DOULOS ENVIRONMENTAL, INC.
1537 PINE VALLEY CIRCLE
ROSEVILLE, CA 95661
(916)782-9054

April 28, 2000

SEP 17 2001

Mr. Joe Aldridge
Ultramar, Inc.
525 West Third Street
Hanford, CA 93230

Subject: **First Quarter 2000 Ground Water Monitoring Report**
Beacon Station #604
1619 First Street Livermore, California

Dear Mr. Aldridge:

Doulos Environmental, Inc. (Doulos) has prepared this report documenting the results of quarterly ground water monitoring conducted on March 13, 2000, at the subject site (Figure 1). The monitoring, conducted by 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. 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 groundwater measurements. Copies of field data sheets are contained in Attachment B. Ground water level data collected since June 1993 are summarized in Table 1. On the basis of the current measurements, groundwater flows toward the northwest (Figure 2) at a gradient of 0.02 foot per foot. Groundwater levels have increased an average of 7.13 feet compared to the last monitoring event.

GROUNDWATER SAMPLING ANALYSES

Groundwater samples were collected from five monitoring wells. All samples were analyzed for concentrations of:

- TPH, as gasoline, by modified EPA Method 8260B.
- BTEX by EPA Method 8260B.
- MTBE by EPA Method 8260B.

TPHg and BTEX analytical results collected since June 1993 are summarized in Table 2. Figure 3 illustrates the inferred distribution of benzene in groundwater based on the current data. The laboratory report and chain-of-custody form for the current sampling event are contained in Attachment C. Benzene was not present at detectable concentrations in the groundwater samples collected from monitoring wells MW-1, and MW-5. The concentration of benzene in groundwater samples ranged from 2400 ppb to 7.5 ppb in monitoring well MW-2 and MW-7 respectively.

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) 782-9054.

Sincerely,

DOULOS ENVIRONMENTAL, INC.

Hal Hansen

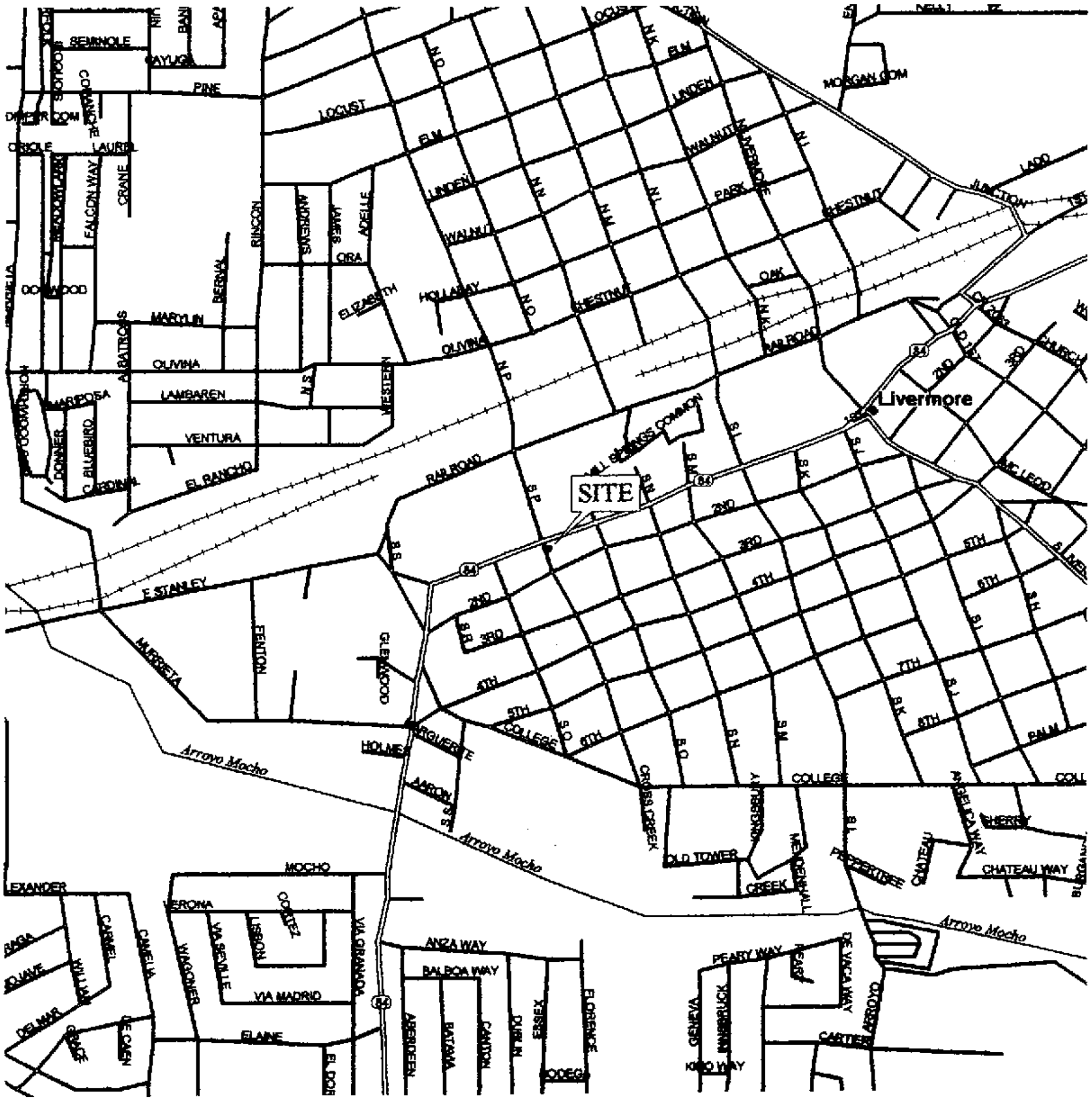
Hal Hansen, R.G.
Geologist

HEH/ph

Attachments

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

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



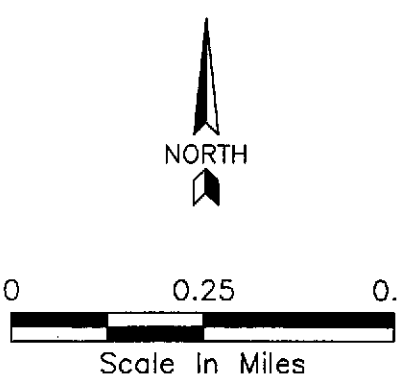


FIGURE 1

SITE VICINITY MAP
BEACON STATION NO. 604
1619 WEST FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO.	PREPARED BY:	
99-604-01	DA 02/00	DOULOS ENVIRONMENTAL COMPANY
DRAWING NO.	REVIEWED BY:	
FIG 1		

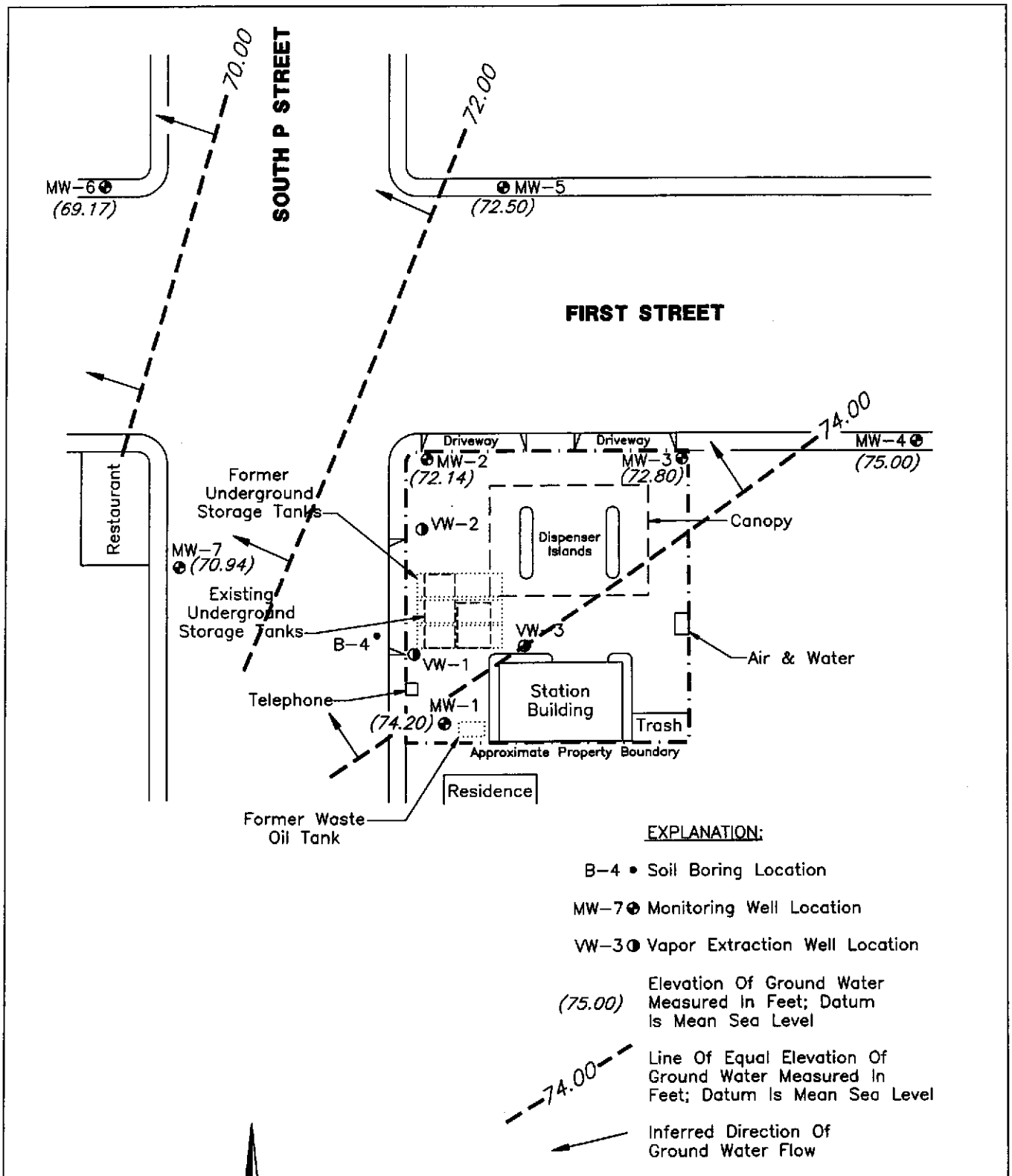
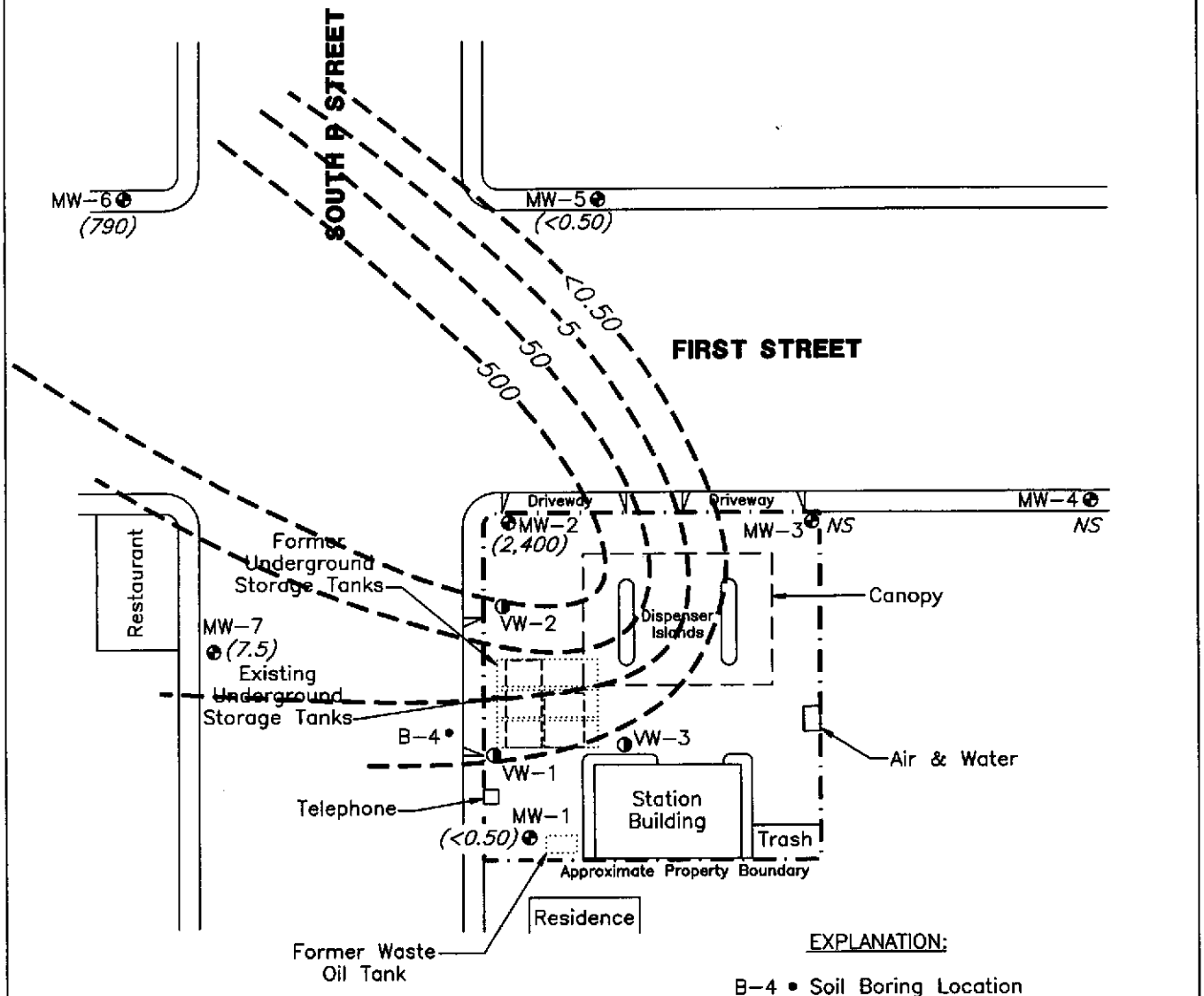


FIGURE 2
GROUND WATER CONTOUR MAP
(MARCH 13, 2000)
BEACON STATION NO. 604
1619 WEST FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO.	PREPARED BY:	DOULOS ENVIRONMENTAL COMPANY
99-604-01	DA 02/00	
DRAWING NO.	REVIEWED BY:	
FIG 2		



EXPLANATION:

B-4 • Soil Boring Location

MW-7 ◓ Monitoring Well Location

VW-3 ◑ Vapor Extraction Well Location

NS Not Sampled

(2,400) Concentration Of Dissolved Benzene In Ground Water Measured In Kilograms Per Liter

500 Line Of Equal Concentration Of Dissolved Benzene In Ground Water Measured In Kilograms Per Liter

NORTH

0 50 100

Scale In Feet

FIGURE 3
DISSOLVED BENZENE DISTRIBUTION MAP
IMARCH 13, 2000I
BEACON STATION NO. 604
1619 WEST FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO.	PREPARED BY:	DOULOS ENVIRONMENTAL COMPANY
99-604-01	DA 09/00	
DRAWING NO.	REVIEWED BY:	
FIG 3		

TABLE 1
GROUNDWATER ELEVATION DATA
BEACON STATION #604
1619 West First Street, Livermore, CA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water [1]	Groundwater Elevation[2]	Depth to Top/Bottom of Screened Interval (feet)	Comments
MW-1	06/01/93	100.00	37.50	62.50	34/54	
	06/22/93		38.46	61.54		
	10/06/93		42.22	57.78		
	01/13/94		34.52	65.48		
	03/30/94		31.93	68.07		
	04/25/94		33.49	66.51		
	08/12/94		41.03	58.97		
	12/14/94		38.63	61.37		
	02/10/95		30.80	69.20		
	06/15/95		25.46	74.54		
	09/26/95		31.05	68.95		
	12/15/95		28.11	71.89		
	03/21/96		17.67	82.33		
	06/13/96		22.86	77.14		
	09/16/96		30.04	69.96		
	12/02/96		26.74	73.26		
	03/07/97		20.84	79.16		
	06/12/97		28.71	71.29		
	09/29/97		33.91	66.09		
	12/01/97		34.88	65.12		
	03/19/98		19.83	80.17		
	05/29/98		21.57	78.43		
	09/15/98		31.68	68.32		
	11/30/98		36.80	63.20		
	01/17/99		30.02	69.98		
	06/10/99		29.30	70.70		
	09/07/99		31.41	68.59		
	12/13/99		32.95	67.05		
	03/13/00		25.74	74.26		
MW-2	06/01/93	98.68	38.02	60.66	34/54	
	06/22/93		39.07	59.61		
	10/06/93		43.72	54.96		
	01/13/94		35.85	62.83		
	03/30/94		32.82	65.86		
	04/25/94		34.76	63.92		
	08/12/94		44.33	54.35		
	12/14/94		40.00	58.68		
	02/10/95		32.16	66.52		
	06/15/95		25.93	72.75		
	09/26/95		32.42	66.26		
	12/15/95		29.41	69.27		
	03/21/96		17.47	81.21		
	06/13/96		23.69	74.99		
	09/16/96		31.24	67.44		
	12/02/96		26.90	71.78		
	03/07/97		21.33	77.35		
	06/12/97		29.94	68.74		
	09/29/97		34.22	64.46		

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GROUNDWATER ELEVATION DATA
BEACON STATION #604
1619 West First Street, Livermore, CA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water [1]	Groundwater Elevation[2]	Depth to Top/Bottom of Screened Interval (feet)	Comments
MW-2 (continued)	12/01/97		35.94	62.74		
	03/19/98		20.34	78.34		
	05/29/98		22.63	76.05		
	09/15/98		32.30	66.38		
	11/30/98		36.90	61.78		
	01/17/99		30.17	68.51		
	06/10/99		29.98	68.70		
	09/07/99		31.85	66.83		
	12/13/99		33.72	64.96		
	03/13/00		26.54	72.14		
MW-3	06/01/93	97.08	36.18	60.90	33/53	
	06/22/93		37.11	59.97		
	10/06/93		41.15	55.93		
	01/13/94		33.95	63.13		
	03/30/94		30.97	66.11		
	04/25/94		32.46	64.62		
	08/12/94		41.72	55.36		
	12/14/94		37.62	59.46		
	02/10/95		29.96	67.12		
	06/15/95		23.66	73.42		
	09/26/95		29.62	67.46		
	12/15/95		27.10	69.98		
	03/21/96		15.85	81.23		
	06/13/96		21.31	75.77		
	09/16/96		28.62	68.46		
	12/02/96		25.55	71.53		
	03/07/97		19.77	77.31		
	06/12/97		27.67	69.41		
	09/29/97		29.60	67.48		
	12/01/97		33.37	63.71		
	03/19/98		18.76	78.32		
	05/29/98		20.64	76.44		
	09/15/98		30.70	66.38		
	11/30/98		34.96	62.12		
	01/17/99		28.81	68.27		
	06/10/99		28.10	68.98		
	09/07/99		30.38	66.60		
	12/13/99		31.46	65.62		
	03/13/00		24.28	72.80		
MW-4	03/30/94	99.35	31.56	67.79	27/47	
	04/25/94		32.73	66.62		
	08/12/94		41.61	57.74		
	12/14/94		38.11	61.24		
	02/10/95		30.50	68.85		
	06/15/95		23.63	75.72		
	09/26/95		29.70	69.65		
	12/15/95		27.56	71.79		
	03/21/96		15.63	83.72		

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GROUNDWATER ELEVATION DATA
BEACON STATION #604
1619 West First Street, Livermore, CA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water [1]	Groundwater Elevation[2]	Depth to Top/Bottom of Screened Interval (feet)	Comments
MW-4 (continued)	06/13/96		21.07	78.28		
	09/16/96		28.99	70.36		
	12/02/96		26.04	73.31		
	03/07/97		19.69	79.66		
	06/12/97		28.04	71.31		
	09/29/97		29.91	69.44		
	12/01/97		33.88	65.47		
	03/19/98		18.67	80.68		
	05/29/98		20.16	79.19		
	09/15/98		30.46	68.89		
	11/30/98		34.50	64.85		
	01/17/99		28.30	71.05		
	06/10/99		27.60	71.75		
	09/07/99		30.79	68.56		
	12/13/99		31.60	67.75		
	03/13/00		24.35	75.00		
MW-5	03/30/94	98.37	32.07	66.30	27/47	
	04/25/94		33.65	64.72		
	08/12/94		42.73	55.64		
	12/14/94		38.89	59.48		
	02/10/95		31.44	66.93		
	06/15/95		24.99	73.38		
	09/26/95		30.20	68.17		
	12/15/95		28.56	69.81		
	03/21/96		16.82	81.55		
	06/13/96		22.61	75.76		
	09/16/96		29.78	68.59		
	12/02/96		26.51	71.86		
	03/07/97		21.91	76.46		
	09/29/97		31.74	66.63		
	12/01/97		34.05	64.32		
	03/19/98		20.93	77.44		
	05/29/98		21.30	77.07		
	09/15/98		31.32	67.05		
	11/30/98		35.44	62.93		
	01/17/99		29.59	68.78		
	06/10/99		28.05	70.32		
	09/07/99		31.11	67.26		
	12/13/99		32.66	65.71		
	03/13/00		25.87	72.50		
MW-6	03/30/94	97.62	33.38	64.24	28/48	
	04/25/94		35.49	62.13		
	08/12/94		45.14	52.48		

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GROUNDWATER ELEVATION DATA
BEACON STATION #604
1619 West First Street, Livermore, CA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water [1]	Groundwater Elevation[2]	Depth to Top/Bottom of Screened Interval (feet)	Comments
MW-6 continued	12/14/94		40.99	56.63		
	02/10/95		33.34	64.28		
	06/15/95		26.88	70.74		
	09/26/95		33.55	64.07		
	12/15/95		30.32	67.30		
	03/21/96		18.89	78.73		
	06/13/96		24.62	73.00		
	09/16/96		32.64	64.98		
	12/02/96		27.42	70.20		
	03/07/97		22.13	75.49		
	06/12/97		31.02	66.60		
	09/29/97		35.77	61.85		
	12/01/97		37.14	60.48		
	03/19/98		21.10	76.52		
	05/29/98		23.26	74.36		
	09/15/98		33.50	64.12		
	11/30/98		38.73	58.89		
	01/17/99		32.05	65.57		
	06/10/99		31.44	66.18		
	09/07/99		33.94	63.68		
	12/13/99		35.84	61.78		
	03/13/00		28.45	69.17		
MW-A	01/17/99	NS	30.13	NS	NS	
	06/10/99		NM-A			
MW-B	01/17/99	NS	30.29	NS	NS	
	06/10/99		NM-A			
MW-C	01/17/99	NS	30.60	NS	NS	
	06/10/99		NM-A			
MW-D	01/17/99	NS	31.32	NS	NS	
	06/10/99		NM-A			
MW-E	01/17/99	NS	31.36	NS	NS	
	06/10/99		NM-A			
MW-W	01/17/99	NS	30.91	NS	NS	
	06/10/99		NM-A			

Notes:
1 = Measurement and reference elevation taken from notch/mark on top of well casing.
2 = Elevation referenced to mean sea level.
NS = Not surveyed.
NM = Well not measured on this date.
NM-A = Well not measured, abandoned after this date.

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
BEACON STATION #604
1619 West First Street, Livermore, CA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	TPH[1] as Gasoline	Aromatic Volatile Organics				
			MTBE[2]	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-1	06/01/93	27000		2200	400	<0.50	4900
	06/22/93	87000		8000	10000	260	10000
	10/06/93	40000		4700	6500	740	5300
	01/13/94	9400		1300	9500	110	850
	04/25/94	11000		1500	1800	290	1700
	08/12/94	11000		550	330	260	1400
	12/14/94	11000		1000	1200	320	1500
	02/10/95	9300		1200	1500	280	1500
	06/15/95	140		5.6	<0.50	<0.50	<0.50
	09/26/95	410		140	<0.50	<0.50	43
	12/15/95	740		250	<1.3	<1.3	87
	03/21/96	<50		0.52	<0.50	<0.50	0.51
	06/13/96	240[3]		<0.50	<0.50	<0.50	<0.50
	09/16/96	720	<5.0	70	<0.50	1.0	5.1
	12/02/96	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/07/97	600	<5.0	6.7	<0.50	1.2	1.8
	06/12/97	18000	<5.0	180	800	410	1800
	09/29/97	350	<50	120	1.5	<0.50	12
	12/01/97	<50	<5.0	7.0	<0.50	<0.50	<0.50
	03/19/98	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	05/29/98	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/15/98	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	11/30/98	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	01/17/99	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	06/10/99	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	09/07/99	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/13/99	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/13/00	<50	<5.0	<0.50	<0.50	<0.50	<0.50
MW-2	06/01/93	170000		20000	21000	3300	18000
	06/22/93	160000		19000	22000	3500	18000
	10/06/93	110000		17000	17000	3000	15000
	01/13/94	93000		20000	19000	2300	14000
	04/25/94	41000		9600	7300	840	7800
	08/12/94	59000		11000	11000	2300	11000
	12/14/94	63000		13000	13000	2200	12000
	02/10/95	63000		12000	12000	2200	11000
	06/15/95	61000		11000	12000	1900	11000
	09/26/95	61000		9400	11000	2300	12000
	12/15/95	48000		8000	8300	2200	12000
	03/21/96	48000		8000	7700	2400	12000
	06/13/96	33000	<250	7300	8800	1900	12000
	09/16/96	8600	<250	510	640	180	1300
	12/02/96	29000	<130	4400	4000	1300	6100
	03/07/97	13000	<250	1800	1100	270	2000
	06/12/97	68000	<500	7800	6600	2300	11000
	09/29/97	15000	<250	1500	97	740	1800
	12/01/97	13000	<250	900	37	860	2400
	03/19/98	42000	<250	5000	3600	2000	8300
	05/29/98	68000	<250	5600	4700	2400	11000
	09/15/98	36000	<250	3900	1200	1400	7800

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
BEACON STATION #604
1619 West First Street, Livermore, CA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	TPH[1] as Gasoline	Aromatic Volatile Organics				
			MTBE[2]	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-2 (continued)	11/30/98	16000	<250	2200	59	1200	1500
	01/17/99	30000	<250	4000	2200	2100	9500
	06/10/99	70000	<500	6300	1800	3600	14000
	09/07/99	42000	150	3800	840	1900	8000
	12/13/99	14000	34	1400	87	690	110
	03/13/00	38,000	2,400	2400	2300	1600	6400
MW-3	06/01/93	270		4.6	<0.50	<0.50	1.9
	06/22/93	160		8.2	<0.50	<0.50	0.72
	10/06/93	740		57	110	24	120
	01/13/94	83		2.6	0.67	0.78	4.2
	04/25/94	60		0.75	3.2	0.50	3.6
	08/12/94	310		7.3	14	2.6	13
	12/14/94	75		<0.50	<0.50	<0.50	<0.50
	02/10/95	96		1.4	<0.50	<0.50	1.8
	06/15/95	<50		<0.50	<0.50	<0.50	<0.50
	09/26/95	<50		<0.50	<0.50	<0.50	<0.50
	12/15/95	<50		<0.50	<0.50	<0.50	<0.50
	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
	09/07/99	NS	NS	NS	NS	NS	NS
	12/13/99	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A
MW-4	03/30/94	120		4.2	15	2.5	26
	04/25/94	65		<0.50	1.8	<0.50	2.1
	08/12/94	<50		<0.50	<0.50	<0.50	<0.50
	12/14/94	<50		<0.50	<0.50	<0.50	<0.50
	02/10/95	<50		<0.50	<0.50	<0.50	<0.50
	06/15/95	<50		<0.50	<0.50	<0.50	<0.50
	09/26/95	<50		<0.50	<0.50	<0.50	<0.50
	12/15/95	<50		<0.50	<0.50	<0.50	<0.50
	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

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
BEACON STATION #604
1619 West First Street, Livermore, CA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	TPH[1] as Gasoline	Aromatic Volatile Organics				
			MTBE[2]	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-4 (continued)	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
	09/07/99	NS	NS	NS	NS	NS	NS
	12/13/99	NS	NS	NS	NS	NS	NS
	03/13/00	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A
MW-5	03/30/94	7500		1300	20	<13	160
	04/25/94	6500		1100	41	130	740
	08/12/94	4000		420	2.9	41	98
	12/14/94	4800		660	<2.5	33	13
	02/10/95	5200		490	<13	23	19
	06/15/95	460		<0.50	<0.50	<0.50	<0.50
	09/26/95	1400		61	<0.50	3.1	<0.50
	12/15/95	2100		77	1.5	10	1.5
	03/21/96	930		35	2.0	2.0	18.00
	06/13/96	610	<5.0	38	0.72	1.9	2.0
	09/16/96	380	<5.0	29	<0.50	0.95	<0.50
	12/02/96	200	<5.0	1.1	0.64	<0.50	<0.50
	03/07/97	520	<5.0	74	<0.50	0.58	1.50
	06/12/97	140	<5.0	5.3	<0.50	<0.50	<0.50
	09/29/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	12/01/97	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/19/98	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	05/29/98	540	<5.0	4.1	<0.50	<0.50	0.52
	09/15/98	67	<5.0	<0.50	<0.50	<0.50	<0.50
	11/30/98	430	<5.0	<0.50	<0.50	<0.50	<0.50
	01/17/99	500	<5.0	<0.50	<0.50	<0.50	<0.50
	06/10/99	66	<5.0	<0.50	<0.50	<0.50	<0.50
	09/07/99	820	<5.0	46	1.7	10	21
	12/13/99	<50	<5.0	<0.50	<0.50	<0.50	<0.50
	03/13/00	270	<5.0	<0.50	<0.50	<0.50	<0.50
MW-6	03/30/94	63000		21000	8600	1700	12000
	04/25/94	77000		22000	12000	2300	16000
	08/12/94	65000		12000	8100	2200	16000
	12/14/94	65000		18000	9500	2200	14000
	02/10/95	63000		21000	8400	2000	14000
	06/15/95	75000		20000	11000	2100	15000
	09/26/95	62000		15000	9600	1700	12000
	12/15/95	61000		15000	9000	2300	15000
	03/21/96	65000		18000	9800	2400	16000
	06/13/96	29000	<250	8600	3300	2200	12000
	09/16/96	42000	<250	6400	1800	2100	11000
	12/02/96	28000	<500	3000	1100	970	8300
	03/07/97	12000	<250	2000	190	520	2300
	06/12/97	37000	<100	3900	470	1600	6200
	09/29/97	34000	<100	3500	370	1600	5200
	12/01/97	20000	<100	2100	<10	1200	2200
	03/19/98	24000	<100	2900	460	1100	3400

TABLE 2
GROUNDWATER ANALYTICAL RESULTS
BEACON STATION #604
1619 West First Street, Livermore, CA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	TPH[1] as Gasoline	Aromatic Volatile Organics				
			MTBE[2]	Benzene	Toluene	Ethyl-benzene	Xylenes
MW-6 (continued)	05/29/98	38000	<100	3500	700	1800	5200
	09/15/98	22000	<100	1900	110	1400	3000
	11/30/98	9900	<100	770	16	820	710
	01/17/99	14000	<100	2200	160	1700	3600
	06/10/99	22000	5.5	1600	160	1400	2900
	09/07/99	17000	<50	1400	33	1300	1800
	12/13/99	16000	<25	790	9.2	840	780
	03/13/00	16000	<25	790	85	780	1600
MW-7	03/30/94	43000		7200	2400	1600	11000
	04/25/94	30000		3900	1000	940	6900
	08/12/94	30000		3800	1400	1300	7500
	12/14/94	31000		3600	1200	900	6400
	02/10/95	27000		4000	900	890	5100
	06/15/95	17000		920	680	740	4100
	09/26/95	7000		200	150	170	810
	12/15/95	11000		350	170	540	1900
	03/21/96	12000		320	100	730	2500
	06/13/96	5900	<50	98	19	370	620
	09/16/96	7800	<25	140	43	440	590
	12/02/96	6300	<50	87	29	290	430
	03/07/97	4500	<25	35	19	360	470
	06/12/97	3900	<5.0	29	5.2	170	48
	09/29/97	6100	<25	56	9	340	190
	12/01/97	6500	<25	24	<2.5	400	250
	03/19/98	2000	<25	20	<2.5	73	79
	05/29/98	5700	<25	22	7.3	290	350
	09/15/98	1700	<25	15	<2.5	44	5.1
	11/30/98	4800	<25	42	12	270	640
	01/17/99	3400	<50	33	<5.0	200	190
	06/10/99	1700	<5.0	7.8	1.5	23	4.1
	09/07/99	1900	<5.0	9.7	2.1	70	2.9
	12/13/99	1900	<5.0	8.0	1.1	10	1.1
	03/13/00	1500	<5.0	7.5	<0.50	6.7	2.9
MW-A	01/17/99	5800	<5.0	1700	85	65	320
	06/10/99	NS	NS	NS	NS	NS	NS
MW-B	01/17/99	4400	<5.0	240	30	21	39
	06/10/99	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A
MW-D	01/17/99	5600	<5.0	1600	130	66	220
	06/10/99	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A
MW-E	01/17/99	5700	<50	1600	180	180	310
	06/10/99	5000	<25	1300	130	320	450
	09/07/99	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A
MW-W	01/17/99	23000	<50	7600.00	760.00	1400	5000
	06/10/99	16000	<50	4100	420	1300	4000
	09/07/99	NS-A	NS-A	NS-A	NS-A	NS-A	NS-A

Notes:
1 Total Petroleum Hydrocarbons
2 Methyl-tertiary-butyl ether
3 Product is not typical gasoline

NS Not sampled (see Table 1)
< Below indicated detection limit.
NS-A Not Sampled, abandoned after this date

FIELD PROCEDURE

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

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 probed 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 measruements 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 are monitored. The well is sufficiently purged when: the four casing volumes have been removed; the temperature, pH, and conductivity 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 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 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 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 labelled 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 will 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 persist throughout bailing, a final free product thickness measurement will be taken and a ground-water sample will not be collected.

Samples are stored in 40-milliliter vials so that air passage through the sample is minimized (to prevent volatilizing 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. A Chain-of-Custody form is completed to ensure sample integrity. Ground-water samples are transported to a state-certified laboratory and analyzed within the EPA-specified holding times for the requested analyses.

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

Project Address: Beacon #604, 1619 West First Street Date: 3-13-00

Livermore, CA Project No.: 94-604-01

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	3:54	100.00	25.74	54.10	74.26			
mw-2	4:05	98.68	26.54	53.75	72.14			
mw-3	4:15	97.08	24.28	52.55	72.80			
mw-4	4:20	99.35	24.35	46.60	75.00			
mw-5	3:10	[illegible]	25.87	46.33	72.50			
mw-6	3:20	97.62	28.45	47.51	69.17			
mw-7	3:40	98.03	27.09	46.61	70.94			

Notes:

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3/13/00

Site: Beacon #604 Project No.: 95-604-01

1619 West First Street Well Designation: MW- 1

Livermore, CA

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) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 3:54
Depth of well: 54.10
Depth to water: 25.74

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge:_____
Actual purge: NA

Start purge: NA Sampling time: 4:00

Time	Temp.	E.C.	pH	Turbidity	Volume

Sample appearance: clear Lock: dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3/13/00

Site: Beacon #604 Project No.: 95-604-01

1619 West First Street Well Designation: MW- 2

Livermore, CA

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) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV_____ 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI X 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2"____ 4" X 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement: Time: 4:05 Depth of well: 53.75 Depth to water: 26.54

Recharge Measurement: Time: NA Depth to water: NA

Calculated purge:_____ Actual purge: NA

Start purge:_____ Sampling time: 4:10

Time	Temp.	E.C.	pH	Turbidity	Volume

Sample appearance: clear Lock: dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3/13/00

Site: Beacon #604 Project No.: 95-604-01

1619 West First Street Well Designation: MW- 5

Livermore, CA

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) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV X 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 3:10
Depth of well: 46.33
Depth to water: 25.87

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge:_____
Actual purge: NA

Start purge: NA Sampling time: 3:14

Time	Temp.	E.C.	pH	Turbidity	Volume

Sample appearance: clear Lock: dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3/13/00

Site: Beacon #604 Project No.: 95-604-01

1619 West First Street Well Designation: MW- 6

Livermore, CA

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) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV X 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 3:20
Depth of well: 47.51
Depth to water: 28.45

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge:_____
Actual purge: NA

Start purge: NA Sampling time: 3:24

Time	Temp.	E.C.	pH	Turbidity	Volume
		NA	NA		

Sample appearance: clear Lock: dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

DOULOS ENVIRONMENTAL COMPANY SAMPLING INFORMATION SHEET

Client: Ultramar Sampling Date: 3/13/00

Site: Beacon #604 Project No.: 95-604-01

1619 West First Street Well Designation: MW- 7

Livermore, CA

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) If no, see remarks
Is well cap sealed and locked? NO (YES) If no, see remarks
Height of well casing riser (in inches): 4
Well cover type: 8" UV X 12" UV_____ 12" EMCO_____ 8" BK_____
12" BK_____ 12" DWP_____ 12" CNI_____ 36" CNI_____ Other_____
General condition of wellhead assembly: Excellent (Good) Fair Poor

Purging Equipment: _____2" disposable bailer _____Submersible pump
_____2" PVC bailer _____Dedicated bailer
_____4" PVC bailer _____Centrifugal pump

Sampled with: Disposable bailer: X Teflon bailer:_____

Well Diameter: 2" X 4"____ 6"____ 8"____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.

Initial Measurement
Time: 3:40
Depth of well: 46.61
Depth to water: 27.09

Recharge Measurement
Time: NA
Depth to water: NA

Calculated purge:_____
Actual purge: NA

Start purge: NA Sampling time: 3:45

Time	Temp.	E.C.	pH	Turbidity	Volume

Sample appearance: clear Lock: Dolphin

Equipment replaced: (Check all that apply) Note condition of replaced item
2" Locking Cap:_____ Lock #3753:_____ 7/32 Allenhead:_____
4" Locking Cap:_____ Lock-Dolphin:_____ 9/16 Bolt:_____
6" Locking Cap:_____ Pinned Allenhead (DWP):_____

Remarks: _____

Signature: _____

KIFF ANALYTICAL LLC

Report Number : 16245
Date : 03/30/2000

Hal Hansen
Doulos Environmental
1537 Pine Valley Circle
Roseville, CA 95661

Subject : 5 Water Samples
Project Name : Beacon 604
Project Number : 604

Dear Mr. Hansen,

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,

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 16245
Date : 03/30/2000

Project Name : **Beacon 604**
Project Number : **604**

Sample : **MW-1** Matrix : Water
Sample Date :03/13/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8260B	03/24/2000
TPH as Gasoline	**< 50**	50	ug/L	EPA 8260B	03/24/2000
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	03/24/2000
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	03/24/2000

Sample : **MW-2** Matrix : Water
Sample Date :03/13/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**2400**	20	ug/L	EPA 8260B	03/28/2000
Toluene	**2300**	20	ug/L	EPA 8260B	03/28/2000
Ethylbenzene	**1600**	20	ug/L	EPA 8260B	03/28/2000
Total Xylenes	**6400**	20	ug/L	EPA 8260B	03/28/2000
Methyl-t-butyl ether	**2400**	200	ug/L	EPA 8260B	03/28/2000
TPH as Gasoline	**38000**	2000	ug/L	EPA 8260B	03/28/2000
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/28/2000
4-Bromofluorobenzene (Surr)	107		% Recovery	EPA 8260B	03/28/2000

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 16245
Date : 4/3/00

Project Name : **Beacon 604**
Project Number : **604**

Sample : **MW-6** Matrix : Water
Sample Date :3/13/00

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**790**	2.5	ug/L	EPA 8020	3/24/00
Toluene	**85**	2.5	ug/L	EPA 8020	3/24/00
Ethylbenzene	**780**	2.5	ug/L	EPA 8020	3/24/00
Total Xylenes	**1600**	2.5	ug/L	EPA 8020	3/24/00
Methyl-t-butyl ether	**< 25**	25	ug/L	EPA 8020	3/24/00
TPH as Gasoline	**16000**	250	ug/L	M EPA 8015	3/24/00
aaa-Trifluorotoluene (8020 Surrogate)	104		% Recovery	EPA 8020	3/24/00
aaa-Trifluorotoluene (Gasoline Surrogate)	100		% Recovery	M EPA 8015	3/24/00

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 16245

Date : 03/30/2000

Project Name : **Beacon 604**

Project Number : **604**

Sample : **MW-5** Matrix : Water

Sample Date :03/13/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8260B	03/24/2000
TPH as Gasoline	**270**	50	ug/L	EPA 8260B	03/24/2000
Toluene - d8 (Surr)	104		% Recovery	EPA 8260B	03/24/2000
4-Bromofluorobenzene (Surr)	103		% Recovery	EPA 8260B	03/24/2000

Sample : **MW-7** Matrix : Water

Sample Date :03/13/2000

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**7.5**	0.50	ug/L	EPA 8260B	03/24/2000
Toluene	**< 0.50**	0.50	ug/L	EPA 8260B	03/24/2000
Ethylbenzene	**6.7**	0.50	ug/L	EPA 8260B	03/24/2000
Total Xylenes	**2.9**	0.50	ug/L	EPA 8260B	03/24/2000
Methyl-t-butyl ether	**< 5.0**	5.0	ug/L	EPA 8260B	03/24/2000
TPH as Gasoline	**1500**	50	ug/L	EPA 8260B	03/24/2000
Toluene - d8 (Surr)	99.8		% Recovery	EPA 8260B	03/24/2000
4-Bromofluorobenzene (Surr)	98.9		% Recovery	EPA 8260B	03/24/2000

Approved By: Joel Kiff

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

Ultramar Inc.
CHAIN OF CUSTODY REPORT

16245

BEACON

Beacon Station No.	Sampler (Print Name)	Date	Form No.
604	Edgar Alineta	3-13-00	1 of 1
Project No.	**Sampler (Signature)**		
604			
Project Location	**Affiliation**		
LIVERMORE	DOULOS		

STANDARD TAT

Sample No./Identification	Date	Time	Lab No.	ANALYSES: BTEX	TPH (gasoline)	TPH (diesel)	No. of Containers	REMARKS
MW-1	3-13-00	4:00	-01	X	X		3	
MW-2	"	4:10	-02					
MW-5	"	3:14	-03					
MW-6	"	3:24	-04					
MW-7	"	3:45	-05				1	

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
DOULOS					
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			DOULOS / K. A	3/17/00	1800

Report To:

Bill to: ULTRAMAR INC.
526 West Third Street
Hanford, CA 93230
Attention: JOE ALDRIDGE

WHITE: Return to Client with Report YELLOW: Laboratory Copy PINK: Originator Copy

32-6003 1/90