

**Soil and Groundwater  
Investigation Report**

**Unocal Service Station 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California  
6-21-95**

Prepared for

Unocal Corporation

June 21, 1995

Prepared by

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Project 310-038.1C



PACIFIC  
ENVIRONMENTAL  
GROUP, INC.

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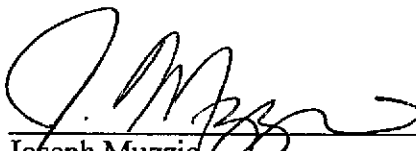
**PROFESSIONAL CERTIFICATION**  
**Soil and Groundwater Investigation Report**

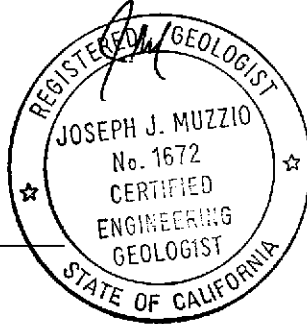
**Unocal Service Station 5430**  
**1935 Washington Avenue at Castro Street**  
**San Leandro, California**  
**June 21, 1995**

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Pacific Environmental Group, Inc. (PACIFIC) has performed a soil and groundwater investigation for Unocal Corporation, at Unocal Service Station 5430, located at 1935 Washington Avenue at Castro Street, California.

The *Soil and Groundwater Investigation Report* has been prepared by the staff of PACIFIC under the professional supervision of the project geologist whose seal and signature appear hereon.

  
Joseph Muzzio  
Project Geologist  
CEG 1672



## EXECUTIVE SUMMARY

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This report has been prepared by Pacific Environmental Group, Inc. (PACIFIC) to document the findings of a soil and groundwater investigation performed at Unocal Service Station 5430, located at 1935 Washington Avenue in San Leandro, California. A summary of the site investigation is as follows:

- The site is an operating Unocal retail service station that has been active since 1965. Unleaded gasoline products are currently stored in two 10,000-gallon underground fiberglass gasoline storage tanks, located in a common excavation in the north-central portion of the property. A 280-gallon underground waste oil storage tank is installed in a separate excavation in the southwest portion of the site.
- The current investigation conducted at the site by PACIFIC included the drilling, logging, and sampling of four borings on February 21 and 22, 1995 to a depth of 42 feet below ground surface (bgs). Groundwater Monitoring Wells U-4, U-5, U-6, and U-7 were installed in the four boring locations.
- The site is underlain primarily by clay, and silty clay, with interbeds of sand, sandy clays and clayey sands, from the ground surface to the maximum depth explored of 42 feet bgs.
- Groundwater was encountered during drilling at between 29 and 30 feet bgs, and stabilized at approximately 26 to 27 feet bgs. Groundwater gradient is approximately 0.03 and flows to the southwest.
- Soil analytical data from the borings showed total petroleum hydrocarbons calculated as gasoline (TPH-g) concentrations ranging from non-detectable to 100 parts per million (ppm). The highest concentration was noted at a depth of 35 feet bgs in a sample collected from boring U-6, downgradient of the product islands. Benzene was also detected at a depth of 35 feet in Boring U-6 at a concentration of 0.088 ppm.
- Groundwater analytical data from Wells U-1 through U-7 showed TPH-g ranging from non-detectable to 14,000 parts per billion (ppb) and benzene

ranging from non-detectable to 860 ppb. The highest concentration of TPH-g was detected in Well U-6, located at the southern property boundary. The highest concentration of benzene was detected in Well U-3, located south of the product islands.

- The maximum extent of dissolved-phase hydrocarbons appears to be limited to the eastern and southern portions of the site in the vicinity of the product islands, which suggests that the product islands are the probable source of petroleum hydrocarbon impact.
- PACIFIC recommends quarterly groundwater monitoring and sampling of all wells to further evaluate trends in groundwater chemistry and flow beneath the site. Additional groundwater investigations may be warranted south of the Unocal site to delineate the downgradient extent of petroleum hydrocarbons in groundwater.

## 1.0 INTRODUCTION

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This report prepared by Pacific Environmental Group, Inc. (PACIFIC) for Union Oil Company of California (d.b.a. Unocal) presents the findings of a soil and groundwater investigation conducted at Unocal Service Station 5430, located at 1935 Washington Avenue at Castro Street in San Leandro, California (Figure 1). The investigation was performed to further delineate the extent of petroleum hydrocarbon impact to groundwater beneath the site. The work was performed as described in a PACIFIC *Work Plan* dated December 27, 1994. Four soil borings were drilled, logged, and sampled. Groundwater monitoring wells were installed in all of the borings. This report includes discussions of the site background, a description of the scope of work performed, the results of the current investigation, and conclusions and recommendations.

## 2.0 BACKGROUND

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### 2.1 Site History

The site has been an active Unocal service station since 1965. Unleaded gasoline products are currently stored in two 10,000-gallon underground fiberglass gasoline storage tanks, located in a common excavation in the north-central portion of the property (Figure 2). These tanks were installed in 1981, to replace the tanks originally installed at the time of construction of the service station. The new tanks were installed in the same excavation which contained the original gasoline tanks. During station construction in 1965, a 280-gallon underground waste oil storage tank was installed in a separate excavation in the southwest portion of the site. This waste oil storage tank is apparently still in use at the site. There are two product islands located in the east-central portion of the site, and two service bays located within the station building in the western portion of the site.

### 2.2 Previous Investigations

Five exploratory soil borings and three groundwater monitoring wells were installed in August 1993. The results of the investigation are presented in a *PACIFIC Soil and Groundwater Investigation Report*, dated December 2, 1994. Soil analytical results were non-detect for total petroleum hydrocarbons calculated as gasoline (TPH-g), benzene, toluene, ethylbenzene, and xylenes (BTEX compounds), except beneath the product island area, where TPH-g concentrations of up to 200 parts per million were detected in capillary fringe zone soils at depths of about 30 feet.

Groundwater has been monitored since August 1993. Depth to water has fluctuated between approximately 28 and 33 feet below ground surface, and groundwater flow has been generally westerly to southerly at a shallow gradient. TPH-g concentrations in site wells have ranged from non-detect to 23,000 parts per billion (ppb). Benzene concentrations in site wells have ranged from non-detect to 1,000 ppb. Well U-3, which is in the vicinity of the pump islands, has consistently had the greatest concentrations of TPH-g and benzene. Well U-1 has had the lowest concentrations of TPH-g and benzene.



### 2.3 Regional Setting and Hydrogeology

The site is located on the San Leandro alluvial cone in the gently bayward-sloping alluvial plain of Alameda County. San Leandro Creek is located approximately 3,500 feet north of the site. The area is bounded on the north by the Oakland alluvial plain, on the east by the foothills of the Diablo Range, on the south by the San Lorenzo and Niles alluvial cones, and on the west by the southern end of San Francisco Bay. The geologic structure of the area is dominated by northwest trending, steeply dipping faults such as the Hayward fault. The Hayward fault zone is a well recognized groundwater barrier which lies near the base of the East Bay hills and traverses the alluvial deposits of the San Leandro cone.

The San Leandro alluvial cone is composed of water-bearing Pliocene-Pleistocene alluvial sediments consisting of a mixture of gravels, sands, and clays. Aquifers in the area are composed of gently westward-sloping sand and gravel beds and can be segregated into five distinct zones: (1) shallow aquifers within 50 feet of the land surface, (2) aquifers between approximately 30 and 100 feet below ground surface (bgs), (3) aquifers between 130 and 220 feet bgs, (4) aquifers between 250 and 400 feet bgs, and (5) aquifers deeper than 400 feet bgs. Most of the shallow aquifers exist under perched conditions, though some are confined by thin clay beds. The water-bearing material in the shallow aquifers is usually silty sand deposits. Groundwater recharge to the shallow aquifers occurs by direct infiltration of precipitation, and from irrigation, and streamflow. During periods of drought some of the perched sand lenses may not yield water to wells. In general, regional groundwater flows from the east to the west, toward San Francisco Bay.

### 3.0 SCOPE OF WORK

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The purpose of the investigation was to further delineate the extent of hydrocarbon-impacted soil and groundwater at the site. The scope of work included the following:

- Subsurface soil and groundwater conditions were explored by drilling, logging, and sampling four borings on February 21 and 22, 1995 to a maximum depth of 42 feet bgs.
- The borings were converted to three on-site Groundwater Monitoring Wells U-4, U-5 and U-6, and one off-site Groundwater Monitoring Well U-7. The wells were constructed of 2-inch diameter well casing and installed to a depth of 40 feet bgs. The wells were developed on February 23, 1995.
- Soil samples were collected from each of the borings in depth intervals of 5 feet, preserved and stored following EPA and DHS guidelines, and submitted to a state-certified laboratory for analysis. Soil samples were selected for analysis of total petroleum hydrocarbons calculated as gasoline (TPH-g) by EPA Modified Method 8015/5030, total petroleum hydrocarbons calculated as diesel (TPH-d) by EPA Modified Method 8015/3550, and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds) by EPA Method 8020/5030.
- Groundwater samples were collected from Wells U-1 through U-7 on March 14, 1995, by MPDS Services Inc. (MPDS), a Unocal sampling contractor. The samples were submitted to a state-certified laboratory and analyzed for TPH-g by EPA Method 8015/5030, and BTEX compounds by EPA Method 8020.
- Wells U-4, U-5, U-6, and U-7 were surveyed for location and elevation relative to mean sea level from a datum with an accuracy of +/- 0.01 foot. Surveying was performed by a state-licensed surveyor. Depth to water measurements collected during groundwater sampling were combined with well elevations to prepare a groundwater elevation contour map.

## 4.0 FINDINGS

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### 4.1 Subsurface Conditions

The site is underlain by thick sequence of clays and silts with laterally and vertically discontinuous sand horizons to the maximum depth drilled of 42 feet. The sand horizons generally range from 1 to 10 feet in thickness, and comprise primarily fine- and medium-grained sand with subangular gravels. Generalized subsurface conditions are shown on Geologic Cross-Sections A-A' and B-B', Figures 3 and 4, respectively. Aquifer materials beneath the site consist of clay with interbedded sand and clayey sand horizons. Field and laboratory procedures are presented as Appendix A. Boring logs, well construction details, and well survey data are presented as Appendix B.

Groundwater in the borings was first encountered during drilling at depths of between approximately 28 and 30 feet bgs. Groundwater stabilized at approximately 26 to 27 feet bgs. Groundwater elevation data for the March 14, 1995 monitoring event are presented in Table 2, and shown on Figure 5. As shown on Figure 5, a northwest trending hydraulic mound occurred beneath the product islands and underground storage tank complex between Wells U-3 and U-2. This hydraulic mounding maybe caused by variations in lithology and hydraulic conductivity across the well screen intervals. Groundwater at the site generally flowed in a southwesterly direction at a gradient of approximately 0.03 feet/foot (Figure 5).

### 4.2 Soil Analytical Results

Soil samples were collected at 5-foot depth intervals from Borings U-4, U-5, U-6, and U-7. Soil samples taken at 5-, 15-, 20-, 25-, 30-, and 35-foot depth intervals were analyzed for TPH-g, TPH-d, and BTEX compounds.

TPH-g and BTEX compounds were reported for the 35-foot sample from Boring U-6, located south of the product islands in the southern portion of the site. In this sample TPH-g and benzene were detected at 100 ppm and 0.088 ppm, respectively. In Boring U-7 a low level of xylene was detected at 0.009 ppm from a sample taken at the 15-foot depth interval. All other samples analyzed were at non-detectable levels. Low levels of TPH-d were detected in all the well borings with the exception of U-5. Soil analytical data are presented in Table 1. Selected soil analytical data are shown on the geologic cross-sections (Figures 3 and 4). Certified

analytical reports, chain-of-custody documentation, and field data sheets are presented as Appendix C.

### 4.3 Groundwater Analytical Results

Groundwater samples were collected from Wells U-1 through U-7 on March 14, 1995 and analyzed for TPH-g and BTEX compounds. A sample taken from Well U-1 on March 14, 1995 was also analyzed for TPH-d.

Concentrations of TPH-g in groundwater ranged from 89 to 14,000 parts per billion (ppb) with the exception of Wells U-5 and U-7, which contained non-detectable levels. Wells U-3 and U-6 had the greatest concentrations of TPH-g at 13,000 and 14,000 ppb, respectively. Concentrations of benzene ranged from non-detectable to 170 ppb with the exception of U-3, which contained 860 ppb. Concentrations of TPH-d were detected in the sample taken from Well U-1 at 71 ppb. Groundwater analytical data is presented on Table 3. TPH-g and benzene concentrations are shown on Figure 6. Certified analytical reports, chain-of-custody documentation, and field data sheets are presented in a MPDS *Quarterly Data Report*, dated April 14, 1995.

## 5.0 CONCLUSIONS AND RECOMMENDATIONS

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The principle conclusions drawn from the information collected during this and previous investigations are as follows:

- Groundwater occurs at depths of between 26 to 30 feet bgs and flows toward the southwest. Local variations in site lithology appear to cause a slight groundwater mounding in the eastern portion of the site beneath the product islands.
- Hydrocarbon-impacted vadose-zone soils have not been detected beneath the site. Concentrations of hydrocarbons have been detected only in soils at the approximate depth of the groundwater surface.
- Newly installed wells U-4 through U-7 have further delineated the dissolved hydrocarbon plume beneath the site. Initial groundwater analytical data from Wells U-7 and U-5 suggest that groundwater in the upgradient (east) and crossgradient (north) directions has not been impacted. Groundwater analytical data from Wells U-1 and U-4 demonstrate that dissolved hydrocarbon concentrations attenuate significantly away from the product islands, toward the west. Initial groundwater analytical data from Well U-6 indicates that petroleum hydrocarbon impact has not been delineated in the downgradient direction, south of the site.
- The maximum extent of dissolved-phase hydrocarbons appears to be limited to the eastern and southern portions of the site in the vicinity of the product islands, which suggests that the product islands are the probable source of petroleum hydrocarbon impact.

PACIFIC recommends quarterly groundwater monitoring and sampling of all wells to further evaluate trends in groundwater chemistry and flow beneath the site. Additional groundwater investigations may be warranted south of the Unocal site to delineate the downgradient extent of petroleum hydrocarbons in groundwater.

Although hydrocarbon impacted groundwater was detected at the western property boundary, additional assessment activities west of the site are not considered feasible due to the density of residential structures.

## REFERENCES

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Alameda County Flood Control and Water Conservation District, *Groundwater in the San Leandro and San Lorenzo Alluvial Cones of the East Bay Plain of the Alameda County*, 1984.

Pacific Environmental Group Inc., *Soil and groundwater Investigation Report, Unocal Service Station 5430, 1935 Washington Avenue, San Leandro, California*, December 2, 1993.

Table 1  
 Soil Analytical Data  
 Total Petroleum Hydrocarbons  
 (TPH as Gasoline and BTEX Compounds)

Unocal Service Station 5430  
 1935 Washington Avenue at Castro Street  
 San Leandro, California

Boring Number	Sample Depth (feet)	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
U-1	9.5 - 11	08/04/93	<1.0	<0.005	0.079	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.20	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	<0.005	0.029	<0.005	<0.005	<0.005
U-2	9.5 - 11	08/05/93	<1.0	<0.005	0.041	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.1	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	<0.005	<0.005	<0.005	<0.005	<0.005
U-3	9.5 - 11	08/05/93	<1.0	<0.005	0.040	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.059	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	0.006	0.007	0.034	<0.005	<0.005
U-4	5 - 5.5	02/21/95	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	15 - 15.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	25 - 25.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	30 - 30.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	35 - 35.5		<1.0	<0.005	<0.005	<0.005	<0.005	1.2
U-5	5 - 5.5	02/21/95	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	15 - 15.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	25 - 25.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	30 - 30.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	35 - 35.5		<1.0	<0.005	<0.005	<0.005	<0.005	2.0
U-6	5 - 5.5	02/21/95	<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	15 - 15.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	20 - 20.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	25 - 25.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	30 - 30.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	35 - 35.5		100	0.008	0.36	1.7	2.4	2.0
U-7	5 - 5.5	02/21/95	<1.0	<0.005	<0.005	<0.005	<0.005	27
	15 - 15.5		<1.0	<0.005	<0.005	<0.005	0.009	<1.0
	20 - 20.5		<1.0	<0.005	<0.005	<0.005	0.009	<1.0
	25 - 25.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	30 - 30.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
	35 - 35.5		<1.0	<0.005	<0.005	<0.005	<0.005	<1.0
U-A	9.5 - 11	08/04/93	<1.0	<0.005	0.008	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.025	<0.005	<0.005	<0.005
	29.5 - 31		53	0.80	0.62	1.5	5.3	5.3
U-B	9.5 - 11	08/04/93	<1.0	<0.005	0.09	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.16	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	<0.005	0.14	<0.005	<0.005	<0.005
U-C	9.5 - 11	08/04/93	<1.0	<0.005	0.03	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.082	<0.005	<0.005	<0.005
	29.5 - 31		200	0.78	13	4.2	20	20

Table 1 (continued)  
**Soil Analytical Data**  
 Total Petroleum Hydrocarbons  
 (TPH as Gasoline and BTEX Compounds)

Unocal Service Station 5430  
 1935 Washington Avenue at Castro Street  
 San Leandro, California

Boring Number	Sample Depth (feet)	Date Sampled	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethyl-benzene (ppm)	Xylenes (ppm)	TPH as Diesel (ppm)
U-D	9.5 - 11	08/04/93	<1.0	<0.005	0.049	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.13	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	<0.005	0.01	<0.005	<0.005	<0.005
U-E	9.5 - 11	08/04/93	<1.0	<0.005	0.077	<0.005	<0.005	<0.005
	19.5 - 21		<1.0	<0.005	0.18	<0.005	<0.005	<0.005
	29.5 - 31		<1.0	<0.005	0.028	<0.005	<0.005	<0.005

ppm = Parts per million



**Table 2**  
**Groundwater Elevation Data**

Unocal Service Station 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

Well Number	Date Gauged	Well Elevation (feet, MSL)	Depth to Water (feet, TOC)	Groundwater Elevation (feet, MSL)
U-1	03/14/95	56.09	27.86	28.23
U-2	03/14/95	55.29	26.36	28.93
U-3	03/14/95	55.23	25.44	29.79
U-4	03/14/95	55.39	26.52	28.87
U-5	03/14/95	54.18	25.20	28.98
U-6	03/14/95	55.36	26.94	28.42
U-7	03/14/95	55.05	26.13	28.92

MSL = Mean sea level  
TOB = Top of box

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

Unocal Service Station 5430  
 1935 Washington Avenue at Castro Street  
 San Leandro, California

Well Number	Date Sampled	TPH as		Ethyl-			TPH as Diesel (ppb)
		Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	benzene (ppb)	Xylenes (ppb)	
U-1	3/14/95	380	20	ND	ND	10	71
U-2	3/14/95	89	ND	ND	ND	1.2	NA
U-3	3/14/95	13,000	860	120	1,300	1,700	NA
U-4	3/14/95	490	3.2	2.1	0.79	1.2	NA
U-5	3/14/95	ND	ND	ND	ND	1.2	NA
U-6	3/14/95	14,000	170	36	790	1,500	NA
U-7	3/14/95	ND	ND	ND	ND	ND	NA

ppb = Parts per billion  
 ND = Not detected  
 NA = Not analyzed

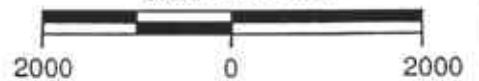


QUADRANGLE  
LOCATION

**REFERENCES:**

USGS 7.5 MIN. TOPOGRAPHIC MAP  
TITLED: SAN LEANDRO, CALIFORNIA  
DATED: 1959 REVISED: 1980

SCALE IN FEET



PACIFIC  
ENVIRONMENTAL-  
GROUP, INC.

UNOCAL SERVICE STATION 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

SITE LOCATION MAP

FIGURE:  
1  
PROJECT:  
310-38.1C

**CASTRO STREET**

**WASHINGTON AVENUE**

HAYS STREET

298 296 Residence PARKING YARD 266 RESIDENCE EMPTY LOT EMPTY LOT

SIDEWALK

291 277 265

RESIDENTIAL

CYPRESS MANOR CONDOMINIUMS

DRIVEWAY

PLANTER

APPROACH

UNDERGROUND FUEL STORAGE TANKS

U-5

U-E

U-D

U-4

U-2

U-B

STATION BUILDING

CANOPY

U-C

WASTE OIL TANK

A

U-1

U-A

PRODUCT ISLANDS

U-3

U-7

A'

CARPORT

CARPORT

CAR WASH

U-6

PLANTER

PARKING LOT

APPROACH

1904 THE MUTT HUTT

1926 RESIDENCE

1940 AUTO SERVICE

AUTO SERVICE

AUTO SERVICE PARKING LOT

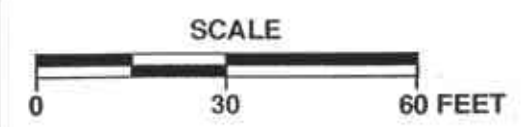
SIDEWALK

**LEGEND**

- U-2 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- U-C ● SOIL BORING LOCATION AND DESIGNATION
- A A' LINE OF GEOLOGIC CROSS-SECTION



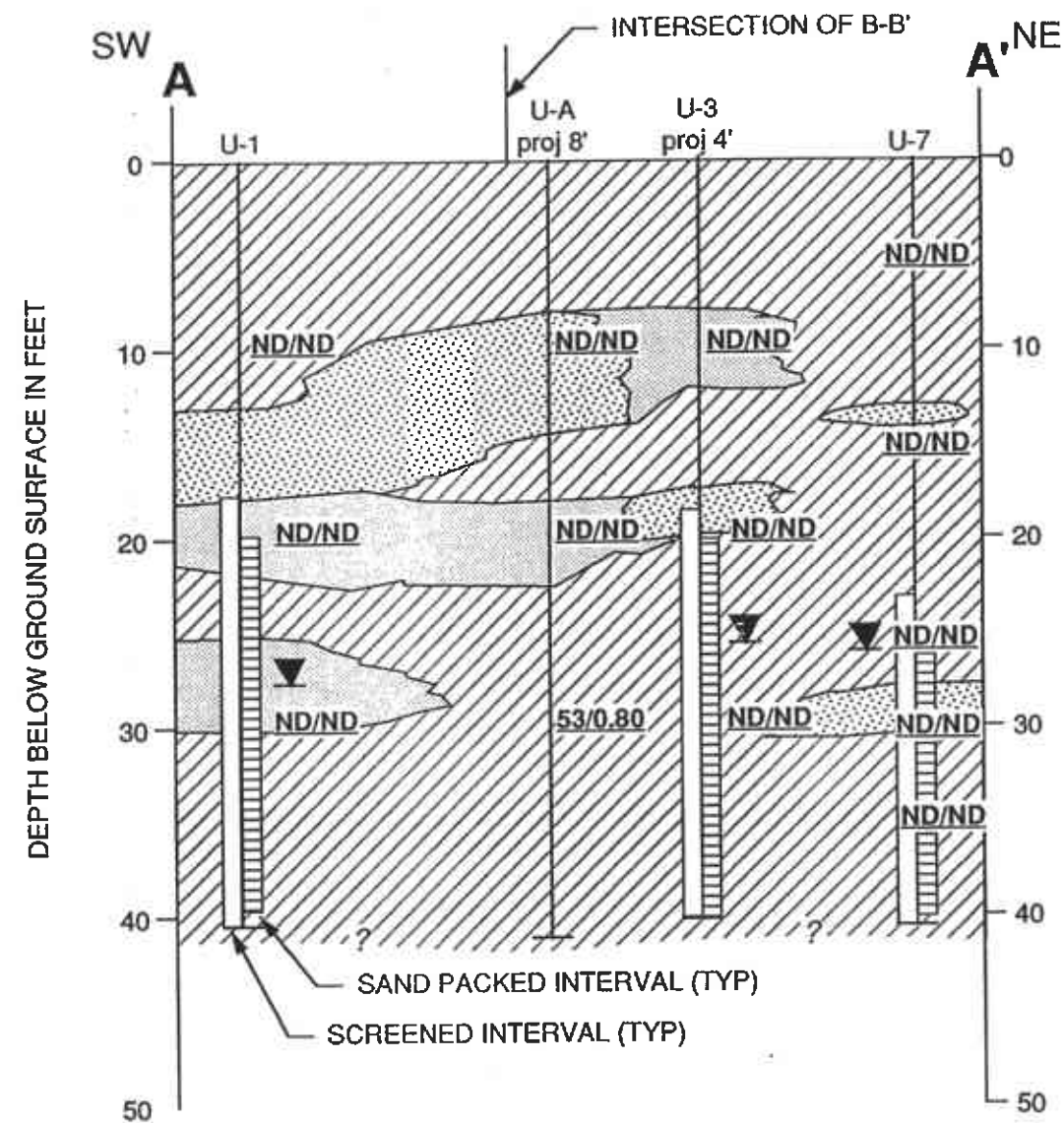
PACIFIC ENVIRONMENTAL GROUP, INC.



UNOCAL SERVICE STATION 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

EXTENDED SITE MAP

FIGURE:  
**2**  
PROJECT:  
310-038.1C



- LEGEND**
- FINE GRAINED DEPOSITS - CLAY AND SILT
  - MEDIUM GRAINE DEPOSITS - SILTY, CLAYEY SAND
  - COARSE GRAINED DEPOSITS - SAND
  - U-1 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - U-A SOIL BORING LOCATION AND DESIGNATION
  - proj PROJECTED ONTO LINE OF SECTION IN FEET
  - STATIC GROUNDWATER LEVEL
  - 53/0.80 TPH-g/BENZENE CONCENTRATION IN SOIL, IN PARTS PER MILLION, 8-4-93, 8-5-93 and 2-21-95
  - ND** NOT DETECTED



PACIFIC ENVIRONMENTAL GROUP, INC.

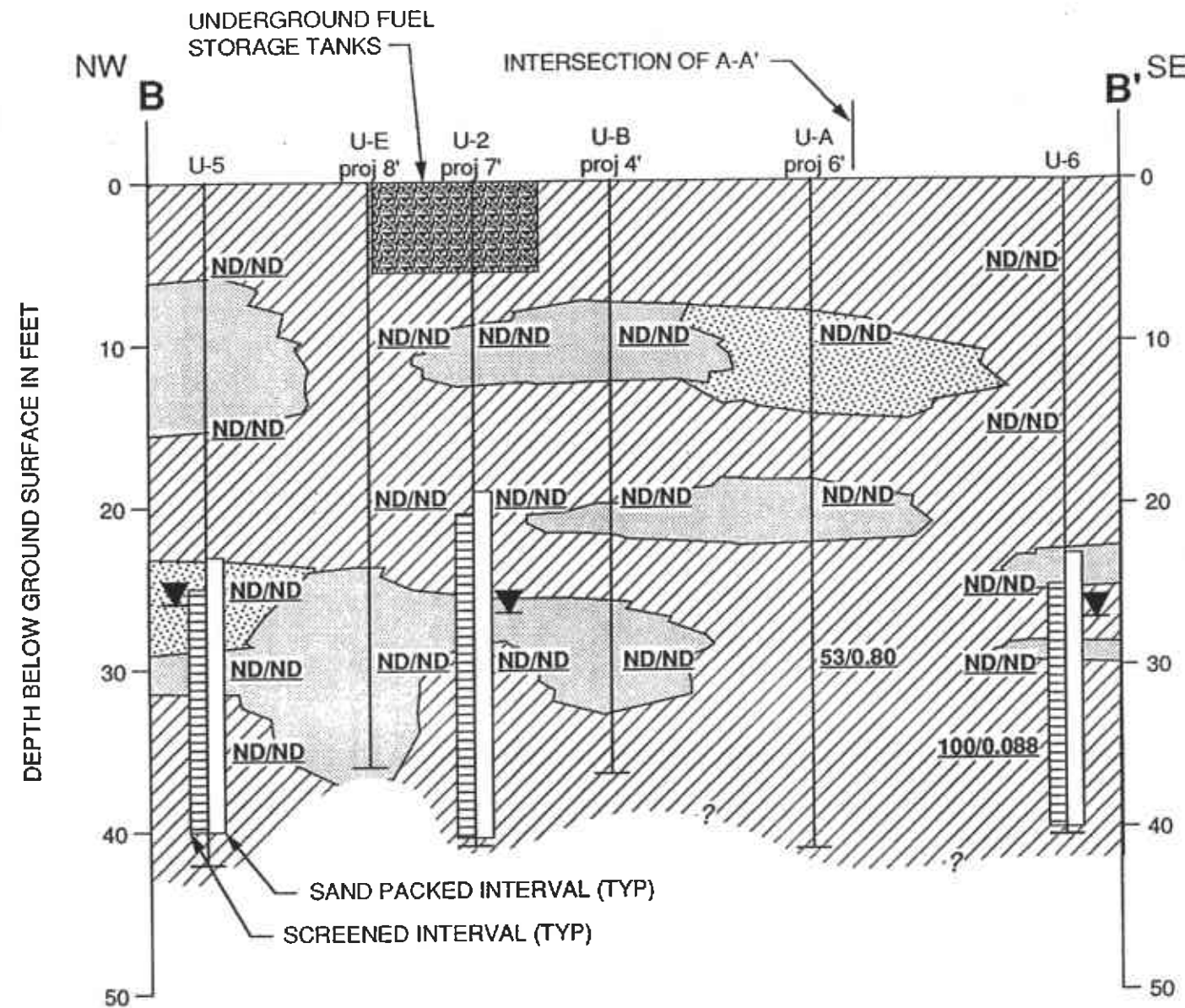
**SCALE**  
 HORIZONTAL : 1" = 30'  
 VERTICAL : 1" = 10'

UNOCAL SERVICE STATION 5430  
 1935 Washington Avenue at Castro Street  
 San Leandro, California

GEOLOGIC CROSS-SECTION A-A'

FIGURE:  
**3**  
 PROJECT:  
 310-038.1C





- LEGEND**
- TANK BACKFILL
  - FINE GRAINED DEPOSITS - CLAY AND SILT
  - MEDIUM GRAINE DEPOSITS - SILTY, CLAYEY SAND
  - COARSE GRAINED DEPOSITS - SAND
  - U-6 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - U-A SOIL BORING LOCATION AND DESIGNATION
  - proj PROJECTED ONTO LINE OF SECTION IN FEET
  - STATIC GROUNDWATER LEVEL
  - 53/0.80 TPH-g/BENZENE CONCENTRATION IN SOIL, IN PARTS PER MILLION, 8-4-93, 8-5-93 and 2-21-95
  - ND NOT DETECTED



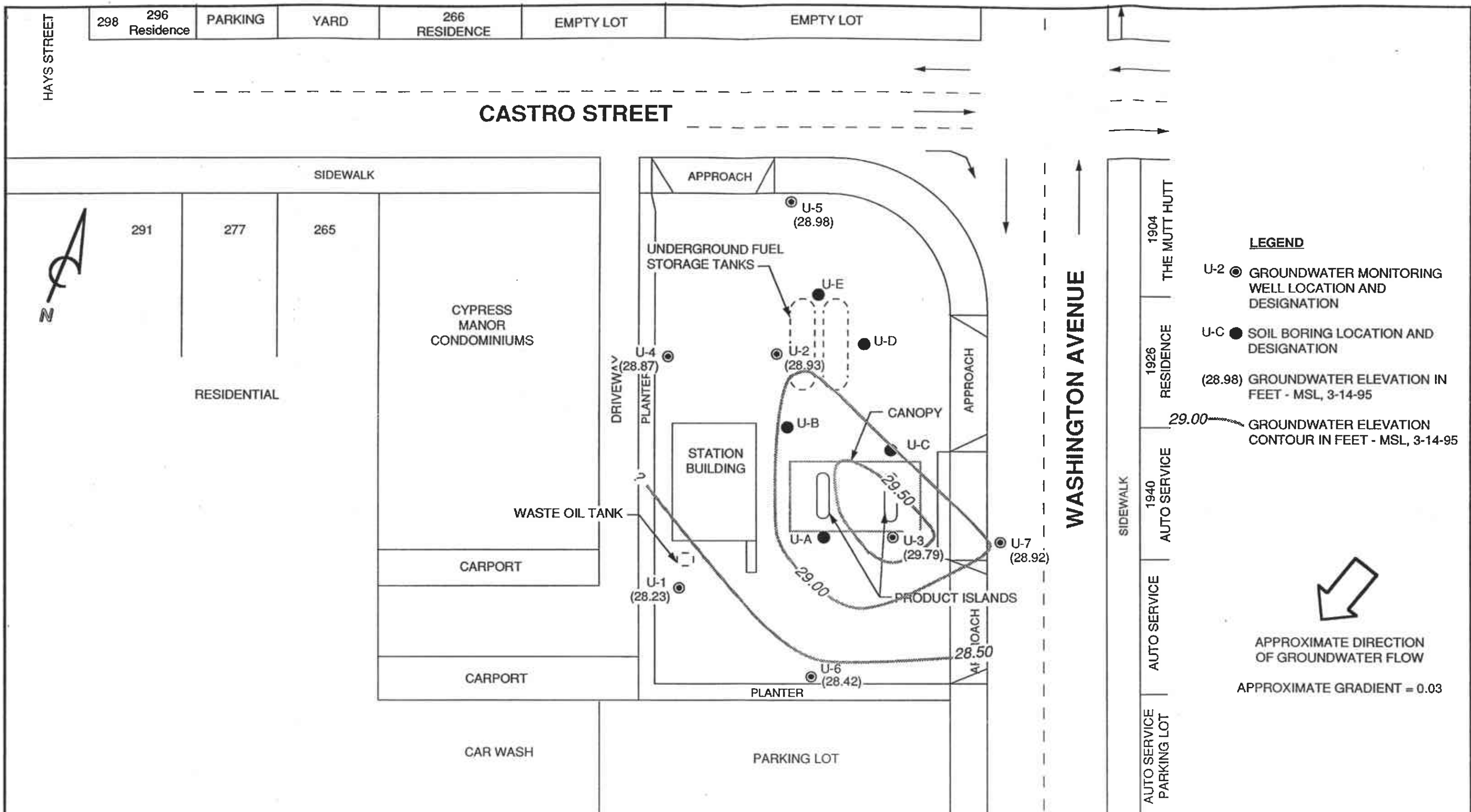
PACIFIC ENVIRONMENTAL GROUP, INC.

**SCALE**  
 HORIZONTAL : 1" = 30'  
 VERTICAL : 1" = 10'

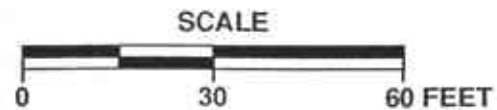
UNOCAL SERVICE STATION 5430  
 1935 Washington Avenue at Castro Street  
 San Leandro, California

GEOLOGIC CROSS-SECTION B-B'

FIGURE: 4  
 PROJECT: 310-038.1C



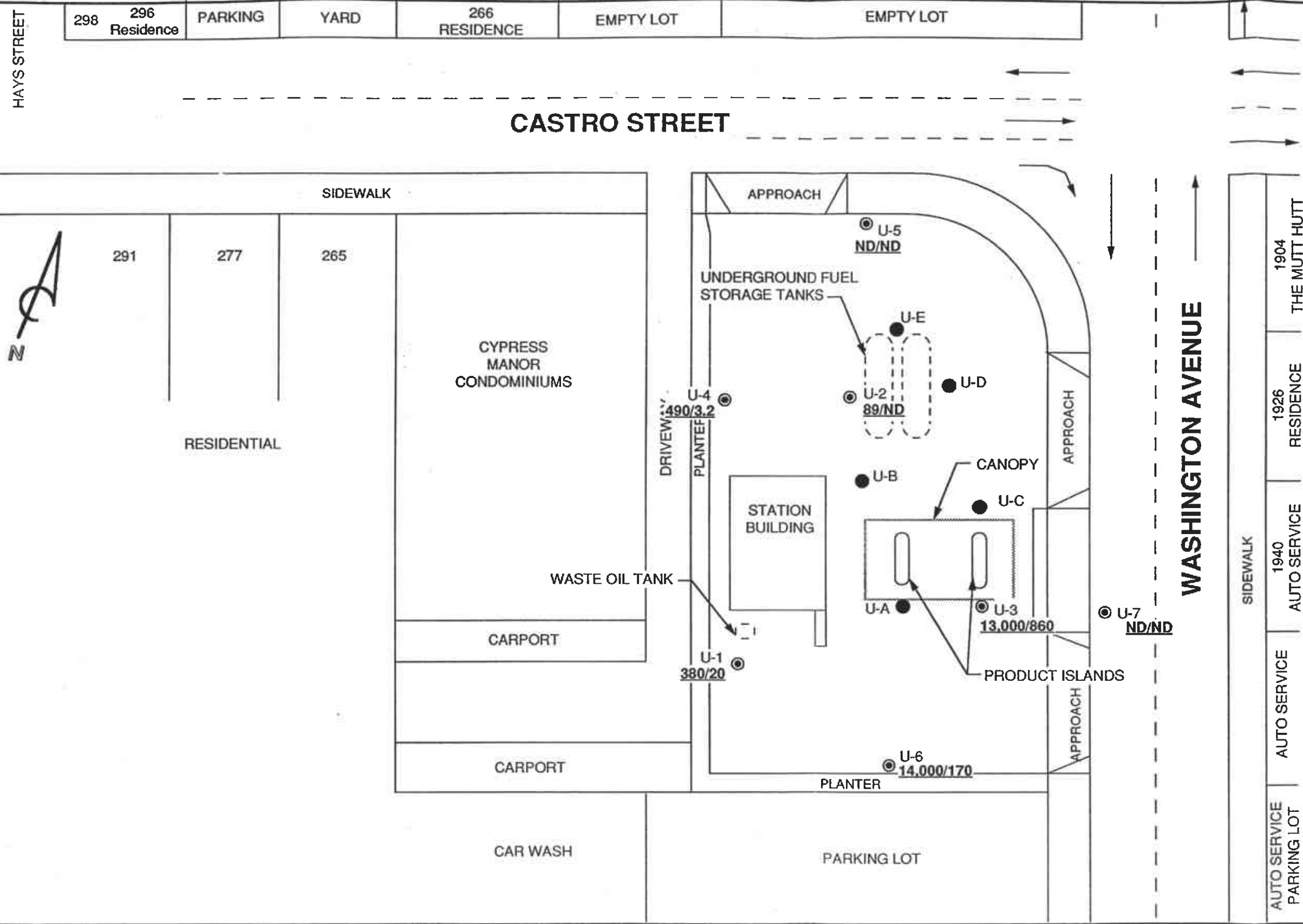
PACIFIC ENVIRONMENTAL GROUP, INC.



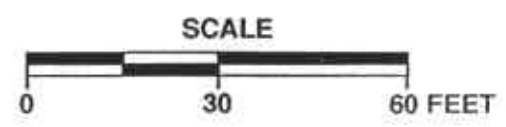
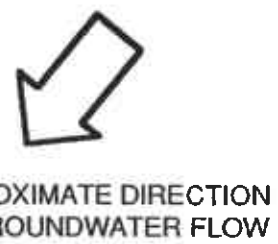
UNOCAL SERVICE STATION 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE:  
5  
PROJECT:  
310-038.1C



- LEGEND**
- U-2 ● GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
  - U-C ● SOIL BORING LOCATION AND DESIGNATION
  - 490/3.2 TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION (ppb), 3-14-95
  - ND NOT DETECTED



UNOCAL SERVICE STATION 5430  
1935 Washington Avenue at Castro Street  
San Leandro, California

TPH-g/BENZENE CONCENTRATION MAP

FIGURE:  
**6**  
PROJECT:  
310-038.1C



**APPENDIX A**  
**FIELD AND LABORATORY PROCEDURES**

## APPENDIX A

### FIELD AND LABORATORY PROCEDURES

---

#### **Exploratory Soil Boring and Monitoring Well Installation Procedures**

The soil borings were drilled using 8-inch diameter hollow-stemmed auger drilling equipment, and logged by a Pacific Environmental Group, Inc. geologist using the Unified Soil Classification System and standard geologic techniques. Soil samples for logging and chemical analysis were collected at maximum depth intervals of 5 feet by advancing a California-modified split-spoon sampler with brass sample liners into undisturbed soil beyond the tip of the auger. The sampler was driven a maximum of 18 inches using a 140-pound hammer with a 30-inch drop. Soil samples for chemical analysis were retained in the brass liners, capped with Teflon sheets and plastic end caps, and sealed in plastic bags. Selected samples were placed on ice and transported to the laboratory accompanied by the appropriate chain-of-custody documentation. The drilling equipment was steam-cleaned prior to, and following the drilling of the boring.

The soil borings were converted to groundwater monitoring wells by the installation of 2-inch diameter flush-threaded Schedule 40 PVC casing with 0.020-inch factory-slotted screen. The screened interval is 25 to 40 feet bgs. Graded 2/12 sand pack was placed in the annular space across the screened interval of each well, and extending approximately 2 feet above the top of the screened interval. A two foot thick bentonite seal was placed above the sand pack. A neat cement seal was placed from the bentonite to ground surface. A locking cap and protective vault box were installed on the top of each well. Boring logs and well construction are included in Attachment B.

Following well completion, the wells were developed through surging and pumping repeatedly until water removed from the wells was relatively free of sediments. The well elevations were surveyed to the nearest 0.01 foot relative to mean sea level datum by a licensed surveyor. Survey data is included in Attachment A. Field data sheets are included in Attachment C.

## **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 head-space within the jar is tested for total organic vapor, measured in parts per million as benzene (ppm; volume/volume). The instrument was previously calibrated using a 100-ppm isobutylene standard (in air) and a sensitivity factor of 0.55, which relates the photo-ionization sensitivity of benzene (10.0 ppm) to the ionization potential of isobutylene (5.5 ppm). Results of these tests were used to assist in selection of samples for laboratory analysis.



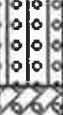












## **Groundwater Sampling Procedures**

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

## **Laboratory Procedures**

Selected soil and groundwater samples were analyzed in the laboratory for the presence of total petroleum hydrocarbons calculated as gasoline (TPH-g), total petroleum hydrocarbons calculated as diesel (TPH-d), and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). Extraction was performed by the purge and trap technique, EPA Method 5030. Analysis of TPH-g was performed according to the DHS LUFT method, and analysis for BTEX compounds was by EPA Method 8020. Final detection was by gas chromatography using a flame-ionization detector and photo-ionization detector. All analyses were performed by a California State-certified laboratory.

**APPENDIX B**  
**BORING LOGS, WELL CONSTRUCTION DETAILS**  
**AND**  
**WELL SURVEY DATA**

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



PACIFIC ENVIRONMENTAL GROUP, INC.

# Unified Soil Classification System

# WELL LOG KEY TO ABBREVIATIONS

### Drilling Method

HSA - Hollow stem auger  
CFA - Continuous 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

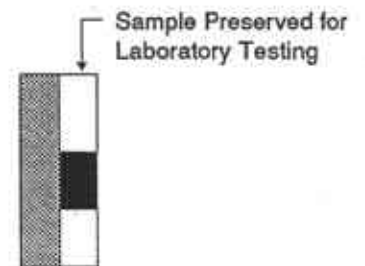
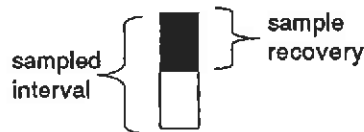
### H-NU (ppm)

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

### GRADE LIMITS

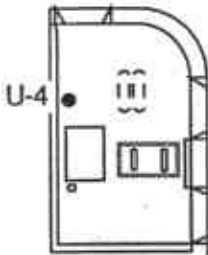
U.S. Standard

### GRADE NAME

inch	sieve size	
12.0		Boulders
3.0	3.0 in.	Cobbles
0.19	No. 4	Gravels
0.08	No. 10	coarse
	No. 40	medium
	No. 200	fine
		Silt
		Clay Size

LOCATION MAP

Castro St.



Washington Ave.



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. U-4  
PAGE 1 OF 1

PROJECT NO. 310-038.1C  
 LOGGED BY: MOTO  
 DRILLER: MDE  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: CALMOD  
 CASING TYPE: SCH 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 X 12 SAND

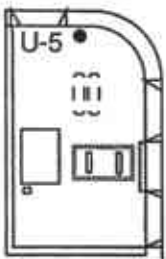
CLIENT: UNOCAL  
 DATE DRILLED: [REDACTED]  
 LOCATION: 1935 Washington Ave.  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 40.5'  
 WELL DIAMETER: 2"  
 WELL DEPTH: 40'  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2			CL	ASPHALT & BASEROCK
				4			SC	CLAY: very dark gray; moderate plasticity; 85% clay; 10% silt; trace fine sand; very stiff; no product odor.
	Mst	0	27	6			SC	CLAYEY SAND: yellowish brown; 20% clay; 75% fine sand; trace coarse sand; medium dense; no product odor.
				8				
	Mst	0	31	10			SP	SAND: dark yellowish brown; 10% silt; 85% fine sand; trace coarse sand; medium dense; no product odor.
				12				
	Mst	0	30	14				@14.5': 85% fine sand; 15% subangular to subrounded gravel to 1/2" diameter; medium dense; no product odor.
				16				
	Mst	0	30	18			CL	SILTY CLAY: dark yellowish brown; low plasticity; 75% clay; 20% silt; trace fine sand; very stiff; no product odor.
				20				
	Mst-Wt	0	29	24			CL	CLAY: dark gray; low to moderate plasticity; 85% clay; 10% silt; trace fine sand; 0.5mm rootholes common; very stiff; no product odor.
				26				
	Wt	0	29	30			SC	CLAYEY SAND: olive; 35% clay; 55% fine sand; 10% fine gravel; bluish gray mottling common; iron oxide staining along rootholes; dense; no product odor.
				32				
	Wt	0	30	34			CL	SANDY CLAY: light olive brown; low to moderate plasticity; 85% clay; 15% fine sand; pervasive bluish gray mottling; very stiff; no product odor.
				36				
	Wt	0	28	38			CL	SILTY CLAY: light olive brown; low to moderate plasticity; 80% clay; 15% silt; trace fine gravel; very stiff; no product odor.
				40				
				42				
				44				

BOTTOM OF BORING AT 40.5'

LOCATION MAP

Castro St.



Washington Ave.



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. U-5

PAGE 1 OF 1

PROJECT NO. 310-038.1C  
 LOGGED BY: MOTO  
 DRILLER: MDE  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: CALMOD  
 CASING TYPE: SCH 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 X 12 SAND

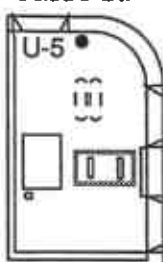
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 LOCATION: 1935 Washington Ave.  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 42'  
 WELL DIAMETER: 2"  
 WELL DEPTH: 40'  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2			CL	ASPHALT & BASEROCK
	Mst	0	23	4			CL	CLAY: very dark gray; low to moderate plasticity; 85% clay; 10% silty fines; trace fine gravel; trace roots; very stiff; no product odor.
	Mst	0	22	6			SM	SILTY CLAY: dark yellowish brown; trace clay; 20% silt; 75% fine sand; 1mm vertically oriented through-going roots; medium dense; no product odor.
	Mst	0	26	10			CL	@14': occasional 1/2" thick horizontal clay interbeds; medium dense; no product odor.
	Mst-Wt	0	32	14			CL	CLAY: strong brown; low plasticity; 80% clay; 10% fine sand; 10% fine gravel; rootholes common; very stiff; no product odor.
	Mst-Wt	0	26	16			SP	GRAVELLY SAND: dark yellowish brown; trace clay; 30% fine sand; 40% medium sand; 25% subangular gravel to 1" diameter; occasional 1/2" clay interbeds; medium dense; no product odor.
	Wt	0	30	20			SC	CLAYEY SAND: olive; 25% clay; 70% fine sand; 5% fine gravel; pervasive bluish gray mottling; medium dense; no product odor.
	Wt	0	31	22			CL	CLAY: light olive brown; low plasticity; 85% clay; 10% silt; trace fine sand; bluish gray mottling along 0.5mm rootholes; very stiff; no product odor.
	Wt	0	40	24				@39': no recovery.
			35	26				@40': gravelly; light olive brown; low plasticity; 75% clay; 5% silt; 15-20% fine gravel; iron oxide staining common; very stiff; no product odor.
				28				BOTTOM OF BORING AT 42'
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				



LOCATION MAP

Castro St.



Washington Ave.



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. U-5  
PAGE 1 OF 1

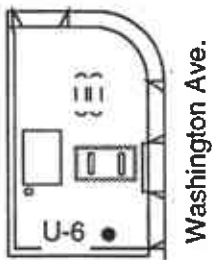
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LOGGED BY: MOTO  
DRILLER: MDE  
DRILLING METHOD: HSA  
SAMPLING METHOD: CALMOD  
CASING TYPE: SCH 40 PVC  
SLOT SIZE: 0.020"  
GRAVEL PACK: 2 X 12 SAND

CLIENT: UNOCAL  
DATE DRILLED: 2-21-95  
LOCATION: 1935 Washington Ave.  
HOLE DIAMETER: 8"  
HOLE DEPTH: 42'  
WELL DIAMETER: 2"  
WELL DEPTH: 40'  
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2			CL	ASPHALT & BASEROCK
	Mst	0	23	4			CL	CLAY: very dark gray; low to moderate plasticity; 85% clay; 10% silty fines; trace fine gravel; trace roots; very stiff; no product odor.
	Mst	0	22	6			SM	SILTY SAND: dark yellowish brown; trace clay; 20% silt; 75% fine sand; 1mm vertically oriented through-going roots; medium dense; no product odor.
	Mst	0	26	10			CL	@14': occasional 1/2" thick horizontal clay interbeds; medium dense; no product odor.
	Mst-Wt	0	32	14			CL	CLAY: strong brown; low plasticity; 80% clay; 10% fine sand; 10% fine gravel; rootholes common; very stiff; no product odor.
	Mst-Wt	0	26	16			SP	GRAVELLY SAND: dark yellowish brown; trace clay; 30% fine sand; 40% medium sand; 25% subangular gravel to 1" diameter; occasional 1/2" clay interbeds; medium dense; no product odor.
	Wt	0	30	20			SC	CLAYEY SAND: olive; 25% clay; 70% fine sand; 5% fine gravel; pervasive bluish gray mottling; medium dense; no product odor.
	Wt	0	31	24			CL	CLAY: light olive brown; low plasticity; 85% clay; 10% silt; trace fine sand; bluish gray mottling along 0.5mm rootholes; very stiff; no product odor.
	Wt	0	40	26				@39': no recovery.
			35	28				@40': gravelly; light olive brown; low plasticity; 75% clay; 5% silt; 15-20% fine gravel; iron oxide staining common; very stiff; no product odor.
				30				
				32				
				34				
				36				
				38				
				40				
				42				
				44				

BOTTOM OF BORING AT 42'

LOCATION MAP  
Castro St.



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. U-6  
PAGE 1 OF 1

PROJECT NO. 310-038.1C  
 LOGGED BY: MOTO  
 DRILLER: MDE  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: CALMOD  
 CASING TYPE: SCH 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 X 12 SAND

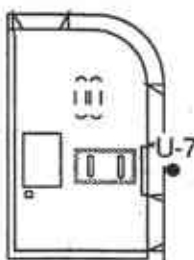
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 DATE DRILLED: 2-21-95  
 LOCATION: 1935 Washington Ave.  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 40.5'  
 WELL DIAMETER: 2"  
 WELL DEPTH: 40'  
 CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2				ASPHALT & BASEROCK
	Mst	0	15	4			ML	SILT: dark yellowish brown; low plasticity; 15% clay; 75% silt; 10% fine sand; 1/4" roots common; stiff; no product odor.
	Mst	0	24	10				@10': yellowish brown; low plasticity; trace clay; 90% silt; trace fine sand; very stiff; no product odor.
	Mst	0	28	14				@15': brownish yellow; trace rootholes; very stiff; no product odor.
	Mst	0	34	20				@20': sandy silt; brownish yellow; trace clay; 80% silt; 15% fine sand; trace iron oxide and manganese oxide staining; very stiff; no product odor.
	Mst	0	33	24			SC	CLAYEY SAND: dark yellowish brown; 15% clay; 15% silt; 70% fine sand; trace iron oxide staining; medium dense; no product odor.
				26			CL	SANDY CLAY: dark yellowish brown; low plasticity; 75% clay; 10% silt; 15% fine sand; very stiff; no product odor.
	Wt	0	29	30			SC	CLAYEY SAND: dark yellowish brown; 25% clay; 70% fine sand; 5% fine gravel; trace iron oxide staining; trace dark gray mottling; very stiff; no product odor.
				32			CL	CLAY: olive; low plasticity; 90% clay; trace silt; trace fine sand; trace manganese oxide staining; trace bluish gray mottling; iron oxide staining common; very stiff; faint product odor.
	Wt	105	22	34				
	Wt	0	30	36				@40': mottling color change to gray; very stiff; no product odor.
				38				
				40				
				42				
				44				

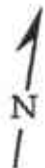
BOTTOM OF BORING AT 40.5'

LOCATION MAP

Castro St.



Washington Ave.



PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. U-7  
PAGE 1 OF 1

PROJECT NO. 310-038.1C  
 LOGGED BY: C.R.  
 DRILLER: MDE  
 DRILLING METHOD: HSA  
 SAMPLING METHOD: CALMOD  
 CASING TYPE: SCH 40 PVC  
 SLOT SIZE: 0.020"  
 GRAVEL PACK: 2 X 12 SAND

CLIENT: UNOCAL  
 DATE DRILLED: 2-22-95  
 LOCATION: 1935 Washington Ave.  
 HOLE DIAMETER: 8"  
 HOLE DEPTH: 40.5'  
 WELL DIAMETER: 2"  
 WELL DEPTH: 40'  
 CASING STICKUP: NA

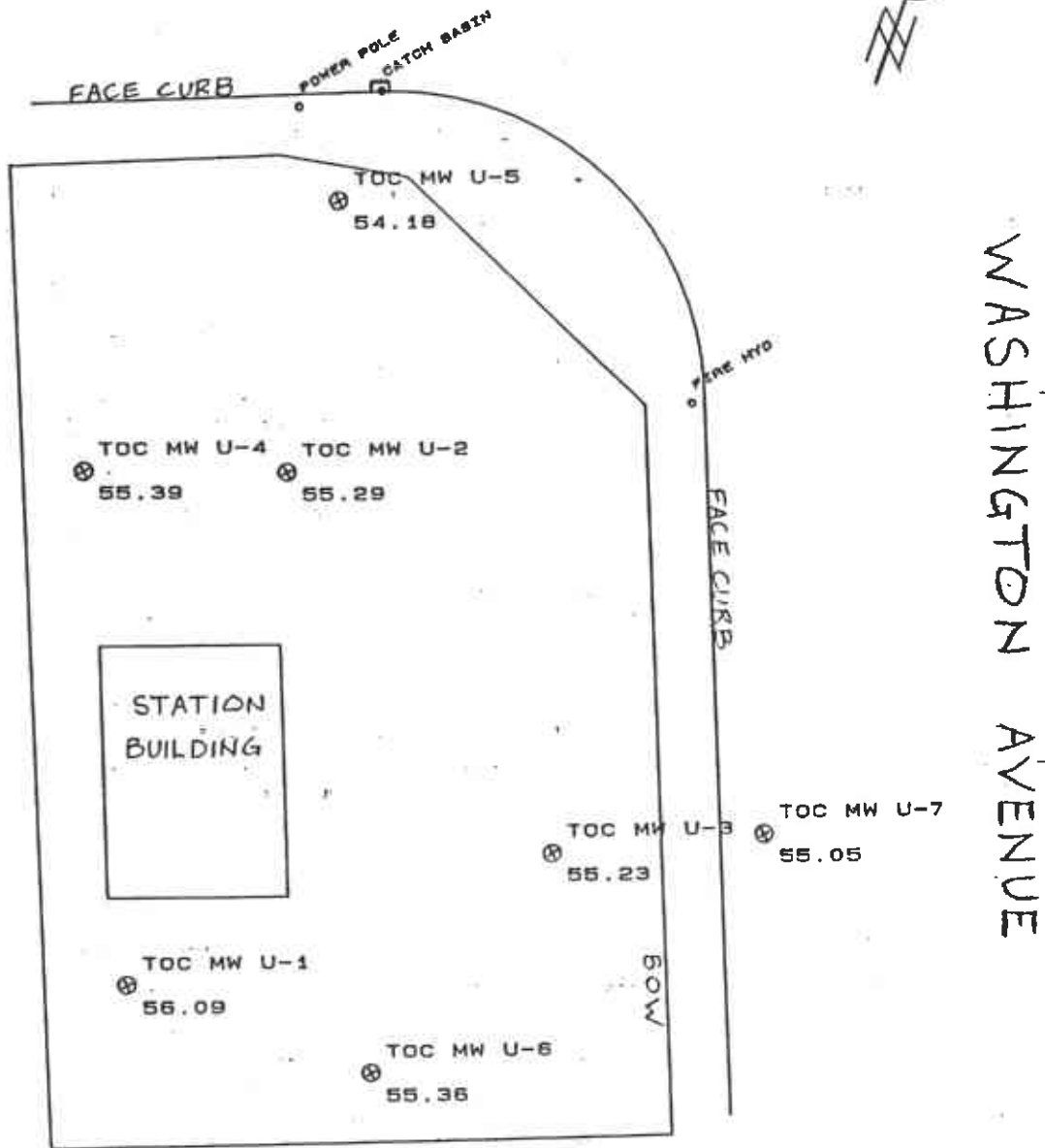
WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				2				ASPHALT & CONCRETE
	Mst	0	26	4			CL	CLAY: dark yellowish brown; low plasticity; 90% clay; 10% silt; occasional rootholes 0.5 mm; very stiff; no product odor.
	Mst	0	24	8			ML	SILT: light yellowish brown; low plasticity; 10% clay; 80% silt; 10% fine sand; very stiff; no product odor.
	Mst	0	26	14			SP	SAND: light yellowish brown; 10% fines; 90% fine sand; iron oxide staining; manganese oxide; medium dense; no product odor.
	Mst	0	32	18			CL	SANDY CLAY: dark brown; low plasticity; 60% clay; 10% silt; 25% fine sand; trace gravel <1/2"; organic matter; roots; very stiff; no product odor.
	Mst	0	28	20				@19': 70% clay; 10% sand; 20% gravel; very stiff; no product odor.
	Mst	0	28	24				@20': dark yellowish brown; low plasticity; 80% clay; 10% silt; 10% fine sand; very stiff; no product odor.
	Mst	0	28	26				@24': very stiff; no product odor.
	Wt	0	40	28			SP	SAND: olive brown; trace silt; 45% fine sand; 50% medium to coarse sand; very stiff; no product odor.
	Wt	0	25	30			CL	SANDY CLAY: light yellowish brown; low plasticity; 60% clay; 10% silt%; 30% fine sand; very stiff; no product odor.
	Wt	0	25	34			CL	CLAY; light olive brown; low plasticity; 85% clay; trace silt; trace fine to coarse sand; trace gravel; pervasive blue gray mottling; very stiff; no product odor.
	Wt	0	24	36				@40': light yellowish brown; low to moderate plasticity; 90% clay; trace silt; trace fine sand; 0.5mm rootholes; manganese oxide specks; trace gray mottling around rootholes; very stiff; no product odor.
				40				BOTTOM OF BORING AT 40.5'

GROUT

BENTONITE

SAND

CASTRO STREET



WASHINGTON AVENUE

UNOCAL SERVICE STATION 5430  
 1935 WASHINGTON AVENUE AT CASTRO STREET  
 SAN LEANDRO, CALIFORNIA



**MISSION ENGINEERS, INC.**

RESPONSIVE, RELIABLE RESULTS SINCE 1953  
 2978 Scott Blvd., Santa Clara, Calif 95054 (408) 727-8262 FAX: (408) 727-8285

SCALE: 1" = 30'
DATE 16 MAR 95
DWN KA/TR
CH'KD
JOB NO. 95037
DWG. NO. —

MISSION ENGINEERS, INC.  
2978 SCOTT BLVD  
SANTA CLARA, CALIFORNIA 95054  
(408)727-8262 FAX(408)727-8285

Date: 03-16-95  
Time: 8:29:13  
Page: 1

Coordinate File: 95037.CRD  
List of Coordinate Points  
\* Denotes Contouring Masspoint

Point ID	NORTH	EAST	ELEV	Descriptor
1A	382.17	460.18	56.09	TOC MW U-1
1B	382.54	459.97	56.57	TOB MW U-1
2A	468.82	461.98	55.29	TOC MW U-2
2B	469.29	461.86	55.77	TOB MW U-2
3A	421.58	519.51	55.23	TOC MW U-3
3B	422.06	519.39	55.65	TOB MW U-3
4A	460.19	430.88	55.39	TOC MW U-4
4B	460.43	430.77	56.01	TOB MW U-4
5A	513.72	457.81	54.18	TOC MW U-5
5B	513.94	457.78	54.75	TOB MW U-5
6A	379.21	501.30	55.36	TOC MW U-6
6B	379.44	501.21	56.19	TOB MW U-6
7A	433.60	551.27	55.05	TOC MW U-7
7B	433.85	551.24	55.37	TOB MW U-7

LOCAL COORDINATE BASIS ONLY.

BENCHMARK PROVIDED BY CITY SAN LEANDRO,

CITY ENGINEERS OFFICE, DATUM 1929

USGS ADJUSTED.

**APPENDIX C**

**CERTIFIED ANALYTICAL REPORTS,  
CHAIN-OF-CUSTODY DOCUMENTATION, AND  
FIELD DATA SHEETS**

## WELL DEVELOPMENT DATA SHEET

Project#: 3100381C Well #: V-4 Development Method Used: \_\_\_\_\_  
 Site Address: 1935 WASHINGTON DTW (feet): 26.90 (TOC) 27.55 (TOB) \_\_\_\_\_  
SAN LEANDRO DTL (feet): - (TOC) - (TOB) \_\_\_\_\_  
 Purge Vol (10 Casings): 20.76 (gal) \_\_\_\_\_  
DTB: 39.11 TOC 39.60 TOB \_\_\_\_\_

Time		Depth		Gallons		Measurements				Comments: (odor, clarity, grain size, etc.) activity
begin	end	to water	to bottom	pumped	total	pH	cond	temp	turbidity	
1237	1245	—	—	<del>4.0</del> FIRST SURGE COMPLETE		—	—	—	—	
1245	1253	27.09	39.30	4.5	4.5	706	1803	63.4	>200	(FAINT, BRN-HWY, SILTY)
1253	1258	—	—	2ND SURGE COMPLETE		—	—	—	—	
1258	1306	27.03	39.20	4.5	9.0	706	1752	64.5	>200	( " " )
1306	1312	—	—	3RD SURGE COMPLETE		—	—	—	—	
1312	1317	27.10	39.25	4.5	13.5	704	1810	64.5	>200	( " " )
1317	1324	—	—	4th SURGE COMPLETE		—	—	—	—	
1324	1330	27.10	39.25	4.5	18.0	706	1820	64.4	>200	( " " )
1330	1335	—	—	5th SURGE COMPLETE		—	—	—	—	
1335	1342	27.09	39.25	4.5	22.50	704	1850	64.4	>200	( " " )

Completed by: J. Monnier date: 2-23-95

## WELL DEVELOPMENT DATA SHEET

Project#: 3100381C Well #: V-5 Development Method Used: 2" SURGE Block  
 Site Address: 1935 WASHINGTON DTW (feet): 2564 (TOC) 26.25 (TOB)                       
SAN LEANDRO DTL (feet):                      (TOC)                      (TOB)                       
 Purge Vol (10 Casings): ~~23.0~~ 24.07 (gal) BHVER 13-2 USED FOR PURGE  
DTB 39.80 (TOC) 40.47 (TOB)

Time		Depth		Gallons		Measurements				Comments: (odor, clarity, grain size, etc.) activity
begin	end	to water	to bottom	pumped	total	pH	cond	temp	turbidity	
1120	1127	—	FIRST SURGE COMPLETE							
1127	1136	25.87	39.84	5.0	5.0	7.10	1618	62.4	7200	(NONE, BROWN, GRITTY)
1136	1143	—	SECOND SURGE COMPLETE							
1143	1147	25.81	<del>39.90</del> 39.90	5.0	10.0	7.10	1700	61.9	7200	( " " " )
1147	1154		THIRD SURGE COMPLETE							
1154	1203	25.84	39.91	5.0	<del>15.0</del> 15.0	7.10	1760	62.0	7200	( " " " )
1203	1211	—	FOURTH SURGE COMPLETE							
1211	1218	25.86	39.91	5.0	20.0	7.06	1810	61.9	7200	( " " " )
1218	1219	—	FIFTH SURGE COMPLETE							
1229	1237	25.84	39.90	5.0	25.0	7.07	1840	62.0	7200	( " " " )

Completed by: J. M. [Signature]

date: 2-23-95



### WELL DEVELOPMENT DATA SHEET

Project#: 310038/C Well #: V-6 Development Method Used: \_\_\_\_\_  
 Site Address: 1936 WASHINGTON AVE SAN LEANORO DTW (feet): 27.18 (TOC) 28.00 (TOB) 2" SURGE BLOCK  
 DTL (feet): — (TOC) — (TOB) \_\_\_\_\_  
 Purge Vol (10 Casings): 22.05 (gal) TOLLON BANNER # 13-3  
DTB 4015 TOC 40.97 TOB

Time		Depth		Gallons		Measurements				Comments: (odor, clarity, grain size, etc.) activity
begin	end	to water	to bottom	pumped	total	pH	cond	temp	turbidity	
1400	1408	<del>27.18</del>	FIRST SURGE COMPLETE	—	—	—	—	—	—	
1408	1416	28.66	40.05	4.5	4.5	7.11	3090	65.1	7200	(FAINT, BRN-HW, SILTY)
1416	1422	—	SECOND SURGE COMPLETE	—	—	—	—	—	—	
1422	1431	28.70	40.10	4.5	9.0	7.06	3160	65.1	7200	(" " " )
1431	1437	—	THIRD SURGE COMPLETE	—	—	—	—	—	—	
1437	1443	28.71	40.10	4.5	13.5	7.06	3190	65.3	7200	(" " " )
1443	1449	—	FOURTH SURGE COMPLETE	—	—	—	—	—	—	
1449	1454	28.69	40.11	4.5	18.0	7.05	3180	65.5	7000	(" " " )
1454	1500	—	FIFTH SURGE COMPLETE	—	—	—	—	—	—	
1500	1507	28.90	40.11	4.5	22.5	7.06	3190	65.4	7200	(" " " )

Completed by J. Montalvo date 7-23-88

39.14.1.2

WELL DEVELOPMENT DATA SHEET

Project#: 310-038.1C Well #: U-7 Development Method Used: \_\_\_\_\_  
 Site Address: 1935 WASHINGTON AVE, SAN LEANDRO TW (feet): 26.46 (TOC) 26.79 (TOB) 2" SURGE BLOCK  
 DTL (feet): — (TOC) — (TOB) \_\_\_\_\_  
 Purge Vol (10 Casings): 19.52 (gal) BAILER 13-5 USED FOR PURGE  
DTB 31.94 TOC 38.55 TOB

Time		Depth		Gallons		Measurements				Comments: (odor, clarity, grain size, etc.) activity
begin	end	TOC to water	to bottom	pumped	total	pH	cond	temp	turbidity	
945	955	—	—	FIRST SURGE COMPLETE		—	—	—	—	
955	1003	27.35	38.20	4.0	4.0	7.15	3620	62.1	7200	NO ODOR, BROWN, GRATTY
1003	1011	—	—	SECOND SURGE COMPLETE		—	—	—	—	
1011	1016	27.20	37.95	4.0	8.0	7.11	3760	62.0	7200	" "
1016	1024	—	—	THIRD SURGE COMPLETE		—	—	—	—	
1024	1034	26.97	38.10	4.0	12.0	7.11	4040	63.4	7200	" "
1034	1042	—	—	FOURTH SURGE COMPLETE		—	—	—	—	
1042	1050	27.14	37.95	4.0	16.0	7.11	4380	63.0	7200	" " "
1050	1057	—	—	FIFTH SURGE COMPLETE		—	—	—	—	
1057	1105	27.10	37.91	4.0	20.0	7.08	4410	62.9	7200	" " "

Completed by: J. Monnier date: 2-25-95



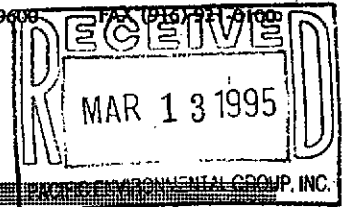
**Sequoia  
Analytical**

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@5-5.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-01

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	88

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@5-5.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-01

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP18

**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.
Chromatogram Pattern:		

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**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@15-15.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-02

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

GC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5A

## Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	103

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
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 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-4@15-15.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-02	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/01/95 Reported: 03/10/95
Attention: Maree Doden		

QC Batch Number: GC030195BTEXEXB  
 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.
Chromatogram Pattern:		

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

  
 Eileen Manning  
 Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@25-25.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-03

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

GC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5A

## Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	97

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



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Pacific Environmental Group  
2025 Gateway Place, Suite 440  
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Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@25-25.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-03

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	100

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager





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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@30-30.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-04

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	97

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@30-30.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-04

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	100

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@35-35.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-05

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

GC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

## Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern: Discrete Peaks	1.0	1.2

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50                      150	111

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-4@35-35.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-05

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

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

Eileen Manning  
Project Manager



**Sequoia  
Analytical**

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FAX (916) 921-0100

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@5-5.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-06

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

GC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	111

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



# Sequoia Analytical

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@5-5.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-06

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-5@15-15.5 Matrix: SOLID Analysis Method: EPA 8015 Mod Lab Number: 9502G38-07	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/03/95 Analyzed: 03/06/95 Reported: 03/10/95
Attention: Maree Doden		

QC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	110

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@15-15.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-07

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	95

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager





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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@25-25.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-08

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	112

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



# Sequoia Analytical

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@25-25.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-08

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	82

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@30-30.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-09

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

QC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP5A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	103

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



# Sequoia Analytical

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Pacific Environmental Group  
2025 Gateway Place, Suite 440  
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Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@30-30.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-09

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	92

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

**SEQUOIA ANALYTICAL** - ELAP #1210

  
Eileen Manning  
Project Manager



**Sequoia  
Analytical**

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-5@35-35.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-10

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/07/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	85

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-5@35-35.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-10	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/02/95 Reported: 03/10/95
Attention: Maree Doden		

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	87

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



**Sequoia  
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Pacific Environmental Group  
2025 Gateway Place, Suite 440  
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Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@5-5.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-11

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXA  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	84

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@5-5.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-11

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	86

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager





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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@15-15.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-12

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/07/95  
Reported: 03/10/95

Attention: Marea Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50                      150	88

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110 Attention: Maree Doden	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-6@15-15.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-12	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/02/95 Reported: 03/10/95
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QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	85

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@20-20.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-13

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50                      150	82

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



Pacific Environmental Group 2025 Gateway Plaza, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-6@20-20.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-13	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/02/95 Reported: 03/10/95
Attention: Maree Doden		

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
Trifluorotoluene	70 130	75

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
 Sample Descript: U-6@25-25.5  
 Matrix: SOLID  
 Analysis Method: EPA 8015 Mod  
 Lab Number: 9502G38-14

Sampled: 02/21/95  
 Received: 02/24/95  
 Extracted: 03/03/95  
 Analyzed: 03/06/95  
 Reported: 03/10/95

Attention: Maree Doden

GC Batch Number: GC0303950HBPEXB  
 Instrument ID: GCHP5B

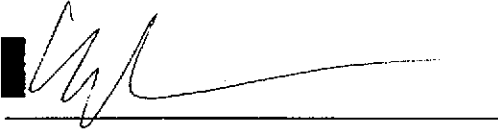
## Total Extractable Petroleum Hydrocarbons (TEPH)

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	91

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

SEQUOIA ANALYTICAL - ELAP #1210



Eileen Manning  
 Project Manager



Pacific Environmental Group	Client Proj. ID: 310-038.1C/5430, San Leandro	Sampled: 02/21/95
2025 Gateway Place, Suite 440	Sample Descript: U-6@25-25.5	Received: 02/24/95
San Jose, CA 95110	Matrix: SOLID	Extracted: 03/01/95
Attention: Maree Doden	Analysis Method: 8015Mod/8020	Analyzed: 03/02/95
	Lab Number: 9502G38-14	Reported: 03/10/95

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	88

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@30-30.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-15

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	90

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@30-30.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-15

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
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.
Chromatogram Pattern:		

Surrogates	Control Limits %		% Recovery
Trifluorotoluene	70	130	87

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager





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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@35-35.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-16

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

GC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	2.0
Chromatogram Pattern: Non Diesel Mix		C9-C14
Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	90

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Maree Doden  
Project Manager



Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-6@35-35.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-16	Sampled: 02/21/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/02/95 Reported: 03/16/95
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QC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP01

**Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	100
Benzene	0.050	0.088
Toluene	0.050	0.36
Ethyl Benzene	0.050	1.7
Xylenes (Total)	0.050	2.4
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	85

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-6@35-35.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-16

Sampled: 02/21/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/02/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	10	100
Benzene	0.050	0.0088
Toluene	0.050	0.36
Ethyl Benzene	0.050	1.7
Xylenes (Total)	0.050	2.4
Chromatogram Pattern:		Gas

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	85

*Corrected  
0.088*

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@5-5.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-17

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

GC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel	1.0	27
Chromatogram Pattern: Non Diesel Mix		C9-C24

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	193 Q

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@5-5.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-17

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP18

**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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	107

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@15-15.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-18

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP4A

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 - 150	83

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
 Sample Descript: U-7@15-15.5  
 Matrix: SOLID  
 Analysis Method: 8015Mod/8020  
 Lab Number: 9502G38-18

Sampled: 02/22/95  
 Received: 02/24/95  
 Extracted: 03/01/95  
 Analyzed: 03/01/95  
 Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
 Instrument ID: GCHP18

**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	0.0090
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	107

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
 Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@20-20.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-19

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	96

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager





# Sequoia Analytical

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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-7@20-20.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-19	Sampled: 02/22/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/01/95 Reported: 03/10/95
Attention: Maree Doden		

GC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP18

## 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.
Chromatogram Pattern:		

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

Eileen Manning  
Project Manager



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

Attention: Marea Doden

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@25-25.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-20

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50                      150	93

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@25-25.5  
Matrix: SOLID  
Analysis Method: 8015Mod/8020  
Lab Number: 9502G38-20

Sampled: 02/22/95  
Received: 02/24/95  
Extracted: 03/01/95  
Analyzed: 03/01/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXB  
Instrument ID: GCHP18

**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.
Chromatogram Pattern:		

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**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@30-30.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-21

Sampled: 02/23/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.
<b>Surrogates</b>	<b>Control Limits %</b>	<b>% Recovery</b>
n-Pentacosane (C25)	50 150	95

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Fileen Manning  
Project Manager



**Sequoia  
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Pacific Environmental Group 2025 Gateway Place, Suite 440 San Jose, CA 95110	Client Proj. ID: 310-038.1C/5430, San Leandro Sample Descript: U-7@30-30.5 Matrix: SOLID Analysis Method: 8015Mod/8020 Lab Number: 9502G38-21	Sampled: 02/23/95 Received: 02/24/95 Extracted: 03/01/95 Analyzed: 03/01/95 Reported: 03/10/95
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QC Batch Number: GC030195BTEXEXA  
Instrument ID: GCHP18

**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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70                      130	107

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

**SEQUOIA ANALYTICAL - ELAP #1210**

Eileen Manning  
Project Manager



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

Client Proj. ID: 310-038.1C/5430, San Leandro  
Sample Descript: U-7@35-35.5  
Matrix: SOLID  
Analysis Method: EPA 8015 Mod  
Lab Number: 9502G38-22

Sampled: 02/23/95  
Received: 02/24/95  
Extracted: 03/03/95  
Analyzed: 03/06/95  
Reported: 03/10/95

Attention: Marea Doden

QC Batch Number: GC0303950HBPEXB  
Instrument ID: GCHP5B

**Total Extractable Petroleum Hydrocarbons (TEPH)**

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TEPH as Diesel Chromatogram Pattern:	1.0	N.D.

Surrogates	Control Limits %	% Recovery
n-Pentacosane (C25)	50 150	94

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

**SEQUOIA ANALYTICAL** - ELAP #1210

Eileen Manning  
Project Manager



# Sequoia Analytical

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

Client Proj. ID: 310-038.1C/5430, San Leandro  
 Sample Descript: U-7@35-35.5  
 Matrix: SOLID  
 Analysis Method: 8015Mod/8020  
 Lab Number: 9502G38-22

Sampled: 02/23/95  
 Received: 02/24/95  
 Extracted: 03/01/95  
 Analyzed: 03/01/95  
 Reported: 03/10/95

Attention: Maree Doden

QC Batch Number: GC030195BTEXEXA  
 Instrument ID: GCHP18

## 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.
Chromatogram Pattern:		

Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	108

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

SEQUOIA ANALYTICAL - ELAP #1210

Eileen Manning  
 Project Manager



Sequoia  
Analytical

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Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Maree Doden

Client Proj. ID: 310-038.1C/5430, San Leandro

Received: 02/24/95

Lab Proj. ID: 9502G38

Reported: 03/10/95

## LABORATORY NARRATIVE

Q - Co-elution confirmed.

SEQUOIA ANALYTICAL

Eileen Manning  
Project Manager





# Sequoia Analytical

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FAX (916) 921-0100

Pacific Environmental Group  
2025 Gateway Place, Suite 440  
San Jose, CA 95110  
Attention: Maree Doden

Client Project ID: 310-038.1C/5430, San Leandro  
Matrix: SOLID

Work Order #: 9502G38 01-03, 10, 12-22

Reported: Mar 13, 1995

COC #:

## QUALITY CONTROL DATA REPORT

Analyte: Diesel

QC Batch#: GC0303950HBPEXB

Analy. Method: EPA 8015M

Prep. Method: EPA 3550

Analyst: B. Ali

MS/MSD #: 9502G3802

Sample Conc.: N.D.

Prepared Date: 3/3/95

Analyzed Date: 3/6/95

Instrument I.D.#: GCHP5

Conc. Spiked: 15 mg/Kg

Result: 13

MS % Recovery: 87

Dup. Result: 12

MSD % Recov.: 80

RPD: 8.0

RPD Limit: 0-50

LCS #:

Prepared Date:

Analyzed Date:

Instrument I.D.#:

Conc. Spiked:

LCS Result:

LCS % Recov.:

MS/MSD

LCS 38-122

Control Limits

### 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.

SEQUOIA ANALYTICAL

Eileen A. Manning  
Project Manager

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

9502G38.PPP <1>



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

Attention: Maree Doden

Client Project ID: 310-038.1C/5430, San Leandro

Matrix: SOLID

Work Order #: 9502G38 04-09, 11

Reported: Mar 13, 1995

COC #:

**QUALITY CONTROL DATA REPORT**

Analyte: Diesel

QC Batch#: GC0303950HBPEXA  
Analy. Method: EPA 8015M  
Prep. Method: EPA 3550

Analyst: B. Ali  
MS/MSD #: 9502G3822  
Sample Conc.: N.D.  
Prepared Date: 3/3/95  
Analyzed Date: 3/6/95  
Instrument I.D.#: GCHP5  
Conc. Spiked: 15 mg/Kg

Result: 15  
MS % Recovery: 100

Dup. Result: 15  
MSD % Recov.: 100

RPD: 0.0  
RPD Limit: 0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD  
LCS 38-122  
Control Limits

**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.

SEQUOIA ANALYTICAL

Eileen A. Manning  
Project Manager



Pacific Environmental Group Client Project ID: 310-038.1C/5430, San Leandro  
 2025 Gateway Place, Suite 440 Matrix: SOLID  
 San Jose, CA 95110  
 Attention: Maree Doden Work Order #: 9502G38 01-20 Reported: Mar 13, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030195BTEXEXB	GC030195BTEXEXB	GC030195BTEXEXB	GC030195BTEXEXB
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan
MS/MSD #:	9502G0706	9502G0706	9502G0706	9502G0706
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/1/95	3/1/95	3/1/95	3/1/95
Analyzed Date:	3/1/95	3/1/95	3/1/95	3/1/95
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	0.20	0.58
MS % Recovery:	90	95	100	97
Dup. Result:	0.18	0.19	0.19	0.57
MSD % Recov.:	90	95	95	95
RPD:	0.0	0.0	5.1	1.7
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
 Analyzed Date:  
 Instrument I.D.#:  
 Conc. Spiked:

LCS Result:  
 LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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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.

SEQUOIA ANALYTICAL

Eileen A. Manning  
 Project Manager



Pacific Environmental Group      Client Project ID: 310-038.1C/5430, San Leandro  
2025 Gateway Place, Suite 440      Matrix: SOLID  
San Jose, CA 95110  
Attention: Maree Doden      Work Order #: 9502G38 21-22      Reported: Mar 13, 1995

**QUALITY CONTROL DATA REPORT**

Analyte:	Benzene	Toluene	Ethyl Benzene	Xylenes
QC Batch#:	GC030195BTEXEXA	GC030195BTEXEXA	GC030195BTEXEXA	GC030195BTEXEXA
Analy. Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Prep. Method:	EPA 5030	EPA 5030	EPA 5030	EPA 5030

Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
MS/MSD #:	9502F7218	9502F7218	9502F7218	9502F7218
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Prepared Date:	3/1/95	3/1/95	3/1/95	3/1/95
Analyzed Date:	3/1/95	3/1/95	3/1/95	3/1/95
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:	0.20	0.21	0.22	0.64
MS % Recovery:	100	105	110	107
Dup. Result:	0.19	0.20	0.20	0.61
MSD % Recov.:	95	100	100	102
RPD:	5.1	4.9	9.5	4.8
RPD Limit:	0-50	0-50	0-50	0-50

LCS #:

Prepared Date:  
Analyzed Date:  
Instrument I.D.#:  
Conc. Spiked:

LCS Result:  
LCS % Recov.:

MS/MSD LCS Control Limits	55-145	47-149	47-155	56-140
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**SEQUOIA ANALYTICAL**

Eileen A. Manning  
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.

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

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

WORKORDER: 9562938  
 DATE OF LOG-IN: 2/27/95

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	Present / <del>Absent</del> Intact / Broken*	01	A	U-4@5-5.5	1 CORE	Solid	2/23	
2. Custody Seal Nos.:	Put in Remarks Section	02		15-15.5				
3. Chain-of-Custody Records:	<del>Present</del> / Absent*	03		25-25.5				
4. Traffic Reports or Packing List:	Present / <del>Absent</del>	04		30-30.5				
5. Airbill:	Airbill / Sticker Present / <del>Absent</del>	05		✓ 35-35.5				
6. Airbill No.:		06		-5@ 5-5.5				
7. Sample Tags:	<del>Present</del> / Absent*	07		15-15.5				
Sample Tag Nos.:	<del>Listed</del> / Not Listed on Chain-of-Custody	08		25-25.5				
8. Sample Condition:	<del>Intact</del> / Broken* / Leaking*	09		30-30.5				
9. Does information on custody reports, traffic reports and sample tags agree?	<del>Yes</del> / No*	10		✓ 35-35.5				
10. Proper preservatives used:	<del>Yes</del> / No*	11		-6@ 5-5.5				
11. Date Rec. at Lab:	<u>2-24-95</u>	12		15-15.5				
12. Temp. Rec. at Lab:	<u>13°C</u>	13		20-20.5				
13. Time Rec. at Lab:	<u>1610</u>	14		25-25.5				
		15		30-30.5				
		16		✓ 35-35.5				
		17		-7@ 5-5.5				
		18		15-15.5				
		19		20-20.5				
		20	✓	✓ 25-25.5	✓	✓	✓	

\* If Circled, contact Project manager and attach record of resolution

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

WORKORDER: 9502G38  
 DATE OF LOG-IN: 2/27/95

CIRCLE THE APPROPRIATE RESPONSE		LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION(ETC.)
1. Custody Seal(s)	Present / <u>Absent</u> Intact / Broken*	21	A	U-7@ 30-30.5	ICORE	Solid	2/23	
2. Custody Seal Nos.:	Put in Remarks Section	22	↓	↓ 35-35.5	↓	↓	↓	
3. Chain-of-Custody Records:	<u>Present</u> / Absent*							
4. Traffic Reports or Packing List:	Present / <u>Absent</u>							
5. Airbill:	Airbill / Sticker Present / <u>Absent</u>							
6. Airbill No.:								
7. Sample Tags:	<u>Present</u> / Absent*							
Sample Tag Nos.:	<u>Listed</u> / Not Listed on Chain-of-Custody							
8. Sample Condition:	<u>Intact</u> / Broken* / Leaking*							
9. Does information on custody reports, traffic reports and sample tags agree?	<u>Yes</u> / No*							
10. Proper preservatives used:	<u>Yes</u> / No*							
11. Date Rec. at Lab:	<u>2-24-95</u>							
12. Temp. Rec. at Lab:	<u>13°C</u>							
13. Time Rec. at Lab:	<u>1610</u>							

*Handwritten:* 2-24-95

\* If Circled, contact Project manager and attach record of resolution

Company Name: <u>Pacific Environmental Group</u>		Project Name: <u>Unocal - 1935 Washington San Leandro</u>	
Address: <u>2025 Gateway Place # 440</u>		UNOCAL Project Manager: <u>DAVE GAMITTE</u>	
City: <u>SAN JOSE</u> State: <u>CA</u> Zip Code: <u>95110</u>	Release #: <u>310-038 1C</u>		
Telephone: <u>408 441-7500</u> FAX #: <u>408 441 7539</u>	Site #: <u>5430</u>		
Report To: <u>Joe Muzio</u>	Sampler: <u>CJ Motosicky</u>	QC Data: <input checked="" type="checkbox"/> Level D (Standard) <input type="checkbox"/> Level C <input type="checkbox"/> Level B <input type="checkbox"/> Level A	

**Turnaround**     10 Work Days     5 Work Days     3 Work Days  
**Time:**     2 Work Days     1 Work Day     2-8 Hours  
**CODE:**     Misc.     Detect     Eval.     Remed.     Demol.     Closure

Drinking Water     Waste Water     Other  
**Analyses Requested**

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	9502938				Comments	
1. U-4 @ 05-05.5	2/21/95	S	1	2x6	X	X				-01	
2. U-4 @ 15-15.5	↓									-02	
3. U-4 @ 25-25.5	↓									-03	
4. U-4 @ 30-30.5	↓									-04	
5. U-4 @ 35-35.5	↓									-05	
6. U-5 @ 5-5.5	2/21/95									-06	
7. U-5 @ 15-15.5	↓									-07	
8. U-5 @ 25-25.5	↓									-08	
9. U-5 @ 30-30.5	↓									-09	
10. U-5 @ 35-35.5	↓									-10	

Relinquished By: <u>CJ Motosicky</u>	Date: <u>2/24/95</u>	Time: <u>0700</u>	Received By: <u>ND Dodson</u>	Date: <u>2/24/95</u>	Time: <u>0800</u>
Relinquished By: <u>ND Dodson</u>	Date: <u>2/24/95</u>	Time: <u>1520</u>	Received By: <u>[Signature]</u>	Date: <u>2/24</u>	Time: <u>3:25</u>
Relinquished By: <u>[Signature]</u>	Date: <u>2/24</u>	Time: <u>4:10</u>	Received By Lab: <u>Charles [Signature]</u>	Date: <u>2/24</u>	Time: <u>1610</u>

Were Samples Received in Good Condition?  Yes  No   
 Samples on Ice?  Yes  No   
 Method of Shipment \_\_\_\_\_   
 Page L of 3

To be completed upon receipt of report:  
 1) Were the analyses requested on the Chain of Custody reported?  Yes  No If no, what analyses are still needed? \_\_\_\_\_  
 2) Was the report issued within the requested turnaround time?  Yes  No If no, what was the turnaround time? \_\_\_\_\_  
 Approved by: \_\_\_\_\_ Signature: \_\_\_\_\_ Company: \_\_\_\_\_ Date: \_\_\_\_\_

Pink - Client

Yellow - Laboratory

4

White - Laboratory

Company Name: Pacific Environmental Group    Project Name: 1935 Washington San Leandro  
 Address: 2025 Gateway Pl #440    UNOCAL Project Manager: DAVE Camille  
 City: San Jose    State: CA    Zip Code: 95110    Release #: 310-038-1C  
 Telephone: 408 441 7500    FAX #: 408 441 7539    Site #: 5430  
 Report To: Joe Muzzio    Sampler: CJ Motosicky    EC Data:  Level D (Standard)     Level C     Level B     Level A

Turnaround  10 Work Days     5 Work Days     3 Work Days  
 Time:     2 Work Days     1 Work Day     2-8 Hours  
 CODE:  Misc.     Detect.     Eval.     Remed.     Demol.     Closure  
 Drinking Water     Waste Water     Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested				Comments
1. U-6 @ 5-5.5	2/21/95	S	1	2x6		9502G/38				
2. U-6 @ 15-15.5										-11
3. U-6 @ 20-20.5										-12
4. U-6 @ 25-25.5										-13
5. U-6 @ 30-30.5										-14
6. U-6 @ 35-35.5										-15
7. U-7 @ 5-5.5	2/22/95									-16
8. <del>U-7</del> @ 15-15.5										-17
9. U-7 @ 20-20.5										-18
10. U-7 @ 25-25.5										-19
										-20

Relinquished By: <u>CJ Motosicky</u>	Date: <u>2/24/95</u>	Time: <u>0700</u>	Received By: <u>(M) Dode</u>	Date: <u>2/24/95</u>	Time: <u>0800</u>
Relinquished By: <u>(M) Dode</u>	Date: <u>2/24/95</u>	Time: <u>1520</u>	Received By: <u>[Signature]</u>	Date: <u>2/24/95</u>	Time: <u>3:25</u>
Relinquished By: <u>[Signature]</u>	Date: <u>2/24</u>	Time: <u>4:10</u>	Received By: Lab: <u>Chris [Signature]</u>	Date: <u>2/24/95</u>	Time: <u>1610</u>

Were Samples Received in Good Condition?  Yes  No    Samples on Ice?  Yes  No    Method of Shipment \_\_\_\_\_    Page 2 of 3

To be completed upon receipt of report:  
 1) Were the analyses requested on the Chain of Custody reported?  Yes  No    If no, what analyses are still needed? \_\_\_\_\_  
 2) Was the report issued within the requested turnaround time?  Yes  No    If no, what was the turnaround time? \_\_\_\_\_  
 Approved by: \_\_\_\_\_    Signature: \_\_\_\_\_    Company: \_\_\_\_\_    Date: \_\_\_\_\_

Pink - Client

Yellow - Laboratory

White - Laboratory 4



Company Name: Pacific Environmental Group Project Name: 1935 Washington Ave San Leandro  
 Address: 2025 gateway Pl # 440 UNOCAL Project Manager: DAVE CAMILLE  
 City: SAN JOSE State: CA Zip Code: 95110 Release #: 310-038-1C  
 Telephone: 408 441-7500 FAX #: 408 441-7790 Site #: 5430  
 Report To: Joe Muzzio Sampler: CJ Motusicky QC Data:  Level D (Standard)  Level C  Level B  Level A

Turnaround  10 Work Days  5 Work Days  3 Work Days  Drinking Water  
 Time:  2 Work Days  1 Work Day  2-8 Hours  Waste Water  
 CODE:  Misc.  Detect  Eval.  Remed.  Demol.  Closure  Other

Client Sample I.D.	Date/Time Sampled	Matrix Desc.	# of Cont.	Cont. Type	Laboratory Sample #	Analyses Requested	Comments
1. <u>U-7@3-35</u>	<u>2/23/95</u>	<u>3</u>	<u>1</u>	<u>2x6</u>	<u>9502638</u>	<u>-21</u>	
2. <u>U-7@35-35.5</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>	<u>↓</u>		<u>-22</u>	
3.							
4.							
5.							
6.							
7.							
8.							
9.							
10.							

Relinquished By: CJ Motusicky Date: 2/24/95 Time: 0700 Received By: [Signature] Date: 2/24/95 Time: 0800  
 Relinquished By: [Signature] Date: 2/24/95 Time: 1520 Received By: [Signature] Date: 2/24 Time: 3:25  
 Relinquished By: [Signature] Date: 2/24 Time: 4:10 Received By: Lab: [Signature] Date: 2/24 Time: 1610

Were Samples Received in Good Condition?  Yes  No Samples on Ice?  Yes  No Method of Shipment \_\_\_\_\_ Page 3 of 3

To be completed upon receipt of report:  
 1) Were the analyses requested on the Chain of Custody reported?  Yes  No If no, what analyses are still needed? \_\_\_\_\_  
 2) Was the report issued within the requested turnaround time?  Yes  No If no, what was the turnaround time? \_\_\_\_\_  
 Approved by: \_\_\_\_\_ Signature: \_\_\_\_\_ Company: \_\_\_\_\_ Date: \_\_\_\_\_

Pink - Client  
 Yellow - Laboratory  
 4  
 White - Laboratory