Ultramar

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: October 14, 1997 **QUARTER ENDING:** September 30, 1997

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. TPH 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

In June 1997, began operation of vapor extraction system.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly monitoring on August 19, 1997.

In July 1997, the ground water recovery system and the air sparging system began operation.

RESULT OF QUARTERLY MONITORING:

Monitoring data indicates that the benzene concentration remained not detected in MW-6 and MW-7. The benzene concentration increased in MW-1 from 33 ppb to 47 ppb, in MW-3 from not detected to 2.2 ppb, and in MW-9 from 2,500 ppb to 7,700 ppb. Benzene concentrations decreased in MW-2 from 610 ppb to 250 ppb, in MW-4 from 4,600 ppb to 420 ppb, in MW-5 from 7,500 ppb to 4,700 ppb, and in MW-8 from 1,000 ppb to 170 ppb.

The ground water extraction system has removed approximately 91,280 gallons of water. Approximately 1,315 pounds of hydrocarbons have been removed by the vapor extraction system.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY

ESTIMATED COMPLETION DATE

Continue quarterly monitoring program.

Continue operation of the remediation system.

El Dorado Environmental, Inc.

2221 Goldorado Trail, El Dorado, California 95623

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

October 7, 1997

Mr. Terrence Fox Senior Project Manager Ultramar Inc. 525 West Third Street Hanford, California 93230

Subject:

Third Quarter 1997 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 August 19, 1997 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 monitoring well MW-9 (Figure 2). The gradient of ground water flow is less than 0.01 foot per foot. Ground water elevations decreased an average of 1.31 feet in monitoring wells MW-1, MW-2, MW-4 through MW-7, and MW-9 and increased an average of 0.28 feet in monitoring wells MW-3 and MW-8 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.
- MTBE 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-6 and MW-7. Concentrations of benzene decreased in ground water samples collected from monitoring wells MW-2, MW-3, MW-5, and MW-8 and increased in the samples collected from monitoring wells MW-1, MW-4, 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.

Jal a. va Jan

Dale A. van Dam, R.G. Hydrogeologist

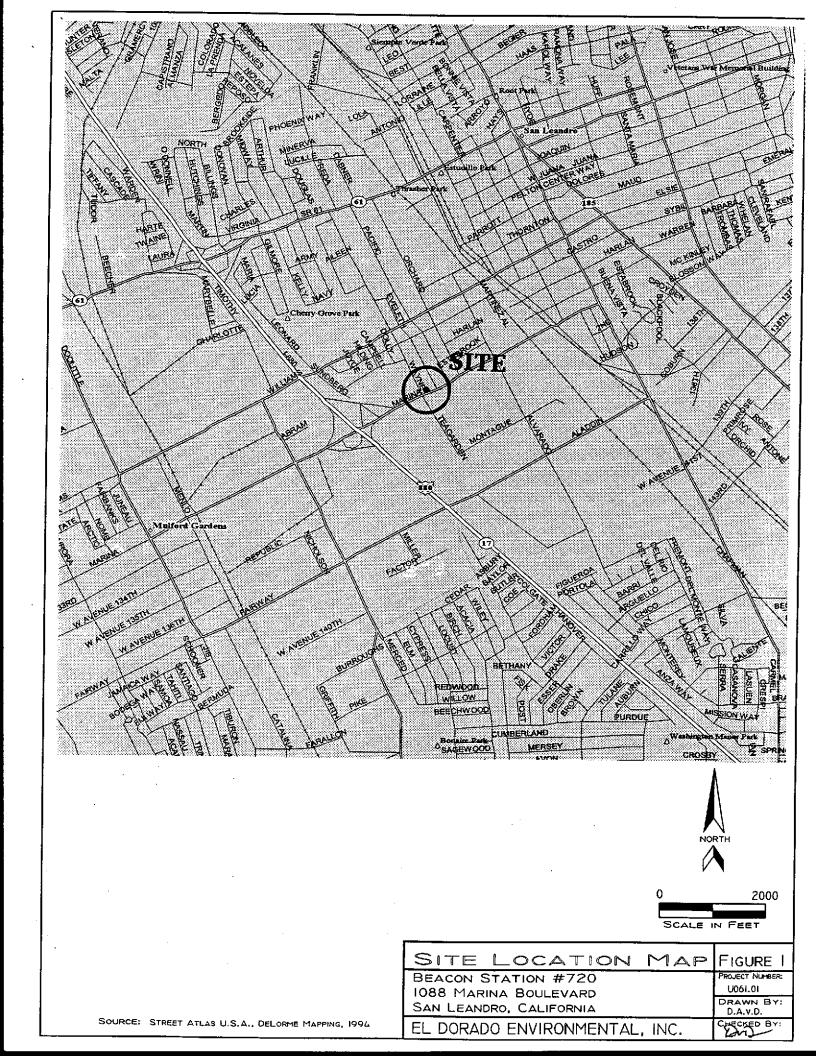
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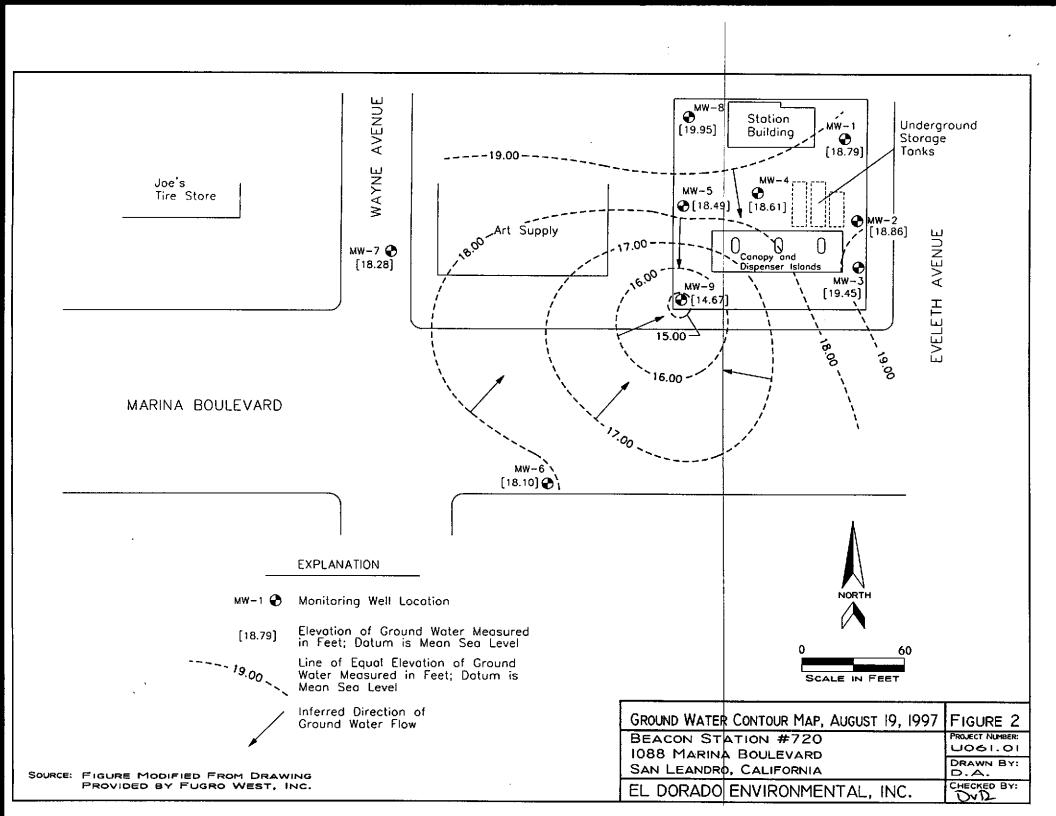
Attachments

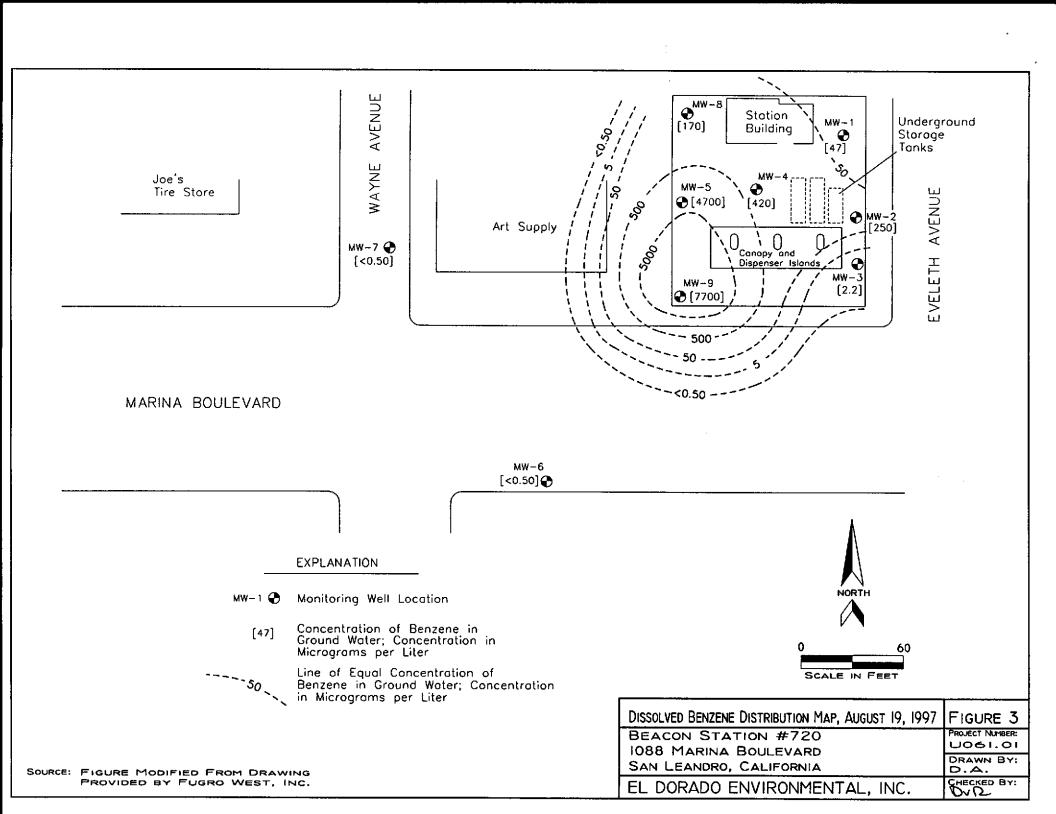


FIGURES:	FIGURE 1 SITE LOCATION MAP
	FIGURE 2 GROUND WATER CONTOUR MAP AUGUST 19, 1997
	FIGURE 3 DISSOLVED BENZENE DISTRIBUTION MAP AUGUST 19, 1997
TABLES:	TABLE 1 GROUND WATER ELEVATION DATA
	TABLE 2 GROUND WATER ANALYTICAL RESULTS
ATTACHMENTS:	A
	B DOULOS ENVIRONMENTAL FIELD DATA SHEETS
	C HISTORICAL GROUND WATER ELEVATION DATA
	D HISTORICAL GROUND WATER ANALYTICAL DATA
	E LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM

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(Measurements in feet)

	<u> </u>		T	T		
Monitoring Well	Date	Reference Elevation (top of casing) ⁽	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	1	14.80	18.30	_	ŀ
	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		14.36	18.74	27.70	
	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	1
	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	
	12/27/95		13.57	19.53	29.92	
	03/26/96		12.13	20.97	29.90	
	06/13/96		13.10	20.00	17.02	
	09/10/96		14.08	19.02	17.03	
	12/05/96		13.41	19.69	17.05	
	03/10/97		12.70	20.40	17.04	
	06/12/97 08/19/97		13.68	19.42	17.04	
	08/19/97		14.31	18.79	17.01	
MW-2	03/30/92	32.80	13.32	19.48		
	07/01/92		14.42	18.38		
	09/30/92		15.78	17.02	•••	
	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		13.64	19.16	25.52	
	12/21/95		13.71	19.09	35.05	
	03/07/95 06/08/95	•	12.54	20.26	25.87	
	09/22/95		12.81 13.66	19.99 10.14	25.86	
	12/27/95		13.42	19.14 19.38	25.80 25.83	
	03/26/96		12.05	20.75	25.83 25.83	
	06/13/96		12.03	20.73	25.83	
	09/10/96		13.73	19.07	26.43	
	12/05/96		13.73	19.51	26.45	
	03/10/97		12.42	20.38	26,48	
	06/12/97	,	13.18	19.62	26.50	
	08/19/97		13.94	18.86	26.52	

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.

Well Depth

(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-3	03/30/92	32.30	12.96	19.34	_	
	07/01/92	32.30	14.00	18.30		
	09/30/92		15.36	16.94		1
	11/19/92		15.57	16.73	24,45	<u>[</u>]
	02/03/93	ı	11.96	20.34	24.54	Ì
	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	
İ	06/15/94		13.65	18.65	24.78	j
	09/14/94	•	14.54	17.76	24.59	
	12/19/94		13,28	19.02	24.71	i
	12/21/95		13.30	19.00	27,71	
	03/07/95		12.26	20.04	26.03	
	06/08/95		12,42	19.88	26.02	
	09/22/95		13.25	19.05	26.00	
	12/27/95		13.04	19.26	26.00	
	03/26/96		11.62	20.68	26.01	
	06/13/96		12.61	19.69	28.45	
•	09/10/96		13.49	18.81	28.42	
	12/05/96		13.07	19.23	28.42	
	03/10/97		12.23	20.07	28.41	
	06/12/97		12.94	19.36	28.44	
	08/19/97		12.85	19.45	28.45	
MW-4	03/30/92	32.90	13.60	19.30		
	07/01/92	34.70	15.72	17.18	•••	
	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	26.90	
	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	
	12/27/95		13.74	19.16	28.71	
	03/26/96		12.30	20.60	28.70	
	06/13/96		13.18	19.72	27.86	
	09/10/96		14.22	18.68	27.40	
	12/05/96		13.65	19.25	27.40	
	03/10/97		12.79	20.11	27.42	
	06/12/97		13.51	19.39	27.40	
	08/19/97		14.29	18.61	27.40	

NOTES:

Measurement and reference elevation taken from notch/mark on top north side of well casing.

2 Well Depth

= Elevation referenced to mean sea level, pth = Measurement from top of casing to bottom of well.

Not measured.

= Not measured.
 = Well paved over.

(Measu	rements	in feet)
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Monitoring Well	Date	Reference Elevation (top of casing)'	Depth to Ground Water ¹	Ground Water Elevation ²	Well Depth	Comments
MW-5	03/30/92	32.70	13.48	19.22	***	
	07/01/92	32.70	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	
	09/22/93		14.37	18.33	27.64	
	12/21/93		14.58	18.12	27.01	
	03/18/94		13.53	19.17	28.70	
	06/15/94		14.18	18.52	28.74	
	09/14/94		15.07	17.63	28.70	
į	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	
	06/08/95		12.99	19.71	28.87	
	09/22/95		13.83	18.87	28.85	
1	12/27/95		13.59	19.11	28.85	
	03/26/96		12.20	20.50	28.84	
	06/13/96		12.98	19.72	28.84	
	09/10/96		13.96	18.74	28.87	
	12/05/96 03/10/97		13.36 12.74	19.34 19.96	28.87 28.86	
	06/12/97		13.06	19.64	28.83	
	08/19/97	:	14.21	18.49	28.82	
MW-6	Ø3/30/92	30.40	12.62	17.78		
IV1W-0	03/30/92 07/01/92	30.40	12.70	17.76	***	
	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		12.43			*
	10/11/93		12.82	17.58	15.10	
	12/21/93		13.06	17.34	15.10	
	03/18/94		12.16	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	
	09/22/95		12,44	17.96	15.00	
,	12/27/95		12.21	18.19	14.98	
	03/26/96		12.26	18.14	14.97	
	06/13/96		12.55	17.85	14.98	
	09/10/96		12.31	18.09	15.01	
	12/05/96		12.22	18.18	15.00	
	03/10/97		12.19	18.21	15.01	j
	06/12/97		12.28	18.12	14.97	
	08/19/97		12.30	18.10	14.98	

NOTES:

1 = Measurement and reference elevation taken from notch/mark on top north side of well casing.
2 = Elevation referenced to mean sea level.
Well Depth = Measurement from top of casing to bottom of well.

Not measured. Well paved over.

(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	31.20	12.34	18.86		
	07/01/92		15.54	15.66		
	09/30/92		14.64	16.56		
	11/19/92		14.80	16.40	25.10	
	02/03/93		11.36	19.84	25,02	ŀ
	05/25/93					
ŀ	09/22/93		13.18	18.02	25.01	
	12/21/93		13.42	17.78	25.02	
	03/18/94		12.36	18.84	25.13	
	06/15/94		13.01	18.19	25.21	
	09/14/94		13.88	17.32	25.13	
	12/19/94		12.61	18,59	25.23	
	12/21/95		12.38	18.82		
	03/07/95		11.56	19.64	25.22	
	06/08/95		11.82	19.38	25.20	
	09/22/95		12.67	18.53	25.23	
	12/27/95		12.34	18.86	25.23	
	03/26/96		11.03	20.17	25.21	
	06/13/96		11.76	19.44	25.20	
	09/10/96	·	12.71	18.49	24.56	
	12/05/96 03/10/97		12.32	18.88	24.56	
	06/12/97		11.38 12.28	19.82 18.92	24.53	
	08/19/97		12.28	18.28	24.52 24.52	
MW-8	03/30/92	33.80	14.66	19.14		
	07/01/92		15.74	18.06	_	
	09/30/92		17.00	16.80		
	11/19/92		17.01	16.79	29.75	
	02/03/93		13.83	19.97	29.88	
	05/25/93		13.01	20.79	29.86	
	09/22/93		15.81	17.99	24.52	
İ	12/21/93		16.05	17.75	29.86	
	03/18/94		14.62	19.18	29,87	
	06/15/94		15.29	18.51	30.07	
	09/14/94		16.22	17.58	29.87	
	12/19/94		14.81	18.99	30.05	
i	12/21/95		14.89	18.91	20.04	
	03/07/95		13.75	20,05	29.94	
ŀ	06/08/95 09/22/95		13.98	19.82	29.93	
	12/27/95		14.92 14.61	18.88 19.19	29.95 29.92	
	03/26/96		13.09	20.71	29.92 29.73	
	06/13/96		13.81	19.99	27.92	
	09/10/96		14.80	19.00	27.92	
	12/05/96		14.05	19.75	27.96	
	03/10/97		13.40	20.40	27.98	
	06/12/97		14.31	19.49	27.95	
	08/19/97		13.85	19.95	27.94	

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.

Well Depth

Not measured. Well paved over,

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 ⁱ	Ground Water Elevation ²	Well Depth	Comments
MW-9	12/21/95	32.56	13.76	18.80		
	03/07/95		12.79	19.77	24.71	
	06/08/95		12.96	19.60	24.70	
	09/22/95		13.73	18.83	24.72	
	12/27/95		13.53	19.03	24.71	
	03/26/96		12.27	20.29	24.70	
	06/13/96		12.84	19.72	24.53	
	09/10/96		13.49	19.07	24.58	
	12/05/96		13.18	19.38	24.60	
	03/10/97		12.25	20.31	24.66	
	06/12/97		12.70	19.86	24.66	
	08/19/97		17.89	14.67	24,68	

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.

Well Depth

Not measured. Well paved over.

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		A	romatic Volatile C)rganics	
		Gasoline	MTBE'	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-I	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	11	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		081	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	12/27/95	3,900		60	13	480	870
	03/26/96	6,400		42	4.9	560	600
i	06/13/96	9,600	<50	86	39	1,100	1,700
	09/10/96	16,000	<50	65	35	1,500	2,700
	12/05/96	6,400	<25	25	11	570	930
03/10/9	03/10/97	15,000	<50	42	<5.0	1,400	1,500
	06/12/97	16,000	<100	33	34	1,100	1,700
	08/19/97	17,000	<100	47	14	1,300	2,200
MW-2	03/30/92	52,000		2,300	1,700	940	3,300
1	07/01/92	130,000		3,500	2,900	1,900	7,900
i	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	14,000		1,600	790	1,100	3,700
	06/15/94	13,000		1,600	580	1,200	4,100
	09/14/94	20,000		1,600	560	1,800	6,400
	12/19/94	19,000		1,700	750	1,600	5,800
l	03/07/95	17,000		1,900	980	1,300	5,100
l	06/08/95	19,000		2,100	740	1,500	4,900
. [09/22/95	12,000		840	170	1,100	3,400
	12/27/95	16,000		1,100	540	1,400	5,100
ļ	03/26/96	11,000		930	520	970	3,000
1	06/13/96	11,000	1,200	1,800	1,400	1,500	4,500
	09/10/96	19,000	1,100	1,600	600	1,600	5,000
Ī	12/05/96	12,000	180	650	180	1,000	2,800
ł	03/10/97	6,800	69	430	95	590	1,800
- 1	06/12/97	20,000	100	610	140	1,500	4,300
- 1	08/19/97	3,600	<100	250	10	250	250

NOTES:

Below indicated detection limit.

< ND NS

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	MTBE ¹	Benzene	Toluene	Ethyl- benzene	Total Xylenes
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/ 9 4	3,100		22	1.3	78	41
	06/15/94	1,700		8.6	I.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
	09/22/95	1,200		<1.3	<1.3	1.3	<1.3
	12/27/95	1,300		2.4	<1.3	3.3	3.6
	03/26/96	1,200		4.3	<1.3	4.2	2.0
	06/13/96	1,300	28	5.1	<0.50	21	6.5
	09/10/96	810	<5.0	1.4	4.8	1.6	2.1
	12/05/96	590	<5.0	<0.50	3.2	0.79	0.52
	03/10/97	650	<5.0	0.73	3.8	2.4	1.6
	06/12/97	710	<5.0	<0.50	3.5	2.9	3.6
	08/19/97	1,400	13	2.2	0.58	!1	34
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
1	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
ļ	09/22/93	23,000		6,900	940	150	3,000
1	12/21/93	28,000		6,900	1,900	1,100	5,500
Į	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
ļ	06/08/95	61,000		17,000	6,300	2,700	9,000
1	09/22/95	37,000		12,000	2,200	1,400	3,500
ł	12/27/95	39,000		12,000	6,000	1,800	5,800
l	03/26/96	31,000	90	9,600	3,700	2,300	6,200
l	06/13/96	240	89	64	0.93	1.8	2.7
l	09/10/96	91,000	2,900	13,000	20,000	3,200	16,000
ł	12/05/96	16,000	1,200	3,700	3,100	580	2,800
j	03/10/97	630	530	91	<0.50	<0.50	0.80
l	06/12/97 08/19/97	36,000	1,100	4,600	5,300	1,200	5,500
	U8/19/9/	12,000	390	420	88	61	520

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		A	romatic Volatile C	Organics	·
		Gasoline	мтве	Benzene	Toluene	Ethyl- benzene	Total Xylenes
MW-5	03/30/92	29,000		2,600	980	390	1,100
Į	07/01/92	52,000		2,400	1,000	5,200	2,000
	09/30/92	32,000		1,800	780	370	1,700
	11/19/92	7,800		1,000	280	120	370
	02/03/93	74,000		3,500	3,000	780	3,200
	05/25/93	57,000		7,900	4,700	1,900	7,800
	09/22/93	52,000		7,600	2,400	1,200	8,800
	12/21/93	23,000		3,600	1,200	970	3,600
1	03/18/94	47,000		8,200	5,000	1,400	6,100
	06/15/94	28,000		7,900	4,000	1,200	5,200
	09/14/94	32,000		8,000	5,100	1,400	5,600
	12/19/94	29,000		7,000	3,400	1,200	5,200
	03/07/95	36,000		9,800	5,800	1,800	7,800
	06/08/95	33,000		7,700	3,800	1,500	6,200
	09/22/95	39,000		9,500	3,800	1,900	7,000
	12/27/95	42,000		9,700	5,000	2,200	8,800
	03/26/96	37,000		9,800	4,900	2,300	8,800
	06/13/96	18,000	1,400	5,500	2,200	1,500	5,300
	09/10/96	22,000	860	5,600	1,400	1,100	3,500
	12/05/96	24,000	650	5,100	2,500	1,400	4,700
	03/10/97	28,000	760	6,800	2,700	1,300	5,700
	06/12/97	49,000	700	7,500	3,200	2,300	9,200
	08/19/97	24,000	1,600	4,700	990	1,400	4,500
MW-6	03/30/92	73		2.1	1.1	ND	0.6
	07/01/92	ND		ND I	ND	ND	ND
ĺ	09/30/92	ND		0.73	ND	ND	0.58
	11/19/92	96		1.5	<0.5	<0.5	0.9
ŀ	02/03/93	73		0.6	<0.5	<0.5	<0.5
J	05/25/93	NS		NS	NS	NS	NS NS
ļ	10/11/93	<50		<0.5	<0.5	<0.5	<0.5
	12/21/93	<50		<0.5	<0.5	<0.5	<0.5
1	03/18/94	<50		<0.5	<0.5	<0.5	<0.5
l	06/15/94	<50		<0.5	<0.5	<0.5	<0.5
l	09/14/94	<50		<0.5	<0.5	<0.5	<0.5
l	12/19/94	<50		<0.5	<0.5	<0.5	<0.5
ļ	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
	12/27/95	<50		<0.50	< 0.50	<0.50	<0.50
	03/26/96	<50		<0.50	<0.50	<0.50	<0.50
	06/13/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/10/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
į	12/05/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	06/12/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	08/19/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50

NOTES:

Below indicated detection limit.

< ND NS

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 (tic Volatile Organics		
		Gasoline	MTBE'	Benzene	Toluene	Ethyl- benzene	Total Xylenes	
MW-7	03/30/92	ND		ND	ND	ND	ND	
	07/01/92	ND		ND	ND	ND	ND	
	09/30/92	ND		ND	ND	ND	ND	
	11/19/92	<50	İ	<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	
	06/15/94	<50		<0.5	<0.5	<0.5	<0.5	
ĺ	09/14/94	<50	ļ	<0.5	<0.5	<0.5	<0.5	
	12/19/94	<50	ļ	<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	
1	09/22/95	<50		<0.50	<0.50	<0.50	<0.50	
	12/27/95	<50]	< 0.50	< 0.50	< 0.50	<0.50	
ļ	03/26/96	<50		< 0.50	< 0.50	< 0.50	< 0.50	
	06/13/96	<50	<5.0 <5.0	<0.50	< 0.50	<0.50	<0.50	
	09/10/96	<50		<0.50	<0.50	<0.50	<0.50	
	12/05/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
	03/07/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
	06/12/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
	08/19/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50	
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	2,400		490	45	37	140	
	12/21/93	1,400		240	7.5	<2.5	82	
ŀ	03/18/94	8,600		1,600	680	470	1,900	
	06/15/94	4,800		980	380	260	1,200	
	09/14/94	6,600		1,200	280	330	1,100	
ļ	12/19/94	8,400		1,800	390	500	2,000	
[03/07/95	7,400		1,400	370	440	2,000	
1	06/08/95	6,000		790	220	290	1,400	
	09/22/95	4,100		750	93	230	860	
	12/27/95	5,400		860	140	350	1,400	
	03/26/96	1,700		180	27	100	370	
1	06/13/96	2,400	42	500	67	220	850	
	09/10/96 7,000	<50	1,300	100	410	1,600		
	12/05/96	6,300	<50 <50	1,100	78	410	1,600	
- 1	03/07/97	6,500	<130	840	67	330	1,500	
İ	06/12/97	7,500	<50	1,000	79	390	1,400	
- 1	08/19/97	1,100	√30	170	14	38	220	

NOTES:

Below indicated detection limit.

K ND NS

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		Α	romatic Volatile (Organics	
		Gasoline	мтве [,]	Benzene	Toluene	Ethyl- benzene	Total Xylenes
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
	12/27/95	2,800		960	100	200	250
ľ	03/26/96	1,600		380	44	96	110
	06/13/96	1,800	750	540	71	140	180
	09/10/96	2,400	810	860	70	190	210
	12/05/96	5,500	960	2,100	420	380	720
	03/07/97	4,200	720	1,300	170	260	440
	06/12/97	11,000	1,000	2,500	490	560	1,300
	08/19/97	42,000	<1.000	7.700	3 500	2 000	8 300

NOTES:

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Below indicated detection limit.

ND

Reported as "nondetect" by previous consultant.

Not sampled.

= Not sampled

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 for 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)

Project Address:

Beacon #720, 1088 Marina Blvd.

Date: 8-19-97

San Leandro, CA

Project No.: 94-720-01

Recorded by: Hal Hansen

Well	No	Time	Well Elev. TOC		Measured Total Depth	Gr. Water Elevation		Product Thickness	Comments
MW	1	3:44		14,31	17.01				slight odor nosheen
MW	-2	3:99		13,94	20.52				
MW-	3	3:28		12,85	28.45				petroleum odor nosheen slight saco Jon heen
		3:57		14.29	27,40				petroleum odor noshen
		3:54	·	14,21	28,82				petroleum odor nosheer pump in wall under vac petroleum odor nosheer
	i	3:2 Y	,	12,30	14.98				ho odor no sheen
		3:20		12,92	24,52		-		no odor no sheen
		3:48		13.85	27.94				no odor nosheen under vacuum
		3:52		17.89	24,68				pump in vell mother varia
. =									
	İ								
		· - ···						· · · · · · · · · · · · · · · · · · ·	

Notes:

C	lient:_	Ultramar		s	ampling Date:	2/19/97	
	Site:_	Beacon #7	20		Project No.:	94-720-01	
٠	_	1088 Mari	na Bouleva	rd_ We	ll Designation:	MW-	
		San Leand		,			
Is the Is top Is well Height Well con 12" BK	re stan of cas l cap s of wel over ty	ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP	in well bovel? locked? iser (in in in in in in in in in in in in in i	nches): "UV	NO YES	bove TOC Belo If no, see re If no, see re8" BK her	ow TOC emarks emarks
_	g Equip		4" PVC b	ailer	lerSu De <u>/</u> Ce _ Teflon baile	ntrifugal pum	np er np
	" '	"	*		6" 8"		
Initia Time: Depth Depth	l Measu 3:44 of well to wate		Recl Time: S Depth to	harge Meas	1.47 2 surement Calcula 4.36 Act		
	Time	Temp.	E.C.	pH pH	Turbidity	Volume	
	5:09	68,9		7, 4 3		1	
	5:10	69.2	1550	7, 28		2	
	5:10	69.3	1537	7.15		3	
÷	5:11	69.7	1521	7,1(4	
S	ample a	ppearance:	_ ; <u> </u>	۲	Lock:	2/25	·
2" Lo	ent rep ocking (ocking (ocking (Cap: Cap:	eck all th Lock-I Lock-I	at apply)	7/32	Allenhead:9/16 Bolt:	
Rema	rks: _						
		11/1	n ./				

С	lient:_	Ultramar		Sa	ampling Date:_	8/19/97	
	Site:_	Beacon #7	20		Project No.	: 94-720-01	
	<u></u>	1088 Mari	na Bouleva:	rd Wei	ll Designation	:MW	
		San Leand			-		
Is the Is top Is well well control BK Genera Purging Similar Time: Depth of the Is top Is well a series of the Is top Is	re stand of cas local services of well s	ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP tion of we ment: with: Disp Diameter: ltiplier: rement	in well be vel? locked? iser (in in 12 12" CN: llhead asse2" dispos2" PVC be4" PVC be posable bas 2"X 0.16 Rech	ox? nches): "UV	NO YES NO	8" BK ther Ther Ther Ther Submersible pump edicated bailer entrifugal pump er:	TOC rks rks
		4:56	_		s: <u></u> S:0)		
	Time	Temp.		pН	Turbidity	Volume	
	4:58	68,3	1284	7.56		1	
	4:59	68.5	1272	7.51		2	
,	4:59	68.6	1265	7, 48		3	
	5:00	69.0	1251	7, 43		4	
	1,,,,,						
Sa	ample ap	pearance:	clea	<u> </u>	Lock: d	olphia	
2" Lo 4" Lo	ocking (ocking (ocking (laced: (Ch Cap: Cap:	_ Lock	at apply) #3753: Oolphin:	7/3	on of replaced it 2 Allenhead: 9/16 Bolt: nhead (DWP):	
Signati		Hed.	N.				

Client: <u>Ultramar</u>		S	Sampling Date:	8119197
Site: <u>Beacon #</u>	720		Project No.:	94-720-01
<u> 1088 Mar</u>	<u>ina Bouleva</u>	ard We	ell Designation:	MW}
<u>San Lean</u>	dro, CA			,
Is setup of traffic consistence standing water. Is top of casing cut look is well cap sealed and Height of well casing well cover type: 8" Unit of the set	r in well revel? locked? riser (in i	inches):	NO YES A NO YES NO YES 12" EMCO	bove TOC Below TOC If no, see remarks If no, see remarks8" BK
Purging Equipment: Sampled with: Dis	2" dispo 2" PVC b 4" PVC b	eailer eailer	Dec Cer	bmersible pump dicated bailer ntrifugal pump
Well Diameter: Purge Vol. Multiplier: Initial Measurement Time: 3 , 28 Depth of well: 28, 43 Depth to water: 12,85 Start purge: 4.41	0.16 Rec Time: 4 Depth to	0.65 harge Mea :50 water:	1.47 2.	'
Time Temp.	E.C.			T
	1	pH	Turbidity	Volume
4:42 68,5 4:43 68,4	1486	7,26		
4:44 68, 3	1467	7,17		3
4:45 68,6	1451	7,12		4
				4-
Sample appearance:	clea		Lock: Aolp	h. n
Equipment replaced: (Checking Cap: 4" Locking Cap: 6" Locking Cap: Remarks:	_ Lock	at apply) : #3753: Oolphin:	7/32 <u></u>	of replaced item Allenhead: 9/16 Bolt: ead (DWP):
Signature:	N			

(Client: <u>Ultramar</u>				Sampling Date: 8/19/97			
	Site:_	Beacon #7	20		Project	No.:_	94-720-01	
	_	1088 <u>Mari</u>	na Bouleva	<u>rd</u> Wei	ll Designa	ation:_	MW- 4	
		San Leand						
Is the Is top Is well	ere stan o of cas ll cap s c of wel	ding water ing cut le ealed and l casing r	trol devic in well b vel? locked? iser (in in in in in in in in in in in in in i	ox?	NO C	ES Ab ES I:	ime: ove TOC B f no, see f no, see 8" BK_ er Fair l	elow TOC remarks remarks
Purgin	ng Equip	ment: with: Dis	2" dispo 2" PVC ba 4" PVC ba posable ba	sable bail ailer ailer iler:	er کاری Teflon	Subr Ded: X Cent	mersible picated bastrifugal p	oump iler oump
			2"					· · · · · · · · · · · · · · · · · · ·
Initia Time: Depth Depth	1 Measu 3'57 of well to wate	ltiplier: rement : 27, 40 r: 14.19	Rech Time: 6 Depth to	0.65 narge Meas 20 water:	Ca 4.90	lculate Actua	51 gal/fed purge:_	8.3 8.3 8.3
	Time	Temp.	E.C.	Нф	Turbid	ity	Volume]
	6:15	68,2	1189	7,44			\	
	6:17	68.5	1174	7,40			2	
	6:17		1160	7.36			3	
	6:18	68,5	1148	7,31			4	
S	ample ap	ppearance:	<u>clea</u>		Lock:	dolph	in	·
Equipme	ent repl	laced: (Ch	neck all th Lock	: #3753 :	<u>.</u>	7/32 A	of replac	
4" L	ocking (ocking (ocking (Cap:	_ Lock-D	olphin:		9 Allenhe	/16 Bolt: ad (DWP):	

Client: <u>Ultra</u>	ımar	Sa	umpling Date:	3/19/97
Site: <u>Beac</u>	on #720		Project No.:	94-720-01
1088	Marina Bouleva	<u>rd</u> Wel	ll Designation:	
San_I	Leandro, CA			
Is setup of traffic Is there standing will stop of casing curing well cap sealed Height of well cast Well cover type: 8 12" BK 12" DW General condition of Purging Equipment:	vater in well be it level? and locked? ing riser (in ing "UV12" VP 12" CNI of wellhead asse	nches): "UV I	NO YES A NO YES NO YES 12" EMCO COLUMN COLUM	time: hours bove TOC Below TOC If no, see remarks If no, see remarks 8" BK her Fair Poor bmersible pump dicated bailer ntrifugal pump
Sampled with:	Disposable ba	iler:	Teflon bailer	/b/hg r:
Well Diamet	er: 2" <u>X</u>	4"	6" 8"_	
Purge Vol. Multipli Initial Measurement Time: 3:54 Depth of well: 28 Depth to water: 14, Start purge: 6:00	$\begin{array}{c} & \frac{\text{Rech}}{2} \\ & \text{Time:} \\ \hline & \\ & \\ \hline \\ & \\ \hline \\ & \\ \hline & \\ \hline \\ & \\ \hline \\ \hline$	narge Meas :/ <u>()</u> water: <u>/</u>		ted purge: 9,499 ual purge: 9,499
		pling time	: 6: 1/	
Time Tem		рН	Turbidity	Volume
6:01 68		7, 22		
<u> </u>	, 3 1290	7, 17		2
6:03 68,		7.10		3
6:04 68,	1 1269	7,06		4
Sample appeara	nce: clear	<u>-</u>	Lock: <u>hon</u>	<u>e</u>
Equipment replaced: 2" Locking Cap: 4" Locking Cap: 6" Locking Cap: Remarks:	Lock	#3753:	7/32	n of replaced item Allenhead: 9/16 Bolt: head (DWP):
Signature: 9/	u192			

C	Client:_	Ultramar		s	ampling Date:_	8/19/97
	Site:_	Beacon #7	20		Project No.	94-720-01
	-	1088 Mari	na Bouleva	<u>rd</u> We	ll Designation	: <u>mw-</u> 6
		San Leand	ro, CA	 -		
Is the Is top Is well Height Well of 12" BK Genera	ore stand of case of well cover ty	ding water ing cut le ealed and l casing r pe: 8" UV 12" DWP tion of we	in well bevel? locked. locked.	ox? nches): " UV 3 embly: E sable bai ailer ailer	NO YES NO YES NO YES NO YES NO TES 12" EMCO 6" CNI Of xcellent Good ler St Co	Fair Poor blubmersible pump edicated bailer entrifugal pump
S	ampled	with: Dis	posable ba	iler: <u>X</u>	_ Teflon baile	er:
	Well	Diameter:	2" <u>X</u>	4"	6"8"	I <u>.</u>
Initia Time:_ Depth Depth	1 Measu 3`, 2 + of well to wate	1tiplier: rement : 14.98 r: 12.30	Time: <u>4</u> Depth to	narge Mea 36 water:	Calcula 12.39 Act	ted purge: 1.7 aa ual purge: 1.7 aa
ocar c	Time				=: <u>4:39</u>	
		Temp.	E.C.	pH	Turbidity	Volume
		68,6	1059	7.62		. \
	4:15	68,5	1043	7.58		2_
		68,4	1031	7,51		3
•	4:17	68,5	1018	7, 47		4
S	ample ap	opearance:	clea	· ·	Lock:d	olahin
2" Lo 4" Lo	ocking (ocking (ocking (Cap: Cap:	eck all th Lock Lock-D	at apply) #3753: oolphin:	7/32	on of replaced item Allenhead: 9/16 Bolt: head (DWP):
Signatu	ıre: _	I Vat	Non			

C	:lient:_	Ultramar		S	ampling Date:	8119/9	7	
	Site:_	Beacon #7	20		Project No	.: <u>94-720-01</u>		
	_	1088 Mari	na Bouleva	rd We	ll Designation	n:		
_		San Leand			-	***	- .	
Is the Is top Is well well control of the Is well control of the Island Senera Purgin Suppose	Is setup of traffic control devices required? NO YES time: hours Is there standing water in well box? NO YES Above TOC Below TOC Is top of casing cut level? NO YES Above TOC Below TOC Is top of casing cut level? NO YES If no, see remarks Is well cap sealed and locked? NO YES If no, see remarks Height of well casing riser (in inches): Well cover type: 8" UV							
Start	purge:_	4:00	Sam	oling time	e: <u>4:1/</u>		-	
	Time	Temp.	E.C.	рH	Turbidity	Volume		
	4:01	68.6	1226	7,37		1		
	4:02	68,7	1211	7,33		2		
	4:04	6813	1200	7,29		3		
	4:04	68,5	1193	7.26		4		
			·					
Sa	ample ap	pearance:	_cle	ar	Lock: _d	oldhin		
2" Lo 4" Lo	ocking Cocking C	aced: (Ch ap: ap:	Lock	at apply) : #3753: !olphin:	7/3 	ion of replace 2 Allenhead: 9/16 Bolt: nhead (DWP):		
Signatu		ghul of	Yam					

c	Client: <u>Ultramar</u>				ampling Date	:ර	2/19/0	<u></u> ア
	Site:_	Beacon #7:	20		Project N	o.: <u>9</u>	4-720-01	
	_	1088 Mari	na_Bouleva	rd Wei	ll Designati	on:	mw− ₽	
		San Leand			, ,			
				······································			-	
Is the Is top Is well Height	re stand of cas l cap so of well	raffic conding water ing cut level ealed and for the condition of well and the condition of well and the condition of well and the condition of the condition o	in well bovel? locked? iser (in in	ox?	NO YES	Abo If If	me:	elow TOC remarks remarks
	Purging Equipment:2" disposable bailerSubmersible pump 2" PVC bailerDedicated bailer 4" PVC bailerX Centrifugal pump Sampled with: Disposable bailer:X Teflon bailer:							
s	ampled v	with: Disp	oosable ba	iler:	_ Teflon ba	iler:		
	Well i	Diameter:	2"	4"	6"	8"		
Initia Time:_ Depth Depth	Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft. Initial Measurement Time: 3:48 Depth of Well: 7,94 Depth to Water: 13,85 Depth to Water: 13,85							
Start		<u>5:19</u>	Samp	oling time	s: <u>5:31</u>	· T		_
	Time	Temp.	E.C.	Нф	Turbidit	У	Volume	
•	5:10	68.5	1415	7.42				
	5:21	68,4	1403	7, 35			2	
	5:22	68, 4	1387	7,29			3	
	5:24	68.6	1361	7,24			4	
S	ample ap	pearance:	_clea	~	Lock:	20	5(phi.	<u></u>
2" Lo 4" Lo	ocking (aced: (Ch Cap: Cap:	Lock	at apply) :#3753: olphin:	7,	/32 A 9	llenhead: /16 Bolt:	
Remai	rks:	12						
Signati		11/1/10	2/ -					

C	lient:_	Ultramar		Sa	ampling Date	8/19/97	
	Site:_	Beacon #72	20		Project No	o.: <u>94-720-01</u>	
		1088 Mari	na Bouleva	<u>rd</u> We	ll Designatio	on: <u>MW-</u>	
		San Leandi				•	•
Is the Is top Is well to 12" BK Genera Purgin Purge Initia Time: 100 Depth	up of tree stand of casil cap selected of well selected we	raffic containg water ing cut level and it casing rises are selected and it casing rises are selected are sel	trol device in well be vel? locked? iser (in in 12 12" CN llhead asse 2" dispos 2" PVC be 4" PVC be cosable bas 2" 0.16 Recl Time: 5 Depth to	ox? nches): "UV	Teflon ba: 1.47 surement	8" BK_Other Submersible pur Dedicated baile Centrifugal pur	ow TOC emarks emarks or mp er mp
Start	purge:	5:34	Sam	oling time	: 5:59	· · · · · · · · · · · · · · · · · · ·	
	Time	Temp.	E.C.	Hq	Turbidity	y Volume	
	5:39	68,5	1222	7,23		(
•	5:42	68,5	1207	7,11		2	•
	5:46	68,4	1189	7.04	· · · · · · · · · · · · · · · · · · ·	3	
	5:50	6813	1164	6,92		4-	
S	ample ap	pearance:	dea	<u>~</u>	Lock:	none	
2" L 4" L	ocking C ocking C ocking C	aced: (Ch cap: cap: pvmpin	Lock-I	at apply) c #3753: Dolphin:	7,	tion of replaced 32 Allenhead: 9/16 Bolt:_ enhead (DWP):	
	<u></u>	Al. A	NV				

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 o	f 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 of	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 o	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

	Depth to Groundwater	Groundwater Elevation
Date Sampled	(Feet)	(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:	New Elevation o	f Top of Casing = 32.90 feet
December 24, 1991	17.10	15.80
March 30, 1992	13.60	19.30
Groundwater Monitoring Well MW-5:	Elevation o	f 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 o	f 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 o	f 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 o	f 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)
- Groundwater Technology, Inc., made measurements until February 1989

 Du Pont Environmental Services collected samples from February 1989 through February 1991 4)
- 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 No.	Date Sampled	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (μg/L)	TPH-G (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	3,500	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	5 9	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	
1	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)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	TPH-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
	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	ИD	ND	ΝО	ND	79	
	Mar. 30, 1992	2.1	1.1	ND	0.6	73	
MW-7	Dec. 24, 1991	ND	ОИ	ND	ND	ND	·
	Mar. 30, 1992	DN	ND	ND	ND	ND	
8-WM	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
- Odor refers to petroleum hydrocarbon odor
- All results are presented in parts per billion
- Groundwater Technology, Inc., collected samples prior to February 1989

 Du Pont Environmental Services collected samples from February 1989 through February 1991
- Environmental Geotechnical Consultants, Inc. collected samples beginning in May 1991
- ND = Non Detect
- See analytical results for detection limits (Appendix B)

ATTACHMENT E

LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM



Date: 08/28/97

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

Subject: Analysis of 9 Water Samples

Project Name: Beacon 720 Project Number: 94-720-01

Dear Mr. van Dam,

Chemical analysis of the samples referenced above has been completed. Summaries of the data are contained on the following pages. Sample(s) were received under documented chain-of-custody. US EPA protocols for sample storage and preservation were followed.

Kiff Analytical is certified by the State of California (# 2236). If you have any questions regarding procedures or results, please call me at 916-297-4800.

Sincerely,



Date: 08/28/97

Subject :

9 Water Samples

Project Name : Project Number : Beacon 720 94-720-01

Case Narrative

The reporting limit for Methyl-tert-butyl ether for samples MW-2, MW-8, and MW-9 is increased due to the presence of interfering compounds. GC/MS analysis is recommended if increased sensitivity is required.

Approved By:



Date: 08/28/97

Project Name : Beacon 720 Project Number: 94-720-01

Sample: MW-1

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	47	10	ug/L	EPA 8020	08/27/97
Toluene	14	10	ug/L	EPA 8020	08/27/97
Ethylbenzene	1300	10	ug/L	EPA 8020	08/27/97
Total Xylenes	2200	10	ug/L	EPA 8020	08/27/97
Methyl-t-butyl ether	< 100	100	ug/L	EPA 8020	08/27/97
TPH as Gasoline	17000	1000	ug/L	M EPA 8015	08/27/97
aaa-Trifluorotoluene (8020 Surrogate)	95.8		% Recovery	EPA 8020	08/27/97
aaa-Trifluorotoluene (Gasoline Surrogate)	101		% Recovery	M EPA 8015	08/27/97

Sample: MW-2

Matrix: Water

Sample Date :08/19/97

Sample Date .00/19/9/		Method			
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	250	5.0	ug/L	EPA 8020	08/27/97
Toluene	10	5.0	ug/L	EPA 8020	08/27/97
Ethylbenzene	250	5.0	ug/L	EPA 8020	08/27/97
Total Xylenes	250	5.0	ug/L	EPA 8020	08/27/97
Methyl-t-butyl ether	< 100	100	ug/L	EPA 8020	08/27/97
TPH as Gasoline	3600	500	ug/L	M EPA 8015	08/27/97
aaa-Trifluorotoluene (8020 Surrogate)	98.6		% Recovery	EPA 8020	08/27/97
aaa-Trifluorotoluene (Gasoline Surrogate)	98.0		% Recovery	M EPA 8015	08/27/97

Approved By: Joel Kiff



Date: 08/28/97

Project Name :

Beacon 720

Project Number: 94-720-01

Sample: MW-3

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	2.2	0.50	ug/L	EPA 8020	08/23/97
Toluene	0.58	0.50	ug/L	EPA 8020	08/23/97
Ethylbenzene	11	0.50	ug/L	EPA 8020	08/23/97
Total Xylenes	34	0.50	ug/L	EPA 8020	08/23/97
Methyl-t-butyl ether	13	5.0	ug/L	EPA 8020	08/23/97
TPH as Gasoline	1400	50	ug/L	M EPA 8015	08/23/97
aaa-Trifluorotoluene (8020 Surrogate)	100		% Recovery	EPA 8020	08/23/97
aaa-Trifluorotoluene (Gasoline Surrogate)	108		% Recovery	M EPA 8015	08/23/97

Sample: MW-4

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	420	10	ug/L	EPA 8020	08/27/97
Toluene	88	10	ug/L	EPA 8020	08/27/97
Ethylbenzene	61	10	ug/L	EPA 8020	08/27/97
Total Xylenes	520	10	ug/L	EPA 8020	08/27/97
Methyl-t-butyl ether	390	100	ug/L	EPA 8020	08/27/97
TPH as Gasoline	12000	1000	ug/L	M EPA 8015	08/27/97
aaa-Trifluorotoluene (8020 Surrogate)	103		% Recovery	EPA 8020	08/27/97
aaa-Trifluorotoluene (Gasoline Surrogate)	92.5		% Recovery	M EPA 8015	08/27/97

Approved By: Joel Kiff



Date: 08/28/97

Project Name : Beacon 720
Project Number : 94-720-01

Sample: MW-5

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	4700	25	ug/L	EPA 8020	08/27/97
Toluene	990	25	ug/L	EPA 8020	08/27/97
Ethylbenzene	1400	25	ug/L	EPA 8020	08/27/97
Total Xylenes	4500	25	ug/L	EPA 8020	08/27/97
Methyl-t-butyl ether	1600	250	ug/L	EPA 8020	08/27/97
TPH as Gasoline	24000	2500	ug/L	M EPA 8015	08/27/97
aaa-Trifluorotoluene (8020 Surrogate)	97.2	•	% Recovery	EPA 8020	08/27/97
aaa-Trifluorotoluene (Gasoline Surrogate)	93.3		% Recovery	M EPA 8015	08/27/97

Sample: MW-6

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8020	08/23/97
Toluene	< 0.50	0.50	ug/L	EPA 8020	08/23/97
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	08/23/97
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	08/23/97
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	08/23/97
TPH as Gasoline	< 50	50	ug/L	M EPA 8015	08/23/97
aaa-Trifluorotoluene (8020 Surrogate)	103		% Recovery	EPA 8020	08/23/97
aaa-Trifluorotoluene (Gasoline Surrogate)	92.7		% Recovery	M EPA 8015	08/23/97

Approved By: Joel Kiff



Date: 08/28/97

Project Name: Beacon 720

Project Number: 94-720-01

Sample: MW-7

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene < 0.50		0.50	ug/L	EPA 8020	08/23/97	
Toluene	< 0.50	0.50	ug/L	EPA 8020	08/23/97	
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	08/23/97	
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	08/23/97	
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	08/23/97	
TPH as Gasoline	< 50	50	ug/L	M EPA 8015	08/23/97	
aaa-Trifluorotoluene (8020 Surrogate)	102		% Recovery	EPA 8020	08/23/97	
aaa-Trifluorotoluene (Gasoline Surrogate)	92.7		% Recovery	M EPA 8015	08/23/97	

Sample: MW-8

Matrix: Water

Sample Date :08/19/97

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	170	1.0	ug/L	EPA 8020	08/27/97
Toluene	14	1.0	ug/L	EPA 8020	08/27/97
Ethylbenzene	38	1.0	ug/L	EPA 8020	08/27/97
Total Xylenes	220 1.0		ug/L	EPA 8020	08/27/97
Methyl-t-butyl ether	< 20	20	ug/L	EPA 8020	08/27/97
TPH as Gasoline	1100	100	ug/L	M EPA 8015	08/27/97
aaa-Trifluorotoluene (8020 Surrogate)	98.2		% Recovery	EPA 8020	08/27/97
aaa-Trifluorotoluene (Gasoline Surrogate)	95.9		% Recovery	M EPA 8015	08/27/97

Approved By: Joel Kiff



Date: 08/28/97

Project Name: Beacon 720 Project Number: 94-720-01

Sample: MW-9

Matrix: Water

Sample Date :08/19/97

Parameter	Method Measured Reporti Value Limit		Units	Analysis Method	Date Analyzed	
Benzene	7700	50	ug/L	EPA 8020	08/27/97	
Toluene	3500	50	ug/L	EPA 8020	08/27/97	
Ethylbenzene	2000	50	ug/L	EPA 8020	08/27/97	
Total Xylenes	8300	50	ug/L	EPA 8020	08/27/97	
Methyl-t-butyl ether	< 1000	1000	ug/L	EPA 8020	08/27/97	
TPH as Gasoline	42000	5000	ug/L	M EPA 8015	08/27/97	
aaa-Trifluorotoluene (8020 Surrogate)	103		% Recovery	EPA 8020	08/27/97	
aaa-Trifluorotoluene (Gasoline Surrogate)	96.6		% Recovery	M EPA 8015	08/27/97	

Approved By: Joel Kiff



Ultramar Inc.CHAIN OF CUSTODY REPORT

10379

BEACON

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Litramar Inc.CHAIN OF CUSTODY REPORT

10379

BEACON

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