



Texaco Refining  
and Marketing Inc

138 Cutting Boulevard  
Richmond, CA 94801

95 AUG 11 PM 2:42

July 26, 1995

**ENV - STUDIES, SURVEYS, & REPORTS**

**500 Grand Avenue  
Oakland, California**

Ms. Susan Hugo  
Alameda County Environmental  
Health Department  
1131 Harbor Bay Pky.  
Alameda, CA 94502-6577

Dear Ms. Hugo:

This letter presents the results of groundwater monitoring and sampling conducted by Blaine Tech Services, Inc. on June 18, 1995, at the site referenced above (see Plate 1, Site Vicinity Map). Based on groundwater level measurements, the areal hydraulic gradient was estimated to be south-southeast (see Plate 2, Groundwater Gradient Map). TPHg and benzene concentrations are shown on Plate 3. Tables 1 and 2 list historical groundwater monitoring data and analytical results, respectively.

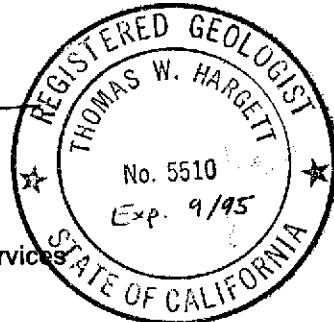
The certified analytical report, chain-of-custody, field data sheets, bill of lading, and quarterly summary report are in the Appendix. Texaco Environmental Services' Standard Operating Procedures may be found in Texaco's first quarter, 1995 monitoring report.

If you have any questions or comments regarding this site, please call the Texaco Environmental Services' site Project Coordinator, Tom Hargett at (818) 505-2733.

Best Regards,

Rebecca Digerness  
Environmental Assistant

Tom Hargett, R. G.  
Project Coordinator  
Texaco Environmental Services



RBD:hs  
P:\GWMP\QMR\500G\QMR.LET

Enclosures

cc: Mr. Richard Hiett  
CRWQCB - San Francisco Bay Region  
2101 Webster St., Suite 500  
Oakland, CA 94612

RAOFile-UCPFile-TWHargett (w/enclosures) RRZielinski (w/o enclosures)

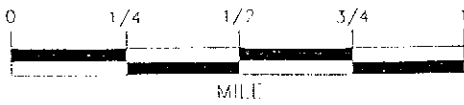
pr: KEP

**Groundwater Monitoring and Sampling  
Second Quarter, 1995  
at the  
Former Texaco Service Station  
500 Grand Avenue  
Oakland, CA**



**SOURCE:**

1993 THE THOMAS GUIDE  
ALAMEDA COUNTY, PAGE 9 (D4)



1" = 2200'



**TEXACO**

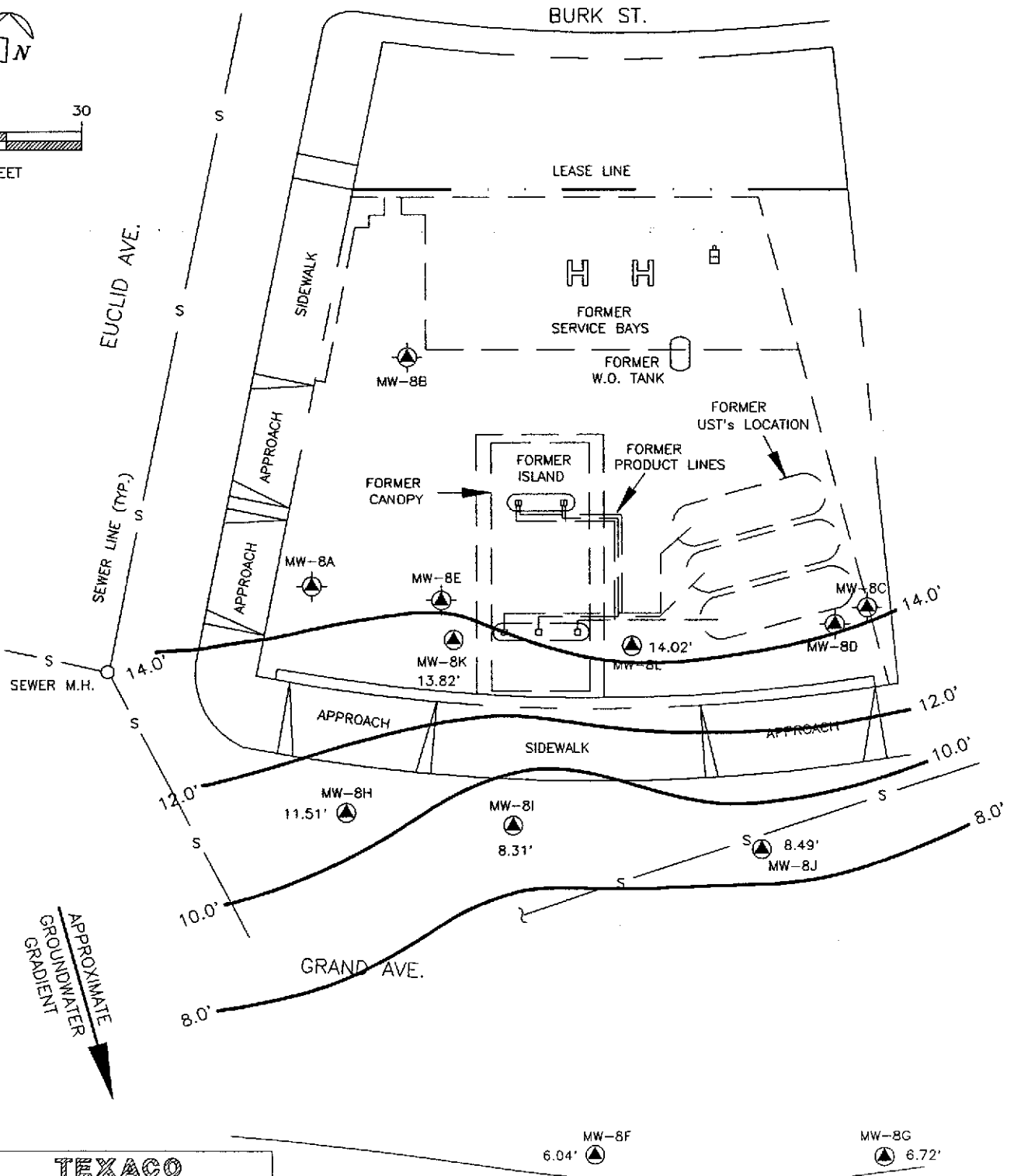
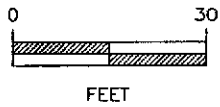
REFINING AND MARKETING, INC.  
TEXACO ENVIRONMENTAL SERVICES

PLATE 1

SITE VICINITY MAP

FORMER TEXACO SERVICE STATION

500 GRAND AVE. / EUCLID AVE.  
OAKLAND, CALIFORNIA



APPROXIMATE  
GROUNDWATER  
GRADIENT  
↓



**TEXACO**

REFINING AND MARKETING INC.  
TEXACO ENVIRONMENTAL SERVICES

PLATE 2 : GROUNDWATER GRADIENT MAP  
(05/18/1995)

FORMER TEXACO SERVICE STATION  
500 GRAND AVE. / EUCLID AVE.,  
OAKLAND, CALIFORNIA

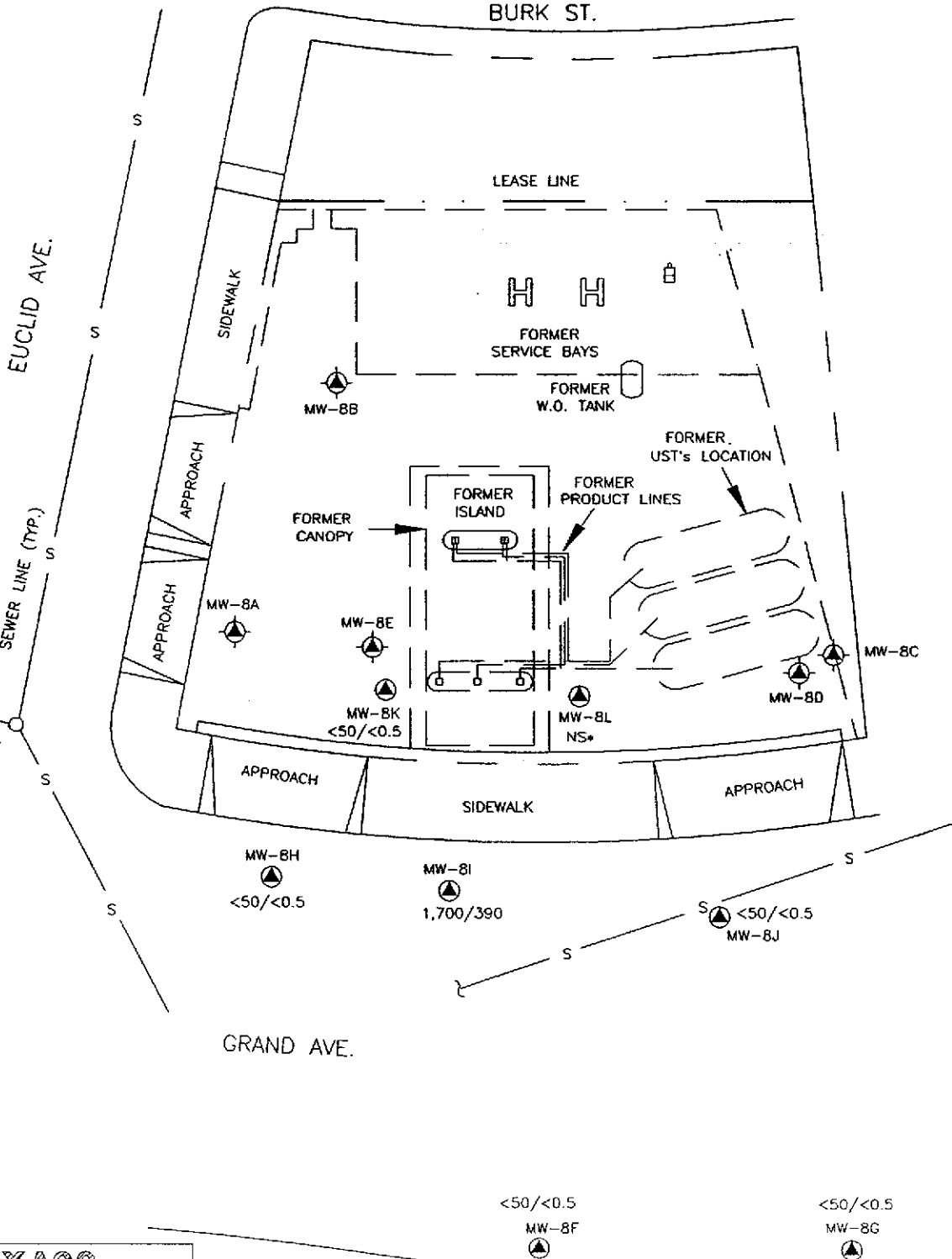
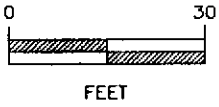
SCALE	1" = 30'-0"	LOCATION #	62-488-0235
DRAWN BY	AMA	DATE	07/24/1995
CHECKED BY	RD	DATE	07/24/1995
DRAWING NO. (OAKLAND) GR-EU-OK.DWG			

**LEGEND :**

- MW-8F
- MW-8A
- 8.49'

- GROUNDWATER MONITORING WELL LOCATION,  
AND WELL NUMBER
- ABANDONED GROUNDWATER MONITORING WELL LOCATION,  
AND WELL NUMBER
- GROUNDWATER CONTOUR LINE
- GROUNDWATER ELEVATION (ABOVE MSL)

LAKE MERRITT  
PARK



**TEXACO**  
REFINING AND MARKETING INC.  
TEXACO ENVIRONMENTAL SERVICES

PLATE 3 : TPH<sub>9</sub>/BENZENE CONCENTRATION IN GROUNDWATER  
(05/18/1995)

FORMER TEXACO SERVICE STATION  
500 GRAND AVE. / EUCLID AVE.,  
OAKLAND, CALIFORNIA

SCALE 1"=30'-0" LOCATION # 62-488-0235

DRAWN BY AMA DATE 07/24/1995

CHECKED BY RD DATE 07/24/1995

DRAWING NO. (OAKLAND) GR-EU-OK-DWG

**LEGEND :**

- GROUNDWATER MONITORING WELL LOCATION, AND WELL NUMBER
- ABANDONED GROUNDWATER MONITORING WELL LOCATION, AND WELL NUMBER
- <50/<0.5 TPH<sub>9</sub>/BENZENE CONCENTRATION IN GROUNDWATER (ppb)
- NS\* NOT SAMPLED, WELL OBSTRUCTED

LAKE MERRITT  
PARK

Table 1  
Groundwater Elevation Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8A	Well Properly Abandoned			
MW-8B	Well Properly Abandoned			
MW-8C	Well Properly Abandoned			
MW-8D	Well Properly Abandoned			
MW-8E	Well Properly Abandoned			
MW-8F	03/29/91	97.94		
	01/23/92		10.24	87.70
	02/28/92		9.93	88.01
	03/26/92		8.78	89.16
	04/30/92		9.36	88.58
	09/28/92		11.83	86.11
	11/19/92		11.22	86.72
	02/12/93		9.66	88.28
	05/06/93		8.83	89.11
	08/16/93	14.04 *	10.16	3.88
	10/12/93		10.60	3.44
	02/03/94		9.29	4.75
	05/31/94		9.34	4.70
	08/25/94		10.14	3.90
	11/02/94		10.42	3.62
01/31/95		7.47	6.57	
05/18/95		8.00	6.04	
MW-8G	04/23/91	97.24		
	01/23/92		11.30	85.94
	02/28/92		10.83	86.41
	03/26/92		9.20	88.04
	04/30/92		9.00	88.24
	09/28/92		13.32	83.92
	11/19/92		Well Inaccessible	
	02/12/93		Well Inaccessible	
	05/06/93		11.18	86.06
	08/16/93	13.32 *	9.51	3.81
	10/12/93		10.93	2.39
	02/03/94		9.69	3.63
	05/31/94		9.24	4.08
	08/25/94		9.74	3.58
	11/02/94		10.08	3.24
01/31/95		5.75	7.57	
05/18/95		6.60	6.72	

Table 1  
Groundwater Elevation Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8H	03/29/91	98.90		
	01/23/92		3.74	95.16
	02/28/92		4.44	94.46
	03/26/92		4.21	94.69
	04/30/92		3.46	95.44
	09/28/92		Well Inaccessible	
	11/19/92		3.75	95.15
	02/12/93		4.12	94.78
	05/06/93		3.85	95.05
	08/16/93	15.04 *	3.88	11.16
	10/12/93		3.80	11.24
	02/03/94		3.71	11.33
	05/31/94		3.80	11.24
	08/25/94		3.89	11.15
	11/02/94		3.64	11.40
	01/31/95		3.58	11.46
	05/18/95		3.53	11.51
MW-8I	03/29/91	98.27		
	01/23/92		6.33	91.94
	02/28/92		6.55	91.72
	03/26/92		6.45	91.82
	04/30/92		6.48	91.79
	09/28/92		Well Inaccessible	
	11/19/92		6.37	91.90
	02/12/93		6.44	91.83
	05/06/93		6.36	91.91
	08/16/93	14.40 *	6.35	8.05
	10/12/93		5.99	8.41
	02/03/94		5.84	8.56
	05/31/94		6.25	8.15
	08/25/94		6.31	8.09
	11/02/94		6.10	8.30
	01/31/95		5.83	8.57
	05/18/95		6.09	8.31



Table 1  
Groundwater Elevation Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Gauged	Top of Casing Elevation (feet, MSL)	Depth to Water (feet, TOC)	Elevation of Groundwater (feet, MSL)
MW-8J	03/29/91	97.69		
	01/23/92		6.31	91.38
	02/28/92		6.28	91.41
	03/26/92		6.20	91.49
	04/30/92		6.48	91.21
	09/28/92		Well Inaccessible	
	11/19/92		6.55	91.14
	02/12/93		7.46	90.23
	05/06/93		6.21	91.48
	08/16/93	13.82 *	6.29	7.53
	10/12/93		5.87	7.95
	02/03/94		5.98	7.84
	05/31/94		6.10	7.72
	08/25/94		6.01	7.81
	11/02/94		5.90	7.92
	01/31/95		5.07	8.75
05/18/95		5.33	8.49	
MW-8K	08/16/93	15.18 *	2.08	13.10
	10/12/93		1.95	13.23
	02/03/94		1.48	13.70
	05/31/94		1.59	13.59
	08/25/94		2.00	13.18
	11/02/94		2.10	13.08
	01/31/95		1.35	13.83
	05/18/95		1.36	13.82
MW-8L	08/16/93	14.44 *	2.47	11.97
	10/12/93		2.36	12.08
	02/03/94		2.82	11.62
	05/31/94		2.66	11.78
	08/25/94		2.34	12.10
	11/02/94		Well Obstructed	
	01/31/95		0.08	14.36
	05/18/95		0.42	14.02
* = New well elevation survey performed on August 16, 1993 based on mean sea level (MSL). Prior data based on arbitrary site data.				
TOC = Top of Casing				

Table 2  
Groundwater Analytical Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPHd (ppm)	TPH as Other* (ppm)
MW-8A	Well properly abandoned							
MW-8B	Well properly abandoned							
MW-8C	Well properly abandoned							
MW-8D	Well properly abandoned							
MW-8E	Well properly abandoned							
MW-8F	01/23/92	<50	4.0	1.3	<0.5	1.9	1.3	NA
	04/30/92	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<500
	09/28/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	11/19/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	02/12/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	NA
	05/06/93	<50	<0.5	<0.5	<0.5	<0.5	<0.1	<50
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	0.53
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	1.4
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	0.52	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	0.29	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	0.054	<5
MW-8G	** 01/24/92	<50	<0.5	<0.5	<0.5	<0.5	0.98	NA
	04/30/92	<50	1.7	<0.5	<0.5	<0.5	<0.05	<500
	09/28/92	Well Dry						
	11/19/92	Well Inaccessible						
	02/12/93	Well Inaccessible						
	04/29/93	<50	<0.5	<0.5	<0.5	<0.5	0.06	<250
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<0.2
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	0.86
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	0.53	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5

Table 2  
Groundwater Analytical Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPHd (ppm)	TPH as Other* (ppm)	
MW-8H	01/23/92	110	7.2	1.2	4.7	3.2	<0.06	NA	
	04/30/92	190	11	1.5	5.6	3.6	0.09	<500	
	09/28/92	Well Inaccessible							
	11/19/92	130	6.8	<0.5	1.1	1.5	NA	NA	
	02/12/93	73	5.9	<0.5	0.8	<0.5	NA	NA	
	05/06/93	57	1.7	<0.5	<0.5	<0.5	<0.1	<50	
	08/16/93	<50	0.5	<0.5	0.5	1.4	<0.05	<50	
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50	
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50	
	05/31/94	<50	0.79	<0.5	<0.5	<0.5	<0.05	1.6	
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	4.0	
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	0.76	<5	
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	0.19	<5	
05/18/95	<50	<0.5	<0.5	<0.5	<0.5	0.37	6.6		
MW-8I	01/23/92	820	420	7	27	20	0.21	NA	
	04/30/92	2,200	1,800	19	180	25	0.43	<500	
	09/28/92	Well Inaccessible							
	11/19/92	720	120	1.1	29	13	NA	NA	
	02/12/93	4,000	970	9.2	52	36	NA	NA	
	05/06/93	1,400	370	2.4	40	8.4	<0.01	<50	
	08/16/93	<50	3.1	<0.5	6	<0.5	<0.05	<50	
	10/12/93	<50	1.4	<0.5	<0.5	<0.5	<0.05	<50	
	02/03/94	1,000	270	3.2	51	14	<0.05	<50	
	05/31/94	1,400	330	4.6	52	16	<0.05	0.33	
	08/25/94	540	14	0.58	30	4.3	<0.05	0.73	
	11/02/94	310	5.7	0.74	20	<0.5	0.37	<5	
	01/31/95	840	290	4.5	45	1.6	0.91	<5	
05/18/95	1,700	390	7.8	80	10	1.1	<5		
MW-8J	01/23/92	<50	1	<0.5	<0.5	<0.5	<0.05	NA	
	04/30/92	<50	2	<0.5	<0.5	<0.5	<0.05	<500	
	09/28/92	Well Inaccessible							
	11/19/92	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
	02/12/93	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	
	05/06/93	<50	<0.5	<0.5	<0.5	<0.5	<0.01	<50	
	08/16/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50	
	10/12/93	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50	
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50	
	05/31/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<0.2	
	08/25/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	1.0	
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5	
	01/31/95	<50	3.7	<0.5	<0.5	<0.5	<0.05	<5	
05/18/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5		

Table 2  
Groundwater Analytical Data  
500 Grand Avenue, Oakland, CA

Well Number	Date Sampled	TPHg (ppb)	Benzene (ppb)	Toluene (ppb)	Ethyl-benzene (ppb)	Xylenes (ppb)	TPHd (ppm)	TPH as Other* (ppm)
MW-8K	05/21/93	54	12	<0.5	<0.5	<0.5	<0.05	<50
	08/16/93	<50	<0.5	<0.5	1.0	<0.5	<0.05	<50
	10/24/93	<50	4.2	<0.5	<0.5	<0.5	<0.05	<50
	02/03/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<50
	05/31/94	<50	1.0	0.57	<0.5	<0.5	<0.05	<0.2
	08/25/94	<50	0.78	<0.5	<0.5	<0.5	<0.05	0.98
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
	01/31/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
MW-8L	05/21/93	76	1.1	<0.5	<0.5	6	<0.05	<50
	08/16/93	<50	<0.5	<0.5	0.7	1.1	<0.05	<50
	10/12/93	110	13	<0.5	6	<0.5	<0.05	<50
	02/03/94	590	61	2.4	<0.5	110	<0.05	<50
	05/31/94	410	77	<0.5	20	1.1	<0.05	<0.2
	08/25/94	260	16	<0.5	2.5	<0.5	<0.05	1.1
	11/02/94	Not Sampled						
	01/31/95	Not Sampled						
05/18/95	Not Sampled							
EB	08/25/94	69	<0.5	<0.5	<0.5	<0.5	<0.05	0.71
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	<0.05	<5
TB	08/25/94	52	<0.5	<0.5	<0.5	<0.5	NA	NA
	11/02/94	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
	05/18/95	<50	<0.5	<0.5	<0.5	<0.5	NA	NA
EB = Equipment Blank								
TB = Trip Blank								
ppb = parts per billion								
ppm = parts per million								
NA = Not Analyzed								
< = Less than the detection limit for the specified method of analysis.								
* = Includes "heavy" petroleum hydrocarbons such as waste oil, mineral spirits, jet fuel, or fuel oil.								
** = Non-diesel mix >C16. The certified analytical report for sample MW-8G was revised on 10/21/93.								

801 Western Avenue  
 Glendale, CA 91201  
 818/247-5737  
 Fax: 818/247-9797

LOG NO: G95-05-348

Received: 19 MAY 95

Mailed: **JUN 1 1995**

Ms. Rebecca Digerness  
 Texaco Environmental Services  
 108 Cutting Boulevard  
 Richmond, CA 94804

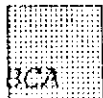
Purchase Order: 94-1446346+4370

Requisition: 624880235  
 Project: FKEP1014L

REPORT OF ANALYTICAL RESULTS

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TRPH (CADHS/418.1) mg/L	TPH/BTEX (CADHS/8020)	Date Analyzed Date	Dilution Factor Times	TPH-g ug/L	Benzene ug/L	Toluene ug/L	Ethyl-Benzene ug/L	Total Xylenes Isomers ug/L	Carbon Range
RDL					1	50	0.5	0.5	0.5	0.5	
1*MW-8F	05/18/95	<5	05/30/95	05/30/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
2*MW-8G	05/18/95	<5	05/30/95	05/30/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
3*MW-8H	05/18/95	6.6	05/30/95	05/30/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
4*MW-8I	05/18/95	<5	05/30/95	05/30/95	5	1700	390	7.8	80	10	C6-C12
5*MW-8J	05/18/95	<5	05/30/95	05/30/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
6*MW-8K	05/18/95	<5	05/31/95	05/31/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
7*EB	05/18/95	<5	05/31/95	05/31/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12
8*TB	05/18/95	---	05/31/95	05/31/95	1	<50	<0.5	<0.5	<0.5	<0.5	C6-C12



801 Western Avenue  
Glendale, CA 91201  
818/247-5737  
Fax: 818/247-9797

LOG NO: G95-05-348

received: 19 MAY 95

Ms. Rebecca Digerness  
Texaco Environmental Services  
108 Cutting Boulevard  
Richmond, CA 94804

Purchase Order: 94-1446346+4370

Requisition: 624880235  
Project: FKEP1014L

REPORT OF ANALYTICAL RESULTS

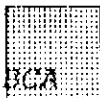
Page 2

AQUEOUS

SAMPLE DESCRIPTION	DATE SAMPLED	TPH (CADHS/3520)	Date	Date	Dilution Factor Times	TPH-d mg/L	
			Extracted Date	Analyzed Date			
RDL						0.05	
1*MW-8F	05/18/95	05/24/95	05/26/95		1	0.054	---
2*MW-8G	05/18/95	05/24/95	05/26/95		1	<0.05	---
3*MW-8H	05/18/95	05/24/95	05/26/95		1	0.37	---
4*MW-8I	05/18/95	05/24/95	05/26/95		1	1.1	---
5*MW-8J	05/18/95	05/24/95	05/26/95		1	<0.05	---
6*MW-8K	05/18/95	05/24/95	05/26/95		1	<0.05	---
7*EB	05/18/95	05/24/95	05/26/95		1	<0.05	---
8*1B	05/18/95	---	---		---	---	---

Tom Hargett  
500 Grand Ave., Oakland  
Alameda County

*Jane Freemyer*  
Jane Freemyer, Program Manager



AMPL'S...	SAMPLE DESCRIPTION..	DETERM.....	DATE.....	METHOD.....	EQUIP. BATCH..	ID.NO
			ANALYZED			
1505348*1	MW-8F	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		GAS.BTX.TESNC	05.30.95	8015M.TX	536-23	8042
		DIESEL.3520.TES	05.26.95	8015M	536-01	7616
1505348*2	MW-8G	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.30.95	8015M.TX	536-23	8042
1505348*3	MW-8H	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.30.95	8015M.TX	536-23	8042
1505348*4	MW-8I	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.30.95	8015M.TX	536-23	8042
1505348*5	MW-8J	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.30.95	8015M.TX	536-23	8042
1505348*6	MW-8K	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.31.95	8015M.TX	536-23	8042
1505348*7	EB	IR.PET.TES.AQ	05.23.95	418.1	533-17	8106
		DIESEL.3520.TES	05.26.95	8015M	636-01	7616
		GAS.BTX.TESNC	05.31.95	8015M.TX	536-23	8042
1505348*8	TB	GAS.BTX.TESNC	05.31.95	8015M.TX	536-23	8042

\*\*\*

Notes: Equipment = BC Analytical identification number for a particular piece of analytical equipment.  
 ID.NO = BC Analytical employee identification number of analyst.

BC ANALYTICAL

ORDER QC REPORT FOR G9505348

Page 1

DATE REPORTED : 06/01/95

LABORATORY CONTROL STANDARDS  
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	LC RESULT	LT RESULT	UNIT	PERCENT RECOVERY
1. TRPH/CADHS/418.1	C5052639*1	05.23.95	9579	3.93	2.50	mg/L	157
2. TRPH/CADHS/418.1	C5052640*1	05.23.95	9579	4.04	2.50	mg/L	162
3. TPH (8015M/8020)	C5053357*1						
Date Analyzed		05.30.95	95563	05/30/95	05/30/95	Date	N/A
Benzene		05.30.95	95563	15.8	15.2	ug/L	104
Toluene		05.30.95	95563	84.4	97.4	ug/L	87
Ethylbenzene		05.30.95	95563	16.6	20.4	ug/L	81
Total Xylene Isomers		05.30.95	95563	98.4	119	ug/L	83
TPH (Gasoline Range)		05.30.95	95563	1180	1100	ug/L	107
1. TPH (8015M/8020)	C5053358*1						
Date Analyzed		05.30.95	95563	05/30/95	05/30/95	Date	N/A
Benzene		05.30.95	95563	15.7	15.2	ug/L	103
Toluene		05.30.95	95563	84.3	97.4	ug/L	87
Ethylbenzene		05.30.95	95563	17.9	20.4	ug/L	88
Total Xylene Isomers		05.30.95	95563	99.7	119	ug/L	84
TPH (Gasoline Range)		05.30.95	95563	1060	1100	ug/L	96
5. TPH (3520/8015M)	C5052668*1						
Date Extracted		05.26.95	9564	05/24/95	05/24/95	Date	N/A
Date Analyzed		05.26.95	9564	05/26/95	05/26/95	Date	N/A
TPH (Diesel Range)		05.26.95	9564	0.776	1.00	mg/L	78
6. TPH (3520/8015M)	C5053113*1						
Date Extracted		05.25.95	9564	05/24/95	05/24/95	Date	N/A
Date Analyzed		05.25.95	9564	05/25/95	05/25/95	Date	N/A
TPH (Diesel Range)		05.25.95	9564	0.823	1.00	mg/L	82



BC ANALYTICAL

ORDER QC REPORT FOR G9505348

DATE REPORTED : 06/01/95

Page 1

ADDITIONAL LCS PRECISION (DUPLICATES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	LC1 RESULT	LC2 RESULT	UNIT	RELATIVE DIFF
1. TRPH/CADHS/418.1		05.23.95	9579	3.93	4.04	mg/l	3
2. TP4 (8015M/8020)							
Date Analyzed		05.30.95	95563	05/30/95	05/30/95	Date	N/A
Benzene		05.30.95	95563	15.8	15.7	ug/l	1
Toluene		05.30.95	95563	84.4	84.3	ug/L	0
Ethylbenzene		05.30.95	95563	16.6	17.9	ug/L	8
Total Xylene Isomers		05.30.95	95563	98.4	99.7	ug/L	1
TPH (Gasoline Range)		05.30.95	95563	1180	1060	ug/L	11
3. TPH (3520/8015M)							
Date Extracted		05.26.95	9564	05/24/95	05/24/95	Date	N/A
Date Analyzed		05.26.95	9564	05/26/95	05/25/95	Date	N/A
TPH (Diesel Range)		05.26.95	9564	0.776	0.823	mg/l	6

BC ANALYTICAL

ORDER QC REPORT FOR G9505348

DATE REPORTED : 06/01/95

Page 1

MATRIX QC PRECISION (DUPLICATE SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS RESULT	MSD RESULT	UNIT	RELATIVE % DIFF
1. TPH (8015M/8020)	9505348*1						
Date Analyzed		05.30.95	95563	05/30/95	05/30/95	Date	N/A
Benzene		05.30.95	95563	17.9	20.3	ug/l.	13
Toluene		05.30.95	95563	95.2	106	ug/l.	11
Ethylbenzene		05.30.95	95563	18.6	23.4	ug/l.	23
Total Xylene Isomers		05.30.95	95563	109	125	ug/l.	14
TPH (Gasoline Range)		05.30.95	95563	1040	1280	ug/l.	21
2. TPH (3520/8015M)	9505348*1						
Date Analyzed		05.26.95	9564	05/26/95	05/26/95	Date	N/A
Date Extracted		05.26.95	9564	05/24/95	05/24/95	Date	N/A
TPH (Diesel Range)		05.26.95	9564	0.976	1.04	mg/L	6

BC ANALYTICAL

ORDER QC REPORT FOR G9505348

DATE REPORTED : 06/01/95

MATRIX QC ACCURACY (SPIKES)  
BATCH QC REPORT

PARAMETER	SAMPLE NUMBER	DATE ANALYZED	BATCH NUMBER	MS %	MSD %	TRUE RESULT	UNIT	
1. TPH (8015M/8020)	9505348*1							
Benzene		05.30.95	95563	118	134 Q	15.2	ug/l	Q
Toluene		05.30.95	95563	98	109	97.4	ug/l	
Ethylbenzene		05.30.95	95563	91	115	20.4	ug/l	
Total Xylene Isomers		05.30.95	95563	92	105	119	ug/l	
TPH (Gasoline Range)		05.30.95	95563	95	116	1100	ug/l	
2. TPH (3520/8015M)	9505348*1							
TPH (Diesel Range)		05.26.95	9564	93	99	1.05	mg/l	

BC ANALYTICAL

ORDER QC REPORT FOR G9505348

Page 1

DATE REPORTED : 06/01/95

METHOD BLANKS AND REPORTING DETECTION LIMIT (RDL)  
FOR BATCHES WHICH INCLUDE THIS ORDER

PARAMETER		DATE ANALYZED	BATCH NUMBER	BLANK RESULT	RDL	UNIT	METHOD
1. TRPH/CADHS/418.1	B5051353*1	05.23.95	9579	0	0.2	mg/l	418.1
2. TPH (8015M/8020)	B5051732*1						
Date Analyzed		05.30.95	95563	05/30/95	NA	Date	8015M.1X
Benzene		05.30.95	95563	0	0.5	ug/l	8015M.1X
Toluene		05.30.95	95563	0.12	0.5	ug/L	8015M.1X
Ethylbenzene		05.30.95	95563	0	0.5	ug/L	8015M.1X
Total Xylene Isomers		05.30.95	95563	0	0.5	ug/L	8015M.1X
TPH (Gasoline Range)		05.30.95	95563	0	50	ug/L	8015M.1X
3. TPH (3520/8015M)	B5051366*1						
Date Extracted		05.26.95	9564	05/24/95	NA	Date	8015M
Date Analyzed		05.26.95	9564	05/26/95	NA	Date	8015M
TPH (Diesel Range)		05.26.95	9564	0	0.05	mg/l	8015M

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
9505348*1							
8015M.TXa	a,a-Trifluorotoluene	95563	05/30/95	51.4	50.0	103	
8015M	Naphthalene	9564	05/26/95	0.0365	0.0500	73	
9505348*2							
8015M	Naphthalene	9564	05/26/95	0.0298	0.0500	60	
8015M.TXa	a,a-Trifluorotoluene	95563	05/30/95	49.9	50.0	100	
9505348*3							
8015M	Naphthalene	9564	05/26/95	0.0358	0.0500	72	
8015M.TXa	a,a-Trifluorotoluene	95563	05/30/95	50.5	50.0	101	
9505348*4							
8015M	Naphthalene	9564	05/26/95	0.0948	0.0500	190	
8015M.TXa	a,a-Trifluorotoluene	95563	05/30/95	48.5	50.0	97	
9505348*5							
8015M	Naphthalene	9564	05/26/95	0.0311	0.0500	62	
8015M.TXa	a,a-Trifluorotoluene	95563	05/30/95	50.1	50.0	100	
9505348*6							
8015M	Naphthalene	9564	05/26/95	0.0490	0.0500	98	
8015M.TXa	a,a-Trifluorotoluene	95563	05/31/95	50.0	50.0	100	
9505348*7							
8015M	Naphthalene	9564	05/26/95	0.0295	0.0500	59	
8015M.TXa	a,a-Trifluorotoluene	95563	05/31/95	49.8	50.0	100	
9505348*8							
8015M.TXa	a,a-Trifluorotoluene	95563	05/31/95	51.7	50.0	103	

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
J505348*1*R1							
3015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	51.4	50.0	103	
3015M	Naphthalene	9564	05/26/95	0.0365	0.0500	73	
J505348*1*S1							
3015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	53.2	50.0	106	
3015M	Naphthalene	9564	05/26/95	0.0318	0.0500	64	
J505348*1*S2							
3015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	53.8	50.0	108	
3015M	Naphthalene	9564	05/26/95	0.0329	0.0500	66	
J505348*1*T							
3015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	50.0	50.0	100	
3015M	Naphthalene	9564	05/26/95	0.0500	0.0500	100	
J5051366*1*MB							
8015M	Naphthalene	9564	05/26/95	0.0487	0.0500	97	
B5051732*1*MB							
8015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	51.2	50.0	102	
C5052668*1*LC							
8015M	Naphthalene	9564	05/26/95	0.0460	0.0500	92	
C5052668*1*LT							
8015M	Naphthalene	9564	05/26/95	0.0500	0.0500	100	
C5053113*1*LC							
8015M	Naphthalene	9564	05/25/95	0.0671	0.0500	134	
C5053113*1*LT							
8015M	Naphthalene	9564	05/25/95	0.0500	0.0500	100	
C5053357*1*LC							
8015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	53.1	50.0	106	
C5053357*1*LT							
8015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	50.0	50.0	100	
C5053358*1*LC							
8015M	TXa,a,a-Trifluorotoluene	95563	05/30/95	52.9	50.0	106	

: SURROGATE RECOVERIES :  
: BC ANALYTICAL : GLEN LAB : 15:36:52 01 JUN 1995 - P. 2 :  
=====

METHOD	ANALYTE	BATCH	ANALYZED	REPORTED	TRUE	%REC	FLAG
C5053358*1*LT							
8015M.TXa	,a,a-Trifluorotoluene	95563	05/30/95	50.0	50.0	100	

**Chain-of-Custody**

**Texaco Environmental Services**

108 Cutting Boulevard  
 Richmond, California 94804  
 Phone: (510) 238-3541  
 FAX: (510) 237-7821

Forward Results to the Attention of Rebecca Digerness

Texaco Project Coordinator Tom Hargett

Site Name: Texaco Loc# 624880235  
 Site Address: 500 Grand Ave. Oakland, CA  
 Contractor Project Number: 950518-D2  
 Contractor Name: Blaine Tech Services, Inc.  
 Address: 985 Timothy Dr., San Jose, CA 95133  
 Project Contact: Don Wertz  
 Phone/FAX: (408) 995-5535 (408) 293-8773

Laboratory: B C Analytical

Turn Around Time: normal (10 day)

Samplers (PRINT NAME): MIKE O'LOUGHERY

Sampler Signature: [Signature]

Date Samples Collected: 5-18-95

ANALYSIS										Comments
TPH gas/BTEX	TPH Diesel	O&G/TRPH (418.1)	TPH Ex. (C8-C36 +)	VOCs B240/B24	P. Halocarbons 8010/80	P. Aromatics 8020/802	Organic Lead			
										624880235
										Armeda -
										KEEP (0146
										TWIT
										G9505348.
MW-8P										
MW-8G										
MW-8H										
MW-8I										
MW-8J										
MW-8K										
EB										
TB										

Sample Number	Lab Sample Number	Date/Time Collected	No. of Containers	Type of Containers	Sample Matrix	Preservative
MW-8P		5-18/1055	7	VOALITH	W	HCL
MW-8G		5-18/1120	7			
MW-8H		5-18/1145	7			
MW-8I		5-18/1230	7			
MW-8J		5-18/1210	7			
MW-8K		5-18/1020	7			
EB		5-18/1030	7	↓	↓	↓
TB			2			

Relinquished by: [Signature] Date: 5-19-95 Time: 1430  
 Received by: [Signature] Date: 5-19-95 Time: 230

Relinquished by: [Signature] Date: 5-19-95 Time: 1405  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Method of Shipment: \_\_\_\_\_  
 Lab Comments: \_\_\_\_\_



## Well Gauging Data

Project Name: 624800235  
 Project Number: 950518-DZ

Date: 5-18-95  
 Recorded By: MIKE D & RANDY

Well ID	TOC Elev.	DTB (ft. TOC)	Well Dia. (in.)	DTP (ft.)	DTW (ft.)	PT (ft.)	Comments
MW-8K		16.70	2		1.36		
* MW-8L		2.42	2		0.42	WELL	CASING IS DAMAGED *
MW-8F		14.52	4		8.00		
MW-8G		14.25	4		6.60		
MW-8H		14.86	4		3.53		
MW-8J		14.77	4		5.33		
MW-8I		14.60	4		6.09		

TOC = Top of casing  
 DTB = Depth to bottom in feet below TOC  
 DTP = Depth to product in feet below TOC  
 DTW = Depth to water in feet below TOC  
 PT = Product thickness in feet

# Groundwater Sampling Form

Project Name 500 GRAND AV  
 Project Number 950518-DL  
 Recorded By MD

Well No. ~~11-86~~ MW-8F  
 Well Type  Monitor  Extraction  Other  
 Sampled by MD Date 5-18

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other  
 Well Total Depth (TD, ft. below TOC) 14.52  
 Depth to Water (WL, ft. below TOC) 8.00

Depth to free phase hydrocarbons (FP, ft. below TOC)  
 Number of well volumes to be purged  
 3  10  Other

### PURGE VOLUME CALCULATION

$$\frac{6.52}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)  
 2 = 0.17 | 3 = 0.38 | 4 = 0.65 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

### PURGE METHOD

Bailor - Type  
 Pump - Type ELEC SUB  
 Other

### PUMP INTAKE

Near top Depth (ft)  
 Near Bottom Depth (ft) 14.0  
 Other  
 Pumping Rate 16 gpm

12.9 gals  
 CALCULATED PURGE VOLUME  
13.0 gals  
 ACTUAL PURGE VOLUME

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
10 45   2	7.0	1000	66.8	158	42.2	CLEAR
10 46   8	6.8	3200	66.2	151	13.4	
10 47   13	6.6	3200	66.2	151	6.5	
/						
/						
/						
/						
/						

Comments during well purge

Well Pumped dry: YES  NO  Purge water storage/disposal  Drummed onsite  Other BTS

## WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 5-18 11055

Bailer - Type  TEFLON  Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type MYRON

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ / /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8F</u>	<u>2 VOLS</u>	<u>GAS BIA</u>	<u>HCL</u>	<u>BCA</u>	
	<u>2 LITERS</u>	<u>PH-D</u>			
	<u>2 LITERS</u>	<u>B+C</u>			

### QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsate	<u>EB @ 10:30</u>
Transfer	
Other	

# Groundwater Sampling Form

Project Name 500 GRAND AV.  
 Project Number 95051X-02  
 Recorded By MD

Well No. ~~21~~ MW-8G  
 Well Type  Monitor  Extraction  Other  
 Sampled by MD Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other  
 Well Total Depth (TD, ft. below TOC) 14.25  
 Depth to Water (WL, ft. below TOC) 6.60  
 Depth to free phase hydrocarbons (FP, ft. below TOC) \_\_\_\_\_  
 Number of well volumes to be purged  
 3  10  Other \_\_\_\_\_

### PURGE VOLUME CALCULATION

$$\frac{7.65}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)  
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

### PURGE METHOD

Bailer - Type \_\_\_\_\_  
 Pump - Type elec. sub  
 Other \_\_\_\_\_

### PUMP INTAKE

Near top Depth (ft) \_\_\_\_\_  
 Near Bottom Depth (ft) 14.25  
 Other \_\_\_\_\_

Pumping Rate 16 gpm

15.2 gals  
**CALCULATED PURGE VOLUME**  
15.5 gals  
**ACTUAL PURGE VOLUME**

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
11:10   5.0	6.2	3400	67.2		10.2	
11:11   10.0	6.2	4000	66.8		14.0	
11:12   15.5	6.2	4000	66.4		14.4	
/						
/						
/						
/						
/						

Comments during well purge \_\_\_\_\_

Well Pumped dry: YES  NO  Purge water storage/disposal  Drummed onsite  Other BTS

## WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 5-18-95 11:20

Bailer - Type  TEFLON Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type MYRON

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ / /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8G</u>	<u>3-VOLAS</u>	<u>GAS BTEX</u>	<u>HCL</u>	<u>B.C.A.</u>	
	<u>2-LITER BALS</u>	<u>TPH-D</u>			
	<u>2-LITER PNE</u>	<u>DTG</u>			

### QUALITY CONTROL SAMPLES

Duplicate Samples

Original Sample No.	Duplicate Sample No.

Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

# Groundwater Sampling Form

Project Name 500 GRAND AV.  
 Project Number 950518-02  
 Recorded By MD

Well No. MW-54  
 Well Type  Monitor  Extraction  Other  
 Sampled by MD Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other  
 Well Total Depth (TD, ft. below TOC) 14.86  
 Depth to Water (WL, ft. below TOC) 3.53

Depth to free phase hydrocarbons (FP, ft. below TOC)

Number of well volumes to be purged  
 3  10  Other

### PURGE VOLUME CALCULATION

$$\frac{11.33}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)  
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.63 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

### PURGE METHOD

Bailer - Type \_\_\_\_\_  
 Pump - Type Subm.  
 Other \_\_\_\_\_

### PUMP INTAKE

Near top Depth (ft) \_\_\_\_\_  
 Near Bottom Depth (ft) 14.5  
 Other \_\_\_\_\_

Pumping Rate 16 gpm

22.4 gals  
**CALCULATED PURGE VOLUME**  
22.5 gals  
**ACTUAL PURGE VOLUME**

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON

Time/Gallons	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1135   7.0	6.2	4600	68.6		107.5	
1136   15.0	6.6	1000	66.6		120.	
1137   22.5	6.6	1000	66.8		122.7	
/						
/						
/						
/						
/						

Comments during well purge

Well Pumped dry: YES  NO

Purge water storage/disposal  Drummed onsite

Other BTS

## WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 5-18 11:45

Bailer - Type  TEFLON

Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type MYRON

Date/Time/% Recharge	pH	Cond. (uomhcs/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8H</u>	<u>3-VIALS</u>	<u>GAS BTEX</u>	<u>HCL</u>	<u>BCA</u>	
	<u>2-LINERS WWP</u>	<u>TPH-D</u>			
	<u>2-LINERS PRES</u>	<u>O &amp; G</u>			

### QUALITY CONTROL SAMPLES

#### Duplicate Samples

Original Sample No.	Duplicate Sample No.

#### Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

# Groundwater Sampling Form

Project Name 500 GRAND AV.  
 Project Number 950518-01  
 Recorded By MD

Well No. MW- 8E  
 Well Type  Monitor  Extraction  Other  
 Sampled by MD Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other  
 Well Total Depth (TD, ft. below TOC) 14.60  
 Depth to Water (WL, ft. below TOC) 6.09  
 Depth to free phase hydrocarbons (FP, ft. below TOC) \_\_\_\_\_  
 Number of well volumes to be purged  
 3  10  Other \_\_\_\_\_

### PURGE METHOD

Bailor - Type  
 Pump - Type ELEC SUB.  
 Other

### PUMP INTAKE

Near top Depth (ft) \_\_\_\_\_  
 Near Bottom Depth (ft) 14.5  
 Other  
 Pumping Rate 16 gpm

### PURGE VOLUME CALCULATION

$$\frac{8.5}{\text{Water Column Length}} \times \frac{.66}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. inches) = Gallons/linear ft.  
 2 = 0.173 | 3 = 0.38 | 4 = 0.65 | 4.5 = 0.63 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

16.8 gals  
 CALCULATED PURGE VOLUME  
17.0 gals  
 ACTUAL PURGE VOLUME

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type HYDRON

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1220 1 6.0	6.5	1200	67.6		18-6	
1221 1 12.0	6.5	1200	65.8		17.2	
1222 1 17.0	6.4	1200	66.4		12.6	
/						
/						
/						
/						
/						

Comments during well purge \_\_\_\_\_

Well Pumped dry: YES  NO  Purge water storage/disposal  Drummed onsite  Other BTS

## WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 5-18-95 12:30  
 Bailer - Type  TEFLON  Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type HYDRON

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-8E</u>	<u>3 - VOLS</u>	<u>GAZ, BTEX</u>	<u>HCL</u>	<u>BCA</u>	
	<u>2 - LITERS PRE</u>	<u>TPH - D</u>			
	<u>2 - LITERS MNP</u>	<u>DTG</u>			

### QUALITY CONTROL SAMPLES

Duplicate Samples	
Original Sample No.	Duplicate Sample No.

Blank Samples	
Type	Sample No.
Trip	
Rinsate	
Transfer	
Other	

# Groundwater Sampling Form

Project Name 500 GRAND AV. Well No. MW-85  
 Project Number 950518-02 Well Type  Monitor  Extraction  Other  
 Recorded By MD Sampled by MD Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other

Well Total Depth (TD, ft. below TOC) 14.77  
 Depth to Water (WL, ft. below TOC) 5.33

Depth to free phase hydrocarbons (FP, ft. below TOC)

Number of well volumes to be purged  
 3  10  Other

### PURGE VOLUME CALCULATION

$$\frac{9.44}{\text{Water Column Length}} \times \frac{-66}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft.)  
 2 = 0.17 | 3 = 0.38 | 4 = 0.66 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

### PURGE METHOD

Bailor - Type  
 Pump - Type elec. sub.  
 Other

### PUMP INTAKE

Near top Depth (ft)  
 Near Bottom Depth (ft) 14.5  
 Other

Pumping Rate 16 gpm

18.7 gals  
 CALCULATED PURGE VOLUME

19.0 gals  
 ACTUAL PURGE VOLUME

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
1202 / 6	7.0	1000	66.2		20.4	
1203 / 13	7.0	1000	64.2		27.6	
1204 / 19	7.0	1000	64.2		25.2	
/						
/						
/						
/						
/						

Comments during well purge

Well Pumped dry: YES  NO

Purge water storage/disposal  Drummed onsite

Other BTS

## WELL SAMPLING

SAMPLING METHOD Date/Time Sampled 5-18-95 12:10

Bailer - Type  TEFLON

Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type MYRON

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-85</u>	<u>3-VOA's</u>	<u>GAS BTEX</u>	<u>HCL</u>	<u>BCA</u>	
	<u>2-Liters VHE</u>	<u>TOH-D</u>			
	<u>2-Liters UNP</u>	<u>O+G</u>			

### QUALITY CONTROL SAMPLES

#### Duplicate Samples

Original Sample No.	Duplicate Sample No.

#### Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

# Groundwater Sampling Form

Project Name 500 GRAND  
 Project Number 950518-DL  
 Recorded By MD

Well No. MW-816  
 Well Type  Monitor  Extraction  Other  
 Sampled by MD Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other \_\_\_\_\_  
 Well Total Depth (TD, ft. below TOC) 16.70  
 Depth to Water (WL, ft. below TOC) 1.36  
 Depth to free phase hydrocarbons (FP, ft. below TOC) \_\_\_\_\_  
 Number of well volumes to be purged  
 3  10  Other \_\_\_\_\_

### PURGE METHOD

Bailor - Type TEFLON  
 Pump - Type \_\_\_\_\_  
 Other \_\_\_\_\_

### PUMP INTAKE

Near top Depth (ft) \_\_\_\_\_  
 Near Bottom Depth (ft) \_\_\_\_\_  
 Other \_\_\_\_\_

### PURGE VOLUME CALCULATION

$$\frac{15.34}{\text{Water Column Length}} \times \frac{.17}{\text{Multiplier}} \times \frac{3}{\text{No. Vols}} =$$

(MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)  
 2 = 0.17 | 3 = 0.38 | 4 = 0.65 | 4.5 = 0.83 | 5 = 1.02 | 6 = 1.5 | 8 = 2.6

Pumping Rate \_\_\_\_\_ gpm  
7.82 gals  
**CALCULATED PURGE VOLUME**  
8.0 gals  
**ACTUAL PURGE VOLUME**

### GROUNDWATER PARAMETER MEASUREMENT

Meter Type MYRON

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
10:05   2.5	7.2	2100	66.2		7200	BROWN
10:08   5.0	7.0	1800	65.3		7200	
10:12   8.0	7.0	1600	65.5		7200	
/						
/						
/						
/						
/						

Comments during well purge

Well Pumped dry: YES  NO  Purge water storage/disposal  Drummed onsite  Other BTS

## WELL SAMPLING

### SAMPLING METHOD

Date/Time Sampled 5/18 110:20

Bailor - Type  TEFLON Sample port  Other

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Meter Type MYRON

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C / deg F	Turbidity (NTU)	Color/Odor
/ /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments
<u>MW-1816</u>	<u>3 VOAS</u>	<u>GAS BTX</u>	<u>HCL</u>	<u>B.C.A.</u>	
	<u>2 LIHEAS</u>	<u>TPH-D.</u>			
	<u>2 LIHEAS</u>	<u>OTG</u>			

### QUALITY CONTROL SAMPLES

#### Duplicate Samples

Original Sample No.	Duplicate Sample No.

#### Blank Samples

Type	Sample No.
Trip	
Rinsate	
Transfer	
Other:	

# Groundwater Sampling Form

Project Name SOOGRAND

Well No. MW-8L

Project Number 950518-D2

Well Type  Monitor  Extraction  Other

Recorded By MIKED

Sampled by PU

Date 5-18-95

## WELL PURGING

### PURGE VOLUME

Well casing diameter  
 2-inch  4-inch  Other \_\_\_\_\_

Well Total Depth (TD, ft. below TOC) \_\_\_\_\_

Depth to Water (WL, ft. below TOC) 0.42

Depth to free phase hydrocarbons (FP, ft. below TOC) \_\_\_\_\_

Number of well volumes to be purged  
 3  10  Other \_\_\_\_\_

### PURGE VOLUME CALCULATION

\_\_\_\_\_ X \_\_\_\_\_ X \_\_\_\_\_ = \_\_\_\_\_

Water Column Length      Multiplier      No. Vols

<b>MULTIPLIER (Casing Dia. [inches] = Gallons/linear ft)</b>					
2 = 0.17	3 = 0.38	4 = 0.66	4.5 = 0.83	5 = 1.02	6 = 1.5
8 = 2.6					

### PURGE METHOD

Bailer - Type \_\_\_\_\_  
 Pump - Type \_\_\_\_\_  
 Other \_\_\_\_\_

### PUMP INTAKE

Near top      Depth (ft) \_\_\_\_\_  
 Near Bottom      Depth (ft) \_\_\_\_\_  
 Other \_\_\_\_\_

Pumping Rate \_\_\_\_\_ gpm

_____ gals
<b>CALCULATED PURGE VOLUME</b>
_____ gals
<b>ACTUAL PURGE VOLUME</b>

### GROUNDWATER PARAMETER MEASUREMENT

Time/Gallons	pH	Cond. (uomhos/cm)	Temp	deg C deg F	Turbidity (NTU)	Color/Odor
/	<b>NOT SAMPLED</b>					
/	<b>WELL CASING IS DAMAGED</b>					
/	<b>AT A DEPTH OF 2.42</b>					
/						
/						
/						
/						

Comments during well purge \_\_\_\_\_

Well Pumped dry: YES NO

Purge water storage/disposal  Drummed onsite  Other \_\_\_\_\_

## WELL SAMPLING

**SAMPLING METHOD** \_\_\_\_\_ Date/Time Sampled \_\_\_\_\_

Bailer - Type  \_\_\_\_\_ Sample port  \_\_\_\_\_ Other  \_\_\_\_\_

### GROUNDWATER SAMPLE PARAMETER MEASUREMENTS

Date/Time/% Recharge	pH	Cond. (uomhos/cm)	Temp	deg C deg F	Turbidity (NTU)	Color/Odor
/ /						

### SAMPLING PROGRAM

Sample No.	Container #/Volume	Analysis	Preservatives	Laboratory	Comments

### QUALITY CONTROL SAMPLES

#### Duplicate Samples

Original Sample No.	Duplicate Sample No.

#### Blank Samples

Type	Sample No.



**SOURCE RECORD BILL OF LADING**  
 FOR NON-HAZARDOUS PURGEWATER RECOVERED FROM  
 GROUNDWATER WELLS AT TEXACO FACILITIES IN THE  
 STATE OF CALIFORNIA. THE NON-HAZARDOUS PURGE-  
 WATER WHICH HAS BEEN RECOVERED FROM GROUND-  
 WATER WELLS IS COLLECTED BY THE CONTRACTOR,  
 MADE UP INTO LOADS OF APPROPRIATE SIZE AND  
 HAULED TO THE DESTINATION DESIGNATED BY TEXACO  
 ENVIRONMENTAL SERVICES (TES).

Contractor: Blaine Tech Services, Inc.  
 Address: 985 Timothy Drive  
 City, State, ZIP: San Jose, CA 95133  
 Phone: (408) 995-5535

is authorized by Texaco Environmental Services to recover, collect, apportion into loads, and haul the NON-HAZARDOUS WELL PURGEWATER that is drawn from wells at the Texaco facility listed below and to deliver that purgewater to an appropriate destination designated by TEXACO ENVIRONMENTAL SERVICES in either Redwood City, California or in Richmond, California. Transport routing of the Non-Hazardous Well Purgewater may be directed from one Texaco facility to the designated destination point; from one Texaco facility to the designated destination point via another Texaco facility; from a Texaco facility via the contractor's facility, or any combination thereof. The Non-Hazardous Well Purgewater is and remains the property of Texaco Environmental Services (TES).

This SOURCE RECORD BILL OF LADING was initiated to cover the recovery of Non-Hazardous Well Purgewater from wells at the Texaco facility described below:

TEXACO #: 624880235  
 Address: 500 GRAND, OAKLAND  
 City, State, ZIP: OAKLAND, CA

Well I.D.	Gals.	Well I.D.	Gals.
<u>MW-8F1</u>	           	<u>          </u>	<u>1</u>
<u>MW-8G1</u>		<u>          </u>	<u>1</u>
<u>OW-8H1</u>		<u>          </u>	<u>1</u>
<u>OW-8J1</u>		<u>          </u>	<u>1</u>
<u>MW-8K1</u>		<u>          </u>	<u>1</u>
<u>          </u>		<u>          </u>	<u>1</u>
<u>          </u>		<u>          </u>	<u>1</u>
<u>          </u>	<u>          </u>	<u>1</u>	
<u>          </u>	<u>          </u>	<u>1</u>	

Total gals. 95 added rinse water 10  
 Total Gals. Recovered 105

Job #: 950518-D2  
 Date: 5-18-95  
 Time: 13:00  
 Signature: [Signature]

REC'D AT: BTS  
 Date: 5-18-95  
 Time: 16:30  
 Signature: [Signature]