



# Industrial Compliance

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March 29, 1995

IC Project No. 05100535

Ms. Jennifer Eberle  
Alameda County Health Care Services Agency  
Department of Environmental Health  
Division of Hazardous Materials  
1131 Harbor Bay Parkway  
Alameda, California 94502

VIA REGULAR MAIL

**Re: Fourth Quarter 1994 Ground Water Monitoring Report  
Southern Pacific Transportation Company  
1399 Wood Street - Oakland, California**

Dear Ms. Eberle:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), has prepared the attached Fourth Quarter 1994 Ground Water Monitoring Report for the SPTCo site located at 1399 Wood Street, Oakland, California.

If you should have any questions regarding this report, please contact either of the undersigned at (510) 238-9540 or (916) 369-8971.

Sincerely,

INDUSTRIAL COMPLIANCE

James B. Ackerman  
Project Geologist

Richard L. Bateman, R.G.  
Principal Hydrogeologist

JBA/RLB/ekw

Attachment

- cc: Mr. John Moe, Southern Pacific Transportation Company (with attachment)
- Mr. Darrell J. Maxey, Oakland Program Office, Southern Pacific Transportation Company (with attachment)
- Ms. Gina Kathuria, California Regional Water Quality Control Board, San Francisco Region (with attachment)

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**Industrial Compliance**

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916/369-8971 FAX 916/369-8370

3-29-95

**FOURTH QUARTER 1994  
GROUND WATER MONITORING REPORT**

**Southern Pacific Transportation Company  
1399 Wood Street  
Oakland, California**

**IC Project No. 05100535**

**Prepared For:**

**Southern Pacific Transportation Company  
One Market Plaza  
San Francisco, CA 94105**

**March 29, 1995**

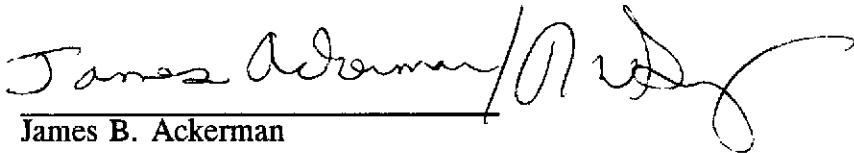
Denver • Phoenix • Kansas City • Dallas • Houston • Los Angeles • Sacramento • Little Rock • Knoxville



**FOURTH QUARTER 1994  
GROUND WATER MONITORING REPORT**

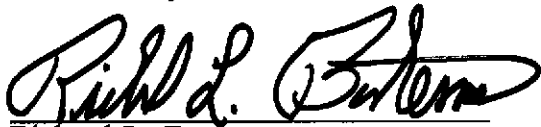
**Southern Pacific Transportation Company  
1399 Wood Street  
Oakland, California**

Prepared By:



James B. Ackerman  
Project Geologist

Reviewed By:



Richard L. Bateman  
Principal Hydrogeologist

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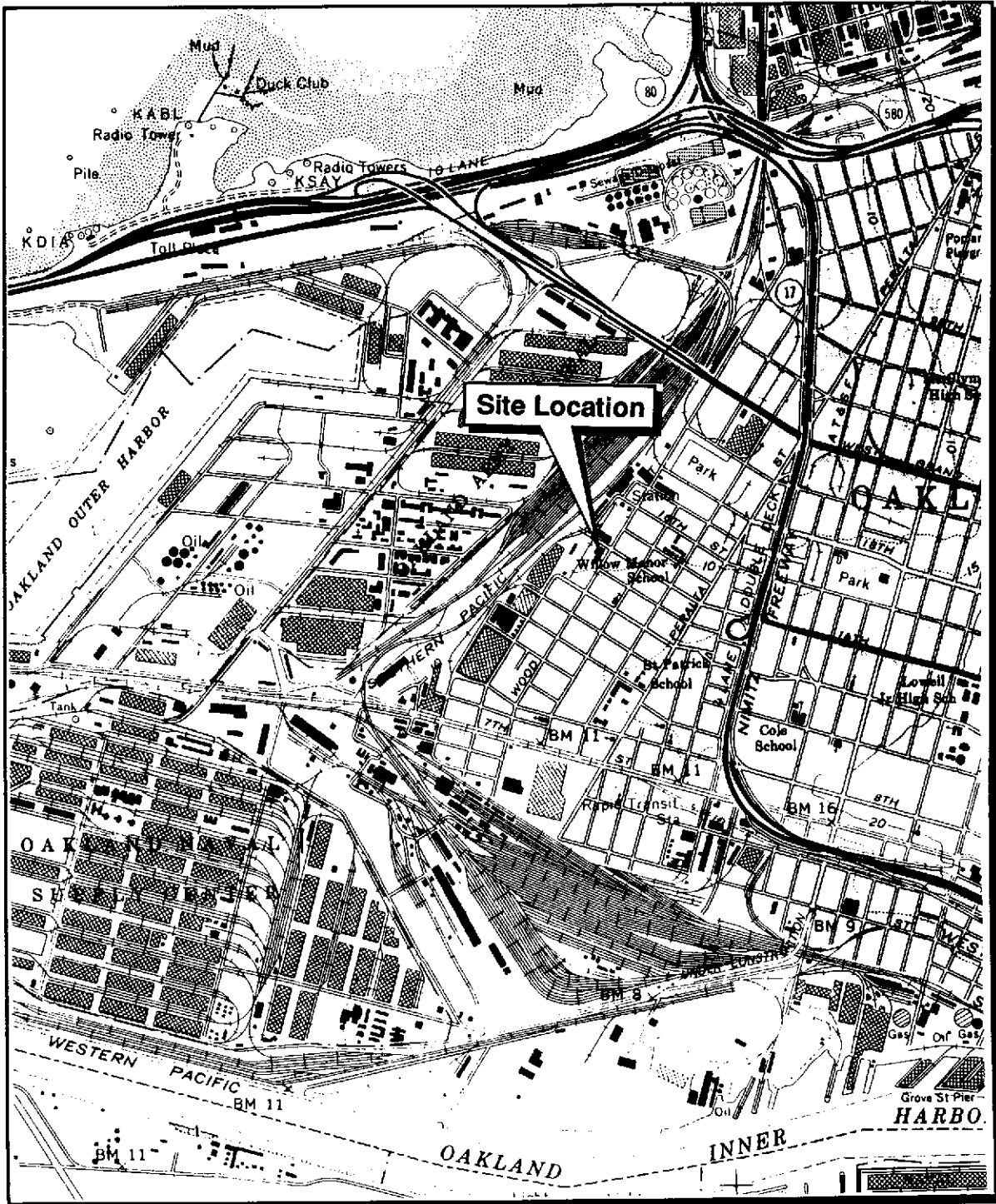
Appendix A	Purge Characterization and Sample Log Field Data Sheets
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## 1.0 INTRODUCTION

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo) is conducting quarterly ground water monitoring at the SPTCo property located at 1399 Wood Street, Oakland, California (Figure 1). The site was formerly the location of three underground storage tanks (USTs) along with a fuel dispensing island (Figure 2). Fourth quarter, 1994 monitoring and sampling activities were performed on December 19, 1994. This report presents the results of that monitoring event:





Approximate Scale in Feet  
 0 2000

**Figure 1**  
**Site Location Map**  
**Southern Pacific Transportation Company**  
**1399 Wood Street**  
**Oakland, California**

Reference:  
 USGS 7.5 Minute Topographic Map  
 Oakland West Quadrangle  
 California



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SPTCo Desert Yard

Excavation A

Tank Pit 3

Surface Drain

Asphalt

Former Shed Location

Former Dispenser Island

Excavation B

Concrete Loading Dock

Ramp

Tank Pit 1/2

Tank Pit 4

Asphalt

14th Street



Note:  
Location of utilities based on SPTCo base map, utility sublocator map, and field observations

**LEGEND**

- Approximate Location of SPTCo Property Boundary
- - - - - Approximate Location of Former Underground Storage Tank (USTs)
- x-x-x-x- Fence
- + + + + + Railroad Tracks
- Power Pole and Overhead Electrical Lines
- ▨ Building/Structures
- ▨ Asphalt Paved Road

Wood Street



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**SITE LAYOUT MAP**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY**  
**1399 WOOD STREET**  
**OAKLAND, CALIFORNIA**

Figure:  
**2**

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as shown

Project No.: **05100535**      Date: **02/13/95**

Drawn By: **Patti Decker**      Checked By: **Richard Bateman**

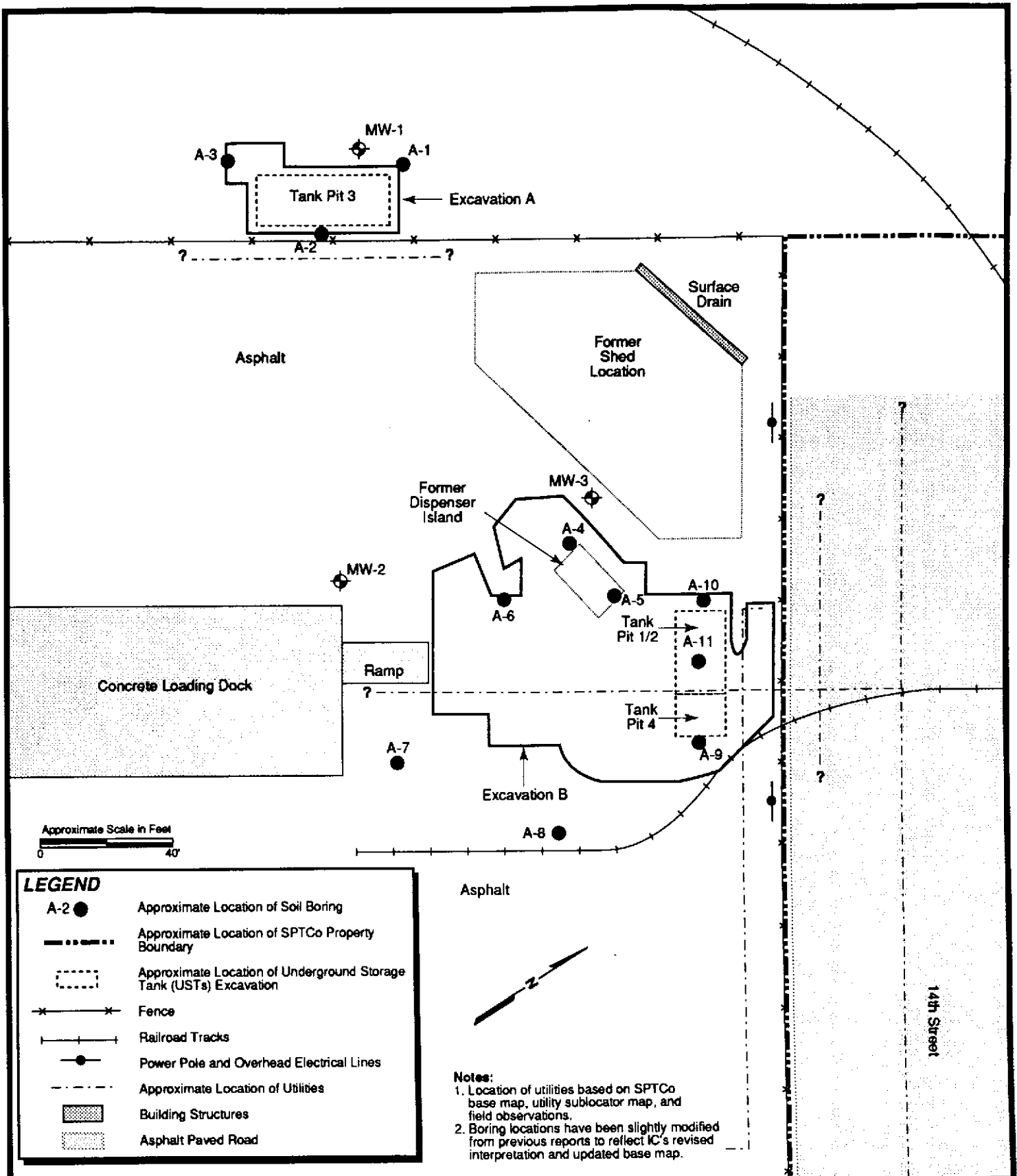


## 2.0 BACKGROUND

In July 1988, Canonie Environmental Services Corporation (Canonie) removed a fuel dispensing island with associated piping and three USTs (identified in Canonie's report as Tank 1/2, Tank 3, and Tank 4) from the 1399 Wood Street site: a 12,000-gallon split-compartment diesel-gasoline tank (Tank 1/2), a 7,300 gallon diesel tank (Tank 3), and a 550 gallon waste oil tank (Tank 4) (Figure 2). The procedures and results of this work were presented in a Canonie report dated December 18, 1989 (report entitled: *Final Site Report, Underground Storage Tank Removal, Southern Pacific Transportation Company, Oakland, California*).

The Alameda County Health Care Services Agency - Department of Environmental Health, Division of Hazardous Materials required SPTCo to conduct a further investigation of the site. In October 1992, IC performed a preliminary soil investigation in which 11 soil borings (A1 through A11) were drilled (Figure 3). Total petroleum hydrocarbons as gasoline (TPH-G) were identified in three borings near the former location of Tanks 1/2 and 4 and the former location of the fuel dispensing island. Total hydrocarbons as diesel were identified in four borings, two near the former location of Tanks 1/2 and 4, and two near the former location of Tank 3. The procedures and results of this work were presented in IC's report dated January 17, 1994 (report entitled: *Preliminary Soil Investigation Report, Southern Pacific Transportation Company, 1399 Wood Street, Oakland, California*).

In June of 1994, IC conducted a soil remediation and ground water investigation. As a result of the soil remediation activities, a total of 1,100 cubic yards (cy) of petroleum hydrocarbon impacted soil was removed from the site. Excavation A included the area immediately around the former location of Tank 3 (60 cy), and the area of excavation B included the former locations of Tank 1/2, Tank 4, and the fuel dispensing island. After conclusion of the soil remediation activities, a ground water investigation was initiated. As part of this



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**LOCATION OF SOIL BORINGS  
AND MONITORING WELLS  
INSTALLED DURING PREVIOUS INVESTIGATIONS  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
1399 WOOD STREET  
OAKLAND, CALIFORNIA**

Figure:

**3**

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investigation, four soil borings were drilled, three of which were converted to monitoring wells, and subsequently developed (MW-1, MW-2 and MW-3). Ground water sampling commenced on June 29, 1994. Locations of excavations, soil borings and monitoring wells are shown on Figure 3. The procedures and results of this work were presented in IC's report dated August 29, 1994 (report entitled: *Soil Remediation and Ground Water Investigation Report, Southern Pacific Transportation Company, 1399 Wood Street, Oakland, California*).

In September of 1994 (third quarter), IC initiated quarterly ground water monitoring and sampling activities using the monitoring wells installed during the June 1994 field activities. The results of the fourth quarter, 1994 sampling event are presented in this report.



### 3.0 FIELD INVESTIGATION

This section discusses the procedures and protocol used for the collection of monitoring well water level data and ground water samples for laboratory analyses.

#### 3.1 Monitoring Well Water Level Data

On December 19, 1994, prior to conducting any ground water sampling, the depth to ground water was measured in all three monitoring wells on site. All measurements were taken relative to the surveyed reference point of known elevation at the top of each well casing, using a water level probe with an accuracy of 0.01 feet. Ground water elevations for the fourth quarter of 1994 ranged from 4.36 to 6.23 feet above mean sea level (MSL).

Monitoring well ground water elevation data for this quarter are summarized in Table 1. Figure 4 is a ground water elevation contour map which depicts the approximate direction and gradient of ground water flow for this quarter. The direction of ground water flow is to the east. The local hydraulic gradient calculated from the December 19, 1994 water level data, is approximately 0.015 feet per foot.

#### 3.2 Monitoring Well Purging

After measurement of the ground water level in each well, the saturated well volume was calculated by subtracting the depth to ground water from the total depth of the well and multiplying the resultant length by the number of gallons per foot of casing. Prior to sample collection, three saturated well volumes were purged from each of the wells by hand-bailing. During purging, ground water characterization data consisting of temperature, electrical conductivity and pH, were measured from the initial water removed from the well, and at least three times during purging. The ground water in each well was assumed to be representative of the formation when three well volumes were removed and consecutive



**TABLE 1**  
**GROUND WATER ELEVATION DATA**  
**DECEMBER, 1994**

Monitoring Well <sup>a</sup>	Date Measured	Time Measured	Reference Elevation <sup>b</sup> (feet MSL)	Depth to Ground Water <sup>c</sup> (feet TOC)	Ground Water Elevation <sup>d</sup> (feet MSL)
MW-1	12/19/94	0825	7.71	1.48	6.23
MW-2	12/19/94	0809	7.00	2.06	4.94
MW-3	12/19/94	0816	7.32	2.96	4.36

a See Figure 3 for approximate location of monitoring wells.

b Reference casing elevation is a point marked on the top of the well casing, which has been measured by a licensed surveyor.

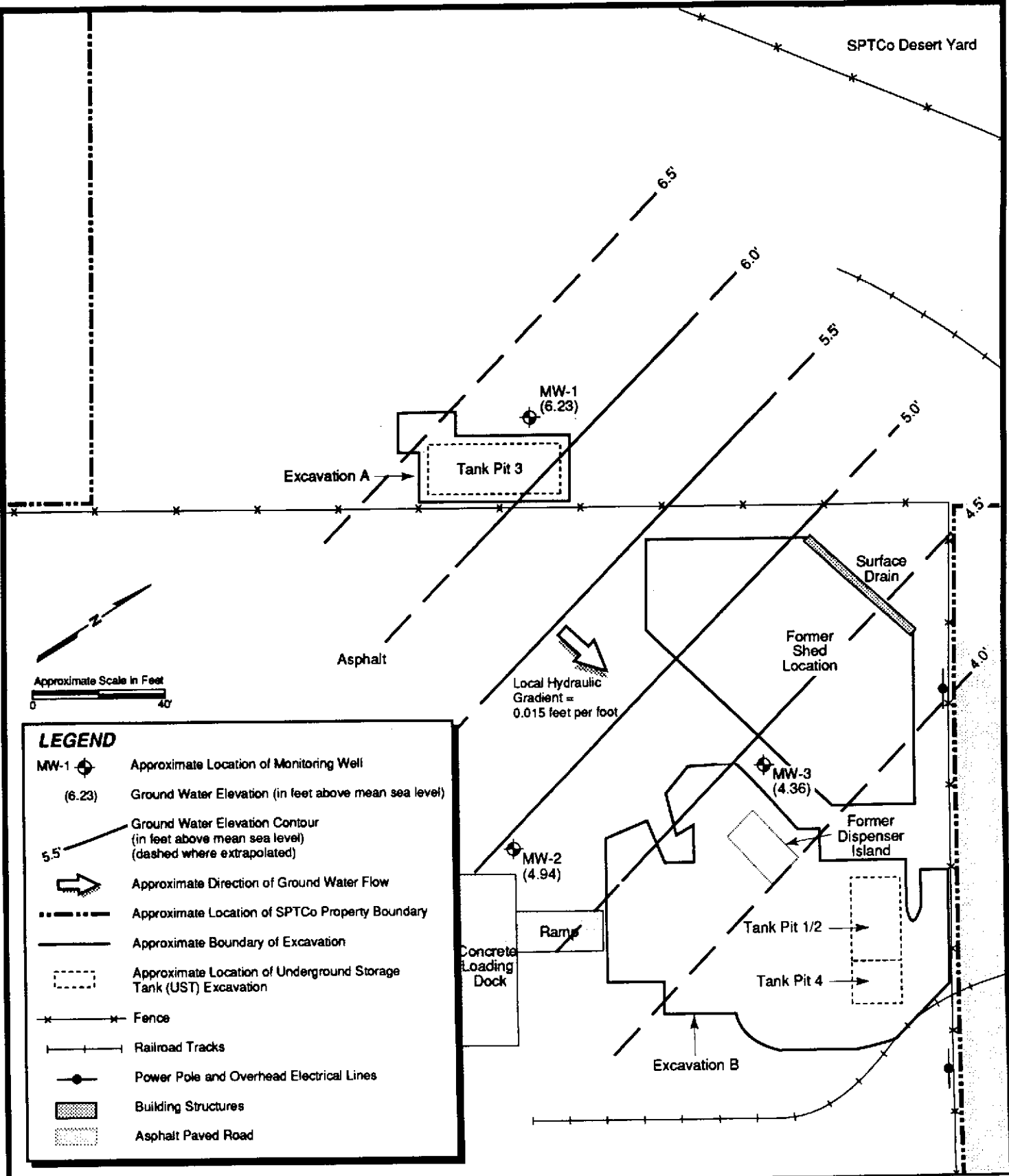
c Depth to ground water measured from top of casing (TOC).

d Ground water elevation calculated by subtracting the depth to ground water from the reference casing elevation.

MSL Mean sea level

TOC Top of casing





**LEGEND**

- MW-1 Approximate Location of Monitoring Well
- (6.23) Ground Water Elevation (in feet above mean sea level)
- Ground Water Elevation Contour (in feet above mean sea level) (dashed where extrapolated)
- Approximate Direction of Ground Water Flow
- Approximate Location of SPTCo Property Boundary
- Approximate Boundary of Excavation
- Approximate Location of Underground Storage Tank (UST) Excavation
- Fence
- Railroad Tracks
- Power Pole and Overhead Electrical Lines
- Building Structures
- Asphalt Paved Road

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**CONTOUR MAP OF GROUND WATER ELEVATION  
 DECEMBER, 1994  
 SOUTHERN PACIFIC TRANSPORTATION COMPANY  
 1399 WOOD STREET  
 OAKLAND, CALIFORNIA**

Figure:	4
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parameter readings were within 10 percent. After purging was completed, each well was allowed to recover to at least 90 percent of the pre-purge water level prior to sampling. Purge water was collected in 55-gallon Department of Transportation approved drums. Purge water was subsequently disposed of at the SPTCo water treatment plant located in the West Oakland Yard, after analytical results from the ground water sampling indicated that the purge water met treatment plant influent requirements. Ground water purge characterization data are summarized in Table 2. Purge characterization and sample log field data sheets are included in Appendix A.

### 3.3 Monitoring Well Sampling

Ground water samples were collected using new, disposable polyethylene bailers. Ground water samples were collected in laboratory-supplied bottles of appropriate volumes and with required preservatives for the intended analyses. Volatile organic analysis (VOA) sample bottles were filled to capacity, sealed with Teflon-lined lids, and checked for air bubbles. If air bubbles were detected, the vial was reopened, additional sample water added, and the vial resealed.

After sample collection was completed, each sample was labeled with a unique sample number, the site name, date of collection, time of collection, initials of collector, and any other pertinent information. The samples were then placed in a chilled ice chest for transport to Chromalab Inc. Environmental Services (Chromalab) for analysis. A chain-of-custody form was completed concurrent with sample collection and accompanied the samples upon transport to the laboratory. The chain-of-custody document is included as Appendix B.



**TABLE 2**  
**GROUND WATER PURGE CHARACTERIZATION DATA**  
**DECEMBER, 1994**

Monitoring Well <sup>a</sup>	Date Measured	Purge Volume (gallons)	Electrical Conductivity ( $\mu$ mhos/cm)	Temperature ( $^{\circ}$ F)	Field pH (units)
MW-1	12/19/94	0	686	57.3	8.36
		6	609	55.8	7.90
		12	588	55.3	7.87
		18	594	55.0	7.89
		24	590	54.7	7.88
MW-2	12/19/94	0	758	56.6	7.98
		6	799	57.6	8.02
		12	818	58.2	8.04
		18	803	57.5	8.04
		24	785	57.8	8.07
MW-3	12/19/94	0	1070	57.1	7.92
		5	1160	60.3	NM
		10	1170	60.2	NM
		15	1150	59.2	NM
		21	1160	59.7	NM

a See Figure 3 for approximate location of monitoring wells.

$\mu$ mhos/cm Micromhos per centimeter

$^{\circ}$ F Degrees Fahrenheit

Note: Purge characterization data sheets included in Appendix A.





All ground water samples were analyzed for the following constituents:

<u>Constituents</u>	<u>Analytical</u>
Total petroleum hydrocarbons as gasoline (TPH-G)	EPA Method 8015 Modified
Total petroleum hydrocarbons as diesel (TPH-D)	EPA Method 8015 Modified
Benzene, toluene, ethylbenzene, and xylenes (BTEX)	EPA Method 8020
Polychlorinated biphenyls (PCBs)	EPA Method 608 Modified
Total dissolved solids (TDS)	EPA Method 160.1
Sodium chloride	Calculation <sup>1</sup>

### 3.4 Quality Assurance/Quality Control

To evaluate the integrity of the ground water sampling/analysis process, a duplicate ground water sample was collected from MW-1 using the procedures previously described in Section 3.3. This duplicate was analyzed for the same constituents as the original ground water sample.

To assess the potential for cross-contamination of the ground water samples during transport to the laboratory, one trip blank was prepared in the field prior to sampling and accompanied the ground water samples during shipment to the laboratory. The trip blank was analyzed for TPH-G and BTEX compounds only.

In addition, one equipment blank was prepared by pouring deionized (DI) water through the sampling equipment into the sample bottles. The equipment blank was analyzed for all constituents listed in Section 3.3, except for sodium chloride and TDS.

---

1. Sodium chloride concentration obtained by calculation, after analyzing for sodium and chloride separately



#### 4.0 ANALYTICAL RESULTS

Fourth quarter 1994 ground water samples were analyzed by Chromalab for the suite of constituents listed in Section 3.3. Analytical results are summarized in Table 3. Figure 5 is a chemical distribution map. Analytical laboratory reports are included as Appendix C. The following is a summary of the fourth quarter, 1994 analytical results:

- \* PCBs were not detected in any of the wells at or above the reporting limit.
- \* Ground water from MW-1 and MW-2 did not contain TPH-G or BTEX at or above the respective reporting limits.
- \* TPH-D<sup>2</sup> was detected in MW-1 at a concentration of 160 micrograms per liter ( $\mu\text{g/L}$ ).
- \* TPH-G was detected in MW-3 at a concentration of 410  $\mu\text{g/L}$ .
- \* Benzene, toluene, and xylenes were detected in MW-3 at concentrations of 5.1  $\mu\text{g/L}$ , 4.5  $\mu\text{g/L}$  and 3.6  $\mu\text{g/L}$  respectively, while ethylbenzene was not detected at or above the reporting limit.
- \* Sodium chloride concentrations ranged from 35 milligrams per liter (mg/L) in MW-2 to 49 mg/L in MW-3 (average concentration for all three wells = 41 mg/L).

---

2. The hydrocarbons detected in the diesel range did not match the typical chromatographic pattern for diesel.



**TABLE 3**  
**GROUND WATER ANALYTICAL RESULTS**  
**DECEMBER, 1994**

Well Location	Date Sampled	Total Petroleum Hydrocarbons <sup>a</sup> ( $\mu\text{g/L}$ )		Volatile Organic Compounds <sup>b</sup> ( $\mu\text{g/L}$ )				PCBs <sup>c</sup> ( $\mu\text{g/L}$ )	Sodium Chloride <sup>d</sup> (mg/L)	Total Dissolved Solids <sup>e</sup> (mg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Xylenes			
MW-1	12/19/94	<50	160*	<0.5	<0.5	<0.5	<0.5	<0.5	40	510
MW-2	12/19/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	35	900
MW-3	12/19/94	410	<50	5.1	4.5	<0.5	3.6	<0.5	49	1020
Duplicate (MW-1D)	12/19/94	<50	140*	<0.5	<0.5	<0.5	<0.5	<0.5	38	510
Equipment Blank	12/19/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA
Trip Blank	12/19/94	<50	NA	<0.5	<0.5	<0.5	<0.5	NA	NA	NA
Cal DHS MCLs <sup>f</sup>		NE	NE	1	100 <sup>g</sup>	680	1,750	0.5 <sup>h</sup>	NE	500

a Analyzed by EPA Method 8015 Modified.

b Analyzed by EPA Method 8020.

c Analyzed by EPA Method 608 Modified.

d Sodium chloride concentrations determined by calculation, after analyzing for sodium and chloride separately.

e Analyzed by EPA Method 160.1

f California Department of Health Services(DHS) Maximum Contaminant Levels (MCLs) for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).

g California DHS action level for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals)

h U.S. Environmental Protection Agency (USEPA) MCLs for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals) .

PCBs Polychlorinated biphenyls

$\mu\text{g/L}$  Micrograms per liter

mg/L Milligrams per liter

< Symbol indicates constituents not detected above reporting limits.

ND Not detected above the reporting limit.

NA Not analyzed

NE Not established

\* Non-typical chromatographic diesel pattern



Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	PCBs (µg/L)	Total Dissolved Solids (mg/L)
	Gasoline	Diesel*	Benzene	Toluene	Ethyl-benzene			
12/19/94	<50	160	<0.5	<0.5	<0.5	40	ND	510

MW-1

Tank Pit 3

Excavation A

Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	PCBs (µg/L)	Total Dissolved Solids (mg/L)
	Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene			
12/19/94	<50	<50	<0.5	<0.5	<0.5	35	ND	900

Surface Drain

Former Shed Location

MW-3

MW-2

Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	PCBs (µg/L)	Total Dissolved Solids (mg/L)	
	Gasoline	Diesel	Benzene	Toluene	Ethyl-benzene				Xylenes
12/19/94	410	<50	5.1	4.5	<0.5	3.6	49	ND	1,020



**LEGEND**

- MW-1 Approximate Location of Monitoring Well
- Approximate Location of SPTCo Property Boundary
- Approximate Boundary of Excavation
- Approximate Location of Underground Storage Tank (USTs) Excavation
- Fence
- Railroad Tracks
- Power Pole and Overhead Electrical Lines
- Building Structures
- Asphalt Paved Road

**NOTES:**

1. Total petroleum hydrocarbons (TPH) analyzed by EPA Method 8015 Modified and volatile organic compounds analyzed by EPA Method 8020 Modified
  2. Polychlorinated biphenyls (PCBs) analyzed by EPA Method 608.
  3. Sodium chloride concentrations determined by calculation.
  4. Total dissolved solids analyzed by EPA Method 160.1.
  5. Sample results reported in micrograms per liter (µg/L), or milligrams per liter (mg/L).
  6. < = Indicates the constituent not detected at a concentration at or above the method practical quantitation limit as noted.
- \* Hydrocarbons detected in the diesel range do not match the typical chromatographic pattern for diesel.



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Project No.: 05100535 Date: 02/13/95  
 Drawn By: Patti Decker Checked By: Richard Bateman

**CHEMICAL DISTRIBUTION MAP FOR  
 CONSTITUENTS IN GROUND WATER SAMPLES  
 DECEMBER 1994  
 SOUTHERN PACIFIC TRANSPORTATION COMPANY  
 1399 WOOD STREET  
 OAKLAND, CALIFORNIA**

Figure:

5

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Scale:

as shown

- \* TDS ranged from 510 mg/L in MW-1 to 1,020 mg/L in MW-3 (average concentration for all three wells = 810 mg/L).

The analytical results for the duplicate ground water sample collected from MW-1 were consistent with the analytical results for the original sample.

None of the analyzed constituents were detected at or above their respective reporting limits in either the trip blank or the equipment blank.

All laboratory procedures (holding times, methods used, method blanks, documentation, etc.) and subsequent results were monitored throughout the analytical process according to standard quality assurance/quality control (QA/QC) procedures. In addition, all laboratory reports were evaluated as part of QA/QC procedures for ground water monitoring. The analytical data included in this fourth quarter, 1994 report are considered quantitatively valid.



## 5.0 DISCUSSION

Based on data collected during the fourth quarter, 1994 ground water monitoring event at the 1399 Wood Street site, the chemical compounds present in the ground water consist primarily of petroleum hydrocarbons in the gasoline and diesel range. Figure 6 shows the estimated lateral extent of TPH-G in ground water. Gasoline impacted ground water appears to be limited to the area around the former location of the fuel dispensing island, as indicated by the detection of gasoline hydrocarbons in monitoring well MW-3 only. Figure 7 shows the estimated lateral extent of TPH-D in ground water. Diesel impacted ground water appears to be limited to the area around the former location of Tank 3 as indicated by the detection of diesel hydrocarbons in MW-1 exclusively. Benzene was the only constituent detected this quarter at a concentration which exceeds the California Department of Health Services (DHS) water quality goals for drinking water. Monitoring well MW-3 contained benzene at a concentration of 5.1  $\mu\text{g/L}$ . The California DHS maximum contaminant level (MCL) for benzene is 1  $\mu\text{g/L}$ .

Table 4 summarizes ground water analytical data collected during this and all previous sampling events. A review of these analytical data shows that concentrations of TPH-G and BTEX compounds have been detected in MW-3 but have not been detected in MW-1 or MW-2. TPH-G has been detected in MW-3 during all sampling events. This quarter, TPH-G concentrations were slightly higher (410  $\mu\text{g/L}$ ), than during previous monitoring events (110  $\mu\text{g/L}$  to 160  $\mu\text{g/L}$ ). In MW-3, concentrations of both benzene and toluene (5.1  $\mu\text{g/L}$  and 4.5  $\mu\text{g/L}$  respectively) increased this quarter in comparison with the analytical results of last quarter (0.8  $\mu\text{g/L}$  and 1.6  $\mu\text{g/L}$  respectively). Also in MW-3, the concentrations of xylenes have increased from 0.8  $\mu\text{g/L}$  in June of 1994 to 3.6  $\mu\text{g/L}$  this quarter. Ethylbenzene has not been detected in MW-3 during any sampling event.



MW-1  
(<50)

Excavation A

Tank Pit 3

Surface  
Drain




Former  
Shed  
Location

Asphalt

Approximate Scale in Feet  
0 40'

Note:  
< = indicates the constituent not detected at a concentration at or above reporting limit as noted.

**LEGEND**

- MW-1  Approximate Location of Monitoring Well
- (410) Concentration of Total Petroleum Hydrocarbons (TPH) as Gasoline (in micrograms per liter)
- 100 — Approximate Extent of TPH-impacted Ground Water (dashed where inferred)
- - - - - Approximate Location of SPTCo Property Boundary
- — — — — Approximate Boundary of Excavation
- - - - - Approximate Location of Underground Storage Tank (USTs) Excavation
- x — x Fence
- + — Railroad Tracks
- ● — Power Pole and Overhead Electrical Lines
-  Building Structures
-  Asphalt Paved Road

MW-2  
(<50)

MW-3  
(410)

Former  
Dispenser  
Island

100

Tank Pit 1/2

Tank Pit 4

Concrete  
Loading  
Dock

Ramp

Excavation B



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**ESTIMATED LATERAL EXTENT OF TPH AS  
GASOLINE IN GROUND WATER - DECEMBER 1994  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
1399 WOOD STREET  
OAKLAND, CALIFORNIA**

Figure:

**6**

Page:

**18**

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as shown

Project No.: **05100535** Date: **02/13/95**

Drawn By: **Patti Decker** Checked By: **Richard Bateman**





**TABLE 4**  
**GROUND WATER ANALYTICAL RESULTS**  
**HISTORIC SUMMARY**

Well Location	Date Sampled	Total Petroleum Hydrocarbons <sup>a</sup> (µg/L)		Volatile Organic Compounds <sup>b</sup> (µg/L)				PCBs <sup>c</sup> (µg/L)	Sodium Chloride <sup>d</sup> (mg/L)	Total Dissolved Solids <sup>e</sup> (mg/L)
		Gasoline	Diesel	Benzene	Toluene	Ethylbenzene	Xylenes			
MW-1	06/29/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<1	40	410
	09/30/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	630
	12/19/94 ✓	<50 ✓	<b>160*</b>	<0.5 ✓	<0.5	<0.5	<0.5	<0.5	40	510
MW-2	06/29/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<1	48	680
	09/30/94	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	NA	670
	12/19/94	<50 ✓	<50	<0.5 ✓	<0.5	<0.5	<0.5	<0.5	35	900
MW-3	06/29/94	110	<50	<0.5	0.9	<0.5	0.8	<1	60	850
	09/30/94	160	<50	0.8	1.6	<0.5	2.3	<0.5	NA	880
	12/19/94	410 ✓	<50 ✓	5.1 ✓	4.5	<0.5	3.6	<0.5	49	1020
Cal DHS MCLs <sup>f</sup>		NE	NE	1	100 <sup>g</sup>	680	1,750	0.5 <sup>h</sup>	NE	500

a Analyzed by EPA Method 8015 Modified (June 29, 1994 samples analyzed by EPA Method 8260 Modified).

b Analyzed by EPA Method 8020 (June 29, 1994 samples analyzed by EPA Method 8260 Modified).

c Analyzed by EPA Method 608 Modified.

d Analyzed by EPA Method 8020.

e Analyzed by EPA Method 160.1

f California Department of Health Services (DHS) Maximum Contaminant Levels (MCLs) for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).

g California DHS action level for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).

h U.S. Environmental Protection Agency (USEPA) MCLs for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).

PCB Polychlorinated biphenyls

µg/L Micrograms per liter

mg/L Milligrams per liter

< Symbol indicates constituents not detected above method detection or reporting limits as noted.

NA Not analyzed

NE No MCL established

\* Non-typical chromatographic diesel pattern



Ground water elevation contour maps for all previous monitoring events are included in Appendix D. Table 5 lists all ground water elevation data collected to date. A comparison of ground water elevation data collected during the fourth quarter, 1994 sampling event with ground water elevations measured during the previous sampling event, indicates an average increase of 2.21 feet in ground water elevation. The local hydraulic gradient for the fourth quarter, 1994 was calculated to be 0.015 feet per foot which has increased relative to the gradient for the September, 1994 gradient of 0.003 feet per foot. The direction of ground water flow has remained consistently to the east/northeast. The observed increase in ground water elevation is most likely due to seasonal variation. Figure 8 shows hydrographs of ground water elevations for all monitoring wells.



**TABLE 5  
GROUND WATER ELEVATION DATA  
HISTORIC SUMMARY**

Monitoring Well <sup>a</sup>	Date Measured	Time Measured	Reference Elevation <sup>b</sup> (feet MSL)	Depth to Ground Water <sup>c</sup> (feet TOC)	Ground Water Elevation <sup>d</sup> (feet MSL)
MW-1	06/29/94	0900	7.74	3.36	4.38
	09/30/94	1000	7.71*	4.56	3.15
	12/19/94	0825		1.48	6.23 ↑
MW-2	06/29/94	0900	7.00*	3.94	3.06
	09/30/94	1015		4.04	2.96
	12/19/94	0809		2.06	4.94 ↑
MW-3	06/29/94	0900	7.43	3.50	3.84
	09/30/94	1030	7.32*	4.52	2.80
	12/19/94	0810		7.32	4.36 ↑

a See Figure 3 for approximate location of monitoring wells.

b Reference casing elevation is a point marked on the top of the well casing, which has been measured by a licensed surveyor.

c Depth to ground water measured from top of casing (TOC).

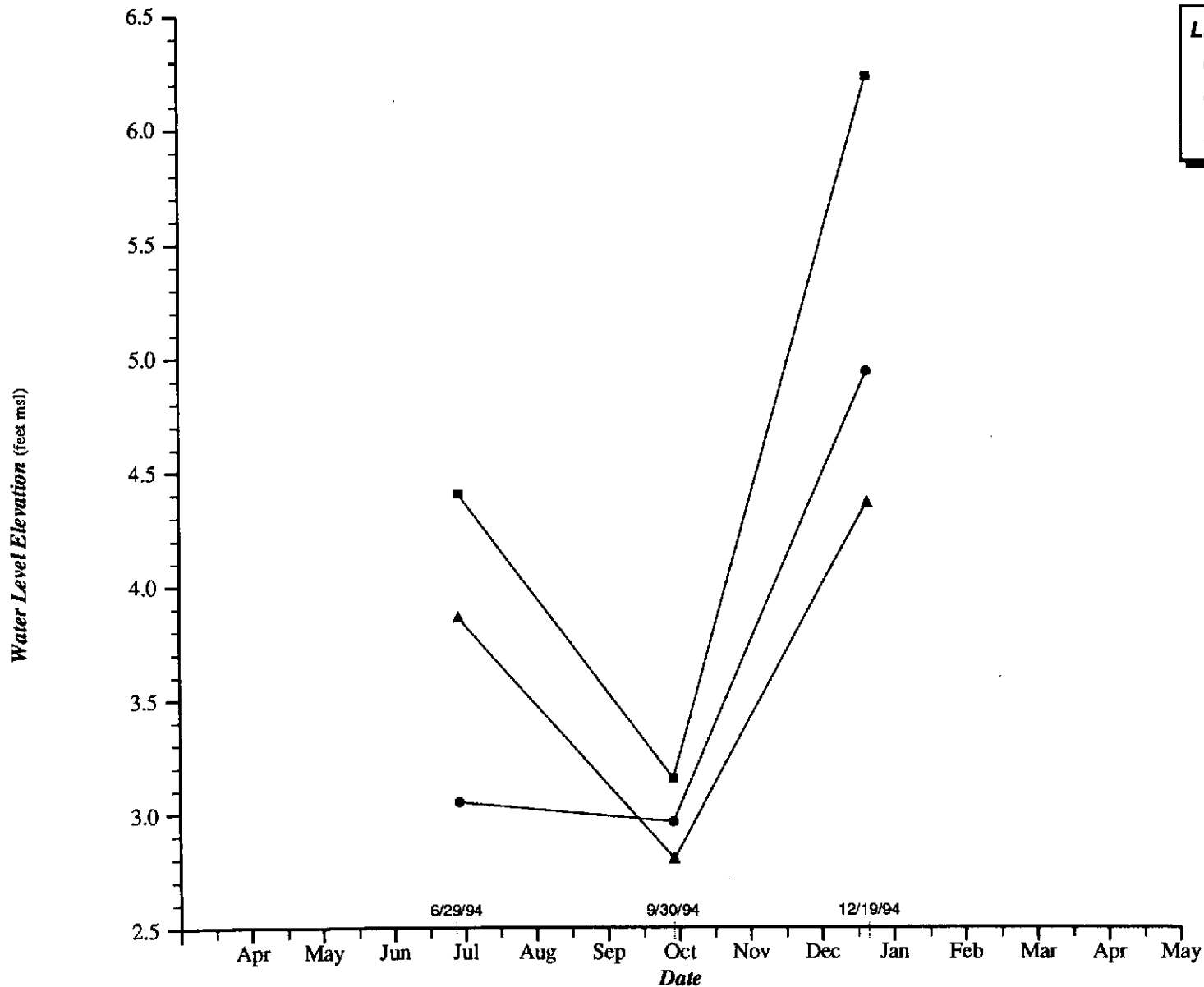
d Ground water elevation calculated by subtracting the depth to ground water from the reference casing elevation.

MSL Mean sea level

TOC Top of casing


\* Well resurveyed in September of 1994.





**LEGEND**

- Monitoring Well MW-1
- Monitoring Well MW-2
- ▲ Monitoring Well MW-3

	<b>Industrial Compliance</b> A Subsidiary of SP Environmental Systems, Inc.	
	Project No.: <b>05100535</b>	Date: <b>02/13/95</b>
Drawn By: <b>Patti Decker</b>	Checked By: <b>Richard Bateman</b>	

**HYDROGRAPHS OF GROUND WATER ELEVATION  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
1399 WOOD STREET  
OAKLAND, CALIFORNIA**

Figure:	<b>8</b>
Page No.:	<b>23</b>
Scale:	as shown

OAK-536/O494GW/F-08 #300

## 6.0 GLOSSARY OF ACRONYMS

BTEX	Benzene, toluene, ethylbenzene, and xylenes
cy	Cubic yards
DHS	Department of Health Services
DI	Deionized
IC	Industrial Compliance
MCLs	Maximum contaminant levels
mg/L	Milligrams per liter
MSL	Mean sea level
PCBs	Polychlorinated biphenyls
QA/QC	Quality Assurance/Quality Control
SPTCo	Southern Pacific Transportation Company
TDS	Total dissolved solids
TPH-D	Total petroleum hydrocarbons as diesel
TPH-G	Total petroleum hydrocarbons as gasoline
UST	Underground storage tank
VOA	Volatile organic analysis
$\mu\text{g/L}$	Micrograms per liter



**APPENDIX A**  
**PURGE CHARACTERIZATION**  
**AND SAMPLE LOG FIELD DATA SHEETS**





Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc.



# PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number: 05100535 Project Name: 1399 WOOD ST Date: 12-19-94  
 Well Number: MW-1 Sampler: Mike Endicott Weather: CLEAR

Military Time	839	844	850	857	903	930	
Gallons Purged	0	6	12	18	24		Depth to bottom (DB): <u>13.70</u>
Purge Rate	—	—	—	—	—	S	Depth to water (DW): <u>1.48</u>
pH	8.36	7.90	7.87	7.89	7.88	A	Height of water column (H) = DB - DW: <u>12.22</u>
Conductivity	6.86 <sup>KPC</sup>	6.09 <sup>KPC</sup>	5.88 <sup>KPC</sup>	5.74 <sup>KPC</sup>	5.90 <sup>KPC</sup>	M	One casing volume (CV) = H x multiplier: <u>7.94</u>
Temperature (C)	57.3	55.8	55.3	55.0	54.7	P	Three casing volumes (3CV): <u>23.8</u>
Salinity (0/00)	—	—	—	—	—	L	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLEAR	CLEAR	CLOUDY	CLOUDY	CLOUDY	E	4" well = 0.65 gallons/foot
Color	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		6" well = 1.47 gallons/foot
Water Level Casing							8" well = 2.61 gallons/foot
Calibration	pH:						S.C.:

Sample #	Quantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	Field Comments
MW-1	2	40 ML	ODAS	HCL	TPH- <sup>OTER</sup>	CHROM	DISP BOTTLES	TELEFON BOTTLES	
	1	1LT	AMBER	HCL	TPH- <sup>OTER</sup>		↓	↓	
	1	1LT	AMBER	HCL	PCB		↓	↓	
	1	1LT	POLY	NON	TEST		↓	↓	
MW-1P	2	40 ML	ODAS	HCL	TPH- <sup>OTER</sup>	CHROM	DISP BOTTLES	TELEFON BOTTLES	
	1	1LT	AMBER	HCL	TPH- <sup>OTER</sup>		↓	↓	
	1	1LT	AMBER	HCL	PCB		↓	↓	
	1	1LT	POLY	NON	TEST		↓	↓	
TRIP	2	40 ML	HCL	HCL	TPH- <sup>OTER</sup>	CHROM	DISP BOTTLES	TELEFON BOTTLES	AT 8:30
Cleaning:	WASHED WITH ALCOHOL / RINSED WITH DI WATER								
Comments:									

Sampler's Signature: Mike Endicott



Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc.



# PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number: 05100535 Project Name: 1399 WOOD ST Date: 12-19-94  
 Well Number: MW-2 Sampler: Mike Endicott Weather: CLEAR

Military Time	1004	1015	1021	1026	1032	1045	
Gallons Purged	0	6	12	20	24		Depth to bottom (DB): 1410
Purge Rate	—	—	—	—	—	5	Depth to water (DW): 2.06
pH	7.98	8.02	8.04	8.04	8.07	A	Height of water column (H) = DB - DW: 12.04
Conductivity	7.58 <sup>X100</sup>	7.99 <sup>X100</sup>	8.10 <sup>X100</sup>	8.13 <sup>X100</sup>	7.95 <sup>X100</sup>	M	One casing volume (CV) = H x multiplier: 7.82
Temperature (C)	56.6	57.6	58.2	57.5	57.0	P	Three casing volumes (3CV): 23.4
Salinity (0/00)	—	—	—	—	—	E	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLOUDY	CLOUDY	CLOUDY	CLOUDY	CLOUDY		4" well = 0.65 gallons/foot
Color	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		6" well = 1.47 gallons/foot
Water Level Casing							8" well = 2.61 gallons/foot
Calibration	pH:						S.C.:

Sample #	Quantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	Field Comments
MW-2	2	40 ML	COB'S	HCL	BTEX PPE-GAS	CH2M	DSP BAILER	TEFLON BAILER	
	1	1LT	AMBER	HCL	PAH-DIPA		↓	↓	
	1	1LT	AMBER	MCL	PCBS		↓	↓	
	1	1LT	PLOY	NONE	PE-NAL		↓	↓	
EQUIP	2	40ML	COB'S	HCL	BTEX PPE-GAS	CH2M	DSP BAILER	TEFLON BAILER	
	1	1LT	AMBER	↓	PAH-DIPA		↓	↓	
	1	1LT	AMBER	↓	PCBS		↓	↓	
Cleaning:	WASHED WITH ALCOHOL / RINSED WITH DI WATER								
Comments:									

Sampler's Signature: Mike Endicott





Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc.



# PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number: MW-3 Project Name: 1399 WOOD ST Date: 12-19-94  
 Well Number: 05100535 Sampler: Mike Endicott Weather: CLEAR

Military Time	1120	1127	1134	1142	1150	1230	
Gallons Purged	0	5	10	15	21	5	Depth to bottom (DB): <u>1410</u>
Purge Rate	—	—	—	—	—	A	Depth to water (DW): <u>295</u>
pH	7.92					M	Height of water column (H) = DB - DW: <u>11.14</u>
Conductivity	1.07 <sup>x1000</sup>	1.16 <sup>x1000</sup>	1.13 <sup>x1000</sup>	1.15 <sup>x1000</sup>	1.16 <sup>x1000</sup>	P	One casing volume (CV) = H x multiplier: <u>7.24</u>
Temperature (C)	57.1	60.3	60.2	59.2	59.7	L	Three casing volumes (3CV): <u>21.7</u>
Salinity (0/00)	—	—	—	—	—	F	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		4" well = 0.65 gallons/foot
Color	CLEAR	CLEAR	CLEAR	CLEAR	CLEAR		6" well = 1.47 gallons/foot
Water Level Casing							8" well = 2.61 gallons/foot
Calibration	pH:						S.C.:

Sample #	Quantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	Field Comments
MW-3	2	40ML	VOA	HCL	BTEX TPH-GAS	CH2M	DISC BAYLER	TEFLON BAYLER	
	1	1LT	AMBER	HCL	TPH-DIGR		↓	↓	
	1	1LT	AMBER	HCL	PCBS		↓	↓	
	1	1LT	AMBER	NONE	TDX-WALL		↓	↓	
Cleaning:	WASHED WITH ALCOHOL / RINSED WITH DI WATER								
Comments:									

Sampler's Signature: Mike Endicott

**GROUND WATER ELEVATION MEASUREMENT LOG**

Sheet 1 of 1

Project Name: 1399 WOOD ST      Project No. 05100535      Task/Phase: 01 / 98000  
 Date: 12-19-94      Equipment: WATER LEVEL INDICATOR      Weather: CLEAR

Well Number	Reference Elevation (feet-MSL)	Time (military)	Depth to Water (feet)	Depth to Product (feet)	Total Depth (feet)	PT (feet)	PT x 0.8 (feet)	Adjusted DTW <sup>1</sup> (feet)	Ground Water Elevation <sup>2</sup> (feet-MSL)
MW-1	7.71	825	1.48	—	13.70	—	—	1.48	6.23
MW-2	7.00	809	2.06	—	14.10	—	—	2.06	4.94
MW-3	7.32	816	2.96	—	14.10	—	—	2.96	4.36
Comments:									

- 1      Adjusted depth to water = DTW - (PT x 0.8)
- 2      Ground water elevation = Reference elevation - Adjusted DTW
- MSL    Mean sea level
- DTW    Depth to water (to 0.01 foot)
- PT      Product thickness (0.01 foot)

Signature Mike Endicott

**APPENDIX B**  
**CHAIN-OF-CUSTODY DOCUMENT**



258/73227-73232

CHAIN-OF-CUSTODY RECORD

19815  
No. 20459

INDUSTRIAL COMPLIANCE • 9838 OLD PLACERVILLE ROAD, SUITE 100 • SACRAMENTO, CA 95827-3559 • Phone 916-369-8971 • FAX 916-369-8370

PROJECT NAME <b>WOOD ST</b>		PROJECT LOCATION <b>OAKLAND, CA</b>	
PROJ. NO. <b>25100539</b>	PROJECT CONTACT <b>CARL TAYLOR</b>	PROJECT TELEPHONE NO. <b>(510) 238 9540</b>	
CLIENT'S REPRESENTATIVE		PROJECT MANAGER/SUPERVISOR <b>CARL TAYLOR</b>	

ANALYSIS DESIRED  
(INDICATE SEPARATE CONTAINERS)

*TPH - GASOLINE / AT&T BELLS  
TPH - DIESEL - BELLS  
TDS - AT&T  
PEBS 8000*

SURN #: 9412258  
CLIENT: INDCOMP  
DUE: 12/27/94  
REF #: 19815

ITEM NO.	SAMPLE NUMBER	DATE	TIME	COMP	GRAB	SAMPLE LOCATION (INCLUDE MATRIX AND POINT OF SAMPLE)	NUMBER OF CONTAINERS	ANALYSIS DESIRED	REMARKS
1	MW-1	12-19	930			GROUNDWATER FROM MW-1	5	X X X X	
2	MW-1D	12-19	930			GROUNDWATER FROM MW-1 DROPGATE	5	X X X X	
3	MW-2	12-19	1045			GROUNDWATER FROM MW-2	5	X X X X	
4	MW-3	12-19	1230			GROUNDWATER FROM MW-3	5	X X X X	
5	EQUIP	12-19	1045			FIELD EQUIPMENT BLANK BAILER	4	X X * X	
6	TRIP	12-19	930			TRIP BLANK	2	X	
7									
8									
9									
10									

TRANSFER NUMBER	ITEM NUMBER	TRANSFERS RELINQUISHED BY	TRANSFERS ACCEPTED BY	DATE	TIME	REMARKS
1	6	<i>Mike Endicott</i>	<i>[Signature]</i>			5 DAY TURN AROUND
2						
3						Received copy in good cond. 12-17-94
4						SAMPLER'S NAME: <b>MIKE ENDICOTT</b> SAMPLER'S SIGNATURE: <i>Mike Endicott</i>

**APPENDIX C**  
**ANALYTICAL LABORATORY REPORTS,**  
**GROUND WATER SAMPLES**



# CHROMALAB, INC.

Environmental Services (SDB)

Reported on: December 28, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor


Project: WOOD ST.  
Received: December 19, 1994

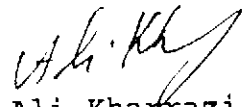
Project#: 05100535

re: 6 samples for Gasoline and BTEX analysis.

Sampled: December 19, 1994 ✓ Matrix: WATER  
Method: EPA 5030/8015M/602/8020 Run#: 4963 Analyzed: December 23, 1994

Spl # CLIENT SMPL ID	Gasoline (mg/L)	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
73227 MW-1	N.D. ✓	N.D. ✓	N.D.	N.D.	N.D.
73228 MW-1D	N.D.	N.D.	N.D.	N.D.	N.D.
73229 MW-2	N.D. ✓	N.D.	N.D.	N.D.	N.D.
73230 MW-3	0.41 ✓	5.1 ✓	4.5	N.D.	3.6
73231 EQUIP	N.D.	N.D.	N.D.	N.D.	N.D.
73232 TRIP	N.D.	N.D.	N.D.	N.D.	N.D.
Reporting Limits	0.05	0.5	0.5	0.5	0.5
Blank Result	N.D.	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)	106	105	105	107	106

  
Jack Kelly  
Chemist

  
Ali Kharrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

December 27, 1994

Submission #: 9412258  
(Revised: 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project #: 05100535

re: Five samples for Diesel analysis

Matrix: WATER  
Sampled: December 19, 1994  
Method: EPA 3510/8015

Extracted: December 21, 1994  
Analyzed: December 22, 1994

<u>Sample #</u>	<u>Client Sample ID</u>	<u>Diesel (<math>\mu\text{g/L}</math>)</u>
73227	MW-1	N.D. (a)
73228	MW-1D ← D is the duplicate	N.D. (b)
73229	MW-2	N.D.
73230	MW-3	N.D.
72331	EQUIP	N.D.
Blank		N.D.
Spike Recovery		80%
Dup Spike Recovery		80%
Reporting Limit		50

(a) Unknown compounds were found in the Diesel range in the estimated amount of 160  $\mu\text{g/L}$  compared with the Diesel Standard.  
(b) Unknown compounds were found in the Diesel range in the estimated amount of 140  $\mu\text{g/L}$  compared with the Diesel Standard.

ChromaLab, Inc.

*Sirirat Chullakorn*

Sirirat Chullakorn  
Analytical Chemist

*Ali Kharrazi*

Ali Kharrazi  
Organic Manager

cc

# CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project#: 05100535


re: One sample for Polychlorinated Biphenyls (PCB's) analysis

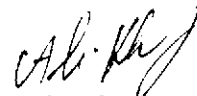
Sample I.D.: MW-1  
Sampled: December 19, 1994  
Matrix: water

Sample No: 73227  
Analyzed: December 21, 1994  
Method: MOD. EPA 608

<u>ANALYTE</u>	<u>RESULT</u> <u>(µg/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(µg/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(µg/L)</u>
AROCLOR 1016	N.D.	0.5	N.D.
AROCLOR 1221	N.D.	0.5	N.D.
AROCLOR 1232	N.D.	0.5	N.D.
AROCLOR 1242	N.D.	0.5	N.D.
AROCLOR 1248	N.D.	0.5	N.D.
AROCLOR 1254	N.D.	0.5	N.D.
AROCLOR 1260	N.D.	0.5	N.D.

ChromaLab, Inc.

  
Alex Tam  
Analytical Chemist

  
Ali Kharrazi  
Organic Manager



# CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project#: 05100535


re: One sample for Polychlorinated Biphenyls (PCB's) analysis


Sample I.D.: MW-1D  
Sampled: December 19, 1994  
Matrix: water

Sample No: 73228  
Analyzed: December 21, 1994  
Method: MOD. EPA 608

<u>ANALYTE</u>	<u>RESULT</u> <u>(µg/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(µg/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(µg/L)</u>
AROCLOR 1016	N.D.	0.5	N.D.
AROCLOR 1221	N.D.	0.5	N.D.
AROCLOR 1232	N.D.	0.5	N.D.
AROCLOR 1242	N.D.	0.5	N.D.
AROCLOR 1248	N.D.	0.5	N.D.
AROCLOR 1254	N.D.	0.5	N.D.
AROCLOR 1260	N.D.	0.5	N.D.

ChromaLab, Inc.

  
Alex Tam  
Analytical Chemist

  
Ali Kharrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project#: 05100535


re: One sample for Polychlorinated Biphenyls (PCB's) analysis

Sample I.D.: MW-2  
Sampled: December 19, 1994  
Matrix: water

Sample No: 73229  
Analyzed: December 21, 1994  
Method: MOD. EPA 608

<u>ANALYTE</u>	<u>RESULT</u> <u>(µg/L)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(µg/L)</u>	<u>BLANK</u> <u>RESULT</u> <u>(µg/L)</u>
AROCLOR 1016	N.D.	0.5	N.D.
AROCLOR 1221	N.D.	0.5	N.D.
AROCLOR 1232	N.D.	0.5	N.D.
AROCLOR 1242	N.D.	0.5	N.D.
AROCLOR 1248	N.D.	0.5	N.D.
AROCLOR 1254	N.D.	0.5	N.D.
AROCLOR 1260	N.D.	0.5	N.D.

ChromaLab, Inc.

  
Alex Tam  
Analytical Chemist

  
Ali Khafrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project#: 05100535


re: One sample for Polychlorinated Biphenyls (PCB's) analysis

Sample I.D.: MW-3  
Sampled: December 19, 1994  
Matrix: water

Sample No: 73230  
Analyzed: December 21, 1994  
Method: MOD. EPA 608

<u>ANALYTE</u>	<u>RESULT</u> <u>(<math>\mu\text{g/L}</math>)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(<math>\mu\text{g/L}</math>)</u>	<u>BLANK</u> <u>RESULT</u> <u>(<math>\mu\text{g/L}</math>)</u>
AROCLOR 1016	N.D.	0.5	N.D.
AROCLOR 1221	N.D.	0.5	N.D.
AROCLOR 1232	N.D.	0.5	N.D.
AROCLOR 1242	N.D.	0.5	N.D.
AROCLOR 1248	N.D.	0.5	N.D.
AROCLOR 1254	N.D.	0.5	N.D.
AROCLOR 1260	N.D.	0.5	N.D.

ChromaLab, Inc.

  
Alex Tam  
Analytical Chemist

  
Ali Kharrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

December 22, 1994

Submission #: 9412258  
(Revised 12/28/94)

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: WOOD ST.  
Received: December 19, 1994

Project#: 05100535

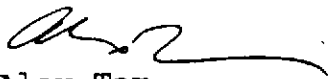
re: One sample for Polychlorinated Biphenyls (PCB's) analysis

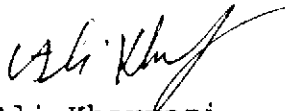
Sample I.D.: EQUIP  
Sampled: December 19, 1994  
Matrix: water

Sample No: 73231  
Analyzed: December 21, 1994  
Method: MOD. EPA 608

<u>ANALYTE</u>	<u>RESULT</u> <u>(<math>\mu\text{g/L}</math>)</u>	<u>REPORTING</u> <u>LIMIT</u> <u>(<math>\mu\text{g/L}</math>)</u>	<u>BLANK</u> <u>RESULT</u> <u>(<math>\mu\text{g/L}</math>)</u>
AROCLOR 1016	N.D.	0.5	N.D.
AROCLOR 1221	N.D.	0.5	N.D.
AROCLOR 1232	N.D.	0.5	N.D.
AROCLOR 1242	N.D.	0.5	N.D.
AROCLOR 1248	N.D.	0.5	N.D.
AROCLOR 1254	N.D.	0.5	N.D.
AROCLOR 1260	N.D.	0.5	N.D.

ChromaLab, Inc.

  
Alex Tam  
Analytical Chemist

  
Ali Kharrazi  
Organic Manager



# GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue, Suite A  
Modesto, CA 95351

Phone (209) 572-0900  
FAX (209) 572-0916

## CERTIFICATE OF ANALYSIS

**Report #** F354-09  
ChromaLab  
1220 Quarry Lane  
Pleasanton CA 94566 - 4756

**Date:** 12/23/94  
**Date Received:** 12/20/94  
**Date Started:** 12/20/94  
**Date Completed:** 12/23/94

**Project Name:** INDCOMP

**Project #** 9412258

Sample ID	Lab ID	Detection Limit	Method	Analyte	Results	Units mg/L
MW-1	F36173	0.05	6010	Sodium	38	
		10	160.1	Total Dissolved Solids	510	
		1	300	Chloride	24	
MW-1D	F36174	0.05	6010	Sodium	72	
		10	160.1	Total Dissolved Solids	510	
		1	300	Chloride	23	
MW-2	F36175	0.05	6010	Sodium	70	
		10	160.1	Total Dissolved Solids	900	
		1	300	Chloride	21	
MW-3	F36176	0.05	6010	Sodium	150	
		10	160.1	Total Dissolved Solids	1020	
		1	300	Chloride	30	

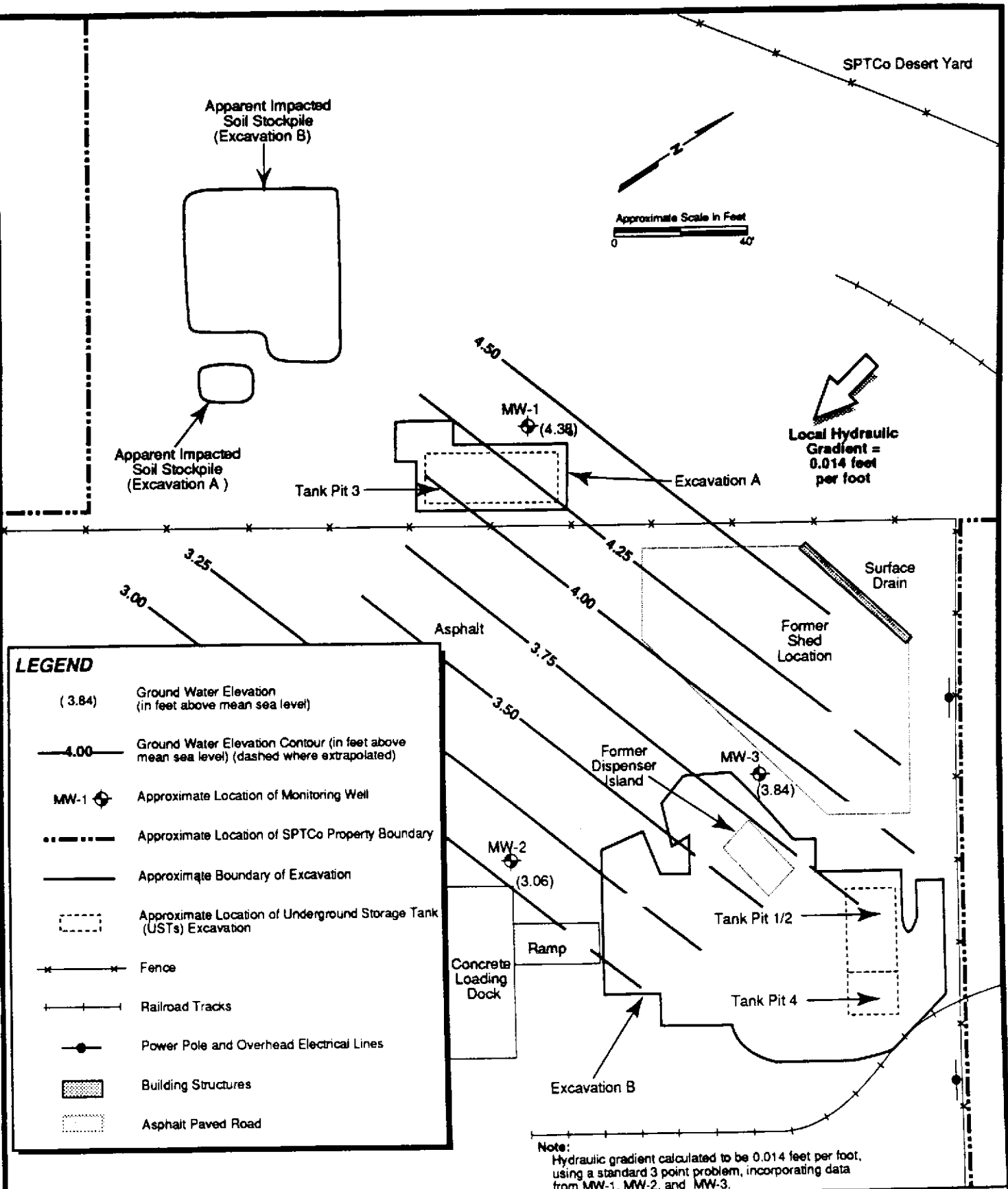
*Ramiro Salgado*  
Ramiro Salgado

*Donna Allsup*  
Donna Allsup

**APPENDIX D**

**GROUND WATER ELEVATION CONTOUR MAPS  
PREVIOUS MONITORING EVENTS**





**LEGEND**

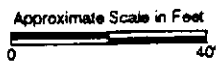
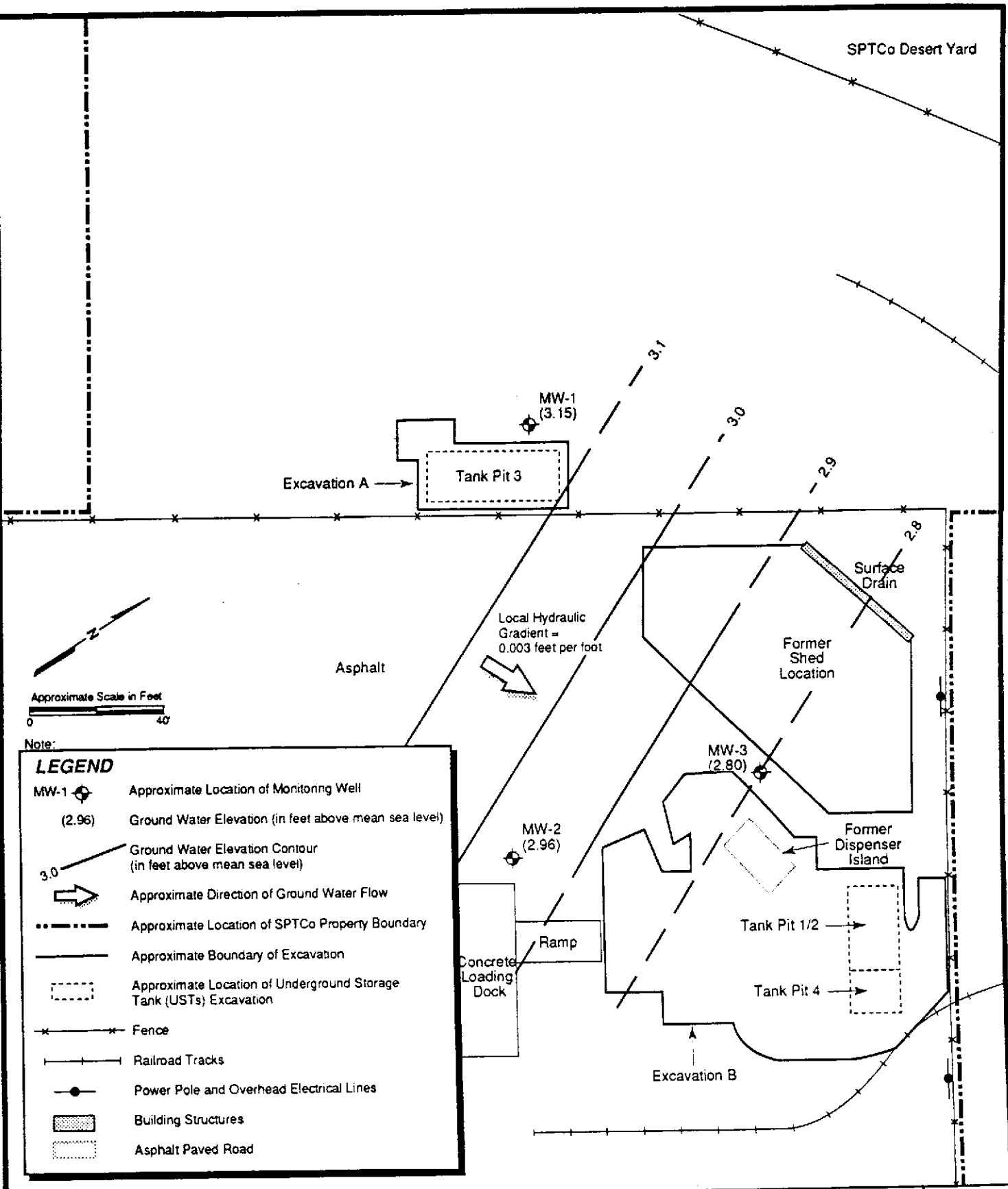
- ( 3.84 ) Ground Water Elevation (in feet above mean sea level)
- 4.00 — Ground Water Elevation Contour (in feet above mean sea level) (dashed where extrapolated)
- MW-1 Approximate Location of Monitoring Well
- Approximate Location of SPTCo Property Boundary
- Approximate Boundary of Excavation
- - - - - Approximate Location of Underground Storage Tank (USTs) Excavation
- \*—\*—\* Fence
- +—+—+ Railroad Tracks
- Power Pole and Overhead Electrical Lines
- Building Structures
- Asphalt Paved Road

Note:  
Hydraulic gradient calculated to be 0.014 feet per foot, using a standard 3 point problem, incorporating data from MW-1, MW-2, and MW-3.

Project No.: 05100535	Date: 08/15/94
Drawn By: Patti Decker	Checked By: James G. Jensen

**CONTOUR MAP OF GROUND WATER ELEVATIONS WITH HYDRAULIC GRADIENT, JUNE, 1994 SOUTHERN PACIFIC TRANSPORTATION COMPANY 1399 WOOD STREET OAKLAND, CALIFORNIA**

Figure:	19
Page:	
Scale:	as shown



Note:

**LEGEND**

- MW-1 Approximate Location of Monitoring Well
- (2.96) Ground Water Elevation (in feet above mean sea level)
- 3.0 Ground Water Elevation Contour (in feet above mean sea level)
- Approximate Direction of Ground Water Flow
- Approximate Location of SPTCo Property Boundary
- Approximate Boundary of Excavation
- Approximate Location of Underground Storage Tank (USTs) Excavation
- Fence
- Railroad Tracks
- Power Pole and Overhead Electrical Lines
- Building Structures
- Asphalt Paved Road

**Industrial Compliance**  
A Subsidiary of SP Environmental Systems, Inc.

Project No.: 05100535 Date: 01/18/95

Drawn By: Patti Decker Checked By: James Ackerman

**CONTOUR MAP OF GROUND WATER ELEVATIONS**  
**SEPTEMBER, 1994**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY**  
**1399 WOOD STREET**  
**OAKLAND, CALIFORNIA**

Figure:	4
Page:	
Scale:	as shown