PACIFIC
ENVIRONMENTAL
GROUP, INC.

- analysis for SVOCs should continue for MW-13.

July 27, 1993
Project 330-06.20

Mr. Michael Whelan
ARCO Products Company
P. O. Box 5811
San Mateo, California 94402

Re: ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Dear Mr. Whelan:

This report, prepared by Pacific Environmental Group, Inc. (PACIFIC) for ARCO Products Company (ARCO), presents the results of an impact delineation investigation and results of an exploratory soil boring program and well installation performed at the site referenced above (Figures 1 and 2). The purpose of the investigation was to provide additional data for site-wide characterization of soil and groundwater conditions, to assist in defining the most appropriate and feasible method(s) of remediation for petroleum hydrocarbon-impacted soils and groundwater underlying the site.

The work performed at the site was proposed in PACIFIC's February 4, 1993 Work Plan (Work Plan). Additionally, the proposed work was presented to the Alameda County Health Care Service Agency (ACHCSA) and Regional Water Quality Control Board (RWQCB) during a meeting conducted on February 5, 1993. The Work Plan was subsequently approved by the ACHCSA.

This report constitutes the first of four reports outlined in PACIFIC's Work Plan. Topics addressed in subsequent reports will include risk assessment, biofeasibility, air sparging and soil vapor extraction (SVE) well testing, aquifer testing, and groundwater modeling.

A detailed discussion of site background, including: (1) site description, (2) results of previous investigations, (3) regulatory response, and (4) summary of site conditions, was presented in PACIFIC's Work Plan. Additionally, field and laboratory procedures were also presented in PACIFIC's Work Plan. These discussions are not duplicated in this report. This report includes a discussion of the scope of work, findings, summary of findings, and conclusions. Also included in this report

are the results of the first quarter 1993 groundwater monitoring of site wells and the results of the second quarter 1993 sampling of the domestic irrigation wells.

PROPOSED SCOPE OF WORK

To complete the site-wide characterization of the soil and groundwater conditions at the site, and to provide additional data to assist in defining the most appropriate and feasible method(s) for the remediation of petroleum hydrocarbons, PACIFIC's Work Plan proposed: (1) the drilling and sampling of a minimum of 14 on-site and 19 off-site borings, (2) the drilling, sampling, and installation of two additional groundwater monitoring wells and two dual completion air sparging and SVE wells, (3) development of the newly installed wells, (4) laboratory chemical analysis of soil and groundwater samples, and (5) technical report preparation and submittal. Based on data gathered during the field activities, one additional off-site and five additional on-site soil borings were drilled and one groundwater monitoring well was installed to assist in the definition of soil and groundwater conditions.

Drilling, sampling, and well installation procedures were described in PACIFIC's Work Plan. Boring logs and well construction details are included as Attachment A. Locations of the borings and wells are presented on Figures 3 and 4.

Exploratory Soil Boring Program

Nineteen on-site soil borings (B-13 through B-24, B-24A, B-27, B-27A, B-28 through B-30, and B-30A) and twenty off-site soil borings (B-1 through B-12, B-25, B-26, and B-31 through B-36) were drilled to: (1) further define the lateral and vertical extent of the subsurface channel deposits (all borings), (2) define the lateral extent of petroleum hydrocarbons in historical capillary fringe zone across the site (all borings), (3) define the lateral and vertical extent of hydrocarbons in soils adjacent to the former oil-water separator/clarifier (clarifier) (B-23, B-24, and B-24A) and adjacent to the former used oil tank (B-27, B-27A, B-28, B-29, B-30, and B-30A), and (4) collect soil samples for physical testing (B-11, B-26, B-31, and SP-2/V-5) and biological testing (B-9 through B-12, B-25, and B-26) pertinent to the risk assessment and remedial alternative portions of the remedial investigation.

Two additional soil borings which were drilled on site to provide further delineation of petroleum hydrocarbons adjacent to the used oil tank. In addition, three soil borings were drilled adjacent to the clarifier and used oil tank to collect additional soil samples, due to insufficient quantities from the initial drilling event; one boring was drilled adjacent to the clarifier, and two borings were drilled adjacent to the used oil tank. One additional soil boring was drilled off site along Hacienda Avenue to provide complete delineation of soils in this area. The

exploratory soil boring program was performed March 8 through 13, and April 6, 1993.

Groundwater Monitoring Well Installation Program

Three groundwater monitoring wells (MW-24 through MW-26) were drilled and installed to: (1) provide delineation of petroleum hydrocarbon-impacted groundwater in the upgradient (east) and crossgradient (north) directions, and (2) further define the lateral and vertical extent of the subsurface channel deposit. Monitoring Well MW-25 was installed on site, upgradient of the underground storage tank (UST) complex and product islands, on March 17, 1993. Monitoring Wells MW-24 and MW-26 were installed north (crossgradient) of the site on March 17 and 19, 1993. Monitoring Wells MW-24 through MW-26 were developed and sampled on March 29, 1993. Groundwater analytical results from the March 29, 1993 monitoring event are reported in the *First Quarter 1993 Groundwater Monitoring Results and Remedial Performance Evaluation* report prepared by PACIFIC, dated June 30, 1993. These wells will be monitored on a quarterly basis.

Dual Completion Air Sparging and Soil Vapor Extraction Well Installation Program

Two dual completion air sparging and SVE wells were installed on and off site to: (1) further define the lateral and vertical extent of the subsurface channel deposit, (2) collect samples for physical testing pertinent to the risk assessment portion of the remedial investigation, (3) provide vertical and lateral characterization of hydrocarbons in soils, and (4) perform air sparging and SVE feasibility tests at the subject site. Dual Completion Well SP-1/V-4 was installed on site on March 18 and 19, 1993. Dual completion Well SP-2/V-5 was installed off site, west (downgradient) of the site, on March 18 and 19, 1993. Sparge Wells SP-1 and SP-2 were developed on March 29, 1993.

Laboratory Analysis

Soil samples for laboratory analysis were collected from all borings and wells at the approximate depth of the historical capillary fringe zone (9 to 14 feet bgs). Additionally, soil samples for laboratory analysis were collected at 5-foot depth intervals in Borings B-23, B-24, B-24A, B-27, B-27A, B-28, B-29, B-30, and B-30A, adjacent to the clarifier and used oil tank.

All soil samples collected for laboratory analysis from the historical capillary fringe zone were analyzed for total petroleum hydrocarbons calculated as gasoline (TPH-g) and benzene, toluene, ethylbenzene, and xylenes (BTEX compounds). Soil samples collected in the vicinity of the former clarifier and former used oil tank were also analyzed for total recoverable petroleum oil calculated as oil and grease (oil and grease), California Assessment Metals (CAM Metals), semi-

volatile organic compounds (SVOCs), and halogenated volatile organic compounds (HVOCs).

Groundwater from all sampled wells was analyzed for TPH-g and BTEX compounds. Certified analytical reports, chain-of-custody documentation, and field data sheets are presented as Attachment B.

FINDINGS

Subsurface Conditions

Soils encountered consisted predominantly of surficial clays and silts extending from the ground surface to a maximum depth of 11 feet bgs. **Clayey sand, silty sand, and sand deposits ranging in approximate thickness from 1/2 foot to 4 feet were noted at depths extending from 4 to 15 feet bgs in most borings,** underlain by clays to the total depth explored of 22-1/2 feet bgs. Most commonly, these sandy units were noted to be between 1/2 and 3 feet in thickness. These coarser-grained deposits are noted primarily in the central portion of the site. **Clayey sand, silty sand, and sand deposits were also noted at similar depths in Borings MW-8 through MW-11, MW-13, MW-15, MW-17, and MW-22 during previous investigations.** The northern most borings did not encounter the sandy units, nor did Boring B-7 in the southeastern part of the study area. Groundwater in the borings was first encountered between the depths of 8 and 14 feet bgs. Figure 3 presents the locations of lines of section for Cross-sections A-A' and B-B'. Cross-sections A-A' and B-B', showing generalized subsurface conditions, are presented on Figure 5. Boring logs are presented as Attachment A.

Organic Vapor Analysis

Concentrations of organic vapors measured with the photo-ionization detector (PID) were found to range from non-detectable levels to 190 parts per million (ppm). Primarily, concentrations of organic vapors were noted in the historical capillary fringe zone, at depths ranging between approximately 9 and 14 feet bgs. In off-site soils, organic vapor concentrations greater than 50 ppm were noted only in Boring B-9, located near the intersection of Via Arriba and Hacienda Avenue, at 110 ppm.

In on-site soils, organic vapor concentrations greater than 50 ppm were noted in Borings B-14, B-22, B-23, B-24, B-27, and SP-1/V-4 at concentrations ranging between 50 and 190 ppm. Organic vapors in soil samples from on-site Borings B-23, B-24, and B-27, located in the vicinity of the former clarifier and former used oil tank, were noted at shallow depths (between 2 and 5 feet bgs) at concentrations between 60 and 160 ppm. Soil samples collected at 10 and 15 feet bgs from Borings B-23, B-24, and B-27 had organic vapor concentrations less than 5 ppm. PID measurements of hydrocarbon levels are useful for indicating relative

levels of impact, but cannot be used to evaluate hydrocarbon levels with the confidence of laboratory analysis. The results of the PID field analyses are noted on the attached boring logs.

Soil Analytical Results

Soil samples for laboratory analysis were collected from all borings from the approximate depth of the historical capillary fringe (9 to 14 feet bgs), and were analyzed for TPH-g and BTEX compounds. TPH-g was detected in the historical capillary fringe zone at concentrations ranging from 1.6 ppm in Boring B-17 to 650 ppm in Boring B-24. Benzene was detected at concentrations ranging from 0.010 ppm in Boring B-9 to 0.59 ppm in Boring SP-1/V-4. Primarily, the highest concentrations of TPH-g (greater than 100 ppm) were noted in soil samples collected from on-site borings in the vicinity of the former clarifier, the product island immediately east of the station building, and approximately 30 feet west of the former UST complex. One off-site boring (B-34) adjacent to Well MW-17 had TPH-g at 130 ppm. Capillary fringe zone samples collected from Borings B-1 through B-8, B-10 through B-12, B-15, B-21, B-23, B-25 through B-33, B-35, B-36, and MW-24 through MW-26 had non-detectable levels of TPH-g and BTEX compounds. Soil analytical data for TPH-g and BTEX compounds are presented in Table 1 and shown on Figures 6 and 7.

Soil samples collected from borings in the vicinity of the clarifier (B-23, B-24, and B-24A) and former used oil tank (B-27 through B-30, B-27A, and B-30A) were collected at 5-foot depths between the ground surface and 15 feet bgs, and were analyzed for oil and grease, CAM Metals, SVOCs, and HVOCs. Oil and grease were detected at concentrations ranging between 240 and 1,900 ppm. Concentrations greater than 500 ppm oil and grease were noted in Borings B-24 and B-24A, adjacent to the clarifier, at depths of 5 and 10 feet bgs. A concentration of 240 ppm oil and grease was noted in Boring B-27, adjacent to the former used oil tank, at a depth of 3 feet bgs. Soil analytical data for oil and grease are presented in Table 2.

Detectable concentrations of CAM Metals including antimony, arsenic, barium, chromium, cobalt, copper, nickel, vanadium, and zinc were noted in Borings B-23, B-24, B-27A, and B-30. Detected concentrations of CAM Metals were significantly below California Code of Regulations (CCR) Title 22 total threshold level concentration (TTLC) levels. Soil analytical data for CAM Metals are presented in Table 3.

SVOCs were detected in Borings B-23 and B-24 between the depths of 5 and 10 feet bgs. Detectable SVOCs included 2-methylnaphthalene, naphthalene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, and *bis*(2-ethylhexyl)phthalate. All other soil samples analyzed contained non-detectable concentrations of SVOCs. SVOC soil analytical data are presented in Table 4.

HVOCs were detected only in Boring B-24 at 5 feet bgs. Detectable HVOCs included 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene. All other soil samples analyzed contained non-detectable levels of HVOCs. HVOC soil analytical data are presented in Table 5.

Groundwater Analytical Results

Groundwater samples were collected from all site groundwater monitoring wells and from domestic irrigation wells on March 16 through 18 and March 29, 1993, and analyzed for TPH-g and BTEX compounds.

Groundwater samples collected from site groundwater monitoring wells had concentrations of TPH-g ranging from 130 parts per billion (ppb) in Well MW-15 to 4,100 ppb in Well MW-10. Benzene was detected at concentrations ranging from 0.69 ppb in Well MW-25 to 340 ppb in Well MW-10. Wells MW-7, MW-9, MW-11, MW-13, MW-14, MW-18 through MW-24, and MW-26 had non-detectable levels of TPH-g and BTEX compounds. No separate-phase hydrocarbons (SPH) were noted in any wells. Hydrocarbon-impacted groundwater has been defined to non-detectable levels in all directions, with the exception of the vicinity of upgradient Well MW-25, where benzene was detected at a concentration of 0.69 ppb. Groundwater analytical data for TPH-g and BTEX compounds are presented in Table 6. A groundwater analytical results map is presented on Figure 8.

Water samples collected from domestic irrigation wells had detectable concentrations of TPH-g at 1,100 ppb at 17349 Via Magdalena, 500 ppb at 17371 Via Magdalena, and 110 ppb at 17372 Via Magdalena. Benzene was detected at a concentration of 16.0 ppb at 17349 Via Magdalena and 8.7 ppb at 17371 Via Magdalena. The wells located at 17197, 17200, 17203, 17302, 17348 Via Encinas, and 17393 Via Magdalena, and 590, 633, and 642 Hacienda Avenue had non-detectable levels of TPH-g and BTEX compounds. Groundwater samples were not collected from wells located at 634 and 675 Hacienda Avenue, due to inoperable pumps. Groundwater analytical data for TPH-g and BTEX compounds are presented in Table 7. Locations of the domestic irrigation wells are presented on Figures 2 and 8.

Depth to groundwater was found to range between approximately 8-1/2 to 12-1/2 feet, with flow to the west with an approximate gradient of 0.003. The operation of the groundwater extraction system on-site has created a groundwater depression extending downgradient at the site. These findings are consistent with groundwater data from previous quarters. Water level data collected on March 15, 1993 from site groundwater monitoring wells, were used to construct the groundwater contour map presented on Figure 9. Groundwater elevation data are presented in Table 8.

SUMMARY OF FINDINGS

The following is a summary of the findings for this investigation:

- Soils encountered underlying the site consisted primarily of surficial clays and silts to a depth of approximately 11 feet bgs. Coarse-grained deposits consisting of clayey sand, silty sand, and sand, ranging in thickness from 1/2 foot to 3 feet, were noted in most borings between the approximate depths of 4 to 15 feet bgs, underlain by clays to the total depth explored 22-1/2 feet bgs. These coarse-grained deposits may represent channel deposits and apparently trend in an east-west direction, increasing in thickness from north to south.

- Organic vapor concentrations ranged between non-detectable levels to 190 ppm. The highest concentrations were noted within the historical capillary fringe zone (9 to 14 feet bgs) and in the vicinity of the former clarifier and former used oil tank.

- TPH-g was detected in the historical capillary fringe zone at concentrations ranging from 1.6 ppm in Boring B-17 to 650 ppm in Boring B-24. Benzene was detected in the capillary fringe zone at concentrations ranging from 0.010 ppm in Boring B-9 to 0.59 ppm in Boring SP-1/V-4. The highest concentrations of TPH-g (greater than 100 ppm) were noted from on-site soil borings located in the vicinity of the former clarifier, western product island adjacent to the station building, and west of the former UST complex. Only one off-site boring had TPH-g greater than 100 ppm.

- In the vicinity of the former clarifier, oil and grease, CAM Metals, SVOCs, and HVOCs were detected. Oil and grease were detected at concentrations of 950 ppm at 4 to 6 feet bgs, and 1,900 ppm at 9 to 11 feet bgs, and were not detected at 14 to 16 feet bgs. CAM Metals including antimony, arsenic, barium, chromium, cobalt, copper, nickel, vanadium, and zinc were detected in soil samples submitted for analysis. All concentrations were significantly below CCR Title 22 TTLC levels. SVOCs and HVOCs detected included: 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 2-methylnaphthalene, naphthalene, and *bis*(2-ethylhexyl)phthalate.

- In the vicinity of the former used oil tank, oil and grease were detected only in Boring B-27 at a concentration of 240 ppm at 2 to 3 feet bgs. All other soil samples analyzed from Borings B-27, B-27A, B-28, B-29, B-30, and B-30A had non-detectable levels of

oil and grease. The above listed CAM Metals were also detected in soil samples from Borings B-27A and B-30. No SVOCs or HVOCs were detected in any soil samples from Borings B-27 and B-30.

- Water level data collected on March 15, 1993 indicate depths to groundwater of between 8-1/2 and 12-1/2 feet, and a westerly flow direction with an approximate gradient of 0.003.
- TPH-g concentrations in groundwater samples collected from site wells ranged from 130 ppb (Well MW-15) to 4,100 ppb (Well MW-10). Benzene was detected in site wells at concentrations ranging from 0.69 ppb (Well MW-25) to 340 ppb (Well MW-10). TPH-g and BTEX compounds were not detected in Wells MW-7, MW-9, MW-11, MW-13, MW-14, MW-18 through MW-24, and MW-26.
- No SPH were detected in any on- or off-site wells.
- Water samples from the domestic irrigation wells located at 17349, 17371, and 17372 Via Magdalena contained TPH-g at 110, 500, and 1,100 ppb, respectively. Benzene was detected in wells located at 17349 and 17371 Via Magdalena at 16.0 and 8.7 ppb, respectively. All other domestic irrigation wells had non-detectable concentrations of TPH-g and benzene, with the exception of wells located at 654 and 675 Hacienda Avenue, which were not sampled.

CONCLUSIONS

Extent of Channel Deposits

The coarse-grained deposits consisting of clayey sands, silty sands and sands are relatively thin and extensive, and underlie a broad area across the site. These coarse-grained deposits are interpreted as channel deposits, and include the historical and present capillary fringe zone; they are defined to the north, but not as well defined to the south. Additionally, the channel deposits are noted to increase in thickness from north to south. These channel deposits are more areally extensive than hydrocarbons noted in soil and groundwater, and therefore do not appear to define a preferential path for the downgradient transport of hydrocarbons in groundwater.

Extent of Hydrocarbons in Soil Capillary Fringe Zone

Soil samples collected from on and off site which exhibited the most gasoline odor or highest PID measurement were submitted to a laboratory for chemical analysis.

TPH-g in soils appear to be very localized. In on-site soils, TPH-g were detected ranging between 1.1 and 650 ppm, west and south of the former UST complex and adjacent to former clarifier. TPH-g were detected in off-site soils at 5.8 and 130 ppm, in the vicinity of Wells MW-10 and MW-17, respectively. In general, the concentrations of hydrocarbons in soils are very low. The capillary fringe zone is defined off site, and is defined on site to less than 16 ppm TPH-g to the north, south, and east. Benzene is defined to non-detectable levels to the north, south, and east.

Extent of Hydrocarbons in Groundwater

The definition of TPH-g and benzene in groundwater to non-detectable levels has been completed to the north with the installation of Wells MW-24 and MW-26. Additionally, the east (upgradient) direction has been defined to non-detectable levels of TPH-g and 0.69 ppb benzene. Groundwater continues to be defined to non-detectable concentrations to the west and south.

The hydrocarbon plume in groundwater is noted to extend off site toward the west and is very localized in extent (Figure 8). Additionally, **the plume is noted to bifurcate in the general area of domestic irrigation Well 633, located at the corner of Hacienda Avenue and Via Magdalena, extending toward** Wells 17200 and **MW-17 (northwest) and Wells 17349 and 17371 (southwest). The plume extends directly toward the domestic irrigation wells which have a history of pumping.** Additionally, concentrations of hydrocarbons in groundwater off site in the area of the domestic irrigation wells are generally relatively low.

In the vicinity of the site, the highest hydrocarbon concentrations in groundwater are noted in Wells MW-8 and MW-10, directly downgradient (west) of the site.

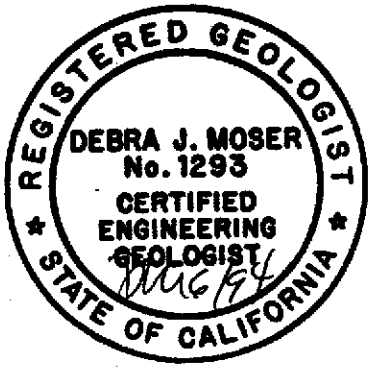
Based on current data, PACIFIC concludes that the sand channel is a factor in hydrocarbon migration, but that other factors also may have influenced hydrocarbon migration to the current plume configuration. These factors may include local variations in channel thickness, depth, and permeability, and pumping of domestic irrigation wells.

If you have any questions concerning the contents of this report, please call.

Sincerely,

Pacific Environmental Group, Inc.

Kelly C. Brown
Project Geologist



Debra J. Moser
Senior Geologist
CEG 1293

Attachments:
Table 1- Soil Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
Table 2- Soil Analytical Data - Total Recoverable Petroleum Oil (Oil and Grease)
Table 3- Soil Analytical Data - California Assessment Metals (Inorganic Persistent and Bioaccumulative Toxic Substances)
Table 4- Soil Analytical Data - Semi-Volatile Organic Compounds
Table 5- Soil Analytical Data - Halogenated Volatile Organic Compounds
Table 6- Groundwater Analytical Data - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
Table 7- Groundwater Analytical Data - Domestic Irrigation Wells - Total Petroleum Hydrocarbons (TPH as Gasoline and BTEX Compounds)
Table 8- Groundwater Elevation Data
Figure 1 - Site Location Map
Figure 2 - Extended Site Map
Figure 3 - Off-Site Soil Boring and Well Location Map
Figure 4 - On-Site Soil Boring and Well Location Map
Figure 5 - Geologic Cross-Sections A-A' and B-B'
Figure 6 - On-Site Soil Analytical Results Map
Figure 7 - Off-Site Soil Analytical Results Map
Figure 8 - Groundwater Analytical Results Map
Figure 9 - Groundwater Elevation Contour Map
Attachment A - Boring Logs B-1 through B-36, B-24A, B-27A, and B-30A, MW-24 through MW-26, SP-1/V-4, and SP-2/V-5
Attachment B - Certified Analytical Reports, Chain-of-Custody Documentation, and Field Data Sheets

cc: Mr. Chris Winsor, ARCO Products Company
Ms. Susan Hugo, Alameda County Health Care Services
Ms. Juliett Shin, Alameda County Health Care Services
Mr. Richard Hiett, Regional Water Quality Control Board - S.F. Bay Region

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

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
B-1	03/08/93	10 - 11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-2	03/08/93	10 - 11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-3	03/08/93	9 - 10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-4	03/08/93	8 - 9	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-5	03/08/93	10 - 11	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-6	03/08/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-7	03/09/93	11 - 12	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-8	03/09/93	11 - 12	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-9	03/09/93	**10 - 12**	**5.8**	**0.010**	<0.0050	**0.029**	<0.0050
B-10	03/09/93	11 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-11	03/09/93	11 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-12	03/09/93	11 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-13	03/10/93	**12 - 13**	**1.6**	<0.0050	<0.0050	<0.0050	<0.0050
B-14	03/10/93	**12 - 13**	**9.6**	<0.25*	<0.25*	**0.39**	**0.94**
B-15	03/10/93	12.5 - 13.5	<1.0	<0.0050	0.0070	<0.0050	<0.0050
B-16	03/11/93	**14 - 15**	**90**	**0.095**	**0.25**	**0.76**	**0.46**
B-17	03/10/93	**12 - 13**	**1.6**	**0.028**	<0.0050	**0.032**	**0.0080**
B-18	03/10/93	**12 - 13**	**19**	<0.025*	<0.025*	**0.19**	**0.21**
B-19	03/10/93	**12 - 13**	**160**	<0.25*	<0.25*	**1.3**	**0.60**
B-20	03/10/93	**12 - 13**	**16**	<0.010*	0.013	**0.11**	**0.14**
B-21	03/10/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-22	03/11/93	**12 - 13**	**4.1**	<0.010*	<0.010*	<0.010*	<0.010*

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

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
B-23	03/11/93	**4 - 5**	**1.4**	<0.0050	<0.0050	<0.0050	<0.0050
		9 - 10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-24	03/11/93	**4 - 5**	**210**	<0.25*	<0.25*	<0.25*	**2.0**
		9 - 10	**650**	<0.5*	<0.5*	**0.80**	**6.4**
		14 - 15	**2.6**	<0.0050	<0.0050	<0.0050	<0.0050
B-25	03/11/93	12 - 14	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-26	03/11/93	12 - 14	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-27	03/11/93	**2 - 3**	**1.2**	**0.013**	**0.024**	**0.025**	**0.041**
		4 - 5	<1.0	<0.0050	0.0050	<0.0050	<0.0050
		9 - 10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-28	03/11/93	4 - 5	<1.0	<0.0050	0.0080	<0.0050	<0.0050
		9 - 10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-29	03/11/93	**4 - 5**	**6.8**	<0.010*	**0.024**	<0.010*	**0.026**
		9 - 10	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
		14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-30	03/11/93	14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-31	03/13/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-32	03/13/93	14 - 15	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-33	03/13/93	13 - 14	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-34	03/13/93	**13 - 14**	**130**	<0.10*	<0.10*	**0.12**	**0.28**
B-35	03/13/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
B-36	03/13/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-24	03/17/93	11 - 12	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-25	03/17/93	12 - 13	<1.0	<0.0050	<0.0050	<0.0050	<0.0050
MW-26	03/19/93	15 - 16.5	<1.0	<0.0050	<0.0050	<0.0050	<0.0050

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

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	TPH as Gasoline (ppm)	Benzene (ppm)	Toluene (ppm)	Ethylbenzene (ppm)	Xylenes (ppm)
SP-1/V-4	03/18/93	**12 - 13**	**500**	**0.59**	**3.8**	**7.9**	**26**
SP-2/V-5	03/18/93	**12 - 13**	<1.0	0.056	<0.0050	**0.021**	**0.0080**

ppm = Parts per million
< = Denotes minimum laboratory detection limit.
* Laboratory detection limits raised due to high analyte concentration requiring sample dilution.

Table 2
Soil Analytical Data
Total Recoverable Petroleum Oil
(Oil and Grease)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	Concentration (ppm)
B-23	03/11/93	4 - 5	<50
		9 - 10	<50
		14 - 15	<50
B-24	03/11/93	**4 - 5**	**500***
		9 - 10	**550***
		14 - 15	<50
B-24A	04/06/93	**4 - 6**	**950**
		9 - 11	**1,900**
		14 - 16	<50
B-27	03/11/93	**2 - 3**	**240***
		4 - 5	<50
		9 - 10	<50
		14 - 15	NA**
B-27A	04/06/93	14 - 16	<50
B-28	03/11/93	4 - 5	<50
		9 - 10	<50
		14 - 15	<50
B-29	03/11/93	4 - 5	<50
		9 - 10	<50
		14 - 15	<50
B-30	03/11/93	14 - 15	<330
B-30A	04/06/93	4 - 6	<50
		9 - 11	<50

ppm = Parts per million
< = Denotes minimum laboratory detection limit.
NA = Not analyzed
* Quantative result. Insufficient sample was available for representative quanitation.
** Not enough of this sample was available for this analysis.

Table 3
Soil Analytical Data
California Assessment Metals
(Inorganic Persistent and Bioaccumulative Toxic Substances)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	Analyte	Sample Results (ppb)	TTLC Max. Limit (ppb)
B-23	03/11/93	4 - 5	Arsenic	27	500
			Barium	140	10,000
			Chromium	31	500
			Cobalt	7.4	8,000
			Copper	16	2,500
			Nickel	33	2,000
			Vanadium	32	2,400
			Zinc	880	5,000
	03/11/93	9 - 10	Arsenic	30	500
			Barium	130	10,000
			Chromium	36	500
			Cobalt	8.4	8,000
			Copper	15	2,500
			Nickel	43	2,000
			Vanadium	33	2,400
			Zinc	860	5,000
	03/11/93	14 - 15	Arsenic	33	500
			Barium	150	10,000
			Chromium	44	500
			Cobalt	9.0	8,000
			Copper	21	2,500
			Nickel	49	2,000
			Vanadium	29	2,400
			Zinc	190	5,000
B-24	03/11/93	4 - 5	Antimony	7.2	500
			Arsenic	31	500
			Barium	140	10,000
			Chromium	34	500
			Cobalt	7.4	8,000
			Copper	15	2,500
			Nickel	34	2,000
			Vanadium	33	2,400
			Zinc	300	5,000

STLC's

5ppm
100 ppm
5 ppm
80 ppm
25 ppm
20 etc

Table 3 (continued)
Soil Analytical Data
California Assessment Metals
(Inorganic Persistent and Bioaccumulative Toxic Substances)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	Analyte	Sample Results (ppb)	TTLC Max. Limit (ppb)
B-24 (cont.)	03/11/93	9 - 10	Arsenic	3.0	500
			Barium	130	10,000
			Chromium	39	500
			Cobalt	7.2	8,000
			Copper	16	2,500
			Lead	49	1,000
			Nickel	41	2,000
			Vanadium	27	2,400
			Zinc	740	5,000
	03/11/93	14 - 15	Arsenic	32	500
			Barium	130	10,000
			Chromium	36	500
			Cobalt	7.0	8,000
			Copper	16	2,500
			Nickel	38	2,000
			Vanadium	38	2,400
			Zinc	1,200	5,000
B-27A	04/16/93	14 - 16	Arsenic	8.3	500
			Barium	82	10,000
			Chromium	22	500
			Cobalt	6.5	8,000
			Copper	9.3	2,500
			Nickel	29	2,000
			Vanadium	26	2,400
			Zinc	31	5,000
B-30	03/11/93	14 - 15	Arsenic	31	500
			Barium	130	10,000
			Chromium	41	500
			Cobalt	7.1	8,000
			Copper	19	2,500
			Lead	11	1,000
			Nickel	44	2,000
			Vanadium	23	2,400
			Zinc	2,300	5,000

ppb = Parts per billion
Only detected compounds are listed.

Table 4
Soil Analytical Data
Semi-Volatile Organic Compounds

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	Analyte	Sample Results (ppb)	Detection Limit (ppb)
B-23	03/11/93	4 - 5	2-Methylnaphthalene	100	100
			Naphthalene	140	100
		9 - 10	ND	ND	--
		14 - 15	ND	ND	--
B-24	03/11/93	4 - 5	1,4-Dichlorobenzene	150	100
			1,2-Dichlorobenzene	480	100
			2-Methylnaphthalene	710	100
			Naphthalene	570	100
		9 - 10	*Bis*(2-ethylhexyl)phthalate	500	500
			1,2-Dichlorobenzene	160	100
			2-Methylnaphthalene	1,100	100
			Naphthalene	760	100
		14 - 15	ND	ND	--
B-27	03/11/93	14 - 15	ND	ND	--
B-30	03/11/93	14 - 15	ND	ND	--

ppb = Parts per billion
ND = Not detected
Only detected compounds are listed.

Table 5
Soil Analytical Data
Halogenated Volatile Organic Compounds

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Boring Number	Date Sampled	Depth (feet)	Analyte	Sample Results (ppb)	Detection Limit (ppb)
B-23	03/11/93	4 - 5	ND	ND	--
		9 - 10	ND	ND	--
		14 - 15	ND	ND	--
B-24	03/11/93	4 - 5	1,3-Dichlorobenzene	7.1	5.0
			1,4-Dichlorobenzene	45	5.0
			1,2-Dichlorobenzene	110	5.0
		9 - 10	ND	ND	--
		14 - 15	ND	ND	--
B-27	03/11/93	14 - 15	ND	ND	--
B-30	03/11/93	14 - 15	ND	ND	--

ppb = Parts per billion
ND = Not detected
Only detected compounds are listed.

Table 6
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-1	01/11/88	300	20	10	50	80
	06/14/88	Well Destroyed				
MW-2	07/05/85	32,000	1,000	690	NA*	1,500*
	01/11/88	3,300	804	115	168	166
	06/14/88	Well Destroyed				
MW-3	01/11/88	1,800	20	20	80	60
	03/07/89	150,000	4,600	5,200	5,600	13,000
	06/21/89	63,000	2,700	5,800	3,300	12,000
	12/12/89	Not Sampled--Insufficient Water Volume				
	03/29/90	1,100,000**	13,000	60,000	17,000	91,000
	06/22/90	Not Sampled--Insufficient Water Volume				
	07/18/90	Well Destroyed				
MW-4	01/11/88	62,000	2,700	7,900	850	5,200
	09/12/88	Not Sampled--Separate-Phase Hydrocarbon				
	03/07/89	84,000	2,400	3,400	2,500	7,600
	06/21/89	31,000	400	800	200	1,500
	12/12/89	Not Sampled--Well Dry				
	03/29/90	Not Sampled-0.01 foot Separate-Phase Hydrocarbon				
	06/22/90	Not Sampled--Well Dry				
	07/18/90	Well Destroyed				
MW-5	01/11/88	31,000	4,000	2,700	3,800	5,500
	03/07/89	1,300	340	ND	140	50
	06/21/89	1,100	200	ND	130	40
	12/12/89	Not Sampled--Well Dry				
	03/29/90	Not Sampled--Insufficient Water Volume				
	06/22/90	Not Sampled--Insufficient Water Volume				
	09/19/90	Not Sampled--Well Dry				
	12/27/90	Not Sampled--Well Dry				
	03/21/91	Not Sampled--Well Dry				
	06/26/91	Not Sampled--Well Dry				
	09/24/91	Not Sampled--Well Dry				
	12/19/91	Not Sampled--Well Dry				
	03/18/92	11,000	110	2.0	410	150
	06/15/92	Not Sampled--Well Dry				
	09/16/92	Not Sampled--Well Dry				
	12/22/92	960	220	6.5	4.0	2.0
	03/17/93	2,600	180	1.4	28	1.2

Table 6 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-6	06/21/89	1,700	170	170	85	290
(E-1)	12/12/89	500	26	7	8	18
	03/29/90	130	14	9	4	11
	06/22/90	150	15	5	4	13
	07/18/90	---------- Well Destroyed ----------				
MW-7	04/13/90	<50	<0.3	<0.3	<0.3	<0.3
	06/22/90	<50	0.5	1	0.6	3
	09/19/90	<50	<0.3	<0.3	<0.3	<0.3
	12/27/90	69	<0.3	0.3	0.4	2
	03/21/91	<30	<0.3	<0.3	<0.3	<0.3
	06/26/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/17/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-8	04/13/90	4,900	350	16	450	33
	06/22/90	3,700	370	12	330	28
	09/19/90	140	4	3	3	3
	12/27/90	1,200	7	0.3	53	<0.3
	03/21/91	540	8.8	<6.0	21	9.6
	06/26/91	2,100	290	<6.0	56	<6.0
	09/24/91	260	51	0.34	7.9	<0.3
	12/19/91	5,300	300	<3.0	21	4.8
	03/17/92	9,200	370	3.0	48	4.9
	06/17/92	3,300	460	2.7	63	6.9
	09/16/92	1,500	58	<0.5	6.1	4.5
	12/22/92	3,600	410	56	62	4.4
	03/18/93	3,800	61	<0.5	11	1.2
MW-9	04/13/90	<50	<0.3	<0.3	<0.3	2
	06/22/90	12,000	200	3	250	180
	09/19/90	<50	<0.3	<0.3	<0.3	0.6
	12/27/90	<50	<0.3	<0.3	<0.3	<0.3
	03/21/91	<30	<0.3	<0.3	<0.3	<0.3
	06/26/91	<30	<0.3	<0.3	<0.3	<0.3

Table 6 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-9 (cont.)	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/16/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	75***	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
MW-10	04/13/90	10,000	150	4	280	200
	06/22/90	9,700	28	<0.3	131	210
	09/19/90	1,800	<0.3	4	0.8	10
	12/27/90	5,700	7	3	95	61
	03/21/91	6,900	22	<15	92	33
	06/26/91	9,300	51	<0.3	59	34
	09/24/91	360	8.6	5.2	14	6.2
	12/19/91	3,300	9.2	8.4	11	17
	03/18/92	4,700	14	<6.0	29	10
	06/16/92	4,800	0.46	0.34	7.4	3.8
	09/16/92	2,000	8.3	3.0	3.3	5.5
	12/22/92	2,700***	6.2	<1.0	7.5	2.8
	03/16/93	**4,100**	**340**	**2.4**	**58**	**54**
MW-11	04/13/90	<50	<0.3	<0.3	<0.3	<0.3
	06/22/90	63	0.4	0.9	0.7	3
	09/19/90	<50	<0.3	<0.3	<0.3	<0.3
	12/27/90	<50	<0.3	<0.3	<0.3	<0.3
	03/21/91	<30	<0.3	<0.3	<0.3	<0.3
	06/26/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/16/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
E-1A (MW-12)	09/19/90	<50	7	0.9	1	2
	12/27/90	<50	3	0.5	1	1
	03/21/91	<30	4.2	<0.3	1.1	0.89
	06/26/91	41	6.3	<0.3	1.2	0.59
	---------- Converted to Extraction Well 8/91 ----------					

Table 6 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-13	07/03/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/17/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-14	07/03/91	<30	<0.3	<0.3	<0.3	<0.3
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/16/92	<30	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
MW-15	07/03/91	570	1.8	1.0	1.0	2.2
	09/24/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	360	<0.6	<0.6	0.64	<0.6
	03/18/92	730	0.74	0.98	1.8	0.68
	06/16/92	310	0.54	0.34	0.96	2.5
	09/16/92	100	1.0	<0.5	<0.5	<0.5
	12/22/92	130***	<0.5	<0.5	<0.5	<0.5
	03/18/93	**130*** **	<0.5	<0.5	<0.5	<0.5
MW-16	07/03/91	2,700	31	6.9	4.6	3.1
	09/24/91	430	1.8	1.3	1.9	1.5
	12/19/91	75	<0.3	<0.3	<0.3	<0.3
	03/18/92	1,500	4.0	0.73	2.2	1.3
	06/16/92	80	<0.3	<0.3	<0.3	<0.3
	09/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/18/93	**380*** **	<0.5	<0.5	<0.5	<0.5
MW-17	07/03/91	1,200	12	1.9	28	40
	09/24/91	150	2.7	0.5	3.9	0.59
	12/19/91	370	2.6	<0.3	7.2	6.5
	03/18/92	470	3.1	<0.3	9.1	8.6
	06/16/92	310	1.7	0.56	12	9.6

Table 6 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-17 (cont.)	09/16/92	77	1.5	<0.5	1.2	1.0
	12/21/92	220	1.2	<0.5	9.8	9.4
	03/17/93	250	<0.5	<0.5	7.8	3.3
MW-18	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-19	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-20	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-21	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/18/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-22	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3

Table 6 (continued)
Groundwater Analytical Data
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
MW-22 (cont.)	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/17/93	<50	<0.5	<0.5	<0.5	<0.5
MW-23	10/04/91	<30	<0.3	<0.3	<0.3	<0.3
	12/19/91	<30	<0.3	<0.3	<0.3	<0.3
	03/17/92	<30	<0.3	<0.3	<0.3	<0.3
	06/15/92	<30	<0.3	<0.3	<0.3	<0.3
	09/15/92	<50	<0.5	<0.5	<0.5	<0.5
	12/22/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
MW-24	03/29/93	<50	<0.5	<0.5	<0.5	<0.5
MW-25	03/29/93	<50	0.69	<0.5	<0.5	<0.5
MW-26	03/29/93	<50	<0.5	<0.5	<0.5	<0.5

ppb = Parts per billion
NA = Not available
ND = Not detected
< = Denotes minimum laboratory detection limits. See attached certified analytical reports.
* Ethylbenzene and xylenes given as a combined value.
** Well contained slight product sheen.
*** Non-typical chromatograph pattern.
MW-1 and MW-2 destroyed prior to March 7, 1989 sampling event.
MW-3, MW-4, and MW-6 (E-1) destroyed June 18, 1990.

Table 7
Groundwater Analytical Data
Domestic Irrigation Wells
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Address	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
590 H	11/13/91	<30	<0.3	<0.3	<0.3	<0.3
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
633 H	09-11/91	NS	NS	NS	NS	NS
	10/92	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
634 H	09-11/91	NS	NS	NS	NS	NS
	10/92	NS	NS	NS	NS	NS
	12/92	NS	NS	NS	NS	NS
	03/16/93	NS	NS	NS	NS	NS
642 H	11/13/91	<30	<0.3	<0.3	<0.3	<0.3
	10/16/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
675 H	09-11/91	NS	NS	NS	NS	NS
	10/92	NS	NS	NS	NS	NS
	12/92	NS	NS	NS	NS	NS
	03/16/93	NS	NS	NS	NS	NS
17197 VM	11/13/91	<30	<0.3	<0.3	<0.3	<0.3
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
17200 VM	11/13/91	440	2.7	<0.3	<0.3	12
	10/92	NS	NS	NS	NS	NS
	12/18/92	160	1.4	<0.5	<0.5	3.4
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
17203 VM	11/13/91	<30	<0.3	<0.3	<0.3	<0.3
	10/92	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	1.3
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5

Table 7 (continued)
Groundwater Analytical Data
Domestic Irrigation Wells
Total Petroleum Hydrocarbons
(TPH as Gasoline and BTEX Compounds)

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Address	Date Sampled	TPH as Gasoline (ppb)	Benzene (ppb)	Toluene (ppb)	Ethylbenzene (ppb)	Xylenes (ppb)
17302 VM	10/21/91	72	0.64	<0.3	0.44	<0.3
	10/92	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
17348 VM	09-11/91	NS	NS	NS	NS	NS
	10/92	NS	NS	NS	NS	NS
	12/21/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5
17349 VM	09/27/91	780	13.0	<3.0	<3.0	<3.0
	10/14/92	2,200	<5.0	<5.0	<5.0	110
	12/18/92	1,500	14.0	1.8	7.1	56
	03/16/93	**1,100**	**16.0**	**4.2**	**1.8**	**1.8**
17371 VM	11/13/91	870	9.0	1.0	2.1	4.5
	10/14/92	<50	<0.5	<0.5	<0.5	<0.5
	12/18/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	**500**	**8.7**	<0.5	3.9	3.1
17372 VM	09/27/91	300	5.5	<0.6	1.3	0.72
	10/14/92	220	<1.0	<1.0	<1.0	<1.0
	12/18/92	290	3.8	0.88	0.99	1.2
	03/16/93	**110***	<0.5	<0.5	<0.5	<0.5
17393 VM	11/13/91	31	<0.3	<0.3	<0.3	<0.3
	10/92	NS	NS	NS	NS	NS
	12/18/92	<50	<0.5	<0.5	<0.5	<0.5
	03/16/93	<50	<0.5	<0.5	<0.5	<0.5

ppb = Parts per billion
< = Denotes minimum laboratory detection limit.
NS = Not sampled
* Non-typical chromatograph pattern.

Table 8
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-1	01/11/88	NA	NA	--	NA
	06/14/88	Well Destroyed			
MW-2	07/05/85	NA	NA	--	NA
	01/11/88	NA	NA	--	NA
	06/14/88	Well Destroyed			
MW-3	01/11/88	33.27	NA	--	NA
	03/07/89		11.96	--	21.31
	06/21/89		12.85	--	20.42
	12/12/89		13.46	--	19.81
	03/29/90		13.21	--	20.06
	05/08/90		13.23	--	20.04
	06/22/90		NA	--	NA
	07/18/90	Well Destroyed			
MW-4	01/11/88	32.43	NA	--	NA
	09/12/88		NA	--	NA
	03/07/89		10.76	--	21.67
	06/21/89		11.96	--	20.47
	12/12/89		NA	--	NA
	03/29/90		11.72	0.01	20.71
	05/08/90		12.19	--	20.24
	06/22/90		NA	--	NA
	07/18/90	Well Destroyed			
MW-5	01/11/88	33.99	NA	--	NA
	03/07/89		12.74	--	21.25
	06/21/89		13.26	--	20.73
	12/12/89		NA	--	NA
	03/29/90		13.30	--	20.69
	05/08/90		NA	--	NA
	06/22/90		13.52	--	20.47
	09/19/90		13.99	--	20.00
	12/27/90		NA	--	NA
	03/21/91		13.00	--	20.99
	06/26/91		13.25	--	20.74
	07/03/91		13.33	--	20.66
	09/24/91		Dry	--	NA
	10/04/91		Dry	--	NA
	12/19/91		Dry	--	NA
	01/16/92		Dry	--	NA

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-5 (cont.)	02/19/92		13.5	--	20.49
	03/17/92		11.90	--	22.09
	04/15/92		12.18	--	21.81
	05/14/92		12.78	--	21.21
	06/15/92		Well Dry		
	07/14/92		Well Dry		
	08/18/92		Well Dry		
	09/15/92		Well Dry		
	10/16/92		Well Dry		
	11/18/92		Well Dry		
	12/17/92		12.74	--	21.25
	01/19/93		10.92	--	23.07
	02/22/93		11.10	--	22.89
	03/15/93		11.13	--	22.86
MW-6 (E-1)	06/21/89	32.95	12.48	--	20.47
	12/12/89		13.16	--	13.16
	03/29/90		12.39	--	12.39
	05/08/90		12.93	--	12.93
	06/22/90		12.94	--	12.94
	07/18/90		Well Destroyed		
MW-7	04/13/90	34.40	NA	--	NA
	05/08/90		13.98	--	20.42
	06/22/90		13.91	--	20.49
	09/19/90		15.09	--	19.31
	12/27/90		14.67	--	19.73
	03/21/91		12.88	--	21.52
	06/26/91		13.85	--	20.55
	07/03/91		13.95	--	20.45
	09/24/91		15.54	--	18.86
	10/04/91		15.60	--	18.80
	12/19/91		15.70	--	18.70
	01/16/92		13.33	--	21.83
	02/19/92		12.16	--	NA
	03/17/92		11.86	--	22.54
	04/15/92		12.30	--	22.10
	05/14/92		13.04	--	21.36
	06/15/92		13.78	--	20.62
	07/14/92		14.20	--	20.20
	08/18/92		14.79	--	19.61
	09/15/92		15.12	--	19.28
	10/16/92		15.38	--	19.02
	11/18/92		15.10	--	19.30
	12/17/92		13.69	--	20.71

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-7 (cont.)	01/19/93		10.92	--	23.48
	02/22/93		10.91	--	23.49
	03/15/93		11.13	--	23.03
MW-8	04/13/90	32.79	NA	--	NA
	05/08/90		12.77	--	20.02
	06/22/90		12.73	--	20.06
	09/19/90		13.95	--	18.84
	12/27/90		13.56	--	19.23
	03/21/91		11.78	--	21.01
	06/26/91		12.66	--	20.13
	07/03/91		12.75	--	20.04
	09/24/91		13.97	--	18.82
	10/04/91		14.01	--	18.78
	12/19/91		13.35	--	19.44
	01/16/92		13.40	--	19.39
	02/19/92		11.26	--	21.53
	03/17/92		10.90	--	21.89
	04/15/92		11.35	--	21.44
	05/14/92		12.06	--	20.73
	06/15/92		12.83	--	19.96
	07/14/92		12.75	--	20.04
	08/18/92		13.83	--	18.96
	09/15/92		14.17	--	18.62
	10/16/92		14.51	--	18.28
	11/18/92		14.15	--	18.64
	12/17/92		12.68	--	20.11
	01/19/93		9.79	--	23.00
	02/22/93		9.95	--	22.84
	03/15/93		10.31	--	22.48
MW-9	04/13/90	32.11	NA	--	NA
	05/08/90		12.02	--	20.09
	06/22/90		11.93	--	20.18
	09/19/90		13.18	--	18.93
	12/27/90		12.77	--	19.34
	03/21/91		10.94	--	21.17
	06/26/91		11.92	--	20.19
	07/03/91		12.02	--	20.09
	09/24/91		13.27	--	18.84
	10/04/91		13.29	--	18.82
	12/19/91		13.42	--	18.69
	01/16/92		12.45	--	19.66
	02/19/92		10.25	--	21.86
	03/17/92		10.01	--	22.10
	04/15/92		10.49	--	21.62

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-9 (cont.)	05/14/92		11.19	--	20.92
	06/15/92		11.86	--	20.25
	07/14/92		12.28	--	19.83
	08/18/92		12.89	--	19.22
	09/15/92		13.28	--	18.83
	10/16/92		13.60	--	18.51
	11/18/92		13.24	--	18.87
	12/17/92		11.76	--	20.35
	01/19/93		8.99	--	23.12
	02/22/93		9.13	--	22.98
	03/15/93		9.48	--	22.63
MW-10	04/13/90	31.67	NA	--	NA
	05/08/90		12.16	--	19.51
	06/22/90		12.10	--	19.57
	09/19/90		13.41	--	18.26
	12/27/90		13.67	--	18.00
	03/21/91		11.11	--	20.56
	06/26/91		12.00	--	19.67
	07/03/91		12.16	--	19.51
	09/24/91		13.40	--	18.27
	10/04/91		13.50	--	18.17
	12/19/91		13.57	--	18.10
	01/16/92		12.55	--	19.12
	02/19/92		10.50	--	21.17
	03/18/92		10.12	--	21.55
	04/15/92		10.59	--	21.08
	05/14/92		11.30	--	20.37
	06/15/92		11.93	--	19.74
	07/14/92		12.42	--	19.25
	08/18/92		13.03	--	18.64
	09/15/92		13.42	--	18.25
	10/16/92		13.74	--	17.93
	11/18/92		13.42	--	18.25
	12/17/92		11.94	--	19.73
	01/19/93		9.13	--	22.54
	02/22/93		9.22	--	22.45
	03/15/93		9.64	--	22.03
MW-11	04/13/90	32.54	NA	--	NA
	05/08/90		12.84	--	19.70
	06/22/90		12.82	--	19.72
	09/19/90		14.09	--	18.45
	12/27/90		13.66	--	18.88
	03/21/91		11.85	--	20.69
	06/26/91		12.69	--	19.85
	07/03/91		12.81	--	19.73

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-11 (cont.)	09/24/91		14.03	--	18.51
	10/04/91		14.18	--	18.36
	12/19/91		14.29	--	18.25
	01/16/92		13.28	--	19.26
	02/19/92		11.29	--	21.25
	03/17/92		10.81	--	21.73
	04/15/92		11.23	--	21.31
	05/14/92		11.96	--	20.58
	06/15/92		12.64	--	19.90
	07/14/92		13.08	--	19.46
	08/18/92		13.72	--	18.82
	09/15/92		14.13	--	18.41
	10/16/92		14.45	--	18.09
	11/18/92		14.11	--	18.43
	12/17/92		12.69	--	19.85
	01/19/93		9.91	--	22.63
	02/22/93		9.95	--	22.59
	03/15/93		10.30	--	22.24
E-1A (MW-12)	09/19/90	33.06	14.31	--	18.75
	12/27/90		13.97	--	19.09
	03/21/91		12.11	--	20.95
	06/26/91		12.90	--	20.16
	07/03/91		13.00	--	20.06
	09/24/91		22.47	--	10.59
	01/16/92		23.68	--	9.38
	02/19/92		18.71	--	14.35
	03/17/92		23.10	--	9.96
	04/15/92		20.54	--	12.52
	05/14/92		23.09	--	9.97
	06/15/92		23.72	--	9.34
	07/14/92		13.25	--	19.81
	08/18/92		23.73	--	9.33
	09/15/92		23.62	--	9.44
	10/16/92		23.78	--	9.28
	11/18/92		23.80	--	9.26
	12/17/92		22.65	--	10.41
	01/19/93		23.65	--	9.41
	02/22/93		23.70	--	9.36
	03/15/93		22.92	--	10.14
MW-13	07/03/91	35.42	15.19	--	20.23
	09/24/91		16.45	--	18.97
	12/19/91		16.66	--	18.76
	01/16/92		15.70	--	19.72

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-13 (cont.)	02/19/92		13.60	--	21.82
	03/17/92		13.20	--	22.22
	04/15/92		13.64	--	21.78
	05/14/92		14.34	--	21.08
	06/15/92		15.13	--	20.29
	07/14/92		15.45	--	19.97
	08/18/92		16.15	--	19.27
	09/15/92		16.51	--	18.91
	10/16/92		16.81	--	18.61
	11/18/92		16.50	--	18.92
	12/17/92		15.07	--	20.35
	01/19/93		12.40	--	23.02
	02/22/93		12.35	--	23.07
	03/15/93		12.69	--	22.73
MW-14	07/03/91	30.46	11.05	--	19.41
	09/24/91		12.30	--	18.16
	10/04/91		12.38	--	18.08
	12/19/91		12.39	--	18.07
	01/16/92		11.34	--	19.12
	02/19/92		9.32	--	21.14
	03/17/92		9.04	--	21.42
	06/15/92		10.83	--	19.63
	09/15/92		12.27	--	18.19
	12/17/92		10.69	--	19.77
	03/15/93		8.70	--	21.76
MW-15	07/03/91	31.41	12.43	--	18.89
	09/24/91		13.69	--	17.72
	10/04/91		13.80	--	17.61
	12/19/91		13.78	--	17.63
	01/16/92		12.80	--	18.61
	02/19/92		10.85	--	20.56
	03/18/92		10.41	--	21.00
	06/15/92		12.19	--	19.22
	09/15/92		13.69	--	17.72
	12/17/92		12.26	--	19.15
	03/15/93		10.05	--	21.36
MW-16	07/03/91	31.39	12.92	--	18.47
	09/24/91		14.10	--	17.29
	10/04/91		14.20	--	17.19
	12/19/91		14.14	--	17.25
	01/16/92		13.09	--	18.30
	02/19/92		10.99	--	20.40
	03/18/92		10.85	--	20.54

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

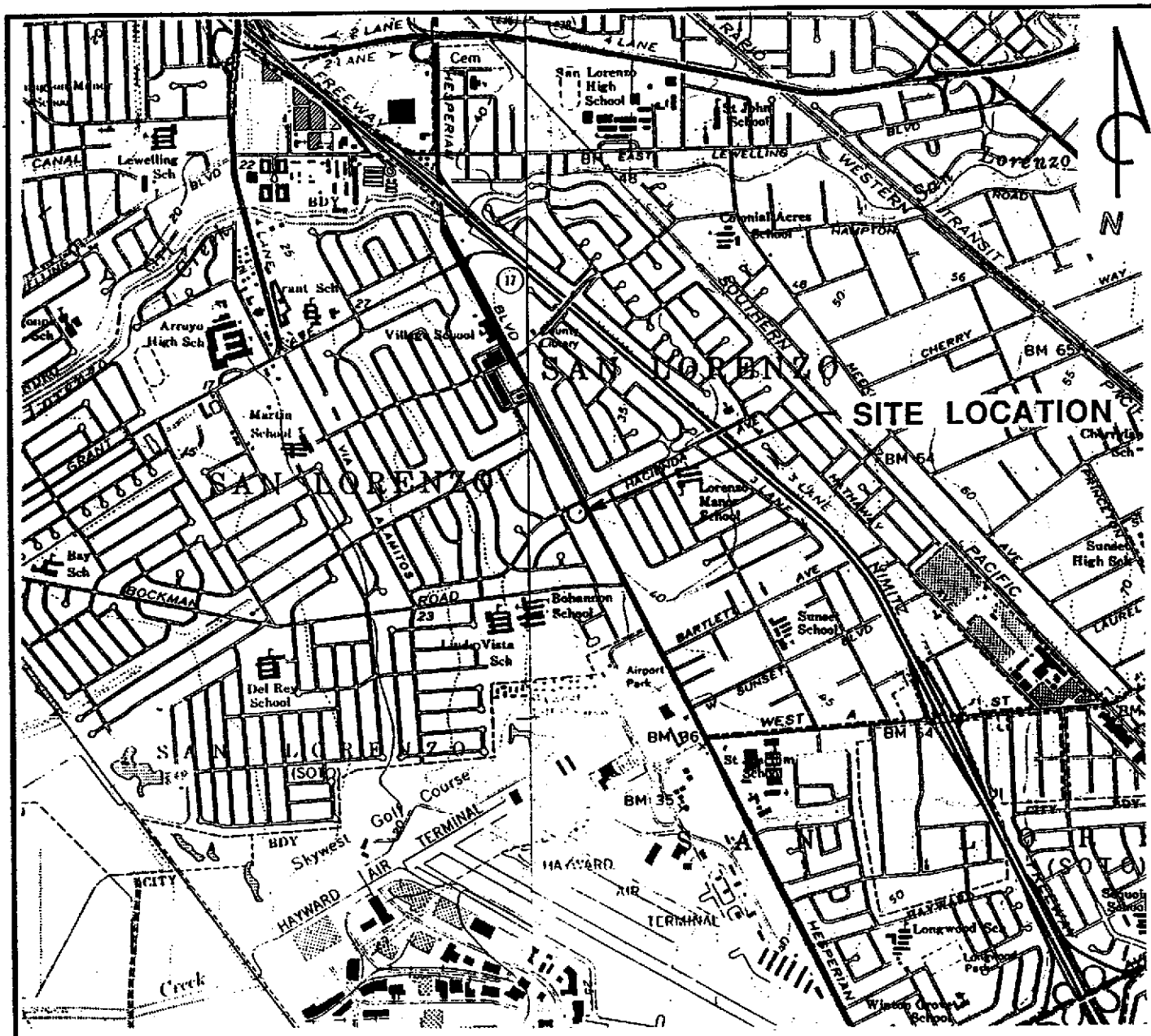
Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-16 (cont.)	06/15/92		12.64	--	18.75
	09/15/92		14.07	--	17.32
	12/17/92		12.56	--	18.83
	03/15/93		10.60	--	20.79
MW-17	07/03/91	32.43	13.75	--	18.68
	09/24/91		14.98	--	17.45
	10/04/91		15.20	--	17.23
	12/19/91		15.02	--	17.41
	01/16/92		13.92	--	18.51
	02/19/92		11.65	--	20.78
	03/18/92		11.71	--	20.72
	06/15/92		13.50	--	18.93
	09/15/92		14.95	--	17.48
	12/17/92		13.34	--	19.09
	03/15/93		11.47	--	20.96
MW-18	10/04/91	29.70	13.00	--	16.59
	12/19/91		12.91	--	16.71
	03/18/92		9.73	--	19.97
	06/15/92		11.50	--	18.20
	09/15/92		12.90	--	16.80
	12/17/92		11.21	--	18.49
	03/15/93		9.62	--	20.08
MW-19	10/04/91	29.02	12.43	--	16.59
	12/19/91		12.31	--	16.71
	03/18/92		9.22	--	19.80
	06/15/92		10.94	--	18.08
	09/15/92		12.38	--	16.64
	12/17/92		10.51	--	18.51
	03/15/93		9.23	--	19.79
MW-20	10/04/91	29.54	12.56	--	16.98
	12/19/91		12.48	--	17.06
	03/18/92		9.49	--	20.05
	06/15/92		11.11	--	18.43
	09/15/92		12.50	--	17.04
	12/17/92		10.74	--	18.80
	03/15/93		9.44	--	20.10
MW-21	10/04/91	28.72	12.88	--	15.84
	12/19/91		12.68	--	16.04
	03/18/92		9.55	--	19.17
	06/15/92		11.30	--	17.42

Table 8 (continued)
Groundwater Elevation Data

ARCO Service Station 0608
17601 Hesperian Boulevard
San Lorenzo, California

Well Number	Date Sampled	Well Elevation (feet, MSL)	Depth to Liquid (feet, TOB)	SPH Thickness (feet)	Liquid Surface Elevation (feet, MSL)
MW-21 (cont.)	09/15/92		12.78	--	15.94
	12/17/92		10.80	--	17.92
	03/15/93		9.59	--	19.13
MW-22	10/04/91	29.29	13.37	--	15.92
	12/19/91		13.19	--	16.10
	03/17/92		10.05	--	19.24
	06/15/92		11.84	--	17.45
	09/15/92		13.27	--	16.02
	12/17/92		11.58	--	17.71
	03/15/93		10.03	--	19.26
MW-23	10/04/91	30.99	14.50	--	16.49
	12/19/91		14.38	--	16.61
	03/17/92		11.20	--	19.79
	06/15/92		12.94	--	18.05
	09/15/92		14.40	--	16.59
	12/17/92		13.01	--	17.98
	03/15/93		11.01	--	19.98
MW-24	03/29/93	34.38	11.80	--	22.58
MW-25	03/29/93	34.12	10.56	--	23.56
MW-26	03/29/93	33.71	10.92	--	22.79

MSL = Mean sea level
TOB = Top of box
SPH = Separate-phase hydrocarbons
NA = Not available
Well elevations are measured from set mark at top of vault box.



QUADRANGLE LOCATION

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

SCALE
2000 0 2000 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

SITE LOCATION MAP

FIGURE: 1
PROJECT: 330-06.20

REORDER NO. A54081

N

VIA MANZANAS

RESIDENTIAL

MW-20

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

MW-19

VIA MAGDALENA

RESTAURANT

CHURCH AND SCHOOL

17200

MW-24

MW-14

MW-18

MW-17

RESIDENTIAL

MW-21

17197

17203

MW-26

RESTAURANT

VIA MEDIA

VIA FLORES

17302

17372

MW-9

E-1A

MW-25

MW-16

MW-10

MW-8

MW-5

RESIDENTIAL

633

ALLEY

MW-7

17349

MW-15

590

17371

MW-11

MW-22

MW-13

17393

RESIDENTIAL

VIA ENCINAS COURT

642

634

SHOPS

17348

HACIENDA AVENUE

MW-23

675

RESIDENTIAL

VIA ALAMO

LEGEND

MW-7 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

E-1A ◉ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

590 ■ DOMESTIC IRRIGATION WELL LOCATION AND DESIGNATION

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE

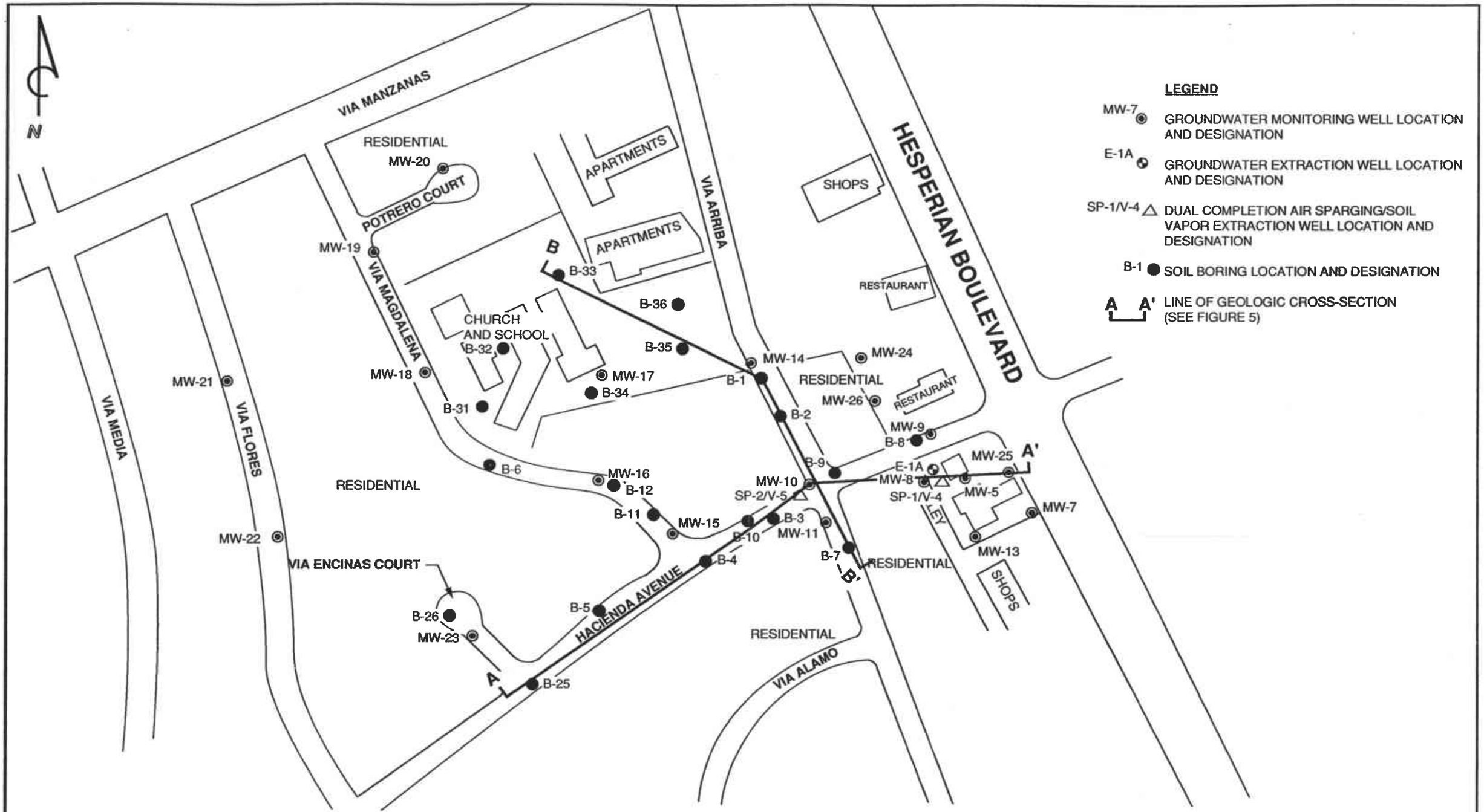
0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

EXTENDED SITE MAP

FIGURE: 2

PROJECT: 330-06.20



LEGEND

- MW-7 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- E-1A — GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION
- SP-1/V-4 — DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- B-1 — SOIL BORING LOCATION AND DESIGNATION
- A A' — LINE OF GEOLOGIC CROSS-SECTION (SEE FIGURE 5)

PACIFIC ENVIRONMENTAL GROUP, INC.

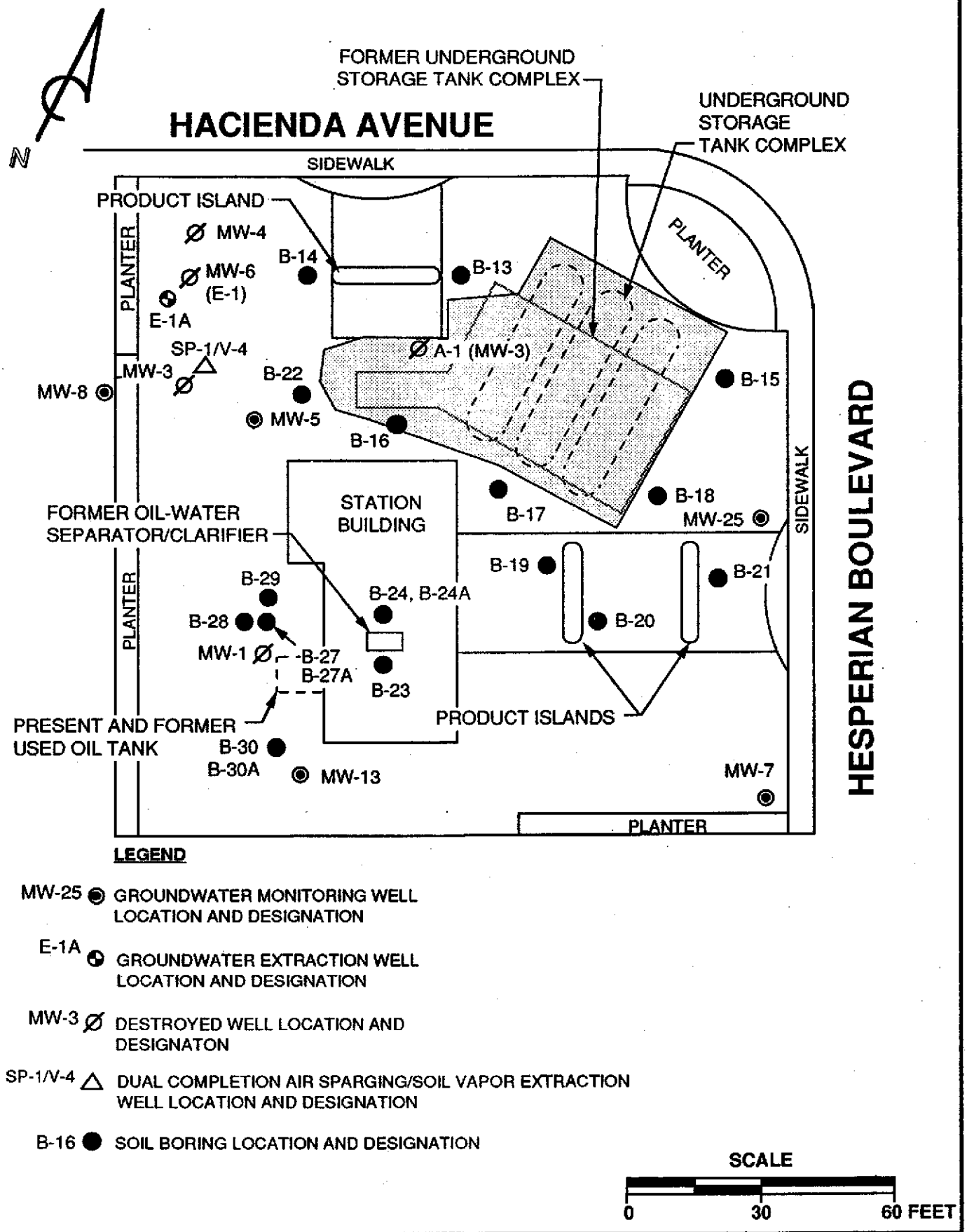
APPROXIMATE SCALE
0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

OFF-SITE SOIL BORING AND WELL LOCATON MAP

FIGURE: 3
PROJECT: 330-06.20

7/27/93



LEGEND

MW-25 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

E-1A ⊕ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

MW-3 Ø DESTROYED WELL LOCATION AND DESIGNATON

SP-1/V-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

B-16 ● SOIL BORING LOCATION AND DESIGNATION

SCALE

0 30 60 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

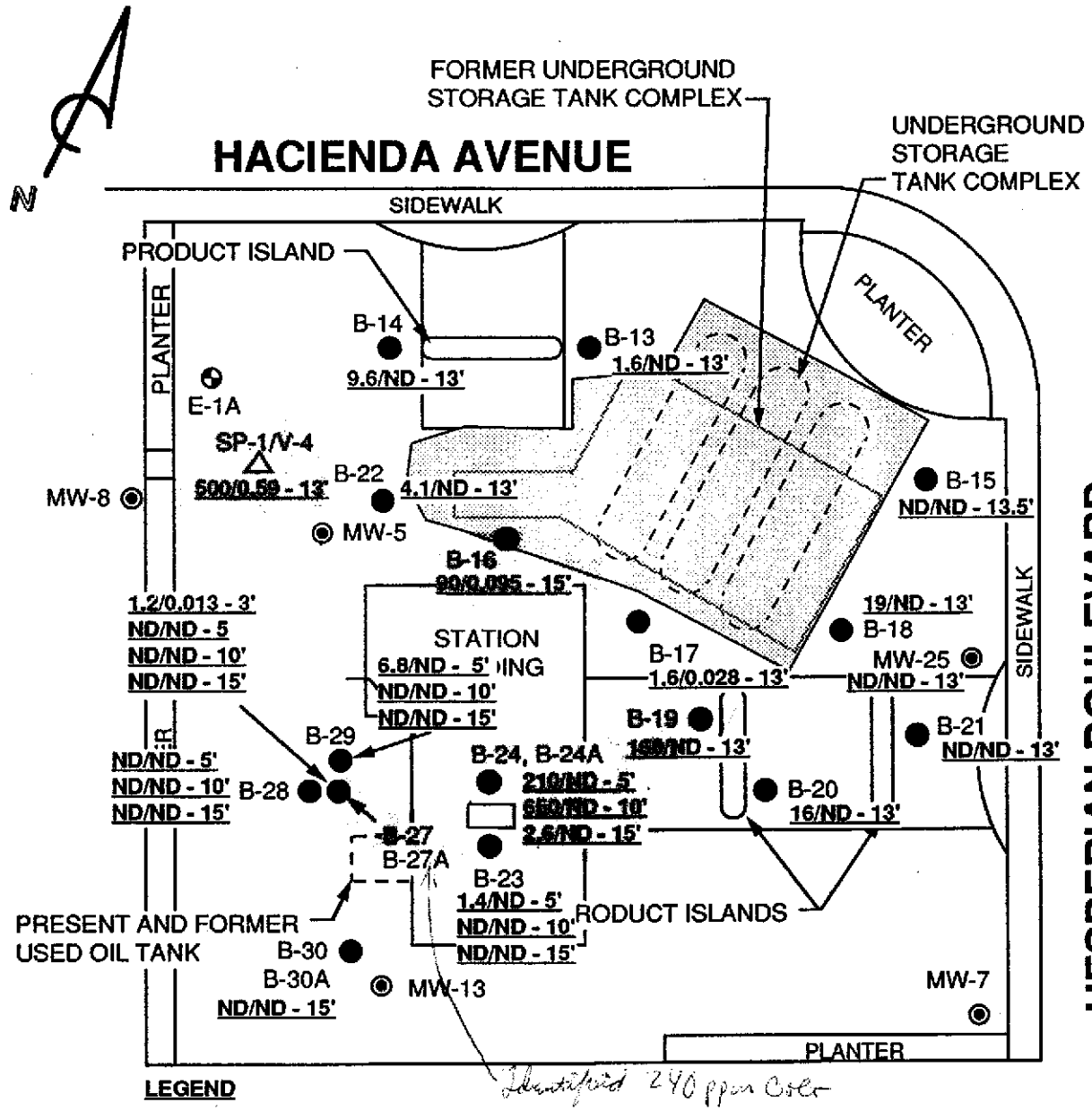
ON-SITE SOIL BORING AND WELL LOCATION MAP

FIGURE: 4

PROJECT: 330-06.20

7/27/93

LARGE MAP REMOVED



LEGEND

MW-25 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

E-1A ⊕ GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

SP-1/V-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

B-16 ● SOIL BORING LOCATION AND DESIGNATION

16/ND - 13' TPH-g/BENZENE CONCENTRATIONS IN SOIL, IN PARTS PER MILLION AT DEPTH INDICATED IN FEET

ND NOT DETECTED

SCALE

0 30 60 FEET

PACIFIC ENVIRONMENTAL GROUP, INC.

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

ON-SITE SOIL ANALYTICAL RESULTS MAP

FIGURE: 6

PROJECT: 330-06.20

7/27/93

N

VIA MANZANAS

RESIDENTIAL

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

VIA MAGDALENA

VIA MEDIA

VIA FLORES

B-33
ND/ND - 14'

B-36
ND/ND - 13'

CHURCH
AND SCHOOL

B-32
ND/ND - 15'

B-35
ND/ND - 13'

B-34
130/ND - 14'

B-31
ND/ND - 13'

B-1
ND/ND - 11'

B-2
ND/ND - 11'

RESTAURANT

MW-24
ND/ND - 12'

RESIDENTIAL

MW-26
ND/ND - 16.5'

RESTAURANT

B-8
ND/ND - 12'

B-6
ND/ND - 13'

B-12
ND/ND - 13'

B-9
5.8/0.010 - 12'

MW-25
ND/ND - 13'

SP-2/V-5
ND/0.056 - 13'

SP-1/V-4
500/0.59 - 13'

RESIDENTIAL

B-11
ND/ND - 13'

B-10
ND/ND - 13'

B-3
ND/ND - 10'

B-7
ND/ND - 12'

VIA ENCINAS COURT

B-4
ND/ND - 9'

SHOPS

B-5
ND/ND - 11'

B-26
ND/ND - 14'

HACIENDA AVENUE

RESIDENTIAL

VIA ALAMO

B-25
ND/ND - 14'

LEGEND

MW-24 ◉ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

SP-1/V-4 △ DUAL COMPLETION AIR SPARGING/SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION

B-35 ● SOIL BORING LOCATION AND DESIGNATION

500/0.59 - 13' TPH-g/BENZENE CONCENTRATIONS IN SOIL, IN PARTS PER MILLION AT DEPTH INDICATED IN FEET

ND NOT DETECTED

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

OFF-SITE SOIL ANALYTICAL RESULTS MAP

FIGURE: 7
PROJECT: 330-06.20

7/27/93

N

VIA MANZANAS

RESIDENTIAL

MW-20
ND/ND

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19
ND/ND

VIA MAGDALENA

CHURCH
AND SCHOOL

MW-18
ND/ND

17200 ND/ND

MW-17
250/ND

MW-14
ND/ND

MW-24 *
ND/ND

RESIDENTIAL

MW-26
ND/ND

RESTAURANT

MW-9
ND/ND

MW-21
ND/ND

VIA MEDIA

VIA FLORES

ND/ND 17197

17203
ND/ND

ND/ND 17302

17372
110/ND

?

100

NS E-1A

MW-25 *
ND/0.69

RESIDENTIAL

MW-16
380/ND

633
ND/ND

MW-10
4,100/340

3,800/61 MW-8

ALLEY

MW-5
2,600/180

MW-7
ND/ND

17349

1,100/16.0

17371

MW-15
130/ND

590
ND/ND

MW-22
ND/ND

500/8.7

MW-11
ND/ND

VIA ENCINAS COURT

17393
ND/ND

634
642 NS
ND/ND

MW-13
ND/ND

RESIDENTIAL

SHOPS

17348
ND/ND

HACIENDA AVENUE

MW-23
ND/ND

675
NS

RESIDENTIAL

VIA ALAMO

LEGEND

MW-7 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

E-1A — GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

590 — DOMESTIC IRRIGATION WELL LOCATION AND DESIGNATION

3,800/61 — TPH-g/BENZENE CONCENTRATION IN GROUNDWATER, IN PARTS PER BILLION (ppb), 3-16-93, 3-17-93, and 3-18-93, * SAMPLED 3-29-93

100 — TPH-g ISOCONCENTRATION CONTOUR IN ppb

ND — NON-DETECTABLE LEVELS

NS — NOT SAMPLED

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE
0 150 300 FEET

ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

GROUNDWATER ANALYTICAL RESULTS MAP

FIGURE: 8
PROJECT: 330-06.20

7/27/93

N

VIA MANZANAS

RESIDENTIAL

MW-20 (20.10)

POTRERO COURT

APARTMENTS

APARTMENTS

VIA ARRIBA

SHOPS

HESPERIAN BOULEVARD

RESTAURANT

MW-19 (19.79)

VIA MAGDALENA

CHURCH AND SCHOOL

MW-18 (20.08)

MW-17 (20.96)

MW-14 (21.76)

MW-24 * (22.58)

RESIDENTIAL

RESTAURANT

MW-26 * (22.79)

22.00

MW-9 (22.63)

MW-21 (19.13)

VIA MEDIA

VIA FLORES

E-1A (10.14)

MW-25 (23.56) *

MW-8 (22.48)

MW-5 (22.86)

MW-7 (23.03)

MW-16 (20.79)

MW-10 (22.03)

RESIDENTIAL

MW-15 (21.36)

MW-11 (22.24)

ALLEY

MW-13 (22.73)

23.00

22.50

MW-22 (19.26)

VIA ENCINAS COURT

22.00

21.50

19.50

HACIENDA AVENUE

21.00

SHOPS

MW-23 (19.98)

20.50

RESIDENTIAL

20.00

VIA ALAMO

LEGEND

MW-7 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

E-1A — GROUNDWATER EXTRACTION WELL LOCATION AND DESIGNATION

(23.03) GROUNDWATER ELEVATION IN FEET - MSL, 3-15-93

19.50 — GROUNDWATER ELEVATION CONTOUR IN FEET - MSL, 3-15-93

* NOT USED IN CONTOURING, GROUNDWATER ELEVATION MEASURED 3-29-93

APPROXIMATE DIRECTION OF GROUNDWATER FLOW

APPROXIMATE GRADIENT = 0.003

PACIFIC ENVIRONMENTAL GROUP, INC.

APPROXIMATE SCALE

0 150 300 FEET

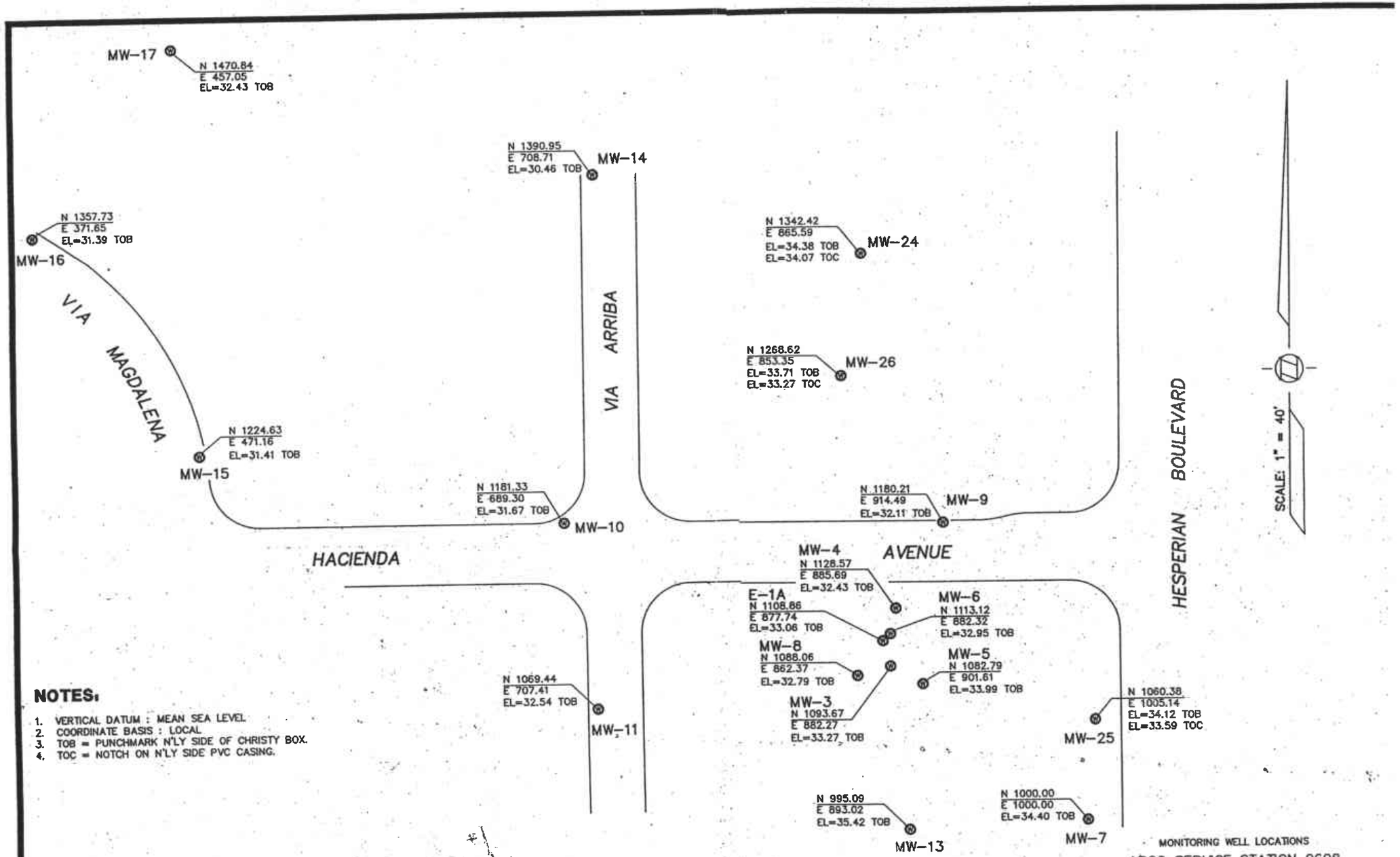
ARCO SERVICE STATION 0608
17601 Hesperian Boulevard
San Lorenzo, California

GROUNDWATER ELEVATION CONTOUR MAP

FIGURE: 9

PROJECT: 330-06.20

7/27/93



NOTES:

1. VERTICAL DATUM : MEAN SEA LEVEL
2. COORDINATE BASIS : LOCAL
3. TOB = PUNCHMARK N'LY SIDE OF CHRISTY BOX.
4. TOC = NOTCH ON N'LY SIDE PVC CASING.

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SURVEY 2651 SJP

REVISIONS:

4/3/93 ADDED WELLS 24,25 & 26

LICENSED LAND SURVEYOR BRUCE J. TRONOFF EXP. 12/31/94 NO. 6415 STATE OF CALIFORNIA

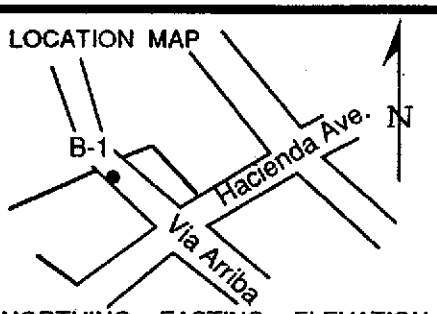
MONITORING WELL LOCATIONS
ARCO SERVICE STATION 0608
17601 HESPERIAN BLVD., AT HACIENDA AVE.
SAN LORENZO, CALIFORNIA
FOR
PACIFIC ENVIRONMENTAL GROUP, INC.
BY

TRONOFF LAND SURVEYING
516 HUBBLE STREET
DAVIS, CALIFORNIA 95616
(916) 758-4599

SCALE: 1"=40' JULY 24, 1991

ATTACHMENT A

BORING LOGS B-1 THROUGH B-36, B-24A, B-27A, AND B-30A, MW-24 THROUGH MW-26, SP-1/V-4, AND SP-2/V-5



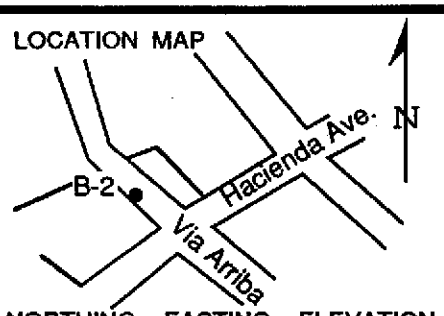
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-1
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 17491 Via Arriba
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				0		ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1	CL	CLAY: very dark greyish brown; low plasticity; 10% fine sand; firm; no product odor.
				3		@3': dark greyish brown; trace silt; soft; no product odor.
	Mst	0		8		@8-9': yellowish brown; soft; no product odor.
	Sat	0		10	SC	CLAYEY SAND: yellowish brown; 10% clay; fine sand; loose; no product odor.
				11	ML	SILT: yellowish brown; soft; no product odor.
				13	CL	CLAY: yellowish brown; moderate plasticity; <10% fine sand; mottled with black specks; soft; no product odor.
	Sat	0		14		
				15		BOTTOM OF BORING AT 15'



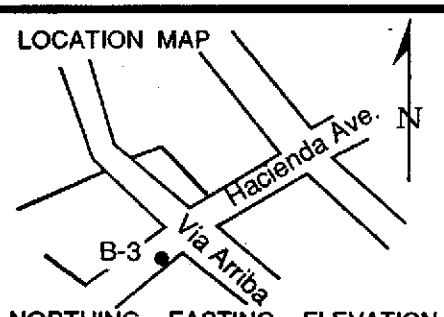
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-2
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 17495 Via Arriba
HOLE DIAMETER: 1"
HOLE DEPTH: 11'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–4			CL	CLAY: very dark greyish brown; low plasticity; 10% fine sand; firm; no product odor.
	Mst	0		8–9			SP	SAND: yellowish brown; trace silt; fine sand; medium dense; no product odor.
	Sat	0		10–11			CL	CLAY: yellowish brown; moderate to high plasticity; 10% fine sand; rootholes; firm; no product odor.
								BOTTOM OF BORING AT 11'



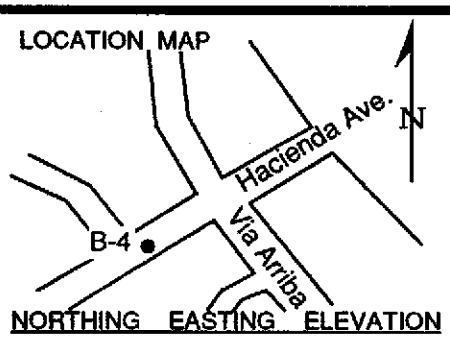
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-3
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 622 Hacienda
HOLE DIAMETER: 1"
HOLE DEPTH: 12'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–5			CL	CLAY: brown; low plasticity; 10-20% fine sand; firm; no product odor. @2': soft.
▽	Sat	1		9			SP	SAND: dark yellowish brown; fine sand; trace clay; 10% medium sand; loose; very faint product odor.
	Sat	0		11			CH	CLAY: light olive brown; high plasticity; 5% fine sand; soft; very faint product odor.
				12				BOTTOM OF BORING AT 12'



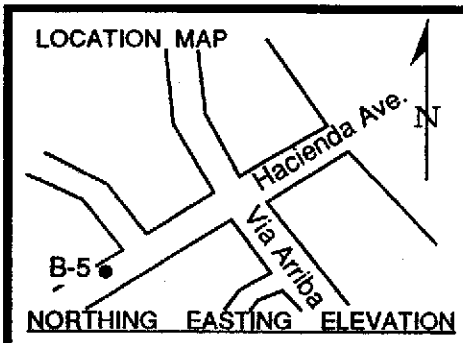
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-4
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 642 Hacienda
HOLE DIAMETER: 1"
HOLE DEPTH: 11'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–5			CL	CLAY: dark brown; moderate plasticity; firm; no product odor. @3': soft.
	Sat	1		8–9			SP	SAND: dark yellowish brown; <5% fines; fine sand; trace medium sand; loose; no product odor.
	Sat	0		10–11			CL	SILTY CLAY: dark yellowish brown; moderate plasticity; rootholes; soft; no product odor.
								BOTTOM OF BORING AT 11'



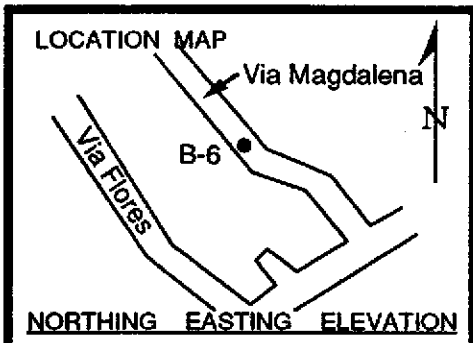
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-5
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 659 Hacienda
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
						ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–4	CL	CLAY: very dark greyish brown; low plasticity; 10% fine sand; firm; no product odor. @2': soft.
	Mst	0		8	ML	CLAYEY SILT: dark yellowish brown; low plasticity; soft; no product odor.
				8–9	CH	CLAY: dark yellowish brown; high plasticity; soft; no product odor.
	Sat	0		10–11	SP	SAND: brown; fine sand; <5% fines; up to 20% medium sand; loose; no product odor.
	Sat	0		12	SC	CLAYEY SAND: dark yellowish brown; fine sand; 10-20% clay; loose; no product odor.
				13	CH	CLAY: brown; high plasticity; trace silt and fine sand; firm; no product odor.
						BOTTOM OF BORING AT 13'



PACIFIC ENVIRONMENTAL GROUP, INC.

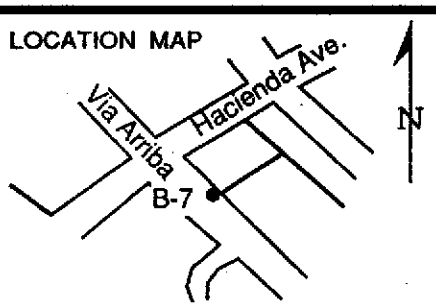
BORING NO. B-6
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-8-93
LOCATION: 17295 Via Magdelena
HOLE DIAMETER: 1"
HOLE DEPTH: 17'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout				1			CL	CLAY: very dark greyish brown; low plasticity; firm; no product odor.
				2				
				3				@3': soft; no product odor.
				4				
				5				
	Mst	0		6				@5-6': dark yellowish brown; low plasticity; 10-20% fine sand; rootholes; soft; no product odor.
				7				
				8				
				9				
				10			SM	SILTY SAND: brown; 10% fines; loose; no product odor.
	Sat	0		11			CL	SILTY CLAY: brown; moderate plasticity; soft; no product odor.
				12				@12-12.5': as above; no product odor.
	Sat	0		13			SM	SILTY SAND: dark yellowish brown; 10-20% fines; fine sand; medium dense; no product odor.
				14			SP	SAND: greyish brown; <5% fines; fine sand; medium dense; no product odor.
	Sat	0		15				
				16			CH	CLAY: greenish grey; high plasticity; firm; no product odor.
	Sat	0		17				
				18				BOTTOM OF BORING AT 17'
				19				
				20				
				21				
				22				

LOCATION MAP



NORTHING EASTING ELEVATION

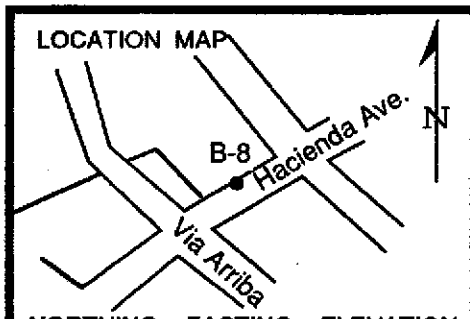
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-7
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: 17530 Via Arriba
HOLE DIAMETER: 1"
HOLE DEPTH: 14'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0				ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1			CL	CLAY: dark brown; low plasticity; 10-20% fine sand; firm; no product odor.
				2				
				3				
				4				
				5				
				6				
				7				@7': soft.
				8				
				9			CL	SILTY CLAY: dark yellowish brown; low plasticity; soft; no product odor.
▽	Dp	0		10				
				11			ML	CLAYEY SILT: brown; low plasticity; soft; no product odor.
	Sat	0		12				
				13			CL	CLAY: brown; moderate plasticity; trace fine sand; firm; no product odor.
	Sat	0		14				
				15				BOTTOM OF BORING AT 14'
				16				
				17				
				18				
				19				
				20				
				21				
				22				



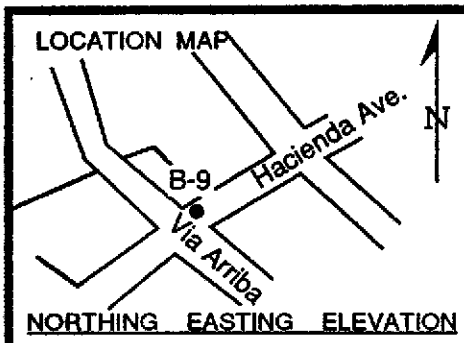
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-8
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: Hacienda Avenue
HOLE DIAMETER: 1"
HOLE DEPTH: 12'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				0		ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–4	CL	CLAY: greyish brown; low to moderate plasticity; 10-20% fine sand; stiff; no product odor. @3': firm.
	Mst	0		7	ML	CLAYEY SILT: olive; soft; no product odor.
▽	Sat	0		9	CL	CLAY: olive grey; low to moderate plasticity; 10-20% fine sand; rootholes; firm; no product odor.
				10	SP	SAND: olive grey; fine sand; trace clay; medium dense; very faint product odor.
	Sat	0		11	CL	CLAY: dark greyish brown; moderate plasticity; firm; no product odor.
				12		BOTTOM OF BORING AT 12'



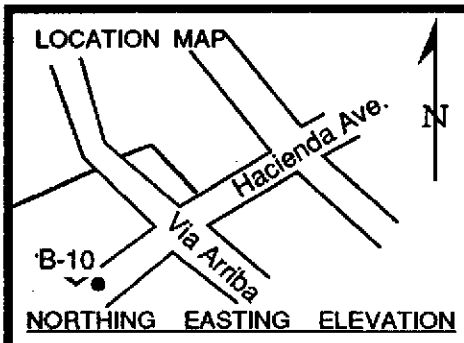
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-9
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: 17498 Via Arriba
HOLE DIAMETER: 1"
HOLE DEPTH: 14'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
							ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–7		CL	CLAY: dark greyish brown; low plasticity; 10% fine sand; stiff; no product odor. @2': firm.
	Mst			8			
▽	Sat	110		9		ML	SANDY SILT: light olive brown; no plasticity; fine sandy silt; soft; moderate product odor.
	Sat	40		10–11		SM	SILTY SAND: 25% silt; fine sand; moderate product odor.
				11–12		CH	CLAY: greenish grey; high plasticity; soft; moderate product odor.
	Sat	8		13–14			@13-14': dark olive grey; faint product odor.
				14–22			BOTTOM OF BORING AT 14'



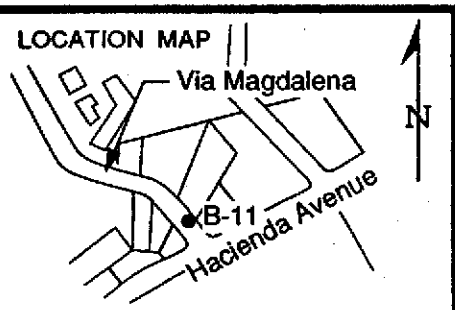
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-10
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: 621 Hacienda
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND ASPHALT.
Back Filled With Grout	Dp			1–7				CL	CLAY: dark greyish brown; low plastiicty; 10% fine sand; soft; no product odor.
				8–9				SP	@8-8.5': dark yellowish brown; firm; no product odor. SAND: dark yellowish brown; <5% fines; fine sand; medium dense; no product odor.
▽	Mst	0		10				CH	CLAY: olive; high plasticity; soft; no product odor.
	Sat	2		11–12					@11.5-13': dark greenish grey; firm; faint product odor.
	Sat	7		13					BOTTOM OF BORING AT 13'
				14–22					



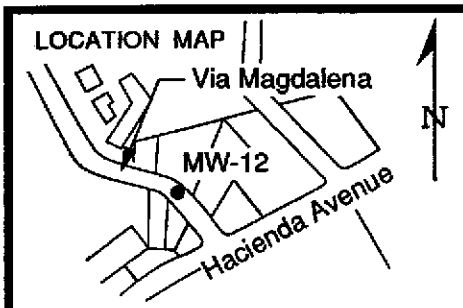
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-11
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: 17393 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1				CL	CLAY: dark brown; low plasticity; firm; no product odor.
				2					
				3					
				4					
	Dp	0		5					@5-6': dark yellowish brown; soft; no product odor.
				6					
				7					
				8					
				9					@9-9.5': soft; no product odor.
▽	Wt			10				SP	SAND: trace clay; fine sand; trace medium sand; loose; no product odor.
		0		11				CH	CLAY: dark greenish grey; high plasticity; stiff; very faint product odor.
	Sat	3		12					
		2		13					BOTTOM OF BORING AT 13'
				14					
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

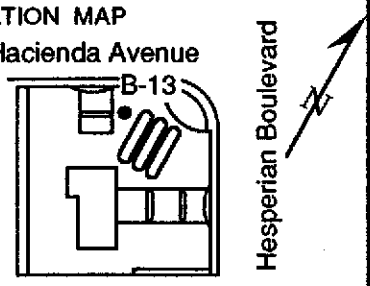
BORING NO. B-12
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-9-93
LOCATION: 17326 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION		MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
										ASPHALT AND BASEROCK.
Back Filled With Grout					1				CL	CLAY: dark greyish brown; low plasticity; soft; no product odor.
					2					
					3					
					4					
					5					
					6					
					7					
		Mst	0		8					@7-8': dark yellowish brown; moderate plasticity; trace medium sand and silt; rootholes; soft; no product odor.
	▽	Wt	0		9				SP	SAND: yellowish brown; <10% fines; fine sand; <10% medium and coarse sand; trace fine gravel; loose; no product odor.
					10					
					11				CL	CLAY: dark greenish grey; moderate plasticity; stiff; very faint product odor.
		Sat	2		12				SP	SAND: <5% fines; fine sand; very faint product odor.
			1		13					
		Sat	1		14				CH	CLAY: dark greenish grey; high plasticity; stiff; no product odor.
					15					BOTTOM OF BORING AT 15'
					16					
					17					
					18					
					19					
					20					
					21					
					22					

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

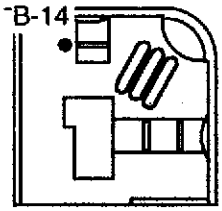
BORING NO. B-13
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout				1			CL	CLAY: dark greyish brown; 10-20% fine sand; firm; no product odor.
				2				
				3				
				4				
				5				
				6				
	Dp	0		7				@6-7': dark greenish grey; moderate plasticity; firm; rootholes; no product odor.
				8				
	Mst	0		9				@8-9': as above; no product odor.
	▽			10			SM	
	Sat	11		11				SILTY SAND: greenish grey; 10-20% fines as silt; fine sand; medium dense; faint product odor.
				12			CH	
	Sat	45		13				CLAY: dark greenish grey; high plasticity; firm; rootholes; moderate product odor.
				14				BOTTOM OF BORING AT 13'
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

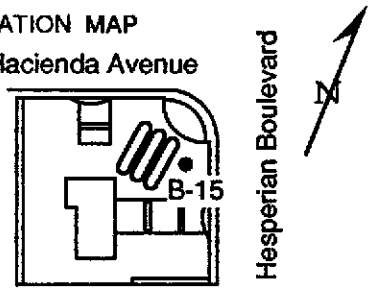
BORING NO. B-14
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
								ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–5			CL	CLAY: black; low to moderate plasticity; <10% fine sand; firm; no product odor.
	Dp	3		6–7				@5-6': olive brown; low plasticity; 10-20% fine sand; trace medium sand; firm; no product odor.
		13		8				@7-8': dark greyish brown; firm; no product odor.
	Mst			9			ML	CLAYEY SILT; olive grey; low plasticity; trace fine sand; firm; faint product odor.
▽		17		10–11			SP	SAND: olive grey; fine sand; medium dense; sheen; strong product odor.
	Sat	50		12			CH	CLAY: olive grey; moderate to high plasticity; 5-10% silt; firm; sheen; strong product odor.
		40		13				@12-13': greenish grey; high plasticity; stiff; moderate product odor.
				14–22				BOTTOM OF BORING AT 13'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

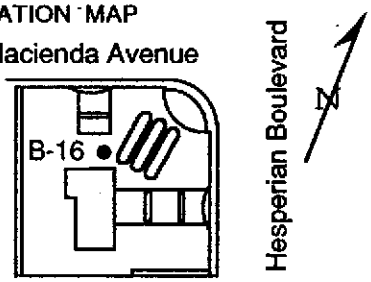
BORING NO. B-15
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13.5'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
							ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–2		FL	FILL: gravel.
				2–5		CL	CLAY: dark greyish brown; low plasticity; 10-20% fine sand; firm; no product odor.
				5–7			
				7–8			@7-8': dark greyish brown; firm; no product odor.
	Dp	0		8–9			@8-9': greenish grey; moderate plasticity; trace fine sand; stiff; no product odor.
	Mst	2		10–11		SM	SILTY SAND: dark greenish grey; fine sand; 40% silt; dense; very faint product odor.
				11–12		ML	SANDY SILT: dark greenish grey; 40% fine sand; very faint product odor.
	Sat	0		12–13		CL	CLAY: dark greenish grey; moderate plasticity; stiff; very faint product odor.
				13–22			BOTTOM OF BORING AT 13.5'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

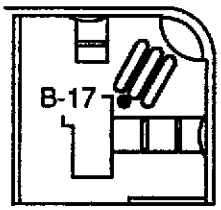
BORING NO. B-16
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Back Filled With Grout				1–4		FL	ASPHALT. FILL: angular gravel.
	Sat	11		14–15		CH	CLAY: dark greenish grey; high plasticity; firm; moderate product odor.
							BOTTOM OF BORING AT 15'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

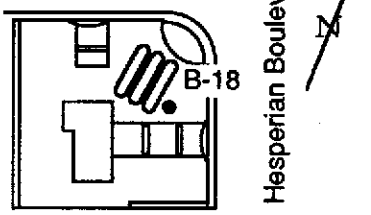
BORING NO. B-17
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0				ASPHALT AND BASEROCK.
Back Filled With Grout				1			FL	FILL: gravel.
	Dp			2			CL	CLAY: black; low plasticity; 10-20% fine sand; trace medium sand; stiff; no product odor.
				3				
				4				
				5				
				6				
				7				
				8				@8-9': brown; low plasticity; 10% fine to medium sand; stiff; no product odor.
	Mst	0		9			SP	SAND: brown; trace clay; fine sand; medium dense; no product odor.
				10				
	Mst	0		11				
				12			CH	CLAY: dark greenish grey; high plasticity; firm; strong product odor, sheen.
	Sat	1		13				
				14				BOTTOM OF BORING AT 13'
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-18
PAGE 1 OF 1

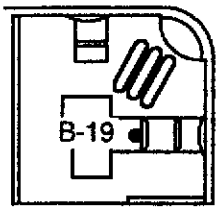
PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1				FL	FILL: gravel.
				2				CL	CLAY: black; low plasticity; 20% silt and fine sand; trace medium sand; stiff; no product odor.
				3					
				4					
				5					
				6					
				7					
	Dp	0		8					@8-9': brown; moderate plasticity; <10% silt and fine sand with small white caliche nodules; stiff; no product odor.
				9					
				10				SP	SAND: yellowish brown; trace clay; iron oxide mottling; medium dense; no product odor.
	Mst	0		11					
				12				ML	CLAYEY SILT: dark greenish grey; low plasticity; firm; very faint product odor.
	Sat	6		13				CL	CLAY: dark greenish grey; moderate plasticity; firm; moderate product odor; sheen.
				14					BOTTOM OF BORING AT 13'
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					

LOCATION MAP

Hacienda Avenue



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

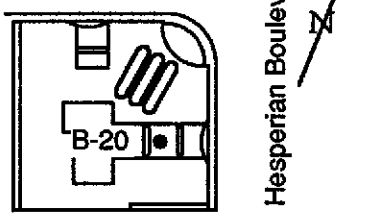
BORING NO. B-19
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1			ASPHALT, CONCRETE AND BASEROCK.
Back Filled With Grout	Dp			2			
				3		CL	CLAY: black; low plasticity; 10% silt and fine sand; stiff; no product odor.
				4			
				5			
				6			
				7			
				8			@8-9': dark greenish grey; firm; very faint product odor.
	Mst	1		9			
				10		SP	SAND: dark greenish grey; trace clay; fine sand; very faint product odor.
	Mst	1		11			
▽				12			
	Sat	30		13		CL	CLAY: dark greenish grey; moderate plasticity; firm; moderate product odor.
				14			BOTTOM OF BORING AT 13'
				15			
				16			
				17			
				18			
				19			
				20			
				21			
				22			

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

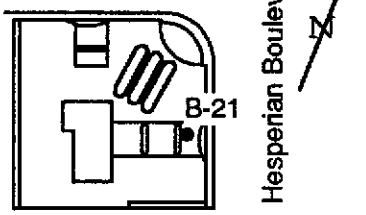
BORING NO. B-20
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1				ASPHALT, CONCRETE AND BASEROCK.
Back Filled With Grout	Dp			2				
				3			CL	CLAY: very dark brown; low to moderate plasticity; 10-20% fine sand and silt; stiff; no product odor.
				4				
				5				
				6				
				7				
	Dp	0		8				@8-9': dark brown; low to moderate plasticity; 10-20% fine sand and silt; firm; no product odor.
				9				
	Mst	3		10			SP	SAND: dark greenish grey; <5% silt; trace clay; medium dense; faint product odor.
▽				11				
	Sat	2		12			CH	CLAY: dark greenish grey; high plasticity; faint product odor.
				13				BOTTOM OF BORING AT 13'
				14				
				15				
				16				
				17				
				18				
				19				
				20				
				21				
				22				

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-21
PAGE 1 OF 1

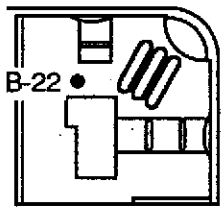
PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1				ASPHALT, CONCRETE AND BASEROCK.
Back Filled With Grout	Dp			2			CL	CLAY: very dark brown; moderate plasticity; 10% fine sand and silt; stiff; no product odor.
				3				
				4				
				5				
				6				
				7				@8-8.5': dark olive grey; moderate plasticity; trace silt; firm; very faint product odor.
	Dp	0		8				@8.5-9': low plasticity; increased silt content; very faint product odor.
				9			ML	SANDY SILT: dark greenish grey; low plasticity; 10-30% clay; 20% fine sand; firm; faint product odor.
	Mst	1		10				
				11			SM	SILTY SAND: dark greenish grey; 30% fines as silt; fine sand; dense; faint product odor.
▽				12				
	Sat	3		13			CH	CLAY: dark greenish grey; high plasticity; stiff; faint product odor.
				14				
				15				BOTTOM OF BORING AT 13'
				16				
				17				
				18				
				19				
				20				
				21				
				22				

LOCATION MAP

Hacienda Avenue



Hesperian Boulevard

NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

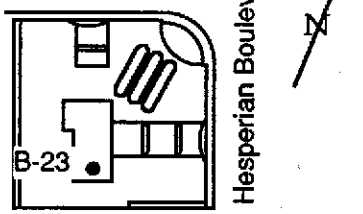
BORING NO. B-22
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-10-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1-5				CL	CLAY: black; low plasticity; 10-20% fine sand and silt; trace medium sand and coarse sand; stiff; no product odor.
	Dp	2		8-9					@8-9': olive brown; moderate plasticity; trace fine sand; firm; faint product odor.
	Mst	4		10-10.5				SP	@10-10.5': greenish grey; firm; faint product odor. SAND: greenish grey; fine sand; trace clay; medium dense; moderate product odor.
▽	Sat	85		12-13				CL	CLAY: greenish grey; moderate plasticity; moderate product odor.
									BOTTOM OF BORING AT 13'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

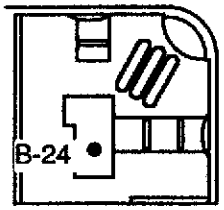
BORING NO. B-23
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1				CONCRETE AND BASEROCK.
Back Filled With Grout				2			CL	CLAY: very dark grey to black; low plasticity; 10% silt and fine sand; stiff; faint to moderate product odor.
	Dp	120		4				@4-5': as above; moderate product odor.
				5				
				6				
				7				
				8				
	Dp	1		9				@9-10': olive brown; trace medium sand; caliche; stiff; faint product odor.
				10				
				11				
				12				
				13				
	Sat	2		14			CH	CLAY: dark greenish grey; high plasticity; stiff; faint product odor.
				15				BOTTOM OF BORING AT 15'
				16				
				17				
				18				
				19				
				20				
				21				
				22				

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

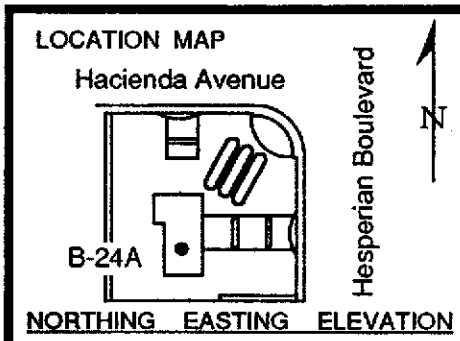
BORING NO. B-24
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									CONCRETE AND BASEROCK.
Back Filled With Grout				1				CL	CLAY: very dark grey to black; low plasticity; 10-20% silt and fine sand; stiff; faint to moderate product odor.
				2					
				3					
				4					
	Dp	160		5					@4-5': as above; moderate product odor.
				6					
				7					
				8					
	Dp	2		9					@9-10': olive brown; trace medium sand; caliche; stiff; faint product odor.
				10				SP	SAND: dark greenish grey; fine sand; medium dense; moderate product odor.
				11					
				12					
				13					
				14					
	Sat	2		15				CH	CLAY: dark greenish grey; high plasticity; stiff; faint product odor.
				16					BOTTOM OF BORING AT 15'
				17					
				18					
				19					
				20					
				21					
				22					

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

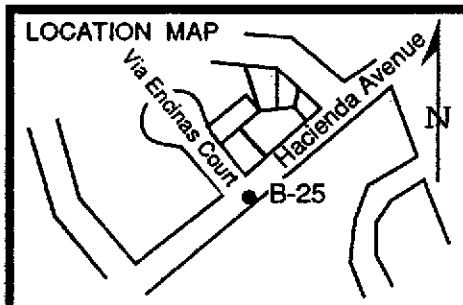
BORING NO. B-24A
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 4-6-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 16'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1			CONCRETE AND BASEROCK.
Back Filled With Grout				2		CL	CLAY: black to dark olive grey; 10-20% silt and fine sand; stiff; moderate product odor.
	Mst	0		5			
				9			@9': as above; dark greenish grey; moderate product odor.
	Mst Wt	0		10		SP	SAND: dark greenish grey; fine sand; medium dense; moderate product odor.
▽				14		CH	CLAY: dark greenish grey mottled with trace dark yellowish brown; moderate to high plasticity; stiff; faint product odor.
	Sat	0		15			
				16			BOTTOM OF BORING AT 16'

LOCATION MAP



NORTHING EASTING ELEVATION

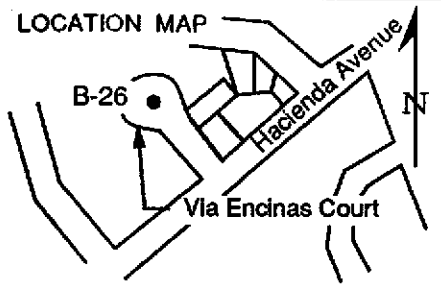
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-25
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 690 Hacienda
HOLE DIAMETER: 1"
HOLE DEPTH: 14'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout				1				CL	CLAY: black; low plasticity; firm; no product odor.
				2					@2': soft.
				3					
				4					@4-5': as above; moderate product odor.
				5				SC	CLAYEY SAND: 20% fines as clay; fine sand; loose;
	Dp	0		6					no product odor.
				7				SP	SAND: dark yellowish brown; fine sand; 10-20%
	Mst	0		8					medium to coarse sand; loose; no product odor.
▽				9				ML	SANDY SILT: yellowish brown; 30% fine sand; trace
	Sat	0		10				SP	clay; soft; no product odor. SAND: dark yellowish brown; trace fines; loose; no
				11					product odor.
	Sat	0		12				CL	CLAY: dark yellowish brown; moderate plasticity; firm;
	Sat	0		13					no product odor.
	Sat	0		14					
				15					BOTTOM OF BORING AT 14'
				16					
				17					
				18					
				19					
				20					
				21					
				22					



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

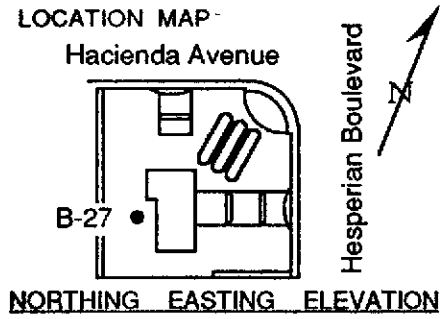
BORING NO. B-26
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17335 Via Encinas
HOLE DIAMETER: 1"
HOLE DEPTH: 14'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
							ASPHALT AND BASEROCK.
Back Filled With Grout				1		CL	CLAY: black; low plasticity; firm; no product odor.
				2			
				3			
				4			
				5			
	Dp	0		6			@5-6': low plasticity; fine to medium sand; <10% silt; soft; no product odor.
				7			
	Dp	0		8			@7-8': as above; no product odor.
				9		SP	
▽	Wt	0		10			SAND: dark yellowish brown; <5% fines; fine sand; <10% medium to coarse sand; medium dense; no product odor.
	Sat			11			
		0		12		CL	CLAY: dark yellowish brown; moderate plasticity; firm; no product odor.
		0		13			
		0		14			
				15			BOTTOM OF BORING AT 14'
				16			
				17			
				18			
				19			
				20			
				21			
				22			

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

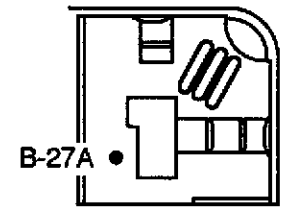
BORING NO. B-27
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout				1				SW	SAND - FILL: gravelly; mottled greyish green and bluish gray; trace fines; fine sand; 25-40% medium to coarse sand; loose; strong product odor.
	Wt	60		2					@2': strong product odor.
				3				CL	SANDY CLAY: dark greyish brown; low plasticity; 10% medium to coarse sand; trace medium to coarse sand; stiff; moderate product odor.
	Dp	1		4					
				5					
				6					
				7					
				8					
	Mst	4		9					@9-10': olive brown; trace medium sand; stiff; faint product odor.
				10					
				11					
				12					
				13					
	Sat	2		14					@14-15': as above dark greenish grey; moderate plasticity; stiff; faint product odor.
				15					BOTTOM OF BORING AT 15'
				16					
				17					
				18					
				19					
				20					
				21					
				22					

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

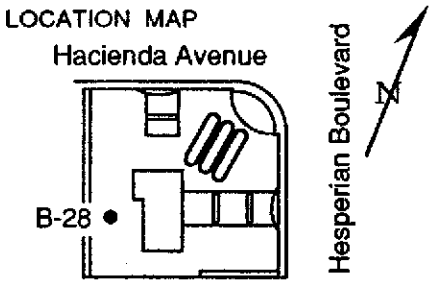
BORING NO. B-27A
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 4-6-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 16'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0				ASPHALT AND BASEROCK.
Back Filled With Grout				1–2			SW	SAND - FILL: gravelly; mottled greyish green and bluish grey; fine sand; 25-40% medium to coarse sand; loose; strong product odor.
				3–4			CL	CLAY: dark greenish grey; moderate plasticity; stiff; no product odor.
	▽			10–11				@11-13': easier drilling
		Sat	0	14–15			SP	SAND: dark yellowish brown; medium dense; no product odor.
				16				BOTTOM OF BORING AT 16'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

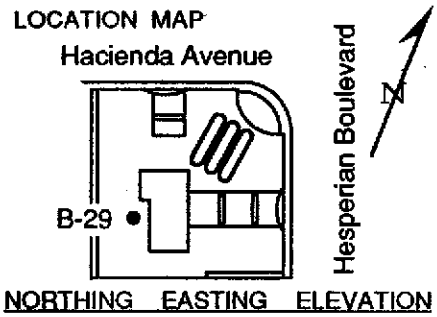
BORING NO. B-28
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
						ASPHALT AND BASEROCK.
Back Filled With Grout	Mst			1–2	SW	GRAVELLY SAND - FILL: greyish green; low plasticity; fine to coarse sand; loose; moderate product odor.
				2–3	CL	CLAY: dark greyish brown; low plasticity; 10-20% fine sand; trace medium to coarse sand; stiff; moderate product odor.
	Dp	4		4–5		@4-5': faint product odor.
	Mst	0		9–10		@9-10': olive brown; stiff; no product odor.
	Sat	2		14–15	CH	CLAY: dark greenish grey; high plasticity; stiff; no product odor.
						BOTTOM OF BORING AT 15'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

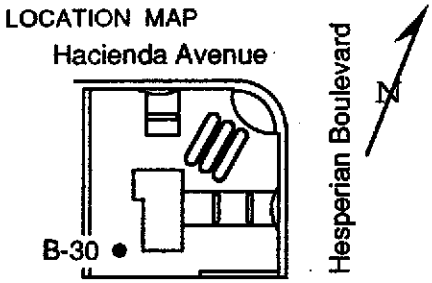
BORING NO. B-29
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout				1				SW	GRAVELLY SAND-FILL: greyish green; fine to coarse sand; loose; faint product odor.
				2				CL	CLAY: dark greyish brown; low plasticity; 10-20% fine sand; trace medium and coarse sand; stiff; faint product odor.
	Dp	1		4					@4-5': as above; very faint product odor.
				5					
				6					
				7					
				8					
	Mst	1		9					@9-10': olive brown; stiff; no product odor.
				10					
				11					
				12					
				13					
	Sat	0		14				CH	CLAY: dark greenish grey; high plasticity; firm; no product odor.
				15					BOTTOM OF BORING AT 15'
				16					
				17					
				18					
				19					
				20					
				21					
				22					

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

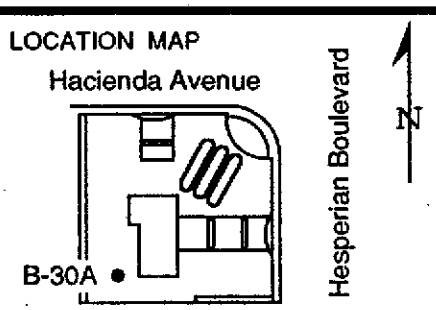
BORING NO. B-30
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-11-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
				1		ASPHALT, CONCRETE AND BASEROCK.
Back Filled With Grout				2		
				3	CL	CLAY: black; low plasticity; 10-15% fine sand; trace medium sand; stiff; no product odor.
	Dp	0		4		
				5		
				6		
				7		
				8		
	Mst	0		9		@9-10': olive brown; low plasticity; 10% silts and fine sand; stiff; no product odor.
				10	SM	SILTY SAND: dark greyish brown; trace of clay; 20% silt; fine sand; no product odor.
				11	SP	SAND: olive brown; trace clay and silt; fine sand; medium dense; no product odor.
▽	Wt	0		12		
				13	CH	CLAY: dark greenish grey; high plasticity; stiff; no product odor.
	Sat	0		14		
		0		15		BOTTOM OF BORING AT 15'
				16		
				17		
				18		
				19		
				20		
				21		
				22		

LOCATION MAP



NORTHING EASTING ELEVATION

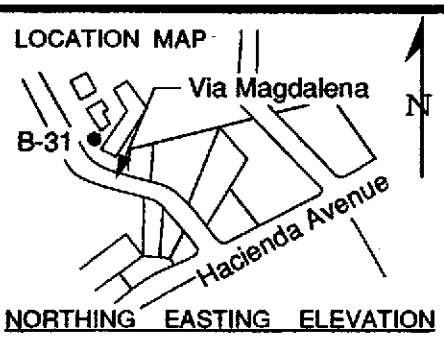
PACIFIC ENVIRONMENTAL GROUP, INC.

BORING NO. B-30A
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 4-6-93
LOCATION: 17601 Hesperian Blvd.
HOLE DIAMETER: 1"
HOLE DEPTH: 11'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				1					ASPHALT, CONCRETE AND BASEROCK.
Back Filled With Grout				2					
				3				CL	CLAY: black; low plasticity; 10-15% fine sand; trace medium sand; stiff; no product odor.
				4					
	Dp	0		5					
				6					
				7					
				8					@9-10': olive brown; 20% fine sand; no product odor.
	Mst	0		9					
				10				SM	SILTY SAND: dark greyish brown; 20% silt; fine sand; minor clay; medium dense; no product odor.
	Wt			11					
				12					BOTTOM OF BORING AT 11'
				13					
				14					
				15					
				16					
				17					
				18					
				19					
				20					
				21					
				22					



PACIFIC ENVIRONMENTAL GROUP, INC.

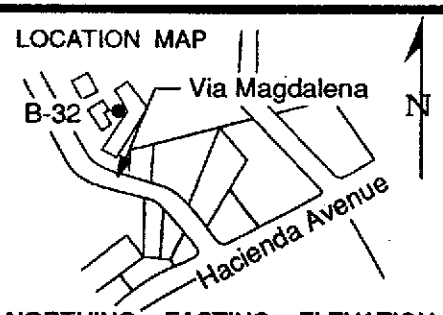
BORING NO. B-31
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0		SC	CLAYEY SAND: 30-40% fines; fine sand.
Back Filled With Grout	Dp			1		CL	CLAY: dark brown; low plasticity; 10% fine sand; no product odor.
				2			
				3			
				4			
				5			
				6			
				7			
	Dp Wt	0		8			@8-9': dark greyish brown; no product odor.
				9			
	Sat	0		10		SP	SAND: brown; <5% fines; fine sand; 10% medium and coarse sand; rootlets; no product odor.
				11			
	Sat	0		12		ML	CLAYEY SILT; dark yellowish brown; low plasticity; firm; no product odor.
				13			
	Sat	0		14		CH	CLAY: dark yellowish brown; high plasticity; no product odor.
				15			
				16			BOTTOM OF BORING AT 15'
				17			
				18			
				19			
				20			
				21			
				22			

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

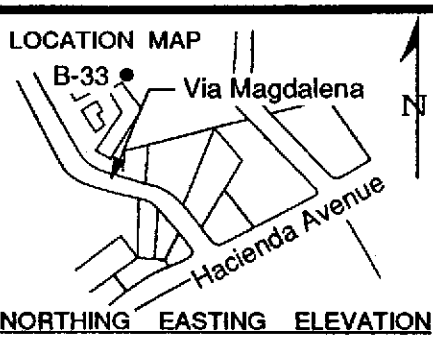
BORING NO. B-32
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
							ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1		CL	CLAY: black; low plasticity; 10% fine sand; firm; no product odor.
				2			
				3			
				4			
				5			
				6			
				7			
				8			
				9			@9-9.5': brown; firm; no product odor.
	Dp	0		10			@9.5-10': 20-30% fine sand; firm; no product odor.
				11		ML	CLAYEY SILT: dark yellowish brown; low plasticity; firm; no product odor.
	Wt	0		12		CL	CLAY: dark yellowish brown; low plasticity; 10-20% fine sand; trace black organic material; soft; no product odor.
				13		SP	SAND: dark yellowish brown; fine sand; medium dense; no product odor.
	Sat	0		14		CH	CLAY: very dark greyish brown; high plasticity; stiff; no product odor.
				15			BOTTOM OF BORING AT 15'
				16			
				17			
				18			
				19			
				20			
				21			
				22			

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

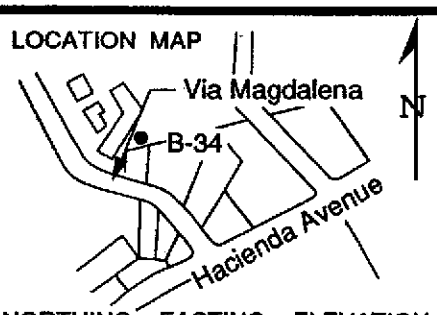
BORING NO. B-33
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 14'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
				0			ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–4		CL	CLAY: black; moderate plasticity; 10% fine sand; firm; no product odor.
	Dp	0		9–10			@9-10': olive brown; firm; no product odor.
▽	Sat	0		11–12			@11-12': olive brown; low plasticity; 5% fine and medium sand; soft; no product odor.
	Sat	0		13–14			@13-14': olive brown; low to moderate plasticity; firm; no product odor.
				14			BOTTOM OF BORING AT 14'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

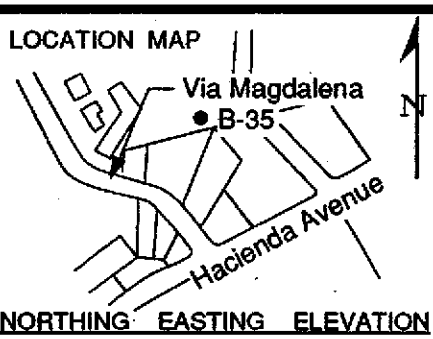
BORING NO. B-34
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 16'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY	SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
									ASPHALT AND BASEROCK.
Back Filled With Grout	Dp			1–5				CL	CLAY: black; low plasticity; 30% silt; trace medium sand; firm; no product odor.
	Dp	0		9					@9.5': brown; firm; no product odor.
	Mst								@9.5-10': brown; low plasticity; 30% fine sand; 15% silt; firm; no product odor.
	Wt	0		10–11				SC	CLAYEY SAND: brown; 30-40% clay; medium dense; no product odor.
				12				CH	CLAY: dark yellowish brown; high plasticity; mottled greenish grey; firm; faint product odor.
	Sat	13		13–14				SC SP	CLAYEY SAND: dark yellowish brown; discolored in vertical bands with dark greenish grey; 10-20% fines; fine sand; stiff; moderate product odor. SAND: dark greenish grey; fine sand; 10 % medium sand; trace coarse sand; medium dense; strong product odor.
	Sat	18		15–16				CL	CLAY: dark greenish grey; moderate plasticity; stiff; moderate product odor.
				17–22					BOTTOM OF BORING AT 16'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

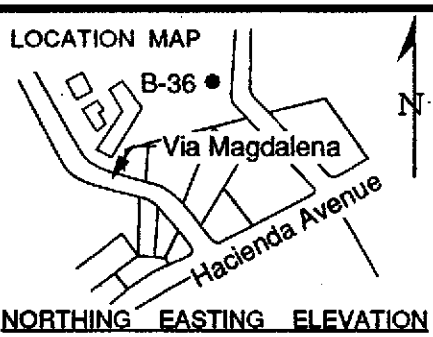
BORING NO. B-35
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 13'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Back Filled With Grout	Dp			1–5		CL	CLAY: very dark grey; low plasticity; 10-20% fine sand; 10% fine sand; firm; no product odor.
	Mst	0		10			@10-10.5': dark yellowish brown; low plasticity; trace medium sand; firm; no product odor.
				10–11		SC	CLAYEY SAND: yellowish brown; 10% clay; fine sand; medium dense; no product odor.
	Sat	0		12		ML	SILT: yellowish brown; soft; no product odor.
				13		CH	CLAY: high plasticity; stiff; no product odor.
				14–22			BOTTOM OF BORING AT 13'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

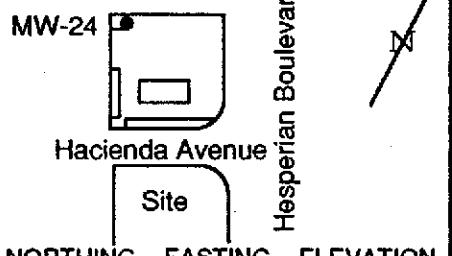
BORING NO. B-36
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: ECA
DRILLING METHOD: Pneumatic Drive
SAMPLING METHOD: SOIL CORE
CASING TYPE: NA
SLOT SIZE: NA
GRAVEL PACK: NA

CLIENT: ARCO
DATE DRILLED: 3-13-93
LOCATION: 17200 Via Magdalena
HOLE DIAMETER: 1"
HOLE DEPTH: 15'
WELL DIAMETER: NA
WELL DEPTH: NA
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
Back Filled With Grout	Dp			1–5		CL	CLAY: very dark gray; low plasticity; 10-20% fine sand; firm; no product odor.
	Mst	0		10–10.5			@10-10.5': brown; firm; no product odor.
				10.5–12		ML	SILT: yellowish brown; 20% clay; 20% fine sand; soft; no product odor.
	Sat	0		12–13		SM	SILTY SAND: yellowish brown; 10% clay; 30% silt; fine sand; loose; no product odor.
		0		14–15		CH	CLAY: very dark greyish brown; high plasticity; very stiff; no product odor.
							BOTTOM OF BORING AT 15'

LOCATION MAP



PACIFIC ENVIRONMENTAL GROUP, INC.

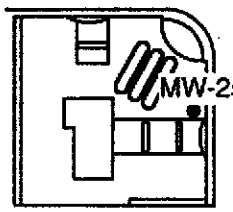
WELL NO. MW-24
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 X 12 SAND

CLIENT: ARCO
DATE DRILLED: 3-17-93
LOCATION: Hacienda Avenue
HOLE DIAMETER: 10"
HOLE DEPTH: 21'
WELL DIAMETER: 2"
WELL DEPTH: 21'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				1	SM	SILTY SAND - FILL: 10% clay; 10% silt; fine to coarse sand; subrounded to angular gravel to 3" diameter; dense; no product odor.
	Dp			2	CL	CLAY: black; moderate plasticity; 5% medium sand; stiff; no product odor.
				3		
				4		
				5		
BENTONITE	Dp	0		6		@5.5': trace medium sand.
				7		@7': dark yellowish brown; low plasticity; 10% fine sand; stiff; no product odor.
	Sat	0		8		
				9		
	Dp			10		@10-10.5': as above; no product odor.
SAND				11	SC	CLAYEY SAND: dark yellowish brown; 10% clay; fine sand; loose; no product odor.
	Sat	3	8	12	SP	SAND: dark yellowish brown; fine sand; loose; no product odor.
				13	ML	CLAYEY SILT: yellowish brown; low plasticity; trace fine sand; firm; no product odor.
	Sat	0		14	CH	CLAY: olive brown; high plasticity; stiff; no product odor.
				15		
			32	16		
				17		
	Sat	0		18		
				19		
			27	20		
				21		BOTTOM OF BORING AT 21'
				22		

LOCATION MAP
Hacienda Avenue



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

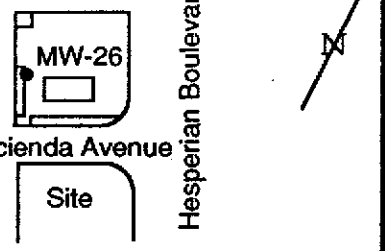
WELL NO. MW-25
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 X 12 SAND

CLIENT: ARCO
DATE DRILLED: 3-17-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 10"
HOLE DEPTH: 21'
WELL DIAMETER: 2"
WELL DEPTH: 21'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				1	FL	ASPHALT FILL: baserock; clayey; angular gravel with debris; dense; no product odor.
	Dp	1		2		
				3	CL	SANDY CLAY: black; low plasticity; 10-20% fine to coarse sand; stiff; no product odor.
				4		
				5		@5.5': brown; mottled with black fingering; stiff; no product odor.
BENTONITE		1		6	SP	SAND: dark greenish grey; fine sand; medium dense; no product odor.
				7	CL	SANDY CLAY: dark greenish grey; low plasticity; 10% fine to coarse sand; stiff; no product odor.
				8		
				9		
	Dp	2		10	SC SP	CLAYEY SAND: dark greenish grey; fine sand; 30% clay; medium dense; very faint product odor.
SAND	Mst			11		SAND: dark green grey; fine sand; loose; no product odor.
			16	12	ML	CLAYEY SILT: yellowish brown; low plasticity; trace fine sand; firm; faint product odor.
	Sat			13	CH	CLAY: very dark grey; high plasticity; trace fine sand; stiff; no product odor.
	Sat	2	25	14	CL	CLAY: dark greyish brown; moderate plasticity; trace fine sand; stiff; no product odor.
				15		
				16		
				17		
			24	18		
				19		
	Sat	0		20		
				21		BOTTOM OF BORING AT 21'
				22		

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

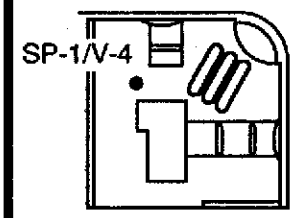
WELL NO. MW-26
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"
GRAVEL PACK: 2 X 12 SAND

CLIENT: ARCO
DATE DRILLED: 3-19-93
LOCATION: Hacienda Avenue
HOLE DIAMETER: 8"
HOLE DEPTH: 21.5'
WELL DIAMETER: 2"
WELL DEPTH: 21'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL	GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				1			CL	CLAY - FILL: reddish black; low plasticity; firm; no product odor.
	Dp			2			SP	SAND: <5% clay and silt; fine to coarse sand; subrounded to angular gravel to 3" diameter; dense; no product odor.
				3			CL	SANDY CLAY: black; low plasticity; 10-20% fine sand; trace medium sand; stiff; no product odor.
	Dp			4				
				5				@5-6.5': very stiff; no product odor.
BENTONITE		0	29	6				
				7				
				8				
				9				
	Mst	0	36	10				@10-10.5': rootholes; trace fine gravel; no product odor. @10.5-11': brown; organic material; caliche present; very stiff; no product odor.
SAND				11			SP	SAND: olive brown; fine sand; dense; no product odor.
				12				
				13				
				14				
				15			CL	CLAY: light olive brown; low plasticity; 10% fine sand; mottled with yellowish brown and black speckles along rootholes; very stiff; no product odor.
	Sat	0	22	16				
				17			SC	CLAYEY SAND: silty; yellowish brown; medium dense; no product odor.
				18			CL	CLAY: yellowish brown; moderate plasticity; trace fine sand; very stiff; no product odor.
				19				
	Sat	0	18	20				
NATIVE				21				@21.5': increased silt and fine sand.
				22				BOTTOM OF BORING AT 21.5'

LOCATION MAP
Hacienda Avenue



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

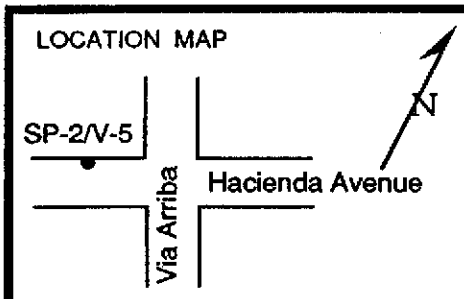
WELL NO. SP-1/V-4
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"/0.040"
GRAVEL PACK: 2 X 12 SAND/Aquarium Sand

CLIENT: ARCO
DATE DRILLED: 3-18-93
LOCATION: 17601 Hesperian
HOLE DIAMETER: 10"
HOLE DEPTH: 22.5'
WELL DIAMETER: 2"/2"
WELL DEPTH: 21'/15'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	RECOVERY / SAMPLE INTERVAL / GRAPHIC	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				1			ASPHALT AND BASEROCK: clayey gravel (fill to 2')
	Dp	0		2		CL	CLAY: black; low plasticity; hard to very stiff; no product odor.
				3			
				4			
				5		CL	SANDY CLAY: dark yellowish brown; low plasticity; stiff; no product odor.
	Dp	0		6			
BENTONITE				7			
			30	8			
SAND				9		SP	@8.5-9': greenish grey; faint product odor. SAND: dark greenish grey; faint product odor.
						SC	CLAYEY SAND: dark greenish grey; fine sand; medium dense; faint product odor.
	Mst	16		10			
				11			
	Wt	190	11	12		CL	CLAY: very dark grey; moderate plasticity; 10% fine sand; sheen in blebs along rootholes; stiff; strong product odor.
				13			
▽	Sat	85	21	14			@14': greenish grey mottled with bluish gray; strong product odor.
				15			
GROUT				16		SC	CLAYEY SAND: light olive brown; medium dense; faint product odor.
				17			
			19	18			
SAND				19			
				20		CL	CLAY: yellowish brown; moderate plasticity; trace fine sand; very stiff; no product odor.
				21			
NATIVE			26	22			BOTTOM OF BORING AT 22.5'

LOCATION MAP



NORTHING EASTING ELEVATION

PACIFIC ENVIRONMENTAL GROUP, INC.

WELL NO. SP-2/V-5
PAGE 1 OF 1

PROJECT NO. 330-06.20
LOGGED BY: RH
DRILLER: WEST HAZMAT
DRILLING METHOD: HSA
SAMPLING METHOD: CAL MOD
CASING TYPE: Sch 40 PVC
SLOT SIZE: 0.020"/0.040"
GRAVEL PACK: 2 X 12 SAND/Aquarium Sand

CLIENT: ARCO
DATE DRILLED: 3-18-93
LOCATION: Hacienda and Via Arriba
HOLE DIAMETER: 10"
HOLE DEPTH: 19'
WELL DIAMETER: 2"/2"
WELL DEPTH: 19'/11'
CASING STICKUP: NA

WELL COMPLETION	MOISTURE CONTENT	PID	PENETRATION (BLOWS/FT)	DEPTH (FEET)	SOIL TYPE	LITHOLOGY / REMARKS
GROUT				0		ASPHALT AND BASEROCK.
	Dp	0		1	CL	SANDY CLAY: black; low plasticity; 10-20% fine sand; trace coarse sand; stiff; no product odor.
				2		@2': dark yellowish brown.
				3		
				4		
				5		
	Dp	0		6		
SAND			12	7	SM	SILTY SAND: dark yellowish brown; fine sand; no product odor.
					SP	SAND: dark yellowish brown; fine sand; no product odor.
BENTONITE	Mst	0		8	ML	CLAYEY SILT: dark yellowish brown; 10% fine sand; firm; no product odor.
				9	SC	CLAYEY SAND: yellowish brown; 30-40% fines; fine sand; faint product odor.
	Sat	12	14	10		
				11	CL	CLAY: dark grey; low to moderate plasticity; rootholes; stiff; faint product odor.
GROUT				12		
				13		@13': olive brown with grey mottling along fine sand filled rootholes; caliche; faint product odor.
			22	14		
				15		@15': mottling lessening with depth; no product odor.
		0		16		
SAND				17		
				18		
		0	20	19		@18.5': increased fine sand and silt; no product odor.
						BOTTOM OF BORING AT 19'
				20		
				21		
				22		

ATTACHMENT B

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

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.20/Arco 0608, San Lorenzo

Enclosed are the results from 12 soil samples received at Sequoia Analytical on March 10,1993. The requested analyses are listed below:

3C60001	Soil, B-1 @ 10'-11'	3/8/93	EPA 5030/8015/8020
3C60002	Soil, B-2 @ 10'-11'	3/8/93	EPA 5030/8015/8020
3C60003	Soil, B-3 @ 9'-10'	3/8/93	EPA 5030/8015/8020
3C60004	Soil, B-4 @ 8'-9'	3/8/93	EPA 5030/8015/8020
3C60005	Soil, B-5 @ 10'-11'	3/8/93	EPA 5030/8015/8020
3C60006	Soil, B-6 @ 12'-13'	3/8/93	EPA 5030/8015/8020
3C60007	Soil, B-7 @ 11'-12'	3/9/93	EPA 5030/8015/8020
3C60008	Soil, B-8 @ 11'-12'	3/9/93	EPA 5030/8015/8020
3C60009	Soil, B-9 @ 10'-12'	3/9/93	EPA 5030/8015/8020
3C60010	Soil, B-10 @ 11'-13'	3/9/93	EPA 5030/8015/8020
3C60011	Soil, B-11 @ 11'-13'	3/9/93	EPA 5030/8015/8020
3C60012	Soil, B-12 @ 11'-13'	3/9/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 8, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 10, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 22, 1993
Attention: Kelly Brown	First Sample #:	3C60001		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C60001 B-1 @ 10'-11'	Sample I.D. 3C60002 B-2 @ 10'-11'	Sample I.D. 3C60003 B-3 @ 9'-10'	Sample I.D. 3C60004 B-4 @ 8'-9'	Sample I.D. 3C60005 B-5 @ 10'-11'	Sample I.D. 3C60006 B-6 @ 12'-13'
Purgeable Hydrocarbons	1.0	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/15/93	3/15/93	3/16/93	3/17/93	3/17/93	3/17/93
Instrument Identification:	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Surrogate Recovery, %: (QC Limits = 70-130%)	91	101	98	104	98	103

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 9, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 10, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 22, 1993
Attention: Kelly Brown	First Sample #:	3C60007		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C60007 B-7 @ 11'-12'	Sample I.D. 3C60008 B-8 @ 11'-12'	Sample I.D. 3C60009 B-9 @ 10'-12'	Sample I.D. 3C60010 B-10 @ 11'-13'	Sample I.D. 3C60011 B-11 @ 11'-13'	Sample I.D. 3C60012 B-12 @ 11'-13'
Purgeable Hydrocarbons	1.0	N.D.	N.D.	5.8	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	0.010	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	0.029	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	Non-gas mix >C8	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/17/93	3/17/93	3/17/93	3/15/93	3/17/93	3/17/93
Instrument Identification:	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Surrogate Recovery, %: (QC Limits = 70-130%)	100	100	100	104	99	102

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C600-1-02, 10

Reported: Mar 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylees
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Miraftab	A. Miraftab	A. Miraftab	A. Miraftab
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK031593BS	GBLK031593BS	GBLK031593 BS	GBLK031593 BS
Date Prepared:	3/15/93	3/15/93	3/15/93	3/15/93
Date Analyzed	3/15/93	3/15/93	3/15/93	3/15/93
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
LCS % Recovery:	100	105	110	108
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G9303531-1A	G9303531-1A	G9303531-1A	G9303531-1A
Date Prepared:	3/15/93	3/15/93	3/15/93	3/15/93
Date Analyzed	3/15/93	3/15/93	3/15/93	3/15/93
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Matrix Spike % Recovery:	70	70	75	72
Matrix Spike Duplicate % Recovery:	90	90	90	88
Relative % Difference:	25	25	18	20

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Water
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C60003-09, 11-12

Reported: Mar 22, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	A. Maralit	A. Maralit	A. Maralit	A. Maralit
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK031693BS	GBLK031693BS	GBLK031693 BS	GBLK031693 BS
Date Prepared:	3/16/93	3/16/93	3/16/93	3/16/93
Date Analyzed	3/17/93	3/17/93	3/17/93	3/17/93
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
LCS % Recovery:	95	100	100	100
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G9303561-1A	G9303561-1A	G9303561-1A	G9303561-1A
Date Prepared:	3/16/93	3/16/93	3/16/93	3/16/93
Date Analyzed	3/17/93	3/17/93	3/17/93	3/17/93
Instrument I.D.#:	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Matrix Spike % Recovery:	85	85	85	85
Matrix Spike Duplicate % Recovery:	80	90	90	88
Relative % Difference:	6.1	5.7	5.7	3.8

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

Chain of Custody

Products Company ◆ 330-06.20 **Task Order No.** 0608-93-2
Division of AtlanticRichfieldCompany

y no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia Analytical
er Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 441-7500	Fax no. (Consultant) (408) 441-7539
me Pacific Environmental Group		Address (Consultant) 2025 Gateway Pl. #440, San Jose, CA 95110	Contract number

Method of shipment: Courier

Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH-Gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
2-11'	1	X			X		3/8/93	10:00 AM		X			930	8600			01	A			
2-11'	1							11:00 AM									02				
2-10'	1							noon									03				
2-9'	1							1:30 PM									04				
2-11'	1							2:30 PM									05				
2-13'	1							3:30 PM									06				
1-12'	1						3/9/93	10:00 AM									07				
1-12'	1							11:00 AM									08				
1-12'	1							12:30 PM									09				
1-13'	1							1:30 PM									16				
1-13'	1							2:30 PM									11				
1-13'	1							3:30 PM									12				

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

of sample:		Temperature received:	
ed by sampler Hoffmaier	Date 3/10/93	Time 15:10	Received by
ed by	Date 3/10/93	Time 16:55	Received by
by	Date	Time	Received by laboratory Date 3-10-93 Time 16:55

Consultant

SEQUOIA ANALYTICAL

MASTER LOG NO. / PAGE: 9303600
DATE OF LOG-IN: 3-15-93

AME: P.E.G.
(PRINT): T.C.

APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
Seal(s): Present / (Absent) Intact / Broken*	01	A	B-1	core	S	3/8	
Seal Nos.:	02		2				
	03		3				
	04		4				
	05		5				
ol-Custody (Present) / Absent*	06		6			3/9	
s:	07		7				
	08		8				
Reports or (Present) / Absent*	09		9				
g List:	10		10				
	11		11				
: Airbill / Slicker	12		12				
Present / (Absent)			13				
No.:							
le Tags: (Present) / Absent*							
le Tag Nos.: (Listed) / Not Listed on Chain-of-Custody							
le Condition: (Intact) / Broken* / Leaking*							
Information on (Yes) / No* ody reports, traffic ls and sample tags agree?							
per (Yes) / No* servatives Used:							
e Rec. at Lab: 3-10-93							
e Rec. at Lab: 1655							

cied, contact Project Manager and attach record of resolution

Form SC001

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.20/Arco 0608, San Lorenzo

Enclosed are the results from 35 soil samples received at Sequoia Analytical on March 15,1993. The requested analyses are listed below:

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3C83001	Soil, B-13 12-13'	3/10/93	EPA 5030/8015/8020
3C83002	Soil, B-14 12-13'	3/10/93	EPA 5030/8015/8020
3C83003	Soil, B-15 12.5-13.5'	3/10/93	EPA 5030/8015/8020
3C83004	Soil, B-16 14-15'	3/11/93	EPA 5030/8015/8020
3C83005	Soil, B-17 12-13'	3/10/93	EPA 5030/8015/8020
3C83006	Soil, B-18 12-13'	3/10/93	EPA 5030/8015/8020
3C83007	Soil, B-19 12-13'	3/10/93	EPA 5030/8015/8020
3C83008	Soil, B-20 12-13'	3/10/93	EPA 5030/8015/8020
3C83009	Soil, B-21 12-13'	3/10/93	EPA 5030/8015/8020
3C83010	Soil, B-22 12-13'	3/11/93	EPA 5030/8015/8020
3C83011	Soil, B-23 4-5'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)
3C83012	Soil, B-23 9-10'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)
3C83013	Soil, B-23 14-15'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)
3C83014	Soil, B-24 4-5'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3C83015	Soil, B-24 9-10'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)
3C83016	Soil, B-24 14-15'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)
3C83017	Soil, B-25 12-14'	3/11/93	EPA 5030/8015/8020
3C83018	Soil, B-26 12-14'	3/11/93	EPA 5030/8015/8020
3C83019	Soil, B-27 2-3'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83020	Soil, B-27 4-5'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83021	Soil, B-27 9-10'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83022	Soil, B-27 14-15'	3/11/93	EPA 5030/8010 EPA 5030/8015/8020 EPA 8270
3C83023	Soil, B-28 4-5'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83024	Soil, B-28 9-10'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83025	Soil, B-28 14-15'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83026	Soil, B-29 4-5'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83027	Soil, B-29 9-10'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83028	Soil, B-29 14-15'	3/11/93	EPA 5030/8015/8020 SM 5520 E&F (Gravimetric)
3C83029	Soil, B-30 14-15'	3/11/93	TTLC Metals EPA 5030/8010 EPA 5030/8015/8020 EPA 8270 SM 5520 E&F (Gravimetric)

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SAMPLE #	SAMPLE DESCRIPTION	DATE OF COLLECTION	TEST METHOD
3C83030	Soil, B-31 12-13'	3/13/93	EPA 5030/8015/8020
3C83031	Soil, B-32 14-15'	3/13/93	EPA 5030/8015/8020
3C83032	Soil, B-33 13-14'	3/13/93	EPA 5030/8015/8020
3C83033	Soil, B-34 13-14'	3/13/93	EPA 5030/8015/8020
3C83034	Soil, B-35 12-13'	3/13/93	EPA 5030/8015/8020
3C83035	Soil, B-36 12-13'	3/13/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

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(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 10, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83001		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83001 B-13 12-13'	Sample I.D. 3C83002 B-14 12-13'	Sample I.D. 3C83003 B-15 12.5-13.5'	Sample I.D. 3C83004 B-16 14-15'	Sample I.D. 3C83005 B-17 12-13'	Sample I.D. 3C83006 B-18 12-13'
Purgeable Hydrocarbons	1.0	1.6	9.6	N.D.	90	1.6	19
Benzene	0.0050	N.D.	N.D.	N.D.	0.095	0.028	N.D.
Toluene	0.0050	N.D.	N.D.	0.0070	0.25	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	0.39	N.D.	0.76	0.032	0.19
Total Xylenes	0.0050	N.D.	0.94	N.D.	0.46	0.0080	0.21
Chromatogram Pattern:		Non-gas C4 - C12	Gas	Discrete Peak	Gas + Non-gas C4 - C12	Non-gas C4 - C12	Non-gas > C8

Quality Control Data

Report Limit Multiplication Factor:	1.0	50	1.0	10	1.0	5.0
Date Analyzed:	3/21/93	3/22/93	3/20/93	3/20/93	3/20/93	3/21/93
Instrument Identification:	GCHP-7	GCHP-7	GCHP-7	GCHP-7	GCHP-7	GCHP-6
Surrogate Recovery, %: (QC Limits = 70-130%)	90	94	95	96	89	91

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 10-11, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83007		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83007 B-19 12-13'	Sample I.D. 3C83008 B-20 12-13'	Sample I.D. 3C83009 B-21 12-13'	Sample I.D. 3C83010 B-22 12-13'	Sample I.D. 3C83011 B-23 4-5'	Sample I.D. 3C83012 B-23 9-10'
Purgeable Hydrocarbons	1.0	160	16	N.D.	4.1	1.4	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	0.013	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	1.3	0.11	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	0.60	0.14	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		Non-gas > C8	Non-gas > C8	--	Non-gas mix < C8	Non-gas mix	--

Quality Control Data

Report Limit Multiplication Factor:	50	2.0	1.0	2.0	1.0	1.0
Date Analyzed:	3/21/93	3/21/93	3/22/93	3/22/93	3/22/93	3/20/93
Instrument Identification:	GCHP-6	GCHP-6	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	99	96	102	111	95	88

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83013		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83013 B-23 14-15'	Sample I.D. 3C83014 B-24 4-5'	Sample I.D. 3C83015 B-24 9-10'	Sample I.D. 3C83016 B-24 14-15'	Sample I.D. 3C83017 B-25 12-14'	Sample I.D. 3C83018 B-26 12-14'
Purgeable Hydrocarbons	1.0	N.D.	210	650	2.6	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	0.80	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	2.0	6.4	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	Non-gas > C8	Non-gas mix > C8	Non-gas mix C8 - C11	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	50	100	1.0	1.0	1.0
Date Analyzed:	3/20/93	3/21/93	3/21/93	3/20/93	3/20/93	3/20/93
Instrument Identification:	GCHP-7	GCHP-6	GCHP-6	GCHP-7	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	74	94	93	90	94	91

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83019		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83019 B-27 2-3'	Sample I.D. 3C83020 B-27 4-5'	Sample I.D. 3C83021 B-27 9-10'	Sample I.D. 3C83022 B-27 14-15'	Sample I.D. 3C83023 B-28 4-5'	Sample I.D. 3C83024 B-28 9-10'
Purgeable Hydrocarbons	1.0	1.2	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	0.013	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	0.024	0.0050	N.D.	N.D.	0.0080	N.D.
Ethyl Benzene	0.0050	0.025	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	0.041	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		Gas	Discrete Peak	--	--	Discrete Peak	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/22/93	3/21/93	3/20/93	3/22/93	3/21/93	3/21/93
Instrument Identification:	GCHP-7	GCHP-7	GCHP-7	GCHP-6	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	82	92	77	95	104	94

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83025		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83025 B-28 14-15'	Sample I.D. 3C83026 B-29 4-5'	Sample I.D. 3C83027 B-29 9-10'	Sample I.D. 3C83028 B-29 14-15'	Sample I.D. 3C83029 B-30 14-15'	Sample I.D. 3C83030 B-31 12-13'
Purgeable Hydrocarbons	1.0	N.D.	6.8	N.D.	N.D.	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	0.024	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.0050	N.D.	0.028	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	Non-gas mix C4 - C12	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	2.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/21/93	3/21/93	3/21/93	3/21/93	3/22/93	3/20/93
Instrument Identification:	GCHP-7	GCHP-7	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	92	97	95	97	105	71

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled: Mar 11, 13, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received: Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported: Mar 29, 1993
Attention: Kelly Brown	First Sample #:	3C83031	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C83031 B-32 14-15'	Sample I.D. 3C83032 B-33 13-14'	Sample I.D. 3C83033 B-34 13-14'	Sample I.D. 3C83034 B-35 12-13'	Sample I.D. 3C83035 B-36 12-13'
Purgeable Hydrocarbons	1.0	N.D.	N.D.	130	N.D.	N.D.
Benzene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.0050	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	0.12	N.D.	N.D.
Total Xylenes	0.0050	N.D.	N.D.	0.28	N.D.	N.D.
Chromatogram Pattern:		--	--	Non-gas mix > C4 - C12	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	20	1.0	1.0
Date Analyzed:	3/21/93	3/20/93	3/21/93	3/20/93	3/22/93
Instrument Identification:	GCHP-7	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	95	87	96	86	96

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83011	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Eileen A. Manning
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83012	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5,0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83013	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83014	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	7.1
1,4-Dichlorobenzene	5.0	45
1,2-Dichlorobenzene	5.0	110
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83015	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83016	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-27 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83022	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-30 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8010	Analyzed:	Mar 24, 1993
Attention: Kelly Brown	Lab Number:	3C83029	Reported:	Mar 29, 1993

HALOGENATED VOLATILE ORGANICS (EPA 8010)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Bromodichloromethane	5.0	N.D.
Bromoform	5.0	N.D.
Bromomethane	10	N.D.
Carbon tetrachloride	5.0	N.D.
Chlorobenzene	5.0	N.D.
Chloroethane	10	N.D.
2-Chloroethylvinyl ether	10	N.D.
Chloroform	5.0	N.D.
Chloromethane	10	N.D.
Dibromochloromethane	5.0	N.D.
1,3-Dichlorobenzene	5.0	N.D.
1,4-Dichlorobenzene	5.0	N.D.
1,2-Dichlorobenzene	5.0	N.D.
1,1-Dichloroethane	5.0	N.D.
1,2-Dichloroethane	5.0	N.D.
1,1-Dichloroethene	5.0	N.D.
cis-1,2-Dichloroethene	5.0	N.D.
trans-1,2-Dichloroethene	5.0	N.D.
1,2-Dichloropropane	5.0	N.D.
cis-1,3-Dichloropropene	5.0	N.D.
trans-1,3-Dichloropropene	5.0	N.D.
Methylene chloride	50	N.D.
1,1,2,2-Tetrachloroethane	5.0	N.D.
Tetrachloroethene	5.0	N.D.
1,1,1-Trichloroethane	5.0	N.D.
1,1,2-Trichloroethane	5.0	N.D.
Trichloroethene	5.0	N.D.
Trichlorofluoromethane	5.0	N.D.
Vinyl chloride	10	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83011	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83011	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	100
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	140
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83012	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83012	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	N.D.
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Eileen A. Manning
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83013	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83013	Analyzed:	Mar 23, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	N.D.
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83014	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	150
1,2-Dichlorobenzene	100	480
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83014	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	710
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	570
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83015	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	500
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	160
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83015	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	1,100
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	760
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83016	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83016	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	N.D.
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-27 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83022	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	130	N.D.
Acenaphthylene	130	N.D.
Aniline	130	N.D.
Anthracene	130	N.D.
Benzidine	3,100	N.D.
Benzoic Acid	630	N.D.
Benzo(a)anthracene	130	N.D.
Benzo(b)fluoranthene	130	N.D.
Benzo(k)fluoranthene	130	N.D.
Benzo(g,h,i)perylene	130	N.D.
Benzo(a)pyrene	130	N.D.
Benzyl alcohol	130	N.D.
Bis(2-chloroethoxy)methane	130	N.D.
Bis(2-chloroethyl)ether	130	N.D.
Bis(2-chloroisopropyl)ether	130	N.D.
Bis(2-ethylhexyl)phthalate	630	N.D.
4-Bromophenyl phenyl ether	130	N.D.
Butyl benzyl phthalate	130	N.D.
4-Chloroaniline	130	N.D.
2-Chloronaphthalene	130	N.D.
4-Chloro-3-methylphenol	130	N.D.
2-Chlorophenol	130	N.D.
4-Chlorophenyl phenyl ether	130	N.D.
Chrysene	130	N.D.
Dibenz(a,h)anthracene	130	N.D.
Dibenzofuran	130	N.D.
Di-N-butyl phthalate	630	N.D.
1,3-Dichlorobenzene	130	N.D.
1,4-Dichlorobenzene	130	N.D.
1,2-Dichlorobenzene	130	N.D.
3,3-Dichlorobenzidine	630	N.D.
2,4-Dichlorophenol	130	N.D.
Diethyl phthalate	130	N.D.
2,4-Dimethylphenol	130	N.D.
Dimethyl phthalate	130	N.D.
4,6-Dinitro-2-methylphenol	630	N.D.
2,4-Dinitrophenol	630	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-27 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83022	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	130	N.D.
2,6-Dinitrotoluene	130	N.D.
Di-N-octyl phthalate	130	N.D.
Fluoranthene	130	N.D.
Fluorene	130	N.D.
Hexachlorobenzene	130	N.D.
Hexachlorobutadiene	130	N.D.
Hexachlorocyclopentadiene	130	N.D.
Hexachloroethane	130	N.D.
Indeno(1,2,3-cd)pyrene	130	N.D.
Isophorone	130	N.D.
2-Methylnaphthalene	130	N.D.
2-Methylphenol	130	N.D.
4-Methylphenol	130	N.D.
Naphthalene	130	N.D.
2-Nitroaniline	630	N.D.
3-Nitroaniline	630	N.D.
4-Nitroaniline	630	N.D.
Nitrobenzene	130	N.D.
2-Nitrophenol	130	N.D.
4-Nitrophenol	630	N.D.
N-Nitrosodiphenylamine	130	N.D.
N-Nitroso-di-N-propylamine	130	N.D.
Pentachlorophenol	630	N.D.
Phenanthrene	130	N.D.
Phenol	130	N.D.
Pyrene	130	N.D.
1,2,4-Trichlorobenzene	130	N.D.
2,4,5-Trichlorophenol	630	N.D.
2,4,6-Trichlorophenol	130	N.D.

Analytes reported as N.D. were not present above the stated limit of detection. Because matrix effects and/or other factors required additional sample dilution, detection limits for this sample have been raised.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-30 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83029	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
Acenaphthene	100	N.D.
Acenaphthylene	100	N.D.
Aniline	100	N.D.
Anthracene	100	N.D.
Benzidine	2,500	N.D.
Benzoic Acid	500	N.D.
Benzo(a)anthracene	100	N.D.
Benzo(b)fluoranthene	100	N.D.
Benzo(k)fluoranthene	100	N.D.
Benzo(g,h,i)perylene	100	N.D.
Benzo(a)pyrene	100	N.D.
Benzyl alcohol	100	N.D.
Bis(2-chloroethoxy)methane	100	N.D.
Bis(2-chloroethyl)ether	100	N.D.
Bis(2-chloroisopropyl)ether	100	N.D.
Bis(2-ethylhexyl)phthalate	500	N.D.
4-Bromophenyl phenyl ether	100	N.D.
Butyl benzyl phthalate	100	N.D.
4-Chloroaniline	100	N.D.
2-Chloronaphthalene	100	N.D.
4-Chloro-3-methylphenol	100	N.D.
2-Chlorophenol	100	N.D.
4-Chlorophenyl phenyl ether	100	N.D.
Chrysene	100	N.D.
Dibenz(a,h)anthracene	100	N.D.
Dibenzofuran	100	N.D.
Di-N-butyl phthalate	500	N.D.
1,3-Dichlorobenzene	100	N.D.
1,4-Dichlorobenzene	100	N.D.
1,2-Dichlorobenzene	100	N.D.
3,3-Dichlorobenzidine	500	N.D.
2,4-Dichlorophenol	100	N.D.
Diethyl phthalate	100	N.D.
2,4-Dimethylphenol	100	N.D.
Dimethyl phthalate	100	N.D.
4,6-Dinitro-2-methylphenol	500	N.D.
2,4-Dinitrophenol	500	N.D.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-30 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	EPA 8270	Extracted:	Mar 22, 1993
Attention: Kelly Brown	Lab Number:	3C83029	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

SEMI-VOLATILE ORGANICS by GC/MS (EPA 8270)

Analyte	Detection Limit µg/kg	Sample Results µg/kg
2,4-Dinitrotoluene	100	N.D.
2,6-Dinitrotoluene	100	N.D.
Di-N-octyl phthalate	100	N.D.
Fluoranthene	100	N.D.
Fluorene	100	N.D.
Hexachlorobenzene	100	N.D.
Hexachlorobutadiene	100	N.D.
Hexachlorocyclopentadiene	100	N.D.
Hexachloroethane	100	N.D.
Indeno(1,2,3-cd)pyrene	100	N.D.
Isophorone	100	N.D.
2-Methylnaphthalene	100	N.D.
2-Methylphenol	100	N.D.
4-Methylphenol	100	N.D.
Naphthalene	100	N.D.
2-Nitroaniline	500	N.D.
3-Nitroaniline	500	N.D.
4-Nitroaniline	500	N.D.
Nitrobenzene	100	N.D.
2-Nitrophenol	100	N.D.
4-Nitrophenol	500	N.D.
N-Nitrosodiphenylamine	100	N.D.
N-Nitroso-di-N-propylamine	100	N.D.
Pentachlorophenol	500	N.D.
Phenanthrene	100	N.D.
Phenol	100	N.D.
Pyrene	100	N.D.
1,2,4-Trichlorobenzene	100	N.D.
2,4,5-Trichlorophenol	500	N.D.
2,4,6-Trichlorophenol	100	N.D.

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

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Matrix Descript:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	SM 5520 E&F (Gravimetric)		
Attention: Kelly Brown	First Sample #:	3C83011	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg
3C83011	B-23 4-5'	N.D.
3C83012	B-23 9-10'	N.D.
3C83013	B-23 14-15'	N.D.
3C83014	B-24 4-5'	500*
3C83015	B-24 9-10'	550*
3C83016	B-24 14-15'	N.D.
3C83019	B-27 2-3'	240*
3C83020	B-27 4-5'	N.D.
3C83021	B-27 9-10'	N.D.
3C83022	B-27 14-15'	**

Detection Limits:	**50**

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

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Eileen A. Manning
Project Manager

Please Note:
*This sample result is qualitative only. Insuffient sample was available for representative quanitation.

**Not enough of this sample was available for this analysis.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Matrix Descript:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	SM 5520 E&F (Gravimetric)		
Attention: Kelly Brown	First Sample #:	3C83023	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg
3C83023	B-28 4-5'	N.D.
3C83024	B-28 9-10'	N.D.
3C83025	B-28 14-15'	N.D.
3C83026	B-29 4-5'	N.D.
3C83027	B-29 9-10'	N.D.
3C83028	B-29 14-15'	N.D.

Detection Limits:	50

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

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 10, 1993
2025 Gateway Place, Suite 440	Matrix Descript:	Soil	Received:	Mar 15, 1993
San Jose, CA 95110	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	Mar 22, 1993
Attention: Kelly Brown	First Sample #:	3C83029	Analyzed:	Mar 24, 1993
			Reported:	Mar 29, 1993

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg
3C83029	B-30 14-15'	N.D.

Detection Limits:	330

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83011	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTLC Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	27
Barium	100	0.10	-	10,000	5.0	140
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	31
Cobalt	80	0.050	-	8,000	2.5	7.4
Copper	25	0.010	-	2,500	0.50	16
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	33
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	32
Zinc	250	0.010	-	5,000	0.50	880
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83012	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration (Waste Extraction Test)			Total Threshold Limit Concentration		
Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTLC Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	30
Barium	100	0.10	-	10,000	5.0	130
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	36
Cobalt	80	0.050	-	8,000	2.5	8.4
Copper	25	0.010	-	2,500	0.50	15
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	43
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	34
Zinc	250	0.010	-	5,000	0.50	960
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-23 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Nov 18, 1900
Attention: Kelly Brown	Lab Number:	3C83013	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
Analyte	**STLC Max. Limit** (mg/L)	**Detection Limit** (mg/L)	**Analysis Result** (mg/L)	**TTLC Max. Limit** (mg/kg)	**Detection Limit** (mg/kg)	**Analysis Result** (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	33
Barium	100	0.10	-	10,000	5.0	150
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	44
Cobalt	80	0.050	-	8,000	2.5	9.0
Copper	25	0.010	-	2,500	0.50	21
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	49
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	29
Zinc	250	0.010	-	5,000	0.50	190
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 4-5'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83014	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration (Waste Extraction Test)			Total Threshold Limit Concentration		
Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTLC Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.10	-	500	5.0	7.2
Arsenic	5.0	0.10	-	500	5.0	31
Barium	100	0.10	-	10,000	5.0	140
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	34
Cobalt	80	0.050	-	8,000	2.5	7.4
Copper	25	0.010	-	2,500	0.50	15
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	34
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	33
Zinc	250	0.010	-	5,000	0.50	300
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

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Eileen A. Manning
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 9-10'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83015	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
Analyte	**STLC Max. Limit** (mg/L)	**Detection Limit** (mg/L)	**Analysis Result** (mg/L)	**TTLC Max. Limit** (mg/kg)	**Detection Limit** (mg/kg)	**Analysis Result** (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	3.0
Barium	100	0.10	-	10,000	5.0	130
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	39
Cobalt	80	0.050	-	8,000	2.5	7.2
Copper	25	0.010	-	2,500	0.50	16
Lead	5.0	0.10	-	1,000	5.0	49
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	41
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	27
Zinc	250	0.010	-	5,000	0.50	740
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

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Eileen A. Manning
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-24 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83016	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
Analyte	**STLC Max. Limit** (mg/L)	**Detection Limit** (mg/L)	**Analysis Result** (mg/L)	**TTLC Max. Limit** (mg/kg)	**Detection Limit** (mg/kg)	**Analysis Result** (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	32
Barium	100	0.10	-	10,000	5.0	130
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	36
Cobalt	80	0.050	-	8,000	2.5	7.0
Copper	25	0.010	-	2,500	0.50	16
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	38
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	38
Zinc	250	0.010	-	5,000	0.50	1,200
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

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Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-27 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	N.A.*
Attention: Kelly Brown	Lab Number:	3C83022	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration (Waste Extraction Test)			Total Threshold Limit Concentration		
Analyte	STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	TTLC Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.10	-	500	5.0	-
Arsenic	5.0	0.10	-	500	5.0	-
Barium	100	0.10	-	10,000	5.0	-
Beryllium	0.75	0.010	-	75	0.50	-
Cadmium	1.0	0.010	-	100	0.50	-
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	-
Cobalt	80	0.050	-	8,000	2.5	-
Copper	25	0.010	-	2,500	0.50	-
Lead	5.0	0.10	-	1,000	5.0	-
Mercury	0.20	0.00020	-	20	0.10	-
Molybdenum	350	0.050	-	3,500	2.5	-
Nickel	20	0.050	-	2,000	2.5	-
Selenium	1.0	0.10	-	100	5.0	-
Silver	5.0	0.010	-	500	0.50	-
Thallium	7.0	0.10	-	700	5.0	-
Vanadium	24	0.050	-	2,400	2.5	-
Zinc	250	0.010	-	5,000	0.50	-
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

Please Note:
* Not enough of this sample was available for this analysis.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 11, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-30 14-15'	Received:	Mar 15, 1993
San Jose, CA 95110			Extracted:	Mar 23, 1993
Attention: Kelly Brown	Lab Number:	3C83029	Reported:	Mar 29, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

	Soluble Threshold Limit Concentration Waste Extraction Test			Total Threshold Limit Concentration		
Analyte	**STLC Max. Limit** (mg/L)	**Detection Limit** (mg/L)	**Analysis Result** (mg/L)	**TTLC Max. Limit** (mg/kg)	**Detection Limit** (mg/kg)	**Analysis Result** (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	31
Barium	100	0.10	-	10,000	5.0	130
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	41
Cobalt	80	0.050	-	8,000	2.5	7.1
Copper	25	0.010	-	2,500	0.50	19
Lead	5.0	0.10	-	1,000	5.0	11
Mercury	0.20	0.00020	-	20	0.10	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	44
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	23
Zinc	250	0.010	-	5,000	0.50	2,300
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	B. Ali	B. Ali	B. Ali	B. Ali
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK031993	GBLK031993	GBLK031993	GBLK031993
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/20/93	3/20/93	3/20/93	3/20/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
LCS % Recovery:	100	95	95	97
Control Limits:	60-140	60-140	60-140	60-140

MS/MSD Batch #:	G9303827-01A	G9303827-01A	G9303827-01A	G9303827-01A
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/20/93	3/20/93	3/20/93	3/20/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Matrix Spike % Recovery:	85	90	90	88
Matrix Spike Duplicate % Recovery:	85	85	85	87
Relative % Difference:	0.0	5.7	5.7	1.9

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Donohue	C. Donohue	C. Donohue	C. Donohue
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK031993BS	GBLK031993BS	GBLK031993 BS	GBLK031993 BS
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/21/93	3/21/93	3/21/93	3/21/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
LCS % Recovery:	110	110	110	110
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G9303827 02	G9303827 02	G9303827 02	G9303827 02
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/21/93	3/21/93	3/21/93	3/21/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Matrix Spike % Recovery:	90	95	95	93
Matrix Spike Duplicate % Recovery:	100	105	105	102
Relative % Difference:	11	10	10	5.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	E. Cunanan	E. Cunanan	E. Cunanan	E. Cunanan
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK031993BS	GBLK031993BS	GBLK031993 BS	GBLK031993 BS
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/22/93	3/22/93	3/22/93	3/22/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
LCS % Recovery:	95	95	95	92
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G930383022	G930383022	G930383022	G930383022
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/22/93	3/22/93	3/22/93	3/22/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Matrix Spike % Recovery:	105	100	100	102
Matrix Spike Duplicate % Recovery:	100	95	95	97
Relative % Difference:	4.9	5.1	5.1	5.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Donohue	C. Donohue	C. Donohue	C. Donohue
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK032193BS	GBLK032193BS	GBLK032193 BS	GBLK032193 BS
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/21/93	3/21/93	3/21/93	3/21/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
LCS % Recovery:	115	115	115	113
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G9303827-2A	G9303827-2A	G9303827-2A	G9303827-2A
Date Prepared:	3/19/93	3/19/93	3/19/93	3/19/93
Date Analyzed	3/21/93	3/21/93	3/21/93	3/21/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
Matrix Spike % Recovery:	110	110	105	108
Matrix Spike Duplicate % Recovery:	105	105	105	103
Relative % Difference:	4.7	4.7	0.0	4.7

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Donohue	C. Donohue	C. Donohue	C. Donohue
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK032293BS	GBLK032293BS	GBLK032293 BS	GBLK032293 BS
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/22/93	3/22/93	3/22/93	3/22/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
LCS % Recovery:	120	120	115	115
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	G930383022	G930383022	G930383022	G930383022
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/22/93	3/22/93	3/22/93	3/22/93
Instrument I.D.#:	GCHP-6	GCHP-6	GCHP-6	GCHP-6
Matrix Spike % Recovery:	110	110	110	108
Matrix Spike Duplicate % Recovery:	115	110	110	108
Relative % Difference:	4.4	0.0	0.0	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	1,1-Dichloroethene	Trichloroethene	Chloro-benzene
Method:	EPA 8010	EPA 8010	EPA 8010
Analyst:	B. Samra	B. Samra	B. Samra
Conc. Spiked:	25	25	25
Units:	µg/kg	µg/kg	µg/kg
LCS Batch#:	VBLK032293BS	VBLK032293BS	VBLK032293 BS
Date Prepared:	3/22/93	3/22/93	3/22/93
Date Analyzed	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-9	GCHP-9	GCHP-9
LCS % Recovery:	88	96	84
Control Limits:	59-172	62-137	60-133
MS/MSD Batch #:	V930383022	V930383022	V930383022
Date Prepared:	3/22/93	3/22/93	3/22/93
Date Analyzed	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-9	GCHP-9	GCHP-9
Matrix Spike % Recovery:	80	104	88
Matrix Spike Duplicate % Recovery:	64	92	88
Relative % Difference:	22	12	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C83001-35

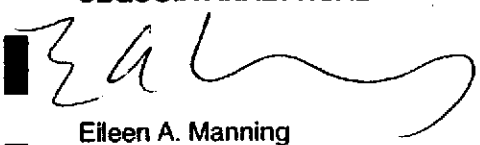
Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Phenol	2-Chlorophenol	1,4-Dichloro-benzene	N-Nitroso-Di-N-propylamine	1,2,4-Trichloro-benzene	4-Chloro-3-Methylphenyl
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	Scott/Manuel	Scott/Manuel	Scott/Manuel	Scott/Manuel	Scott/Manuel	Scott/Manuel
Conc. Spiked:	50-100	50-100	50-100	50-100	50-100	50-100
Units:	ng	ng	ng	ng	ng	ng
LCS Batch#:	BLK032293	BLK032293	BLK032293	BLK032293	BLK032293	BLK032293
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/23/93	3/23/93	3/23/93	3/23/93	3/23/93	3/23/93
Instrument I.D.#:	H5	H5	H5	H5	H5	H5
LCS % Recovery:	82	83	76	88	76	85
Control Limits:	26-90	25-102	28-104	41-126	38-107	26-103
MS/MSD Batch #:	930368729	930368729	930368729	930368729	930368729	930368729
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	H5	H5	H5	H5	H5	H5
Matrix Spike % Recovery:	80	82	72	84	76	84
Matrix Spike Duplicate % Recovery:	74	75	68	80	70	77
Relative % Difference:	7.8	8.9	5.7	4.9	8.2	8.7

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL



Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group: 3C83001-35	Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Acenaphthene	4-Nitrophenol	2,4-Dinitro-toluene	Pentachloro-phenol	Pyrene
Method:	EPA 8270	EPA 8270	EPA 8270	EPA 8270	EPA 8270
Analyst:	Scott/Manuel	Scott/Manuel	Scott/Manuel	Scott/Manuel	Scott/Manuel
Conc. Spiked:	50-100	50-100	50-100	50-100	50-100
Units:	ng	ng	ng	ng	ng
LCS Batch#:	BLK032293	BLK032293	BLK032293	BLK032293	BLK032293
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/23/93	3/23/93	3/23/93	3/23/93	3/23/93
Instrument I.D.#:	H5	H5	H5	H5	H5
LCS % Recovery:	82	94	80	83	96
Control Limits:	31-137	11-114	28-89	17-109	35-142
MS/MSD Batch #:	930368729	930368729	930368729	930368729	930368729
Date Prepared:	3/22/93	3/22/93	3/22/93	3/22/93	3/22/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	H5	H5	H5	H5	H5
Matrix Spike % Recovery:	76	83	72	76	70
Matrix Spike Duplicate % Recovery:	72	81	68	73	74
Relative % Difference:	5.4	2.4	5.7	4.0	5.6

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

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Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group: 3C83001-35	Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Total Recoverable Petroleum Oil
Method:	SM 5520 E&F
Analyst:	M. Shkidt
Conc. Spiked:	1000
Units:	mg/kg
LCS Batch#:	BLK032493
Date Prepared:	3/24/93
Date Analyzed	3/24/93
Instrument I.D.#:	N.A.
LCS % Recovery:	83
Control Limits:	70-110

MS/MSD Batch #:	9303830-19
Date Prepared:	3/24/93
Date Analyzed	3/24/93
Instrument I.D.#:	N.A.
Matrix Spike % Recovery:	92
Matrix Spike Duplicate % Recovery:	92
Relative % Difference:	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Goup:	3C83001-35

Reported: Mar 29, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Beryllium	Cadmium	Chromium	Nickel	Mercury
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 7471
Analyst:	M. Mistry	M. Mistry	M. Mistry	M. Mistry	J. Martinez
Conc. Spiked:	100	100	100	100	1.0
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	BLK032393	BLK032393	BLK032393	BLK032393	BLK032693
Date Prepared:	3/23/93	3/23/93	3/23/93	3/23/93	3/26/93
Date Analyzed:	3/24/93	3/24/93	3/24/93	3/24/93	3/26/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2	MPE-2
LCS % Recovery:	96	88	94	93	105
Control Limits:	75-125	75-125	75-125	75-125	90-110
MS/MSD Batch #:	9303925-01A	9303925-01A	9303925-01A	9303925-01A	9303A96011A
Date Prepared:	3/23/93	3/23/93	3/23/93	3/23/93	3/22/93
Date Analyzed:	3/24/93	3/24/93	3/24/93	3/24/93	3/22/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2	MPE-2
Matrix Spike % Recovery:	89	82	91	86	100
Matrix Spike Duplicate % Recovery:	93	83	95	92	100
Relative % Difference:	4.4	1.2	4.3	6.7	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

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ARCO Products Company
Division of AtlanticRichfieldCompany

330-06.20 Task Order No. 0608-93-2

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia Analytical
ARCO engineer Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 441-7500	Fax no. (Consultant) (408) 441-7539
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Pl., Ste. 440, San Jose, CA 95110		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Water	Other	Preservation: Ice	Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH (Gas) EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM5520E	EPA 601/8010	EPA 624/8240	EPA 625/8270	Semi TCLP Metals ☐ VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	Waste Oil/Extractable EPA 5520E/F	CCR T.22 Metals
B-13@12-13'	1		X			X		3/10/93			X					9303830-01						
B-14@12-13'	1							3/10/93											02			
B-15@12.5-13.5'	1							3/10/93											03			
B-16@14-15'	1							3/11/93											04			
B-17@12-13'	1							3/10/93											05			
B-18@12-13'	1																		06			
B-19@12-13'	1																		07			
B-20@12-13'	1																		08			
B-21@12-13'	1																		09			
B-22@12-13'	1							3/11/93											10			
B-23@4-5'	1														X		X		11	X	X	
B-23@9-10'	1														X		X		12	X	X	
B-23@14-15'	2														X		X		13	X	X	
B-24@4-5'	1														X		X		14	X	X	
B-24@9-10'	1														X		X		15	X	X	
B-24@14-15'	2														X		X		16	X	X	

Special detection Limit/reporting

Special QA/QC

Remarks
CCR T.22 METALS = CAM 17 TOTAL ONLY

Lab number

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:

Temperature received:

	Date	Time
Relinquished by sampler: Roger Hoffmann	3/15/93	3:00
Relinquished by:	3/15/93	15:45
Relinquished by:		
Received by:		
Received by:		
Received by laboratory: A. Nagra	3/15	1542

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant
APPC-3292 (2-91)

ARCO Products Company 330-06.20 **Task Order No.** 0608-93-2

Division of AtlanticRichfieldCompany

Chain of Custody

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia Analytical
ARCO engineer Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 441-7500 / Fax no. (Consultant) (408) 441-7539	Contract number
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place, #440, San Jose, CA 95110		

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH (Gasoline) EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	Waste Oil/Oil&Grease EPA 5520 E&F	Metals LCR T-22
B-25@	12-14'	1	X			X		3/11/93			X						9303830-			0217		
B-26@	12-14'	1																		0218		
B-27@	2-3'	2																		0319	X	
B-27@	4-5'	1																		0420	X	
B-27@	9-10'	1																		0521	X	
B-27@	14-15'	1													X		X			0622	X	X
B-28@	4-5'	1																		0723	X	
B-28@	9-10'	1																		0824	X	
B-28@	14-15'	1																		0925	X	
B-29@	4-5'	1																		1026	X	
B-29@	9-10'	1																		27	X	
B-29@	14-15'	1																		28	X	
B-30@	14-15'	1						↓							X		X			29	X	X
B-31@	12-13'	1						3/13/93												30		
B-32@	14-15'	1																		31		
B-33@	13-14'	1	↓			↓		↓			↓							↓		32		

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

Priority Rush 1 Business Day ☐

Rush 2 Business Days ☐

Expedited 5 Business Days ☐

Standard 10 Business Days ☒

Condition of sample:			Temperature received:	
Relinquished by sampler Roger Hoffmore	Date 3/15/93	Time 3:00	Received by [signature]	
Relinquished by [signature]	Date 3/15/93	Time 15:42	Received by	
Relinquished by	Date	Time	Received by laboratory A. Nage	Date 3/15 Time 1542

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

APPC-3292 (2-91)

ARCO Products Company Division of AtlanticRichfieldCompany 330-06.20 **Task Order No.** 0608-93-2

Chain of Custody

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia Analytical
ARCO engineer Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408)441-7500 / Fax no. (Consultant) (408)441-7539	Contract number
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Plac #440, San Jose CA 95110		

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH (Gasoline) EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
B-34@	13-14'	1	X			X		3/13/93			X						930	38	30-	33		
B-35@	12-13'	1	↓			↓		↓			X							↓		34		
B-36@	12-13'	1	↓			↓		↓			X							↓		35		

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:			Temperature received:		
Relinquished by sampler Roger Hoffman	Date 3/15/93	Time 3:05	Received by [signature]		
Relinquished by [signature]	Date 3/15/93	Time 15:40	Received by		
Relinquished by	Date	Time	Received by laboratory A. Negrete	Date 3/15	Time 1542

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

APPC-3292 (2-91)

CLIENT NAME: PEG

REC. BY (PRINT): AA

MASTER LOG NO. / PAGE:

DATE OF LOG-IN: 3/19/93

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) — Intact / Broken*
2. Custody Seal Nos.:
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker — Present / (Absent)
6. Airbill No.:
7. Sample Tags: (Present) / Absent* — Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives Used: (Yes) / No*
11. Date Rec. at Lab: 3/15
12. Time Rec. at Lab: 1542

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
9303830-01	A	B-13 @ 12-13'	CORE	S	3/10	
02	↓	B-14 @ 12-13'				
03		B-15 @ 12.5-13.5'				
04		B-16 @ 14-15'				
05		B-17 @ 12-13'				
06		B-18 @ 12-13'				
07		B-19 @ 12-13'				
08		B-20 @ 12-13'				
09		B-21 @ 12-13'				
10		B-22 @ 12-13'				
11		B-23 @ 4-5'				
12	↓	B-23 @ 9-10'				
13	AB	B-23 @ 14-15'				
14	↓	B-24 @ 4-5'				
15	↓	B-24 @ 9-10'				
16 ↓	AB	B-24 @ 14-15'				

See page 2 continued

* If Circled, contact Project Manager and attach record of resolution

Form SC001

CLIENT NAME: PEG

REC. BY (PRINT): AN

MASTER LOG NO. / PAGE:

DATE OF LOG-IN: 3/19/93

CIRCLE THE APPROPRIATE RESPONSE

1. Custody Seal(s): Present / (Absent) Intact / Broken
2. Custody Seal Nos.: X
3. Chain-of-Custody Records: (Present) / Absent*
4. Traffic Reports or Packing List: Present / (Absent)
5. Airbill: Airbill / Sticker Present / (Absent)
6. Airbill No.: X
7. Sample Tags: (Present) / Absent* Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody
8. Sample Condition: (Intact) / Broken* / Leaking*
9. Does information on custody reports, traffic reports and sample tags agree? (Yes) / No*
10. Proper Preservatives Used: (Yes) / No*
11. Date Rec. at Lab: 3/15
12. Time Rec. at Lab: 1542

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
9303830-17	A	B-25@ 12-14'	CORE	S	3/11	
18	A	B-26@ 12-14'				
19	A-B	B-27@ 2-3'				
20	A	B-27@ 4-5'				
21		B-27@ 9-10'				
22		B-27@ 14-15'				
23		B-28@ 4-5'				
24		B-28@ 9-10'				
25		B-28@ 14-15'				
26		B-29@ 4-5'				
27		B-29@ 9-10'				
28		B-29@ 14-15'				
29		B-30@ 14-15'			3/12	
30		B-31@ 12-13'			3/12	
31		B-32@ 14-15'			3/12	
32		B-33@ 13-14'				
33		B-34@ 13-14'				
34		B-35@ 12-13'				
35		B-36@ 12-13'				

* If Circled, contact Project Manager and attach record of resolution

Form SC001

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.20/Arco 0608, San Lorenzo

Enclosed are the results from 6 soil samples received at Sequoia Analytical on April 7,1993. The requested analyses are listed below:

3D36201	Soil, B-24A @ 4-6'	4/6/93	SM 5520 E&F (Gravimetric)
3D36202	Soil, B-24A @ 9-11'	4/6/93	SM 5520 E&F (Gravimetric)
3D36203	Soil, B-24A @ 14-16'	4/6/93	SM 5520 E&F (Gravimetric)
3D36204	Soil, B-27A @ 14-16'	4/6/93	TTLC Metals SM 5520 E&F (Gravimetric)
3D36205	Soil, B-30A @ 4-6'	4/6/93	SM 5520 E&F (Gravimetric)
3D36206	Soil, B-30A @ 9-11'	4/6/93	SM 5520 E&F (Gravimetric)

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Apr 6, 1993
2025 Gateway Place, Suite 440	Matrix Descript:	Soil	Received:	Apr 7, 1993
San Jose, CA 95110	Analysis Method:	SM 5520 E&F (Gravimetric)	Extracted:	Apr 15, 1993
Attention: Kelly Brown	First Sample #:	3D36201	Analyzed:	Apr 15, 1993
			Reported:	Apr 19, 1993

TOTAL RECOVERABLE PETROLEUM OIL

Sample Number	Sample Description	Oil & Grease mg/kg
3D36201	B-24A @ 4-6'	950
3D36202	B-24A @ 9-11'	1,900
3D36203	B-24A @ 14-16'	N.D.
3D36204	B-27A @ 14-16'	N.D.
3D36205	B-30A @ 4-6'	N.D.
3D36206	B-30A @ 9-11'	N.D.

Detection Limits:	**50**

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

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Apr 6, 1993
2025 Gateway Place, Suite 440	Sample Descript:	Soil, B-27A @ 14-16'	Received:	Apr 7, 1993
San Jose, CA 95110			Extracted:	Apr 13, 1993
Attention: Kelly Brown	Lab Number:	3D36204	Reported:	Apr 19, 1993

INORGANIC PERSISTENT AND BIOACCUMULATIVE TOXIC SUBSTANCES

Analyte	Soluble Threshold Limit Concentration (Waste Extraction Test) STLC Max. Limit (mg/L)	Detection Limit (mg/L)	Analysis Result (mg/L)	Total Threshold Limit Concentration TTLC Max. Limit (mg/kg)	Detection Limit (mg/kg)	Analysis Result (mg/kg)
Antimony	15	0.10	-	500	5.0	N.D.
Arsenic	5.0	0.10	-	500	5.0	8.3
Barium	100	0.10	-	10,000	5.0	82
Beryllium	0.75	0.010	-	75	0.50	N.D.
Cadmium	1.0	0.010	-	100	0.50	N.D.
Chromium (VI)	5.0	0.0050	-	500	0.050	-
Chromium	560	0.010	-	2,500	0.50	22
Cobalt	80	0.050	-	8,000	2.5	6.5
Copper	25	0.010	-	2,500	0.50	9.3
Lead	5.0	0.10	-	1,000	5.0	N.D.
Mercury	0.20	0.00020	-	20	0.010	N.D.
Molybdenum	350	0.050	-	3,500	2.5	N.D.
Nickel	20	0.050	-	2,000	2.5	29
Selenium	1.0	0.10	-	100	5.0	N.D.
Silver	5.0	0.010	-	500	0.50	N.D.
Thallium	7.0	0.10	-	700	5.0	N.D.
Vanadium	24	0.050	-	2,400	2.5	26
Zinc	250	0.010	-	5,000	0.50	31
Asbestos	-	10	-	10,000	100	-
Fluoride	180	0.10	-	18,000	1.0	-

TTLC results are reported as mg/kg of wet weight. Asbestos results are reported as fibers/g.
Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group: 3D36201-06	Reported: Apr 19, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Total Recoverable Petroleum Oil
Method:	SM 5520 E&F
Analyst:	M. Shkidt
Conc. Spiked:	1000
Units:	mg/kg
LCS Batch#:	BLK041493
Date Prepared:	4/14/93
Date Analyzed	4/15/93
Instrument I.D.#:	N.A.
LCS % Recovery:	94
Control Limits:	70-110

MS/MSD Batch #:	9304362-1A
Date Prepared:	4/14/93
Date Analyze	4/15/93
Instrument I.D.#:	N.A.
Matrix Spike % Recovery:	92
Matrix Spike Duplicate % Recovery:	69
Relative % Difference:	29

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Goup:	3D36204

Reported: Apr 19, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Beryllium	Cadmium	Chromium	Nickel	Mercury
Method:	EPA 6010	EPA 6010	EPA 6010	EPA 6010	EPA 7471
Analyst:	C. Medefesser	C. Medefesser	C. Medefesser	C. Medefesser	J. Martinez
Conc. Spiked:	100	100	100	100	1.0
Units:	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	BLK041393	BLK041393	BLK041393	BLK041393	BLK041493
Date Prepared:	4/13/93	4/13/93	4/13/93	4/13/93	4/14/93
Date Analyzed	4/15/93	4/15/93	4/15/93	4/15/93	4/14/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2	MPE-2
LCS % Recovery:	100	98	100	100	100
Control Limits:	75-125	75-125	75-125	75-125	90-110
MS/MSD Batch #:	9304469-7A	9304469-7A	9304469-7A	9304469-7A	9304158 01A
Date Prepared:	4/13/93	4/13/93	4/13/93	4/13/93	4/14/93
Date Analyzed	4/13/93	4/13/93	4/13/93	4/13/93	4/14/93
Instrument I.D.#:	MTJA-2	MTJA-2	MTJA-2	MTJA-2	MPE-2
Matrix Spike % Recovery:	72	71	90	90	92
Matrix Spike Duplicate % Recovery:	75	74	96	97	92
Relative % Difference:	4.1	4.1	6.5	7.5	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

IT NAME: PEG
BY (PRINT): AN

MASTER LOG NO. / PAGE:
DATE OF LOG-IN: 4/10/93

E THE APPROPRIATE RESPONSE

stody Seal(s): Present / (Absent)
Intact / Broken*

stody Seal Nos.: X

ain-of-Custody cords: (Present) / Absent*

affic Reports or cking List: Present / (Absent)

rbill: Airbill / Sticker
Present / (Absent)

rbill No.: X

mple Tags: (Present) / Absent*
mple Tag Nos.: (Listed) / Not Listed on Chain-of-Custody

mple Condition: (Intact) / Broken*/Leaking*

es information on (Yes) / No* stody reports, Traffic orts and sample tags agree?

roper (Yes) / No* reservatives Used:

te Rec. at Lab: 4/7

me Rec. at Lab: 1200

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
9304362-01	A	B24A — 4-6	CORE	S	4/6	
02		9-11				
03		14-16				
04		B27A -14-16				
05		B30A — 4-6				
06	↓	9-11	↓	↓	↓	

contact Project Manager and attach record of resolution

O Products Company ◆ 330-06.20 **Task Order No.** 0608-93-2 **Chain of Custody**

Division of AtlanticRichfieldCompany

Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
Engineer Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 441-7500	Fax no. (Consultant) (408) 441-7539
ant name Pacific Environmenta Group	Address (Consultant) 2025 Gateway Place, Suite 440, San Jose CA 95110		Contract number

	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	Waste Oil/Oil+Grease EPA 5520 E+F	CAM Metals
1@4-6'		1	X			X		4/6/93			930	43	62	-01							X	
A@9-11'		1	X			X		↓				↓		02							X	
1@14-16'		1	X			X		↓				↓		03							X	
1@14-16'		1	X			X		↓				↓		04							X	X
1@4-6'		1	X			X		↓				↓		05							X	
A@9-11'		1	X			X		↓				↓		06							X	

Method of shipment

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

...on of sample:		Temperature received:		
...ished by sampler Joseph Hoffmann	Date 4/7/93 Time 9:20	Received by Mark M Ellis		
...ished by Mark M Ellis	Date 4-7-93 Time 12:00	Received by		
...by	Date Time	Received by laboratory A-Nagre	Date 4/7	Time 1200

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

RECEIVED
APR 02 1993
PACIFIC ENVIRONMENTAL GROUP, INC.

Pacific Environmental Group	Client Project ID:	Arco #0608-92-5, San Lorenzo/#330-06.15	Sampled:	3/16-3/18/93
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received:	Mar 19, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 31, 1993
Attention: Kelly Brown	First Sample #:	303-0708		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0708 TB-1	Sample I.D. 303-0709 MW-5(13)	Sample I.D. 303-0710 MW-7(14)	Sample I.D. 303-0711 MW-8(16)	Sample I.D. 303-0712 MW-9(15)	Sample I.D. 303-0713 MW-10(18)
Purgeable Hydrocarbons	50	N.D.	2,600	N.D.	3,800	N.D.	4,100
Benzene	0.5	N.D.	180	N.D.	61	N.D.	340
Toluene	0.5	N.D.	1.4	N.D.	N.D.	N.D.	2.4
Ethyl Benzene	0.5	N.D.	28	N.D.	11	N.D.	58
Total Xylenes	0.5	N.D.	1.2	N.D.	1.2	N.D.	54
Chromatogram Pattern:		--	Gasoline and Non-Gasoline Mixture (>C9)	--	Gasoline and Non-Gasoline Mixture (>C12)	--	Gasoline and Non-Gasoline Mixture (>C9)

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93
Instrument Identification:	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Surrogate Recovery, %: (QC Limits = 70-130%)	97	89	99	92	98	80

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group	Client Project ID:	Arco #0608-92-5, San Lorenzo/#330-06.15	Sampled:	3/16-3/18/93
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received:	Mar 19, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 31, 1993
Attention: Kelly Brown	First Sample #:	303-0714		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0714 MW-11(15)	Sample I.D. 303-0715 MW-13(18)	Sample I.D. 303-0716 MW-14(20)	Sample I.D. 303-0717 MW-15(19)	Sample I.D. 303-0718 MW-16(18)	Sample I.D. 303-0719 MW-17(18)
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	130	380	250
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	7.8
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	3.3
Chromatogram Pattern:		--	--	--	Non-Gasoline Mixture (>C12)	Non-Gasoline Mixture (>C12)	Gasoline and Non-Gasoline Mixture (>C9)

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93
Instrument Identification:	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Surrogate Recovery, %: (QC Limits = 70-130%)	101	104	99	100	97	97

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group	Client Project ID:	Arco #0608-92-5, San Lorenzo/#330-06.15	Sampled: 3/16 & 3/17/93
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received: Mar 19, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported: Mar 31, 1993
Attention: Kelly Brown	First Sample #:	303-0720	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0720 MW-18(16)	Sample I.D. 303-0721 MW-19(16)	Sample I.D. 303-0722 MW-20(17)	Sample I.D. 303-0723 MW-21(18)	Sample I.D. 303-0724 MW-22(17)	Sample I.D. 303-0725 MW-23(15)
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93	3/28/93
Instrument Identification:	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1	GCHP-1
Surrogate Recovery, %: (QC Limits = 70-130%)	100	99	99	100	100	101

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110
Attention: Kelly Brown

Client Project ID: Arco #0608-92-5, San Lorenzo/#330-06.15

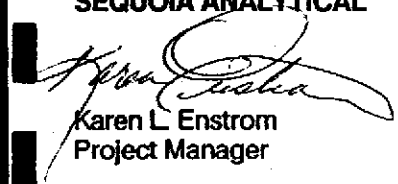
QC Sample Group: 3030708-725

Reported: Mar 31, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	TSM	TSM	TSM	TSM
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 28, 1993	Mar 28, 1993	Mar 28, 1993	Mar 28, 1993
QC Sample #:	Matrix Blank	Matrix Blank	Matrix Blank	Matrix Blank
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	10	10	10	10
Conc. Matrix Spike:	9.6	9.9	10	15.2
Matrix Spike % Recovery:	96	99	100	101
Conc. Matrix Spike Dup.:	10.2	10.5	10.7	16.2
Matrix Spike Duplicate % Recovery:	102	105	107	108
Relative % Difference:	6.1	5.9	6.8	6.4

SEQUOIA ANALYTICAL



Karen L Enstrom
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

ARCO Products Company ◆ Division of AtlanticRichfieldCompany — 330-06.15 **Task Order No.** 0608-92-5 — **Chain of Custody**

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia (Concord)
ARCO engineer Mike Whelan	Telephone no. (ARCO) —	Telephone no. (Consultant) 408-441-7500	Fax no. (Consultant) 408-441-7539
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place #440 San Jose 95110		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
TB-1		2		W		X	HCl	3-16-93	—		X			3	0	3	0	7	0	8	A	B
MW-5(13)		3						3-17-93	17:00									7	0	9	A	C
MW-7(14)								3-17-93	14:40									7	1	0	A	C
MW-8(16)								3-18-93	9:10									7	1	1	A	C
MW-9(15)								3-16-93	16.25									7	1	2	A	C
MW-10(18)								3-16-93	14:05									7	1	3	A	C
MW-11(15)								3-16-93	15:40									7	1	4	A	C
MW-13(18)								3-17-93	11:15									7	1	5	A	C
MW-14(20)								3-16-93	13:40									7	1	6	A	C
MW-15(19)								3-16-93	9:35									7	1	7	A	C
MW-16(18)								3-18-93	8:10									7	1	8	A	C
MW-17(18)								3-17-93	15:35									7	1	9	A	C
MW-18(16)								3-17-93	16:05									7	2	0	A	C
MW-19(16)								3-17-93	15:15									7	2	1	A	C
MW-20(17)								3-17-93	12:55									7	2	2	A	C
MW-21(18)								3-17-93	12:30									7	2	3	A	C

Special detection Limit/reporting

Special QA/QC

Remarks: Trip Blank from Sequoia Dated 3-15-93 "11.15"

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☐

Condition of sample:		Temperature received:	
Relinquished by sampler	Date 3-17-93 Time 4 PM	Received by	
Relinquished by	Date Time	Received by	
Relinquished by	Date Time	Received by laboratory	Date Time

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

ARCO Products Company

Division of AtlanticRichfieldCompany

330-06.15 **Task Order No.** 0608-92-5

Chain of Custody

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO) —	Telephone no. (Consultant) 408-441-7500	Fax no. (Consultant) 408-441-7539
Consultant name Pacific Environmental Group	Address (Consultant) 2025 Gateway Place #440 San Jose 95110		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ Semi VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
MW-22(17)	·	3		W		X	HCl	3-17-93	12:05		X			3	0	3	0	7	2	4	A	C
MW-23(15)	·	3		W		X	HCl	3-16-93	14:55		X				↓			7	2	5	A	C

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☐

Condition of sample:

Temperature received:

	Date	Time	
Relinquished by sampler	3-16-93	4:30	Received by
Relinquished by			Received by
Relinquished by			Received by laboratory

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.05/Arco 0608, San Lorenzo

Enclosed are the results from 4 water samples received at Sequoia Analytical on March 31,1993. The requested analyses are listed below:

3CE7201	Water, TB-1	3/29/93	EPA 5030/8015/8020
3CE7202	Water, MW-24 (15)	3/29/93	EPA 5030/8015/8020
3CE7203	Water, MW-25 (17)	3/29/93	EPA 5030/8015/8020
3CE7204	Water, MW-26 (17)	3/29/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.05/Arco 0608, San Lorenzo	Sampled:	Mar 29, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Water	Received:	Mar 31, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 13, 1993
Attention: Kelly Brown	First Sample #:	3CE7201		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 3CE7201 TB-1	Sample I.D. 3CE7202 MW-24 (15)	Sample I.D. 3CE7203 MW-25 (17)	Sample I.D. 3CE7204 MW-26 (17)
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	N.D.
Benzene	0.50	N.D.	N.D.	0.69	N.D.
Toluene	0.50	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.50	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.50	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	--	Discrete Peak	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0
Date Analyzed:	4/3/93	4/3/93	4/3/93	4/3/93
Instrument Identification:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Surrogate Recovery, %: (QC Limits = 70-130%)	106	98	106	104

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL
680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.05/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Water
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3CE7201-04

Reported: Apr 13, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	J. Villar	J. Villar	J. Villar	J. Villar
Conc. Spiked:	10	10	10	30
Units:	µg/L	µg/L	µg/L	µg/L
LCS Batch#:	GBLK040393	GBLK040393	GBLK040393	GBLK040393
Date Prepared:	-	-	-	-
Date Analyzed	4/3/93	4/3/93	4/3/93	4/3/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
LCS % Recovery:	84	84	84	83
Control Limits:	80-120	80-120	80-120	80-120
MS/MSD Batch #:	G9303E72-04	G9303E72-04	G9303E72-04	G9303E72-04
Date Prepared:	-	-	-	-
Date Analyzed	4/3/93	4/3/93	4/3/93	4/3/93
Instrument I.D.#:	GCHP-3	GCHP-3	GCHP-3	GCHP-3
Matrix Spike % Recovery:	95	94	95	93
Matrix Spike Duplicate % Recovery:	85	83	85	87
Relative % Difference:	11	12	11	7.4

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.
SEQUOIA ANALYTICAL

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

Eileen A. Manning
Project Manager

CO Products Company
Division of AtlanticRichfieldCompany

330-06.05 Task Order No. 608-92-5

Chain of Custody

Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
Consultant engineer Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408-441-7500	Fax no. (Consultant) 408-441-7539
Consultant name Atlantic Env. Group Inc.	Address (Consultant) 2025 Gateway Place #240 San Jose 95110		Contract number

Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Semi Metals ☐ VOA ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐		
	2		W		Yes	HCl	3-29-93			X						9303F72-				01	A/B
(15)	3		↓		↓	↓	↓	7:40		↓										02	A-C
(17)	3		↓		↓	↓	↓	8:35		↓										03	A-C
(17)	3		↓		↓	↓	↓	8:10		↓								↓		04	A-C

Special detection Limit/reporting

Special QA/QC

Remarks

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☐

Method of shipment

n of sample:

Temperature received:

shed by sampler	Date 3-31-93	Time 15:35	Received by
shed by	Date 3/31/93	Time 16:30	Received by
shed by	Date	Time	Received by laboratory Date 3/31/93 Time 1630

Copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

T NAME: PEG
BY (PRINT): RS

MASTER LOG NO. / PAGE: 9303E72
DATE OF LOG-IN: 4-1-93

THE APPROPRIATE RESPONSE	LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
				VOAS	W	3/29	
tody Seal(s): Present / (Absent) Intact / Broken*	01	A/B	TB-1	↓	↓	↓	
tody Seal Nos.:	02	A.C	MW-24 (15)				
	03	↓	MW-25 (17)				
ain-of-Custody ords: (Present) / Absent*	04	↓	MW-26 (17)	↓	↓	↓	
ffic Reports or king List: Present (/) Absent							
bill: Airbill / Sticker Present (/) Absent							
bill No.:							
mple Tags: (Present) / Absent*							
mple Tag Nos.: (Listed) / Not Listed on Chain-of-Custody							
mple Condition: (Intact) / Broken*/Leaking*							
s information on (Yes) / No* ody reports, traffic rts and sample tags agree?							
per (Yes) No* servatives Used:							
e Rec. at Lab: 3-31-93							
e Rec. at Lab: 1630							

* contact Project Manager and attach record of resolution

Form SC001

Page 1 of

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group	Client Project ID:	Arco #0608-93-5/330-06.18, San Lorenzo	Sampled: 3/15-3/16/93
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received: Mar 17, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported: Mar 24, 1993
Attention: Kelly Brown	First Sample #:	303-0498	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0498 TB-1	Sample I.D. 303-0499 17371	Sample I.D. 303-0500 17393	Sample I.D. 303-0501 590	Sample I.D. 303-0502 633	Sample I.D. 303-0503 642
Purgeable Hydrocarbons	50	N.D.	500	N.D.	N.D.	N.D.	N.D.
Benzene	0.5	N.D.	8.7	N.D.	N.D.	N.D.	N.D.
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	N.D.
Ethyl Benzene	0.5	N.D.	3.9	N.D.	N.D.	N.D.	N.D.
Total Xylenes	0.5	N.D.	3.1	N.D.	N.D.	N.D.	N.D.
Chromatogram Pattern:		--	Gasoline	--	--	--	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/17/93	3/17/93	3/17/93	3/17/93	3/17/93	3/17/93
Instrument Identification:	HP-2	HP-2	HP-2	HP-2	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	101	87	101	101	100	98

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group	Client Project ID:	Arco #0608-93-5/330-06.18, San Lorenzo	Sampled: 3/15 & 3/16/93
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received: Mar 17, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported: Mar 24, 1993
Attention: Kelly Brown	First Sample #:	303-0504	

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0504 17348	Sample I.D. 303-0505 17302	Sample I.D. 303-0506 17203	Sample I.D. 303-0507 17372	Sample I.D. 303-0508 17197	Sample I.D. 303-0509 17349
Purgeable Hydrocarbons	50	N.D.	N.D.	N.D.	110	N.D.	1,100
Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	16
Toluene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	4.2
Ethyl Benzene	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	1.8
Total Xylenes	0.5	N.D.	N.D.	N.D.	N.D.	N.D.	1.8
Chromatogram Pattern:		--	--	--	Non Gasoline Mixture (<C5)	--	Gasoline

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	1.0	1.0	1.0	1.0
Date Analyzed:	3/17/93	3/18/93	3/18/93	3/18/93	3/17/93	3/17/93
Instrument Identification:	HP-4	HP-5	HP-4	HP-5	HP-4	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	99	110	99	109	101	110

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group	Client Project ID:	Arco #0608-93-5/330-06.18, San Lorenzo	Sampled:	Mar 16, 1993
2025 Gateway Place, Ste. 440	Sample Matrix:	Water	Received:	Mar 17, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Mar 24, 1993
Attention: Kelly Brown	First Sample #:	303-0510		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit µg/L	Sample I.D. 303-0510 17200
Purgeable Hydrocarbons	50	N.D.
Benzene	0.5	N.D.
Toluene	0.5	N.D.
Ethyl Benzene	0.5	N.D.
Total Xylenes	0.5	N.D.
Chromatogram Pattern:		--

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	3/17/93
Instrument Identification:	HP-4
Surrogate Recovery, %: (QC Limits = 70-130%)	102

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

SEQUOIA ANALYTICAL

1900 Bates Avenue • Suite LM • Concord, California 94520
(510) 686-9600 • FAX (510) 686-9689

Pacific Environmental Group
2025 Gateway Place, Ste. 440
San Jose, CA 95110
Attention: Kelly Brown

Client Project ID: Arco #0608-93-5/330-06.18, San Lorenzo

QC Sample Group: 3030498-510

Reported: Mar 24, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020	EPA 8015/8020
Analyst:	J.F.	J.F.	J.F.	J.F.
Reporting Units:	µg/L	µg/L	µg/L	µg/L
Date Analyzed:	Mar 17, 1993	Mar 17, 1993	Mar 17, 1993	Mar 17, 1993
QC Sample #:	303-0502	303-0502	303-0502	303-0502
Sample Conc.:	N.D.	N.D.	N.D.	N.D.
Spike Conc. Added:	20	20	20	60
Conc. Matrix Spike:	21	20	20	60
Matrix Spike % Recovery:	105	100	100	100
Conc. Matrix Spike Dup.:	22	21	21	63
Matrix Spike Duplicate % Recovery:	110	105	105	105
Relative % Difference:	4.6	4.8	4.8	4.8

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

Karen L. Enstrom
Project Manager

% Recovery:	Conc. of M.S. - Conc. of Sample / Spike Conc. Added	x 100
Relative % Difference:	Conc. of M.S. - Conc. of M.S.D. / (Conc. of M.S. + Conc. of M.S.D.) / 2	x 100

ARCO Products Company
Division of AtlanticRichfieldCompany

330-06.18 **Task Order No.** 0608-93-5

Chain of Custody

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name (Concord) Sequoia
ARCO engineer Mike Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) 408-441-7500	Fax no. (Consultant) 408-441-7539
Consultant name Pacific Env. Group	Address (Consultant) 2025 Gateway Place Suite #440 San Jose 95110		Contract number

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐
TB-1		2		W		Yes	HCl	3-15-93	←		X					30304	98			AB
17371		3						3-16-93	9:50								0499			AC
17393									9:35								0500			AC
590									9:55								0501			AC
633									9:10								0502			AC
612									11:00								0503			AC
17349									10:45								0504			AC
17302									10:15								0505			AC
17203									10:30								0506			AC
17372									9:20								0507			AC
17197								3-15-93	10:15								0508			AC
17349								3-16-93	10:05								0509			AC
17200		↓		↓		↓	↓	3-16-93	10:20		↓					↓	0510			AC

Special detection Limit/reporting

Special QA/QC

Remarks
Trip Blank from Sequoia - Dated 12-22-92

Lab number

Turnaround time
- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☑

Condition of sample:

Temperature received:

Relinquished by sampler	Date 3-17-93	Time 9:10	Received by Erin J Vonnel 3/17/93 0910
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory / Date / Time

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

ARCO Products Company
Division of AtlanticRichfieldCompany

330-06.18 Task Order No.

Chain of Custody

ARCO Facility no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia (Concord)
ARCO engineer Mike Whelan	Telephone no. (ARCO) ---	Telephone no. (Consultant) 408-441-7500	Fax no. (Consultant) 408-441-7539
Consultant name Pacific Env. Group	Address (Consultant) 2025 Gateway Place Suite #440 San Jose 95110		Contract number

Method of shipment

Special detection Limit/reporting

Special QA/QC

Sample I.D.	Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH Gas EPA M8020/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease ☐	TPH EPA 418.1/SM503E	EPA 601/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	
TB-1		2		W		Yes	HCl	3-15-93	—		X										
17371		3						3-16-93	9:50												
17393									9:35												
590									9:55												
633									9:10												
612									11:00												
17349									10:45												
17302									10:15												
17203									10:30												
17372									9:20												
17197								3-16-93	10:15												
17349								3-16-93	10:05												
17200								3-16-93	10:20												

Remarks: Trip Blank from Sequoia - Dated 12-21-92

Lab number

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

Condition of sample:

Temperature received:

Relinquished by sampler	Date 3-17-93	Time 9:10	Received by 3/17/93 0910
Relinquished by	Date	Time	Received by
Relinquished by	Date	Time	Received by laboratory	Date	Time

Distribution: White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.20/Arco 0608, San Lorenzo

Enclosed are the results from 4 soil samples received at Sequoia Analytical on March 19,1993. The requested analyses are listed below:

3C94101	Soil, MW-24 11-12	3/17/93	EPA 5030/8015/8020
3C94102	Soil, MW-25 12-13	3/17/93	EPA 5030/8015/8020
3C94103	Soil, SP-1/V-4 12-13	3/18/93	EPA 5030/8015/8020
3C94104	Soil, SP-2/V-5 12-13	3/18/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 17-18, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 19, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 1, 1993
Attention: Kelly Brown	First Sample #:	3C94101		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3C94101 MW-24 11-12	Sample I.D. 3C94102 MW-25 12-13	Sample I.D. 3C94103 SP-1/V-4 12-13	Sample I.D. 3C94104 SP-2/V-5 12-13
Purgeable Hydrocarbons	1.0	N.D.	N.D.	500	N.D.
Benzene	0.0050	N.D.	N.D.	0.59	0.056
Toluene	0.0050	N.D.	N.D.	3.8	N.D.
Ethyl Benzene	0.0050	N.D.	N.D.	7.9	0.021
Total Xylenes	0.0050	N.D.	N.D.	26	0.0080
Chromatogram Pattern:		--	--	Gas	--

Quality Control Data

Report Limit Multiplication Factor:	1.0	1.0	100	1.0
Date Analyzed:	3/24/93	3/24/93	3/24/93	3/24/93
Instrument Identification:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Surrogate Recovery, %: (QC Limits = 70-130%)	100	99	110	86

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo
2025 Gateway Place, Suite 440	Matrix:	Soil
San Jose, CA 95110		
Attention: Kelly Brown	QC Sample Group	3C94101-04

Reported: Apr 1, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	R. Geckler	R. Geckler	R. Geckler	R. Geckler
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK032493BS	GBLK032493BS	GBLK032493 BS	GBLK032493 BS
Date Prepared:	3/24/93	3/24/93	3/24/93	3/24/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
LCS % Recovery:	95	100	100	97
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	9303941-1A	9303941-1A	9303941-1A	9303941-1A
Date Prepared:	3/24/93	3/24/93	3/24/93	3/24/93
Date Analyzed	3/24/93	3/24/93	3/24/93	3/24/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Matrix Spike % Recovery:	95	95	95	92
Matrix Spike Duplicate % Recovery:	90	95	90	92
Relative % Difference:	5.4	0.0	5.4	0.0

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

Chain of Custody

Products Company ◆ 330-06.20 **Task Order No.** 0608-93-2
Division of AtlanticRichfieldCompany

y no. 0608	City (Facility) San Lorenzo	Project manager (Consultant) Kelly Brown	Laboratory name Sequoia
er Michael Whelan	Telephone no. (ARCO)	Telephone no. (Consultant) (408) 441-7500	Fax no. (Consultant) (408) 441-7539
am Pacific Environmental Group	Address (Consultant) 2025 Gateway Place, Ste. 440, San Jose, CA 95110		Contract number

Method of shipment: Courier

Lab no.	Container no.	Matrix: Soil	Matrix: Water	Matrix: Other	Preservation: Ice	Preservation: Acid	Sampling date	Sampling time	BTEX 602/EPA 8020	BTEX/TPH (gasoline) EPA M602/8020/8015	TPH Modified 8015 Gas ☐ Diesel ☐	Oil and Grease 413.1 ☐ 413.2 ☐	TPH EPA 418.1/SM503E	EPA 801/8010	EPA 624/8240	EPA 625/8270	TCLP Metals ☐ VOA ☐ Semi VOA ☐	CAM Metals EPA 6010/7000 TTLC ☐ STLC ☐	Lead Org./DHS ☐ Lead EPA 7420/7421 ☐	
0811-12'	1	X			X		3/17/93			X										01
0812-13'	1	X			X		3/17/93			X										02
0812-13'	1	X			X		3/18/93			X										03
0812-13'	1	X			X		3/18/93			X										04
0808"	2		X		X	X	3/17/93			X										

W.O. # 93-03-941

Special detection Limit/reporting

Special QA/QC

Remarks: Please Hold Water samples for possible additional analysis

Lab number W.O. # 93-03-941

Turnaround time

- Priority Rush 1 Business Day ☐
- Rush 2 Business Days ☐
- Expedited 5 Business Days ☐
- Standard 10 Business Days ☒

ol sample:		Temperature received:	
ed by sampler	Date 3/19/93	Time 2:12	Received by
ed by	Date 3/19/93	Time 2157	Received by
ed by	Date	Time	Received by laboratory — Date 3/19/93 — Time 1437

White copy — Laboratory; Canary copy — ARCO Environmental Engineering; Pink copy — Consultant

SEQUOIA ANALYTICAL SAMPLE RECEIPT LOG

NT NAME: PEG
BY (PRINT): RL

MASTER LOG NO. / PAGE: W.O.# 93-03-941
DATE OF LOG-IN: 3/22

LE THE APPROPRIATE RESPONSE

ustody Seal(s): Present / (Absent)
Intact / Broken*

ustody Seal Nos.:

Chain-of-Custody ecords: (Present) / Absent*

Traffic Reports or Packing List: Present / (Absent)

Airbill: Airbill / ~~Sticker~~
Present / (Absent)

Airbill No.:

Sample Tags: (Present) / Absent*
Sample Tag Nos.: (Listed) / Not Listed on Chain-of-Custody

Sample Condition: (Intact)/Broken*/Leaking*

Does information on (Yes) / No*
ustody reports, traffic eports and sample tags agree?

Proper (Yes) / No*
Preservatives Used:

Date Rec. at Lab: 3-19-93

Time Rec. at Lab: 1437

LAB SAMPLE #	DASH #	CLIENT IDENTIFICATION	CONTAINER DESCRIPTION	SAMPLE MATRIX	DATE SAMP.	REMARKS: CONDITION (ETC)
01	A	MW-24	CORE	Soil	3/17	
02		25	↓	↓	↓	
03		SP-1/V-4				
04	⊥	SP-2/V-5	↓	↓	⊥	
	AB	MW-25A	VOAS	W		

Sticled, contact Project Manager and attach record of resolution

SEQUOIA ANALYTICAL

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Project: 330-06.20/Arco 0608, San Lorenzo

Enclosed are the results from 1 soil sample received at Sequoia Analytical on March 22,1993. The requested analyses are listed below:

3CC2901	Soil, MW-26	3/19/93	EPA 5030/8015/8020

Please contact me if you have any questions. In the meantime, thank you for the opportunity to work with you on this project.

Very truly yours,

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

680 Chesapeake Drive • Redwood City, CA 94063
(415) 364-9600 • FAX (415) 364-9233

Pacific Environmental Group	Client Project ID:	330-06.20/Arco 0608, San Lorenzo	Sampled:	Mar 19, 1993
2025 Gateway Place, Suite 440	Sample Matrix:	Soil	Received:	Mar 22, 1993
San Jose, CA 95110	Analysis Method:	EPA 5030/8015/8020	Reported:	Apr 6, 1993
Attention: Kelly Brown	First Sample #:	3CC2901		

TOTAL PURGEABLE PETROLEUM HYDROCARBONS with BTEX DISTINCTION

Analyte	Reporting Limit mg/kg	Sample I.D. 3CC2901 MW-26
Purgeable Hydrocarbons	1.0	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Total Xylenes	0.0050	N.D.
Chromatogram Pattern:		--

Quality Control Data

Report Limit Multiplication Factor:	1.0
Date Analyzed:	3/30/93
Instrument Identification:	GCHP-6
Surrogate Recovery, %: (QC Limits = 70-130%)	91

Purgeable Hydrocarbons are quantitated against a fresh gasoline standard.
Analytes reported as N.D. were not detected above the stated reporting limit.

SEQUOIA ANALYTICAL

Eileen A. Manning
Project Manager

SEQUOIA ANALYTICAL

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Pacific Environmental Group
2025 Gateway Place, Suite 440
San Jose, CA 95110
Attention: Kelly Brown

Client Project ID: 330-06.20/Arco 0608, San Lorenzo
Matrix: Soil
QC Sample Group 3CC2901

Reported: Apr 6, 1993

QUALITY CONTROL DATA REPORT

ANALYTE	Benzene	Toluene	Ethyl-Benzene	Xylenes
Method:	EPA 8020	EPA 8020	EPA 8020	EPA 8020
Analyst:	C. Donohue	C. Donohue	C. Donohue	C. Donohue
Conc. Spiked:	0.20	0.20	0.20	0.60
Units:	mg/kg	mg/kg	mg/kg	mg/kg
LCS Batch#:	GBLK033093BS	GBLK033093BS	GBLK033093 BS	GBLK033093 BS
Date Prepared:	3/30/93	3/30/93	3/30/93	3/30/93
Date Analyzed	3/30/93	3/30/93	3/30/93	3/30/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
LCS % Recovery:	110	125	130	130
Control Limits:	60-140	60-140	60-140	60-140
MS/MSD Batch #:	9303C44 5A	9303C44 5A	9303C44 5A	9303C44 5A
Date Prepared:	3/30/93	3/30/93	3/30/93	3/30/93
Date Analyzed	3/30/93	3/30/93	3/30/93	3/30/93
Instrument I.D.#:	GCHP-7	GCHP-7	GCHP-7	GCHP-7
Matrix Spike % Recovery:	90	105	115	112
Matrix Spike Duplicate % Recovery:	100	110	120	117
Relative % Difference:	11	4.7	4.3	4.4

Quality Assurance Statement: All standard operating procedures and quality control requirements have been met.

SEQUOIA ANALYTICAL

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 LCS % recovery data is used for validation of sample batch results. Due to matrix effects, the QC limits for MS/MSD's are advisory only and are not used to accept or reject batch results.

Eileen A. Manning
Project Manager