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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

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SECOND QUARTER 1995 GROUND WATER MONITORING REPORT

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

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TABLE OF CONTENTS

1.0	INTRODUCTION
2.0	FIELD INVESTIGATION
	2.1 Monitoring Well Water Level Data 2.2 Monitoring Well Purging 2.3 Monitoring Well Sampling 2.4 Quality Assurance/Quality Control
3.0	ANALYTICAL RESULTS
4.0	DISCUSSION
	4.1Chemical Distribution134.2Ground Water Elevation and Flow134.3Reduction of Analyses14
5.0	GLOSSARY OF ACRONYMS
	FIGURES
Figure 1 Figure 2 Figure 3	Site Location Map
Figure 4	Hydrographs of Ground Water Elevation
	TABLES
Table 1 Table 2 Table 3	Ground Water Elevation Data

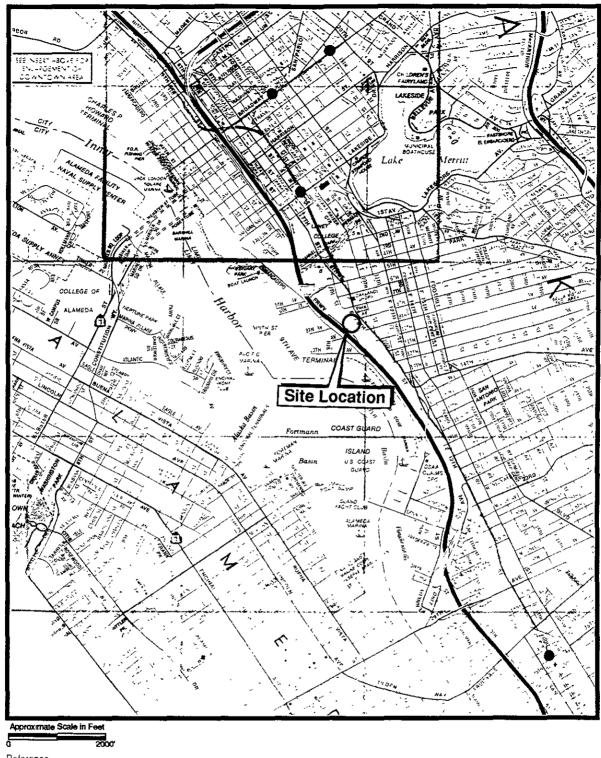
TABLE OF CONTENTS (continued)

APPENDICES

Appendix A	Ground Water Elevation Measurement and Purge Characterization and
	Sample Logs
Appendix B	Chain-of-Custody Document
Appendix C	Analytical Laboratory Reports, Ground Water Samples
Appendix D	Ground Water Elevation Contour Maps, Previous Monitoring Events

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 on a portion of the East Oakland Yard at 5th Avenue and 7th Street in Oakland, California (Figure 1). Monitoring wells were installed and quarterly ground water monitoring was initiated at the site during the second quarter of 1994. This report presents second quarter 1995 ground water monitoring results. Second quarter water level measurement and ground water sampling activities occurred on May 11, 1995. The second quarter 1995 monitoring is the fifth quarterly monitoring event for the site.



Reference Map of Oakland, Berkeley, Alameda American Automobile Association

Date

Checked By



05100269

Patti Decker

Project No

Industrial Compliance

A Subsidiary of SP Environmental Systems, Inc



12/01/94

James Ackerman

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

Figure
Page No
2
Scale
as shown

2.0 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.

2.1 Monitoring Well Water Level Data

On May 11, 1995, prior to purging, the depth to ground water was measured in the three monitoring wells on site. All measurements were taken relative to a surveyed reference point of known elevation at the top of each well casing using a water level indicator with an accuracy to 0.01 feet. The ground water elevation measurement log is included in Appendix A. Ground water elevation data for this and all previous quarters are summarized in Table 1. Ground water elevation data were used to construct a ground water elevation contour map (Figure 2). Ground water elevations this quarter ranged from 2.79 to 4.50 feet above mean sea level (MSL). Ground water flow this quarter is in a easterly direction. The calculated local hydraulic gradient is 0.002.

2.2 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, each well was purged to ensure that the water sample obtained from the well was representative of the formation water. Each well was purged by hand-bailing a minimum of three times the saturated casing volume in the well. Purging equipment was cleaned with Alconox and rinsed with deionized (DI) water prior to each use. Ground water characterization data, consisting of electrical conductivity, temperature and pH, were measured from the initial water removed and at least three times during purging. The

3

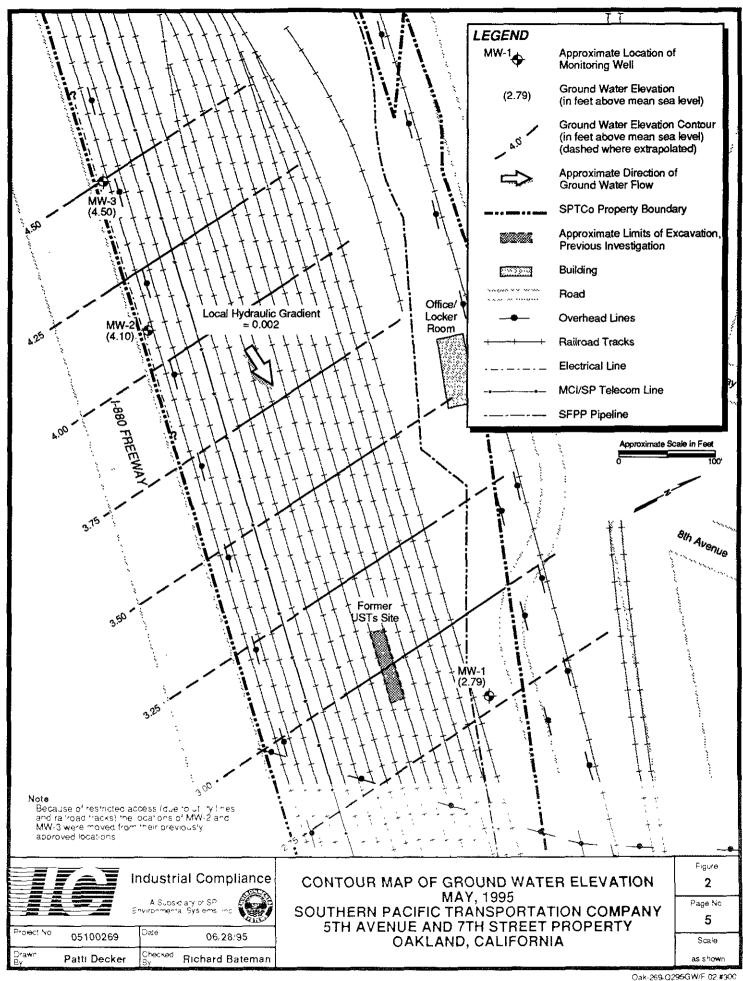
TABLE 1 GROUND WATER ELEVATION DATA

Monitoring Well ²	Date Measured	Time Measured	Top of Casing Elevation ^b (feet MSL)	Depth to Ground Water ^c (feet TOC)	Ground Water Elevation ^d (feet MSL)
	04/28/94	0900		4.68	3.52
	08/16/94	0815		10.50	-2.30
MW-1	11/09/94	0755	8.20	2 08	6 12
	02/28/95	1259		6 60	1.60
	05/11/95	0757	<u> </u>	5.41	2.79
	04/28/94	0913		2.01	4.35
	08/16/94	0845		3.16	3.20
MW-2	11/09/94	0815	6.36	1.22	5.14
	02/28/95	1312		2.48	3.88
	05/11/95	0808		2 26	4.10
	04/28/94	0920		2.99	3.85
	08/16/94	0910		3.06	3.78
MW-3	11/09/94	0810	6.84	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



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 ^a	Date Measured	Purge Volume (gallons)	Electrical Conductivity (µmhos)/cm	Temperature (°F)	Field pH (units)
		0	530	67.1	6.85
NOV :	05/11/05	6	610	65.8	6.74
MW-1	05/11/95	10	650	65.0	6.85
		16	620	63.8	6.94
	*	0	2330	65.0	6.88
) av a	05111107	8	1020	64.9	6 86
MW-2	05/11/95	14	220	64.4	6.89
		21	1450	6.42	6.83
		0	2210	64.1	6.77
	0.541.40.5	8 2540 64.2		64.2	6.63
MW-3	05/11/95	14	3180	63.7	6.57
		17	2620	64.5	6.56

a See Figure 2 for approximate location of monitoring wells.

μmhos/cm Micromhos per centimeters

°F Degrees Fahrenheit

NOTE: Purge characterization logs included in Appendix A

All ground water samples were analyzed for the following constituents:

Constituent	Analytical Method				
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 ¹				
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.

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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

	Total Extractable Petroleum Hydrocarbons (µg/L)				itile Organic	: Compounds ^c (µg	Sodium	Total	
Sample Location	Sample Date Location Sampled I		Motor Oil ^b	Benzene	Toluene	Ethylbenzene	Xylenes	Chloride ^d (mg/L)	Dissolved Solids ^e (mg/L)
	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
MW-1	11/09/94	< 50	< 500	< 0.5	< 0.5	< 0.5	< 0.5	25	470
	02/16/95 ^f	NS	NS	NS	NS	NS	NS	NS	NS
	05/11/95	< 50	< 500	<0.5	<0.5	< 0.5	< 0.5	46	550
1	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
MW-2	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
1	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
MW-3	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 MO	CLs ^g	NE	NE	1	100 ^h	680	1,750	NE	500

Analyzed by EPA Method 8015 (April 1994 samples analyzed by EPA Method 8260).

Analyzed by EPA method 8015 (April 1994 samples analyzed by EPA Method 8270).

Analyzed by EPA Method 8020 (April 1994 samples analyzed by EPA Method 8270).

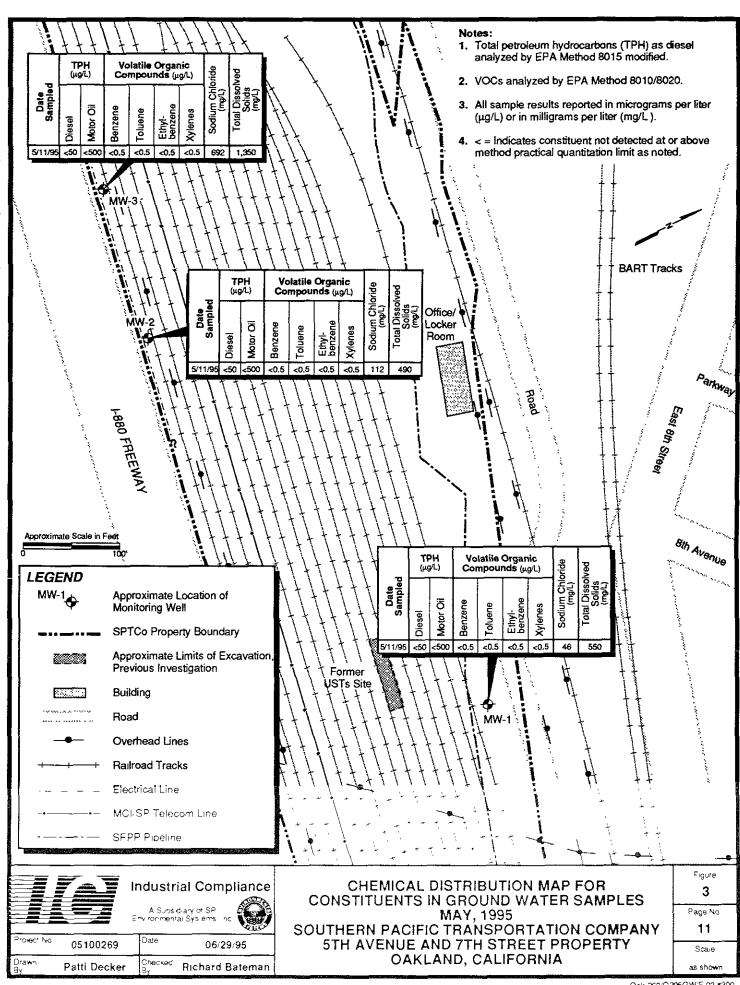
Sodium entor de elinearir fil as determined in leafon irrani. Interin dezing for sedien and entoride separate s

Total dissolute solds in court in IPA Mort 1 (60)

. MW-1 was not sampled in Toleran . In 1995, day to insecess of most true from onest consists of the α

- g California Department of Health Services (DHS) Maximum Contaminant Levels (MCLs) for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).
- h California DHS action level for drinking water (California RWQCB, May, 1993, Compilation of Water Quality Goals).
- NA Not analyzed.
- NE N. MCT Local Soc.
- 15 7 58 1 1 81 81
- mg I Millions per hor
- ag L $_{\rm S}$ M $_{\rm S}$ s $_{\rm S}$ so that
- If the lost reconstraint is a not decear to a concentration action on the reconstraint again method to be to a first susteed.





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

4.0 DISCUSSION

The following sections discuss the occurrence and distribution of chemical compounds in site ground water, ground water elevation and flow direction, and proposed reduction in the number of analytes for the quarterly ground water monitoring program.

4.1 Chemical Distribution

No petroleum hydrocarbons or related volatile organic compounds were detected in ground water samples collected during the second quarter, 1995 ground water monitoring event at the SPTCo 5th Avenue and 7th Street property. This result is generally consistent with analytical results from all previous monitoring events (Table 3). TPH-MO was detected in MW-2 at a concentration of 750 mg/L during the third quarter 1994 monitoring event. Third quarter 1994 samples were analyzed by a different analytical laboratory and resulted in detections at this and several other monitoring sites which have not been duplicated in any subsequent monitoring. None of the constituents analyzed this or any preceding quarter has exceeded established California Department of Health Services (DHS) maximum contaminant levels (MCLs) or action levels (ALs) for drinking water.

4.2 Ground Water Elevation and Flow

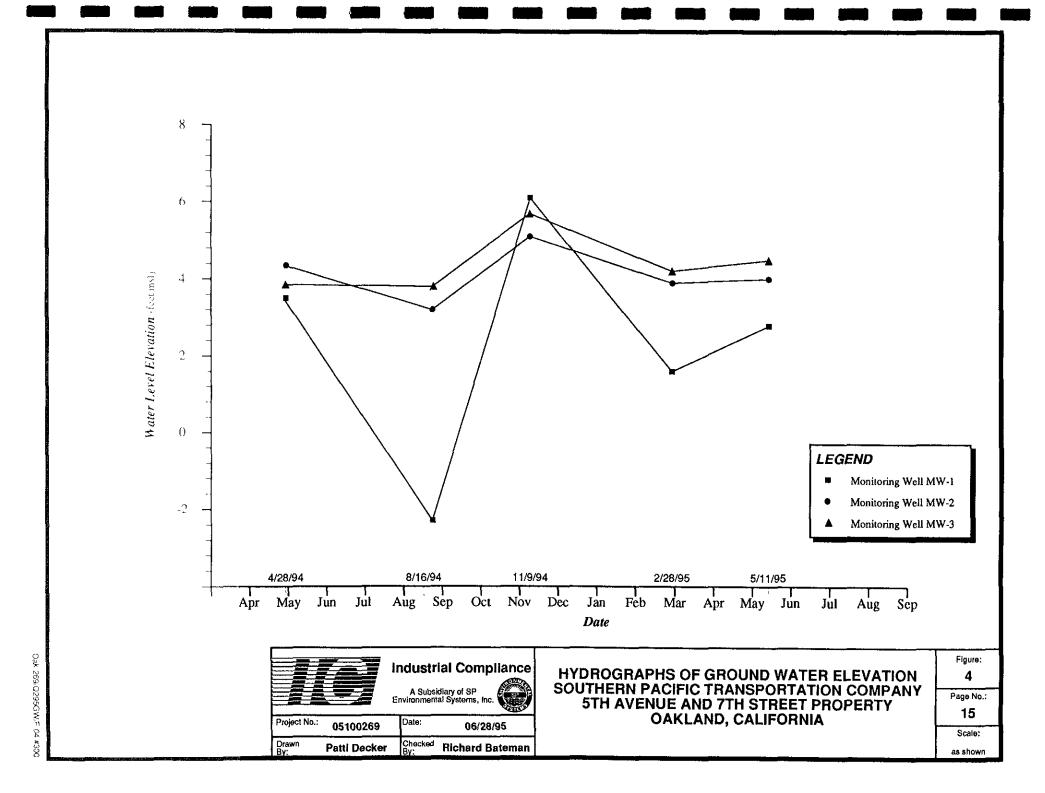
Ground water elevation contour maps for all previous monitoring events are included in Appendix D. Table 1 lists all ground water elevation data collected to date. A comparison of ground water elevation data collected during the second quarter, 1995 sampling event with ground water elevations measured during the first quarter 1995, indicates a slight increase of ground water elevations in all three monitoring wells. Ground water elevations measured during the second quarter 1995, show an average increase of 0.56 feet over first quarter 1995 water levels. The local hydraulic gradient for the second quarter, 1995 was calculated



to be 0.002 which is slightly lower than the gradient calculated for February, 1995 of 0.006. The ground water flow direction has changed from a northeasterly direction during the first quarter 1995, to a easterly direction this quarter. The observed increase in ground water elevation is most likely due to seasonal variation. The change in flow direction may be due to seasonal variation or tidal influence or may be a result of measurement variations and the very low hydraulic gradient in the site vicinity. Figure 4 shows hydrographs of ground water elevations for all monitoring wells.

4.3 Reduction of Analyses

Based on the results from the five quarters of ground water sampling at the site, IC will be deleting TDS and sodium chloride from the analytical suite for quarterly monitoring effective the third quarter of 1995. These analytes were not required by Alameda County but have been monitored at the direction of SPTCo. Both TDS and sodium chloride (calculation from separate analyses of sodium and chloride) have been analyzed for the last five quarters (with the exception of MW-1 last quarter). SPTCo considers this an adequate amount of data to assess the TDS and salinity of site ground water.



5.0 GLOSSARY OF ACRONYMS

ALs Action levels

BTEX Benzene, toluene, ethylbenzene, and xylenes

DHS California Department of Health Services

DI Deionized

IC Industrial Compliance

MCLs Maximum contaminant levels

mg/L Milligrams per liter

MSL Mean sea level

QA/QC Quality Assurance/Quality Control

SPTCo Southern Pacific Transportation Company

TDS Total dissolved solids

TPH-D Total petroleum hydrocarbons as diesel

TPH-MO Total petroleum hydrocarbons as motor oil

VOA Volatile organic analysis

APPENDIX A

GROUND WATER ELEVATION MEASUREMENT AND PURGE CHARACTERIZATION AND SAMPLE LOGS

GROUND WATER ELEVATION MEASUREMENT LOG

Sheet / of /

Project Name: FATT OAKCAKO	Project No. <u>05/00269</u> Task/	Phase: 01 / 98000
Date: 5-//- 65	Equipment: WATER LEVEL MONTHS Weath	er: <u>SUFFCAST</u>

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 ¹ (feet)	Ground Water Elevation ² (feet-MSL)
760-1	8,20	7.57	5.41		13.68			5.41	2.79
M6-2	6.36	8.08	2.26		13.64		,	2.26	4.10
146-3	6.84	8.12	2-34		13.60			2.34	4.50
Сол	mments:								

,	\arustad	danth	+ -	 -	- עדיירו	- / D/T	-,-	Λ.	R	L

MSL Mean sea level

DTW Depth to water (to 0.01 foot)

PT Product thickness (0.01 foot)

Signature Make Endecol

² Ground water elevation = Reference elevation - Adjusted DTW



PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number:	<u>05/00269</u>	Project Name: <u>FAST OAKCAMO GARD</u>	Date: 5/11/95
Well Number: _	100-1	Sampler: J. Rott / M FANCOTT	Weather: Overcast

Military Time	0758	0804	0810	0855	1100	1105	
Gallons Purged		6	10	16		0	Depth to bottom (DB): /3 - 68
Purge Raie					S	4	Depth to water (DW): 5.4/
pH	-,	6,74			P	2	Height of water column (H) = DB - DW: 8-27
Conductivity				6,2×100	177	/	One casing volume (CV) = H x multiplier: 5.38
Temperature (XF)	67.1	65.8	65.0	63.8	- u	<u></u>	Three casing volumes (3CV): 16.1
Salmity (0/00)	<u> </u>					17	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	Lon	Low	Low	MED	<u> </u>		4" well = 0.65 gallons/foot
Color	Car	CUR	Cire	CT. BRN			6" well = 1.47 gallons/loot
Water Level Casing	<u> </u>	·	<u> </u>	<u> </u>			8" well = 2.61 gallons/foot
Calitation	рН	»					S C.:

Samble #	Quantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	Field C-
MG-1		400L	1 000	HCL	BIEX	CHROM	DIS BALLER	TEL BALLER	Field Comments
		LLT	AMBER	MONE	DESEMPO	CHOOM	DIS BAILER	TEL BAILER	
		LET.	MAR	MONE	TPH MO			TEL BACER	
		14	PXY	NONE	TDS/MACL	THROW	DS BAILER	TEL BAILER	
TRIP	2	40mL	UOA	HCL	BTEX	CHEON			
MW-1D	2	40156	CDA	1456	BTEX	CHRON	DIS BALETA	TEL BALLETE	
		CET	AMPER	MONE	HEDH GOIS	CHRON	DIS BAILER	TEL BALLER	
		(EF	AMBOR	MOVE	TPH NO	C41127	A'S BAILER	TEL- MAILER	······································
		1LT	POLY	MONE	TOSIMEL	CHROM		TEL PRICE	
Cicanung	(LASHE!	TEFLON	BAILES	WATH F	+LCOHOX	1 EIK	SED COITH L)(())	
20numents		on REC					COLUMN X	W WATER	,

Sampler's Signature: Dele Endeco



PURGE CHARACTERIZATION AND SAMPLE LOG

Protect Number:	C 5,00269

Project Name: EAST OAKLAKO GARD

Date: 5-11-95

Well Number: ~ ~ &)

Sampler: 3 ROTH

Weather: OUERCAST

Military Time	954	1001	1013	1022	1035	
Galions Purged	(C)	8	14	151		Depth to bottom (DB): 13 cC11
Purge Raie					3	
но	6.88	6.86	6.89	6.83	A	Height of any 1
Conductivity	2.33	1.82	0.450	1.45	M	0
Termiscrature (L/4)	65.0	64.9	64.4	642	P	Three casing volumes (3CV): 21.0
Salimity (0/00)					4	Multipliers = 2" well = 0.16 gallons/foot
Turbidity	CLONE	CLEAR	CLOUDY	(LOLDY	E	4" well = 0.65 gallons/foot
		CLEAR	LT BEN	CT BEX		6" well = 1.47 gallons/foot
Water Level Casing	<u> </u>		1	-		8" well = 2.61 gallons/foot
Calibration	Hq					S.C.:

Sample #	Quantity	Volume	Туре	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	E: N.O.
M(0) - 3	2	40ML	(200	HCL	BIEX	LIPTIM	DIS BALLER		Field Comments
	(1 LT	AMBOR	NONE	TERM CLASS		NS BAILER	TEL BALLER	
- <u>-</u>		7-61	PMBER				DIS BALER	TEL BALLER	
	1	1.4T	PORT	MONE	TDS/MACL	CHEON	DYS BALLER	TEL BAILER	
								1220141100	
				·					
									<u> </u>
									
					<u> </u>	·			
		· ***********************************			<u> </u>				
	1				<u> </u>				·
1					<u> </u>	<u> </u>	· · · · · · · · · · · · · · · · · · ·		
leaning. onunients	COAYTE	Q TELF	OK BH	LER G	SITH A	4-00KI	OX / PELLUS	ED GOXTH DI	COATER

Sampler's Signature: Drake Endicol



PURGE CHARACTERIZATION AND SAMPLE LOG

Project Number:	05/00269
A A CONCLUSION TO THE COLL	

Project Name: <u>FAST OAKLAND 9THED</u>

Date: 5-11-95

Sampler: 5 ROTH / M EMPLOTT

Weather: OUERCAST

Military Time	1423	925	932	1/21	1300	
Galions Purped		8	14	21/7		Depth to bottom (DB): 42 CH 13 CO
Purge Rate					S	Depth to bottom (DB): 43 64 (3.60) Depth to water (DW): 34
pH	6.77	6.6.3	6.57	6.56	A	Hisiabit of water polymer (II) 100
Conductivity	12:51	2:54	34680	2630	14	One casing volume (CV) = H x multiplier:
Temperature (S/F)	64.1	64.5	63.7	64.5	P	77
Salmity (0/00)					7	Multipliers = 2" well = 0.16 gallons/foot
Turbidin	CLEDA	C/0004	(40004	(100004	E	4" well = 0.65 gallons/foot
Color		17 BEN	LTBOX	LIT BIEW		6" weil = 1.47 gallons/foot
Water Level Casing						8" well = 2.61 gallons/foot
Calitration	Hq					S.C.:

Sample#	(hiantity	Volume	Type	Preserv.	Analysis	Lab	Sample Equip.	Purge Equip.	57.11.0
171-2		40ML	COA	HCL	BIEX	CHROM			Field Comments
	/	ILT	AMBER	MONE	TEPH BOIS	CHRON	DIS BALLER	TEC BAIER	
	<u>, </u>	167	Pros		1-0			TEL BAILER	
		14T	POLY		TOSAKL			TEL BALER	
			<u> </u>		<u> </u>			THE GTICES	
MG-DE		40m	UOA	HCL	BTEX	CHROM		TEL BALLER	
	rL	/ <u>/ </u>	AMER	MOME	TEPH BOIS			TEL BALLER	
	7	127	PMBER	KORE	1PH-MO			TE BALLE	
	í				ļ <u>.</u>			OCICE	
		,	 '			<u> </u>			
	1	<u> </u>	 	 					
Clean			<u></u>	<u> </u>					
Cleaning Co iumenis	COASHE	TELF	CAN PAGE	ER CE			PARSED CE	OTH DI WATE	- 72
Co inneurz	i V	TEREO E		GACS			1 HOURS	DELOATERED O	AT 17 GALS.
1	GOALTE	Sp / 5	5 /4RDS	2 774F	ek san	MPCE	2		

Sampler's Signature: Drefee Endeas

APPENDIX B CHAIN-OF-CUSTODY DOCUMENT

16 /8827v-8028

21928

No. 20557

																			<u>U.</u>		
INI	DUSTRIAL	. COMF	PLIANC	CE ·	983	38 OLD PLACE		SUITE 100 · S	SACRAI	MENT	D, CA	95827	7-35	59 •			6-369	9-8971	• FAX	916-369-	8370
PROJECT N			<i>C</i>	_		PROJECT LOCA				ANA	ANALYSIS DESIRED										
FAST.	CAX/LA PROJE	CT CONTA	<i>Υ/}(</i> C)	D		CAKELI	PROJECT TELEPHON	E NO.	န္		ANALYSIS DESIRED (INDICATE SEPARATE CONTAINERS) REMARKS										
					15-6	`M <i>\</i>	(50)238		NUMBER												
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APPENDIX C

ANALYTICAL LABORATORY REPORTS, GROUND WATER SAMPLES

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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.

Sampled: May 11, 1995 Method: EPA 3510/8015M Matrix: WATER Run#: 6661

Extracted: May 15, 1995

N JC SIRPAT 14 19 2

Analyzed: May 15, 1995

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.	

Sinist andlatora

Sirirat (Sindy) Chullakorn

Chemist

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 Extracted: May 15, 1995

Analyzed: May 15, 1995 Run#: 6661

 Spl	DIESEL (ug/L)	REPORTING LIMIT (ug/L)	BLANK RESULT (ug/L)	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

Sunat Chullet

Sirirat (Sindy) Chullakorn

Chemist

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

Sampled: May 11, 1995

Project#: 05100269

re: 6 samples for BTEX analysis.

Matrix: WATER

Run#: 6712

Analyzed: May 17, 1995

Ethyl

Total

Method: EPA 8020

Sp1 # CLIENT SMPL ID	Benzene (ug/L)	Toluene (ug/L)	Benzene (ug/L)	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.
Poporting Limits	0.5	0.5	0.5	0.5
Reporting Limits				
Blank Result	N.D.	N.D.	N.D.	N.D.
Blank Spike Result (%)	109	103		~ -
ally Newston		Al. KM		

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

05/16/95 Date of Report: 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

Donna Allsup Laboratory Director

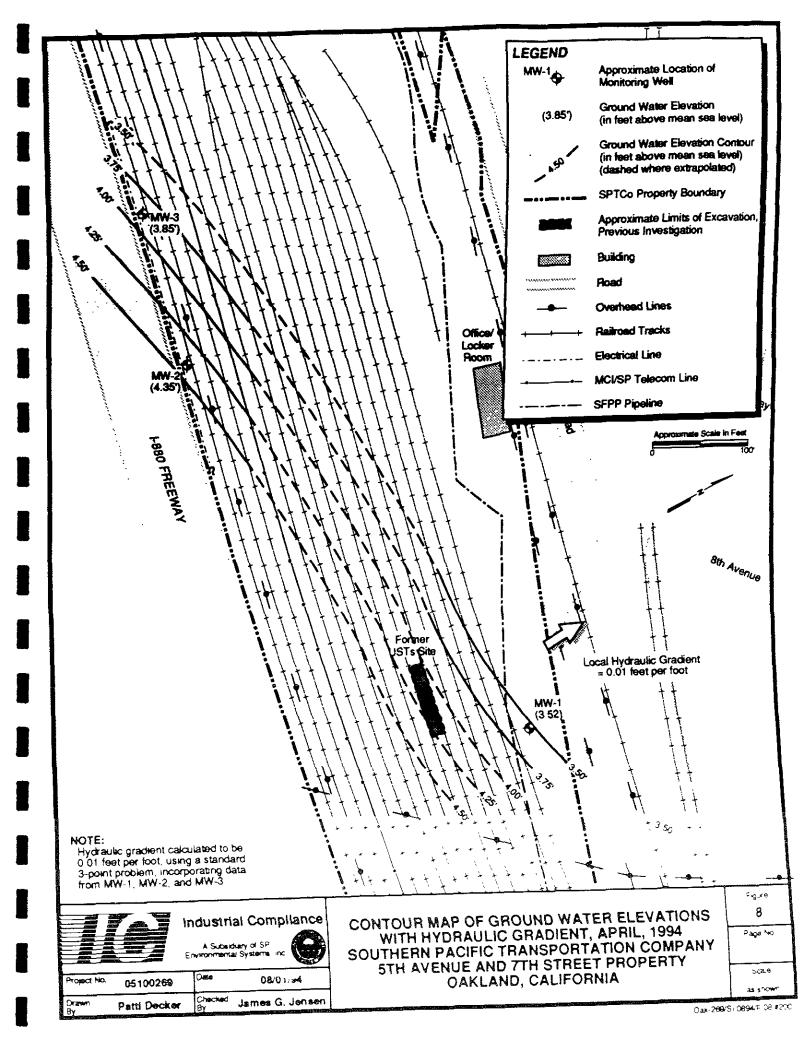
Chemist

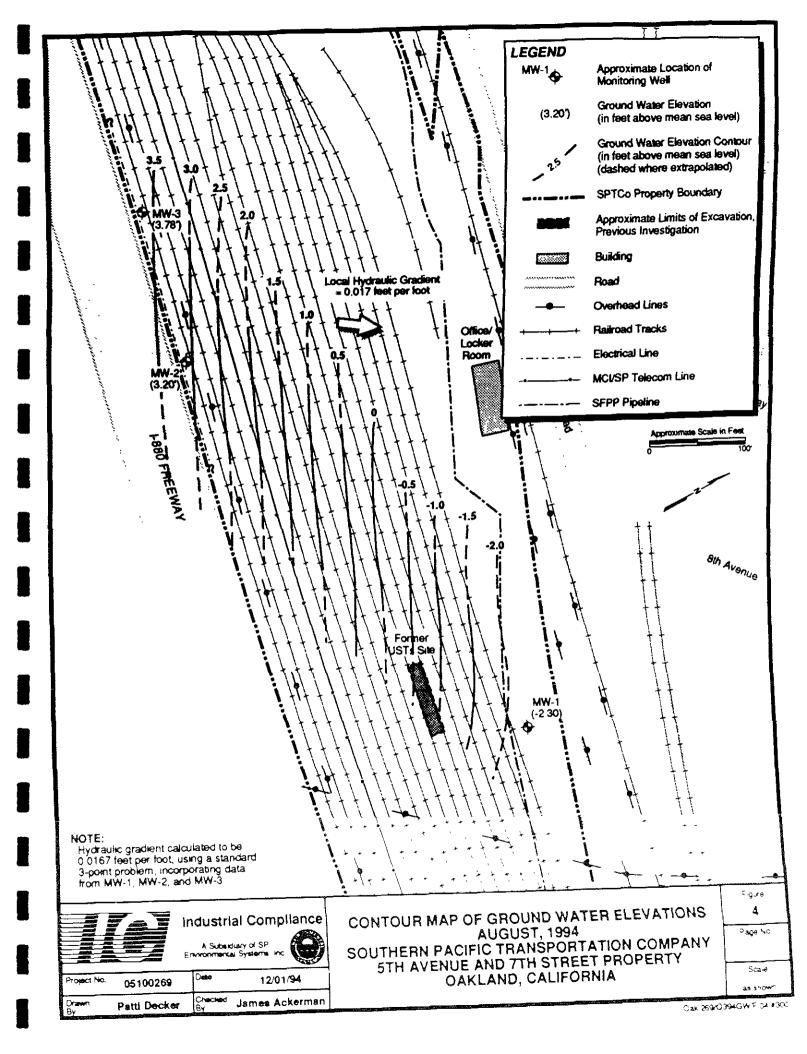
APPENDIX D

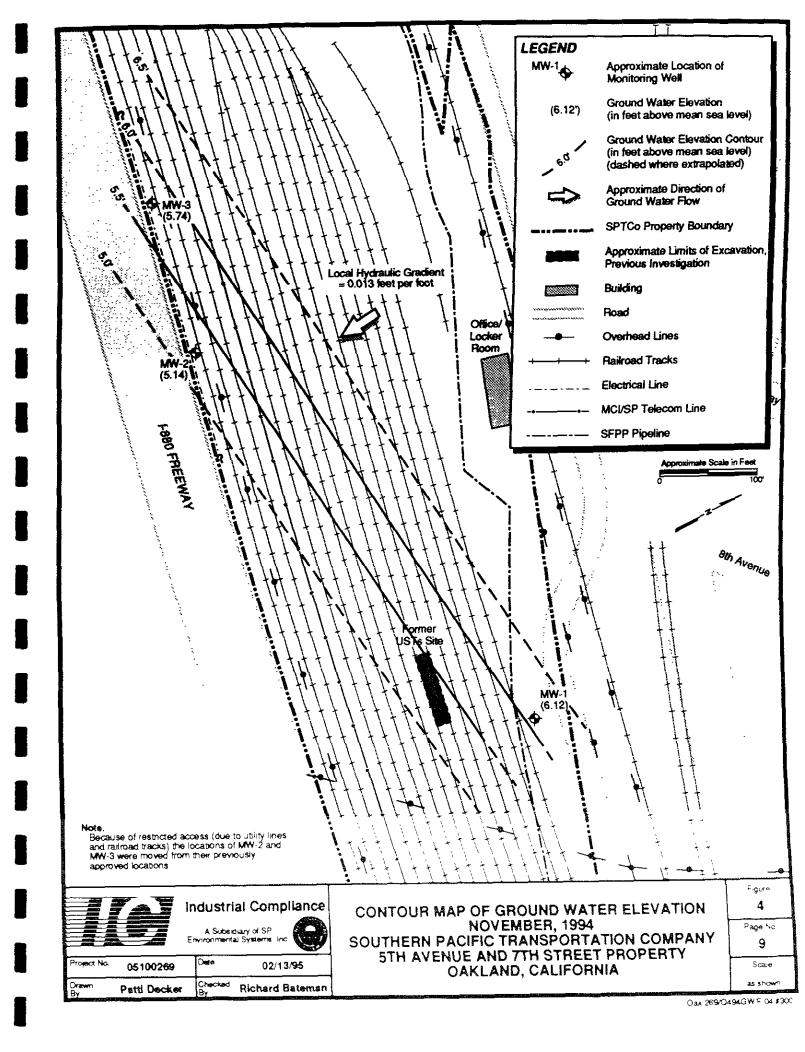
GROUND WATER ELEVATION CONTOUR MAPS PREVIOUS MONITORING EVENTS

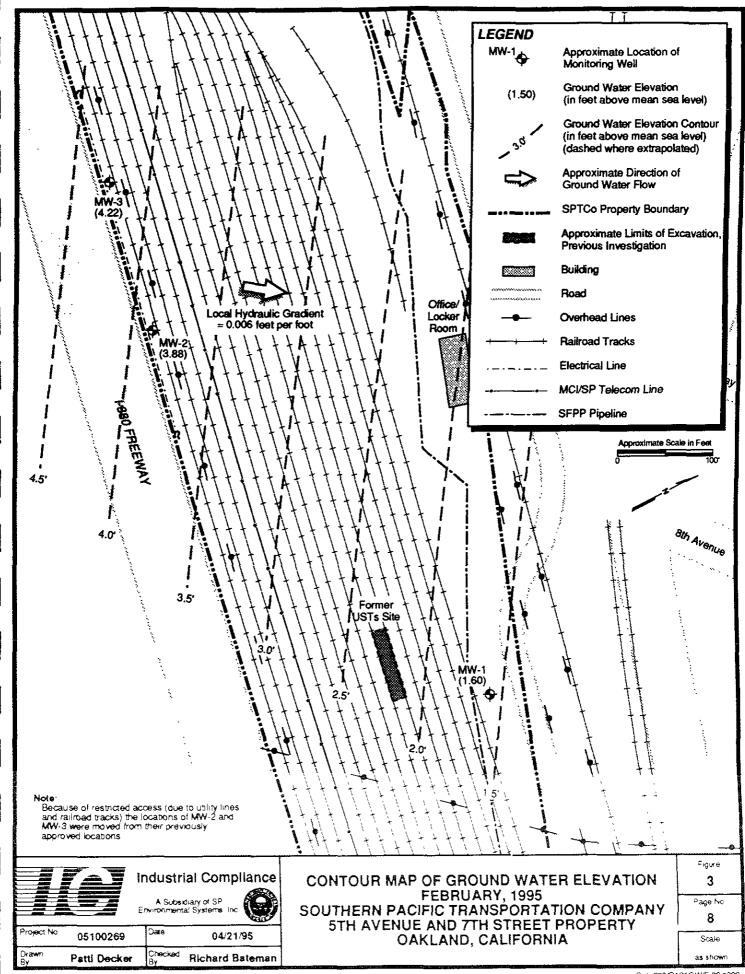












9838 Old Placerville Road Suite 100 Sacramento, CA 95827-3559 916/369-8971 FAX 916/369-8370 55.P 3748

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

+ , A, O, A

James B Ackerman Project Geologist Richard L. Bateman, R.G. Principal Hydrogeologist

JBA RLB dao

Attachment



Ms. Jennifer Eberle August 4, 1995 Page 2

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

Region (with attachment)