Chevron

May 17, 1996

Chevron U.S.A. Products Company
2410 Camino Ramon
San Ramon, CA 94583
P.O. Box 5004
San Ramon, CA 94583-0804

Marketing Department
Phone 510 842 9500

Mr. Scott Seery
Alameda County Health Care Services
Depaartment of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Former Chevron Service Station #9-4930**
3369 Castro Valley Blvd., Castro Valley, California

ENVIRONMENTAL PROTECTION
95 MAY 21 AM 9:15

Dear Mr. Seery:

I am encloseing a report from Pacific Environmental Group, Inc. that details the results of a soil and groundwater investigation that was conduted at the site noted above. This work was performed in accordance with the work plan that was previously submitted to your office.

In accordance to said work plan, four groundwater probes were drilled, one across Castro Valley Blvd. to the northeast of the site, and three along Wilbeam Ave. to the west and southwest of the site. We were unable to drill on the adjoining property to the east (Kragen Auto Parts), as we have not been able to secure access to this property as yet. When access is received, we will proceed with drilling the final probe.

Soil and groundwater samples were analyzed for TPPH-G and BTEX compounds. Goundwater samples were collected at probesGP-1 and GP-2 , and soil samples from probesGP-3 and GP-4. There was no TPPH-G and BTEX detected in the groundwater of probeGP-1. Probe GP-2 had concentrations of TPPH-G and BTEX of 1,600 and 9.6 ppb, respectively. Probe GP-2 is close to the area of previous fueling operations that had been conducted at the southwest corner of Castro Valley Blvd. and Wilbeam Ave., and therfore could be impacted by those previous operations. Since the purpose of this investigation was to delineate the disolved plume no soil samples were collected at probes GP-1 and GP-2

Soil samples were collected at probes GP-3 and GP-4 and no TPPH-G or BTEX was detected in any of the samples analyzed. There was inadequate water recovery in both of these probes and the consultant was unable to collect any water samples for analysis.

Since we were unable to fully define the extent of the dissolved hydrocarbon plume in this investigation, Chevron proposes to install two additional monitoring wells further downgradient of the probes GP-2, GP-3 and GP-4. Access for the downgradient wells will have to be secured prior to drilling. A Work Plan will be submitted for approval prior to any work. Chevron will also review the existing data to determine if it is sufficent to begin a risk evaluation of the site at this time, or if additional data will be needed from the monitoring wells to be drilled. If no additional data is needed we should be able to complete the evaluation in 30-45 days.

May 17, 1996

Mr. Scott Seery
Former Chevron Service Station 9-4930
3369 Castro Valley Blvd., Castro Valley, California

For your information, Chevron has undergone a recent reorganization which has involved the movement and replacement of personel within our Region. I have been assigned all projects in Alameda County , with the exception of the City of Berkeley and the area covered be the Alameda County Water District. Therefore I have taken over the responsibility of this site from Mr. Kenneth Kan of this office. If you have any questions, please call me at (510) 842-9136.

Sincerly,
CHEVRON PRODUCTS COMPANY

Philip R. Briggs
Site Assessment and Remediation Project Manager

Enclosure

cc: Mr. Kevin Graves, RWQCB-San Francisco Bay Region
2101 Webster St., Suite 500, Oakland, CA 94612

Anna Counelis & Tula Gallanes
109 Casa Vieja Place, Orinda, CA 94563

Mr. Mark Sullivan, Pacific Environmental Group, Inc.
2025 Gateway Place, Suite 440, San Jose, CA 95110

Ms. Bette Owen, Chevron Products Co.

PACIFIC
ENVIRONMENTAL
GROUP, INC.

April 18, 1996
Project 320-156.1A

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

ENVIRONMENTAL
PROTECTION
96 MAY 21 AM 8:16

Re: Soil and Groundwater Investigation
Former Chevron Service Station 9-4930
3369 Castro Valley Boulevard at Wilbeam Avenue
Castro Valley, California

Dear Mr. Kan:

This letter report, prepared by Pacific Environmental Group, Inc. (PACIFIC) on behalf of Chevron Products Company (Chevron), presents the results of a soil and groundwater investigation conducted at the site referenced above (Figures 1 and 2). The purpose of the investigation was to complete definition of the dissolved petroleum hydrocarbon plume. The investigation was performed in accordance with PACIFIC's *Work Plan* dated September 13, 1995. This letter report includes a discussion of site background, previous investigations, scope of work, and findings.

Field and laboratory procedures, boring logs, survey elevation data, and Blaine Tech Services, Inc. (Blaine) well development and well sampling reports are presented as Attachment A. Certified analytical reports and chain-of-custody documentation are presented as Attachment B. The results of an off-site data search are presented as Attachment C.

SITE BACKGROUND

The subject site is a former Chevron service station located at 3369 Castro Valley Boulevard in Castro Valley, California (Figure 1). The site lies at an elevation of approximately 170 feet above mean sea level (MSL). Surface topography slopes gently toward the south-southwest. The nearest surface water to the site is an unnamed tributary of San Lorenzo Creek which flows south-southwesterly into the San Francisco Bay.

The unnamed tributary is located approximately 1,500 feet to the east of the Chevron site. Regional groundwater flow in the vicinity of the site is inferred to the south-southwest.

Land usage in the site vicinity is primarily commercial, including retail stores, restaurants, a dry cleaners, and auto repair facilities. The Sal's Foreign Car Service site is located across Wilbeam Avenue west of the Chevron site. A Kragen auto parts store is located adjacent to, and east of the Chevron site. Residences, including apartment complexes and single-family homes, are also located in the vicinity of the site.

Available data indicate that the site was operated by Chevron in at least two configurations. The original site layout included four underground fuel storage tanks, two product islands, a station building, and one underground used oil storage tank. These facilities were located in the central to northeastern portion of the site. The station was subsequently remodeled to include three underground fuel storage tanks and two product islands in the western portion of the site, and a car wash facility in the central to northeastern portion of the site. The car wash facility included underground water reclamation tanks.

PREVIOUS INVESTIGATIONS

Investigative activities at the site were initiated in November 1992 by Resna Industries, Inc. (Resna). Work performed by Resna included the performance of a water-supply well survey, which identified 58 documented wells within 1/2 mile of the site. Resna also performed an off-site source search, which documented the presence of five fuel leak sites within 750 feet of the Chevron site. Field investigations performed by Resna included the drilling of exploratory Soil Borings B-1 through B-10, and the installation of temporary well casings in Borings B-1 through B-4. Resna also drilled hand-augered Soil Borings H-1 through H-6. Soil samples from all borings, and groundwater samples from Borings B-1 through B-4 were submitted for laboratory analysis. Details of this investigation were documented in Resna's *Subsurface Environmental Investigation Report* dated December 16, 1992.

In February 1993, the service station and car wash buildings were demolished. In March 1993, the existing service station facilities, including three 10,000-gallon fiberglass underground fuel storage tanks, associated underground product piping, product dispenser islands, and car wash wastewater reclamation tanks were removed. Soil and groundwater samples were collected by Touchstone Developments (Touchstone) during the removal of the service station facilities. Overexcavation activities were performed by Gettler-Ryan, Inc. and documented by Touchstone. The entire northern portion of the site, where the first and second generations of service station facilities had been located,

was excavated to depths of approximately 8 to 15 feet below ground surface (bgs). Approximately 7,500 cubic yards of soil were excavated and off-hauled. Details of the removal of the service station facilities and subsequent overexcavation activities were described in Touchstone's *Tank/Line Removal and Over-Excavation Report* dated June 5, 1993.

In October 1993 Resna drilled additional Soil Borings B-11 through B-14 at the site. These borings were converted to groundwater Monitoring Wells MW-1 through MW-4 by the installation of 2-inch diameter PVC well casings. The wells range in depth from 20-1/2 to 21-1/2 feet. Soil and groundwater samples were submitted for laboratory analysis. The monitoring wells were also surveyed to allow the preparation of groundwater elevation contour maps. Findings of this investigation were documented in Resna's *Additional Subsurface Investigation Report* dated December 13, 1993.

Weiss Associates prepared a *Comprehensive Site Evaluation and Proposed Future Action Plan*, which was finalized on July 11, 1994. This document summarized the findings of previous investigations and remediation at the site, and determined that continued groundwater monitoring and sampling were the most appropriate future actions for the site.

Groundwater monitoring and sampling have been performed at the site on a quarterly basis since October 1993. Groundwater monitoring and sampling are currently performed by Blaine Tech Services, Inc.

The following observations are based on a review of investigative and remedial activities performed at the site to date:

- Soils underlying the site consist primarily of silty to gravely clay to depths of approximately 8 to 12 feet bgs. The surficial clays are underlain by clayey silts in most locations at the site. In the areas of the 1993 overexcavation activities, the site is now underlain by a combination of 2-inch drain rock and Class II aggregate base rock.
- Groundwater has varied from depths of approximately 4.8 to 8.0 feet bgs during the course of groundwater monitoring at the site. Groundwater flow has typically been toward the southwest at hydraulic gradients of approximately 0.005 to 0.010. This is consistent with inferred regional trends.
- Hydrocarbon-impacted soils have been excavated and removed from the site. Figure 2 depicts the extent of the excavation.

- Groundwater samples collected during the first quarter 1996 event contained concentrations of total purgeable petroleum hydrocarbons calculated as gasoline (TPPH-g) ranging from not detected at Well MW-2, to 1,400 parts per billion (ppb) at Well MW-4. Benzene concentrations ranged from not detected at Wells MW-1 through MW-3, to 65 ppb at Well MW-4.

SCOPE OF WORK

In order to complete definition of the dissolved hydrocarbons beneath the site, the following scope of work was performed:

- **Permits.** PACIFIC obtained the appropriate soil boring and groundwater monitoring well permits from the Zone 7 Water Agency prior to initiating field work.
- **Soil Boring and Temporary Well Installation.** PACIFIC drilled four geoprobe borings (GP-1 through GP-4) on January 25, 1996. These borings and temporary wells were drilled and installed to complete definition of the dissolved hydrocarbons beneath the site (Figure 2).
- **Soil and Groundwater Analysis.** Selected soil samples and groundwater samples were submitted to a California State-certified laboratory and analyzed for the presence of TPPH-g and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds).

FINDINGS

Subsurface Conditions

Four groundwater probes were drilled; one across Castro Valley Boulevard to the northeast of the station, and three along Wilbeam Avenue to the west and southwest of the station. Access to the Kragen Auto Parts store on the adjoining property to the east of the station was not obtainable and is currently pending. As a result, the four accessible borings were drilled and the remaining soil boring may be installed at a later date.

Soils encountered during drilling (maximum explored depth of approximately 24 feet bgs) consisted of sandy clay. Groundwater was first encountered at approximately 6 feet bgs and stabilized at approximately 5 feet bgs.

Groundwater Analytical Results

Groundwater was collected at Borings GP-1 and GP-2. Results of the groundwater analysis indicate that TPPH-g and BTEX compounds were not detected in groundwater at Boring GP-1. Groundwater at Boring GP-2 contained TPPH-g and benzene at concentrations of 1,600 and 9.6 ppb, respectively. Groundwater in the vicinity of Boring GP-2 may have been impacted by an underground storage tank (UST) previously owned by Sal's Car Repair. This UST is located approximately 60 feet north of Boring GP-2 on the southwestern corner of the intersection of Castro Valley Boulevard and Wilbeam Avenue. Groundwater analytical data are presented in Table 1.

All of the probes were inserted slowly to prevent the smearing of soils in the boring, however, groundwater was not obtainable at Borings GP-3 and GP-4 due to a lack of groundwater movement into these borings. This situation may have been the result of low permeability soils in the formation. Groundwater bailing from Borings GP-3 and GP-4 was attempted several times over a period of approximately 4 hours; during that time, sufficient groundwater was not available in the boring. Due to time constraints resulting from street closure activities, groundwater sampling from these borings was prevented; therefore, soil samples were analyzed at each of these boring locations. Soil samples were not analyzed at boring locations GP-1 and GP-2 because sufficient groundwater samples were available from these borings.

Soil Analytical Results

Soil samples were collected from Borings GP-3 and GP-4 and analyzed for TPPH-g and BTEX compounds. Soil samples were not analyzed at Borings GP-1 and GP-2 since the purpose of this assessment was to provide delineation of the dissolved plume, and groundwater was collected from each of these borings. Additionally, no product odor was noted at Borings GP-1 and GP-2; therefore, the soil samples were not analyzed for TPPH-g and BTEX compounds.

Soil analytical results at Borings GP-3 and GP-4 indicate that TPPH-g and BTEX compounds were not detected in soils at the 5, 10, and 15 foot bgs intervals. Photo-ionization detector (PID) measurements indicated low concentrations of volatile hydro-carbons in Boring GP-4 at a depth of 10 feet bgs. Since analytical results indicate that soils were not impacted in this boring, these PID measurements at the capillary fringe may be the result of low hydrocarbon concentrations in groundwater in the vicinity of this boring. Soil analytical data are presented in Table 2.

RECOMMENDATIONS

Based on recent guidance provided by the Regional Water Quality Control Board - San Francisco Bay Region dated January 5, 1996, this site may satisfy the criteria for a low risk groundwater case. It is therefore recommended that one or two groundwater monitoring wells be installed to the southwest of the site for the purpose of fully characterizing the dissolved hydrocarbon plume. Once this is established, PACIFIC recommends monitoring groundwater for parameters of biodegradation to asses the presence of natural biodegradation. If plume stability can be established through the mechanism of biodegradation, PACIFIC will assess the feasibility of a risk based corrective action (RBCA) evaluation for this site.

If there are any questions regarding the contents of this letter report, please call.

Sincerely,

Pacific Environmental Group, Inc.

Mark Sullivan
Project Engineer

Michael Hurd
Senior Geologist
CHG 0068

REGISTERED GEOLOGIST
MICHAEL HURD
No. 0068
CERTIFIED
HYDROGEOLOGIST
EXP. 9/96
STATE OF CALIFORNIA

Attachments:
- Table 1 - Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPPH as Gasoline and BTEX Compounds)
- Table 2 - Soil Analytical Data - Total Petroleum Hydrocarbons (TPPH as Gasoline and BTEX Compounds)
- Figure 1 - Site Location Map
- Figure 2 - Extended Site Map
- Attachment A - Field and Laboratory Procedures and Boring Logs
- Attachment B - Certified Analytical Reports and Chain-of-Custody Documentation

Table 1
Groundwater Anlytical Data
Total Petroleum Hydrocarbons
(TPPH as Gasoline and BTEX Compounds)

Chevron Service Station 9-4930
3369 Castro Valley Boulevard at Wilbeam Avenue
Castro Valley, California

Well Number	Date Sampled	Depth to Water (feet)	TPPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)
GP-1	01/25/96	5.00	ND	ND	ND	ND	ND
GP-2	01/25/96	5.20	1,600	9.6	4.5	37	190

TPPH = Total purgeable petroleum hydrocarbons
ppb = Parts per billion
ND = Not detected
See certified analytical reports for detection limits.

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

Chevron Service Station 9-4930
3369 Castro Valley Boulevard
Castro Valley, California

Well Number	Sample Depth (feet)	Date Sampled	TPPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)
GP-3	5	01/25/96	ND	ND	ND	ND	ND
	10		ND	ND	ND	ND	ND
	15		ND	ND	ND	ND	ND
GP-4	5	01/25/96	ND	ND	ND	ND	ND
	10		ND	ND	ND	ND	ND
	15		ND	ND	ND	ND	ND

TPPH = Total purgeable petroleum hydrocarbons
ppm = Parts per million
ND = Not detected
See certified analytical reports for detection limits.

QUADRANGLE LOCATION

REFERENCES:
USGS 7.5 MIN. TOPOGRAPHIC MAP
TITLED: HAYWARD, CALIFORNIA
DATED: 1959 REVISED: 1980

SCALE IN FEET

2000 0 2000

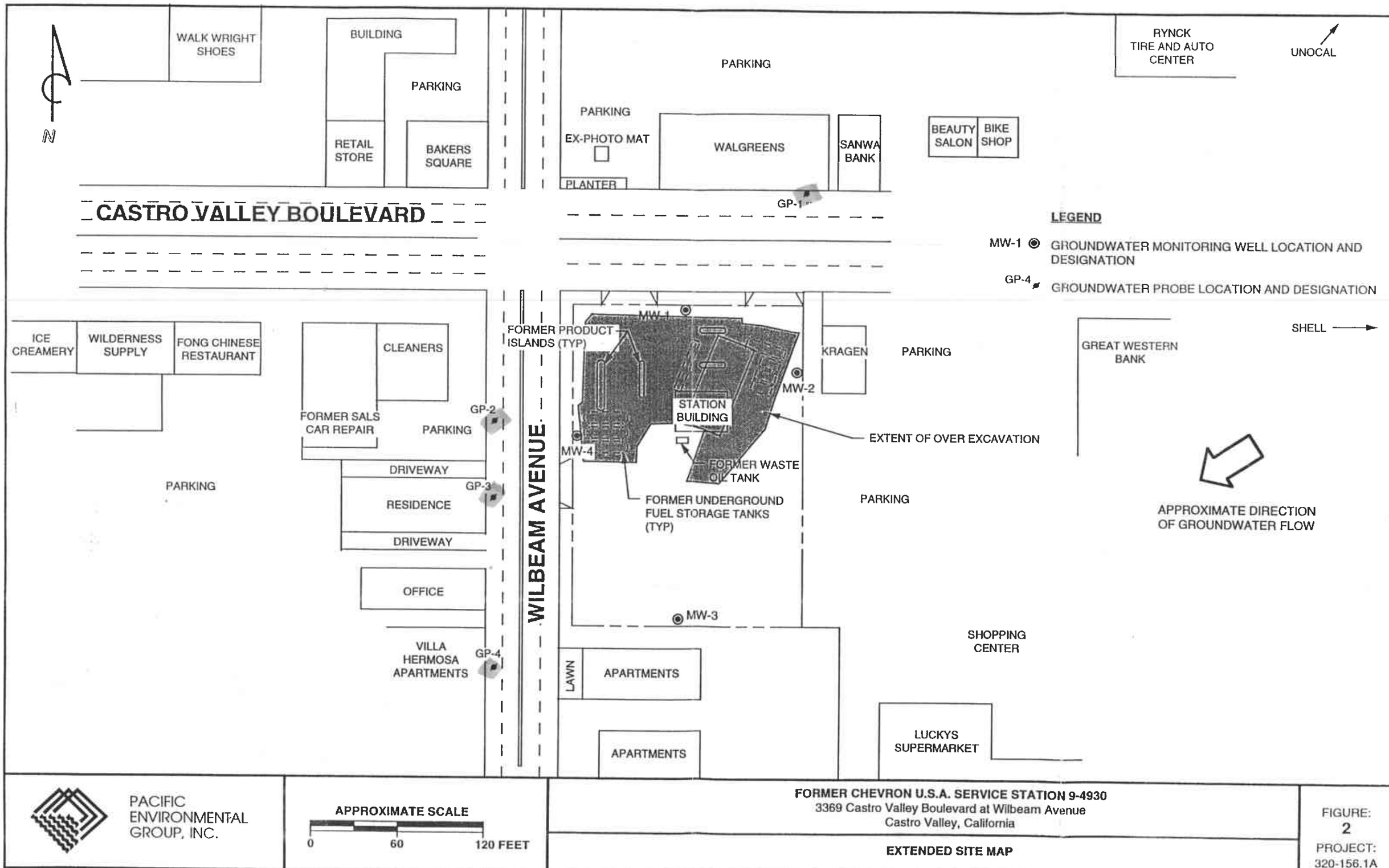
PACIFIC ENVIRONMENTAL GROUP, INC.

FORMER CHEVRON U.S.A. SERVICE STATION 9-4930
3369 Castro Valley Boulevard at Wilbeam Avenue
Castro Valley, California

SITE LOCATION MAP

FIGURE: 1

PROJECT: 320-156.1A



PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 60 120 FEET

FORMER CHEVRON U.S.A. SERVICE STATION 9-4930
3369 Castro Valley Boulevard at Wilbeam Avenue
Castro Valley, California

EXTENDED SITE MAP

FIGURE: 2
PROJECT: 320-156.1A

ATTACHMENT A

FIELD AND LABORATORY PROCEDURES AND BORING LOGS

ATTACHMENT A
FIELD AND LABORATORY PROCEDURES

Groundwater Probes

The groundwater probes were installed using 1.5-inch diameter steel pipe. The pipe was hydraulically driven or pneumatically driven into the subsurface. Selected soil samples will be collected in acetate liners. Groundwater samples will be collected with a bailer from the bore-hole or custom well screen. Groundwater probe sampling equipment will be either steam-cleaned or cleaned in a tri-sodium phosphate solution prior to use. Soil and groundwater samples will be preserved in accordance to the procedures discussed below.

Organic Vapor Procedures

Soil samples collected during drilling were analyzed in the field for ionizable organic compounds using the HNU Model PI-101 (or equivalent) photo-ionization detector (PID) with a 10.2 eV lamp. The test procedure involved placing approximately 30 grams of soil from an undisturbed soil sample in a clean glass jar, and sealing the jar with aluminum foil secured under a ring-type threaded lid. The jar was warmed for approximately 20 minutes in the sun, the foil pierced, and the head-space within the jar analyzed for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument was calibrated prior to drilling using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 55, which relates the photo-ionization potential of benzene to that of isobutylene at 100 ppm. The results of the field testing will be noted on the boring logs. PID readings are useful for indicating relative levels of contamination, but cannot be used to evaluate hydrocar-bon levels with the confidence of laboratory analyses.

Laboratory Procedures

Selected soil samples and groundwater samples were analyzed for the presence of total purge-able petroleum hydrocarbons calculated as gasoline, benzene, toluene, ethylbenzene, and xylenes using modified EPA Methods 8015 and 8020.

WELL LOG
KEY TO ABBREVIATIONS

Drilling Method

HSA - Hollow stem auger
CFA - Continous flight auger
Air - Reverse air circulation

Gravel Pack

CA - Coarse aquarium sand

Sampling Method

Cal. Mod. - California modified split-spoon sampler (2" inner diameter) driven 18" by a 140-pound hammer having a 30" drop. Where penetration resistance is designated "P", sampler was instead pushed by drill rig.
Disturbed - Sample taken from drill-return materials as they surfaced.
Shelby - Shelby Tube thin-walled sampler (3" diameter), where sampler is pushed by drill-rig.

Moisture Content

Dry - Dry
Dp - Damp
Mst - Moist
Wt - Wet
Sat - Saturated

Sorting

PS - Poorly sorted
MS - Moderately sorted
WS - Well sorted

Plasticity

L - Low
M - Moderate
H - High

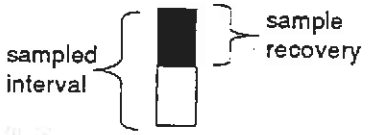
H-NU (ppm)

ND - No detection

Symbols

▽ - First encountered ground water

▼ - Static ground water level



Density (Blows/Foot - Cal Mod Sampler)

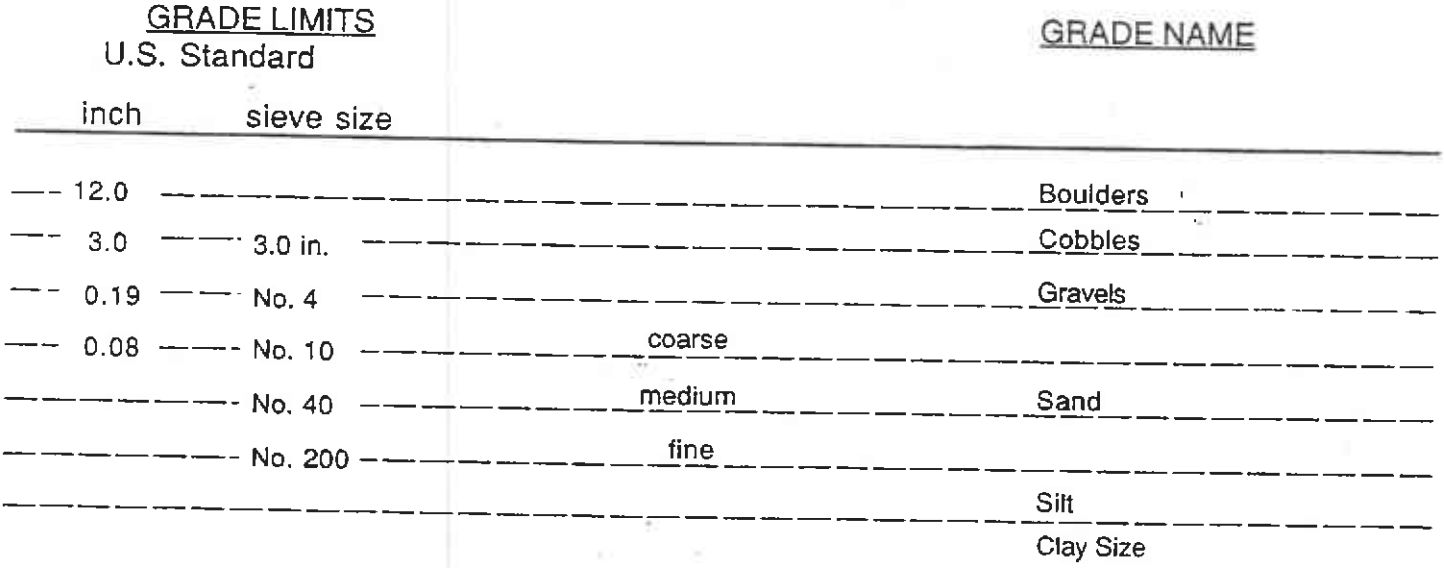
Sands and gravels

0 - 5	- Very Loose
5 - 13	- Loose
13 - 38	- Medium dense
38 - 63	- Dense
over 63	- Very dense

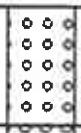
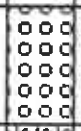
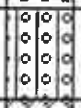
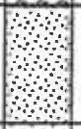
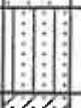
Silts and Clays

0 - 2	- Very Soft
2 - 4	- Soft
4 - 9	- Firm
9-17	- Stiff
17 - 37	- Very Stiff
37 - 72	- Hard
over 72	- Very Hard

GRAIN - SIZE SCALE



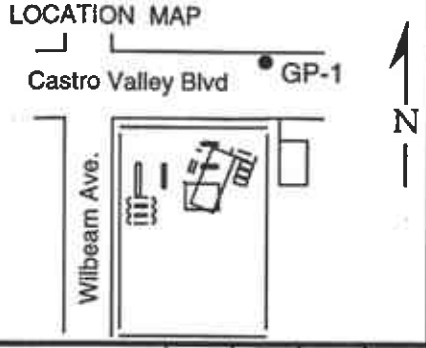
PACIFIC ENVIRONMENTAL GROUP, INC.

Primary Divisions			Group Symbol/Graphic		Typical Names
COARSE GRAINED SOILS more than half is larger than #200 sieve	GRAVELS half of coarse fraction larger than #4 sieve	CLEAN GRAVELS (less than 5% fines)	GW		Well graded gravels, gravel-sand mixtures; little or no fines
			GP		Poorly graded gravels or gravel-sand mixtures; little or no fines
		GRAVEL WITH FINES	GM		Silty gravels, gravel-sand-silt mixtures
			GC		Clayey gravels, gravel-sand-clay mixtures
	SANDS half of coarse fraction smaller than #4 sieve	CLEAN SANDS (less than 5% fines)	SW		Well graded sands, gravelly sands, little or no fines
			SP		Poorly graded sands or gravelly sands; little or no fines
		SANDS WITH FINES	SM		Silty sands, sand-silt mixtures
			SC		Clayey sands, sand-clay mixtures, plastic fines
FINE GRAINED SOILS more than half is smaller than #200 sieve	SILTS AND CLAYS liquid limit less than 50%		ML		Inorganic silts and very fine sand, rock flour, silty or clayey fine sands or clayey silts, with slight plasticity
			CL		Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
			OL		Organic silts and organic silty clays of low plasticity
	SILTS AND CLAYS liquid limit more than 50%		MH		Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
			CH		Inorganic clays of high plasticity, fat clays
			OH		Organic clays of medium to high plasticity, organic silts
HIGHLY ORGANIC SOILS			Pt		Peat and other highly organic soils

PACIFIC ENVIRONMENTAL GROUP, INC.

Unified Soil Classification System

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

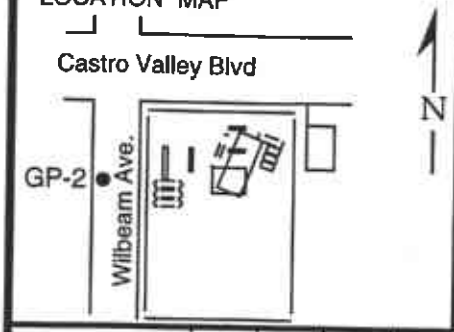
BORING N[redacted]
PAGE 1 OF 1

PROJECT NO. 320-156.1A
LOGGED BY: CWR
DRILLER: ECA
DRILLING METHOD: PNEUMATIC
SAMPLING METHOD: GEOPROBE
CASING TYPE: NA
SLOT SIZE: NA
WELL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 1-25-96
LOCATION: CASTRO VALLEY
HOLE DIAMETER: 2"
HOLE DEPTH: 16'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				2, 4, 6, 8, 10, 12, 14, 16, 18, 20, 22, 24, 26, 28, 30, 32, 34, 36, 38, 40, 42, 44			CL	ASPHALT - 5"; BASEROCK 2" SANDY CLAY: dark yellowish brown; low plasticity; 80-85% clay; 15-20% medium sand yellowish brown in color; rare black specks; no product odor.
	Mst	303						
	Mst-Wt	135						@10': as above; yellowish brown; low plasticity; 50-60% clay; 20-30% medium to coarse sand; 10-20% fine subangular gravel; manganese oxide specks are common; no product odor.
	Mst-Wt	92						@15': as above; low plasticity; no product odor.
								BOTTOM OF BORING AT 16'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. GP-2
PAGE 1 OF 1

PROJECT NO. 320-156.1A
LOGGED BY: CWR
DRILLER: ECA
DRILLING METHOD: PNEUMATIC
SAMPLING METHOD: GEOPROBE
CASING TYPE: NA
SLOT SIZE: NA
WELL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 1-25-96
LOCATION: CASTRO VALLEY
HOLE DIAMETER: 2"
HOLE DEPTH: 16'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				0				ASPHALT 4"; BASEROCK 1-1/2'
				2			CL	SANDY CLAY: dark greenish gray with olive mottling; low plasticity; 80-85% clay; 15-20% medium sand; calcite replacement along rootholes; very faint [redacted] odor.
	Mst	95		4				
				6				
	Mst-Wt	54		8				
				10				@10': as above; yellowish brown; low plasticity; 60-70% clay with silt; 20-30% medium sand; 0-20% fine subangular gravel; manganese oxide specks are common; some olive mottling; no product odor.
	Mst-Wt	16		12				
				14				
				16				@15': as above; more orange to color; low plasticity; manganese oxide specks; no product odor.
				18				
				20				BOTTOM OF BORING AT 16'
				22				
				24				
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP

PACIFIC ENVIRONMENTAL GROUP, INC.

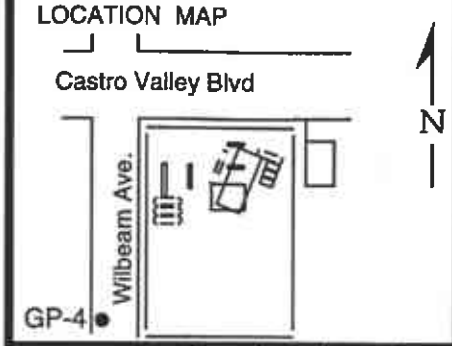
BORING NO. GP-3
PAGE 1 OF 1

PROJECT NO. 320-156.1A
LOGGED BY: CWR
DRILLER: ECA
DRILLING METHOD: PNEUMATIC
SAMPLING METHOD: GEOPROBE
CASING TYPE: NA
SLOT SIZE: NA
WELL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 1-25-96
LOCATION: CASTRO VALLEY
HOLE DIAMETER: 2"
HOLE DEPTH: 24'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout				0				ASPHALT 4"; BASEROCK 1-1/2'
				2			CL	SANDY CLAY: brown; low plasticity; 75-85% clay and silt; 15-25% fine to medium sand; no product odor.
	Mst	5		4				
				6				
				8				
	Mst	4		10				@10': as above; yellowish brown with light olive gray mottling as dominant color; low plasticity; 60-70% clay with silt; 20-30% medium to coarse sand; 0-20% fine subangular gravel; manganese oxide specks; no product odor.
				12				
	Mst-Wt	9		14				@15': as above; yellowish brown with some light olive gray mottling; low plasticity; manganese oxide specks; no product odor.
				16				
				18				
				20				
				22				
				24				BOTTOM OF BORING AT 24'
				26				
				28				
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. [redacted]
PAGE 1 OF 1

PROJECT NO. 320-156.1A
LOGGED BY: CWR
DRILLER: ECA
DRILLING METHOD: PNEUMATIC
SAMPLING METHOD: GEOPROBE
CASING TYPE: NA
SLOT SIZE: NA
WELL PACK: NA

CLIENT: CHEVRON
DATE DRILLED: 1-25-96
LOCATION: CASTRO VALLEY
HOLE DIAMETER: 2"
HOLE DEPTH: 18.5'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Backfilled With Grout								ASPHALT 4"; BASEROCK 1-1/2'
	Dp-Mst	22		2–6			CL	SANDY CLAY: dark yellowish brown with light olive gray mottling; low plasticity; 70-80% clay with silt; 15-25% medium sand; trace coarse sand; manganese oxide specks; no product odor.
	Mst	99		8–12				@10': as above; dark greenish gray with light greenish gray and olive gray mottling; low plasticity; faint product odor.
	Mst	15		14–18				@15': as above; dark yellowish brown with some light olive gray mottling; low plasticity; less sand; manganese oxide specks; no product odor.
				20–44				BOTTOM OF BORING AT 18.5'

ATTACHMENT B

CERTIFIED ANALYTICAL REPORTS AND CHAIN-OF-CUSTODY DOCUMENTATION

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

RECEIVED
FEB 08 1996
PACIFIC ENVIRONMENTAL GROUP, INC

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vlly
Sample Descript: GP-1
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9601100-01

Sampled: 01/25/96
Received: 01/26/96

Analyzed: 01/29/96
Reported: 02/07/96

QC Batch Number: GC012996BTEX03A
Instrument ID: GCHP03

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	50	N.D.
Benzene	0.50	N.D.
Toluene	0.50	N.D.
Ethyl Benzene	0.50	N.D.
Xylenes (Total)	0.50	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	101

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vlly
Sample Descript: GP-2
Matrix: LIQUID
Analysis Method: 8015Mod/8020
Lab Number: 9601100-02

Sampled: 01/25/96
Received: 01/26/96

Analyzed: 01/30/96
Reported: 02/07/96

QC Batch Number: GC012996BTEX02A
Instrument ID: GCHP02

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit ug/L	Sample Results ug/L
TPPH as Gas	250	1600
Benzene	2.5	9.6
Toluene	2.5	4.5
Ethyl Benzene	2.5	37
Xylenes (Total)	2.5	190
Chromatogram Pattern:		Gas

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vlly

Lab Proj. ID: 9601100

Received: 01/26/96

Reported: 02/07/96

LABORATORY NARRATIVE

Fraction -02 was diluted 1:5 due to a high concentration of the target analyte.

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Sullivan

Client Project ID: 320-156.1A/9-4930, Castro Valley
Matrix: LIQUID
Work Order #: 9601I00 01
Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC012996BTEX03A	GC012996BTEX03A	GC012996BTEX03A	GC012996BTEX03A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9601E1402	9601E1402	9601E1402	9601E1402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.9	9.8	10	30
MS % Recovery:	99	98	100	100
Dup. Result:	9.6	9.4	9.7	29
MSD % Recov.:	96	94	97	97
RPD:	3.1	4.2	3.0	3.4
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK012996	BLK012996	BLK012996	BLK012996
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP3	GCHP3	GCHP3	GCHP3
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	9.8	10	30
LCS % Recov.:	100	98	100	100
MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Sullivan

Client Project ID: 320-156.1A/9-4930, Castro Valley
Matrix: LIQUID
Work Order #: 9601I00 02
Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC012996BTEX02A	GC012996BTEX02A	GC012996BTEX02A	GC012996BTEX02A
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	J. Woo	J. Woo	J. Woo	J. Woo
MS/MSD #:	9601E1402	9601E1402	9601E1402	9601E1402
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
Result:	9.7	9.7	9.6	29
MS % Recovery:	97	97	96	97
Dup. Result:	9.8	9.9	9.8	29
MSD % Recov.:	98	99	98	97
RPD:	1.0	2.0	2.1	0.0
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:	BLK012996	BLK012996	BLK012996	BLK012996
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP2	GCHP2	GCHP2	GCHP2
Conc. Spiked:	10 µg/L	10 µg/L	10 µg/L	30 µg/L
LCS Result:	10	10	10	30
LCS % Recov.:	100	100	100	100

MS/MSD LCS Control Limits	70-130	70-130	70-130	70-130

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): MY

WORKORDER: 9601I00
DATE OF LOG-IN: 01/27/96

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s) Present / (Absent)
   Intact / Broken*
2. Custody Seal Nos.: Put in Remarks Section
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absen)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill No.: ———
7. Sample Tags: (Present) / Absent*
   Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper preservatives used: (Yes) / No*
11. Date Rec. at Lab: 1·26·96
12. Temp. Rec. at Lab: 11°C
13. Time Rec. at Lab: 1652

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
01	A,B	GP-1	VOA (2)	LIQ	1/25	
02	↓	GP-2	"	"	"	

1.26.96

* if Circled, contact Project manager and attach record of resolution

Revision 3/21/95

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

Chain-of-Custody-Record

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

Chevron Facility Number 9-4930
Facility Address 3369 Castro Valley Blvd.
Consultant Project Number 320-156.1A
Consultant Name Pacific Environmental Group
Address 2025 Gateway Place Ste.440 San Jose 95110
Project Contact (Name) Mark Sullivan x301
(Phone) (408)441-7500 (Fax Number) 441-9102

Chevron Contact (Name) Kenneth Kan
(Phone) 510 842 1000
Laboratory Name Segovia
Laboratory Release Number 3713531
Samples Collected by (Name) Charlie Rous
Collection Date 1/25/96
Signature [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)	BTEX + TPH GAS (8020 + 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
GP-1	01 A,B	2	W	G		HCl, ice	Y	X												
GP-2	02 ↓	2	W	G		HCl, ice	Y	X												

NOTE: DO NOT BILL TB-LB SAMPLE

9601I00

Relinquished By (Signature)	Organization	Date/Time	Received By (Signature)	Organization	Date/Time
[signature]	PACIFIC	1/26/96 10:00	[signature]	PEG	1/26/96 1000
[signature]	PEG	1/26/96 110	[signature]	SEQ	1/26/96 1:40
Relinquished By (Signature) [signature]	Organization SEQ	Date/Time [illegible]	Recieved For Laboratory By (Signature)		Date/Time

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

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
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RECEIVED
FEB 08 1996
PACIFIC ENVIRONMENTAL GROUP, INC.

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vly
Sample Descript: GP-3,5'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9601H98-01

Sampled: 01/25/96
Received: 01/26/96
Extracted: 01/29/96
Analyzed: 01/29/96
Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	106

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 320-156.1A/9-4930,Castro Vly	Sampled: 01/25/96
2025 Gateway Place, Suite 440	Sample Descript: GP-3,10'	Received: 01/26/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 01/29/96
	Analysis Method: 8015Mod/8020	Analyzed: 01/29/96
Attention: Mark Sullivan	Lab Number: 9601H98-02	Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	112

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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Pacific Environmental Group	Client Proj. ID: 320-156.1A/9-4930,Castro Vly	Sampled: 01/25/96
2025 Gateway Place, Suite 440	Sample Descript: GP-3,15'	Received: 01/26/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 01/29/96
	Analysis Method: 8015Mod/8020	Analyzed: 01/29/96
Attention: Mark Sullivan	Lab Number: 9601H98-03	Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	96

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 320-156.1A/9-4930,Castro Vly	Sampled: 01/25/96
2025 Gateway Place, Suite 440	Sample Descript: GP-4,5'	Received: 01/26/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 01/29/96
	Analysis Method: 8015Mod/8020	Analyzed: 01/29/96
Attention: Mark Sullivan	Lab Number: 9601H98-04	Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	98

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group	Client Proj. ID: 320-156.1A/9-4930,Castro Vly	Sampled: 01/25/96
2025 Gateway Place, Suite 440	Sample Descript: GP-4,10'	Received: 01/26/96
San Jose, CA 95110	Matrix: SOLID	Extracted: 01/29/96
	Analysis Method: 8015Mod/8020	Analyzed: 01/29/96
Attention: Mark Sullivan	Lab Number: 9601H98-05	Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	102

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110

Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vly
Sample Descript: GP-4,15'
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9601H98-06

Sampled: 01/25/96
Received: 01/26/96
Extracted: 01/29/96
Analyzed: 01/29/96
Reported: 02/07/96

QC Batch Number: GC012996BTEXEXA
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Surrogates	**Control Limits %**	**% Recovery**
Trifluorotoluene	70 130	103

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Claudia Hirotsu
Project Manager

Sequoia Analytical

680 Chesapeake Drive, Redwood City, CA 94063, (415) 364-9600, FAX (415) 364-9233
404 N. Wiget Lane, Walnut Creek, CA 94598, (510) 988-9600, FAX (510) 988-9673
819 Striker Avenue, Suite 8, Sacramento, CA 95834, (916) 921-9600, FAX (916) 921-0100

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Sullivan

Client Proj. ID: 320-156.1A/9-4930,Castro Vly
Lab Proj. ID: 9601H98

Received: 01/26/96
Reported: 02/07/96

LABORATORY NARRATIVE

No issues.

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Sequoia Analytical

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Mark Sullivan

Client Project ID: 320-156.1A/9-4930, Castro Valley
Matrix: SOLID
Work Order #: 9601H98 01-06
Reported: Feb 7, 1996

QUALITY CONTROL DATA REPORT

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC012996BTEXEXA	GC012996BTEXEXA	GC012996BTEXEXA	GC012996BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030
Analyst:	M. Otte	M. Otte	M. Otte	M. Otte
MS/MSD #:	9601A0202	9601A0202	9601A0202	9601A0202
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
Result:	0.18	0.19	0.19	0.57
MS % Recovery:	90	95	95	95
Dup. Result:	0.17	0.17	0.18	0.53
MSD % Recov.:	85	85	90	88
RPD:	5.7	11	5.4	7.3
RPD Limit:	0-50	0-50	0-50	0-50
LCS #:	BLK012996	BLK012996	BLK012996	BLK012996
Prepared Date:	1/29/96	1/29/96	1/29/96	1/29/96
Analyzed Date:	1/29/96	1/29/96	1/29/96	1/29/96
Instrument I.D.#:	GCHP1	GCHP1	GCHP1	GCHP1
Conc. Spiked:	0.20 mg/Kg	0.20 mg/Kg	0.20 mg/Kg	0.60 mg/Kg
LCS Result:	0.20	0.21	0.20	0.61
LCS % Recov.:	100	105	100	102
MS/MSD LCS Control Limits	50-150	50-150	50-150	50-150

SEQUOIA ANALYTICAL

Claudia Hirotsu
Project Manager

Please Note:
The LCS is a control sample of known, interferent-free matrix that is analyzed using the same reagents, preparation, and analytical methods employed for the samples. The matrix spike is an aliquot of sample fortified with known quantities of specific compounds and subjected to the entire analytical procedure. If the recovery of analytes from the matrix spike does not fall within specified control limits due to matrix interference, the LCS recovery is to be used to validate the batch.

** MS = Matrix Spike, MSD = MS Duplicate, RPD = Relative % Difference

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

CLIENT NAME: PEG
REC. BY (PRINT): MY

WORKORDER: 9601H98
DATE OF LOG-IN: 01/27/96

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent)
   Intact / Broken*
2. Custody Seal Nos.: Put in Remarks Section
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill No.:
7. Sample Tags: (Present) / Absent*
   Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper preservatives used: (Yes) / No*
11. Date Rec. at Lab: 1-26-96
12. Temp. Rec. at Lab: 12°C
13. Time Rec. at Lab: 1652

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
01	A	GP-3, 5'	CORE(1)	SOIL	1/25	
02		GP-3, 10'				
03		GP-3, 15'				Thin plastic
04		GP-4, 5'				cores
05		GP-4, 10'				
06		GP-4, 15'				
07						

1-26-96

* if Circled, contact Project manager and attach record of resolution