



**Industrial Compliance**

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8/4/95

**SECOND QUARTER 1995  
GROUND WATER MONITORING REPORT**

**Southern Pacific Transportation Company  
5th Avenue and 7th Street  
Oakland, California**

**IC Project No. 05100269**

**Prepared For:**

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

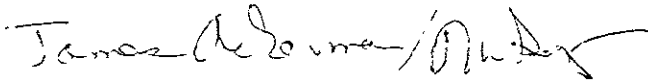
**August 4, 1995**



**SECOND QUARTER 1995  
GROUND WATER MONITORING REPORT**

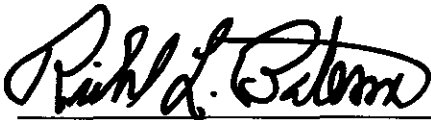
**Southern Pacific Transportation Company  
5th Avenue and 7th Street  
Oakland, California**

Prepared By:



James B. Ackerman  
Project Geologist

Reviewed By:

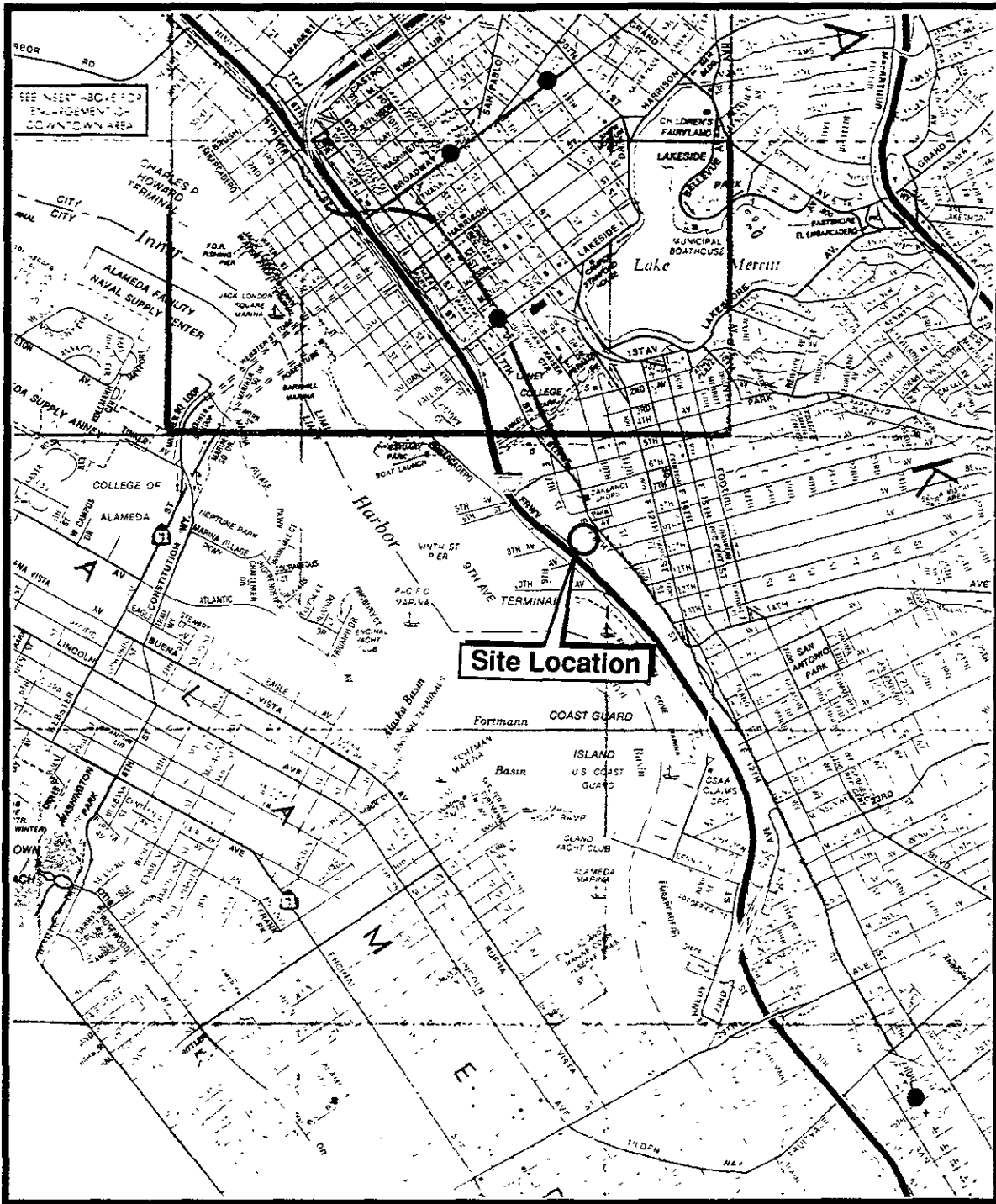


Richard L. Bateman  
Principal Hydrogeologist









Approximate Scale in Feet  
 0 2000'

Reference  
 Map of Oakland, Berkeley, Alameda  
 American Automobile Association



**Industrial Compliance**

A Subsidiary of SP  
 Environmental Systems, Inc.



Project No	05100269	Date	12/01/94
Drawn By	Patti Decker	Checked By	James Ackerman

**SITE LOCATION MAP  
 SOUTHERN PACIFIC TRANSPORTATION COMPANY  
 5TH AVENUE AND 7TH STREET PROPERTY  
 OAKLAND, CALIFORNIA**

Figure

1

Page No

2

Scale

as shown



TABLE 1  
GROUND WATER ELEVATION DATA

Monitoring Well <sup>a</sup>	Date Measured	Time Measured	Top of Casing 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	04/28/94	0900	8.20	4.68	3.52
	08/16/94	0815		10.50	-2.30
	11/09/94	0755		2.08	6.12
	02/28/95	1259		6.60	1.60
	05/11/95	0757		5.41	2.79
MW-2	04/28/94	0913	6.36	2.01	4.35
	08/16/94	0845		3.16	3.20
	11/09/94	0815		1.22	5.14
	02/28/95	1312		2.48	3.88
	05/11/95	0808		2.26	4.10
MW-3	04/28/94	0920	6.84	2.99	3.85
	08/16/94	0910		3.06	3.78
	11/09/94	0810		1.10	5.74
	02/28/95	1259		2.62	4.22
	05/11/95	0812		2.34	4.50

a See Figure 2 for approximate location of monitoring wells.

b Top of casing elevation is the elevation, in feet above mean sea level, of a point marked on the top of the well casing (generally north side) which has been surveyed by a licensed surveyor.

c Depth to ground water measured from top of casing.

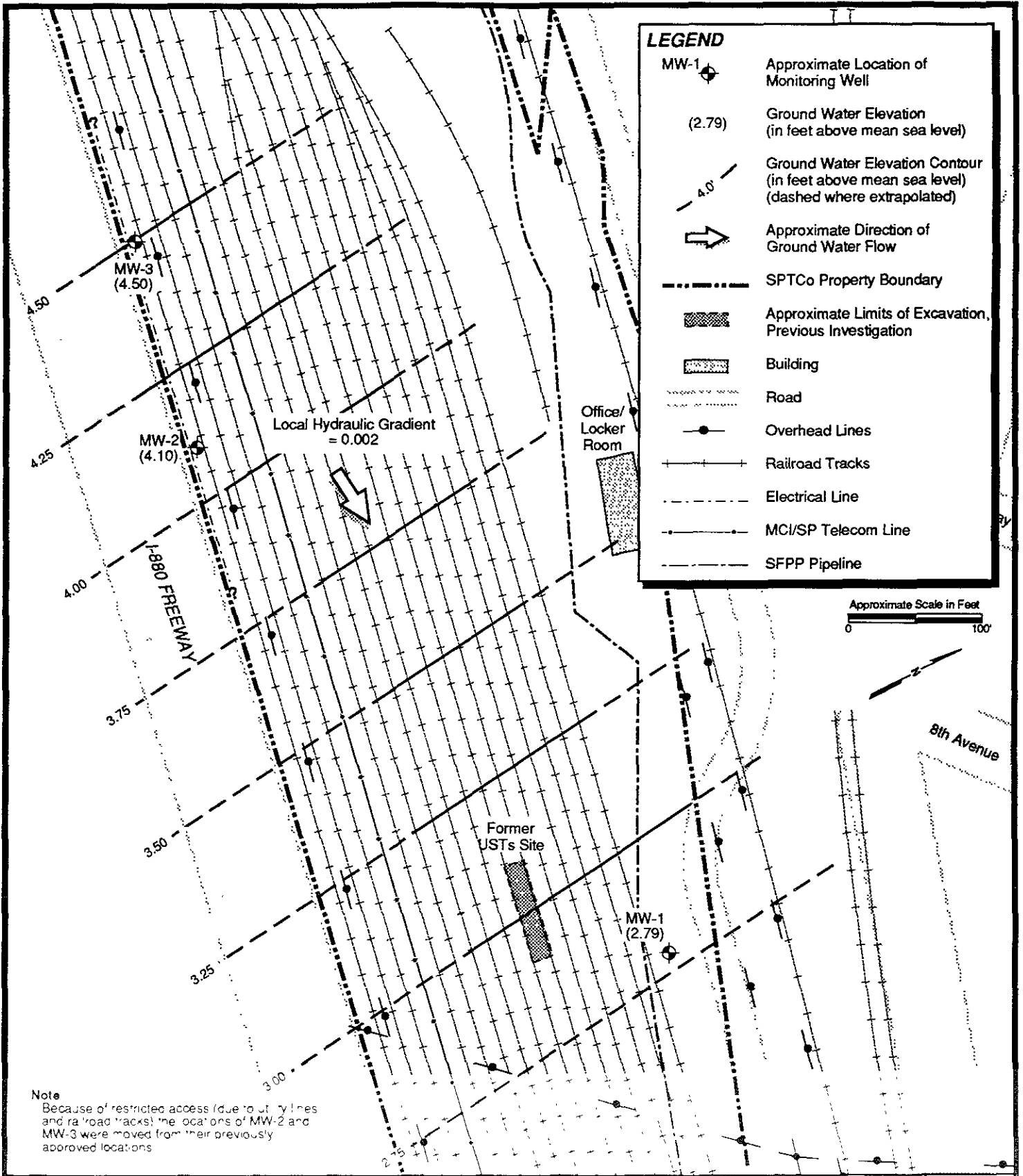
d Ground water elevation calculated by subtracting the depth to ground water from the top of casing elevation.

MSL Mean sea level

TOC Top of casing







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

Project No: 05100269 Date: 06.28.95

Drawn By: Patti Decker Checked By: Richard Bateman

**CONTOUR MAP OF GROUND WATER ELEVATION  
MAY, 1995  
SOUTHERN PACIFIC TRANSPORTATION COMPANY  
5TH AVENUE AND 7TH STREET PROPERTY  
OAKLAND, CALIFORNIA**

Figure	2
Page No	5
Scale	as shown

ground water in each well was assumed to be representative of the formation when a minimum of three well volumes had been removed and consecutive parameter readings were within 10 percent, or 4 well volumes were removed. After purging was complete, each well was allowed to recover to at least 90 percent of the original water level. Due to the slow recharge rate, well MW-3 was bailed dry and subsequently sampled before recovering to 90 percent of the pre-purge water level. Ground water purge characterization data are summarized in Table 2. Purge characterization logs are included in Appendix A.

### 2.3 Monitoring Well Sampling

Ground water samples were collected using new, disposable polyethylene bailers. The water samples from the bailers were transferred to laboratory-supplied containers of appropriate volumes and with required preservatives for the intended analyses. Volatile organic analysis (VOA) sample containers were filled to capacity, sealed with Teflon-lined lids, and checked for air bubbles. If air bubbles were detected, the vial was re-opened, 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). A chain-of-custody document was completed concurrent with sample collection and accompanied the samples upon transport to the laboratory. Sample logs are included in Appendix A. The chain-of-custody document is included as Appendix B.

TABLE 2  
GROUND WATER PURGE CHARACTERIZATION DATA  
MAY, 1995

Monitoring Well <sup>a</sup>	Date Measured	Purge Volume (gallons)	Electrical Conductivity ( $\mu$ mhos)/cm	Temperature ( $^{\circ}$ F)	Field pH (units)
MW-1	05/11/95	0	530	67.1	6.85
		6	610	65.8	6.74
		10	650	65.0	6.85
		16	620	63.8	6.94
MW-2	05/11/95	0	2330	65.0	6.88
		8	1020	64.9	6.86
		14	220	64.4	6.89
		21	1450	6.42	6.83
MW-3	05/11/95	0	2210	64.1	6.77
		8	2540	64.2	6.63
		14	3180	63.7	6.57
		17	2620	64.5	6.56

a See Figure 2 for approximate location of monitoring wells.

$\mu$ mhos/cm Micromhos per centimeters

$^{\circ}$ F Degrees Fahrenheit

NOTE: Purge characterization logs included in Appendix A

All ground water samples were analyzed for the following constituents:

<u>Constituent</u>	<u>Analytical Method</u>
Total petroleum hydrocarbons as diesel (TPH-D)	EPA Method 8015 Modified
Total petroleum hydrocarbons as motor oil (TPH-MO)	EPA Method 8015 Modified
Benzene, toluene, ethylbenzene, and xylenes (BTEX)	EPA Method 8020
Sodium chloride	Calculation <sup>1</sup>
Total dissolved solids (TDS)	EPA Method 160.1

#### 2.4 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 described in Section 2.3. The duplicate ground water sample was analyzed for TPH-D, TPH-MO, BTEX, sodium chloride, and TDS.

To assess the potential for cross-contamination of the ground water samples during transport to the laboratory, one trip blank was prepared by the lab prior to sample collection with DI water and accompanied the ground water samples during shipment to the laboratory. The trip blank was submitted to the laboratory for BTEX analysis only.

In addition, one equipment blank was collected by pouring DI water through the sampling equipment into the appropriate sample bottles. The equipment blank was analyzed for TPH-D, TPH-MO, and BTEX.

<sup>1</sup> EPA Method 8015 Modified is the standard method for determining total dissolved solids in water.

### 3.0 ANALYTICAL RESULTS

Second quarter 1995 ground water samples were analyzed by Chromalab for the suite of constituents listed in Section 2.3. Analytical results are summarized in Table 3. Figure 3 is a chemical distribution map. Analytical laboratory reports are included as Appendix C. The following is a summary of the second quarter, 1995 analytical results:

- \* TPH-D, TPH-MO, and BTEX were not detected in any of the wells sampled at or above their respective reporting limits.
- \* Sodium chloride concentrations ranged from 46 milligrams per liter (mg/L) in MW-1 to 692 mg/L in MW-3 (average concentration for all three wells = 283 mg/L).
- \* TDS ranged from 490 mg/L in MW-2 to 1,350 mg/L in MW-3 (average concentration for all three wells = 797 mg/L).

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

**TABLE 3  
GROUND WATER ANALYTICAL RESULTS**

Sample Location	Date Sampled	Total Extractable Petroleum Hydrocarbons (µg/L)		Volatile Organic Compounds <sup>c</sup> (µg/L)				Sodium Chloride <sup>d</sup> (mg/L)	Total Dissolved Solids <sup>e</sup> (mg/L)
		Diesel <sup>a</sup>	Motor Oil <sup>b</sup>	Benzene	Toluene	Ethylbenzene	Xylenes		
MW-1	04/28/94	<50	<200	<0.5	<0.5	<0.5	<0.5	61	530
	08/16/94	<120	<750	<0.3	<0.3	<0.5	<0.5	86	600
	11/09/94	<50	<500	<0.5	<0.5	<0.5	<0.5	25	470
	02/16/95 <sup>f</sup>	NS	NS	NS	NS	NS	NS	NS	NS
	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	46	550
MW-2	04/28/94	<50	<200	<0.5	<0.5	<0.5	<0.5	77	460
	08/16/94	<120	750	<0.3	<0.3	<0.5	<0.5	170	690
	11/10/94	<50	<500	<0.5	<0.5	<0.5	<0.5	35	370
	02/16/95	<50	<500	<0.5	<0.5	<0.5	<0.5	190	370
	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	112	490
MW-3	04/28/94	<50	<200	<0.5	<0.5	<0.5	<0.5	300	680
	08/16/94	<120	<750	<0.3	<0.3	<0.5	<0.5	1,200	3,700
	11/10/94	<50	<500	<0.5	<0.5	<0.5	<0.5	140	620
	02/16/95	<50	<500	<0.5	<0.5	<0.5	<0.5	630	1,330
	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	692	1,350
Duplicate (MW-1)	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	47	530
Trip Blank	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	NA	NA
Equipment Blank	05/11/95	<50	<500	<0.5	<0.5	<0.5	<0.5	NA	NA
Cal DHS MCLs <sup>g</sup>		NE	NE	1	100 <sup>h</sup>	680	1,750	NE	500

<sup>a</sup> Analyzed by EPA Method 8015 (April 1994 samples analyzed by EPA Method 8260).

<sup>b</sup> Analyzed by EPA method 8015 (April 1994 samples analyzed by EPA Method 8270).

<sup>c</sup> Analyzed by EPA Method 8020 (April 1994 samples analyzed by EPA Method 8270).

<sup>d</sup> Sodium chloride concentrations determined by calcium chloride analyzing for sodium and chloride separately.

<sup>e</sup> Total dissolved solids analyzed by EPA Method 8060.

<sup>f</sup> MW-1 was not sampled in February of 1995 due to access restrictions from construction activities.

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

<sup>h</sup> California DHS action level for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).

NA Not analyzed.

NE Not established.

NS Not sampled.

mg/L Milligrams per liter.

µg/L Micrograms per liter.

< The testing concentration was not detected (a concentration below the reporting or method detection limit was used).

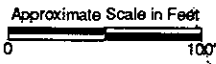
**Notes:**

1. Total petroleum hydrocarbons (TPH) as diesel analyzed by EPA Method 8015 modified.
2. VOCs analyzed by EPA Method 8010/8020.
3. All sample results reported in micrograms per liter (µg/L) or in milligrams per liter (mg/L).
4. < = Indicates constituent not detected at or above method practical quantitation limit as noted.

Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	Total Dissolved Solids (mg/L)
	Diesel	Motor Oil	Benzene	Toluene	Ethyl-benzene		
5/11/95	<50	<500	<0.5	<0.5	<0.5	692	1,360

Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	Total Dissolved Solids (mg/L)
	Diesel	Motor Oil	Benzene	Toluene	Ethyl-benzene		
5/11/95	<50	<500	<0.5	<0.5	<0.5	112	490

Date Sampled	TPH (µg/L)		Volatile Organic Compounds (µg/L)			Sodium Chloride (mg/L)	Total Dissolved Solids (mg/L)
	Diesel	Motor Oil	Benzene	Toluene	Ethyl-benzene		
5/11/95	<50	<500	<0.5	<0.5	<0.5	46	550



**LEGEND**

- MW-1 Approximate Location of Monitoring Well
- SPTCo Property Boundary
- Approximate Limits of Excavation, Previous Investigation
- Building
- Road
- Overhead Lines
- Railroad Tracks
- Electrical Line
- MCI/SP Telecom Line
- SFPP Pipeline



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**CHEMICAL DISTRIBUTION MAP FOR CONSTITUENTS IN GROUND WATER SAMPLES MAY, 1995**

**SOUTHERN PACIFIC TRANSPORTATION COMPANY  
5TH AVENUE AND 7TH STREET PROPERTY  
OAKLAND, CALIFORNIA**

Project No	05100269	Date	06/29/95
Drawn By	Patti Decker	Checked By	Richard Bateman

Figure

**3**

Page No

**11**

Scale

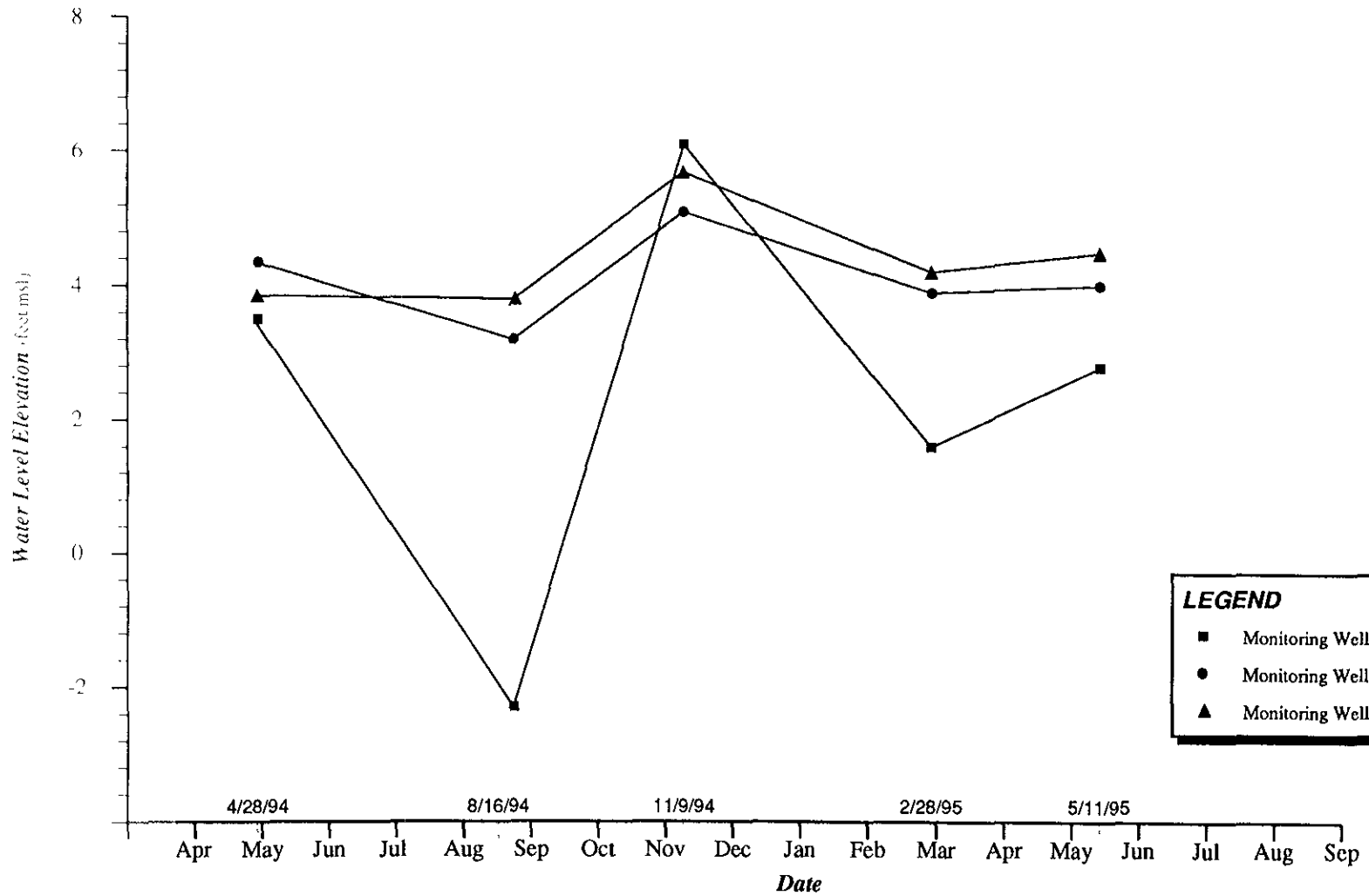
as shown

analytical data included in this second quarter, 1995 report are considered quantitatively valid.









**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>05100269</b>	Date: <b>06/28/95</b>
Drawn By: <b>Patti Decker</b>	Checked By: <b>Richard Bateman</b>	

**HYDROGRAPHS OF GROUND WATER ELEVATION**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY**  
**5TH AVENUE AND 7TH STREET PROPERTY**  
**OAKLAND, CALIFORNIA**

Figure:	<b>4</b>
Page No.:	<b>15</b>
Scale:	as shown

OAK 269-029KJWF PA #330



**APPENDIX A**

**GROUND WATER ELEVATION MEASUREMENT AND  
PURGE CHARACTERIZATION AND SAMPLE LOGS**

**GROUND WATER ELEVATION MEASUREMENT LOG**

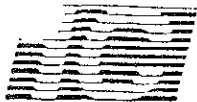
Sheet 1 of 1

Project Name: EAST OAKLAND Project No. 05100269 Task/Phase: 01 / 98000  
 Date: 5-11-85 Equipment: WATER LEVEL INDICATOR Weather: OVERCAST

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	8.20	7.57	5.41	—	13.68	—	—	5.41	2.79
MW-2	6.36	8.08	2.26	—	13.64	—	—	2.26	4.10
MW-3	6.84	8.12	2.34	—	13.60	—	—	2.34	4.50
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 Enders



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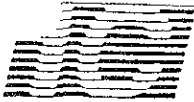
# PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number: 05100269 Project Name: EAST OAKLAND YARD Date: 5/11/95  
 Well Number: MW-1 Sampler: J. ROTH / M. ENDICOTT Weather: OVERCAST

Military Time	0758	0804	0810	0855	1100	1105	
Gallons Purged	0	6	10	16	S	D	Depth to bottom (DB): 13.68
Purge Rate	—	—	—	—	A	L	Depth to water (DW): 5.41
pH	6.85	6.74	6.85	6.94	M	I	Height of water column (H) = DB - DW: 8.27
Conductivity	5.3x100	6.1x100	6.5x100	6.2x100	P	L	One casing volume (CV) = H x multiplier: 5.38
Temperature (°F)	67.1	65.8	65.0	63.8	L	A	Three casing volumes (3CV): 16.1
Salinity (0/00)	—	—	—	—	E	T	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	LOW	LOW	LOW	MED			4" well = 0.65 gallons/foot
Color	CLR	CLR	CLR	5.0BN			6" well = 1.47 gallons/foot
Water Level Casing							8" well = 2.61 gallons/foot
Calibration	pH						SC.:

Sample #	Quantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	Field Comments
MW-1	2	40ML	DOA	HCL	BTEX	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	AMBER	NONE	TEPH, B015 DEPH/NO	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	AMBER	NONE	TEPH NO	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	POLY	NONE	TDS/MALC	CHROM	DIS BAILER	TEL BAILER	
TRIP	2	40ML	DOA	HCL	BTEX	CHROM	—	—	
MW-1D	2	40ML	DOA	HCL	BTEX	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	AMBER	NONE	TEPH, B015 DEPH/NO	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	AMBER	NONE	TEPH NO	CHROM	DIS BAILER	TEL BAILER	
	1	1LT	POLY	NONE	TDS/MALC	CHROM	DIS BAILER	TEL BAILER	
Cleaning	WASHED TEFLON BAILER WITH ALCOHOL / RINSED WITH DI WATER								
Comments	SLOW RECHARGE RATE								

Sampler's Signature: Mike Endicott



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# PURGE CHARACTERIZATION AND SAMPLE LOG

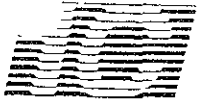
Project Number: CS100269 Project Name: EAST OAKLAND YARD Date: 5-11-95  
 Well Number: MW-32 Sampler: J ROTH / M ENDICOTT Weather: OVERCAST

Military Time	954	1001	1013	1022	1035		
Gallons Purged	0	8	14	21			Depth to bottom (DB): <u>13.64</u>
Purge Rate	—	—	—	—	5		Depth to water (DW): <u>2.26</u>
pH	6.88	6.86	6.89	6.83	A		Height of water column (H) = DB - DW: <u>11.38</u>
Conductivity	2.35 <sup>x1000</sup>	1.82 <sup>x1000</sup>	0.55 <sup>x1000</sup>	1.45 <sup>x1000</sup>	M		One casing volume (CV) = H x multiplier: <u>7.0</u>
Temperature (°F)	65.0	64.9	64.4	64.2	P		Three casing volumes (3CV): <u>21.0</u>
Salinity (0/00)	—	—	—	—	L		Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLEAR	CLEAR	CLOUDY	CLOUDY	E		4" well = 0.65 gallons/foot
Color	CLEAR	CLEAR	LT BRN	LT BRN			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	UOA	HCL	BTEX	CHROM	DIS BAILER	TEL BAILER	
	1	1 LT	AMBER	NONE	TEPH 8013 DESIGN	CHROM	DIS BAILER	TEL BAILER	
	1	1 LT	AMBER	NONE	TPH-MO	CHROM	DIS BAILER	TEL BAILER	
	1	1 LT	POLY	NONE	TDH/NAEL	CHROM	DIS BAILER	TEL BAILER	
Cleaning Comments	WASHED TELFOR BAILER WITH ALCOHOL / RINSED WITH DI WATER								

Sampler's Signature: Mike Endicott





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# PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number: 05100269 Project Name: FAST OAKLAND YARD Date: 5-11-95  
 Well Number: MW-3 Sampler: J ROTH / M ENDICOTT Weather: OVERCAST

Military Time	023	025	032	1121	1350		
Gallons Purged	0	8	14	217			Depth to bottom (DB): <sup>NOTE</sup> <del>13.64</del> 13.60
Purge Rate	—	—	—	—	S		Depth to water (DW): 2.34
pH	6.77	6.63	6.57	6.56	A		Height of water column (H) = DB - DW: <del>11.30</del> <sup>NOTE</sup> 11.26
Conductivity	<sup>X1000</sup> 2.51	<sup>X1000</sup> 2.54	<sup>X1000</sup> 3.18	<sup>X1000</sup> 2.62	M		One casing volume (CV) = H x multiplier: 7.0
Temperature (°F)	64.1	64.2	63.7	64.5	P		Three casing volumes (3CV): 21.0
Salinity (0/00)	—	—	—	—	L		Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLEAR	CLOUDY	CLOUDY	CLOUDY	E		4" well = 0.65 gallons/foot
Color	CLEAR	LT BKN	LT BKN	LT BKN			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	CHROM	D/S BAILER	TEL BAILER	
	1	1 LT	AMBER	NONE	TEPH <sup>8015</sup> DISEL/NO	CHROM	D/S BAILER	TEL BAILER	
	1	1 LT	AMBER	NONE	TPH-MO	CHROM	D/S BAILER	TEL BAILER	
	1	1 LT	POLY	NONE	TPH-NAL	CHROM	D/S BAILER	TEL BAILER	
MW-2E	2	40ML	VOA	HCL	BTEX	CHROM	—	TEL BAILER	
	1	1 LT	AMBER	NONE	TEPH <sup>8015</sup> DISEL/NO	CHROM	—	TEL BAILER	
	1	1 LT	AMBER	NONE	TPH-MO	CHROM	—	TEL BAILER	
Cleaning	WASHED TELFOX BAILER WITH ALCOHOL / RINSED WITH DI WATER								
Comments	DEWATERED AT 15 GALS, WAITED 1 HOUR, DEWATERED AT 17 GALS, WAITED 1 1/2 HRS THEN SAMPLED								

Sampler's Signature: Mike Endicott

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



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

# CHROMALAB, INC.

Environmental Services (SDB)

May 18, 1995

Submission #: 9505161

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: EAST OAKLAND YARD  
Received: May 11, 1995

Project#: 05100269

re: 5 samples for Motor oil analysis.

Matrix: WATER  
Run#: 6661

Extracted: May 15, 1995  
Analyzed: May 15, 1995

Sampled: May 11, 1995  
Method: EPA 3510/8015M

Spl #	CLIENT	SMPL ID	MOTOR OIL (ug/L )	REPORTING LIMIT (ug/L )	BLANK RESULT (ug/L )	BLANK SPIKE RESULT (%)
88276	MW-1		N.D.	500	N.D.	--
88277	MW-2		N.D.	500	N.D.	--
88278	MW-3		N.D.	500	N.D.	--
88279	MW-1D		N.D.	500	N.D.	--
88280	EQUIP		N.D.	500	N.D.	--

*Sirirat Chullakorn*

Sirirat (Sindy) Chullakorn  
Chemist

*Ali Kharrazi*

Ali Kharrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 18, 1995

Submission #: 9505161

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: EAST OAKLAND YARD  
Received: May 11, 1995

Project#: 05100269

re: 5 samples for Diesel analysis.

Sampled: May 11, 1995  
Method: EPA 3510/8015M

Matrix: WATER  
Run#: 6661

Extracted: May 15, 1995  
Analyzed: May 15, 1995

Spl #	CLIENT SMPL ID	DIESEL (ug/L )	REPORTING LIMIT (ug/L )	BLANK RESULT (ug/L )	BLANK SPIKE RESULT (%)
88276	MW-1	N.D.	50	N.D.	98
88277	MW-2	N.D.	50	N.D.	98
88278	MW-3	N.D.	50	N.D.	98
88279	MW-1D	N.D.	50	N.D.	98
88280	EQUIP	N.D.	50	N.D.	98

*Sirirat Chullakorn*

Sirirat (Sindy) Chullakorn  
Chemist

*Ali Kharrazi*

Ali Kharrazi  
Organic Manager

# CHROMALAB, INC.

Environmental Services (SDB)

May 18, 1995

Submission #: 9505161

INDUSTRIAL COMPLIANCE-OAKLAND

Atten: Carl Taylor

Project: EAST OAKLAND YARD

Project#: 05100269

Received: May 11, 1995

re: 6 samples for BTEX analysis.

Matrix: WATER

Run#: 6712

Analyzed: May 17, 1995

Sampled: May 11, 1995

Method: EPA 8020

Spl #	CLIENT SMPL ID	Benzene (ug/L)	Toluene (ug/L)	Ethyl Benzene (ug/L)	Total Xylenes (ug/L)
88276	MW-1	N.D.	N.D.	N.D.	N.D.
88277	MW-2	N.D.	N.D.	N.D.	N.D.
88278	MW-3	N.D.	N.D.	N.D.	N.D.
88279	MW-1D	N.D.	N.D.	N.D.	N.D.
88280	EQUIP	N.D.	N.D.	N.D.	N.D.
88281	TRIP	N.D.	N.D.	N.D.	N.D.
Reporting Limits		0.5	0.5	0.5	0.5
Blank Result		N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)		109	103	--	--



Oleg Nemtsov  
Chemist



Ali Kharrazi  
Organic Manager



# GeoAnalytical Laboratories, Inc.

1405 Kansas Avenue  
Modesto, CA 95351

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

## CERTIFICATE OF ANALYSIS

Report # G132-04  
ChromaLab  
1220 Quarry Lane  
Pleasanton CA 94566 - 4756

Date of Report: 05/16/95  
Date Received: 05/12/95  
Date Started: 05/12/95  
Date Completed: 05/15/95

Project Name: INDCOMP

Project # 9505161

Sample ID	Lab ID	Detection Limit	Method	Analyte	Results	Units mg/L
MW-1	G32176	1	6010/300	Sodium Chloride	46	
MW-1	G32176	10	160.1	Total Dissolved Solids	550	
MW-2	G32177	1	6010/300	Sodium Chloride	112	
MW-2	G32177	10	160.1	Total Dissolved Solids	490	
MW-3	G32178	1	6010/300	Sodium Chloride	692	
MW-3	G32178	10	160.1	Total Dissolved Solids	1350	
MW-1D	G32179	1	6010/300	Sodium Chloride	47	
MW-1D	G32179	10	160.1	Total Dissolved Solids	530	

Ramiro Salgado  
Chemist






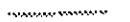





Certification # 1157

Donna Allsup  
Laboratory Director



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

**LEGEND**

- MW-1  Approximate Location of Monitoring Well
- (3.85') Ground Water Elevation (in feet above mean sea level)
-  Ground Water Elevation Contour (in feet above mean sea level) (dashed where extrapolated)
-  SPTCo Property Boundary
-  Approximate Limits of Excavation, Previous Investigation
-  Building
-  Road
-  Overhead Lines
-  Railroad Tracks
-  Electrical Line
-  MCI/SP Telecom Line
-  SFPP Pipeline

Approximate Scale in Feet  
0 100



8th Avenue

Local Hydraulic Gradient = 0.01 feet per foot

Former JSTs Site

Office/ Locker Room

MW-2 (4.35')

1880 FREEWAY

MW-3 (3.85')

MW-1 (3.52')

**NOTE:**  
Hydraulic gradient calculated to be 0.01 feet per foot, using a standard 3-point problem, incorporating data from MW-1, MW-2, and MW-3

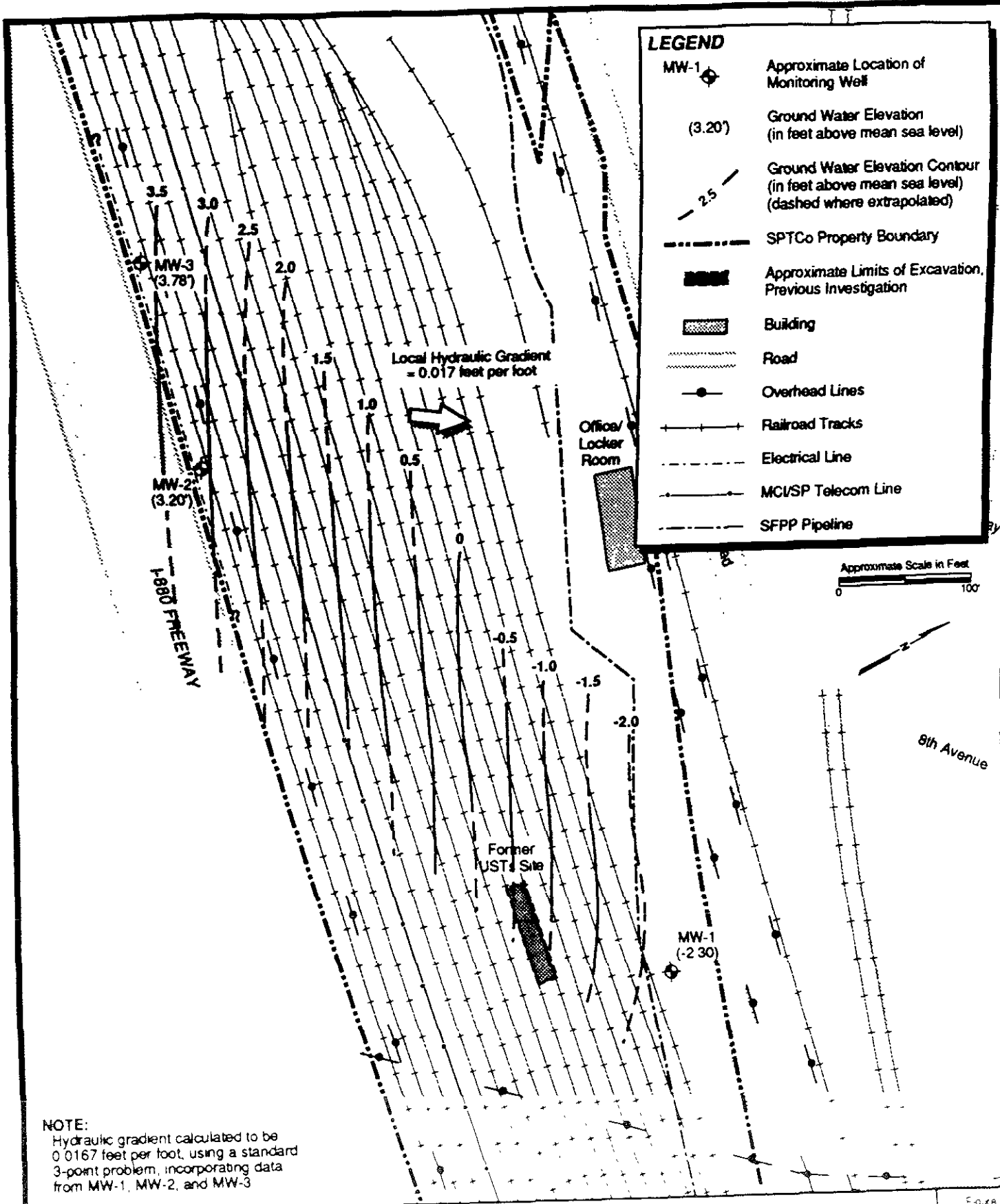


**Industrial Compliance**  
A Subsidiary of SP Environmental Systems, Inc.

**CONTOUR MAP OF GROUND WATER ELEVATIONS WITH HYDRAULIC GRADIENT, APRIL, 1994 SOUTHERN PACIFIC TRANSPORTATION COMPANY 5TH AVENUE AND 7TH STREET PROPERTY OAKLAND, CALIFORNIA**

Project No. 05100269	Date 08/01/94
Drawn By Patti Decker	Checked By James G. Jensen

Figure 8
Page No
Scale as shown



**NOTE:**  
 Hydraulic gradient calculated to be 0.0167 feet per foot, using a standard 3-point problem, incorporating data from MW-1, MW-2, and MW-3

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

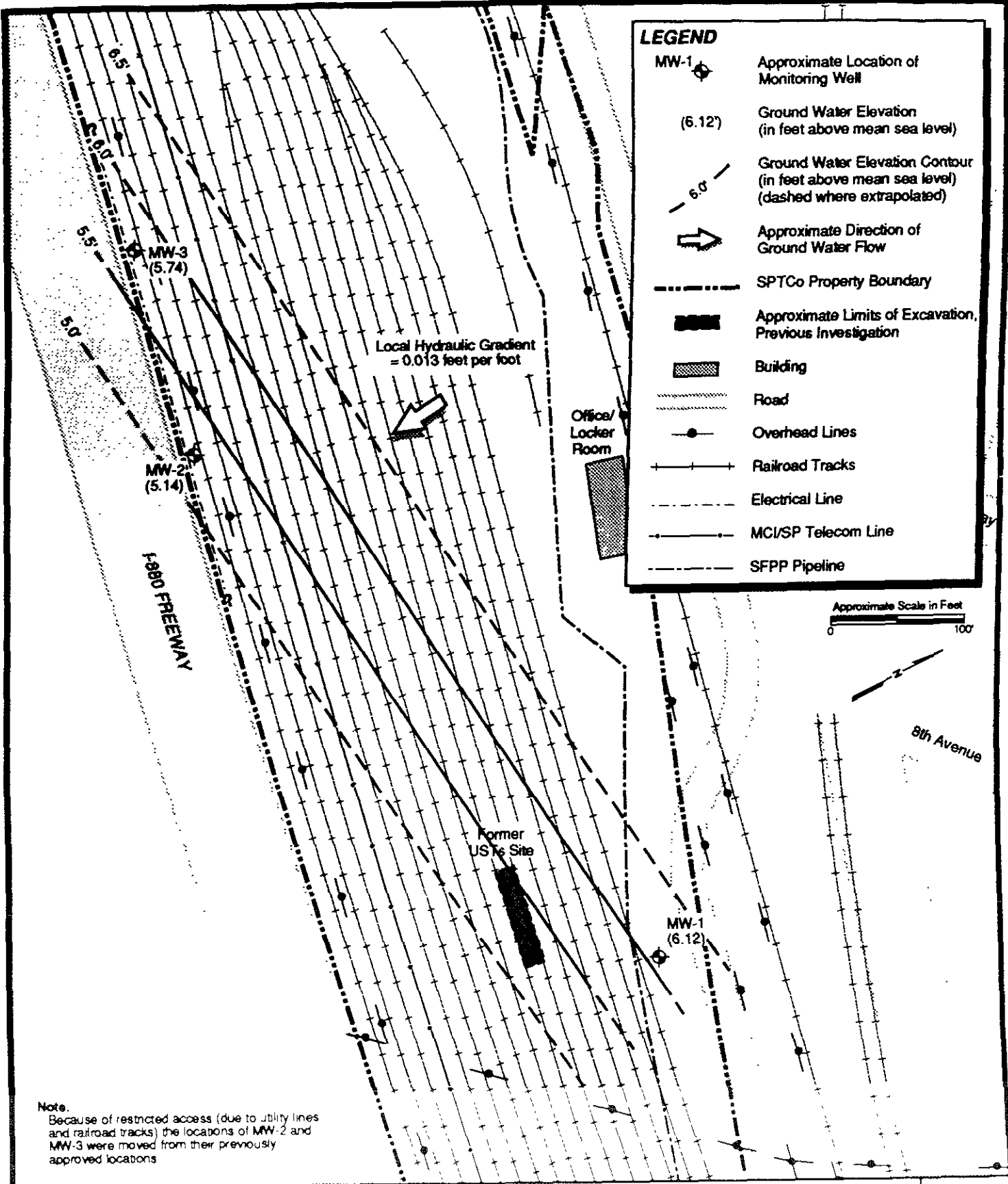
Project No. 05100269	Date 12/01/94
Drawn By Patti Decker	Checked By James Ackerman

**CONTOUR MAP OF GROUND WATER ELEVATIONS**  
**AUGUST, 1994**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY**  
**5TH AVENUE AND 7TH STREET PROPERTY**  
**OAKLAND, CALIFORNIA**

Figure 4
Page No
Scale as shown

**LEGEND**

- MW-1 Approximate Location of Monitoring Well
- (6.12) 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
- SPTCo Property Boundary
- Approximate Limits of Excavation, Previous Investigation
- Building
- Road
- Overhead Lines
- Railroad Tracks
- Electrical Line
- MCI/SP Telecom Line
- SFPP Pipeline



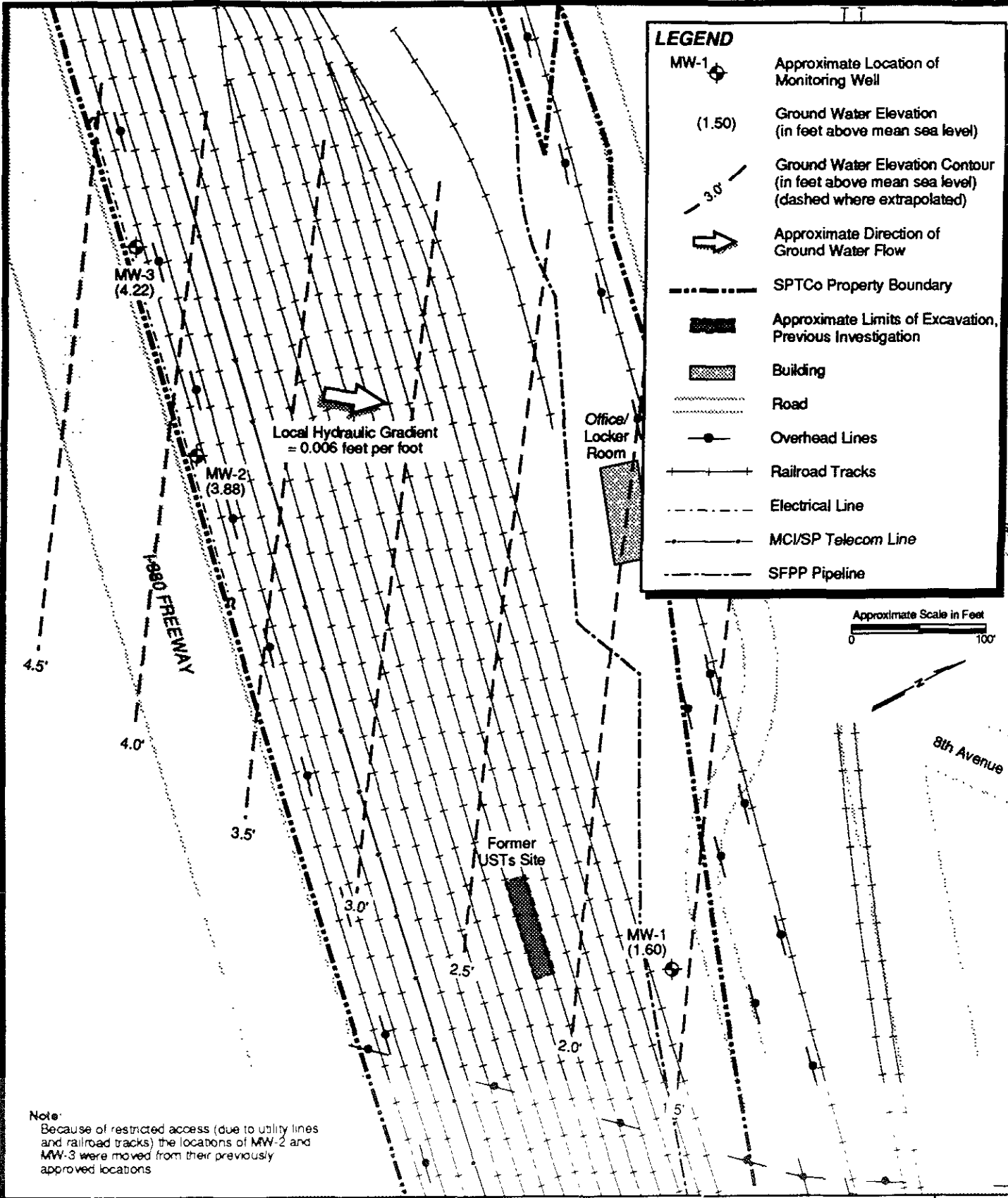
**Note.**  
 Because of restricted access (due to utility lines and railroad tracks) the locations of MW-2 and MW-3 were moved from their previously approved locations

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


Project No.	05100269	Date	02/13/95
Drawn By	Patti Decker	Checked By	Richard Bateman

**CONTOUR MAP OF GROUND WATER ELEVATION  
 NOVEMBER, 1994  
 SOUTHERN PACIFIC TRANSPORTATION COMPANY  
 5TH AVENUE AND 7TH STREET PROPERTY  
 OAKLAND, CALIFORNIA**

Figure	4
Page No	9
Scale	as shown



**Note:**  
 Because of restricted access (due to utility lines and railroad tracks) the locations of MW-2 and MW-3 were moved from their previously approved locations

 <b>Industrial Compliance</b> A Subsidiary of SP Environmental Systems, Inc.			
Project No	05100269	Date	04/21/95
Drawn By	Patti Decker	Checked By	Richard Bateman

**CONTOUR MAP OF GROUND WATER ELEVATION**  
**FEBRUARY, 1995**  
**SOUTHERN PACIFIC TRANSPORTATION COMPANY**  
**5TH AVENUE AND 7TH STREET PROPERTY**  
**OAKLAND, CALIFORNIA**

Figure	3
Page No	8
Scale	as shown



# Industrial Compliance

9838 Old Placerville Road Suite 100 Sacramento, CA 95827-3559  
916/369-8971 FAX 916/369-8370

ST-0 3748

August 4, 1995

IC Project No. 05100269

Ms. Jennifer Eberle  
Alameda County Health Care Services Agency  
Department of Environmental Health  
Division of Hazardous Materials  
1131 Harbor Bay Parkway  
Alameda, California 94501

**Re: Second Quarter 1995 Ground Water Monitoring Report  
Southern Pacific Transportation Company  
5th Avenue and 7th Street Property - Oakland, California**

Dear Ms. Eberle:

Industrial Compliance (IC), on behalf of Southern Pacific Transportation Company (SPTCo), has prepared the attached Second Quarter 1995 Ground Water Monitoring Report for the SPTCo property located in the East Oakland Yard at 5th Avenue and 7th Street, Oakland, California. This second quarter report incorporates several of the format changes that you suggested in your May 31, 1995 letter to Mr. Mike Grant of SPTCo and during your May 31, 1995 telephone discussion with Mr. James Ackerman of IC's Oakland Field Office. These changes include deletion of site background text and figures and combination of current and historic data tables for ground water elevation measurements and analytical results.

Section 4.3 of the enclosed report provides notification of a reduction in the scope of monitoring at the 5th Avenue and 7th Street property. Total dissolved solids and sodium chloride, which have been monitored voluntarily by SPTCo, will be dropped from the analytical suite effective the third quarter of 1995.

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 dao

Attachment

88027611080495 EAW 07 0000 00 0000 0000

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



Ms. Jennifer Eberle

August 4, 1995

Page 2

cc: Mr. Greg Shepherd, 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)