El Dorado Environmental, Inc.

2221 Goldorado Trail, El Dorado, California 95623

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

August 26, 1999

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

Subject:

Second Quarter 1999 Ground Water Monitoring Report

Beacon Station #604

1619 West First Street, Livermore, California

Dear Mr. Fox:

El Dorado Environmental, Inc. (EDE) has prepared this report to document the results of quarterly ground water monitoring conducted on June 10, 1999, at the subject site (Figure 1). Field work, conducted by Doulos Environmental (Doulos), included measurements of depth to ground water, subjective analysis of ground water in wells for the presence or absence of free petroleum product and collection of ground water samples. Doulos reports that all field activities were conducted in accordance with field procedures described in Attachment A.

GROUND WATER ELEVATIONS

Prior to well sampling, Doulos measured the depth to ground water in each well at the site. Ground water elevation data collected at the site since June 1993 are compiled in Table 1. Copies of Doulos' field data sheets are contained in Attachment B. Current depth to ground water measurements indicate a direction of ground water flow toward the west-northwest (Figure 2) at a gradient of approximately 0.02 foot per foot. Ground water elevations beneath the site have increased an average of 0.80 feet since the previous monitoring event.

GROUND WATER SAMPLING AND ANALYSIS

Ground water samples were collected from five monitoring wells at the site. Each sample collected was analyzed for concentrations of dissolved:

- Benzene, toluene, ethylbenzene, and total xylenes (BTEX), by EPA Method 602
- Total petroleum hydrocarbons as gasoline (TPHg), by modified EPA Method 8015
- Methyl-tertiary-butyl ether (MTBE) by EPA Method 602

Analytical results since June 1993 are compiled in Table 2; copies of certified analytical reports for ground water samples collected during the current monitoring event are contained in Attachment C. Benzene was not present at detectable concentrations in the ground water samples collected from monitoring wells MW-1 and MW-5. Dissolved benzene concentrations decreased in the ground water samples collected from monitoring wells MW-6 and MW-7; and increased in the ground water sample collected from monitoring well MW-2 compared to the most recent sampling event. Figure 3 illustrates the current interpreted distribution of dissolved benzene in ground water underlying the site.

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

Ms. Eva Chu Department of Environmental Health Alameda County Health Care Services 80 Swan Way, Room 20 Oakland, California 94612

Mr. Cecil Fox
California Regional Water Quality Control
Board, San Francisco Bay Region
2101 Webster Street, Room 500
Oakland, California 94612

The interpretations and/or conclusions contained in this report represent our professional opinions. These opinions are based on currently available information. Other than this, no warranty is implied nor intended. This report has been prepared solely for the use of Ultramar Inc. Any reliance upon or use of this report by third parties will be at such parties' sole risk.

If you have any comments or questions, please contact the undersigned at (530) 626-3898.

Regards,

EL DORADO ENVIRONMENTAL, INC.

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Dale A. van Dam, R.G.

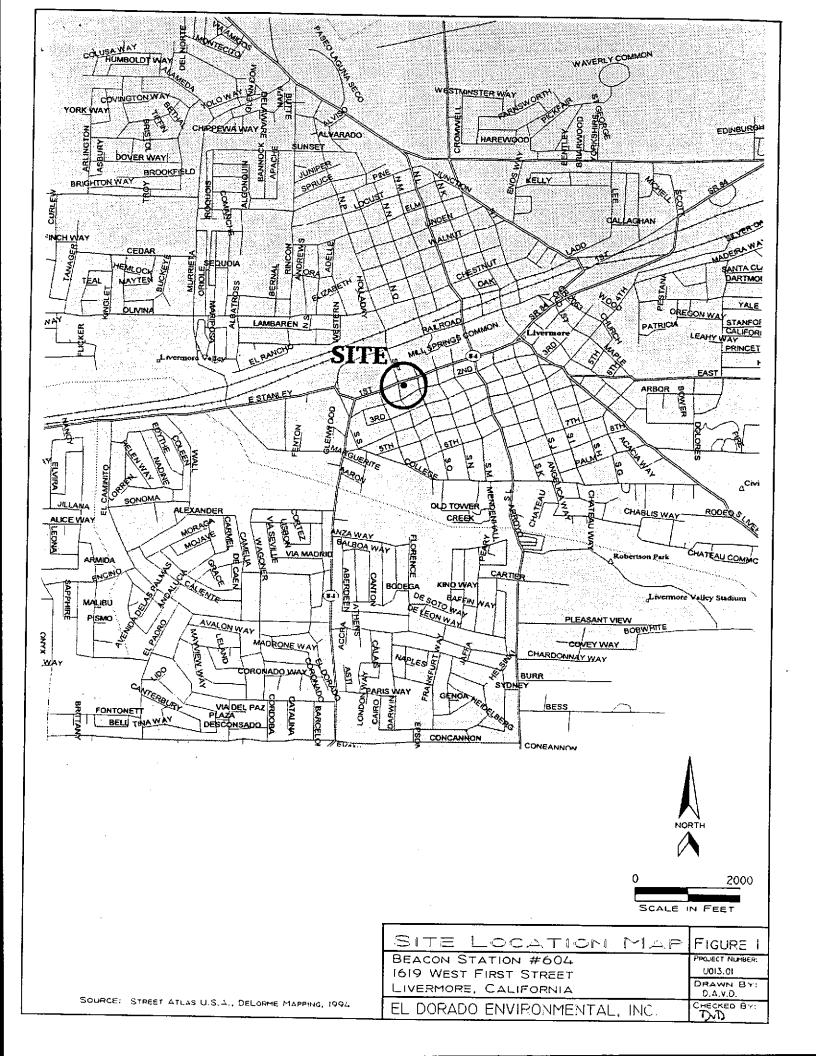
Hydrogeologist

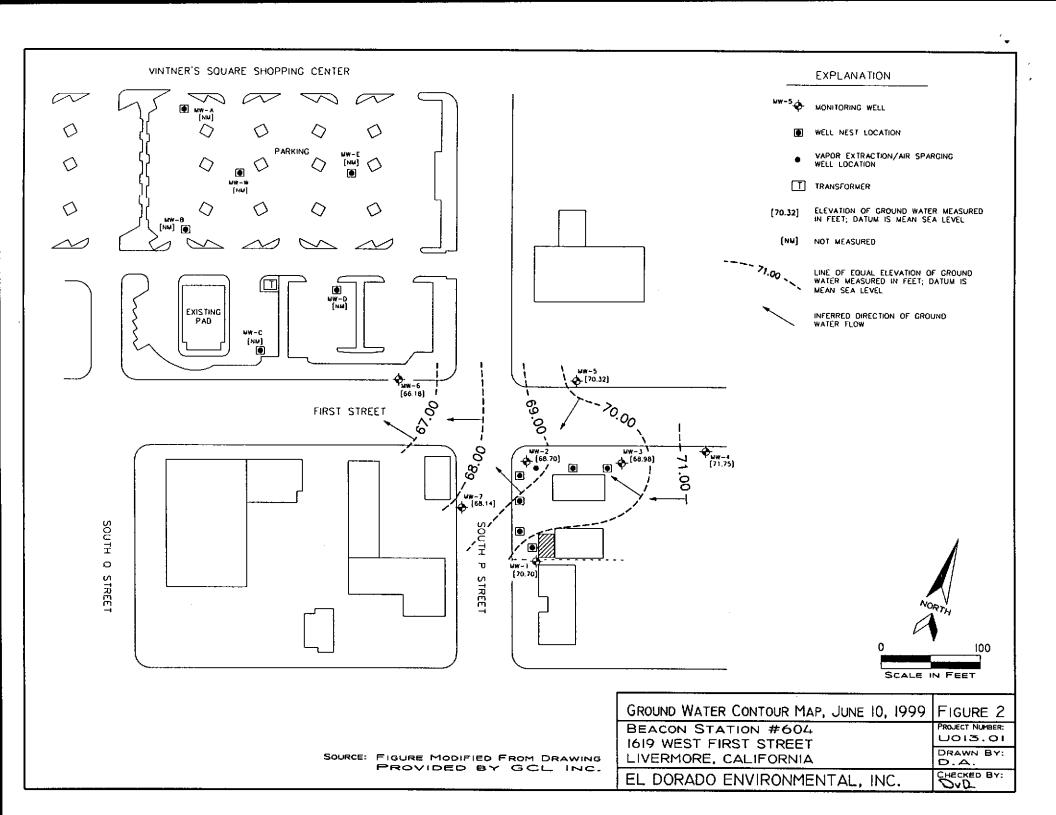
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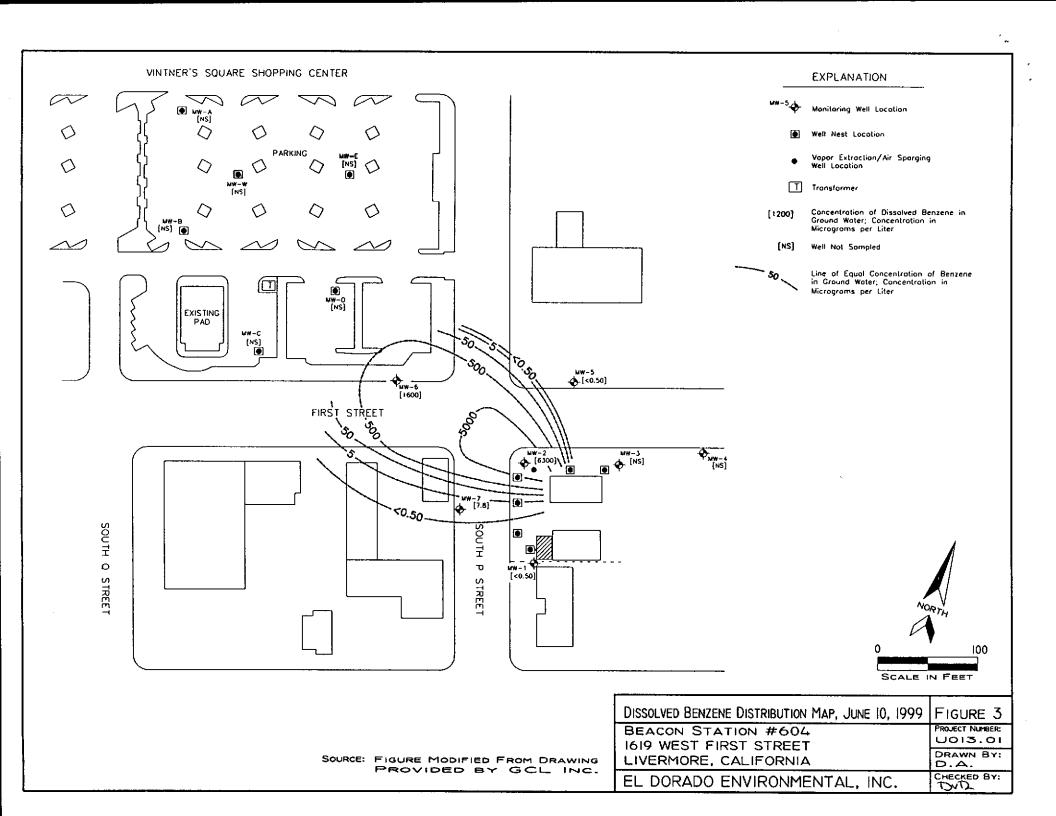
Attachments



FIGURES:	FIGURE 1 SITE LOCATION MAP
	FIGURE 2 GROUND WATER CONTOUR MAP JUNE 10, 1999
	FIGURE 3 DISSOLVED BENZENE DISTRIBUTION MAP JUNE 10, 1999
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 LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM







[T					
		Depth to				
		Top/Bottom of		İ	Ground Water	
Monitoring	Top of Riser	Screened Interval	Monitoring	Depth to Water	Elevation	Physical
Well	(feet)	(feet)	Date	(feet)	(feet)	Observation
						"
MW-1	100.00	34/54	06/01/93	37.50	62.50	No Product
			06/22/93	38.46	61.54	No Product
			10/06/93	42.22	57.78	No Product
			01/13/94	34.52	65.48	No Product
			03/30/94	31.93	68.07	No Product
			04/25/94	33.49	66.51	No Product
			08/12/94	41.03	58.97	No Product
	ļ		12/14/94	38.63	61.37	No Product
			02/10/95	30.80	69.20	No Product
			06/15/95	25.46	74.54	No Product
			09/26/95	31.05	68.95	No Product
			12/15/95	28.11	71.89	No Product
			03/21/96	17.67	82.33	No Product
			06/13/96	22.86	77.14	No Product
			09/16/96	30.04	69.96	No Product
			12/02/96	26.74	73.26	No Product
			03/07/97	20.84	79.16	No Product
			06/12/97	28.71	71.29	No Product
	1		09/29/97	33.91	66.09	No Product
			12/01/97	34.88	65.12	No Product
			03/19/98	19.83	80.17	No Product
			05/29/98	21.57	78.43	No Product
			09/15/98	31.68	68.32	No Product
			11/30/98	36.80	63.20	No Product
			01/17/99	30.02	69.98	No Product
			06/10/99	29.30	70.70	No Product
			VUI 1VI 33	29.30	70.70	NO Froduct

Monitoring Well	Top of Riser (feet)	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water (feet)	Ground Water Elevation (feet)	Physical Observation
MW-2	98.68	34/54	06/01/93 06/22/93 10/06/93 01/13/94 03/30/94 04/25/94 08/12/94 12/14/94 02/10/95 06/15/95 09/26/95 12/15/95 03/21/96 06/13/96 09/16/96 12/02/96 03/07/97 06/12/97 09/29/97 12/01/97 03/19/98 05/29/98 09/15/98 11/30/98 01/17/99	38.02 39.07 43.72 35.85 32.82 34.76 44.33 40.00 32.16 25.93 32.42 29.41 17.47 23.69 31.24 26.90 21.33 29.94 34.22 35.94 20.34 22.63 32.30 36.90 30.17	60.66 59.61 54.96 62.83 65.86 63.92 54.35 58.68 66.52 72.75 66.26 69.27 81.21 74.99 67.44 71.78 77.35 68.74 64.46 62.74 78.34 76.05 66.38 61.78 68.51	No Product
			06/10/99	29.98	68.70	No Product

Monitoring Top of Riser Well (feet)	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water (feet)	Ground Water Elevation (feet)	Physical Observation
MW-3 97.08	33/53	06/01/93 06/22/93 10/06/93 01/13/94 03/30/94 04/25/94 08/12/94 12/14/94 02/10/95 06/15/95 09/26/95 12/15/95 03/21/96 06/13/96 09/16/96 12/02/96 03/07/97 06/12/97 09/29/97 12/01/97 03/19/98 05/29/98 01/17/99 06/10/99	36.18 37.11 41.15 33.95 30.97 32.46 41.72 37.62 29.96 23.66 29.62 27.10 15.85 21.31 28.62 25.55 19.77 27.67 29.60 33.37 18.76 20.64 30.70 34.96 28.81 28.10	60.90 59.97 55.93 63.13 66.11 64.62 55.36 59.46 67.12 73.42 67.46 69.98 81.23 75.77 68.46 71.53 77.31 69.41 67.48 63.71 78.32 76.44 66.38 62.12 68.27 68.98	No Product

Monitoring Well	Top of Riser	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water (feet)	Ground Water Elevation (feet)	Physical Observation
MW-4	99.35	27/47	03/30/94 04/25/94 08/12/94 12/14/94 02/10/95 06/15/95 09/26/95 12/15/95 03/21/96 06/13/96 09/16/96 12/02/96 03/07/97 06/12/97 09/29/97 12/01/97 03/19/98 05/29/98 09/15/98 11/30/98 01/17/99 06/10/99	31.56 32.73 41.61 38.11 30.50 23.63 29.70 27.56 15.63 21.07 28.99 26.04 19.69 28.04 29.91 33.88 18.67 20.16 30.46 34.50 28.30 27.60	67.79 66.62 57.74 61.24 68.85 75.72 69.65 71.79 83.72 78.28 70.36 73.31 79.66 71.31 69.44 65.47 80.68 79.19 68.89 64.85 71.05 71.75	No Product

Monitoring Well	Top of Riser (feet)	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water (feet)	Ground Water Elevation (feet)	Physical Observation
MW-5	98.37	27/47	03/30/94 04/25/94 08/12/94 12/14/94 02/10/95 06/15/95 09/26/95 12/15/95 03/21/96 06/13/96 09/16/96 12/02/96 03/07/97 09/29/97 12/01/97 03/19/98 05/29/98 09/15/98 11/30/98 01/17/99 06/10/99	32.07 33.65 42.73 38.89 31.44 24.99 30.20 28.56 16.82 22.61 29.78 26.51 21.91 31.74 34.05 20.93 21.30 31.32 35.44 29.59 28.05	66.30 64.72 55.64 59.48 66.93 73.38 68.17 69.81 81.55 75.76 68.59 71.86 76.46 66.63 64.32 77.44 77.07 67.05 62.93 68.78 70.32	No Product

Monitoring Well	Top of Riser (feet)	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water (feet)	Ground Water Elevation (feet)	Physical Observation
MW-6	97.62	28/48	03/30/94 04/25/94 08/12/94 12/14/94 02/10/95 06/15/95 09/26/95 12/15/95 03/21/96 06/13/96 09/16/96 12/02/96 03/07/97 06/12/97 09/29/97 12/01/97 03/19/98 05/29/98 09/15/98 11/30/98 01/17/99 06/10/99	33.38 35.49 45.14 40.99 33.34 26.88 33.55 30.32 18.89 24.62 32.64 27.42 22.13 31.02 35.77 37.14 21.10 23.26 33.50 38.73 32.05 31.44	64.24 62.13 52.48 56.63 64.28 70.74 64.07 67.30 78.73 73.00 64.98 70.20 75.49 66.60 61.85 60.48 76.52 74.36 64.12 58.89 65.57 66.18	No Product

Beacon Station #604 1619 West First Street, Livermore, California

Monitoring Well	Top of Riser (feet)	Depth to Top/Bottom of Screened Interval (feet)	Monitoring Date	Depth to Water	Ground Water Elevation (feet)	Physical Observation
MW-7	98.03	27/47	03/30/94	31.98	66.05	No Product
• • • • • • • • • • • • • • • • • • • •		2., .,	04/25/94	33.56	64.47	No Product
			08/12/94	43.35	54.68	No Product
			12/14/94	39.34	58.69	No Product
			02/10/95	32.11	65.92	No Product
			06/15/95	25.51	72.52	No Product
	İ		09/26/95	31.43	66.60	No Product
			12/15/95	28.97	69.06	No Product
			03/21/96	17.36	80.67	No Product
			06/13/96	23.47	74.56	No Product
			09/16/96	31.35	66.68	No Product
			12/02/96	27.11	70.92	No Product
			03/07/97	21.33	76.70	No Product
			06/12/97	29.90	68.13	No Product
			09/29/97	34.37	63.66	No Product
			12/01/97	36.46	61.57	No Product
			03/19/98	20.33	77.70	No Product
			05/29/98	22.30	75.73	No Product
	}		09/15/98	32.54	65.49	No Product
	İ		11/30/98	37.96	60.07	No Product
			01/17/99	31.04	66.99	No Product
			06/10/99	29.89	68.14	No Product
MW-A	?	?	01/17/99	30.13	? ?	No Product
			06/10/99	NM		
MW-B	?	?	01/17/99	30.29	?	No Product
			06/10/99	NM		
MW-C	?	?	01/17/99	30.6	?	No Product
			06/10/99	NM		
MW-D	?	?	01/17/99	31.32	?	No Product
			06/10/99	NM		
MW-E	?	?	01/17/99	31.36	?	No Product
			06/10/99	NM		
MW-W	?	?	01/17/99	30.91	?	No Product
			06/10/99	NM		

Note: Monitoring well casing elevations were surveyed relative to an arbitrary bench mark at the top of the casing of monitoring well MW-1 with an assumed elevation of 100.00 feet.

NM = Well Not Measured on This Date.

^{? =} Not known; Not Surveyed.

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-1	06/01/93		2200	400	<50	4900	27000
	06/22/93		8000	10000	260	10000	87000
	10/06/93		4700	6500	740	5300	40000
	01/13/94		1300	950	110	850	9400
1	04/25/94		1500	1800	290	1700	11000
	08/12/94		550	330	260	1400	11000
ĺ	12/14/94		1000	1200	320	1500	11000
	02/10/95		1200	1500	280	1500	9300
	06/15/95		5.6	< 0.50	< 0.50	< 0.50	140
	09/26/95		140	< 0.50	< 0.50	43	410
	12/15/95		250	< 1.3	<1.3	87	740
	03/21/96		0.52	< 0.50	< 0.50	0.51	< 50
ĺ	06/13/96	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	240*
	09/16/96	< 5.0	70	< 0.50	1.0	5.1	720
}	12/02/96	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
ļ	03/07/97	< 5.0	6.7	< 0.50	1.2	1.8	600
	06/12/97	< 50	180	800	410	1800	18000
	09/29/97	< 5.0	120	1.5	< 0.50	12	350
	12/01/97	< 5.0	7.0	< 0.50	< 0.50	< 0.50	< 50
	03/19/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	05/29/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	09/15/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	11/30/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	01/17/99	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	06/10/99	<5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-2	06/01/93		20000	21000	3300	18000	170000
	06/22/93		19000	22000	3500	18000	160000
ŀ	10/06/93		17000	17000	3000	15000	110000
	01/13/94		20000	19000	2300	14000	93000
	04/25/94		9600	7300	840	7800	41000
	08/12/94		11000	11000	2300	11000	59000
	12/14/94] [13000	13000	2200	12000	63000
	02/10/95	i	12000	12000	2200	11000	63000
i	06/15/95	1	11000	12000	1900	11000	61000
	09/26/95	!	9400	11000	2300	12000	61000
	12/15/95	1	8000	8300	2200	12000	48000
1	03/21/96	1 1	8000	7700	2400	12000	48000
	06/13/96	<250	7300	8800	1900	12000	33000
	09/16/96	<250	510	640	180	1300	8600
	12/02/96	< 130	4400	4000	1300	6100	29000
į	03/07/97	<250	1800	1100	270	2000	13000
F	06/12/97	< 500	7800	6600	2300	11000	68000
	09/29/97	<250	1500	97	740	1800	15000
ļ	12/01/97	< 250	900	37	860	2400	13000
İ	03/19/98	<250	5000	3600	2000	8300	42000
	05/29/98	< 250	5600	4700	2400	11000	68000
ļ	09/15/98	< 250	3900	1200	1400	7800	36000
	11/30/98	< 250	2200	59	1200	1500	16000
	01/17/99	<250	4000	2200	2100	9500	30000
	06/10/99	< 500	6300	1800	3600	14000	70000

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-3	06/01/93		4.6	< 0.50	< 0.50	1.9	270
	06/22/93		8.2	< 0.50	< 0.50	0.72	160
	10/06/93		57	110	24	120	740
	01/13/94		2.6	0.67	0.78	4.2	83
	04/25/94		0.75	3.2	0.50	3.6	60
	08/12/94		7.3	14	2.6	13	310
İ	12/14/94		< 0.50	< 0.50	< 0.50	< 0.50	75
	02/10/95		1.4	< 0.50	< 0.50	1.8	96
	06/15/95		< 0.50	< 0.50	< 0.50	< 0.50	< 50
]	09/26/95		< 0.50	< 0.50	< 0.50	< 0.50	< 50
1	12/15/95		< 0.50	< 0.50	< 0.50	< 0.50	< 50
ĺ	03/21/96	Ī	NS	NS	NS	NS	NS
İ	06/13/96	NS	NS	NS	NS	NS	NS
	09/16/96	NS	NS	NS	NS	NS	NS
	12/02/96	NS	NS	NS	NS	NS	NS
	03/07/97	NS	NS	NS	NS	NS	NS
ŀ	06/12/97	NS	NS	NS	NS	NS	NS
	09/29/97	NS .	NS	NS	NS	NS	NS
	12/01/97	NS	NS	NS	NS	NS	NS
	03/19/98	NS	NS	NS	NS	NS	NS
	05/29/98	NS	NS	NS	NS	NS	NS
	09/15/98	NS	NS	NS	NS	NS	NS
	11/30/98	NS	NS	NS	NS	NS	NS
	01/1 7 /99	NS	NS	NS	NS	NS	NS
	06/10/99	NS	NS	NS	NS	NS	NS

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-4	03/30/94 04/25/94		4.2	15	2.5	26 2.1	120
	08/12/94		< 0.50 < 0.50	1.8 <0.50	<0.50 <0.50	< 0.50	65 < 5 0
	12/14/94		< 0.50	<0.50	< 0.50	< 0.50	< 50 < 50
	02/10/95	1	< 0.50	<0.50	< 0.50	< 0.50	<50 <50
	06/15/95		< 0.50	< 0.50	< 0.50	< 0.50	<50
]	09/26/95		< 0.50	< 0.50	< 0.50	< 0.50	< 50
	12/15/95		< 0.50	< 0.50	< 0.50	< 0.50	< 50
	03/21/96		NS	NS	NS	NS	NS
	06/13/96	NS	NS	NS	NS	NS	NS
	09/16/96	NS	NS	NS	NS	NS	NS
	12/02/96	NS	NS	NS	NS	NS	NS
	03/07/97	NS	NS	NS	NS	NS	NS
	06/12/97	NS	NS	NS	NS	NS	NS
	09/29/97	NS	NS	NS	NS	NS	NS
	12/01/97	NS	NS	NS	NS	NS	NS
	03/19/98	NS	NS	NS	NS	NS	NS
	05/29/98	NS	NS	NS	NS	NS	NS
[09/15/98	NS	NS	NS	NS	NS	NS
	11/30/98	NS	NS	NS	NS	NS	NS
	01/17/99	NS	NS	NS	NS	NS	NS
	06/10/99	NS	NS	NS	NS	NS	NS

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-5	03/30/94		1300	20	< 13	160	7500
	04/25/94		1100	41	130	740	6500
	08/12/94		420	2.9	41	98	4000
1	12/14/94		660	<2.5	33	13	4800
	02/10/95		490	< 13	23	19	5200
	06/15/95		< 0.50	< 0.50	< 0.50	< 0.50	460
	09/26/95		61	< 0.50	3.1	< 0.50	1400
	12/15/95		77	1.5	10	1.5	2100
	03/21/96		35	2.0	2.0	18.00	930
	06/13/96	< 5.0	38	0.72	1.9	2.0	610
	09/16/96	< 5.0	29	< 0.50	0.95	< 0.50	380
	12/02/96	< 5.0	1.1	0.64	< 0.50	< 0.50	200
	03/07/97	< 5.0	74	< 0.50	0.58	1.50	520
i	06/12/97	< 5.0	5.3	< 0.50	< 0.50	< 0.50	140
	09/29/97	<5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	12/01/97	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	03/19/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	< 50
	05/29/98	< 5.0	4.1	< 0.50	< 0.50	0.52	540
	09/15/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	67
	11/30/98	< 5.0	< 0.50	< 0.50	< 0.50	< 0.50	430
	01/17/99	<5.0	< 0.50	< 0.50	< 0.50	< 0.50	500
	06/10/99	<5.0	< 0.50	< 0.50	<0.50	< 0.50	66

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-6	03/30/94		21000	8600	1700	12000	63000
	04/25/94		22000	12000	2300	16000	77000
	08/12/94		12000	8100	2200	16000	65000
	12/14/94		18000	9500	2200	14000	65000
	02/10/95		21000	8400	2000	14000	63000
1	06/15/95		20000	11000	2100	15000	75000
	09/26/95		15000	9600	1700	12000	62000
	12/15/95		15000	9000	2300	15000	61000
	03/21/96		18000	9800	2400	16000	65000
	06/13/96	<250	8600	3300	2200	12000	29000
ĺ	09/16/96	< 250	6400	1800	2100	11000	42000
	12/02/96	< 500	3000	1100	970	8300	28000
	03/07/97	< 250	2000	190	520	2300	12000
	06/12/97	< 100	3900	470	1600	6200	37000
	09/29/97	< 100	3500	370	1600	5200	34000
	12/01/97	< 100	2100	< 10	1200	2200	20000
1	03/19/98	< 100	2900	460	1100	3400	24000
	05/29/98	< 100	3500	700	1800	5200	38000
	09/15/98	< 100	1900	110	1400	3000	22000
	11/30/98	< 100	770	16	820	710	9900
	01/17/99	< 100	2200	160	1700	3600	14000
	06/10/99	5.5	1600	160	1400	2900	22000

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-7	03/30/94		7200	2400	1600	11000	43000
1	04/25/94		3900	1000	940	6900	30000
Ī	08/12/94		3800	1400	1300	7500	30000
	12/14/94		3600	1200	900	6400	31000
	02/10/95		4000	900	890	5100	27000
	06/15/95		920	680	740	4100	17000
 	09/26/95		200	150	170	810	7000
	12/15/95		350	170	540	1900	11000
	03/21/96		320	100	730	2500	12000
1	06/13/96	< 50	98	19	370	620	5900
	09/16/96	<25	140	43	440	590	7800
	12/02/96	< 50	87	29	290	430	6300
	03/07/97	< 25	35	19	360	470	4500
	06/12/97	< 5.0	29	5.2	170	48	3900
	09/29/97	<25	56	9	340	190	6100
	12/01/97	<25	24	< 2.5	400	250	6500
	03/19/98	<25	20	< 2.5	73	79	2000
I	05/29/98	<25	22	7.3	290	350	5700
ŀ	09/15/98	< 25	15	< 2.5	44	5.1	1700
ĺ	11/30/98	<25	42	12	270	640	4800
	01/17/99	< 50	33	< 5.0	200	190	3400
ļ	06/10/99	<5.0	7.8	1.5	23	4.1	1700

Beacon Station #604 1619 West First Street, Livermore, California Concentrations in micrograms per Liter

Monitoring Well	Monitoring Date	MTBE (1)	Benzene	Toluene	Ethylbenzene	Xylenes	Total Petroleum Hydrocarbons as Gasoline
MW-A	01/17/99	<5.0	1700	85	65	320	5800
	06/10/99	NS	NS	NS	NS	NS	NS
MW-B	01/17/99	<5.0	240	30	21	39	4400
	06/10/99	NS	NS	NS	NS	NS	NS
MW-C	01/17/99	<5.0	0.8	<0.50	<0.50	0.55	1800
	06/10/99	NS	NS	NS	NS	NS	NS
MW-D	01/17/99	<5.0	1600	130	66	220	5600
	06/10/99	NS	NS	NS	NS	NS	NS
MW-E	12/16/98	<50	1600	180	180	310	5700
	01/17/99	<25	1300	130	320	450	5000
	06/10/99	NS	NS	NS	NS	NS	NS
MW-W	12/16/98	<50	7600.00	760.00	1400	5000	23000
	01/17/99	<50	4100	420	1300	4000	16000
	06/10/99	NS	NS	NS	NS	NS	NS

NS = Well Not Sampled on This Date.

* = Product is not typical gasoline.

MTBE (1) = Methyl-Tertiary-Butyl Ether.

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)

r	rof	ect	Address:	
1			ALGUL COO.	

Beacon #604, 1619 West First Street

Date: ____6-10.

JUL 1 1 1999

Livermore, CA

Project No.: <u>94-604-01</u>

Recorded by: Hal Hansen

Well No	Time	Well Elev. TOC	Depth to Gr. Water	Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness	Comments
MW-1	1:56		29.30	54.10				
MW-1 MW-2	2:08		29.98	53.76				
MW-3	2:20		28.10	52.55				
MW-Y	2:24		27.60	46.60				
mw-s	1:30		28.05	46.37				
MW-6	1:40		31.44	47.53				
MW-7	1:50		29.89	46.61				
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Notes:

C	:lient: _	Ultrama	r	s	ampling Date:_	6-14-9	7
	Site:	Beacon #	604		Project No.	: 95-604-01	
		<u>1619 West</u>	First Str	<u>eet</u> We	ll Designation	: <u>MW-/</u>	
		Livermore	, CA				
Is the Is top Is well theight Well continued by the Is well continued by the Is well and I	ere stand of casi l cap se of well cover typ	ing water ng cut le aled and : casing r e: 8" UV 2" DWP	in well b vel? locked? iser (in i 12 12" CN	ox? nches): " UV	NO YES	Above TOC Be If no, see If no, see - 8" BK_ ther	elow TOC remarks remarks
				ailer ailer ,	D	ubmersible p edicated bai entrifugal p	ler
S	ampled w	ith: Disp	posable ba	iler:	Teflon bail	er:	
	Well D	iameter:	2"	4"	6"8	"	
Initia Time: Depth Depth	l Measur /:56 of well:	- 54.18 :29-30	Rec Time:	water:	1.47 surement Calcul Ac	• .	
	Time	Temp.	E.C.	рН	Turbidity	Volume	
			<u> </u>		<i>H</i>		
S	ample ap	pearance:	_lle	ar	-Lock:	meffelle	
2" Lo 4" Lo	ocking Ca ocking Ca ocking Ca	ap:		at apply) (#3753: Dolphin:	7/3: 	on of replac 2 Allenhead: 9/16 Bolt: nhead (DWP):	<u></u>
Kemal							
Signatu	ıre:	Hal	1/4				<u> </u>

Client: <u>Ultram</u>	ar	Sa	mpling Date:	6-10-99
Site: Beacon	#604	<u>.</u> .	Project No.:	95-604-01
<u> 1619 Wes</u>	t First Stre	<u>et</u> Wel	l Designation:	MW- 2
Livermor	e, CA			•
Is setup of traffic co Is there standing wate Is top of casing cut 1 Is well cap sealed and Height of well casing Well cover type: 8" U 12" BK 12" DWP General condition of w	r in well bo evel? locked? riser (in in V 12"	ches): UV36	NO YES A NO YES 12" EMCO Otl	bove TOC Below TOC If no, see remarks If no, see remarks8" BK
	2" dispos 2" PVC ba 4" PVC ba	iler iler	Dec Cer	omersible pump dicated bailer ntrifugal pump
Sampled with: Di	sposable bai	ler:	Teflon baile	c:
Well Diameter:	2"	4"	6" 8"_	
Purge Vol. Multiplier: Initial Measurement Time: 1:01 Depth of well: 53.7 Depth to water: 199 Start purge: 1	Time:	arge Meas NH water:	<u>urement</u>	ted purge:
Time Temp.	E.C.		Turbidity	Volume
Time Temp.	E.C.	рН	Turbiarcy	VOTUME
	1	1		
Sample appearance	1000		Lock: Os	Milhs.
Equipment replaced: (C 2" Locking Cap:	Theck all tha		Note condition 7/32	n of replaced item Allenhead: 9/16 Bolt:
	1111			

Cli	ent: _	Ultramar		Sa	mpling D	ate: <u>6</u>	-10-99	_
s	ite:	Beacon #6	04		Projec	t No.:_	95-604-01	_
		1619 West	First Stre	eet_ Wel	l Design	ation:_	mw- 5	
		•						·
		Livermore.					· · · · · ·	hausa
Is there	stand f casi	ing water ng cut lev	in well borel?	ox?	NO A		ime: ove TOC Be f no, see f no, see 8" BK_ er Fair P	remarks remarks
Purging		 	2" PVC ba 4" PVC ba	ailer ailer	-	Ded Ded	mersible p icated bai trifugal p	ump ler ump
Sam	pled w	vith: Disp	oosable ba	iler: <u> </u>	Teflor	bailer	<u></u>	
		iameter:						
Initial Time: Depth of Depth to	Measur 1:30 well: water	tiplier: ement - 16.3 :28.05	Time: <u>Reci</u> Depth to	water:	n 4	Calculat Actu	61 gal/f ed purge:_ al purge:_	e. 14
	Time	Temp.		рН		dity	Volume]
			M)	4				
			//			<u> </u>		
			_					
Sam	ple ap	pearance:	Cle	2~	Lock:	11-9	flew	
2" Loc 4" Loc	king C	aced: (Ch ap: ap:	Loci	nat apply) k #3753: Dolphin:		7/32	of replac Allenhead: 9/16 Bolt: ead (DWP):	
Remark	.s:							
Signatur	e:	Mr						

Clier	nt: _	Ultramar		Sa	ampling D	ate:_6	-10-9	9
Sit	:e:	Beacon #6	04				95-604-0	
		.	First Stre	et Wel	ll Design	ation:	MW- 6	·
					_			
		<u>Livermore.</u>		<u></u>		<u> </u>		•
Is there s Is top of Is well ca Height of Well cover	stand casi p se well typ	ing water ng cut lev aled and l casing ri e: 8" UV_		nches):	NO NO 12" EI	IES III	f no, see f no, see _ 8" BK_ er	remarks remarks
Purging Eq			2" dispos 2" PVC ba 4" PVC ba		_	Ded Ded	mersible icated ba trifugal	iler
Samp]	led w	ith: Disp	osable ba	ller: 🖟	Teflon	bailer	<u> </u>	
We	ell D	iameter:	2"	4"	6"	. 8"_		
Purge Vol. Initial Me Time: /: Depth of v Depth to v Start purg	easur 40 well: water	<u>47.53</u>	Rect Time: Depth to	0.65 narge Meas water:	w# C	alculat Actu		
T	ime	Temp.	E.C.	рН	Turbi	dity	Volume	
			1		7-			
						- A		
Samp	Le ap	pearance:		مرزرب	Lock:	<u> </u>	<u> </u>	
2" Lock	ing C ing C	ap:	-	at apply) (#3753: Dolphin:_		7/32	of repla Allenhead 9/16 Bolt ead (DWP)	:
Signature	·	Mu	10K					<u> </u>

C	lient:	Ultraman	-	Sa	umpling Da	ate: <u>6</u> -	10-99	_
	Site:_	Beacon #6	504				95-604-01	_
		1619 West	First Str	<u>eet</u> We]	ll Designa	ation:_	mw- 7	- .
	_	Livermore						<u> </u>
Is then Is top	re stand of cas	raffic cont ling water ing cut leve ealed and l casing ri pe: 8" UV 12" DWP_ tion of wel	in well bo /el? !ocked?	ox?	NO ON	ES AD	f no, see f no, see	remarks remarks
			2" PVC ba 4" PVC ba	ailer ailer	_	Ded: Cen	mersible p icated bai trifugal p	ler
Sa	ampled	with: Disp	oosable ba	iler: <u> </u>	Teflon	bailer		
	Well	Diameter:	2"	4"	6"	8"		
Initia Time: Depth of Depth of	l Measu / \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	ltiplier: rement : 46.6/ r: 99.80	Recl Time: Depth to	L 1/	NA C	alculate Actua	of gal/f	
Searc 1	Time	Temp.	E.C.		Turbio		Volume]
	TIME	Temb.		p.i.				-
					4			
			//					-
			100		Logice	Del	Mari	<u>, </u>
Equipme 2" Lo 4" Lo	ent replocking (ppearance: laced: (Ch Cap: Cap:	_ Loc1	nat apply) k #3753: Dolphin:	_ 	7/32 2	of replace Allenhead: 8/16 Bolt: ead (DWP):	
Remai	cks: _	411	1111					
Signatu	ıre: _	- Wa	101/	<u> </u>				

ATTACHMENT C

LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM



Date: 07/11/99

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

Subject: 5 Water Samples
Project Name: Beacon 604
Project Number: 95-604-01

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 530-297-4800.

Sincerely,



Date: 07/11/99

Project Name:

Beacon 604

Project Number: 95-604-01

Sample: MW-1

Matrix: Water

Sample Date :06/10/99

Cample Date :00/10/99		Method				
Parameter	Measured Value	Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Toluene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	06/18/99	
TPH as Gasoline	< 50	50	ug/L	M EPA 8015	06/18/99	
aaa-Trifluorotoluene (8020 Surrogate)	101		% Recovery	EPA 8020	06/18/99	
aaa-Trifluorotoluene (Gasoline Surrogate)	103		% Recovery	M EPA 8015	06/18/99	

Sample: MW-2

Matrix: Water

Sample Date: 06/10/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed	
Benzene	6300	50	ug/L	EPA 8020	06/18/99	
Toluene	1800	50	ug/L	EPA 8020	06/18/99	
Ethylbenzene	3600	50	ug/L	EPA 8020	06/18/99	
Total Xylenes	14000	50	ug/L	EPA 8020	06/18/99	
Methyl-t-butyl ether	< 500	500	ug/L	EPA 8020	06/18/99	
TPH as Gasoline	70000	5000	ug/L	M EPA 8015	06/18/99	
aaa-Trifluorotoluene (8020 Surrogate)	105		% Recovery	EPA 8020	06/18/99	
aaa-Trifluorotoluene (Gasoline Surrogate)	107		% Recovery	M EPA 8015	06/18/99	

Approved By: Joel Kiff

720 Olive Drive, Suite D Davis, CA 95616 530-297-480



Date: 07/11/99

Project Name : Bea

Beacon 604

Project Number: 95-604-01

Sample: MW-5

Matrix: Water

Sample Date :06/10/99

Cample Date :00/10/09		Method			Date Analyzed	
Parameter	Measured Value	Reporting Limit	Units	Analysis Method		
Benzene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Toluene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Total Xylenes	< 0.50	0.50	ug/L	EPA 8020	06/18/99	
Methyl-t-butyl ether	< 5.0	5.0	ug/L	EPA 8020	06/18/99	
TPH as Gasoline	66	50	ug/L	M EPA 8015	06/18/99	
aaa-Trifluorotoluene (8020 Surrogate)	106		% Recovery	EPA 8020	06/18/99	
aaa-Trifluorotoluene (Gasoline Surrogate)	107		% Recovery	M EPA 8015	06/18/99	

Sample: MW-6

Matrix: Water

Sample Date :06/10/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	1600	5.0	ug/L	EPA 8020	06/24/99
Toluene	160	5.0	ug/L	EPA 8020	06/24/99
Ethylbenzene	1400	5.0	ug/L	EPA 8020	06/24/99
Total Xylenes	2900	5.0	ug/L	EPA 8020	06/24/99
Methyl-t-butyl ether	5.5	2.0	ug/L	EPA 8260B	06/25/99
TPH as Gasoline	22000	500	ug/L	M/EPA 8015	06/24/99
aaa-Trifluorotoluene (8020 Surrogate)	119		% Recovery	/EPA 8020	06/24/99
aaa-Trifluorotoluene (Gasoline Surrogate)	120		% Recovery	M EPA 8015	06/24/99

fer bet Kiff, 8260 was ron because of interference and mitte could not be grantified in 18020 for this sample.

Approved By: Joel Kift

720 Olive Drive, Suite D. Davis, CA 95616 530-297-4800



Date: 07/11/99

Project Name : Beacon 604
Project Number : 95-604-01

Sample: MW-7

Matrix: Water

Sample Date :06/10/99

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	7.8	0.50	ug/L	EPA 8020	06/25/99
Toluene	1.5	0.50	ug/L	EPA 8020	06/25/99
Ethylbenzene	23	0.50	ug/L	EPA 8020	06/25/99
Total Xylenes	4.1	0.50	ug/L	EPA 8020	06/25/99
Methyl-t-butyl ether	< 5.0 5.0		ug/L	EPA 8020	06/25/99
TPH as Gasoline	1700	50	ug/L	M EPA 8015	06/25/99
aaa-Trifluorotoluene (8020 Surrogate)	90.9		% Recovery	EPA 8020	06/25/99
aaa-Trifluorotoluene (Gasoline Surrogate)	112		% Recovery	M EPA 8015	06/25/99

Approved By:

720 Olive Drive, Suite D Davis, CA 95616 530-297-4800



Uitramar Inc.CHAIN OF CUSTODY REPORT

BEACON

14325

Beacon Station No.	Sampler (Print Name)				Date Form No.							
Project No.	Hal Hansen				\vdash	- A!	NALYS	ES T	-	6-10-99	1 of 1	
Project No.	Sampler (Signature)				1							
95.604-01	gold offer					<u></u>			Containers	5	ا بروط	
Project Location	Affiliation					<u> </u>			ntair	Stand	ZGLY CI	
Livermore	Doulos Env.					(dies			o Co		•	
Sample No./Identification	Date	Time		Lab No.	BTE	TPH (diesel)			S O	REMARK	(S	
mw-I	6-10.99	2:0	00	-01	X	ſ			3)		
mw·2		2:1	12	-01								
mw-5		1:34		-07								
mw-6		1:45		-04								
mw-7	1	1:53		-0 5	4	1			J			
											· ·	
Relinquished by: (Signature/Affiliation)	Date	Time	Receive	ed by: (Signatur	e/Aff	iliati	on)				Date	Time
Halfform Doula Env		<u> </u>	Kh	m Ø	لمر	<u> </u>					-16-9c	1345
Rélinquished by: (Signature/Affiliation)	Date	Time	Receive	ed by: (Signatur	e/A	iliati	on)				Date	Time
Relinquished by: (Signature/Affiliation)	Date	Date Time Received by: (Signature)		ed by: (Signatur	re/Affiliation)						Date	Time
Report To: Dale Van Dam		<u>. </u>	Bill to:	ULTRAMAR 525 West TI Hanford, CA Attention:	hird S	Stree	it Teri	y	F	ōχ		