Ultramar

Ultramar, Inc. P.O. Box 466 525 W. Third Street Hanford, CA 93232-0466 (209) 582-0241

Telecopy: 209-585-5685 Credit 209-583-3330 Administrative 209-583-3302 Information Services 209-583-3358 Accounting

January 8, 1996

Mr. Scott Seery Department of Environmental Health Alameda County Health Care Agency 1131 Harbor Parkway, Room 250 Alameda, CA 94502-6577

SUBJECT:

BEACON STATION NO. 720, 1088 MARINA BLVD., SAN

LEANDRO, CALIFORNIA

Dear Mr. Seery:

Enclosed is a copy of the Third Quarter 1995 Groundwater Monitoring Report for the above-referenced Ultramar facility. Also included is a copy of the Quarterly Status Report which describes the work completed this quarter and the work anticipated to be completed next quarter.

Ultramar is in the process of obtaining the building permit for the remediation system. It is aniticpated that construction will begin sometime in the first quarter of 1996.

Please call if you have any questions.

Sincerely,

ULTRAMAR INC.

Terrence A. Fox

Senior Project Manager

Marketing Environmental Department

Enclosure



Ultramar

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: January 8, 1996 QUARTER ENDING: September 30, 1995

SERVICE STATION NO.: 720

ADDRESS: 1088 Marina Blvd., San Leandro, CA

COUNTY: Alameda

ULTRAMAR CONTACT: Terrence A. Fox

TEL. NO: 209-583-5545

BACKGROUND:

In January 1987, three underground gasoline storage tanks and one waste oil tank were excavated and removed from two tank cavities. Samples collected from beneath the former tanks indicated that hydrocarbons were present in the soil. In March 1987, five monitoring wells (MW-1 through MW-5) were installed by Conoco. Hydrocarbons were detected in soil and ground-water samples collected from the wells with the highest concentrations being detected in the area of MW-4. In July 1987, four soil borings were drilled in the vicinity of MW-4 to further characterize the soil contamination in that area. concentrations above 100 ppm were detected in each boring. The site has been on a monitoring program since June 1987.

In July 1990, the site was purchased by Ultramar Inc. from Conoco. The monitoring program has continued.

In August 1991, perform shallow ground water study as screening tool to locate wells.

In October 1991, installed three additional wells to further define the extent of the dissolved hydrocarbon plume.

In October 1993, performed a ground-water pump test, a vapor extraction test, and a air sparging test.

In May 1994, submitted Problem Assessment Report/Remedial Action Plan.

In December 1994, installed one additional monitoring well, six air sparging points, and one vapor extraction well.





Beacon Station 720 Quarterly Status Report Page 2

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on September 22, 1995.

Completing design of remediation system.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that the benzene concentration remained not detected in MW-6 and MW-7. The benzene concentration decreased in MW-2 from 2,100 ppb to 840 ppb, in MW-3 from 5.8 ppb to not detected, in MW-4 from 17,000 ppb to 12,000 ppb, and in MW-8 from 790 ppb to 750 ppb. Benzene concentrations increased in MW-1 from 76 ppb to 140 ppb, in MW-5 from 7,700 ppb to 9,500 ppb, and in MW-9 from 1,000 ppb to 1,100 ppb.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY

ESTIMATED COMPLETION DATE

Continue quarterly monitoring program.

Submit for building permit.

December 15, 1995

El Dorado Environmental, Inc.

2221 Goldorado Trail, El Dorado, California 95623

(916) 626-3898 Fax (916) 626-3899

January 2, 1996

Mr. Terrence Fox
Environmental Specialist
Ultramar Inc.
525 West Third Street
Hanford, California 93232-0466

Subject:

Third Quarter 1995 Ground Water Monitoring Report

Beacon Station #720

1088 Marina Boulevard, San Leandro, California

Dear Mr. Fox:

El Dorado Environmental, Inc. (EDE) has prepared this report to document the results of quarterly ground water monitoring conducted on September 22, 1995 at the subject site (Figure 1). The monitoring, conducted by Doulos Environmental (Doulos), included measurements of depth to ground water, subjective analysis for the presence or absence of free product, ground water purging and collection of ground water samples. Doulos reports that all field activities were conducted in accordance with the Ultramar Field Procedures described in Attachment A.

GROUND WATER ELEVATIONS

Prior to purging, Doulos collected depth to ground water measurements. Copies of Doulos' field data sheets are contained in Attachment B. Ground water elevation data collected since March 1992 are summarized in Table 1. Historical ground water elevation data are presented in Attachment C. On the basis of the current measurements, ground water flows toward the southwest (Figure 2) at a gradient of less than 0.01 foot per foot. Ground water levels have decreased an average of 0.92 feet compared to the last monitoring event.

GROUND WATER SAMPLING AND ANALYSES

Ground water samples were collected from nine monitoring wells. All samples were analyzed for concentrations of:

- TPH, as gasoline, by modified EPA Method 8015.
- BTEX by EPA Method 602.

Analytical results collected since March 1992 are summarized in Table 2. Historical analytical data are presented in Attachment D. Figure 3 illustrates the inferred distribution of benzene in ground water based on the current data. The laboratory report and chain-of-custody form for the current sampling event are contained in Attachment E. Benzene was not present at detectable concentrations in ground water samples collected from monitoring wells MW-3 (detection limit of 1.3 micrograms per Liter), MW-6 and MW-7. Concentrations of benzene decreased in samples collected from monitoring wells MW-2, MW-4, and MW-8; and increased in samples collected from monitoring wells MW-1, MW-5, and MW-9 compared to prior sampling.

A copy of this quarterly monitoring report should be forwarded to:

Mr. Rafat Shahid Division of Hazardous Materials Alameda County Health Care Services 80 Swan Way, Room 200 Oakland, California 94621 The interpretations and/or conclusions that may be contained within this report represent our professional opinions. These opinions are based on currently available information. Other than this, no warranty is implied or intended. This report has been prepared solely for the use of Ultramar Inc. Any reliance on this report by third parties will be at such parties' sole risk.

If you have any questions or comments, please contact us at (916) 626-3898.

Regards,

EL DORADO ENVIRONMENTAL, INC.

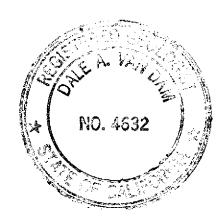
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Dale A. van Dam, R.G.

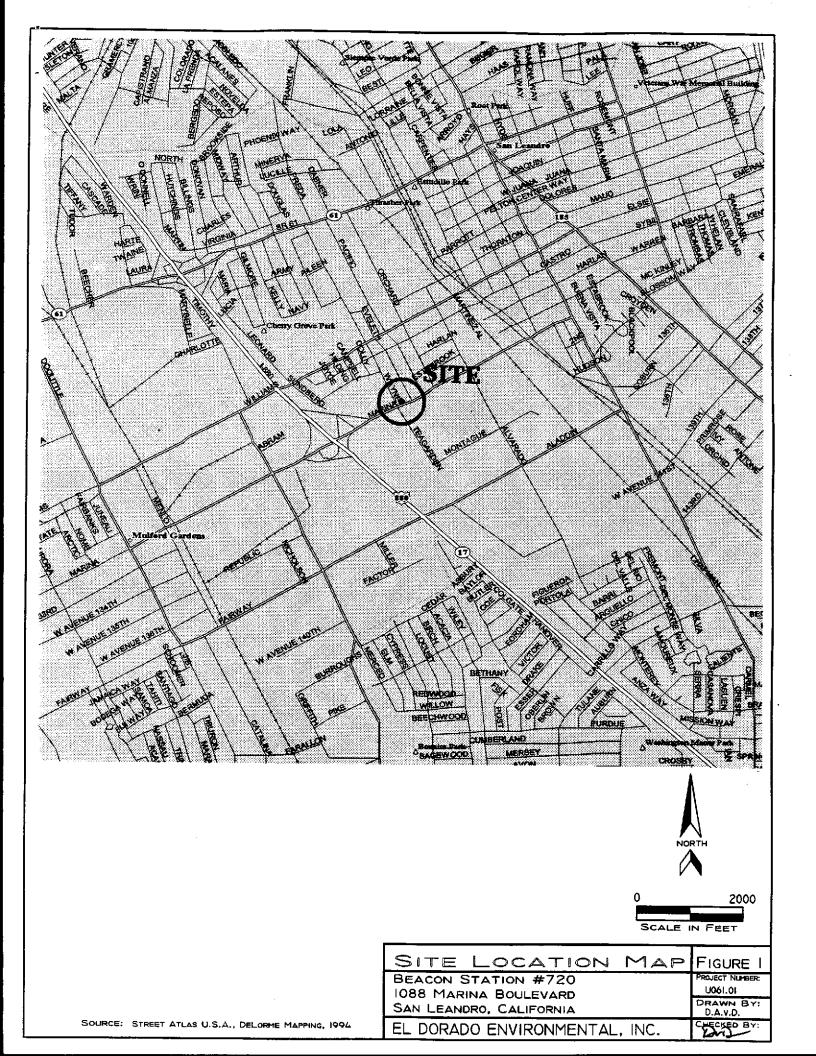
Hydrogeologist

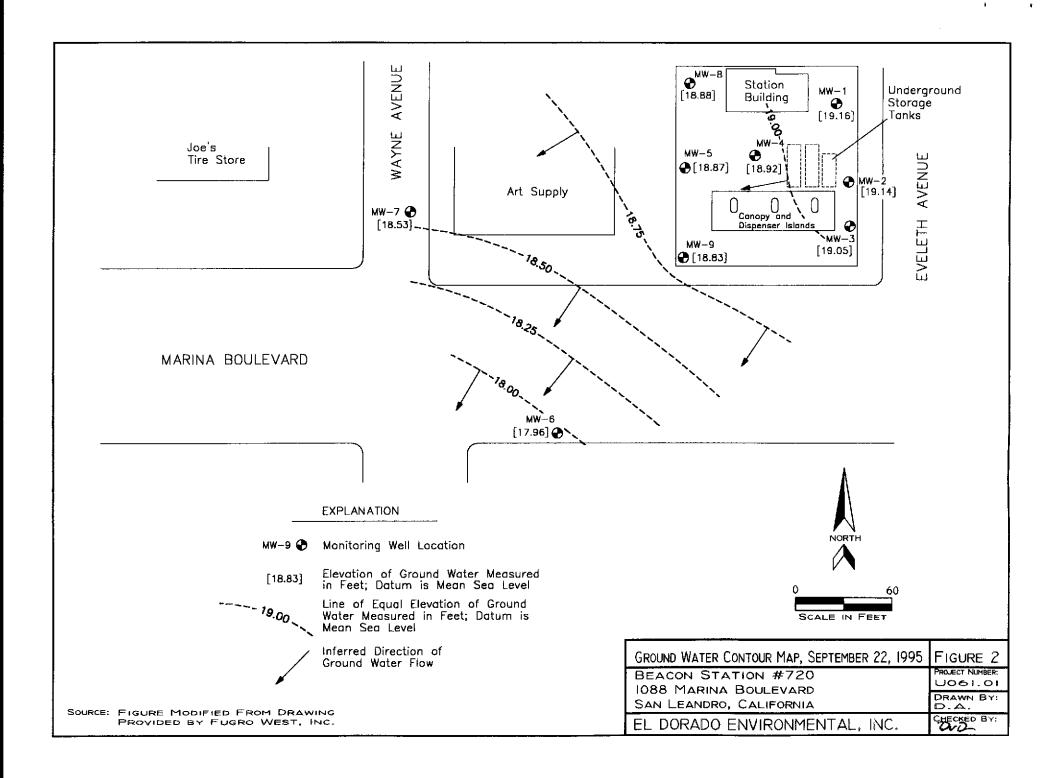
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Attachments



FIGURES:	FIGURE 1 SITE LOCATION MAP
	FIGURE 2 GROUND WATER CONTOUR MAP SEPTEMBER 22, 1995
	FIGURE 3 DISSOLVED BENZENE DISTRIBUTION MAP SEPTEMBER 22, 1995
TABLES:	TABLE 1 GROUND WATER ELEVATION DATA
	TABLE 2 GROUND WATER ANALYTICAL RESULTS
ATTACHMENTS:	A ULTRAMAR FIELD PROCEDURES
	B DOULOS ENVIRONMENTAL FIELD DATA SHEETS
	C HISTORICAL GROUND WATER ELEVATION DATA
	D HISTORICAL GROUND WATER ANALYTICAL DATA
	E LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM





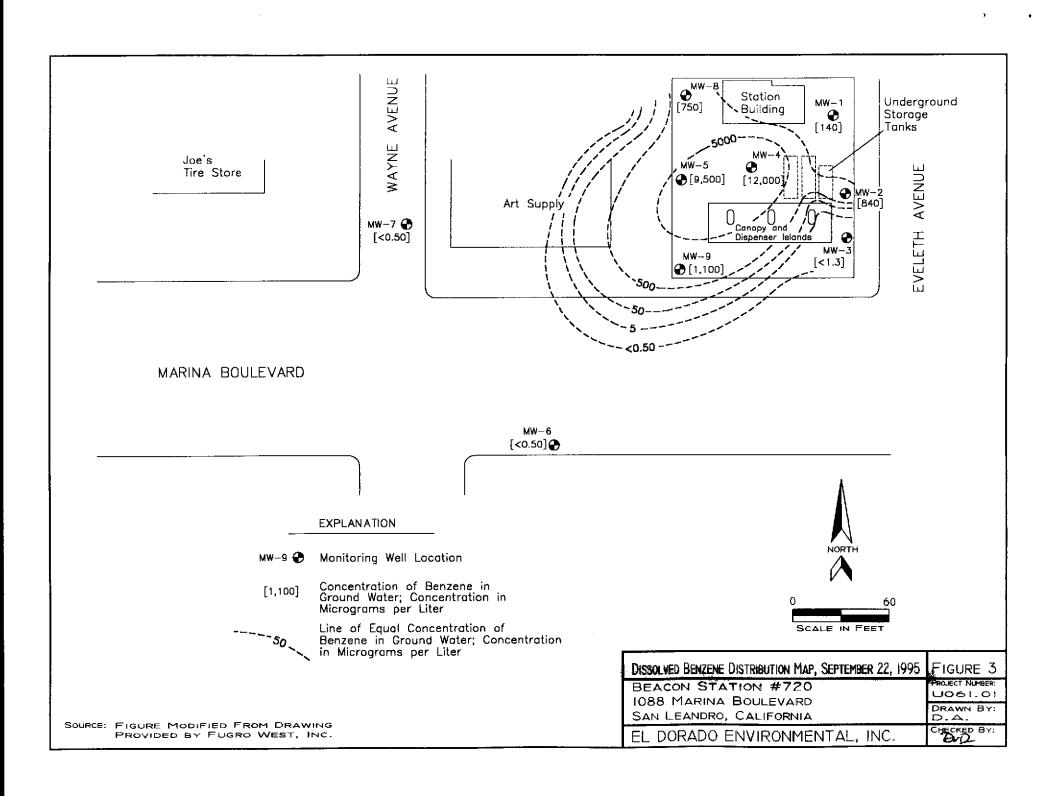


TABLE 1 **GROUND WATER ELEVATION DATA BEACON STATION #720** 1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Ground Water	Ground Water Elevation ²	Well Depth	Comments
MW-1	03/30/92	33.10	13.58	19.52	_	,,
	07/01/92		14.80	18.30		
	09/30/92		16.12	16.98	_	
	11/19/92		16.34	16.76	27.76	
	02/03/93		12.61	20.49	27.72	
	05/25/93		13.12	19.98	27.70	
	09/22/93		14.18	18.92	27.73	
	12/21/93		14. 3 6	18.74	2 7.70	
	03/18/94		13.64	19.46	27.67	
	06/15/94		14.30	18.80	27.69	
	09/14/94		15.18	17.92	27.66	
	12/19/94		13.79	19.31	27.70	
	12/21/95		13.86	19.24		
	03/07/95		12.74	20.36	29.51	
	06/08/95		12.95	20.15	29.54	
	09/22/95	· "-	13.94	.19.16	29.54	
MW-2	03/30/92	32.80	13.32	19.48		
	07/01/92		14.42	18.38	_	
	09/30/92		15.78	17.0 2		
	11/19/92		15.99	16.81	24.56	
	02/03/93		12.31	20.49	25.37	
	05/25/93		12.97	19.83	25.31	
	09/22/93		14.32	18.48	25.34	
	12/21/93		14.52	18.28	25.31	
	03/18/94		13.45	19.35	25.49	
	06/15/94		14.07	18.73	25.50	
	09/14/94		14.96	17.84	25.50	
	12/19/94 12/21/95		13.64	19.16	25.52	
	03/07/95		13.71 12.54	19.09		
	05/07/93		12.34	20.26 19.99	25.86 25.86	
	09/22/95		13.66	19.14	25.80	
	02122175		13.00	17.14	25.80	
MW-3	03/30/92	32.30	12.96	19.34	_	
	07/01/92		14.00	18.30	_	
	09/30/92		15.36	16.94	_	
	11/19/92		15.57	16.73	24.45	
	02/03/93		11.96	20.34	24.54	
	05/25/93		14.12	18.18	24.50	
	09/22/93		13.88	18.42	24.50	
	12/21/93	•	14.12	18.18	24.50	
	03/18/94		13.04	19.26	24.57	
	06/15/94		13.65	18.65	24.78	
	09/14/94 12/19/94		14.54	17.76	24.59	
	12/19/94		13.28	19.02	24.71	
	03/07/95		13.30 12.26	19.00 20.04	26.03	
	06/08/95		12.42	19.88	26.03	
	09/22/95		13.25	19.05	26.00 26.00	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level. Measurement from top of casing to bottom of well. Not measured. Well paved over.

2 = Well Depth = - =

TABLE 1 **GROUND WATER ELEVATION DATA BEACON STATION #720** 1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Ground Water ^t	Ground Water Elevation ²	Well Depth	Comments
MW-4	03/30/92	32.90	13.60	19.30	_	
	07/01/92		15.72	17.18		1
	09/30/92		16.04	16.86		
	11/19/92		16.21	16.69	26.92	
	02/03/93		12.70	20.20	27.00	
	05/25/93		12.97	19.93	26.88	
	09/22/93		14.51	18.39	26.90	
	12/21/93		14.75	18.15	2 6.90	
•	03/18/94		13.68	19.22	27.24	
	06/15/94		14.37	18.53	28.54	
	09/14/94		15.23	17.67	27.25	
	12/19/94		13.93	18.97	28.61	
	12/21/95		13.99	18.91		
	03/07/95		12.86	20.04	28.64	
	06/08/95		13.10	19.80	28.68	
	09/22/95		13.98	18.92	28.71	
MW-5	03/30/92	32.70	13.48	19. 22	_	
Maria	07/01/92	32.10	14.58	18.12	_	
	09/30/92		15.82	16.88		
	11/19/92		16.00	16.70	27.56	
	02/03/93		12.40	20.30	27.61	
	05/25/93		13.01	19.69	27.61	
ļ	09/22/93		14.37	18.33	27.64	
1	12/21/93		14.58	18.12	27.01	
	03/18/94		13.53	19.17	28.70	l .
	06/15/94		14.18	18.52	28.74	
	09/14/94		15.07	17.63	28.70	
	12/19/94		13.74	18.96	28.76	
	12/21/95		13.84	18.86		
	03/07/95		12.73	19.97	28.88	
1	06/08/95		12.99	19.71	28.87	
	09/22/95		13.83	18.87	28.85	
MW-6	03/30/92	30.40	12.62	17.78	_	
17477-0	03/30/92	30.40	12.52 12.70	17.70	_	
	09/30/92		13.40	17.00		
	11/19/92		13.59	16.81	15.10	
	02/03/93		12.43	17.97	15.01	
	05/25/93	,				*
	10/11/93		12.82	17.58	15.10	
	12/21/93		13.06	17.34	15.10	
	03/18/94		1 2 .16	18.24	15.16	
	06/15/94		12.59	17.81	15.17	
	09/14/94		12.86	17.54	14.97	
	12/19/94		12.48	17.92	15.19	
	12/21/95		11.61	18.79	-	
	03/07/95		12.37	18.03	14.98	
	06/08/95		11.14	19.26	15.00	
L <u></u> _	09/22/95		12.44	17.96	15.00	1

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Not measured.

Well paved over.

2 Well Depth =

TABLE 1 GROUND WATER ELEVATION DATA **BEACON STATION #720** 1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing) ¹	Depth to Ground Water ¹	Ground Water Elevation ²	Well Depth	Comments
MW-7	03/30/92 07/01/92 09/30/92 11/19/92 02/03/93 05/25/93 09/22/93 12/21/93 03/18/94 06/15/94 09/14/94 12/19/95 03/07/95 06/08/95	31.20	12.34 15.54 14.64 14.80 11.36 	18.86 15.66 16.56 16.40 19.84 — 18.02 17.78 18.84 18.19 17.32 18.59 18.82 19.64 19.38	25.10 25.02 25.01 25.02 25.13 25.21 25.13 25.23 25.23 25.22 25.20 25.23	*
MW-8	03/30/92 07/01/92 09/30/92 11/19/92 02/03/93 05/25/93 09/22/93 12/21/93 03/18/94 06/15/94 09/14/94 12/19/94 12/21/95 03/07/95	33.80	14.66 15.74 17.00 17.01 13.83 13.01 15.81 16.05 14.62 15.29 16.22 14.81 14.89 13.75 13.98 14.92	18.53 19.14 18.06 16.80 16.79 19.97 20.79 17.99 17.75 19.18 18.51 17.58 18.99 18.91 20.05 19.82 18.88	29.75 29.88 29.86 24.52 29.86 29.87 30.07 29.87 30.05 ———————————————————————————————————	
MW-9	12/21/95 03/07/95 06/08/95 09/22/95	32.56	13.76 12.79 12.96 13.73	18.80 19.77 19.60 18.83	24.71 24.70 24.72	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing. Elevation referenced to mean sea level.

Measurement from top of casing to bottom of well.

Not measured.

Well paved over.

VVeil Depth =

TABLE 2 **GROUND WATER ANALYTICAL RESULTS BEACON STATION #720** 1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons		Aromatic Volatile Organics				
		Gasoline	Benzene	Toluene	Ethyl- ben <i>ze</i> ne	Total Xylenes		
MW-1	03/30/92	27,000	630	550	540	1,900		
	07/01/92	55,000	840	1,000	830	3,600		
	09/30/92	6,400	150	95	120	470		
	11/19/92	1,300	90	l ii	50	87		
	02/03/93	53,000	750	560	950	5,700		
	05/25/93	9,400	200	86	470	1,500		
	09/22/93	41,000	1,000	510	850	1,100		
	12/21/93	41,000	1,000	490	2,700	13,000		
	03/18/94	9,500	320	160	830	2,900		
	06/15/94	8,000	310	80	990	2,300		
	09/14/94	3,600	130	31	390	630		
	12/19/94	17,000	350	150	1,500	5,200		
	03/07/95	12,000	180	62	1,200	3,200		
	06/08/95	6,300	76	8.0	560	860		
	09/22/95	12,000	140	55	1,500	2,500		
1.61/.0	00/00/00					4.400		
MW-2	03/30/92	52,000	2,300	1,700	940	3,300		
	07/01/92	130,000	3,500	2,900	1,900	7,900		
	09/30/92	24,000	890	350	500	1,700		
	11/19/92	32,000	1,900	1,700	870	3,400		
	02/03/93	64,000	1,900	2,200	860	4,100		
	05/25/93	34,000	3,300	1,500	1,300	5,900		
	09/22/93	8,000	640	150	270	2,000		
	12/21/93	18,000	1,500	410	1,300	5,000		
	03/18/94 06/15/94	14,000	1,600	790 580	1,100	3,700		
		13,000	1,600	560	1,200	4,100		
	09/14/94	20,000	1,600	750	1,800	6,400 5,800		
	12/19/94 03/07/95	19,000 17,000	1,700 1,900	980	1,600 1,300	5,100		
	06/08/95	19,000	2,100	740	1,500	4,900		
	09/22/95	12,000	840	170	1,100	3,400		
	93.2079	12,000	370	† 1/3	-,,,,,,,			
MW-3	03/30/92	21,000	560	50	630	980		
	07/01/92	13,000	150	20	22	300		
	09/30/92	4,500	53	2.6	84	96		
	11/19/92	4,700	73	6.2	140	120		
	02/03/93	23,000	220	40	430	740		
	05/25/93	9,900	120	26	370	520		
	09/22/93	10,000	370	71	320	640		
	12/21/93	7,800	130	8.5	430	380		
	03/18/94	3,100	22	1.3	78	41		
	06/15/94	1,700	8.6	1.4	22	15		
	09/14/94	1,400	3.8	<1.3	13	18		
	12/19/94	3,800	70	1.7	140	110		
	03/07/95	2,200	9.4	<1.3	30	21		
	06/08/95	1,700	5.8	<1.3	2.3	14		
<u> </u>	09/22/95	1,200	<1.3	<1.3	1.3	<1.3		

NOTES:

< ND NS

Below indicated detection limit. Reported as "nondetect" by previous consultant. Not sampled.

TABLE 2 **GROUND WATER ANALYTICAL RESULTS BEACON STATION #720** 1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics			
		Gasoline	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-4	03/30/92	76,000	8,000	4,400	730	2,500
	07/01/92	95,000	6,900	2,200	70	880
	09/30/92	58,000	7,100	1,500	650	2,700
	11/19/92	33,000	5,500	840	400	1,400
	02/03/93	130,000	8,200	6,700	940	4,400
	05/25/93	63,000	16,000	6,600	1,700	8,100
	09/22/93	23,000	6,900	940	150	3,000
	12/21/93	28,000	6,900	1,900	1,100	5,500
	03/18/94	58,000	17,000	6,300	2,500	10,000
	06/15/94	59,000	20,000	4,900	2,500	9.100
	09/14/94	73,000	22,000	6,800	2,700	10,000
	12/19/94	67,000	20,000	8,300	2,300	9,100
	03/07/95	57,000	19,000	7,900	2,200	8,700
	06/08/95	61,000	17,000	6,300	2,700	9.000
	09/22/95	37,000	12,000	2,200	1,400	3,500
MW-5	03/30/04	40.000		200	***	
MW-2	03/30/92	29,000	2,600	980	390	1,100
	07/01/92	5 2 ,000	2,400	1,000	5,200	2,000
	09/30/92 11/19/92	32 ,000	1,800	780	370	1,700
	02/03/93	7,800 74,000	1,000	280	120	370
	05/25/93	74,000	3,500	3,000	780	3,200
	09/22/93	57,000	7,900	4,700	1,900	7,800
	12/21/93	52,000	7,600	2,400	1,200	8,800
	1 1	23,000	3,600	1,200	970	3,600
	03/18/94 06/15/94	47,000	8,200	5,000	1,400	6,100
	09/14/94	28,000 32,000	7,900	4,000	1,200	5,200
	12/19/94	29,000 29,000	8,000	5,100	1,400	5,600
	03/07/95	36,000	7,000	3,400	1,200	5,200
	06/08/95	33,000	9,800 7,700	5,800 3,800	1,800 1,500	7,800
	09/22/95	39,000	9,500	3,800	1,900	6,200 7,000
MW-6	03/30/92	73	2.	1.1	NES	0.7
TAT AA -Q	03/30/92 07/01/9 2	ND	2.1	1.1	ND	0.6
	09/30/92	ND ND	ND 0.73	ND	ND	ND
	11/19/92	ND 96	0.73 1.5	ND <0.5	ND <0.5	0.58 0.9
	02/03/93	73	0.6	<0.5 <0.5	<0.5 <0.5	<0.5
	05/25/93	NS	NS	NS	NS NS	NS
	10/11/93	<50	<0.5	<0.5	<0.5	<0.5
	12/21/93	< 50	<0.5	<0.5	<0.5 <0.5	<0.5
	03/18/94	<50	<0.5	<0.5 <0.5	<0.5	<0.5
	06/15/94	<50	<0.5	<0.5	<0.5 <0.5	<0.5
	09/14/94	<50	<0.5	<0.5 <0.5	<0.5	<0.5 <0.5
	12/19/94	< 50	<0.5	<0.5	<0.5	<0.5 <0.5
	03/07/95	<50	<0.5	<0.5	<0.5	<0.5
	06/08/95	< 50	<0.5	<0.5	<0.5 <0.5	<0.5 <0.5
	09/22/95	<50	<0.50	<0.50	<0.50	<0.50

NOTES:

ND NS

Below indicated detection limit. Reported as "nondetect" by previous consultant. Not sampled.

TABLE 2 **GROUND WATER ANALYTICAL RESULTS BEACON STATION #720**

1088 MARINA BOULEVARD, SAN LEANDRO, CALIFORNIA

(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons	Aromatic Volatile Organics				
		Gasoline	Benzene	Toluene	Ethyl- benzene	Total Xylenes	
MW-7	03/30/92	ND	ND	ND	ND	ND	
1,1,1,	07/01/92	ND	ND	ND	ND ND	ND	
	09/30/92	ND	ND	ND	ND	ND	
	11/19/92	< 5 0	<0.5	<0.5	<0.5	<0.5	
	02/03/93	<50	<0.5	<0.5	<0.5	<0.5	
	05/25/93	NS	NS	NS	NS	NS	
	09/22/93	<50	0.51	0.82	<0.5	0.81	
	12/21/93	<50	<0.5	<0.5	<0.5	<0.5	
	03/18/94	<50	<0.5	<0.5	<0.5	<0.5	
İ	06/15/94	<50	<0.5	<0.5	<0.5	<0.5	
	09/14/94	<50	< 0.5	<0.5	<0.5	<0.5	
	12/19/94	<50	<0.5	<0.5	<0.5	<0.5	
	03/07/95	<50	<0.5	<0.5	<0.5	<0.5	
	06/08/95	<50	< 0.5	< 0.5	< 0.5	<0.5	
	09/22/95	<50	<0.50	< 0.50	<0.50	<0.50	
357.0	0.000.000						
MW-8	03/30/92	3,000	1,700	880	970	1,900	
	07/01/92	72,000	1,800	550	520	2,200	
	09/30/92	12,000	680	140	140	560	
	11/19/92	9,600	530	310	130	560	
	02/03/93	44,000	1,500	1,300	490	2,300	
	05/25/93	7,400	580	160	170	480	
	09/ 22/93 12/21/93	2,400	490	45	37	140	
	12/21/93 03/18/94	1,400	240	7.5	<2.5	82	
	03/18/94 06/15/94	8,600 4,800	1,600 980	680	470	1,900	
	06/13/94	,	4	380	260	1,200	
	12/19/94	6,600	1,200	280	330	1,100	
	03/07/95	8,400 7,400	1,800	390 370	500 440	2,000	
[06/08/95	7,400 6,000	1,400 790	370 220	290	2,000	
	09/22/95	4,100	750 750	93	230	1,400 860	
	UPIALITA	4,100	/30	73	430	800	
MW-9	12/20/94	16,000	2.500	1,400	690	2,800	
:	03/07/95	5.200	1,600	250	320	520	
	06/08/95	4,900	1,000	98	300	200	
	09/22/95	4,000	1.100	82	190	200	

NOTES:

Below indicated detection limit.
Reported as "nondetect" by previous consultant.
Not sampled.

K ND NS

ATTACHMENT A ULTRAMAR FIELD PROCEDURES

ATTACHMENT A - ULTRAMAR FIELD PROCEDURES

The following section describes procedures used by field personnel in the performance of ground water sampling at Ultramar Inc. sites.

Ground Water Level and Total Depth Determination

A water level indicator is lowered down the well and a measurement of the depth to water from an established reference point on the casing is taken. The indicator probe is used to sound the bottom of the well and a measurement of the total depth of the well is taken. Both the water level and total depth measurements are taken to the nearest 0.01-foot.

Visual Analysis of Ground Water

Prior to purging and sampling ground water monitoring wells, a water sample is collected from each well for subjective analysis. The visual analysis involves gently lowering a clean, disposable, polyethylene bailer to approximately one-half the bailer length past the water table interface. The bailer is then retrieved, and the sample contained within the bailer is examined fro floating product or the appearance of a petroleum product sheen. If measurable free product is noted in the bailer, a water/product interface probe is used to determine the thickness of the free product to the nearest 0.01-foot. The thickness of free product is determined by subtracting the depth to product from the depth to water.

Monitoring Well Purging and Sampling

Monitoring wells are purged by removing approximately four casing volumes of water from the well using a clean disposable bailer or electrical submersible purge pump. Purge volumes are calculated prior to purging. During purging, the temperature, pH, and electric conductivity of the purge water are monitored. The well is considered to be sufficiently purged when: The four casing volumes have been removed; the temperature, pH, and conductivity values have stabilized to within 10% of the initial readings; and the ground water being removed is relatively free of suspended solids. After purging, ground water levels are allowed to stabilize to within 80% of the initial water level reading. A water sample is then collected from each well with a clean, disposable polyethylene bailer. If the well is bailed or pumped dry prior to removing the minimum volume of water, the ground water is allowed to recharge. If the well has recharged to within 80% of the initial depth to water reading within two hours, the well will continue to be purged until the minimum volume of water has been removed. If the well has not recharged to at least 80% of the initial depth to water reading within two hours, the well is considered to contain formational water and a ground water sample is collected. Ground water removed from the well is stored in 55-gallon drums at the site and labeled pending disposal.

In wells where free product is detected, the wells will be bailed to remove the free product. An estimate of the volume of product and water well be recorded. If the free product thickness is reduced to the point where a measurable thickness is no longer present in the well, a ground water sample will be collected. If free product persists throughout the purging process, a final free product thickness measurement will be taken and a ground water sample will not be collected.

Ground water samples are stored in 40-milliliter vials so that air passage through the sample is minimized (to prevent volatilization of the sample). The vial is tilted and filled slowly until an upward convex meniscus forms over the mouth of the vial. The Teflon™ side of the septum (in cap) is then placed against the meniscus, and the cap is screwed on tightly. The sample is then inverted and the bottle is tapped lightly to check for air bubbles. If an air bubble is present in the vial, the cap is removed and more sample is transferred from the bailer. The vial is then resealed and rechecked for air bubbles. The sample is then appropriately labeled and stored on ice from the time of collection through the time of delivery to the laboratory. The Chain-of-Custody form is completed to ensure sample integrity. Ground water samples are transported to a state-certified laboratory and analyzed within the U.S. Environmental Protection Agency-specified hold times for the specified analytes.

ATTACHMENT B DOULOS ENVIRONMENTAL FIELD DATA SHEETS

DOULOS ENVIRONMENTAL COMPANY GROUNDWATER/LIQUID LEVEL DATA (measurements in feet)

Beacon #720, 1088 Marina Blvd.

Date: 9-12-95

San Leandro, CA Project No.: 94-720-01

Recorded by:

Hal Hansen

Well No	Time	Well Elev. TOC	, F	Measured Total Depth	Gr. Water Elevation	Product Thickness	Comments
MW-1	32]	,	13.84	29.54			slighted norter
MW-2	324	!	13.66	15.80			alighted norten
MW-3	308	,	13.25	2600			roado maker
MW-4	332	ı	13.98	28.71			alisheadon noster
MW-5	378		13.63	28.85			ale trade nester
MW-6	304		12.44	15.00			roador nosher
MW.7	300		12.67	25.23			moador no alem
MW-8	3/2		14.92	29.95			eleptrado noster
MW.9	3/6		13.73	24.72			mooder no alen elighteden moden elighteden no sten

Notes:

C	lient:_	Ultramar		s	ampling Date:	9-22-95	_
	Site:_	Beacon #7	20		Project No	94-720-01	
		1088 Mari	na Bouleva	rd We	ll Designatio	on: <u>MW-/</u>	
		San Leand	lro, CA				
Is the Is top Is wel Height Well c 12" BK	re stand of cas: l cap se of well over typ	ling water ing cut le ealed and casing r pe: 8" UV	locked? liser (in i locked? iser (in i locked) locked?	nches): "UV3	NO YES NO YES NO YES 12" EMCO_ 6" CNI	time:Above TOC B If no, see If no, see 8" BK Other/icne	elow TOC remarks remarks
				١.	ler	Submersible Dedicated ba Centrifugal	pump iler pump
			·	<u> I</u>	6 ⁿ		
Initia Time:_ Depth Depth	l Measur j <u>l</u> of well: to water	tiplier: cement 29,54 :# 1384	Rec Time: Depth to	harge Meas	Surement Calcu	2.61 gal/	
·	Time	Temp.	E.C.	рН	Turbidity	Volume	7
	2843	73K	1031	731		,	1
	436	702	1010	720		2	7
	436	671	997	714		3	7
	437	09,4	762	7/3		- 4	
S	ample ap	pearance:	_clem		Lock:	dalphin	<u> </u>
2" Lo	ocking (ocking (aced: (Clap: cap: cap:	_ Lock-I	nat apply) k #3753: Dolphin:	7/	ion of replace 32 Allenhead 9/16 Bolt enhead (DWP)	:
Remai	rks:						
Signati	ura:	91	May.	_	<u> </u>		

	Client: <u>Ultramar</u>				Sampling Da	ate:	9-11-45	
	Site:	Beacon #	720		Project	t No.:_	94-720-0	1
	_	1088 Mar	ina Bouleva	ird W	ell Designa	ation:_	MW-2	
	_	San Lean	dro. CA	·····				
Is the Is too Is we Height Well of 12" Bl General Purgis	ere star p of cas ll cap s t of wel cover ty K al condi ng Equip Sampled Well Vol. Mu l Measu	ding water ing cut le ealed and l casing r pe: 8" U 12" DWP tion of we ment: with: Dis Diameter: ltiplier: rement	locked? riser (in i V12" CN ellhead ass2" dispo2" PVC b4" PVC b sposable ba 2"	nches): " UV I embly: I sable bai ailer ailer iler: 4" 0.65 harge Mea	NO N	COSubSubCenbailer	Fair mersible icated ba trifugal :	Poor pump iler pump
Depth	to water	r: <u>1366</u> 509						
	Time	Temp.	E.C.	pling tim	Turbid	ity	Volume	7
	509	70.4	1843	784			1	-
	510	645	957	25}			2	7
	5/0	68.2	951	732			9	7
	5//	48,4	920	730)	4	
S	ample ar	pearance:	den		Lock:	elata	Sun]
4" L	ocking (aced: (Ch Cap: Cap:	Lock-D	at apply) : #3753:_ olphin:_	Note con	dition 7/32 A		<u>. </u>
Rema	rks:							
Signati	ura	9/1	01.					

	Client:_	Ultramar			Sampling Date:	1.22-95	
	Site:_	Beacon #	720		Project No.:	94-720-01	
	~	1088 Mar	ina Boulev	ard W	ell Designation:		
		San Lean	lro, CA				
Is the Is to Is we! Height Well (12" B)	ere stan p of cas ll cap s t of wel cover ty	raffic conding water ing cut less ealed and lessing researches. 8" UV 12" DWP tion of we	r in well hevel? locked? riser (in i	nches): 2" UV	AND VES 2	time:l above TOC Bel If no, see re If no, see re8* BK her Fair Poc	ow Toc emarks emarks
	ng Equip Sampled		2" dispo 2" PVC k 4" PVC k	1	lerSu De Ce Teflon baile	bmersible pur dicated baile ntrifugal pur	ì
					6" 8"	<u> </u>	
Initia Time:_ Depth Depth	l Measu JOF of well to wate	ltiplier: rement : 2600 r: /325	Time: 4	harge Mea	1.47 2 surement Calcula 3.36 Act	-	
	Time	Temp.	E.C.	pH	Turbidity	Volume	
	423	702	1184	7/4		1	
	446	674	1093	7/3		2	
	416	84.2	974	702		3	
	417	683	846	705		4	
s	ample ap	pearance:	Clean		Lock: dela	14	
2" L 4" L	ocking (ocking (laced: (Ch Cap: Cap:	_ Lock-	nat apply) k #3753:_ Dolphin:_	7/32	Allenhead: 9/16 Bolt:	
Rema	rks:						
Signat	ure:	91.	131				·

Client: <u>Ultramar</u>			s	Sampling Date: 9-22-95			
	Site:_	Beacon #7	20		Project 1	io.: <u>94-</u> 7	20-01
	_	1088 Mari	na Bouleva	<u>rd</u> We	ll Designati	ion:	1-4
	=	San Leand	ro, CA				
Is the Is top Is well Height Well of 12" BK	ere stand of cas ll cap so of well cover ty	ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP	locked? iser (in i 12 12" CN	nches): "UV	NO YES	Above If no If no	hours TOC Below TOC o, see remarks o, see remarks 8" BK
•	ng Equip		2" dispo 2" PVC b 4" PVC b	ailer ailer	7	_Dedicat _Centrif	ible pump ed bailer ugal pump
S					Teflon ba		
	Well [Diameter:	2"	4"	6#	8"	
Initia Time: Depth	1 Measur	26,71	Rec	harge Meas	1.47 surement Calc		***
Start	purge:	532	Sam	pling time	: <u>540</u>	•	*
	Time	Temp.	E.C.	рн	Turbidit	y Vo	lume
	533	70,2	1671	704		- /	
	534	700	981	202		- 2	
	534	67,4	702	(95			rung.
	535	09,6	909	694		> 4	
e	ample ar	pearance:	de	. .	Lock:	dulas	<u> </u>
	<u>_</u>						
2" L	ocking (ocking (ap:	_ Lock-l	k # 3753:	7	/32 Alle 9/16	replaced item nhead: Bolt: (DWP):
Rema	rks:						
Signat	ure:	7:4	Ma				

Client:_	Ultramar		s	ampling Date:	9-22-95	
Site:_	Beacon #7	20		Project No.:	94-720-01	,
****	1088 Mari	na Bouleva	rd_ We	ll Designation:	<u>mu-5</u>	ı
	San Leand	ro, CA				_
Is setup of the setup of the setup of case is well cap setup of well cover type in the setup in	ding water ing cut le saled and : l casing r	in well b vel? locked? iser (in i	ox? .nches):	NO YES I	time: Above TOC Bel If no, see r If no, see r 8 BK her/L'Custo	ow TO emark emark
Purging Equip	ment:	2" dispo 2" PVC b 4" PVC b	sable bai ailer ailer	lerSu	bmersible pu dicated bail entrifugal pu	er mp
	Diameter:		-			<u>-</u>
Purge Vol. Mul Initial Measur Time: 115 Depth of Well: Depth to Water Start purge:_	rement : <u>18,61</u> :: <u>/163</u>	Rec Time:3 Depth to	harge Mea	Calcula 416 Act	•	
Time	Temp.	E.C.	рН	Turbidity	Volume	
520	791	928	784		1	
521	700	763	720		2	
541	69.4	896	704		5	
522	61.0	870	701	7	4	
	opearance:	clean		Lock:d	eleti	
Sample ap	<u> </u>					
Sample ap Equipment repl 2" Locking (4" Locking (6" Locking (laced: (Ch Cap:	_ Lock-	hat apply) k #3753:_ Dolphin:_	7/32 	on of replace Allenhead:_ 9/16 Bolt:_ head (DWP):_	

DOULOS ENVIRONMENTAL COMPANY

ı	Client: <u>Ultramar</u>			5	Sampling Date: 9-11-95		
	Site:_	Beacon #	720		Project No.	:_94-720-01	
	_	1088 Mar	ina Boulev	ard_ We	ell Designation	:	
		San Lean	iro. CA				
Is the Is top Is well to Height Well of 12" Br Genera	ere stand of case of cap so of well cover ty	ment:	r in well evel? locked? riser (in 1	inches): 2" UV	NO YES NO	ubmersible	elow TOC remarks remarks Poor
			2" PVC] 4" PVC]	bailer bailer	D	edicated ba entrifugal p	iler
S				······································	Teflon bail		
Initia Time:_ Depth Depth	Vol. Mu l Measu 304 of Well to water	ltiplier: rement :/5 @	0.16 Rec Time: Depth to	0.65 charge Mea 4/4 water:_/	6"8 1.47 surement Calcula L. 85 Acc	2.61 gal/:	
	Time	Temp.	E.C.	рн	Turbidity	Volume	7
	346	70.1	1784	74		,	1
	349	612	1041	741		2	-
	355	593	1010	725		3	†
	355	693	19/	210		4	1
S	ample ap	pearance:	clean		Lock: <u>de</u>	Colm	
2" Lo	ent repl ocking (ocking (ocking (Cap:	neck all ti Loc Lock-	nat apply) k #3753:_ Dolphin:_	7/32	Allenhead:	
Remai	rks: _						
Signati	re:	N-181	1				

•	Client: <u>Ultramar</u>				Sampling Date: 9-11-95		
	Site:_	Beacon #	720	···	Project No.: 94-720-01		
		1088 Mar	ina Boulev	ard We	ell Designation:		
		San Lean					
Is the Is top Is well to 12 Be General Purgir	ere stand of cas it cap stof well well well weasy	ment: with: Dis	r in well in evel? locked? riser (in in i	inches): 2" UV NI 3 Sembly: B Dailer Dailer A" 0.65 Charge Mea	NO TES NO	bmersible pump dicated bailer ntrifugal pump r:	
Depth Depth	to water	: <u>/).67</u> r: <u>2.5.23</u>			Calcula 33% Act	ual purge: Roal	
Start		337	1	pling tim	e: <u>3 u 5</u>		
	Time	Temp.	E.C.	pН	Turbidity	Volume	
	388	738	1784	41)			
	339	702	1154	731		2	
	339	701	1126	730		3	
	340	89.2	1107	78C		4	
S	ample ap	pearance:	clen		Lock: dol	2 km	
2" Lo	ocking (ocking (aced: (Cl cap: cap:	_ Lock-	hat apply) k #3753:_ Dolphin:_	7/32	n of replaced item Allenhead: 9/16 Bolt:	
Remai							
Signati	ure:	glal ?	Vano				

(Client: <u>Ultramar</u>				Sampling Date: 9-22-95				
	Site:_	Beacon #7	20		Project No	.: <u>94-720-0</u>	1		
	•••	1088 Mari	na Bouley	ard W	ell Designatio	n: <u>ww-</u> 8			
		San Leand	ro, CA						
Is the Is top Is well the Is well to 12" BK Genera	ere stan of cas l cap s of wel cover ty		in well l vel? locked? iser (in ill2" Ch llhead ass	inches): 2" UV; sembly: 1	NO YES NO YES NO YES NO YES 12" EMCO_ 6" CNI Excellent Go		Below Too e remarks e remarks Poor		
		ment:			·	Submersible Dedicated ba Centrifugal	iler		
					Teflon bai				
Initia Time:_ Depth Depth	1 Measur 1/1 of well to water	: <u>19.95</u>	Time:	harge Mea 504 water: 16	1.47 surement Calcui				
	Time	Temp.	E.C.	рН	Turbidity	Volume	7		
	801	70.1	941	730		1			
	502	69.7	130	726		2			
	J62	4.4	907	714		3	1		
	503	68.8	812	210	-	4]		
Sa	ample ap	pearance:	clem.		Lock: dol	Ari	<u></u>		
2" Lo	ocking C ocking C	aced: (Ch cap: cap:	Lock-	nat apply) k #3753:_ Dolphin:_	7/3	ion of repla 2 Allenhead 9/16 Bolt snhead (DWP)	:		
Remai	rks:								
Signatu	ıre:	West	91				···		

(Client: <u>Ultramar</u>			s	ampling ()ate:	7-11-95	
	Site:_	Beacon #7	20	<u> </u>	Projec	et No.:_	94-720-01	
		1088 Mari	na Bouleva	<u>rd</u> We	ll Design	nation:_	MW-9	<u> </u>
		San Leand						
Is the	ere stand of cas:	ding water ing cut le	trol devic in well b vel? locked? iser (in i 12" CN llhead ass	ox?	NO NO	VES I	ime:ove TOC f no, see f no, see 8" BK erFair	remarks remarks
			2" dispo 2" PVC b 4" PVC b	ailer	-	-Y Cen	trifugal	rret
S			posable ba					
	Well I	Diameter:	2"	7				
Initia Time:_ Depth Depth	1 Measur 3/6 of well: to water	: 11.72	-	harge Mea	surement	Calculat Actu	ed purge: al purge:	24.6 cal
Start		<u> - </u>		pling tim	, 		1	\neg
	Time	Temp.	E.C.	рН	Turbi	.dity	Volume	_
	444	901	1134	73)		-		4
	2046	69.3	1034	702			2	_
	448	69,4	912	204	<u> </u>		3	
	450	69.0	154	579			4	_
S	ample ap	pearance:	_clea		Lock:	dolo	hi	
2" L 4" L	ocking (ap:	neck all th Lock- Lock-	k #3753:_		7/32	of repla Allenhead 9/16 Bolt ead (DWP)	l:
Rema	rks:							
Signat	ure:	Mul	Man					

ATTACHMENT C HISTORICAL GROUND WATER ELEVATION DATA

TABLE 1
GROUNDWATER ELEVATIONS
Page 1 of 5

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)		
Groundwater Monitoring Well MW-1:	Elevation of Top of Casing = 29.89 feet			
June 23, 1987	14.79	15.10		
July 06, 1987	14.93	14.96		
August 06, 1987	14.22	15.67		
November 04, 1987	15.74	14.15		
February 02, 1988	13.99	15.90		
May 02, 1988	14.99	14.90		
November 21, 1988	13.03	16.86		
February 14, 1989	15.86	14.03		
May 02, 1989	14.77	15.12		
August 10, 1989	16.35	13.54		
November 08, 1989	16.46	13.43		
February 20, 1990	15.58	14.31		
May 18, 1990	16.40	13.49		
September 15, 1990	16.83	13.06		
November 26, 1990	17.16	12.73		
February 07, 1991	16.43	13.46		
May 14, 1991	14.93	14.96		
August 16, 1991	16.35	13.54		
Groundwater Monitoring Well MW-1:	New Elevation	of Top of Casing = 33.10 feet		
December 24, 1991	17.20	15.90		
March 30, 1992	13.58	19.52		
Groundwater Monitoring Well MW-2:	Elevation	of Top of Casing = 29.57 feet		
June 23, 1987	14.51	15.06		

TABLE 1
GROUNDWATER ELEVATIONS
Page 2 of 5

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
July 06, 1987	14.63	14.94
August 06, 1987	14.95	14.62
November 04, 1987	15.45	14.12
February 02, 1988	13.74	15.83
May 02, 1988	14.63	14.94
November 21, 1988	12.99	16.58
February 14, 1989	15.66	13.91
May 02, 1989	14.56	15.01
August 10, 1989	16.22	13.35
November 08, 1989	16.19	13.38
February 20, 1990	15.34	14.23
May 18, 1990	16.20	13.37
September 15, 1990	16.42	13.05
November 26, 1990	16.83	12.74
February 07, 1991	16.13	13.44
May 14, 1991	14.62	14.95
August 16, 1991	16.00	13.57
Groundwater Monitoring Well MW-2:	New Elevation of	Top of Casing = 32.80 feet
December 24, 1991	16.90	15.90
March 30, 1992	13.32	19.48
Groundwater Monitoring Well MW-3:	Elevation o	f Top of Casing = 29.13 feet
June 23, 1987	14.13	15.00
July 06, 1987	14.24	14.89
August 06, 1987	14.52	14.61
November 04, 19887	15.09	14.04
February 02, 1988	13.37	15.76

TABLE 1
GROUNDWATER ELEVATIONS
Page 3 of 5

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
May 02, 1988	14.22	14,91
November 21, 1988	13.01	16.12
February 14, 1989	15.22	13.91
May 02, 1989	14.16	14.97
August 10, 1989	15.61	13.52
November 08, 1989	15.75	13.38
February 20, 1990	14.95	14.18
May 18, 1990	15.79	13.34
September 15, 1990	16.07	13.06
November 26, 1990	16.36	12.77
February 07, 1991	15.74	13.39
May 14, 1991	14.19	14.94
August 16, 1991	15.55	13.58
Groundwater Monitoring Well MW-3:	New Elevation of	f Top of Casing = 32,30 feet
December 24, 1991	16.40	15.90
March 30, 1992	12.96	19.34
Groundwater Monitoring Well MW-4:	Elevation o	f Top of Casing = 29.72 feet
June 23, 1987	14.77	14.95
July 06, 1987	14.91	14.81
August 06, 1987	15.19	14.53
November 04, 1987	15.72	14.00
February 02, 1088	14.03	15.69
May 02, 1988	14.89	14.83
November 21, 1988	12.88	16.84
February 14, 1989	15.83	13.89
May 02, 1989	14.75	14.97

TABLE 1
GROUNDWATER ELEVATIONS
Page 4 of 5

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)			
August 10, 1989	16.30	13.42			
November 08, 1989	16.29	13.43			
February 20, 1990	15.62	14.10			
May 18, 1990	16.34	13.38			
September 15, 1990	16.79	12.93			
November 26, 1990	17.08	12.64			
February 07, 1991	16.37	13.35			
May 14, 1991	14.87	14.85			
August 16, 1991	16.25	13.47			
Groundwater Monitoring Well MW-4:	Groundwater Monitoring Well MW-4: New Elevation of Top of Casing = 32.90 fee				
December 24, 1991"	17.10	15.80			
March 30, 1992	13.60	19.30			
Groundwater Monitoring Well MW-5:	Elevation of	Top of Casing = 29.55 feet			
June 23, 1987	14.63	14.92			
July 06, 1987	14.79	14.76			
August 06, 1987	15.07	14.48			
November 04, 1987	15.61	13.94			
February 02, 1988	13.84	15.71			
May 02, 1988	14.77	14.78			
November 21, 1988	12.84	16.71			
February 14, 1989	15.72	13.83			
May 02, 1989	14.68	14.87			
August 10, 1989	16.03	13.52			
November 08, 1989	16.33	13.22			
February 20, 1990	15.44	14,11			

TABLE 1

GROUNDWATER ELEVATIONS Page 5 of 5

Date Sampled	Depth to Groundwater (Feet)	Groundwater Elevation (Feet)
May 18, 1990	16.22	13.33
September 15, 1990	16.65	12.90
November 26, 1990	16.95	12.60
February 07, 1991	16.20	13.35
May 14, 1991	14.72	14.38
August 16, 1991	16.10	13.45
Groundwater Monitoring Well MW-5:	New Elevation	of Top of Casing = 32.70 feet
December 24, 1991	16.92	15.78
March 30, 1992	13.48	19.22
Groundwater Monitoring Well MW-6:	Elevation	of Top of Casing = 30.40 feet
December 24, 1991	14.12	16,28
March 30, 1992	12.62	17.78
Groundwater Monitoring Well MW-7:	Elevation	of Top of Casing = 31.20 feet
December 24, 1991	15.70	15.50
March 30, 1992	12.34	18.86
Groundwater Monitoring Well MW-8:	Elevation	of Top of Casing = 33.80 feet
December 24, 1991	18.00	15.80
March 30, 1992	14.66	19.14

Notes:

- All elevations surveyed to an arbitrary datum
- Elevations and depths are given in feet 2)
- 3)
- 4)
- Groundwater Technology, Inc., made measurements until February 1989

 Du Pont Environmental Services collected samples from February 1989 through February 1991

 Environmental Geotechnical Consultants, Inc., made measurements beginning in May 1991 5)

ATTACHMENT D HISTORICAL GROUND WATER ANALYTICAL DATA

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Page 1 of 5

Well	Date	Benzene	Toluene	Ethyl- benzene	Xylenes	TPH-G	
No.	Sampled	(µg/L)	(µg/L)	(µg/L)	(µg/L)	(µg/L)	Comments
MW-1	Apr. 16, 1987	2,313	3,770	664.1	3,331	17,276	
	June 23, 1987	1,887	2,141	466.7	1,652	26,027	
	July 06, 1987	778.2	943.7	133.2	422.1	3,938	
	Aug. 06, 1987	1,270	1,576	288.7	873.7	6,079	
	Nov. 04, 1987	1,700	4,000	720	2,200	15,000	
	Feb. 02, 1988	1,500	1,700	230	740	14,000	
	May 02, 1988	3,50 0	700	4,900	2,700	33,000	
	Nov. 21, 1988	2,200	560	2,800	2,200	15,000	
	Feb. 14, 1989	1,700	1,700	340	1,500	12,000	Odor
	May 02, 1989	1,500	2,400	510	2,400	18,000	Odor, Slight Sheen
	Aug. 10, 1989	1,400	1,500	360	1,600	10,000	Odor
	Nov. 08, 1989	920	470	190	360	7,200	Odor
	Feb. 20, 1990	810	540	270	800	3,300	
	May 18, 1990	1,900	500	560	1,600	5,600	
	Sep. 15, 1990	320	110	150	520	5,200	Odor
	Nov. 26, 1990	370	59	150	370	3,000	Odor
-	Feb. 07, 1991	750	570	480	1,800	14,000	
-	May 14, 1991	1,000	1,400	600	2,500	41,000	
	Aug. 16, 1991	310	210	150	480	4,000	Odor
	Dec. 24, 1991	530	95	310	680	11,000	Moderate Odor
	Mar. 30, 1992	630	550	540	1,900	27,000	Odor
MW-2	Apr. 16, 1987	3,131	4,239	1,067	4,608	17,920	
	June 23, 1987	2,188	2,622	1,047	4,699	49,354	
	July 06, 1987	1,575	1,729	457	1,702	8,676	
	Aug. 06, 1987	2,623	3,722	702	2,882	14,376	
	Nov. 04, 1987	2,200	4,100	900	3,500	19,000	

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Page 2 of 5

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyi- benzene (µg/L)	Xylenes (μg/L)	ТРН-G (µg/L)	- Comments
MW-2	Feb. 02, 1988	6,200	6,500	1,000	4,000	54,000	
	May 02, 1988	6,800	1,300	7,100	5,400	53,000	
	Nov. 21, 1988						Free product
	Feb. 14, 1989	6,900	4,300	1,100	5,200	48,000	Film of free product
	May 02, 1989	6,100	8,800	2,100	16,000	111,000	Odor, sheen
	Aug. 10, 1989	4,200	2,900	1,000	5,800	39,000	Odor, sheen
	Nov. 08, 1989	3,700	1,500	740	2,200	45,000	Odor, heavy sheen
	Feb. 20, 1990	5,000	8,200	1,600	11,000	60,000	
	May 18, 1990	6,200	1,900	1,300	610	19,000	
	Sep. 15, 1990	1,400	820	660	3,000	27,000	Odor, sheen
	Nov. 26, 1990	1,100	880	700	3,800	28,000	Odor, sheen
	Feb. 07, 1991	2,100	1,900	1,300	6,200	63,000	Odor, sheen
	May 14, 1991	2,200	2,700	1,100	5,900	100,000	Moderate odor Slight sheen
 ,	Aug. 16, 1991	1800	950	990	3900	32,000	Slight odor, sheen
	Dec. 24, 1991	1,100	550	750	2,700	30,000	Odor, sheen
	Mar. 30, 1992	2,300	1,700	940	3,300	52,000	Odor, sheen
MW-3	Apr. 16, 1987	1,371	2,438	472.3	2,617	9,967	
	June 23, 1987	646.2	822.9	320.9	1,280	16,824	
	July 06, 1987	340.3	384.2	116.5	420.2	3,395	
	Aug. 06, 1987	441.9	436.3	118.2	417.3	3,107	
	Nov. 04, 1987	320	280	74	250	2,600	,
	Feb. 02, 1988	2,200	2,300	500	2,300	44,000	
	May 02, 1988	1,600	450	840	1,700	14,000	
	Nov. 21, 1988	1,200	220	560	810	8,100	
-	Feb. 14, 1989	1,500	220	220	500	5,500	Odor

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Page 3 of 5

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (μg/L)	TPH-G (µg/L)	Comments
	Aug. 10, 1989	750	10	190	210	2,700	Odor
	Nov. 08, 1989	370	90	ND	58	2,400	Odor
	Feb. 20, 1990	1,200	810	77	460	3,700	_
	May 18, 1990	980	ND	330	250	2,300	
	Sep. 15, 1990	240	36	150	230	4,700	Odor
	Nov. 26, 1990	170	8.4	86	120	1,400	Odor
•	Feb. 07, 1991	220	20	120	230	2,900	
	May 14, 1991	370	39	220	820	15,000	
	Aug. 16, 1991	480	50	360	680	7,200	Slight Odor
	Dec. 24, 1991	150	20	100	140	4,900	Slight Odor
<u>, , , , , , , , , , , , , , , , , , , </u>	Mar. 30, 1992	560	50	630	980	21,000	Odor
MW-4	Apr. 16, 1987	5,896	3,797	893.9	4,106	19,309	
	June 23, 1987	4,030	1,842	850.0	3,254	31,429	
	July 06, 1987	2,710	1,247	308.2	1,312	8,117	
	Aug. 06, 1987	3,992	1,589	447.9	1,611	10,464	
	Nov. 04, 1987	9,500	17,000	2,800	11,000	55,000	
	Feb. 02, 1988	11,000	7,400	1,400	6,200	47,000	
•	May 02, 1988	9,200	1,300	6,100	6,400	58,000	
	Nov. 21, 1988	5,700	1,600	3,100	7,600	48,000	
	Feb. 14, 1989	8,700	2,500	900	3,800	29,000	Odor & sheen
-	May 02, 1989	4,800	5,600	1,800	8,800	69,000	Odor, slight sheen
	Aug. 10, 1989	15,000	6,600	1,800	12,000	67,000	Odor, slight sheen
	Nov. 08, 1989	11,000	3,200	1,100	4,400	71,000	Odor, slight sheen
	Feb. 20, 1990	8,100	4,500	930	3,500	19,000	
	May 18, 1990	45,000	12,000	5,000	27,000	100,000	
	Sep. 15, 1990	4,200	1,200	740	3,000	38,000	

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Page 4 of 5

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	TPH-G (µg/L)	Comments
MW-4	Nov. 26, 1990	2,800	650	810	2,600	19,000	Odor
	Feb. 07, 1991	4,600	1,100	1,600	4,600	41,000	Odor, sheen
	May 14, 1991	7,300	830	3,900	3,600	100,000	Slight odor, sheen
	Aug. 16, 1991	8,000	2,500	1,100	4,000	45,000	Strong odor, sheen
	Dec. 24, 1991	6,000	1,200	1,100	3,700	79,000	Odor, sheen
	Mar. 30, 1992	8,000	4,400	730	2,500	76,000	Odor, sheen
MW-5	Apr. 16 1987	2,267	921.2	3,277	4,536	17,733	
	June 23, 1987	2,239	516.8	953.9	1,587	19,555	
	July 06, 1987	1,335	313.7	799.2	923.9	5,631	
	Aug. 06, 1987	1,890	881.2	576.8	93.4	6,450	
	Nov. 04, 1987	1,300	500	270	640	4,600	
	Feb. 02, 1988	3,100	1,500	550	1,400	24,000	
	May 02, 1988	4,400	490	1,200	1,500	17,000	
	Nov. 21, 1988	5,600	590	870	2,200	19,000	
-	Feb. 14, 1989	4,300	810	410	1,300	13,000	Odor
···	May 02, 1989	2,900	1,500	690	3,200	24,000	Odor, slight sheen
-	Aug. 10, 1989	6,700	2,300	860	4,700	36,000	Odor, slight sheen
- :	Nov. 08, 1989	5,300	860	460	600	30,000	Odor
	Feb. 20, 1990	1,700	220	120	370	3,400	
	May 18, 1990	18,000	2,000	1,500	5,600	24,000	
	Sep. 15, 1990	2,600	2,200	1,000	4,900	42,000	Odor, sheen
	Nov. 26, 1990	1,900	280	260	800	8,500	Odor, sheen

TABLE 2
SUMMARY OF GROUNDWATER ANALYTICAL RESULTS
Page 5 of 5

Well No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (μg/L)	TPH-G (µg/L)	Comments
	Feb. 07, 1991	1,500	1,200	610	2,700	24,000	Odor
-	May 14, 1991	3,800	4,400	1,400	6,400	120,000	Odor, sheen
	Aug. 16, 1991	4,200	1,900	760	2,900	29,000	Moderate odor, sheen
	Dec. 24, 1991	3,900	1,500	880	3,200	63,000	Odor, sheen
	Mar. 30, 1992	2,600	980	390	1,100	29,000	Odor, sheen
MW-6	Dec. 24, 1991	ND	ND	ND	ND	79	
	Mar. 30, 1992	2.1	1,1	ND	0.6	73	
MW-7	Dec. 24, 1991	ND	ND	ND	ND	ND	
	Mar. 30, 1992	ND	ND	ND	ОИ	ND	
MW-8	Dec. 24, 1991	1,700	2,400	1,200	6,100	81,000	Odor, sheen
	Mar. 30, 1992	1,700	880	970	1,900	3,000	Odor, sheen

Notes:

- 1) TPH-G = Total Petroleum Hydrocarbons as-gasoline
- 2) Odor refers to petroleum hydrocarbon odor
- 3) All results are presented in parts per billion
- 4) Groundwater Technology, Inc., collected samples prior to February 1989
- 5) Du Pont Environmental Services collected samples from February 1989 through February 1991
- 6) Environmental Geotechnical Consultants, Inc. collected samples beginning in May 1991
- 7) ND = Non Detect
- 8) See analytical results for detection limits (Appendix B)

ATTACHMENT E

LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM



October 2, 1995 Sample Log 12996

Dale van Dam El Dorado Environmental 2221 Goldorado Trail El Dorado, CA 95623

Subject: Analytical Results for 9 Water Samples

Identified as: Beacon 720 (Proj. # 94-720-01)

Received: 09/25/95

Dear Mr. van Dam:

Analysis of the sample(s) referenced above has been completed. This report is written to confirm results communicated on October 2, 1995 and describes procedures used to analyze the samples.

Sample(s) were analyzed using the following method(s):

"BTEX" (EPA Method 602/Purge-and-Trap) "TPH as Gasoline" (Modified EPA Method 8015/Purge-and-Trap)

Please refer to the following table(s) for summarized analytical results and contact us at 916-753-9500 if you have questions regarding procedures or results. The chain-of-custody document is enclosed.

Approved by:

Senibr Chemist



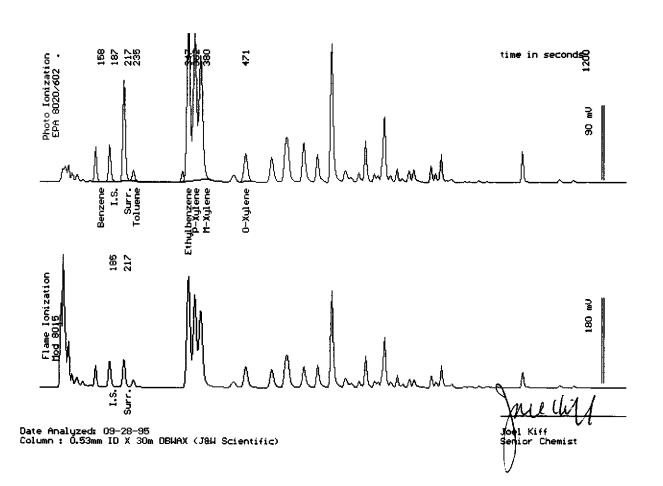
Sample: MW-1

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95 Dilution: 1:10

Dilution: 1:10 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(5.0) (5.0) (5.0) (5.0) (500)	140 55 1500 2500 12000
Surrogate Recovery	,	95 %





Sample Log 12996 12996-02

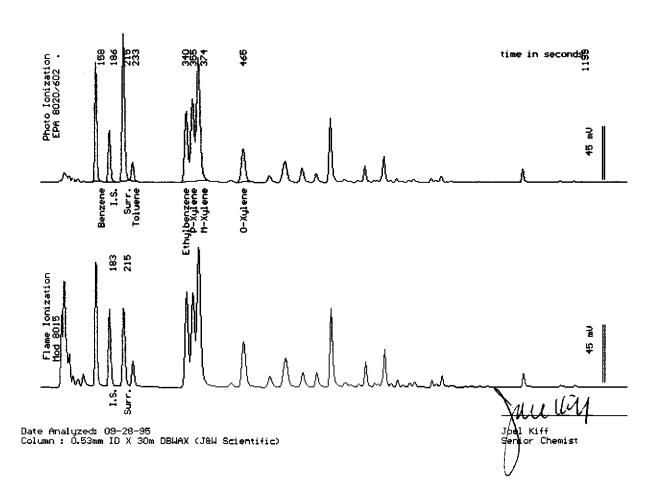
Sample: MW-2

From : Beacon 720 (Proj. # 94-720-01)

Sampled : 09/22/95

Dilution: 1:25 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(13)	840
Toluene	(13)	170
Ethylbenzene	(13)	1100
Total Xylenes	(13)	3400
TPH as Gasoline	(1300)	12000
Surrogate Recovery	•	94 %





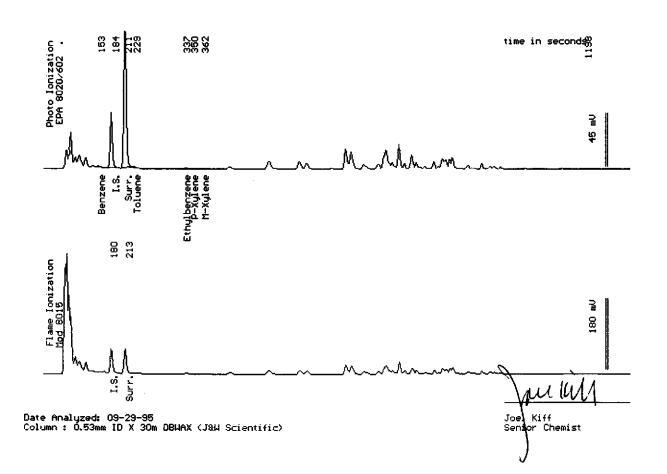
Sample: MW-3

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:3 QC Batch: 4132K

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(1.3) (1.3) (1.3) (1.3) (130)	<1.3 <1.3 1.3 <1.3 1200
Surrogate Recovery	7	91 %





Sample Log 12996 12996-04

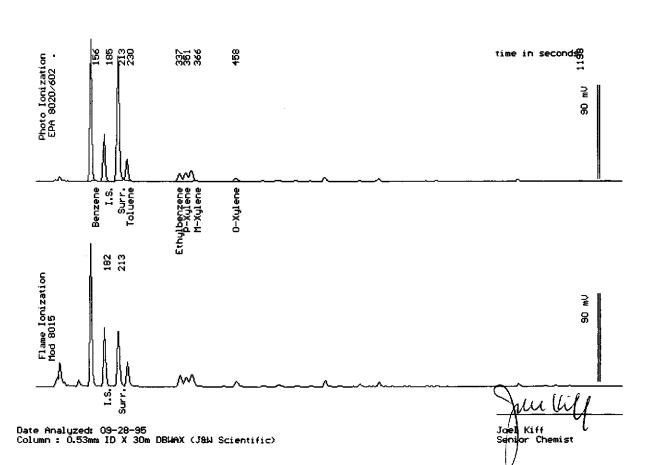
Sample: MW-4

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:250 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(130) (130) (130) (130) (13000)	12000 2200 1400 3500 37000
Surrogate Recovery	,	95 %





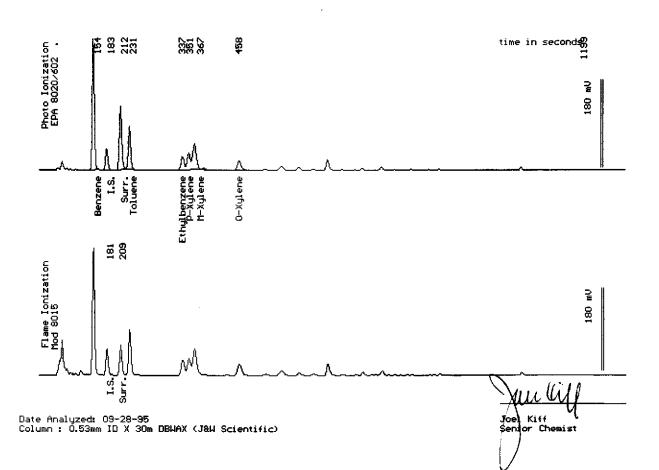
Sample: MW-5

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:100 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L
Benzene	(50)	9500
Toluene	(50)	3800
Ethylbenzene	(50)	1900
Total Xylenes	(50)	7000
TPH as Gasoline	(5000)	39000
Surrogate Recovery	•	95 %





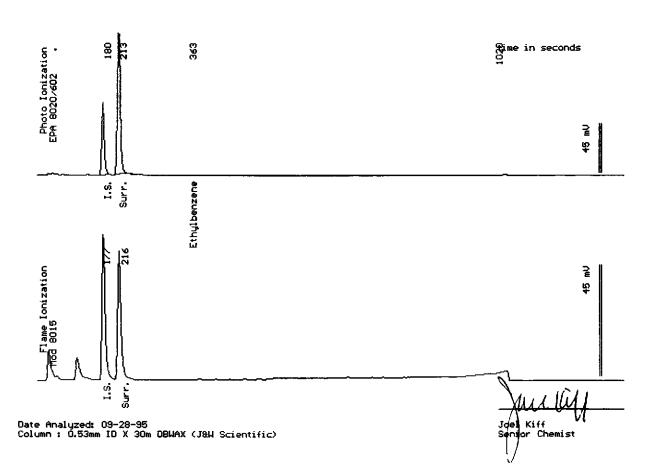
Sample: MW-6

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:1 QC Batch: 2129J

Parameter	(MRL) ug/L	Measured Value ug/L
_		
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery	,	91 %





Sample Log 12996 12996-07

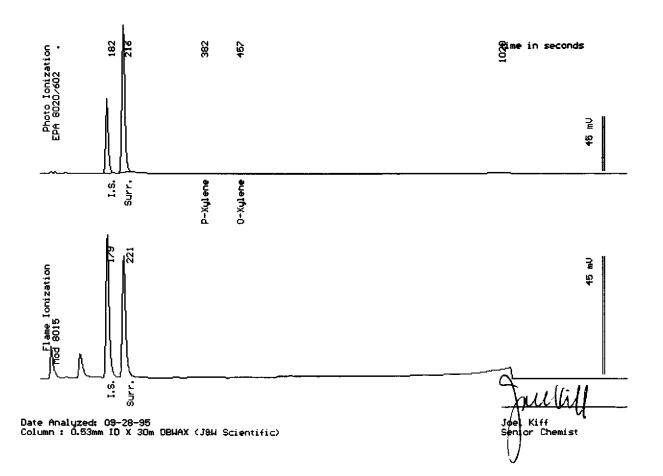
Sample: MW-7

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:1 QC Batch: 2129J

Parameter	(MRL) ug/L	Measured Value ug/E
Benzene	(.50)	<.50
Toluene	(.50)	<.50
Ethylbenzene	(.50)	<.50
Total Xylenes	(.50)	<.50
TPH as Gasoline	(50)	<50
Surrogate Recovery	,	91 %





Sample Log 12996 12996-08

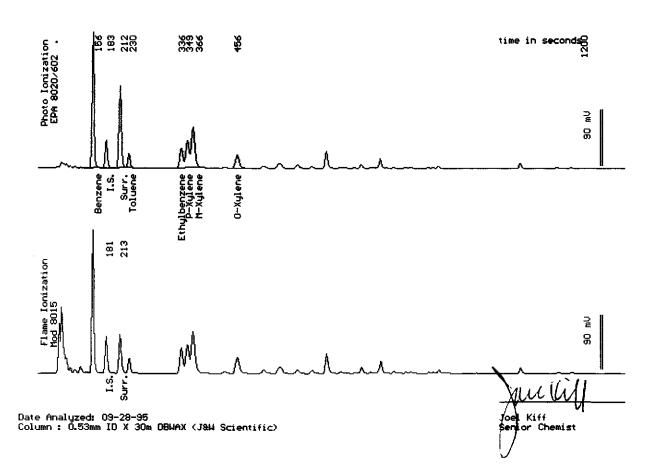
Sample: MW-8

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:10 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L						
Benzene Toluene Ethylbenzene Total Xylenes TPH as Gasoline	(5.0) (5.0) (5.0) (5.0) (500)	750 93 230 860 4100						
Surrogate Recovery	7	96 %						





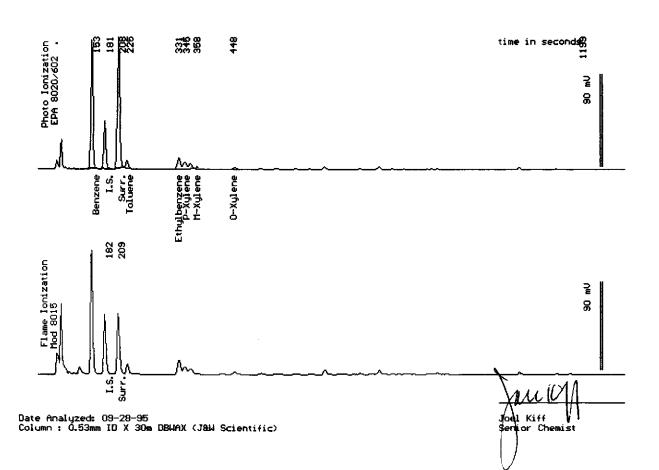
Sample: MW-9

From : Beacon 720 (Proj. # 94-720-01)

Sampled: 09/22/95

Dilution: 1:25 QC Batch: 4132H

Parameter	(MRL) ug/L	Measured Value ug/L						
Benzene	(13)	1100						
Toluene	(13)	82						
Ethylbenzene	(13)	190						
Total Xylenes	(13)	200						
TPH as Gasoline	(1300)	4000						
Surrogate Recovery	•	94 %						





Ultramar Inc.CHAIN OF CUSTODY REPORT

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Ultramar Inc.CHAIN OF CUSTODY REPORT

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