

ENVIRONMENTAL
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**GROUNDWATER MONITORING REPORT
Sampling Round Thirteen**

**PACO PUMPS, INC.
9201 San Leandro Street
Oakland, California**

July 2, 1996



JONAS & ASSOCIATES INC.
Environmental Consultants

Jonas & Associates Inc.

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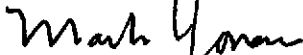
Report Prepared for:

PACO PUMPS, INC.
9201 San Leandro Street
Oakland, California 94603-1237

GROUNDWATER MONITORING REPORT
Sampling Round Thirteen
PACO PUMPS, INC.
9201 San Leandro Street, Oakland, California

Jonas and Associates Inc. Job No. PCO-220

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PACO PUMPS, INC.
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GROUNDWATER MONITORING REPORT
Sampling Round Thirteen

PACO PUMPS, INC.
9201 San Leandro Street
Oakland, California
July 2, 1996

1.0 INTRODUCTION

Jonas and Associates Inc. (J&A) has been retained by PACO Pumps Inc. (PACO or PACO Pumps) to perform the groundwater monitoring program at their former property located at 9201 San Leandro Street, in Oakland, California 94603-1237. To date, thirteen groundwater sampling rounds have been performed at this facility. The first twelve sampling rounds were presented in previous documents, identified in Section 5.0 References. This report presents the results of the thirteenth groundwater sampling round, performed on May 23, 1996.

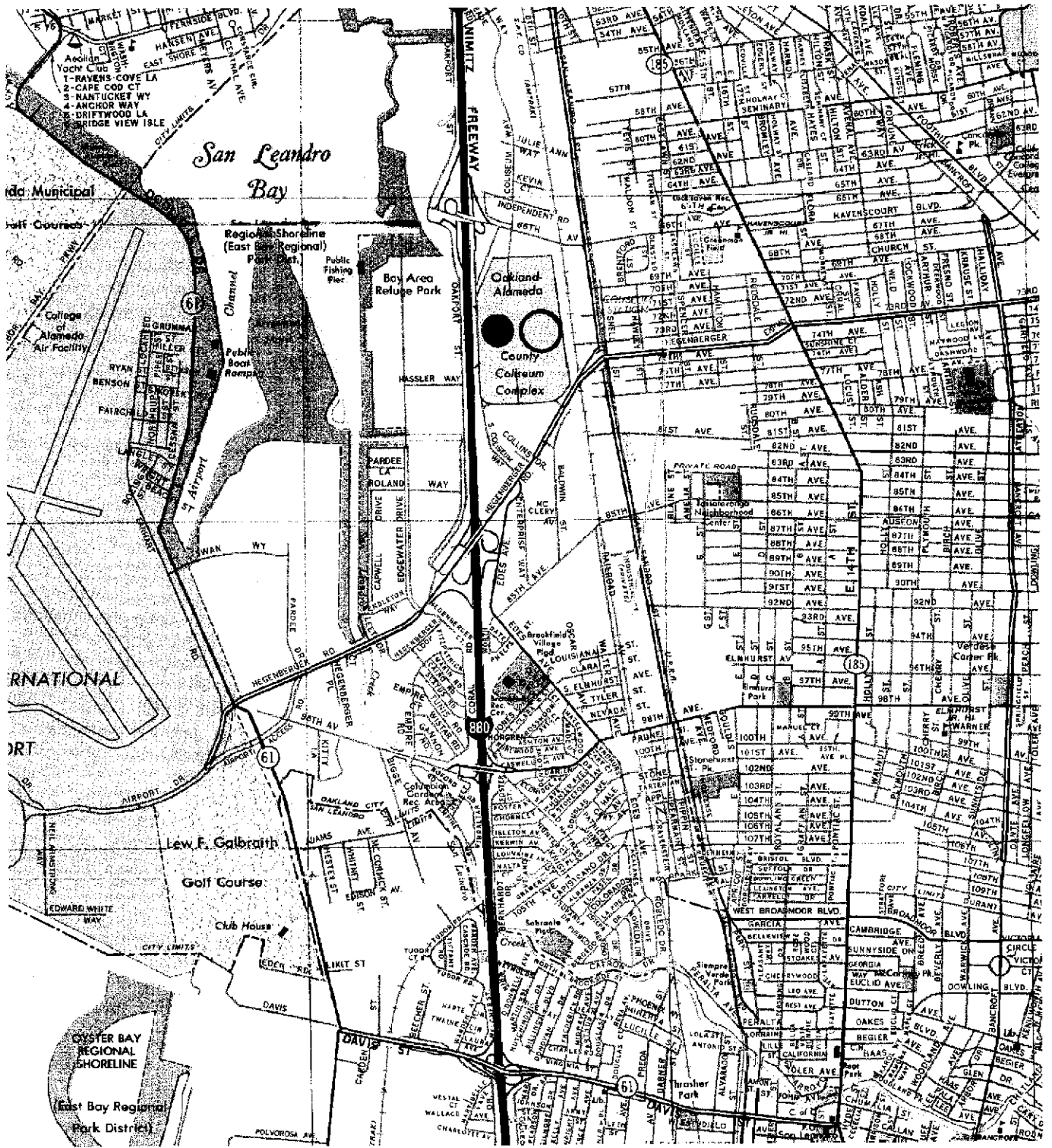
PACO Pumps' environmental representative for this project is Mr. John Lilla {(512) 314-8500}. The lead agency for this project is the Alameda County Health Care Services Agency, Department of Environmental Health, Hazardous Division (Alameda County Health Services). The address of Alameda County Health Services is 1131 Harbor Bay Parkway, 2nd Floor, Alameda, California 94502. The agency representative is Ms. Eva Chu {(510) 567-6762}.

1.1 Site Description

The PACO Pumps former facility presented in this report is located at 9201 San Leandro Street, in Oakland, California. Prior to May 1992, PACO Pumps had an active facility at this location. The facility contained a manufacturing, engineering, and storage building, a purchasing and data processing building, a warehouse, a welding shop, employee parking, and outside storage. Apparently, the property also had two underground tanks used for the storage of gasoline. The property is largely secured by a Cyclone fence and gates. PACO Pumps closed this facility and removed its equipment. Currently, this property is owned by a local company which primarily uses it to warehouse glassware. Adjacent to the PACO Pumps property is Saint Vincent DePaul Resale, where a previous investigation by Subsurface Consultants Inc. (1992) identified the presence of various chemicals on their site. Numerous drums were previously stored on the Saint Vincent DePaul's property.

The regional location of the property is presented in Figure 1-1. The facility is located in Township 2 South, Range 3 West, Section 22, Mount Diablo Baseline and Meridian. The land is essentially flat. Prior to moving, PACO Pumps' Environmental Protection Agency identification number for the facility was CAD088772629.

PACO PUMPS
9201 SAN LEANDRO STREET



REGIONAL LOCATION
Former PACO PUMPS
9201 SAN LEANDRO STREET
OAKLAND, CALIFORNIA



1" = 1/2 MILE

Figure 1-1	DRAWING NUMBER: PC0220-Fig 1
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1.2 Scope of Report

This "Groundwater Monitoring Report, Sampling Round Thirteen" is presented in five sections and three appendices. Section 1, Introduction, provides a brief description of the site and the scope of the report. Section 2, Monitoring Wells and Hydrogeology, presents general well construction details for the five monitoring wells, the results of elevation and location surveys, and a local hydrogeologic cross-section. Section 3, Groundwater Sampling and Analysis, presents Round Thirteen groundwater sampling procedures and results, along with water level and free product measurements. Section 4, Evaluation of ORC Approach, presents an evaluation of the use of Oxygen Release Compound (ORC) in monitoring well 9MW3. Section 5, References, cites various references relevant to this report.

The appendices of the report include groundwater analysis summary tables, chain-of-custody records, and laboratory data sheets.

2.0 MONITORING WELLS AND HYDROGEOLOGY

This section of the report presents a brief history and construction details for the five monitoring wells located at the 9201 San Leandro Street former PACO Pumps' facility. In addition, a summary of the location and elevation surveys performed by Kier & Wright is provided. A local hydrogeologic cross-section is also presented using lithologic logs from on-site monitoring well boreholes.

2.1 Monitoring Wells

Five monitoring wells are located at the former PACO Pumps' facility. Four of these monitoring wells were drilled and installed during a period from November 3 through November 9, 1992. The J&A February 1993 "First Quarterly Status Report, PACO Pumps, 9201 San Leandro Street" presents the installation details and the rationale for locating and sampling each of the monitoring wells. Monitoring well 9MW5 was drilled and installed on August 12, 1994. The installation details and rationale for monitoring well 9MW5 are presented in the J&A August 1994 "Groundwater Monitoring Report, Sampling Round Six, PACO Pumps, 9201 San Leandro Street, Oakland, California". All of the monitoring wells are screened at an apparently transmissive fine sand to silty clay found underneath the facility. Figure 2-1 presents the locations of the five monitoring wells, the Round Thirteen analyses performed at each well, the previous excavation site, suspected former underground storage tank locations, Saint Vincent DePaul, and other on-site structures.

2.1.1 Construction Details

All of the five monitoring wells are constructed in boreholes drilled to depths of 21 feet. One pilot borehole next to monitoring well 9MW3 was drilled down to a depth of 30 feet to collect lithologic samples for analyses. Each of the five monitoring wells have a fifteen foot well screen set between approximately 5 to 20 feet below ground surface (bgs). The wells have a casing and screen diameter of four inches, placed in an 8½ inch borehole.

Monitoring well 9MW1 was constructed on November 4, 1992. The well was installed in a western corner of the facility adjacent to the former manufacturing building, and next to a transformer and the Central Pacific Railroad track. The lithology encountered during drilling ranged from an apparent fill, comprised of a silty gravel to a gravelly sand clay, to a sandy clay between 5 and 21 feet bgs. During drilling, first water was encountered at an approximate depth of 16 feet bgs. Measurement of first water is only approximate because of the difficulty in identifying water while drilling with a hollow stem auger. After the screen was installed, the well water level was measured at 9.74 feet bgs on November 15, 1992.

Monitoring well 9MW2 is located adjacent to the former welding shop and next to the Saint Vincent DePaul fence line. The well was installed on November 3, 1992. The lithology encountered during drilling was gravelly silty sand, probably a fill material,

Drawn by J.W. 6-4-1996

Drawing Number PCO220-5/96:G13F2-1

Figure 2-1

9MW1
TPH - Gasoline with BTEX

9MW3
Prior to purging
TPH - Gasoline with BTEX
Dissolved Oxygen

After purging
TPH - Gasoline with BTEX
Purgeable Halocarbons
Dissolved Oxygen

9MW2
TEPH - Diesel, Kerosene, Motor Oil

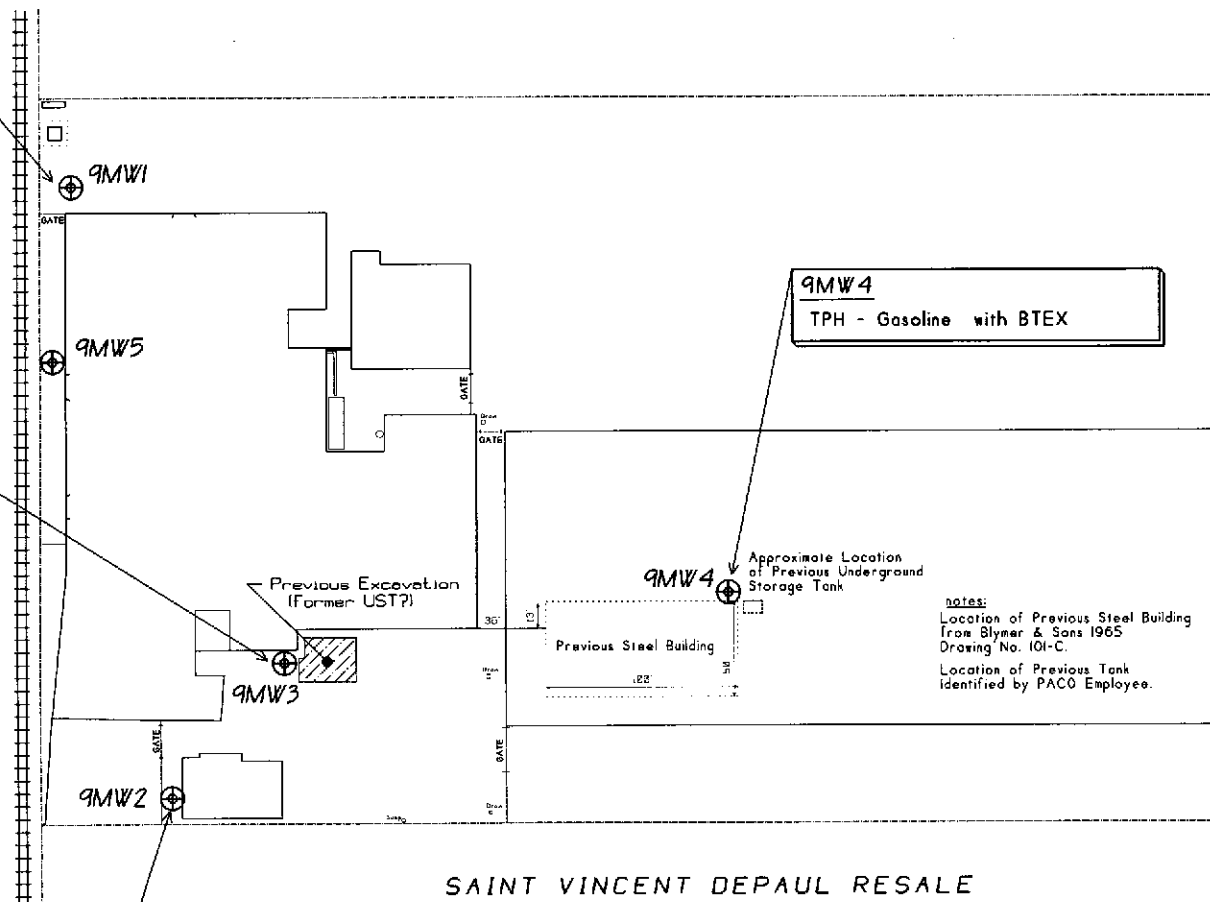
9MW4
TPH - Gasoline with BTEX

Legend:

⊕ Monitoring Well
With groundwater analyses performed during Round Thirteen (5/23/1996).

TPH = Total Petroleum Hydrocarbons
TEPH = Total Extractable Petroleum Hydrocarbons
UST = Underground Storage Tank

Well	Date Installed	Total Depth	Casing Diameter	Borehole Diameter	Screen Depth	Sand Pack Depth
9MW1	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW2	11-3-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW3	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW4	11-9-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW5	8-12-1994	21'	4"	8.5"	5.25'-20.25'	4.25'-21'



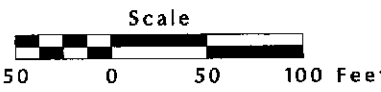
notes:
Location of Previous Steel Building from Blymer & Sons 1965 Drawing No. 101-C.
Location of Previous Tank identified by PACO Employee.

SAINT VINCENT DEPAUL RESALE

Monitoring Wells and Round Thirteen Groundwater Analyses

Former PACO PUMPS
9201 San Leandro Street
Oakland, California

Prepared by
JONAS & ASSOCIATES INC.



Date: 6-4-1996	Figure 2-1	Drawing Number
Locations Approx.		PCO220-5/96:G13F2-1

and a sandy clay located from 4 feet to the bottom of the borehole at 21 feet bgs. First water was not clearly identified. On November 16, 1992 water level in monitoring well 9MW2 was measured at 10.45 feet bgs.

Monitoring well 9MW3 is located adjacent to a previous excavation where a former underground storage tank may have been present. No tank was found, but remnants of a former tank appears to have been identified during the excavation. The tank was reportedly used to store gasoline. Excavation activities and results were documented in the October 16, 1992 "Site Characterization Report and Work Plan, PACO Pumps, 9201 San Leandro Street, Oakland, California". The well was drilled next to the excavation area and constructed on November 4, 1992. During drilling of the borehole for monitoring well 9MW3, the lithology encountered was 2 feet of an apparent fill composed of gravelly silty sand and a sandy clay between 2 and 21 feet bgs. A pilot boring adjacent to 9MW3 also found sandy clay between 20 and 30 feet bgs. First water was not definitively identified. After the construction of monitoring well 9MW3, the well water level was measured at 10.64 bgs. On May 31, 1995 Oxygen Release Compound (ORC) socks were placed in monitoring well 9MW3 to hopefully enhance in-situ bioremediation. Prior to collecting water quality samples in August 1995, the ORC socks needed to be extracted from the well. After some difficulty, Regensis and Gregg Drilling successfully removed the ORC socks on August 25, 1995. On August 29, 1995 new ORC socks were placed in the well. These were then replaced on February 29, 1996 with new ORC socks. Section 4, Evaluation of ORC Approach, of this report presents an evaluation of the use of ORC socks in monitoring well 9MW3.

Monitoring well 9MW4 was constructed on November 9, 1992. The location of the well is apparently near a former UST, which was said to have been located below the floor of the current warehouse. Prior to drilling the borehole for the monitoring well, 1¼ feet of flooring and sub-base was cored with a diamond-studded core barrel. The flooring and sub-base appears to be 6" of concrete, 6" of rock, and 3" of asphalt. Below the flooring and sub-base was a sandy clay down to a depth of 21 feet. During drilling, first water was identified at an approximate depth of 13.5 feet bgs. On November 16, 1992 well water was measured at 9.41 feet bgs.

Monitoring well 9MW5 was constructed on August 12, 1994. The well was installed adjacent to the southwest fence line of the facility and next to the former manufacturing building and the Central Pacific Railroad track. The lithology encountered during drilling ranged from a gravelly sandy clay to a sandy clay between 2 and 21 feet bgs. During drilling activities, depth to first water was not able to be clearly identified. After the screen was installed, the well water level was measured at 8.22 feet bgs on August 24, 1994.

The following Table 2-1 present a summary of construction details for monitoring wells 9MW1, 9MW2, 9MW3, 9MW4, and 9MW5.

Jonas & Associates Inc.
Table 2-1
Monitoring Well Construction Details
PACO PUMPS - 9201 San Leandro Street

Well Number	Date Completed	Casing Diameter	~ Depth in feet bgs					Borehole Diameter
			Screen {0.020"}	Sand Pack {#3 Sand}	Bentonite Seal	Portland Cement ¹	Borehole	
9MW1	11/4/1992	4"	5¼ - 20¼	4¼ - 21	3¾ - 4¼	¼ - 3¾	21	8½"
9MW2	11/3/1992	4"	5¼ - 20¼	4¼ - 21	3¾ - 4¼	¼ - 3¾	21	8½"
9MW3	11/4/1992	4"	5¼ - 20¼	4¼ - 21	3¾ - 4¼	¼ - 3¾	21	8½"
9MW4	11/9/1992	4"	5¼ - 20¼	4¼ - 21	3¾ - 4¼	¼ - 3¾	21	8½"
9MW5	8/12/1994	4"	5¼ - 20¼	4¼ - 21	3¾ - 4¼	¼ - 3¾	21	8½"

notes: ¹ = Portland Cement mixed with ~ 5% bentonite for plasticity.
 bgs = below ground surface

2.1.2 Monitoring Well Survey

During August 1993, monitoring wells 9MW1, 9MW2, 9MW3, and 9MW4 were surveyed by Kier & Wright Civil Engineers & Surveyors, Inc.. In September 1994 they surveyed monitoring well 9MW5. The locations of the wells were surveyed using the California State Coordinate System which identifies the well locations using Eastings and Northings, in feet. The monitoring wells were surveyed at a point representing the north side mark on top of the PVC casing. The survey was based on the City of Oakland Benchmark 721, located at 92nd Avenue and G Street. The following Table 2-2 presents the monitoring well survey results.

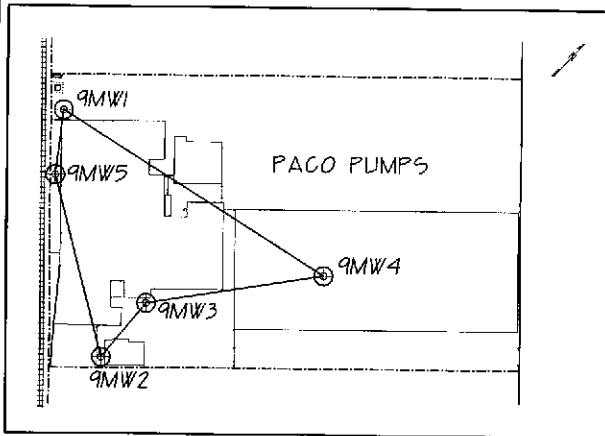
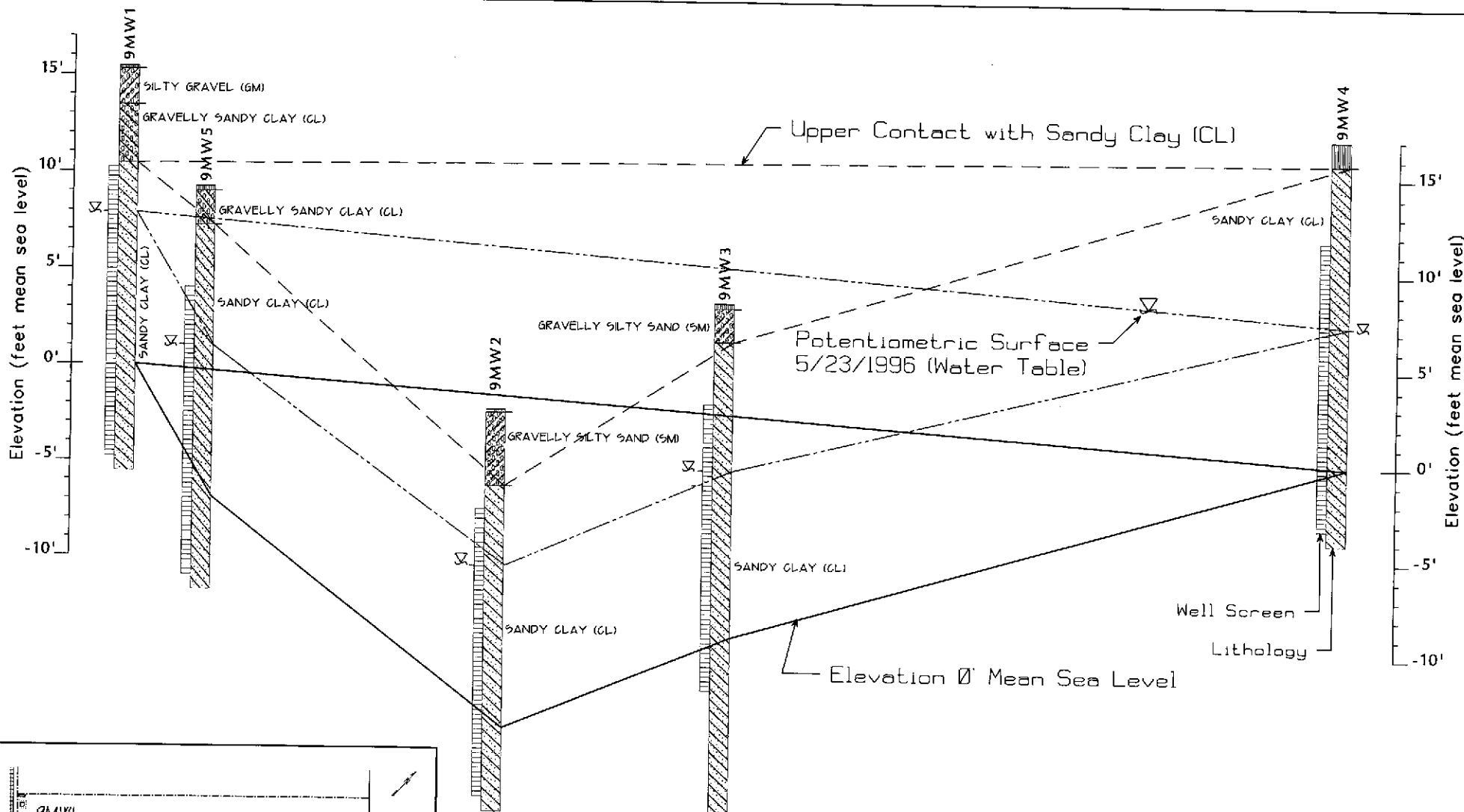
Table 2-2
Monitoring Well Survey Data
PACO PUMPS - 9201 San Leandro Street

Well	Easting	Northing	M.S.L. Elevation
9MW1	1512710.22	456699.01	Top PVC: 15.51'
9MW2	1512968.11	456507.34	Top PVC: 16.83'
9MW3	1512963.22	456602.8	Top PVC: 17.13'
9MW4	1513102.34	456789.38	Top PVC: 17.08'
9MW5	1512763.21	456638.62	Top PVC: 15.93'

Legend - M.S.L.: Mean Sea Level
 Top PVC: Top north edge of PVC casing.

2.2 Hydrogeologic Cross Section

Figure 2-2 presents a hydrogeologic cross section using potentiometric and lithologic data associated with the monitoring wells.



5'
 0'
 Vertical Scale

Hydrogeologic Cross Section

Former PACO PUMPS
 9201 San Leandro Street
 Oakland, California

Prepared by

JONAS & ASSOCIATES INC.

Date: 06-04-1996
 Locations Approx.

Figure 2-2

Drawing Number
 PC0220-5/96:G13F2-2

3.0 ROUND THIRTEEN GROUNDWATER SAMPLING AND ANALYSIS

Following is a discussion of the procedures and results associated with Round Thirteen groundwater sampling of monitoring wells 9MW1, 9MW2, 9MW3, and 9MW4. Sampling for this round occurred on May 23, 1996 and represents spring seasonal conditions. Also included are Round Thirteen water level and free product measurements.

A summary of all laboratory results from samples collected from the on-site monitoring wells is presented in Appendix A. The chain-of-custody record for the May 23, 1996 Round Thirteen groundwater sampling event is presented in Appendix B. The laboratory data sheets associated with this sampling event are presented in Appendix C.

3.1 Groundwater Sampling Procedures

The thirteenth round of groundwater sampling was performed on May 23, 1996 and represents spring groundwater conditions. During the sampling event, the general groundwater sampling procedures presented in the "Site Characterization Report and Work Plan" (J&A 1992) for the facility were followed. After samples were collected and labeled, they were placed into ice chests chilled with blue ice for transport to the Chromalab analytical laboratory. A chain-of-custody record was completed and signed by a representative of Jonas & Associates Inc., and upon delivery, by a representative of Chromalab Inc.. The analysis and results of groundwater samples collected during Round Thirteen are presented in Section 3.2. The following section presents relevant information associated with sampling of each monitoring well.

Sampling Monitoring Well 9MW1

Prior to purging, the depth to groundwater in monitoring well 9MW1 was measured at 8.28 feet below the top of the casing. After measuring the depth to groundwater, a clear bailer was placed into the well to collect a water sample for visual observations. No petroleum products were identified floating on groundwater in monitoring well 9MW1. After assessing for the presence of floating product, approximately 25 gallons of groundwater was removed from the well. Temperature and electric conductivity were measured after each five gallons of purging. Monitoring well 9MW1 appeared to recover relatively rapidly during purging activities. Two Volatile Organic Analysis (VOA) containers with HCl preservative were collected for analyses for Total Petroleum Hydrocarbons as Gasoline (TPH-G) (EPA Methods 5030/8015M) and BTEX (EPA Method 8020). The Round Thirteen groundwater samples from this monitoring well are identified as GW9-MW1-Q13.

Sampling Monitoring Well 9MW2

Prior to purging, the water level in monitoring well 9MW2 was measured at 8.70 feet below the top of the casing. A clean, clear bailer was then used to collect a sample from the surface of the groundwater. No floating product was identified. The well was then purged of approximately 24 gallons of well water. During purging activities, the well appeared to recover relatively rapidly. Two liters were collected for analyses for Total

Extractable Petroleum Hydrocarbons as -Diesel, -Kerosene, and -Motor Oil (TEPH-D,-K,-MO) (EPA Methods 3550/8015M). The Round Thirteen groundwater samples from monitoring well 9MW2 are identified as GW9-MW2-Q13.

Sampling Monitoring Well 9MW3

Prior to measurement of well water level and collection of water quality samples, socks containing the Oxygen Release Compound (ORC) were removed from the well. The ORC socks were placed in a clean bucket, sealed with a lid. After approximately one hour to allow for equilibrium of the water in the well, the water level in monitoring well 9MW3 was measured at 8.98 feet below the top of the casing. After measuring the depth to groundwater, a clear bailer was placed into the well to collect a water sample for visual observations. No floating product was identified. Prior to purging, two VOA containers with HCL were collected for analyses of TPH-G (EPA Methods 5030/8015M) and BTEX (EPA Method 8020). Using a Hach Dissolved Oxygen Test Kit (Model OX-2P), the Dissolved Oxygen was measured from water collected from the well prior to purging. After approximately 25 gallons were purged from the well, two VOA containers with HCL were collected for analyses of TPH-G (EPA Methods 5030/8015M) and BTEX (EPA Method 8020). Two VOA containers were also collected for analysis of Volatile Halogenated Organics (EPA Methods 8010A). Dissolved Oxygen was also measured after purging the well. During purging activities, recovery of the well was slower than the other monitoring wells. The Round Thirteen groundwater samples for monitoring well 9MW3 are identified as GW9-MW3-Q13. After completing the round thirteen sampling effort, the ORC socks were put back into the well.

Sampling Monitoring Well 9MW4

During this sampling event, the groundwater level in monitoring well 9MW4 was measured at 7.24 feet below the top of the casing. No floating products were identified in this well, by using a clean bailer. The well was purged of approximately 25 gallons. Recovery of the well during purging was relatively rapid. Two VOA containers with HCL were used to collect groundwater for analysis of TPH-G (EPA Methods 5030/8015M) and BTEX (EPA Method 8020). The Round Thirteen groundwater samples for monitoring well 9MW4 are identified as GW9-MW4-Q13.

Sampling Monitoring Well 9MW5

For this sampling round, no water quality samples were collected from monitoring well 9MW5. A water level measurement was collected from the well, at 7.92 feet below the top of the casing.

3.2 Groundwater Sampling Results

This section of the report presents the analytical results for the Round Thirteen groundwater sampling event. Water level and free product measurements are also presented.

3.2.1 Analytical Results

As stated previously, summary tables, the Round Thirteen chain-of-custody records and laboratory data sheets are presented in Appendix A, B, and C, respectively. The following Table 3-1 present a summary of the analyses performed and the analytes detected during the Round Thirteen groundwater sampling event. Figure 3-1 provides a graphical display of the analytical results.

Table 3-1
 May 1996 - Round Thirteen
 Groundwater Sampling Results
 PACO PUMPS - 9201 San Leandro Street
 Oakland, California

Jonas & Associates Inc.

Sample I.D.	Analysis	Detected Analytes
GW9-MW1-Q13	TPH as Gasoline (5030/8015M) BTEX (8020)	none detected
GW9-MW2-Q13	TEPH as Diesel, Kerosene, Motor Oil (3550/8015M)	none detected
GW9-MW3-Q13P {prior to purging}	TPH as Gasoline (5030/8015M) BTEX (8020) Dissolved Oxygen	TPH Gasoline: 6.900 mg/L Benzene: 3.300 mg/L Toluene: 0.340 mg/L Ethyl Benzene: 0.071 mg/L Total Xylenes: 0.074 mg/L Dissolved Oxygen: 59. mg/L
GW9-MW3-Q13	TPH as Gasoline (5030/8015M) BTEX (8020) Volatile Halogenated Organics (8010) Dissolved Oxygen	TPH Gasoline: 4.300 mg/L Benzene: 3.200 mg/L Toluene: 0.350 mg/L Ethyl Benzene: 0.072 mg/L Total Xylenes: 0.074 mg/L Dissolved Oxygen: 3. mg/L Others Not Detected
GW9-MW4-Q13	TPH as Gasoline (5030/8015M) BTEX (8020)	Benzene: 0.0011 mg/L Toluene: 0.0020 mg/L Ethyl Benzene: 0.0023 mg/L Total Xylenes: 0.0019 mg/L Others Not Detected
GW9-MW5-Q13	not analyzed	

Legend - TPH: Total Petroleum Hydrocarbons
 TEPH: Total Extractable Petroleum Hydrocarbons
 BTEX: Benzene, Toluene, Ethyl Benzene, Total Xylenes

Drawn by J.W. 6-4-1996

Drawing Number PCO220-5/96:GF3-1

Figure 3-1

9MW1 (Water Elev.:+7.23')
May 23, 1996 sampling results:

(mg/L)		(mg/L)	
TPH-Gasoline	ND(0.050)	Ethyl Benzene	ND(0.00050)
Benzene	ND(0.00050)	Total Xylenes	ND(0.00050)
Toluene	ND(0.00050)		

9MW3 (Water Elev.:+8.15')
May 23, 1996 sampling results:
(Prior to Purging)

(mg/L)		(mg/L)	
TPH-Gasoline	6.900	Ethyl Benzene	0.071
Benzene	3.300	Total Xylenes	0.074
Toluene	0.340	Dissolved Oxygen	59

(After Purging)

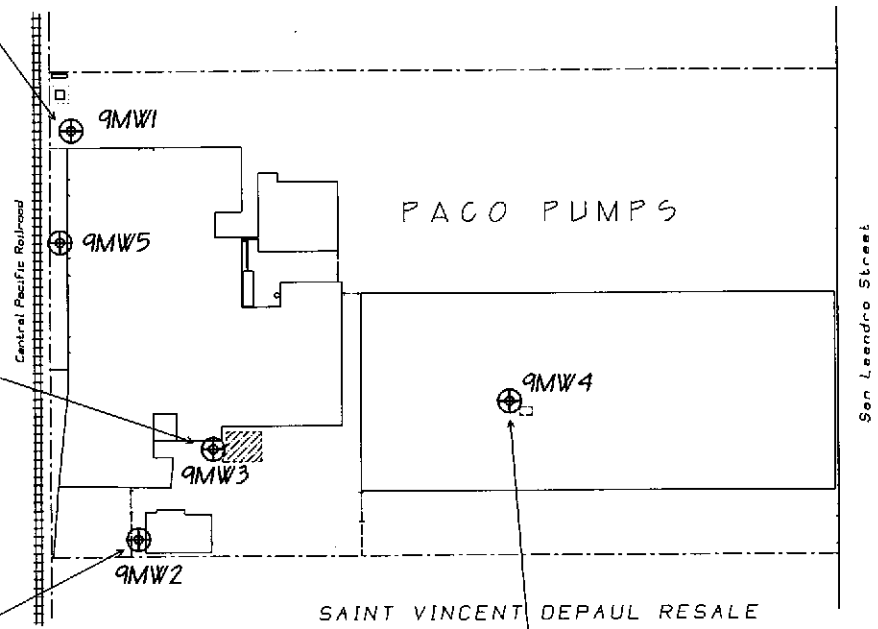
(mg/L)		(mg/L)	
TPH-Gasoline	4.300	Method 8010	
Benzene	3.200	Volatife Halogenated Organics:	
Toluene	0.350	None Detected	ND(0.00050)
Ethyl Benzene	0.072		
Total Xylenes	0.074	Dissolved Oxygen	3

9MW2 (Water Elev.:+8.13')
May 23, 1996 sampling results:

(mg/L)	
TEPH-Diesel	ND(0.050)
TEPH-Kerosene	ND(0.050)
TEPH-Motor Oil	ND(0.500)

9MW4 (Water Elev.:+9.84')
May 23, 1996 sampling results:

(mg/L)		(mg/L)	
TPH-Gasoline	ND(0.050)	Ethyl Benzene	0.0023
Benzene	0.011	Total Xylenes	0.0019
Toluene	0.0020		



Legend:

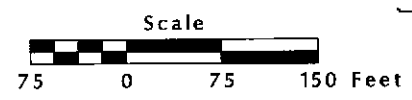
⊕ Monitoring Well

TPH = Total Petroleum Hydrocarbons

TEPH = Total Extractable Petroleum Hydrocarbons

ND(0.05) = Not Detected above laboratory detection limit in parentheses.

Well	Date Installed	Total Depth	Casing Diameter	Borehole Diameter	Screen Depth	Sand Pack Depth
9MW1	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW2	11-3-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW3	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW4	11-9-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW5	8-24-1994	21'	4"	8.5"	5.25'-20.25'	4.25'-21'



May 23, 1996 Groundwater Sampling Results

Former PACO PUMPS
9201 San Leandro Street
Oakland, California

Prepared by

JONAS & ASSOCIATES INC.

Date: 6-4-1996
Locations Approx.

Figure 3-1

Drawing Number
PCO220-5/96:G13F3-1

3.2.2 Results of Water Level and Free Product Measurements

During this sampling round, water level measurements from all five monitoring wells were recorded and a determination was made with respect to the presence or absence of a floating product for the four monitoring wells that were sampled.

The following Table 3-2 provides a summary of the May 23, 1996 Round Thirteen groundwater level and free product measurements. Water level elevations, with respect to mean sea level, were calculated using the results of the Kier & Wright surveys.

Table 3-2
 Round Thirteen - May 23, 1996
 Groundwater Level and Free Product Measurement
 PACO PUMPS - 9201 San Leandro Street
 Oakland, California

Date	Well ID	Surveyed Casing Elevation	Water Level from Top of Casing		Pavement vs. Casing Top	Free Product
		M.S.L.	Depth	Elevation M.S.L.		
5/23/1996	9MW1	15.51'	8.28'	7.23'	0.40'	no free product
5/23/1996	9MW2	16.83'	8.70'	8.13'	0.40'	no free product
5/23/1996	9MW3	17.13'	8.98'	8.15'	0.29'	no free product
5/23/1996	9MW4	17.08'	7.24'	9.84'	0.54'	no free product
5/23/1996	9MW5	15.93'	7.92'	8.01'	0.25'	not sampled

Notes - » Elevation with respect to mean sea level (M.S.L.) and Kier & Wright survey.

Figures 3-2, graphically presents the results of the well water levels collected during the Round Thirteen sampling event.

Drawn by

J.R.W.
6/4/1996

Drawing Number

PC0220-5/96:G13F3-2

Figure 3-2

9MW1 Well Water Level
Date 5/23/96 Feet Mean Sea Level +7.23

9MW5 Well Water Level
Date 5/23/96 Feet Mean Sea Level +8.01

9MW3 Well Water Level
Date 5/23/96 Feet Mean Sea Level +8.15

9MW2 Well Water Level
Date 5/23/96 Feet Mean Sea Level +8.13

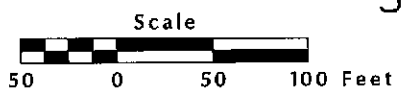
9MW4 Well Water Level
Date 5/23/96 Feet Mean Sea Level +9.84

Legend:

⊕ Monitoring Well with Well Water Level Feet Mean Sea Level

--- 5/23/96 Equipotential Line (approximate)

Well	Date Installed	Total Depth	Casing Diameter	Borehole Diameter	Screen Depth	Sand Pack Depth
9MW1	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW2	11-3-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW3	11-4-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW4	11-9-1992	21'	4"	8.5"	5.25'-20.25'	4.25'-21'
9MW5	8-12-1994	21'	4"	8.5"	5.25'-20.25'	4.25'-21'



May 23, 1996 - Spring Season Potentiometric/Water Table

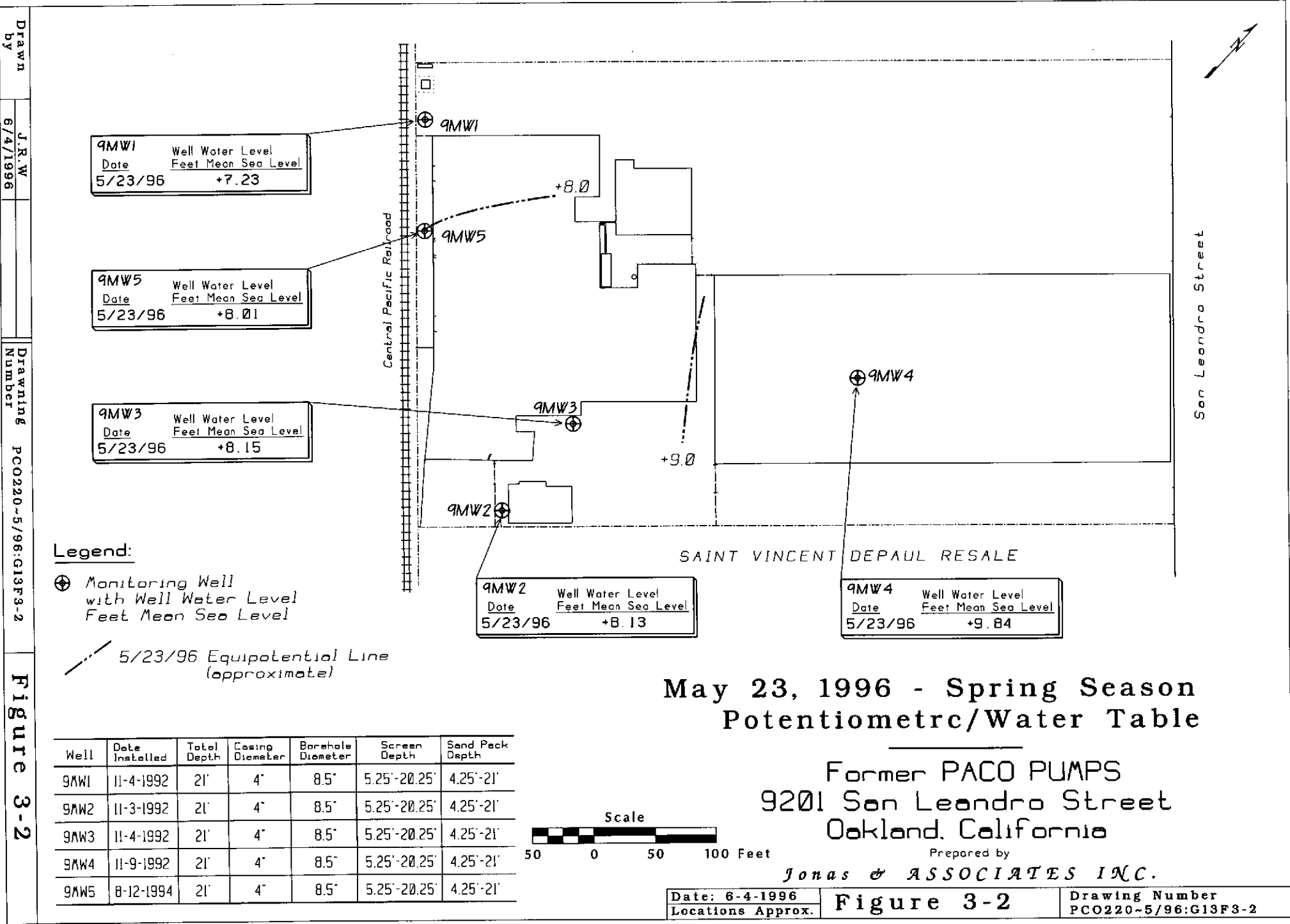
Former PACO PUMPS
9201 San Leandro Street
Oakland, California

Prepared by
Jonas & ASSOCIATES INC.

Date: 6-4-1996
Locations Approx.

Figure 3-2

Drawing Number
PC0220-5/96:G13F3-2



4.0 EVALUATION OF ORC APPROACH

In response to the finding of elevated concentrations of petroleum products in monitoring well 9MW3, during a March 2, 1995 meeting with the Alameda County Health Care Services Agency recommended the use of Oxygen Release Compound (ORC) in the well. On May 2, 1995, J&A and PACO submitted an Oxygen Enhanced Bioremediation Work Plan (Work Plan) for use of ORC to hopefully enhance intrinsic bioremediation around monitoring well 9MW3. As proposed in the Work Plan, the approach is to place ORC filter socks into monitoring well 9MW3. The ORC socks would then slowly release oxygen into the aquifer. This increase in oxygen concentration may then increase the biodegradation of various petroleum products detected in and around monitoring well 9MW3. On May 5, 1995, Alameda County gave approval to the Work Plan. The ORC was first installed on May 31, 1995, after round nine sampling of the well. Figure 4-1 presents a schematic of how the ORC system was used in monitoring well 9MW3. The ORC socks were then replaced in August 1995 after sampling round ten and after sampling round twelve, in February, 1996. Sampling round thirteen, performed in May 1996, represents the four round of groundwater samples collected after installation of the ORC sock. After a year of using the ORC system in monitoring well 9MW3, the agency requested an evaluation of the approach. This section of the report present an evaluation of the ORC approach.

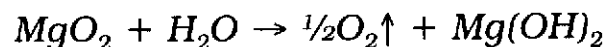
4.1 Summary of ORC Approach

The basic premise of the ORC approach is that oxygen is often the limiting factor in aerobic bioremediation. Delivering oxygen should cause aerobic microbes to thrive. This should increase the rate of intrinsic biodegradation, thereby resulting in significantly lower concentrations of petroleum hydrocarbons in groundwater.

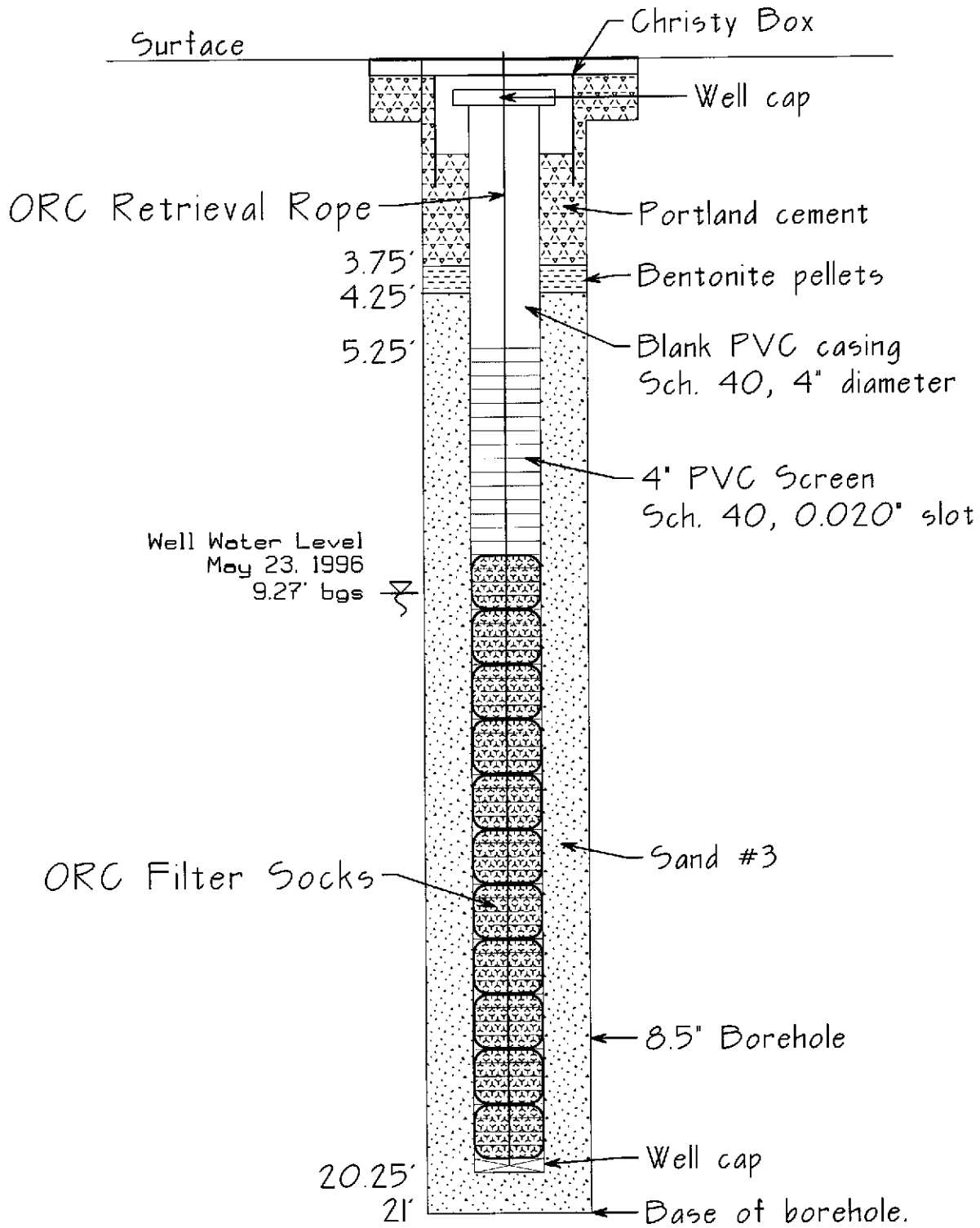
The Oxygen Release Compound used in monitoring well 9MW3 was supplied by the following firm:

REGENESIS Bioremediation Products
27130A Paseo Espada, Suite 1407
San Juan Capistrano, California 92675
(714) 443-3136
(714) 443-3140 fax
contact: Craig A. Sandefur (Manager of Product Applications)

As stated by the manufacturer, "*The product releases oxygen when it comes in contact with water as shown by the following equation:*



The by-products of the reaction are oxygen and magnesium hydroxide (Milk of Magnesia). ORC is environmentally safe to use". The oxygen produced by the reaction of magnesium oxide and water is then available to enhance aerobic bioremediation.



**Schematic of ORC
System in Well 9MW3**

Formerly PACO PUMPS
9201 San Leandro Street
Oakland, California

Prepared by
JONAS & ASSOCIATES INC.

The basis for the use of the ORC at the former PACO Pumps facility is the apparent presence of elevated concentrations of various petroleum products detected in groundwater samples collected from monitoring well 9MW3. Monitoring well 9MW3 is located adjacent to a suspected underground gasoline tank (UST). Excavation of this area occurred in 1992. During the excavation no tank was found, but the elevated concentrations of TPH-Gasoline and BTEX detected in soil samples resulted in the removal of approximately 250 cubic yards of soil.

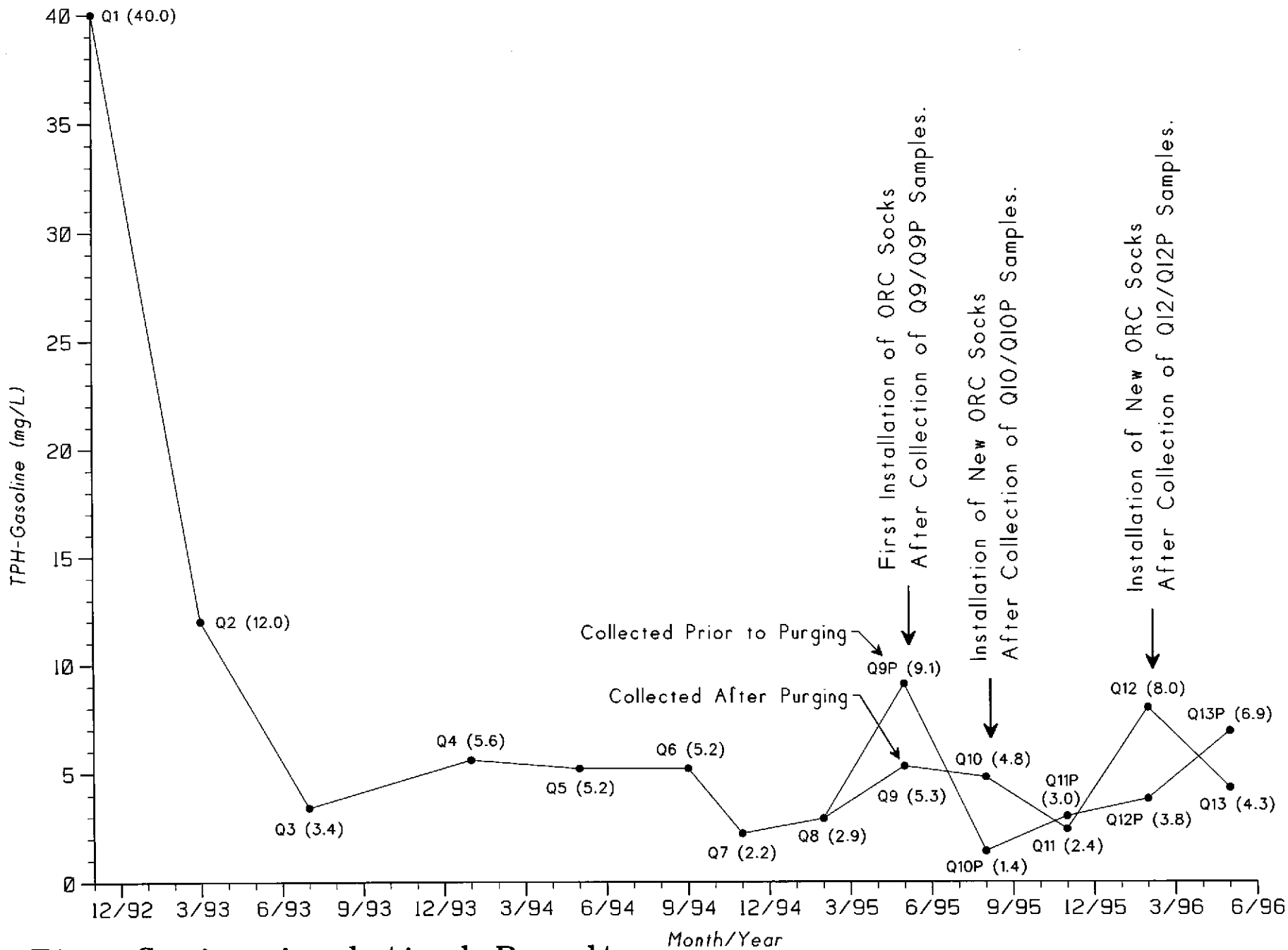
The ORC was first installed in monitoring well 9MW3 on May 31, 1995, after round nine sampling. The ORC socks were then replaced after sampling round ten, in August 1995, and after sampling round twelve, in February, 1996. The October 15, 1995 J&A document titled "Groundwater Monitoring Report, Sampling Rounds Nine and Ten" presents the installation and replacement of the ORC socks associated with sampling rounds nine and ten. Sampling rounds eleven and twelve are covered in their respective groundwater monitoring reports, as identified in Section 5, References. Methods and results associated with sampling round thirteen is presented in this report.

4.2 Discussion of ORC Results

Prior to the use of the ORC in monitoring well 9MW3, nine groundwater sampling rounds had been performed. From these nine sampling rounds, TPH-Gasoline was detected at concentrations ranging from 2.9 mg/L to 40 mg/L. Benzene for the first nine sampling rounds ranged from 0.42 mg/L to 2.9 mg/L. Toluene, Ethyl Benzene, Total Xylene were also regularly detected. 1,2-Dichloroethane was also periodically detected, ranging from not detected to a concentration on 0.33 mg/L. After collecting round nine water quality samples, the ORC socks were then placed into monitoring well 9MW3.

To evaluate conditions occurring immediately in and around the well versus farther out from the well, water quality samples were collected prior to and after purging of the well. This first occurred during sampling round nine to establish a baseline conditions. For sampling round nine, TPH-Gasoline and Benzene were detected at 9.1 mg/L and 2.8 mg/L, respectively, for samples collected prior to purging. After purging the well these concentrations dropped to 5.3 mg/L for TPH-Gasoline and 1.3 mg/L for Benzene. The finding of elevation concentrations prior to purging versus after purging may have been associated with the finding of a slight "oily" sheen on the water in the well. Toluene, Ethyl Benzene, and Total Xylenes were also detected during sampling round nine. In addition, after purging the well Dissolved Oxygen was measure at 11 mg/L. After installing the ORC socks, water quality samples and Dissolved Oxygen measurements were collected during sampling rounds ten, eleven, twelve, and thirteen, prior to and after purging the well.

The complete results associated with all the sampling rounds is presented in Appendix A. Table 4-1 presents analytical results from sampling monitoring well 9MW3, for TPH-Gasoline, Benzene, and Dissolved Oxygen. Figure 4-2 provides a time-series display of analytical results for TPH-Gasoline associated with sampling monitoring well 9MW3.



**Time-Series Analytical Results
for Monitoring Well 9MW3**

Date: 6-4-1996	Figure 4-2	Drawing Number PC0220-6/96:G13F4-2
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Table 4-1
Monitoring Well 9MW3 Time-Series Results
PACO PUMPS - 9201 San Leandro Street
Oakland, California

Date	Sample I.D.	TPH-Gasoline (mg/L)	Benzene (mg/L)	Dissolved Oxygen (mg/L)
11/16/1992	GW9-MW3-Q1	40.000	2.900	
3/9/1993	GW9-MW3-Q2	12.000	1.000	
7/21/1993	GW9-MW3-Q3	3.400	0.420	
1/29/1994	GW9-MW3-Q4	5.600	0.910	
5/26/1994	GW9-MW3-Q5	5.200	0.890	
9/24/1994	GW9-MW3-Q6	5.200	0.580	
11/22/1994	GW9-MW3-Q7	2.200	0.670	
2/8/1995	GW9-MW3-Q8	2.900	0.780	
5/31/1995	GW9-MW3-Q9P	9.1	2.800	
5/31/1995	GW9-MW3-Q9	5.3	1.300	11
8/28/1995	GW9-MW3-Q10P	1.4	ND(0.0005)	64
8/28/1995	GW9-MW3-Q10	4.8	2.500	20
11/29/1995	GW9-MW3-Q11P	3.0	0.780	18
11/29/1995	GW9-MW3-Q11	2.4	0.830	3
2/29/1996	GW9-MW3-Q12P	3.8	1.200	8
2/29/1996	GW9-MW3-Q12	8.0	3.400	2
5/23/1996	GW9-MW3-Q13P	6.900	3.300	59
5/23/1996	GW9-MW3-Q13	4.300	3.200	3

Notes - GW9-MW3-Q9P: Sampled prior to purging. For baseline study for use of Oxygen Release Compound (ORC).
 GW9-MW3-Q9: Sampled after purging. First installation of ORC socks after collection of sample.
 GW9-MW3-Q10P: Sampled after removal of ORC and prior to purging.
 GW9-MW3-Q10: Sampled after purging. Installed new ORC socks.
 GW9-MW3-Q11P: Sampled after removal of ORC and prior to purging.
 GW9-MW3-Q11: Sampled after purging.
 GW9-MW3-Q12P: Sampled after removal of ORC and prior to purging.
 GW9-MW3-Q12: Sampled after purging. Installed new ORC socks.
 GW9-MW3-Q13P: Sampled after removal of ORC and prior to purging.
 GW9-MW3-Q13: Sampled after purging.

For sampling rounds ten, eleven, twelve, and thirteen, TPH-Gasoline ranged from 1.4 to 8.0 mg/L and Benzene ranged from 0.78 mg/L to 3.4 mg/L. Prior to purging the well Dissolved Oxygen was always higher then after purging the well. This establishes that oxygen was entering the groundwater from the ORC socks and water collected farther out from the well (after purging) had less oxygen then immediately around the well. Dissolved Oxygen measurements ranged from 8 mg/L to 64 mg/L, prior to purging, and 2 mg/L to 20 mg/L after purging the well. For TPH-Gasoline concentrations, there was not a discernable trend prior to and after purging. For Benzene, concentrations tended to be lower prior to purging than after purging. Samples collected after purging are more representative of water quality out to a greater distance around the well.

As seen by the results presented in Appendix A, Table 4-1, and Figure 4-2, use of the ORC system did not apparently significantly lower concentrations of TPH-Gasoline, Benzene, Toluene, Ethyl Benzene, and Total Xylenes around monitoring well 9MW3. This assumes that the petroleum products found in the well are only associated with former underground storage tank apparently located adjacent to monitoring well 9MW3. Therefore, even though oxygen is being release into the groundwater it apparently had not had the impact of significantly lowering petroleum product concentrations.

4.3 Recommendation Concerning ORC Use

Based on the relatively poor results associated with the use of the ORC socks in monitoring well 9MW3, we are recommending that PACO be given the discretion to remove the ORC socks from the monitoring well.

5.0 REFERENCES

- Alameda County Health Care Services Agency, 1994, letter titled "Workplan Approval for PACO Pumps, 9201 San Leandro St. Oakland 94603", July 1, 1994 letter to J&A.
- California Department of Water Resources, 1982. "Phase I Water Well Survey, Proposed Oakland Inner Harbor Deepening Project, Central District", September 1982.
- Jonas & Associates Inc., 1992. "Site Characterization Report and Work Plan, PACO Pumps, 9201 San Leandro Street, Oakland, California", October 16, 1992.
- _____, 1993. "First Quarterly Status Report, PACO Pumps, 9201 San Leandro Street, Oakland, California", February 24, 1993.
- _____, 1993. "Groundwater Monitoring Report, Sampling Round One, Two, and Three, PACO Pumps, 9201 San Leandro Street, Oakland, California", December 10, 1993.
- _____, 1994. "Groundwater Monitoring Report, Sampling Round One Through Four, PACO Pumps, 9201 San Leandro Street, Oakland, California", April 15, 1994.
- _____, 1994. "Work Plan, Installation of Monitoring Well 9MW5, PACO Pumps, 9201 San Leandro Street, Oakland, California", June 13, 1994.
- _____, 1994. "Groundwater Monitoring Report, Sampling Round Five, PACO Pumps, 9201 San Leandro Street, Oakland, California", June 28, 1994.
- _____, 1994. "Groundwater Monitoring Report, Sampling Round Six, PACO Pumps, 9201 San Leandro Street, Oakland, California", August 24, 1994.
- _____, 1994. "Groundwater Monitoring Report, Sampling Round Seven, PACO Pumps, 9201 San Leandro Street, Oakland, California", November 22, 1994
- _____, 1995. "Groundwater Monitoring Report, Sampling Round Eight, PACO Pumps, 9201 San Leandro Street, Oakland, California", March 20, 1995.
- _____, 1995. "Groundwater Monitoring Report, Sampling Round Nine and Ten, PACO Pumps, 9201 San Leandro Street, Oakland, California", October 15, 1995.
- _____, 1995. "Groundwater Monitoring Report, Sampling Round Eleven, PACO Pumps, 9201 San Leandro Street, Oakland, California", February 23, 1995.
- _____, 1996. "Groundwater Monitoring Report, Sampling Round Twelve, PACO Pumps, 9201 San Leandro Street, Oakland, California", May 20, 1996.
- Subsurface Consultants Inc., 1992. "Soil Contamination Assessment Drum Storage Areas, St. Vincent DePaul Distribution Center, 9234 San Leandro Street, Oakland, California", December 16, 1992.

Appendix A
Summary Tables of Laboratory Results

TPH-GASOLINE & BTEX GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	TPH-Gasoline (5030/8015M) (mg/L)	Benzene (602/8020) (mg/L)	Toluene (602/8020) (mg/L)	Ethyl Benzene (602/8020) (mg/L)	Total Xylenes (602/8020) (mg/L)
<i>Monitoring Well 9MW1</i>									
GW9-MW1-Q5	5/26/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q9	5/31/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q13	5/23/96	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<i>Monitoring Well 9MW2</i>									
GW9-MW2-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0015)
GW9-MW2-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q3 ¹	7/21/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.002) ²	ND(0.002) ²	ND(0.002) ²	ND(0.002) ²
GW9-MW2-Q5	5/26/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	0.0023	0.0008	ND(0.0005)	ND(0.0005)
GW9-MW2-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	0.0061	0.0014	0.0005	0.0006
GW9-MW2-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	0.0034	0.0018	ND(0.0005)	0.0005
GW9-MW2-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	0.0045	0.0013	ND(0.0005)	0.0005
GW9-MW2-Q10	8/9/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q12	2/29/96	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)
<i>Monitoring Well 9MW3</i>									
GW9-MW3-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	40.000	2.900	6.700	0.550	1.700
GW9-MW3-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	12.000	1.000	0.300	0.110	0.170
GW9-MW3-Q3 ¹	7/21/93	5¼'-20¼' _{screen}	water	CrLab	3.400	0.420	0.063	0.036	0.037
GW9-MW3-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	5.600	0.910 ²	0.220 ²	0.047 ²	0.036 ²
GW9-MW3-Q5	5/26/94	5¼'-20¼' _{screen}	water	CrLab	5.200	0.890	0.180	0.045	0.043
GW9-MW3-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	5.200	0.580	0.076	0.029	0.022
GW9-MW3-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	2.200	0.670	0.130	0.031	0.028
GW9-MW3-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	2.900	0.780	0.120	0.031	0.033
GW9-MW3-Q9P	5/31/95	5¼'-20¼' _{screen}	water	CrLab	9.1	2.800	0.160	0.091	0.072
GW9-MW3-Q9	5/31/95	5¼'-20¼' _{screen}	water	CrLab	5.3	1.300	0.170	0.037	0.044

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TPH-GASOLINE & BTEX GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	TPH-Gasoline (5030/8015M) (mg/L)	Benzene (602/8020) (mg/L)	Toluene (602/8020) (mg/L)	Ethyl Benzene (602/8020) (mg/L)	Total Xylenes (602/8020) (mg/L)
<i>Monitoring Well 9MW3^{cont}</i>									
GW9-MW3-Q10P	8/28/95	5¼'-20¼' _{screen}	water	CrLab	1.4	ND(0.0005)	ND(0.0005)	0.0017	0.0079
GW9-MW3-Q10	8/28/95	5¼'-20¼' _{screen}	water	CrLab	4.8	2.500	0.150	0.053	0.044
GW9-MW3-Q11P	11/29/95	5¼'-20¼' _{screen}	water	CrLab	3.0	0.780	0.043	0.032	0.032
GW9-MW3-Q11	11/29/95	5¼'-20¼' _{screen}	water	CrLab	2.4	0.830	0.038	0.021	0.016
GW9-MW3-Q12P	2/29/96	5¼'-20¼' _{screen}	water	CrLab	3.8	1.200	0.130	0.036	0.035
GW9-MW3-Q12	2/29/96	5¼'-20¼' _{screen}	water	CrLab	8.0	3.400	0.430	0.100	0.099
GW9-MW3-Q13P	5/23/96	5¼'-20¼' _{screen}	water	CrLab	6.900	3.300	0.340	0.071	0.074
GW9-MW3-Q13	5/23/96	5¼'-20¼' _{screen}	water	CrLab	4.300	3.200	0.350	0.072	0.074
<i>Monitoring Well 9MW4</i>									
GW9-MW4-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	0.560	0.066	0.073	0.016	0.130
GW9-MW4-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	0.520	0.063	0.067	0.015	0.140
GW9-MW4-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	0.750	0.067	0.012	0.029	0.062
GW9-MW4-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab	0.250	0.021	0.0042	0.0084	0.011
GW9-MW4-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	0.180	0.028	0.0022	0.0062	0.010
GW9-MW4-Q5	5/26/94	5¼'-20¼' _{screen}	water	CrLab	0.130	0.014	0.0032	0.0061	0.0047
GW9-MW4-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	0.070	0.0067	0.0009	0.0028	0.0026
GW9-MW4-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	0.090	0.016	0.0017	0.0056	0.0034
GW9-MW4-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	0.090	0.017	0.0013	0.0055	0.0030
GW9-MW4-Q9	5/31/95	5¼'-20¼' _{screen}	water	CrLab	0.08	0.013	0.0006	0.0023	0.0012
GW9-MW4-Q10	8/9/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.05)	0.0036	ND(0.0005)	0.0014	0.0006
GW9-MW4-Q11	11/29/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.05)	0.0045	0.0007	0.0010	0.0007
GW9-MW4-Q12	2/29/96	5¼'-20¼' _{screen}	water	CrLab	0.08	0.0074	0.0010	0.0032	0.0024
GW9-MW4-Q13	5/23/96	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	0.011	0.0020	0.0023	0.0019

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TPH-GASOLINE & BTEX GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	TPH-Gasoline (5030/8015M) (mg/L)	Benzene (602/8020) (mg/L)	Toluene (602/8020) (mg/L)	Ethyl Benzene (602/8020) (mg/L)	Total Xylenes (602/8020) (mg/L)
<i>Monitoring Well 9MW5</i>									
GW9-MW5-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW90MW5-Q10	8/9/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.05)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW90MW5-Q12	2/29/96	5¼'-20¼' _{screen}	water	CrLab	ND(0.05)	0.0006	ND(0.0005)	ND(0.0005)	ND(0.0005)

notes: TPH: Total Petroleum Hydrocarbons
 BTEX: Benzene, Toluene, Ethyl Benzene, Total Xylenes
¹ = probably corrected, apparently switched.
² = EPA Method 624
 ND(0.1) = Not Detected above the laboratory detection limit in parentheses.
 GW9-MW3-Q9P: Sampled prior to purging. For baseline study for use of Oxygen Release Compound (ORC).
 GW9-MW3-Q9: Sampled after purging. Installed ORC after collection of sample.
 GW9-MW3-QnP: Sampled after removal of ORC and prior to purging.
 GW9-MW3-Qn: Sampled after purging. n = 10, 11, 12, 13.

TEPH & PCB GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	TEPH-Diesel (3550/3510/8015M) (mg/L)	TEPH-Kerosene (3550/3510/8015M) (mg/L)	TEPH-Motor Oil (3550/3510/8015M) (mg/L)	PCBs (608 mod.) (mg/L)
<i>Monitoring Well 9MW1</i>								
GW9-MW1-Q1	11/15/92	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	ND(0.05)
GW9-MW1-Q2	3/9/93	5¼'-20¼' screen	water	CrLab	0.140	ND(0.050)	ND(0.5)	ND(0.0005)
GW9-MW1-Q3	7/21/93	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW1-Q4	1/29/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
<i>Monitoring Well 9MW2</i>								
GW9-MW2-Q1	11/16/92	5¼'-20¼' screen	water	CrLab	ND(0.050)	0.590	9.5	-
GW9-MW2-Q2	3/9/93	5¼'-20¼' screen	water	CrLab	0.430	0.210	4.3	-
GW9-MW2-Q3 ¹	7/21/93	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	0.52	-
GW9-MW2-Q4	1/29/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	0.68	-
GW9-MW2-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW2-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	0.6	-
GW9-MW2-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	1.0	-
GW9-MW2-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	0.550	-
GW9-MW2-Q9	5/31/95	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.500)	-
GW9-MW2-Q10	8/9/95	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.500)	-
GW9-MW2-Q11	11/29/95	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	0.690	-
GW9-MW2-Q12	2/29/96	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.500)	-
GW9-MW2-Q13	5/23/96	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.500)	-
<i>Monitoring Well 9MW3</i>								
GW9-MW3-Q1	11/16/92	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW3-Q2	3/9/93	5¼'-20¼' screen	water	CrLab	0.290	ND(0.050)	ND(0.5)	-
GW9-MW3-Q3 ¹	7/21/93	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW3-Q4	1/29/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW3-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW3-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	ND(0.050)	0.082	ND(0.5)	-
GW9-MW3-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	ND(0.050) ²	ND(0.050)	ND(0.5)	-
GW9-MW3-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	ND(0.050) ²	ND(0.050)	ND(0.500)	-

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TEPH & PCB GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	TEPH-Diesel (3510/8015M) (mg/L)	TEPH-Kerosene (3510/8015M) (mg/L)	TEPH-Motor Oil (3510/8015M) (mg/L)	PCBs (608 mod.) (mg/L)
<i>Monitoring Well 9MW4</i>								
GW9-MW4-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW41-Q1	11/16/92	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW4-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW4-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
GW9-MW4-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050)	ND(0.050)	ND(0.5)	-
<i>Monitoring Well 9MW5</i>								
GW9-MW5-Q6	9/24/94	5¼'-20¼' _{screen}	water	CrLab	0.130	ND(0.050)	ND(0.5)	-
GW9-MW5-Q7	11/22/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.050) ²	ND(0.050)	ND(0.5)	-
GW9-MW5-Q8	2/8/95	5¼'-20¼' _{screen}	water	CrLab	ND(0.050) ³	ND(0.050)	ND(0.5)	-

notes:

TEPH: Total Extractable Petroleum Hydrocarbons

PCBs: Polychlorinated Biphenyls

ND(0.004) = Not Detected above the laboratory detection limit in parentheses.

¹ = probably corrected, apparently switched.² = Unknown compounds were found in the Diesel range with the estimated concentration of 0.083 mg/L.³ = Unknown compounds were found in the Diesel range with the estimated concentration of 0.190 ug/L.

Table A/GW3
VOLATILE ORGANIC COMPOUND GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET
{mg/L}

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Bromodichloro-		Bromo- methane	Bromo- methane	Carbon Tetrachloride	Chloro- benzene	Chloro- ethane	2-Chloroethyl Vinyl Ether	Chloroform	Chloro- methane
					Acetone	Benzene								
<u>Monitoring Well 9MW1</u>														
GW9-MW1-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW2</u>														
GW9-MW2-Q1	11/15/92	5¼'-20¼' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q2	3/9/93	5¼'-20¼' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q4	1/29/94	5¼'-20¼' screen	water	CrLab	ND(0.005)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	-	0.0023	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	-	0.0061	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	-	0.0034	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	-	0.0045	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q10	8/9/95	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q12	2/29/96	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW3</u>														
GW9-MW3-Q3	7/21/93	5¼'-20¼' screen	water	CrLab	ND(0.002)	0.450	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW3-Q4	1/29/94	5¼'-20¼' screen	water	CrLab	ND(0.002)	0.910	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW3-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	-	0.890	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	-	0.580	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	-	0.670	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	-	0.780	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q9	5/31/95	5¼'-20¼' screen	water	CrLab	-	1.300	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q10	8/28/95	5¼'-20¼' screen	water	CrLab	-	2.500	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q11	11/29/95	5¼'-20¼' screen	water	CrLab	-	0.830	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q12	2/29/96	5¼'-20¼' screen	water	CrLab	-	3.400	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q13	5/23/96	5¼'-20¼' screen	water	CrLab	-	4.300	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)
<u>Monitoring Well 9MW4</u>														
GW9-MW4-Q5	5/26/94	5¼'-20¼' screen	water	CrLab	-	0.014	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	-	0.0067	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	-	0.016	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	-	0.017	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q11	11/29/95	5¼'-20¼' screen	water	CrLab	-	0.0045	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q12	2/29/96	5¼'-20¼' screen	water	CrLab	-	0.0074	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW5</u>														
GW9-MW5-Q6	9/24/94	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q7	11/22/94	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q8	2/8/95	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q10	8/9/95	5¼'-20¼' screen	water	CrLab	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q12	2/29/96	5¼'-20¼' screen	water	CrLab	-	0.0006	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)

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VOLATILE ORGANIC COMPOUND GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET
{mg/L}

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Dibromo-chloromethane	1,2-Di-bromoethane	1,2-Dichloro-benzene	1,3-Dichloro-benzene	1,4-Dichloro-benzene	1,1-Dichloro-ethane	1,2-Dichloro-ethane	1,1-Dichloro-ethene	cis 1,2-Dichloroethene	trans 1,2-Dichloroethene	1,2-Dichloro-propane
<u>Monitoring Well 9MW1</u>															
GW9-MW1-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW1-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW2</u>															
GW9-MW2-Q1	11/15/92	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	-	ND(0.002)	ND(0.002)	ND(0.002)	0.0026	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q2	3/9/93	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	-	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	-	-	-	-	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0016	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0010	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0005	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0007	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW2-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW3</u>															
GW9-MW3-Q3 ¹	7/21/93	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	-	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	0.330	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW3-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	-	-	-	-	ND(0.002)	0.180	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW3-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.250	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.190	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.160	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.160	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q9	5/31/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q10	8/28/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.100	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q11	11/29/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.180	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW3-Q13	5/23/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.00050)	-	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)
<u>Monitoring Well 9MW4</u>															
GW9-MW4-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	0.0025	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW4-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW5</u>															
GW9-MW5-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)
GW9-MW5-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)

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VOLATILE ORGANIC COMPOUND GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET
{mg/L}

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	cis-1,3-Di-chloropropene	trans-1,3-Di-chloropropene	Ethyl-Benzene	Freon 113	2-Hexanone	Methyl Ethyl Ketone	Methyl Isobutyl Ketone	Methylene Chloride	Styrene	1,1,2,2-Tetra-chloroethane	Tetra-chloroethane
<u>Monitoring Well 9MW1</u>															
GW9-MW1-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW1-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW1-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW1-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW2</u>															
GW9-MW2-Q1	11/15/92	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	-	-	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)
GW9-MW2-Q2	3/9/93	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	-	-	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)
GW9-MW2-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.005)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW2-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW2-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0005	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW2-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW2-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW2-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW2-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW3</u>															
GW9-MW3-Q3	7/21/93	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	0.049	-	-	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)
GW9-MW3-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	0.047	-	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.005)	ND(0.002)	ND(0.002)	ND(0.002)
GW9-MW3-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.045	ND(0.0005)	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.029	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.031	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.031	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q9	5/31/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.037	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.053	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q11	11/29/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.021	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.100	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW3-Q13	5/23/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.00050)	ND(0.00050)	0.072	-	-	-	-	ND(0.00050)	-	ND(0.00050)	ND(0.00050)
<u>Monitoring Well 9MW4</u>															
GW9-MW4-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0061	ND(0.0005)	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW4-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0028	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW4-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0056	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW4-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0055	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW4-Q11	11/29/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	0.0010	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
<u>Monitoring Well 9MW5</u>															
GW9-MW5-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW5-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW5-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.005)	-	ND(0.0005)	ND(0.0005)
GW9-MW5-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)
GW9-MW5-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	-	-	ND(0.0005)	-	ND(0.0005)	ND(0.0005)

VOLATILE ORGANIC COMPOUND GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET
{mg/L}

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab										
					Toluene	1,1,1-Tri-chloroethane	1,1,2-Tri-chloroethane	Tri-chloroethene	Trichlorofluoro-methane	Trichloro-trifluoroethane	Vinyl Acetate	Vinyl Chloride	Total Xylenes	
<u>Monitoring Well 9MW1</u>														
GW9-MW1-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	ND(0.0005)	ND(0.0005)	
GW9-MW1-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW1-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW1-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
<u>Monitoring Well 9MW2</u>														
GW9-MW2-Q1	11/15/92	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	-	-	ND(0.002)	ND(0.002)	
GW9-MW2-Q2	3/9/93	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	-	-	ND(0.002)	ND(0.002)	
GW9-MW2-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)	ND(0.002)	
GW9-MW2-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	0.0008	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	ND(0.0005)	ND(0.0005)	
GW9-MW2-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	0.0014	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0006	
GW9-MW2-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	0.0018	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0005	
GW9-MW2-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	0.0013	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0005	
GW9-MW2-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW2-Q12	02/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
<u>Monitoring Well 9MW3</u>														
GW9-MW3-Q3 ¹	7/21/93	5 1/4'-20 1/4' screen	water	CrLab	0.050	ND(0.002)	ND(0.002)	0.0024	ND(0.002)	-	-	ND(0.002)	0.047	
GW9-MW3-Q4	1/29/94	5 1/4'-20 1/4' screen	water	CrLab	0.220	ND(0.002)	ND(0.002)	ND(0.002)	ND(0.002)	-	ND(0.002)	ND(0.002)	0.036	
GW9-MW3-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	0.180	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	ND(0.0005)	0.043	
GW9-MW3-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	0.076	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.022	
GW9-MW3-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	0.130	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.028	
GW9-MW3-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	0.120	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.033	
GW9-MW3-Q9	5/31/95	5 1/4'-20 1/4' screen	water	CrLab	0.170	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.044	
GW9-MW3-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	0.150	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.044	
GW9-MW3-Q11	11/29/95	5 1/4'-20 1/4' screen	water	CrLab	0.038	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.016	
GW9-MW3-Q12	2/29/96	5 1/4'-20 1/4' screen	water	CrLab	0.430	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.099	
GW9-MW3-Q13	5/23/96	5 1/4'-20 1/4' screen	water	CrLab	0.350	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	ND(0.00050)	-	ND(0.00050)	0.074	
<u>Monitoring Well 9MW4</u>														
GW9-MW4-Q5	5/26/94	5 1/4'-20 1/4' screen	water	CrLab	0.0032	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	-	ND(0.0005)	0.0047	
GW9-MW4-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	0.0009	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0026	
GW9-MW4-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	0.0017	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0034	
GW9-MW4-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	0.0013	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0030	
GW9-MW4-Q11	11/29/95	5 1/4'-20 1/4' screen	water	CrLab	0.0070	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	0.0070	
<u>Monitoring Well 9MW5</u>														
GW9-MW5-Q6	9/24/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW5-Q7	11/22/94	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW5-Q8	2/8/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW5-Q10	8/9/95	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	
GW9-MW5-Q12	02/29/96	5 1/4'-20 1/4' screen	water	CrLab	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	ND(0.0005)	-	ND(0.0005)	ND(0.0005)	

notes: CrLab: Chromalab Inc.; ¹ = probably corrected, apparently not GW9-MW2-Q3; ND(0.002) = Not Detected above the laboratory detection limit in parentheses.

METALS GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET
{mg/L}

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Ag Silver	As Arsenic	Ba Barium	Bc Beryllium	Cd Cadmium	Co Cobalt	Cr Chromium	Cu Copper	Hg Mercury	Mo Molybdenum	Ni Nickel
<u>Monitoring Well 9MW1</u>															
GW9-MW1-Q1	11/15/92	5¼'-20¼' _{screen}	water	CrLab	ND(0.005)	ND(0.005)	0.18	0.002	ND(0.001)	ND(0.01)	ND(0.01)	0.007	ND(0.001)	ND(0.005)	ND(0.020)
GW9-MW1-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.005)	ND(0.005)	0.19	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)	ND(0.005)	0.003	ND(0.005)	ND(0.020)
GW9-MW1-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab	0.011	ND(0.005)	0.27	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)	0.007	ND(0.001)	0.010	ND(0.020)
GW9-MW1-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.005)	ND(0.005)	0.12	ND(0.001)	ND(0.001)	ND(0.01)	ND(0.01)	ND(0.005)	ND(0.001)	ND(0.005)	ND(0.02)

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Pb Lead	Sb Antimony	Se Selenium	Tl Thallium	V Vanadium	Zn Zinc
<u>Monitoring Well 9MW1</u>										
GW9-MW1-Q1	11/15/92	5¼'-20¼' _{screen}	water	CrLab	ND(0.010)	ND(0.020)	0.021	ND(0.01)	ND(0.01)	ND(0.005)
GW9-MW1-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.010)	0.03	0.04	ND(0.01)	ND(0.01)	0.03
GW9-MW1-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab	ND(0.010)	ND(0.020)	ND(0.01)	ND(0.01)	ND(0.01)	0.015
GW9-MW1-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab	ND(0.01)	ND(0.02)	0.018	0.12	0.010	ND(0.005)

Monitoring Well 9MW2

GW9-MW2-Q2	3/9/93	5¼'-20¼' _{screen}	water	CrLab			0.08			
GW9-MW2-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab			ND(0.01)			
GW9-MW2-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab			0.026			

Monitoring Well 9MW3

GW9-MW3-Q3	7/21/93	5¼'-20¼' _{screen}	water	CrLab			ND(0.01)			
GW9-MW3-Q4	1/29/94	5¼'-20¼' _{screen}	water	CrLab			0.025			

notes: CrLab: Chromalab Inc.
ND(0.25) = Not Detected above the laboratory detection limit in parentheses.

Table A/GW5
INORGANIC GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Total Nitrogen (351.3/300) (mg/L)	Phosphorus (365.2) (mg/L)	Iron (3010AM/6010) (mg/L)	Manganese (3010AM/6010) (mg/L)	Potassium (3010AM/6010) (mg/L)
<u>Monitoring Well 9MW3</u>									
GW9-MW3-Q9	5/31/95	5¼'-20¼' _{screen}	water	GeoAnal CrLab	ND(0.2)	0.09	3.2	3.3	1.4
GW9-MW3-Q10	8/28/95	5¼'-20¼' _{screen}	water	GeoAnal CrLab	ND(0.2)	1.0	ND(0.1)	1.2	34

notes: GeoAnal: GeoAnalytical Laboratories, Inc.; CrLab: Chromalab Inc.
ND(0.25) = Not Detected above the laboratory detection limit in parentheses.

Table A/GW6
DISSOLVED OXYGEN GROUNDWATER RESULTS
PACO PUMPS - 9201 SAN LEANDRO STREET

Sample I.D.	Sampling Date	Depth (feet)	Matrix	Lab	Dissolved Oxygen (Hach OX-2P) (mg/L)
<u>Monitoring Well 9MW3</u>					
GW9-MW3-Q9	5/31/95	5¼'-20¼' _{screen}	water	field	11
GW9-MW3-Q10P	8/28/95	5¼'-20¼' _{screen}	water	field	64
GW9-MW3-Q10	8/28/95	5¼'-20¼' _{screen}	water	field	20
GW9-MW3-Q11P	11/29/95	5¼'-20¼' _{screen}	water	field	18
GW9-MW3-Q11	11/29/95	5¼'-20¼' _{screen}	water	field	3
GW9-MW3-Q12P	2/29/96	5¼'-20¼' _{screen}	water	field	8
GW9-MW3-Q12	2/29/96	5¼'-20¼' _{screen}	water	field	2
GW9-MW3-Q13P	5/23/96	5¼'-20¼' _{screen}	water	field	59
GW9-MW3-Q13	5/23/96	5¼'-20¼' _{screen}	water	field	3

notes: field: Performed in field with Hach Dissolved Oxygen Test Kit (Model OX-2P).
GW9-MW3-Q9: Sampled after purging, but prior to installation of Oxygen Release Compound (ORC) in well.
GW9-MW3-QnP: Sampled after removal of ORC, but prior to purging of the well.
GW9-MW3-Qn: Sampled after removal of ORC and purging of the well. n = 10, 11, 12, 13.

Appendix B
Chain-of-Custody Records

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.

Project#: PCO-220

Received: May 23, 1996

re: 1 sample for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020

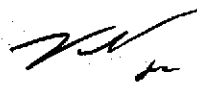
Matrix: WATER


Sampled: May 23, 1996

Run#: 1517

Analyzed: May 28, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
86105	GW9-MW1-Q13	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits		50	0.50	0.50	0.50	0.50
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		87.4	113	110	110	113


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.
Received: May 23, 1996

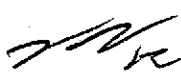
Project#: PCO-220


re: 1 sample for Gasoline and BTEX compounds analysis.
Method: EPA 5030/8015M/8020

Sampled: May 23, 1996
Matrix: WATER
Run#: 1530

Analyzed: May 30, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
86106	GW9-MW3-Q13P	6900	3300	340	71	74
Reporting Limits		500	50	5.0	5.0	5.0
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		89.0	118	113	113	116


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.

Project#: PCO-220

Received: May 23, 1996

re: 1 sample for Gasoline and BTEX compounds analysis.
Method: EPA 5030/8015M/8020


Sampled: May 23, 1996

Matrix: WATER

Run#: 1530

Analyzed: May 30, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
86109	GW9-MW3-Q13	4300	3200	350	72	74
Reporting Limits		500	50	5.0	5.0	5.0
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		89.0	118	113	113	116


June Zhao
Chemist

Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.

Project#: PCO-220

Received: May 23, 1996

re: 1 sample for Gasoline and BTEX compounds analysis.

Method: EPA 5030/8015M/8020


Sampled: May 23, 1996


Matrix: WATER

Run#: 1517

Analyzed: May 28, 1996

Spl#	CLIENT SPL ID	Gasoline (ug/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
86107	GW9-MW4-Q13	N.D.	11	2.0	2.3	1.9
Reporting Limits		50	0.50	0.50	0.50	0.50
Blank Result		N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		87.4	113	110	110	113


June Zhao
Chemist


Marianne Alexander
Gas/BTEX Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.
Received: May 23, 1996

Project#: PCO-220


re: 1 sample for TEPH analysis.
Method: EPA 3550/8015M


Sampled: May 23, 1996

Matrix: WATER
Run#: 1521

Extracted: May 28, 1996
Analyzed: May 28, 1996

Spl#	CLIENT SPL ID	Kerosene (ug/L)	Diesel (ug/L)	Motor Oil (ug/L)
86108	GW9-MW2-Q13	N.D.	N.D.	N.D.
Reporting Limits		50	50	500
Blank Result		N.D.	N.D.	N.D.
Blank Spike Result (%)		--	105	--


Dennis Mayugba
Chemist


Alex Tam
Semivolatiles Supervisor

CHROMALAB, INC.

Environmental Services (SDB)

May 30, 1996

Submission #: 9605770

JONAS & ASSOCIATES, INC.

Atten: Ellis Ishaya

Project: PACO PUMPS 9201 S.L.

Project#: PCO-220

Received: May 23, 1996

re: One sample for Volatile Halogenated Organics analysis.

Method: SW846 METHOD 8010A JULY, 1992

Client Sample ID: GW9-MW3-Q13

Spl#: 86109

Matrix: WATER

Sampled: May 23, 1996

Run#: 1546

Analyzed: May 28, 1996

ANALYTE	RESULT (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	BLANK SPIKE (%)	DILUTION FACTOR
VINYL CHLORIDE	N.D.	0.50	N.D.	--	1
CHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROFLUOROMETHANE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHENE	N.D.	0.50	N.D.	120	1
METHYLENE CHLORIDE	N.D.	0.50	0.700	--	1
TRANS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
CIS-1,2-DICHLOROETHENE	N.D.	0.50	N.D.	--	1
1,1-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
CHLOROFORM	N.D.	0.50	N.D.	--	1
1,1,1-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
CARBON TETRACHLORIDE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROETHANE	N.D.	0.50	N.D.	--	1
TRICHLOROETHENE	N.D.	0.50	N.D.	111	1
1,2-DICHLOROPROPANE	N.D.	0.50	N.D.	--	1
BROMODICHLOROMETHANE	N.D.	0.50	N.D.	--	1
2-CHLOROETHYL VINYL ETHER	N.D.	0.50	N.D.	--	1
TRANS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
CIS-1,3-DICHLOROPROPENE	N.D.	0.50	N.D.	--	1
1,1,2-TRICHLOROETHANE	N.D.	0.50	N.D.	--	1
TETRACHLOROETHENE	N.D.	0.50	N.D.	--	1
DIBROMOCHLOROMETHANE	N.D.	0.50	N.D.	--	1
CHLOROBENZENE	N.D.	0.50	N.D.	101	1
BROMOFORM	N.D.	0.50	N.D.	--	1
1,1,2,2-TETRACHLOROETHANE	N.D.	0.50	N.D.	--	1
1,3-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,4-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
1,2-DICHLOROBENZENE	N.D.	0.50	N.D.	--	1
TRICHLOROTRIFLUOROETHANE	N.D.	0.50	N.D.	--	1



Oleg Nemtsov
Chemist



Chip Poalinelli
Operations Manager