rare manganese oxide; stiff; no product odor.
					4				
					5				
				0	6				SAND (Neroly Formation): black; <15% fines; 85% fine to medium, subangular, volcanically derived sand; poorly graded; massive; weathered feldspar grains; weakly oxidized; poor recovery; loose; no product odor.
	2				7			SP	
					8				CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
					9				
					10				
			Mst	0	11				CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
					12				
					13				CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
					14				
					15				
				3	16			SS	CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
			Dp	0	17				
					18				CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
					19				
					20				
			Wt	0	21				CONGLOMERATIC SANDSTONE (Neroly Formation): matrix as sand above, but lithified in part; subrounded pebbles to 2" diameter; minor calcium carbonate and iron oxide around pebble edges; intense fracturing; as strong iron oxide alteration throughout matrix from 16-17' and 20-21'. @17-18': rounded 2" diameter pebbles recovered; no sand matrix. @21': see next page.
					22				
	6				24				

GROUT

BENTONITE

SAND

See Page One

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL MW-3
PAGE 2 OF 2

PROJECT NO. 325-04.01
LOGGED BY:
DRILLER:
DRILLING METHOD:
SAMPLING METHOD:
CASING TYPE:
SLOT SIZE:
GRAVEL PACK:

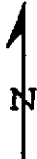
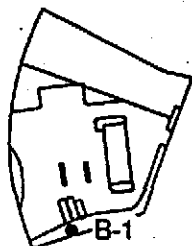
CLIENT:
DATE DRILLED:
LOCATION:
HOLE DIAMETER:
HOLE DEPTH:
WELL DIAMETER:
WELL DEPTH:
CASING STICKUP:

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
SAND	2 7 8 3 9	Dp Dp Mst-Dp	16 2	6 0	23			SS	<p>SANDSTONE (Neroly Formation): black; 90% subangular quartz and weathered mafic minerals; minor feldspar grains fine to medium grained; 10% fines; sucrosic texture; homogeneous; moderate to intense fracturing; weakly weathered; low hardness; no product odor.</p> <p>@22-24': slight clay enriched zone; brittle subhorizontal parting.</p> <p>@23.5': bedding at 62° TCA with perpendicular fracture running at 77° TCA.</p> <p>@28': bedding at 77° TCA with similar high angle fracture perpendicular to bedding at 25° TCA; increased hardness due to cementation; parting common along bedding planes at 75° and 83° TCA.</p> <p>@30': slight product odor.</p> <p>@36': bedding at 55° TCA.</p> <p>@38': high angle fractures at 30° TCA and 11° TCA.</p> <p>BOTTOM OF BORING AT 40'</p>
					24				
					25				
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
38									
39									
40									
41									
42									
43									
44									

SAND

SLOUGH

LOCATION MAP



NORTHING EASTING ELEVATION
154.6 172.9 29.18

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO B-1
PAGE 1 OF 1

PROJECT NO. 325-04.01
LOGGED BY: RWNT
DRILLER: GREAT SIERRA
DRILLING METHOD: AIR ROTARY
SAMPLING METHOD: DRY CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

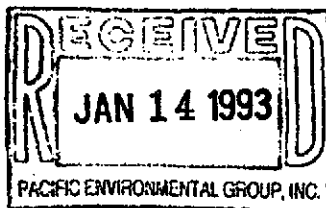
CLIENT: CHEVRON
DATE DRILLED: 12-9-92
LOCATION: Grant Line Road
HOLE DIAMETER: 6"
HOLE DEPTH: 22'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	CORE BOX RUN	MOISTURE CONTENT	PID	ROD (%)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS	
Back Filled With Grout		Mst			1			SP	SAND - FILL: variable color from yellow to dark yellowish brown; no plasticity; 15% clay; 15% silt; 70% fine to medium sand; subrounded; minor wood fragments; local rooted peds of gray clay; loose; no product odor.	
		Dp			2			SM		
				0	3				SILTY SAND - FILL: brown; low plasticity; 15% clay; 25% silt; 60% fine to medium sand; loose; subrounded gravel to 1/2" diameter; no product odor.	
				0	4					
	1	1	Mst		5			SC	CLAYEY SAND - FILL: low plasticity; dark grayish brown; 30% clay; 15-20% silt 50-55% fine to medium sand; abundant angular to 1-1/2" diameter gravel fragments; no product odor.	
				0	6					
			Mst		7			CL	CLAY - FILL: very dark greyish brown; low plasticity; subangular conglomeratic pebbles in dark gray sandy clay matrix; 60% clay; 20% silt; 20% fine to coarse sand; silty texture; angular coarse sand fragments throughout; rare iron oxide blebs; soft; no product odor.	
		2			8					
				2	9					
			Mst-Wt	11	10					
		3			11					
					12					
					13				SM	SILTY SAND - FILL: grayish green; no to low plasticity; 15% silt; 10% clay; 75% medium to coarse sand; subrounded coarse sand pebbles; loose; slight product odor.
					14					
					15					
				15	16				SS	SANDSTONE (Neroly Formation): variable color from white to very dark gray brown; 10% clay; 10% silt; 80% medium quartz and weathered mafic minerals and iron oxide altered feldspars, subangular; abundant to 1/2" clastic fragments; weak fracturing; intragranular porosity; hard; no to weak product odor.
					17					
		4			18					
					19					@19': very dark gray; 10% fines; 90% fine to medium sand; subangular granular sucrosic texture; weak fracturing and alteration; dense; no to weak product odor.
					20					@20': bedding at 77° TCA.
					21					@22': moderate product odor.
				>200	22					

BOTTOM OF BORING AT 22'

ATTACHMENT C

**CERTIFIED ANALYTICAL REPORTS AND
CHAIN-OF-CUSTODY DOCUMENTATION**



December 28, 1992
Sample Log 5549

Ross Tinline
Pacific Environmental Group (Santa Clara Office)
1601 Civic Center Dr., Suite 202
Santa Clara, CA 95050

Subject: Analytical Results for 9 Soil Samples
Identified as: Project # 325 04.01 (Facility 9-7127)
Received: 12/10/92
Purchase Order: 8097900

Dear Mr. Tinline:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on December 28, 1992 and describes procedures used to analyze the samples.

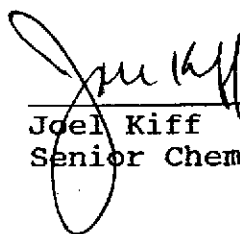
Sample(s) were received in brass sleeves that were sealed with PTFE sheets and plastic endcaps. Each sample was transported and received under documented chain of custody and stored at 4 degrees C until analysis was performed.

Sample(s) were analyzed using the following method(s):

- "BTEX" (EPA Method 8020/Purge-and-Trap)
- "TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us at 916-757-4650 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:



Joel Kiff
Senior Chemist



Sample Log 5549

5549-1

Sample: B-1 (7')

From : Project # 325 04.01 (Facility 9-7127)

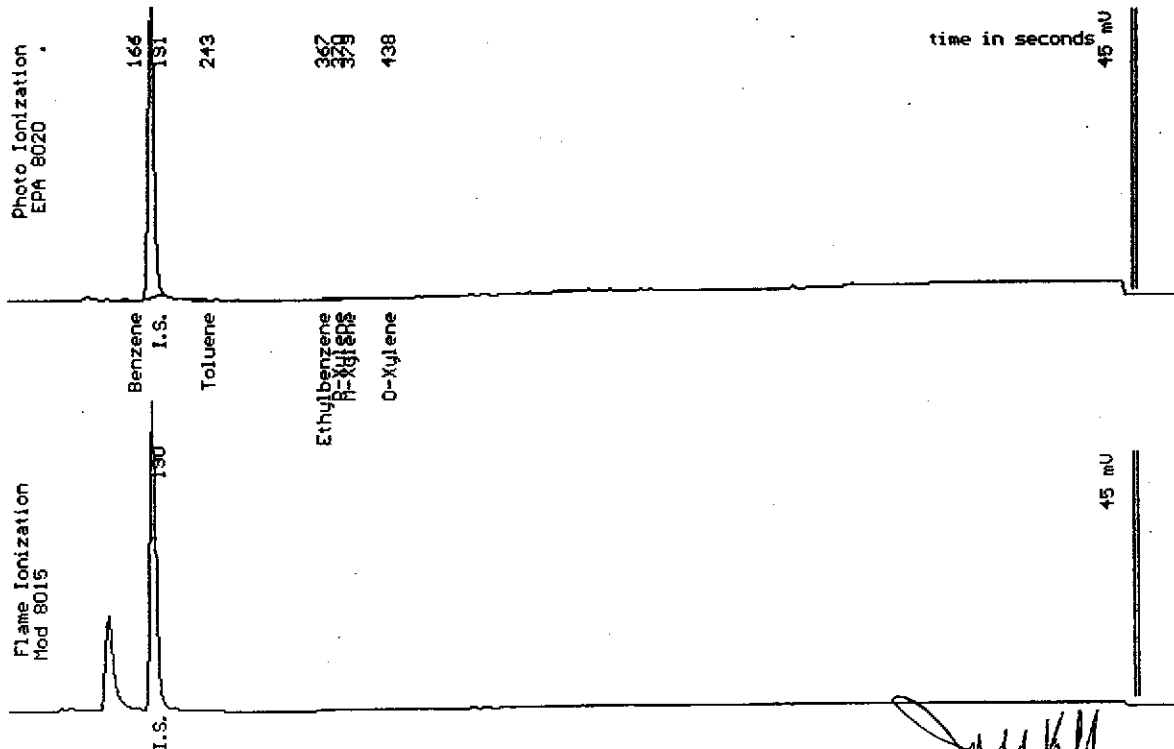
Sampled : 12/09/92

Dilution : 1:1

QC Batch : 4072i

Matrix : Soil

Parameter	(MDL) <small>mg/kg</small>	Measured Value <small>mg/kg</small>
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-21-92
Column : 0.53mm ID X 30m DBMEX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-2

Sample: B-1 (12.5)

From : Project # 325 04.01 (Facility 9-7127)

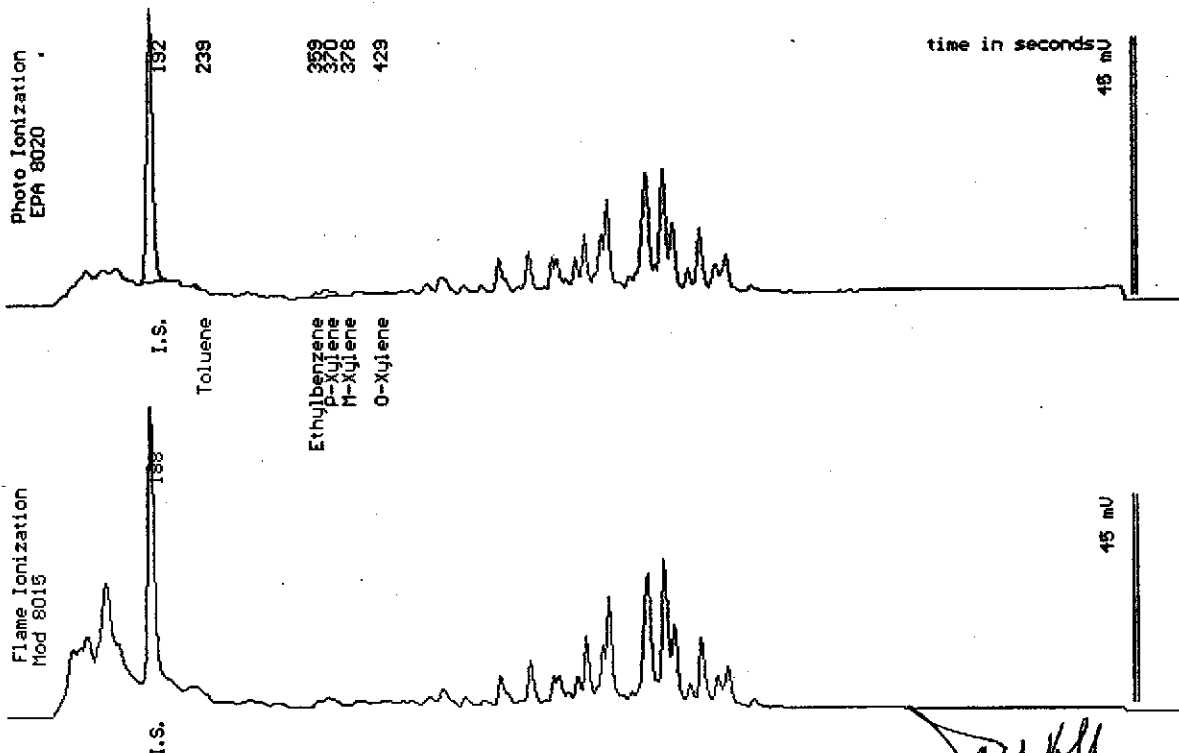
Sampled : 12/09/92

Dilution : 1:1

QC Batch : 4073a

Matrix : Soil

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.015
TPH as Gasoline	(1.0)	4.0



Date Analyzed: 12-23-92
Column : 0.53mm ID X 30m DBMAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-3

Sample: B-1 (17.5)

From : Project # 325 04.01 (Facility 9-7127)

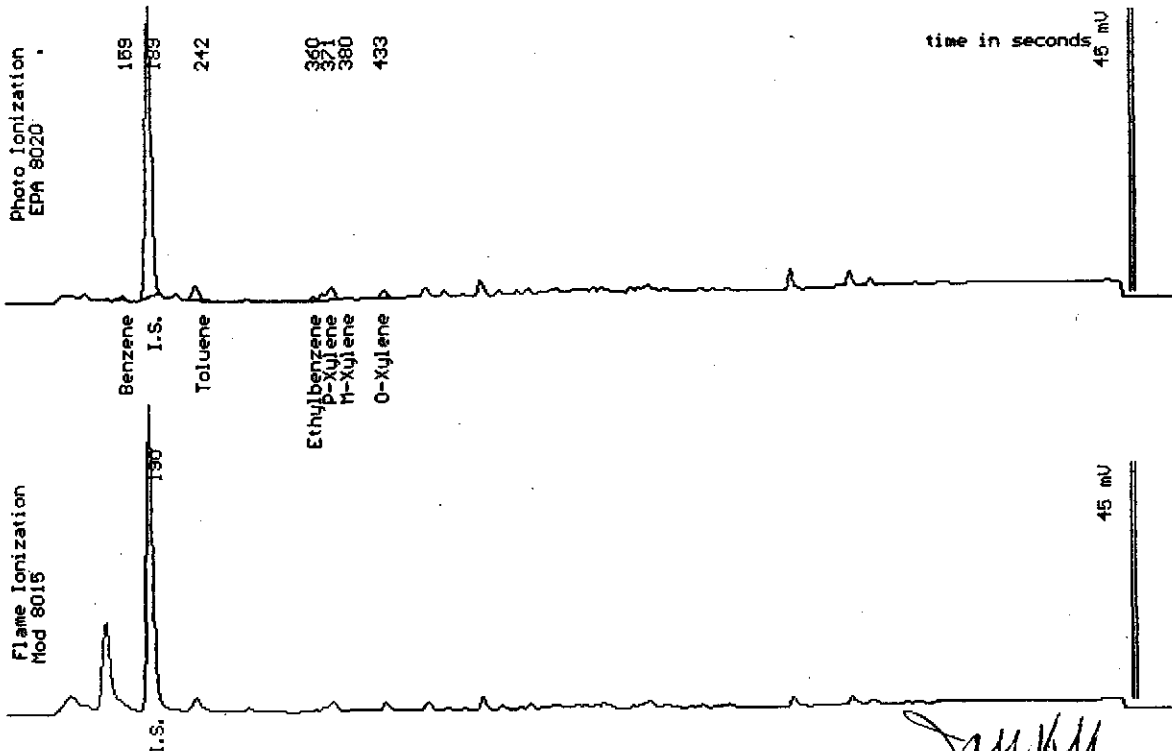
Sampled : 12/09/92

Dilution : 1:1

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) mg/kg	Measured Value mg/kg
Benzene	(.0050)	<.0050
Toluene	(.0050)	.014
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.025
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Joel Kiff
Senior Chemist



Sample Log 5549

5549-4

Sample: B-1 (21.5)

From : Project # 325 04.01 (Facility 9-7127)

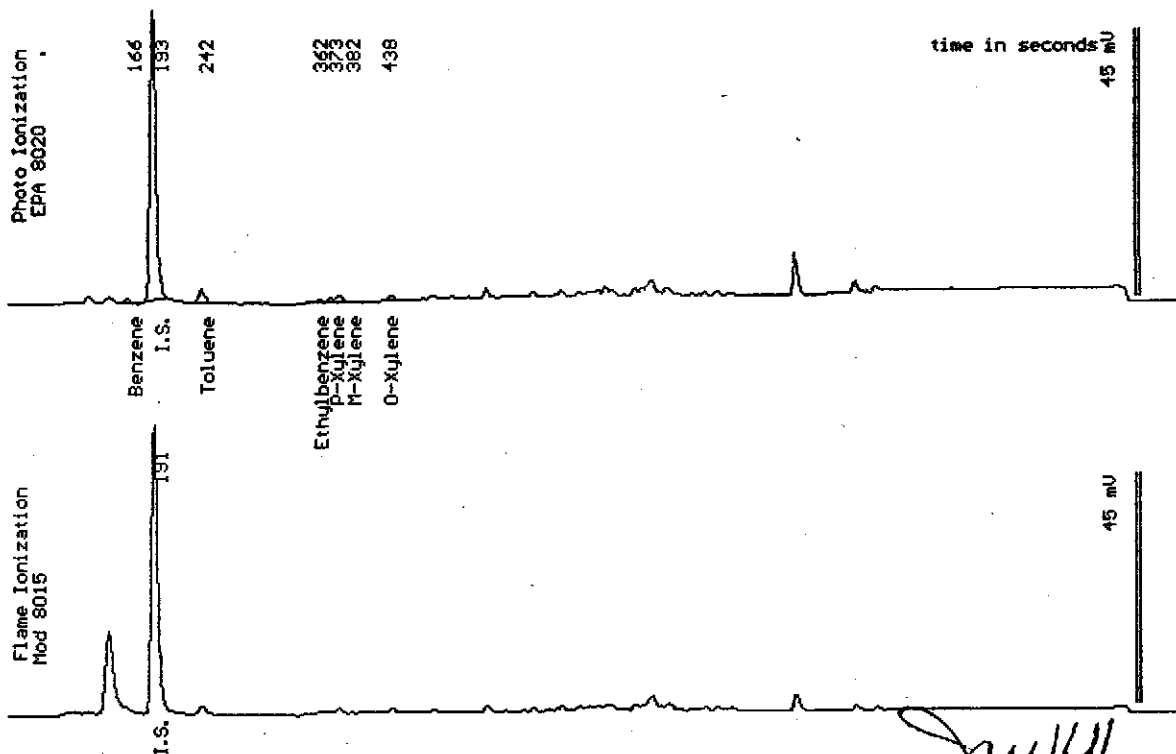
Sampled : 12/09/92

Dilution : 1:1

QC Batch : 4072K

Matrix : Soil

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	.013
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.018
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-23-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-5

Sample: MW-1 (19)

From : Project # 325 04.01 (Facility 9-7127)

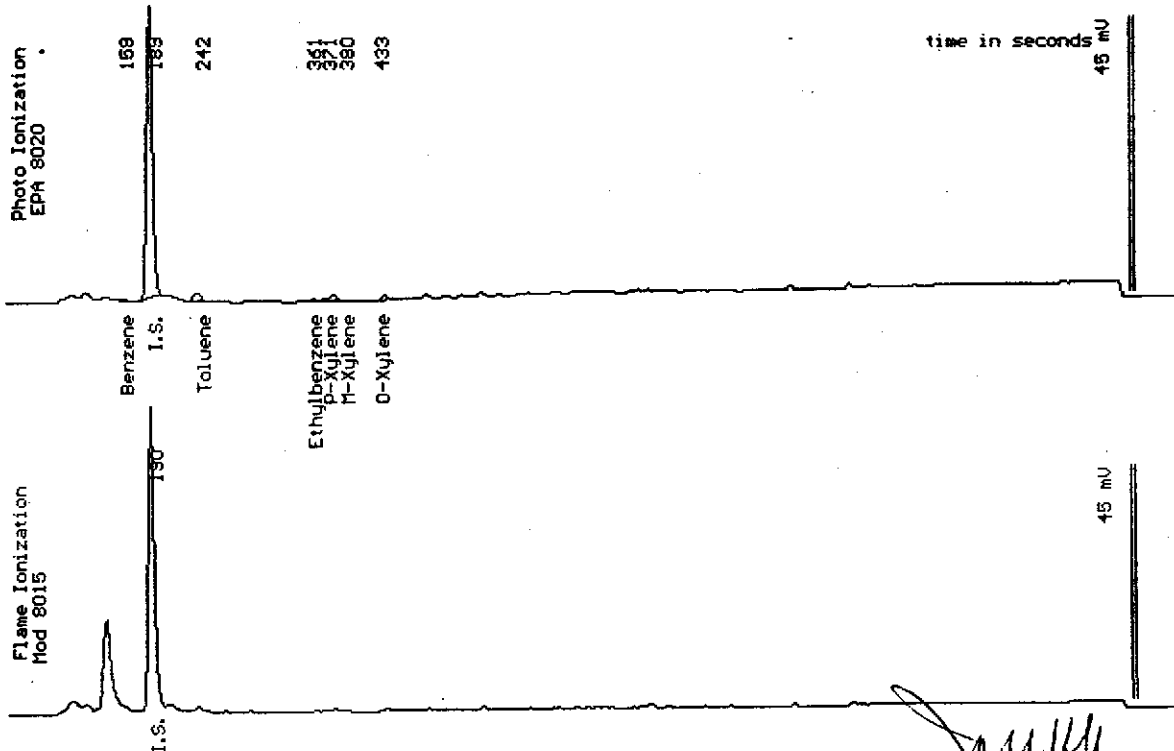
Sampled : 12/08/92

Dilution : 1:1

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	.0056
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.0079
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-6

Sample: MW-1 (24)

From : Project # 325 04.01 (Facility 9-7127)

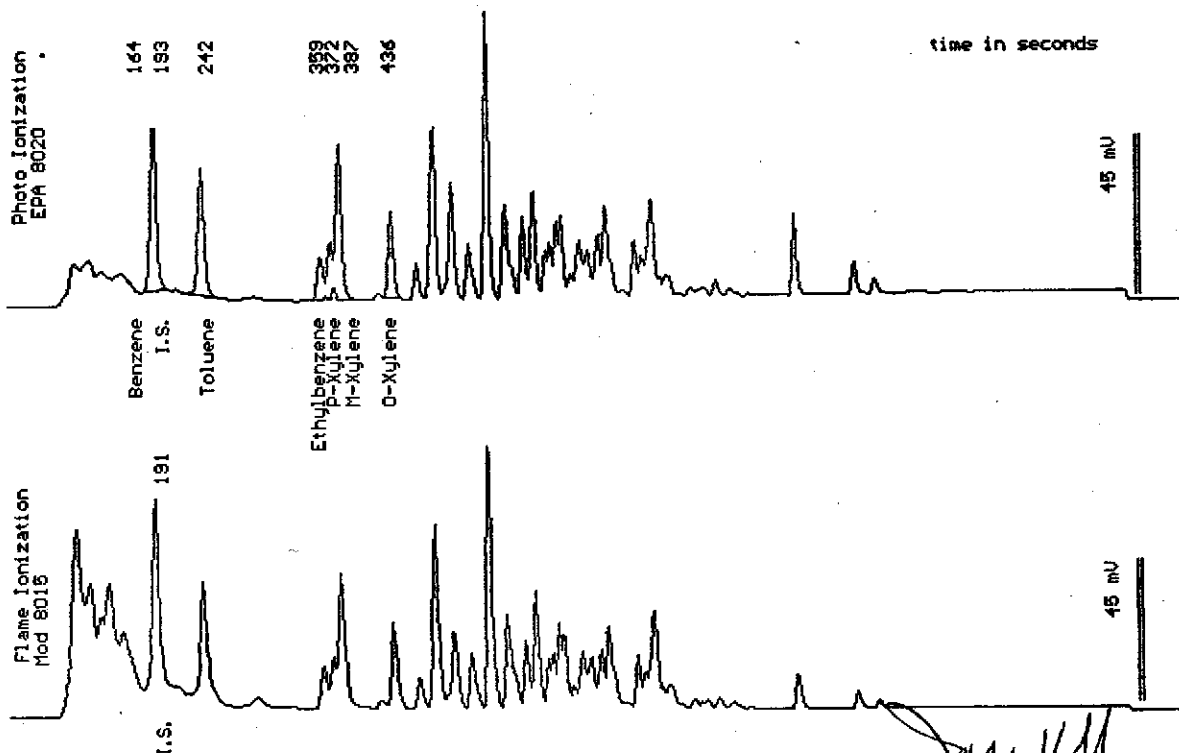
Sampled : 12/08/92

Dilution : 1:1000

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) <small>mg/kg</small>	Measured Value <small>mg/kg</small>
Benzene	(5.0)	<5.0
Toluene	(5.0)	79
Ethylbenzene	(5.0)	30
Total Xylenes	(5.0)	200
TPH as Gasoline	(1000)	2600



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-7

Sample: MW-1 (29)

From : Project # 325 04.01 (Facility 9-7127)

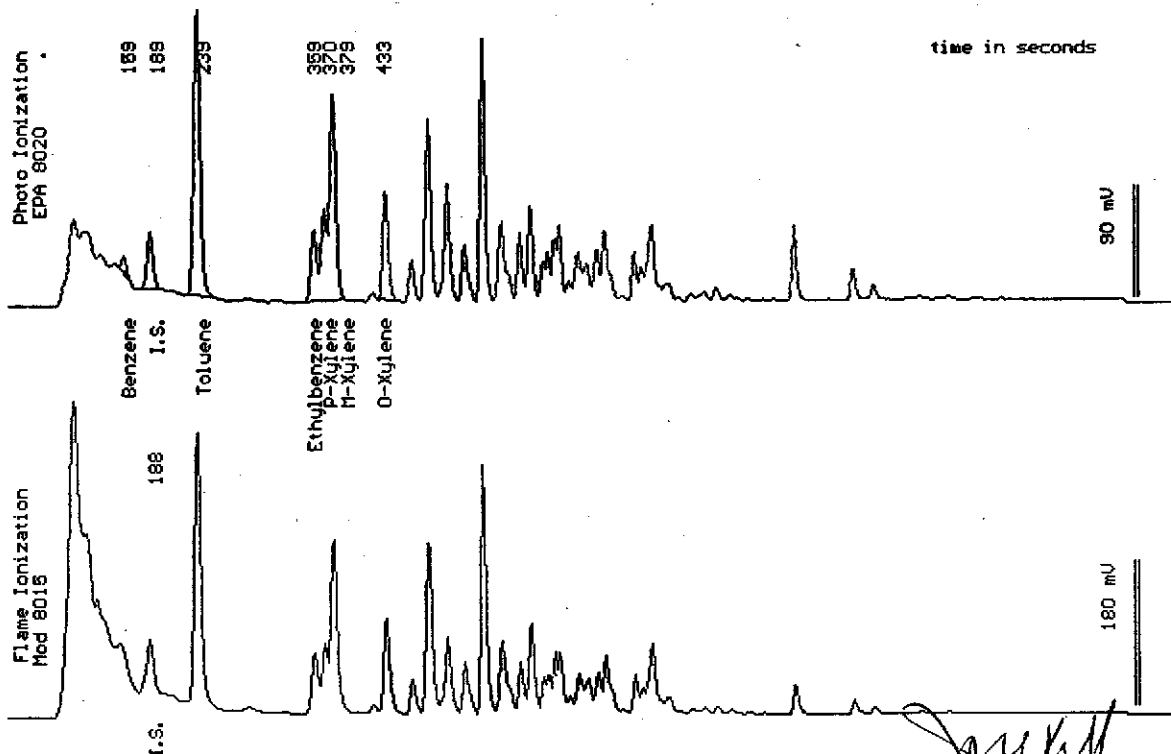
Sampled : 12/08/92

Dilution : 1:1000

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(5.0)	21
Toluene	(5.0)	560
Ethylbenzene	(5.0)	150
Total Xylenes	(5.0)	840
TPH as Gasoline	(1000)	8100



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-8

Sample: MW-1 (30.5)

From : Project # 325 04.01 (Facility 9-7127)

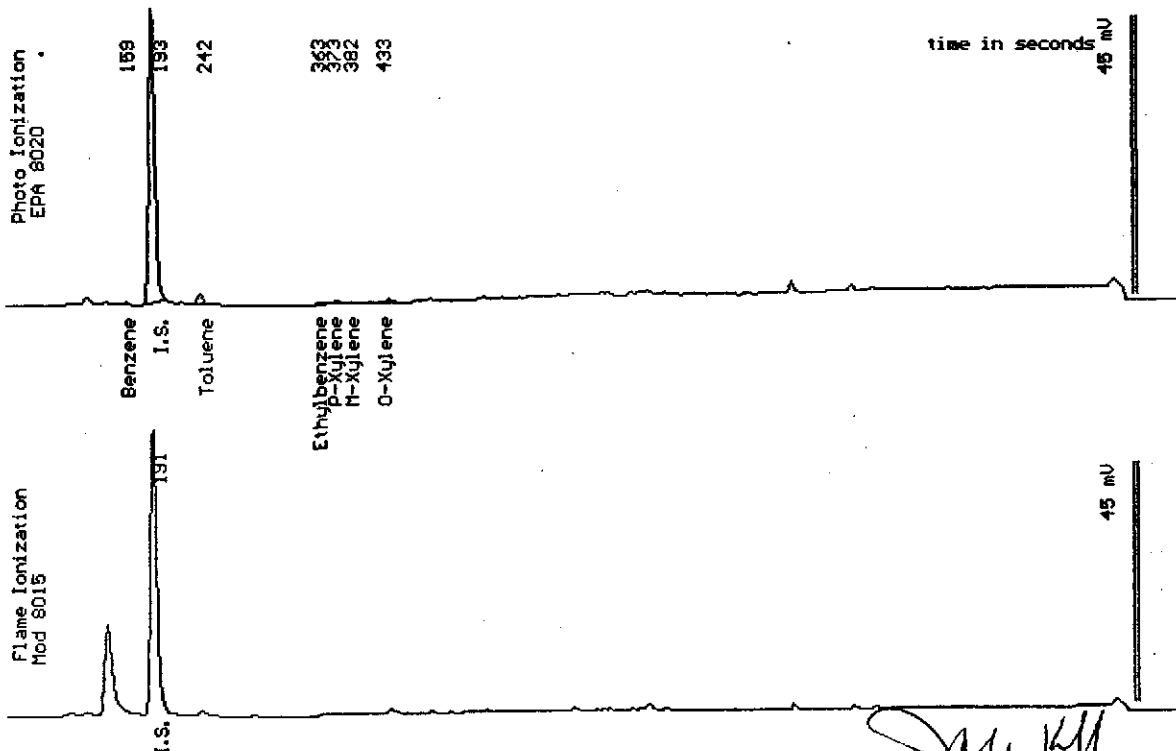
Sampled : 12/08/92

Dilution : 1:1

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) $\mu\text{g}/\text{kg}$	Measured Value $\mu\text{g}/\text{kg}$
Benzene	(.0050)	<.0050
Toluene	(.0050)	<.0050
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	<.0050
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBWAX (J&W Scientific)

Joel Kiff
Senior Chemist



Sample Log 5549

5549-9

Sample: MW-1 (38.5)

From : Project # 325 04.01 (Facility 9-7127)

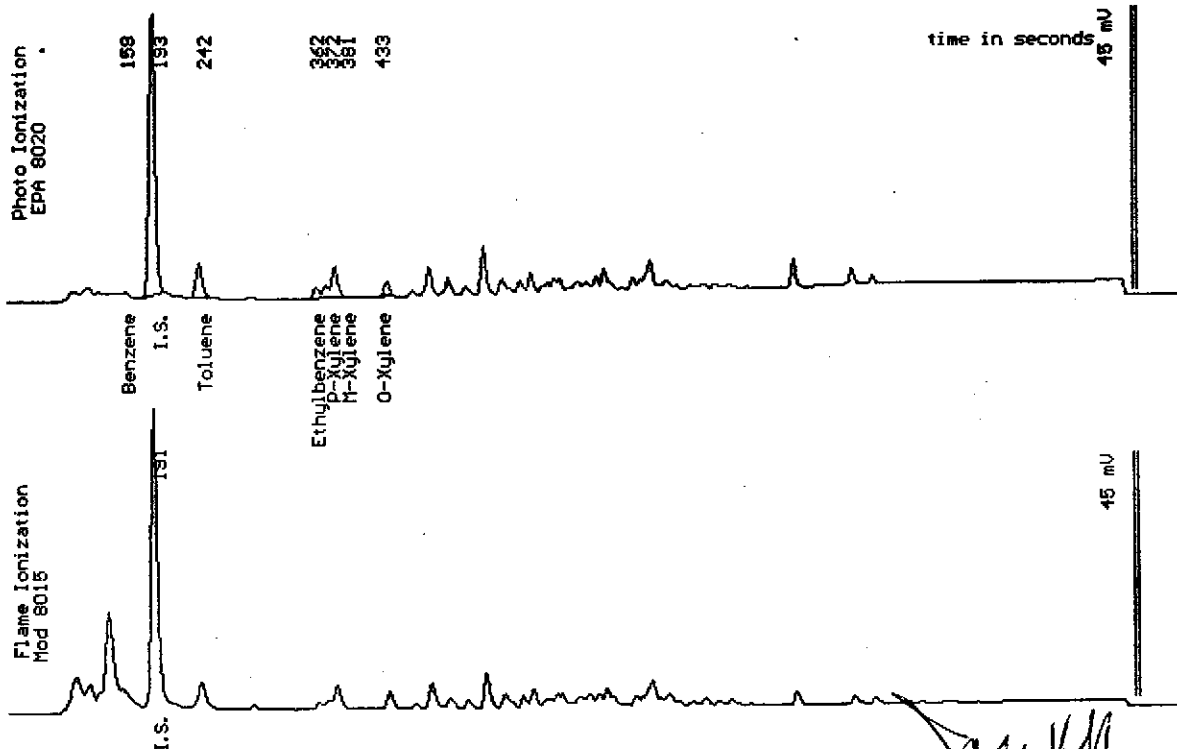
Sampled : 12/09/92

Dilution : 1:1

QC Batch : 4072j

Matrix : Soil

Parameter	(MDL) <small>ug/kg</small>	Measured Value <small>ug/kg</small>
Benzene	(.0050)	<.0050
Toluene	(.0050)	.013
Ethylbenzene	(.0050)	<.0050
Total Xylenes	(.0050)	.024
TPH as Gasoline	(1.0)	<1.0



Date Analyzed: 12-22-92
Column : 0.53mm ID X 30m DBMAX (J&W Scientific)

Joel Kiff
Senior Chemist

PROJECT No.

325 04.01

Chain of Custody

PACIFIC
ENVIRONMENTAL
GROUP, INC1601 Civic Center Dr., Suite 202
Santa Clara, California, 95050
(408) 984-6536 FAX (408) 243-3911

Facility no. 9-7127	Facility Address: GRANT LINE ROAD & I-580, TRACY CA	Billing reference number LAB RELEASE # 8097900
CLIENT engineer: Kenneth Kan	PACIFIC Point of Contact: ROSS Tinline	Sampler: ROSS Tinline
		Laboratory name WEST

Sample I.D.	Lab No.	Container no.	Container size	Sample Preservation	Matrix S - Soil A - Air W - Water C - Charcoal	TYPE G - Grab C - Comp. D - Discrete	Sampling date	Sampling time	BTEX/VPH Gas (8015/8020/5030)	TPH Diesel (8015)	Non Chlorinated H.C. (8020)	Oil and Grease (5520)	Halogenated Volatile Organics (EPA 601/8010)	Purgeable Organics (EPA 624/8240)	Semi Volatile Organics (EPA 625/8270)	Metals Total <input type="checkbox"/> Dissolved <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/>	Lead (EPA 7420/7421) <input type="checkbox"/>
3-1 (7)			2 1/2 x 4"	ICE	S	D	12-9	1200	X									
B-1 (12.5)			↓	↓	↓	↓	12-9	1230	↓									
B-1 (17.5)							1315											
B-1 (21.5)							1330											
MW-1 (19)							12-8	130PM										
MW-1 (24)							12-8	2PM										
MW-1 (29)							12-8	230PM										
MW-1 (30.5)							12-8	3PM										
MW-1 (38.5)							12-9	11AM										

Comments:

WILL FINALIZE SAMPLES TO BE ANALYZED TOMORROW (12-11-92)

Condition of sample:

Temperature received:

50C, 18:30, 12-10-92, JAJ

Relinquished by Sampler

ROSS Tinline

Date

12-10-92

Time

16:46

Received by

Iroy J. Jumper

Date

12-10-92

Time

16:41

Relinquished by

Iroy J. Jumper

Date

Time

Received by

Date

Time

Relinquished by

Date

Time

Received by laboratory

Date

Time

Turnaround time

Priority Rush
1 Business Day Rush
2 Business Days Expedited
5 Business Days Standard
10 Business Days As Contracted

PL1613

Page 2 of 2

PROJECT No.

325 04.01

Chain of Custody

PACIFIC
ENVIRONMENTAL
GROUP, INC1601 Civic Center Dr., Suite 202
Santa Clara, California, 95050
(408) 984-6536 FAX (408) 243-3911

Facility no.

9-7127

Facility Address:

GRANTLINE ROAD & I 580 TRACY CA

Billing reference number

LAB RELEASE 8097900

CLIENT engineer:

Kenneth Kon

PACIFIC Point of Contact:

Ross Tinline

Sampler:

Ross Tinline

Laboratory name

WEST

Sample I.D.	Lab No.	Container no.	Container size	Sample Preservation	Matrix S - Soil A - Air W - Water C - Charcoal	TYPE G - Grab C - Comp. D - Discrete	Sampling date	Sampling time	BTEX/VPH Gas (8015/8020/5030)	TPH Diesel (8015)	Non Chlorinated H.C. (8020)	Oil and Grease (5520)	Halogenated Volatile Organics (EPA 601/8010)	Purgeable Organics (EPA 624/8240)	Semi Volatile Organics (EPA 625/8270)	Metals Total <input type="checkbox"/> Dissolved <input type="checkbox"/>	Lead Org./DHS <input type="checkbox"/>	Lead (EPA 7420/7421) <input type="checkbox"/>	
MW-2 (7)			2x4x4"	ICE	S	D	12-10-92	0900	X										
MW-2 (13)								0930											
MW-2 (19)								1000											
MW-2 (23.5)								1000											
MW-2 (28.5)								1040											
MW-2 (33.5)								1050											
MW-3 (15)							12-10-92	1430											
MW-3 (19.5)								1430											
MW-3 (23)								1450											
MW-3 (29)								1500											
Comments: MW-3 (35) MW-3 (40)								1500 1510											
Condition of sample: NOTE: WILL FINALIZE SAMPLES TO BE ANALYZED ON 12-11-92								Temperature received: 5°C, 18:30, 12-10-92, JAT											
Relinquished by Sampler Ross Tinline				Date 12-10-92		Time 16:46		Received by Troy J. Furman				Date 12-10-92		Time 16:46					
Relinquished by Troy J. Furman				Date		Time		Received by				Date		Time					
Relinquished by				Date		Time		Received by laboratory				Date		Time					

Turnaround time

Priority Rush
1 Business Day Rush
2 Business Days Expedited
5 Business Days Standard
10 Business Days As Contracted

PL 1613

Page 1 of 2

1252 Quarry Lane
P.O. Box 9019
Pleasanton, CA 94566
(510) 426-2600
Fax (510) 426-0106

Clayton
ENVIRONMENTAL
CONSULTANTS

PACIFIC ENVIRONMENTAL GROUP, INC.
PLEASANT HILL

JAN 13 1993

RECEIVED

January 11, 1993

Mr. Scott Pisle
PACIFIC ENVIRONMENTAL GROUP
620 Contra Costa Blvd. Ste. 209
Pleasant Hill, CA 94523

Client Ref. 9-7127/325-04.01
Clayton Project No. 92123.46


Dear Mr. Pisle:

Attached is our analytical laboratory report for the samples received on December 28, 1992. A copy of the Chain-of-Custody form acknowledging receipt of these samples is attached.

Please note that any unused portion of the samples will be disposed of 30 days after the date of this report, unless you have requested otherwise.

We appreciate the opportunity to be of assistance to you. If you have any questions, please contact Suzanne Silvera, Client Services Supervisor, at (510) 426-2657.

Sincerely,



Ronald H. Peters, CIH
Director, Laboratory Services
Western Operations

RHP/caa
Attachments

Results of Analysis
 for
 Chevron U.S.A., Inc./Pacific Environmental Group, Inc.

Client Reference: 9-7127/325-04.01
 Clayton Project No. 92123.46

Sample Identification:	TB-1	Date Sampled:	12/28/92
Lab Number:	9212346-01A	Date Received:	12/28/92
Sample Matrix/Media:	WATER	Date Prepared:	01/05/92
Preparation Method:	EPA 5030	Date Analyzed:	01/05/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	--	0.9	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	--	ND	50
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
a,a,a-Trifluorotoluene	98-08-8	99	50 - 150

ND: Not detected at or above limit of detection
 --: Information not available or not applicable

Results of Analysis
 for
 Chevron U.S.A., Inc./Pacific Environmental Group, Inc.

Client Reference: 9-7127/325-04.01
 Clayton Project No. 92123.46

Sample Identification:	MW-2	Date Sampled:	12/28/92
Lab Number:	9212346-02A	Date Received:	12/28/92
Sample Matrix/Media:	WATER	Date Prepared:	01/06/92
Preparation Method:	EPA 5030	Date Analyzed:	01/06/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	--	0.6	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	--	ND	50
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
a,a,a-Trifluorotoluene	98-08-8	104	50 - 150

ND: Not detected at or above limit of detection
 --: Information not available or not applicable

Results of Analysis
 for
 Chevron U.S.A., Inc./Pacific Environmental Group, Inc.

Client Reference: 9-7127/325-04.01
 Clayton Project No. 92123.46

Sample Identification:	MW-3	Date Sampled:	12/28/92
Lab Number:	9212346-03A	Date Received:	12/28/92
Sample Matrix/Media:	WATER	Date Prepared:	01/06/92
Preparation Method:	EPA 5030	Date Analyzed:	01/06/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
Benzene	71-43-2	8,900	0.4
Toluene	108-88-3	660	0.3
Ethylbenzene	100-41-4	380	0.3
p,m-Xylenes	--	480	0.4
o-Xylene	95-47-6	240	0.4
Gasoline	--	19,000	50
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
a,a,a-Trifluorotoluene	98-08-8	107	50 - 150

ND: Not detected at or above limit of detection
 --: Information not available or not applicable

Results of Analysis
 for
 Chevron U.S.A., Inc./Pacific Environmental Group, Inc.

Client Reference: 9-7127/325-04.01

Clayton Project No. 92123.46

Sample Identification:	METHOD BLANK	Date Sampled:	--
Lab Number:	9212346-04A	Date Received:	--
Sample Matrix/Media:	WATER	Date Prepared:	01/06/92
Preparation Method:	EPA 5030	Date Analyzed:	01/06/92
Analytical Method:	EPA 8015/8020		

Analyte	CAS #	Concentration (ug/L)	Limit of Detection (ug/L)
<u>BTEX/Gasoline</u>			
Benzene	71-43-2	ND	0.4
Toluene	108-88-3	ND	0.3
Ethylbenzene	100-41-4	ND	0.3
p,m-Xylenes	--	ND	0.4
o-Xylene	95-47-6	ND	0.4
Gasoline	--	ND	50
<u>Surrogates</u>		<u>Recovery (%)</u>	<u>QC Limits (%)</u>
a,a,a-Trifluorotoluene	98-08-8	104	50 - 150

ND: Not detected at or above limit of detection
 --: Information not available or not applicable

Quality Assurance Results Summary
for
Clayton Project No. 92123.46

Clayton Lab Number: 9212329-01A
Ext./Prep. Method:
Date: / /
Analyst:
Std. Source: V921223-01W
Sample Matrix/Media: WATER

Analytical Method: EPA8015 8020
Instrument ID: 02857
Date: 01/05/92
Time: 16:06
Analyst: PF
Units: UG/L

Analyte		Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID)	ND	5.00	5.12	102	4.68	94	98	81	118	9.0	20
GASOLINE	(FID)	ND	200	171	86	180	90	88	80	150	5.1	25
TOLUENE	(PID)	ND	21.0	22.1	105	20.2	96	101	84	118	9.0	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 92123.46

Clayton Lab Number: 9212348-02A
Ext./Prep. Method:
Date: / /
Analyst:
Std. Source: V921223-01W
Sample Matrix/Media: WATER

Analytical Method: EPA8015 8020
Instrument ID: 02857
Date: 01/06/93
Time: 12:01
Analyst: PF
Units: UG/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID) ND	4.00	4.09	102	3.59	90	96	81	118	13	20
GASOLINE	(FID) ND	200	194	97	182	91	94	80	150	6.4	25
TOLUENE	(PID) ND	19.0	18.1	95	16.2	85	90	84	118	11	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.

Quality Assurance Results Summary
for
Clayton Project No. 92123.46

Clayton Lab Number: 9212369-02A
Ext./Prep. Method:
Date: / /
Analyst:
Std. Source: V921223-01W
Sample Matrix/Media: WATER

Analytical Method: EPA8015 B020
Instrument ID: 05587
Date: 01/07/92
Time: 18:14
Analyst: PF
Units: UG/L

Analyte	Sample Result	Spike Level	Matrix Spike Result	MS Recovery (%)	Matrix Spike Duplicate Result	MSD Recovery (%)	Average Recovery (% R)	LCL (% R)	UCL (% R)	RPD (%)	UCL (%RPD)
BENZENE	(PID) ND	4.00	3.59	90	3.67	92	91	81	118	2.2	20
GASOLINE	(FID) ND	200	183	92	190	95	93	80	150	3.8	25
TOLUENE	(PID) ND	14.0	14.2	101	14.5	104	103	84	118	2.1	20

LCS = Laboratory Control Sample
ND = Not detected at or above limit of detection

LCL = Lower Control Limit

UCL = Upper Control Limit
SOR = Spike out of range due to high sample concentration.



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

PACIFIC ENVIRONMENTAL GROUP, INC.
PLEASANT HILL

JAN 13 1993

Pacific Environmental Group
Attn: Scott Pisle

RECEIVED

Project 325-04.01
Reported 01/11/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
87583- 1	WATER WELL	01/07/93	01/08/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 87583- 1

Gasoline: ND<50
Benzene: ND<0.5
Toluene: ND<0.5
Ethyl Benzene: ND<0.5
Xylenes: ND<0.5

Concentration: ug/L



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 87583

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	SPIKE LEVEL	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	200 ng	97/92	5%	70-130
Benzene:	200 ng	89/85	5%	70-130
Toluene:	200 ng	93/90	3%	70-130
Ethyl Benzene:	200 ng	98/94	4%	70-130
Xylenes:	600 ng	97/94	3%	70-130

Richard Srna, Ph.D.

Richard Srna
Laboratory Director



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

MOCK INVOICE

Chevron USA
P.O. Box 5004
San Ramon, CA 94583

Date: 01/11/93
Date Rcvd: 01/08/93
Date Rptd: 01/11/93
Our Job #: 87583
Invoice #: 87583

Pacific Environmental Group Job # 325-04.01
Chevron USA Release # 809-7900 Facility #: 9-7127

<u>QTY/MATRIX</u>	<u>ANALYSIS</u>	<u>EXT. PRICE</u>
1	Water sample(s) for VPHBTXE @	\$0.00 (RUSH)
TOTAL INVOICE		0.00

Please Send Payment To:
Superior Precision Analytical
P.O. Box 1545
Martinez, CA 94553

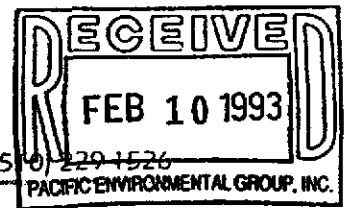
TERMS: NET 30

A charge of 1.5% per month may be applied to unpaid balances.



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526



Pacific Environmental Group
Attn: Scott Pisle

Project 325-04.02
Reported 02/08/93

TOTAL PETROLEUM HYDROCARBONS

Lab #	Sample Identification	Sampled	Analyzed Matrix
87692- 1	WATER WELL	01/22/93	02/05/93 Water

RESULTS OF ANALYSIS

Laboratory Number: 87692- 1

Gasoline: ND<50
Benzene: ND<0.5
Toluene: ND<0.5
Ethyl Benzene: ND<0.5
Xylenes: ND<0.5

Concentration: ug/L



Superior Precision Analytical, Inc.

825 Arnold Drive, Suite 114 • Martinez, California 94553 • (510) 229-1512 / fax (510) 229-1526

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

ANALYSIS FOR TOTAL PETROLEUM HYDROCARBONS

Page 2 of 2
QA/QC INFORMATION
SET: 87692

NA = ANALYSIS NOT REQUESTED
ND = ANALYSIS NOT DETECTED ABOVE QUANTITATION LIMIT
ug/L = parts per billion (ppb)

OIL AND GREASE ANALYSIS By Standard Methods Method 5520F:
Minimum Detection Limit in Water: 5000ug/L

Modified EPA SW-846 Method 8015 for Extractable Hydrocarbons:
Minimum Quantitation Limit for Diesel in Water: 50ug/L

EPA SW-846 Method 8015/5030 Total Purgable Petroleum Hydrocarbons:
Minimum Quantitation Limit for Gasoline in Water: 50ug/L

EPA SW-846 Method 8020/BTXE
Minimum Quantitation Limit in Water: 0.5ug/L

ANALYTE	MS/MSD RECOVERY	RPD	CONTROL LIMIT
Gasoline:	83/95	13%	70-130
Benzene:	80/94	16%	70-130
Toluene:	78/90	14%	70-130
Ethyl Benzene:	83/92	10%	70-130
Xylenes:	85/94	10%	70-130

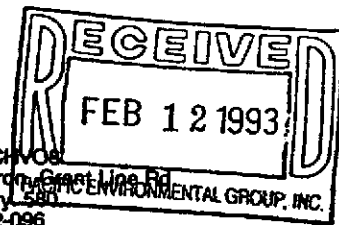
Richard Serra, Ph.D.

[Signature] (for) 2/8/93
Laboratory Director



GTEL
ENVIRONMENTAL
LABORATORIES, INC.

Northwest Region
4080-C Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California
(510) 825-0720 (FAX)



Client Number: PAC01V08
Project ID: Chevron, Grant Line Rd
at Hwy 580, P.O. BOX 1000, PACIFIC ENVIRONMENTAL GROUP, INC.
Work Order Number: C3-02-096
Total Number of Pages: 3

February 10, 1993

Steve Krcik
Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 02/02/93.

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

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

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

Sincerely,
GTEL Environmental Laboratories, Inc.

Eileen F. Bullen
Laboratory Director

Client Number: PACCHV08
 Project ID: Chevron, Grant Line Rd.
 at Hwy. 580
 Work Order Number: C3-02-096
 Total Number of Pages: 3

Table 1
ANALYTICAL RESULTS
 Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water
 EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	02		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		01/29/93	--		
Date Analyzed		02/09/93	02/09/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	3	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	2	<0.5		
BTEX, total	--	5	--		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		101	99.8		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	C302096-1	20	ug/L	108	108	0.0	55 - 129
Toluene	C302096-1	20	ug/L	102	106	3.8	72 - 149
Ethylbenzene	C302096-1	20	ug/L	94.5	100	5.7	75 - 138
Xylene, total	C302096-1	60	ug/L	86.7	103	17.2	74 - 147



Northwest Region
4080-C Pike Lane
Concord, CA 94520
(510) 685-7852
(800) 544-3422 from inside California
(800) 423-7143 from outside California
(510) 825-0720 (FAX)

Client Number: PAC
Project ID: Chevron Grant Line Rd. 5
Hwy. 50
Work Order Number: C3-02-165
Date Reissued: 02-24-93
Total Number of Pages: 2

RECEIVED
FEB 25 1993
PACIFIC ENVIRONMENTAL GROUP, INC.

February 24, 1993

Mary Doden
Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 02/05/93.

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

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

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in cursive script that reads "Eileen F. Bullen".

Eileen F. Bullen
Laboratory Director

Client Number: PAC
 Project ID: Chevron, Grant Line Rd.
 Hwy. 50
 Work Order Number: C3-02-165
 Date Reissued: 02-24-93

Table 1
ANALYTICAL RESULTS
 Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water
 EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	02		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		02/04/93	-		
Date Analyzed		02/05/93	02/05/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	-	-	-		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		97.0	93.4		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.



Northwest Region

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Concord, CA 94520
(510) 685-7852
(800)-544-3422 from inside California
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(510) 825-0720 (FAX)

Client Number: FA
Project ID: 303-01.02
Work Order Number: C3-02349
Total Number of Pages: 3
RECEIVED
FEB 24 1993
PACIFIC ENVIRONMENTAL GROUP, INC.

February 23, 1993

Steve Krcik
Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 02/12/93.

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

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in black ink that reads 'Eileen F. Bullen' followed by a stylized flourish.

Eileen F. Bullen
Laboratory Director

Client Number: PAC
 Project ID: 325-04.02
 Work Order Number: C3-02-349

Table 1
ANALYTICAL RESULTS
Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water
EPA Methods 5030, 8020, and Modified 8015a

GTEL Sample Number		01	02		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		02/12/93	--		
Date Analyzed		02/19/93	02/19/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	--	--	--		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		98.4	98.8		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

QC Matrix Spike and Duplicate Spike Results

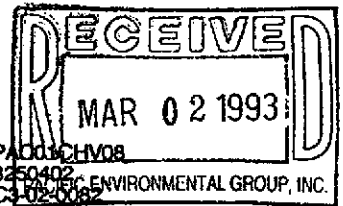
Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	Reagent Water	20.0	ug/L	90.0	90.5	0.6	70 - 147
Toluene	Reagent Water	20.0	ug/L	94.0	91.0	3.2	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	90.0	87.0	3.4	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	90.3	91.0	0.2	71 - 152



Northwest Region

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Client Number: PAD01CHV08
Project ID: 3250402
Work Order Number: C3-02-0082
Total Number of Pages: 3
PACIFIC ENVIRONMENTAL GROUP, INC.

March 1, 1993

Maree Doden
Pacific Environmental Group
2025 Gateway Pl., Ste. 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 02/22/93.

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

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

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in cursive script that reads 'Eileen F. Bullen R. D.'.

Eileen F. Bullen
Laboratory Director

Table 1

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	02		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		02/19/93	-		
Date Analyzed		02/24/93	02/24/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	-	-	-		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		97.3	98.4		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Client Number: PAC01CHV08
Project ID: 3250402
Work Order Number: C3-02-0082

QC Matrix Spike and Duplicate Spike Results

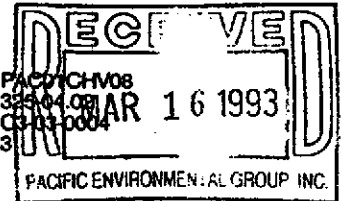
Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	Reagent Water	20.0	ug/L	90.5	86.5	4.5	70 - 147
Toluene	Reagent Water	20.0	ug/L	91.0	86.5	5.1	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	87.5	83.5	4.7	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	91.7	87.8	4.3	71 - 152



Northwest Region
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Client Number: PAC71CHV08
Project ID: 32504.03
Work Order Number: C3030004
Total Number of Pages: 3



March 12, 1993

Maree Doden
Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 02/26/93.

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

GTEL is certified by the California State Department of Health Services, Laboratory certificate numbers 194 and 1075, to perform analyses for drinking water, wastewater, and hazardous waste materials according to EPA protocols.

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

Sincerely,
GTEL Environmental Laboratories, Inc.

A handwritten signature in cursive script that reads 'Eileen F. Bullen/R.D.'.

Eileen F. Bullen
Laboratory Director

Client Number: PAC01CHV08
 Project ID: 325-04.02
 Work Order Number: C3-03-0004

Table 1
ANALYTICAL RESULTS
Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water
EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	02		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		02/26/93	--		
Date Analyzed		03/06/93	03/06/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	--	--	--		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		97.6	102		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Client Number: PAC01CHV08
Project ID: 325-04.02
Work Order Number: C3-03-0004

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	Reagent Water	20.0	ug/L	94.8	95.3	0.526	70 - 147
Toluene	Reagent Water	20.0	ug/L	97.1	99.5	2.44	67 - 150
Ethylbenzene	Reagent Water	20.0	ug/L	93.9	94.9	1.06	69 - 145
Xylene, total	Reagent Water	60.0	ug/L	103	104	0.966	71 - 152



GTEL

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Northwest Region

4080-C Pike Lane

Concord, CA 94520

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(800) 544-3422 from inside California

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(510) 825-0720 (FAX)

Client Number: PAC01CHV08
Project ID: 325-04.02
Work Order Number: C3-03-0125

March 22, 1993

Maree Doden

Pacific Environmental Group, Inc.

2025 Gateway Place, Suite 440

San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 03/08/93.

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

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

Sincerely,

GTEL Environmental Laboratories, Inc.

Eileen F. Bullen

Laboratory Director

Client Number: PAC01CHV08
 Project ID: 325-04.02
 Work Order Number: C3-03-0125

Table 1

ANALYTICAL RESULTS

**Aromatic Volatile Organics and
 Total Petroleum Hydrocarbons as Gasoline in Water**

EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	031293GCM		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		03/04/93	-		
Date Analyzed		03/12/93	03/12/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	-	-	-		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		96.0	96.0		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Client Number: PAC01CHV08
Project ID: 325-04.02
Work Order Number: C3-03-0125

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	DI Water	20.0	ug/L	104	97.5	12.4	55 - 129
Toluene	DI Water	20.0	ug/L	110	102	7.61	72 - 149
Ethylbenzene	DI Water	20.0	ug/L	103	96.5	6.5	75 - 138
Xylene, total	DI Water	60.0	ug/L	113	105	7.3	74 - 147



GTEL

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LABORATORIES, INC.

Northwest Region

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(510) 825-0720 (FAX)

Client Number: PAC01CHV08
Project ID: 325-04.02
Work Order Number: C3-03-0225

March 22, 1993

Maree Doden
Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440
San Jose, CA 95110

Enclosed please find the analytical results for samples received by GTEL Environmental Laboratories, Inc. on 03/12/93.

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

Sincerely,

GTEL Environmental Laboratories, Inc.

Eileen F. Bullen
Laboratory Director

Client Number: PAC01CHV08
 Project ID: 325-04.02
 Work Order Number: C3-03-0225

Table 1
ANALYTICAL RESULTS
Aromatic Volatile Organics and
Total Petroleum Hydrocarbons as Gasoline in Water
EPA Methods 5030, 8020, and Modified 8015^a

GTEL Sample Number		01	031593GCA		
Client Identification		WATER WELL	METHOD BLANK		
Date Sampled		03/11/93	--		
Date Analyzed		03/15/93	03/15/93		
Analyte	Detection Limit, ug/L	Concentration, ug/L			
Benzene	0.5	<0.5	<0.5		
Toluene	0.5	<0.5	<0.5		
Ethylbenzene	0.5	<0.5	<0.5		
Xylene, total	0.5	<0.5	<0.5		
BTEX, total	--	--	--		
TPH as Gasoline	50	<50	<50		
Detection Limit Multiplier		1	1		
BFB surrogate, % recovery		99.4	92.9		

a. Test Methods for Evaluating Solid Waste, SW-846, Third Edition, Revision 0, US EPA November 1986. Modification for TPH as gasoline as per California State Water Resources Control Board LUFT Manual protocols, May 1988 revision.

Client Number: PAC01CHV08
Project ID: 325-04.02
Work Order Number: C3-03-0225

QC Matrix Spike and Duplicate Spike Results

Matrix: Water

Analyte	Sample ID	Spike Amount	Units	Recovery, %	Duplicate Recovery, %	RPD, %	Control Limits
Modified EPA 8020:							
Benzene	C3030225-01	20.0	ug/L	102	91.0	11.4	55 - 129
Toluene	C3030225-01	20.0	ug/L	96.5	86.5	10.9	72 - 149
Ethylbenzene	C3030225-01	20.0	ug/L	90.0	81.5	9.9	75 - 138
Xylene, total	C3030225-01	60.0	ug/L	97.2	88.5	9.4	74 - 147

