Ultramar

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

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

December 3, 1998

Mr. Scott Seery
Senior Hazardous Materials Specialist
Alameda County Health Care Services Agency,
Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Oakland, CA 94502-6577

SUBJECT: Third Quarter 1998 Ground Water Monitoring Report
Former Beacon Station No. 574
22315 Redwood Road, Castro Valley, California

Dear Mr. Seery:

Enclosed is a copy of the *Third Quarter 1998 Ground Water Monitoring Report*, prepared by El Dorado Environmental Inc., for the above-referenced Ultramar facility. Also enclosed is a copy of the *Quarterly Status Report* describing the work performed this quarter and the work anticipated to be conducted in the next quarter.

If you have questions regarding this project, please contact me at (209) 583-3231.

Sincerely,

ULTRAMAR INC.

Joseph A. Aldridge, RG
Senior Project Manager
Retail Environmental Services

Enclosures: Third Quarter 1998 Ground Water Monitoring Report
Quarterly Status Report

cc w/encl.: Mr. Rich Hiett, CRWQCB-San Francisco Bay Region

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ENVIRONMENTAL PROJECT QUARTERLY STATUS REPORT

DATE REPORT SUBMITTED: December 3, 1998
QUARTER ENDING: September 30, 1998

FORMER SERVICE STATION NO.: 574
ADDRESS: 22315 Redwood Road, Castro Valley, CA
COUNTY: Alameda
ULTRAMAR CONTACT: Joseph A. Aldridge TEL. NO: 209-583-3231

BACKGROUND:

On May 5, 1987, five underground storage tanks (two gasoline, two diesel and one waste oil) were excavated and removed from the site. Soil samples were collected from beneath the tanks and analyzed for hydrocarbon constituents. Based on preliminary analytical data related to the collected soil samples, it was determined that elevated levels of gasoline and diesel were present in the soil beneath the former fuel tanks. Soil was over-excavated from beneath the former fuel tanks. Soil samples were collected after the over-excavation and confirmed that the addition excavation was successful.

During March 1991, three ground-water monitoring wells were installed on-site. Laboratory analysis of soil samples obtained from the borings for the installation of the monitoring wells indicated that the soil near the soil/water interface exhibited gasoline range hydrocarbons.

Quarterly monitoring was initiated during the fourth quarter 1991.

Installed five groundwater monitoring wells in May of 1993. With the installation of these new wells the extent of impacted groundwater was fully defined.

Conducted a soil gas survey/performance test, aquifer pump test, and air sparging test during the first quarter of 1994.

Submitted a PAR/RAP during the fourth quarter 1994.

Monitoring Wells MW-7 and MW-8 were abandoned in September 1998, as required by the Alameda County Department of Public Works.

SUMMARY OF THIS QUARTER'S ACTIVITIES:

Performed quarterly groundwater monitoring on August 31, 1998.

RESULT OF QUARTERLY MONITORING:

Benzene was detected in samples collected from three on-site monitoring wells. MTBE was detected in samples collected from three on-site and two off-site monitoring wells.

PROPOSED ACTIVITY OR WORK FOR NEXT QUARTER:

ACTIVITY	ESTIMATED COMPLETION DATE
Quarterly groundwater monitoring	December 1998
Submit additional information, as requested by Alameda County in a letter dated May 27, 1997, regarding the Risk Based Corrective Action Assessment	December 1998

El Dorado Environmental, Inc.
2221 Goldorado Trail, El Dorado, California 95623
(916) 626-3898
Fax (916) 626-3899

November 21, 1998

Mr. Joe Aldridge
Senior Project Manager
Ultramar Inc.
525 West Third Street
Hanford, California 93230

Subject: **Third Quarter 1998 Ground Water Monitoring Report**
Former Beacon Station #574
22315 Redwood Road, Castro Valley, California

Dear Mr. Aldridge:

El Dorado Environmental, Inc. (EDE) has prepared this report to document the results of quarterly ground water monitoring conducted on August 31, 1998, 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 contained in Attachment C. On the basis of the current measurements, ground water flows toward the southwest (Figure 2) at a gradient of approximately 0.01 foot per foot. Ground water elevations decreased an average of 0.79 feet compared to the last monitoring event.

GROUND WATER SAMPLING AND ANALYSES

Ground water samples were collected from six monitoring wells (by agreement with Alameda County, ground water samples were not collected from monitoring wells MW-4 and MW-8). 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 contained in Attachment D. Figure 3 illustrates the inferred distribution of dissolved benzene in ground water based on the current data. The laboratory report and chain-of-custody form for the current sampling event are included in Attachment E. Benzene was not detected in ground water samples collected from monitoring wells MW-5, MW-6, and MW-7. Benzene concentrations decreased in ground water samples collected from monitoring wells MW-1 and MW-2 and increased in the ground water sample collected from monitoring well MW-3.

This quarter, ground water samples were also submitted for analysis of the oxygenated compounds di-isopropyl ether (DIPE), ethyl-t-butyl ether (ETBE), tert-amyl methyl ether (TAME), tert-butanol, methanol, and ethanol. The sample collected from monitoring well MW-1 contained DIPE, tert-butanol, and methanol at concentrations of 3.3, 290, and 2,400 micrograms per Liter (μg/L); the sample collected from monitoring well MW-2 contained DIPE, tert-butanol, and methanol at concentrations of 21, 390, and 2,500 μg/L; the sample collected from monitoring well MW-6 contained DIPE, tert-butanol, and methanol at concentrations of 3.6, 12, and 380 μg/L; the sample collected from monitoring well MW-7 contained methanol at a concentration of 56 μg/L.

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

Mr. Scott Seery
Alameda County Health Agency, Division of Hazardous Materials
Department of Environmental Health
80 Swan Way, Room 350
Oakland, California 94621

Mr. Rich Hiett
California Regional Water Quality Control Board
San Francisco Bay Region
2101 Webster Street, Suite 500
Oakland, California 94612

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 (530) 626-3898.

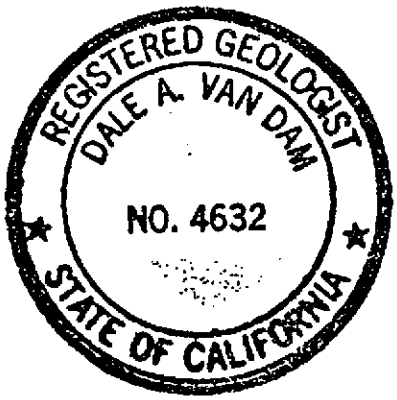
Regards,

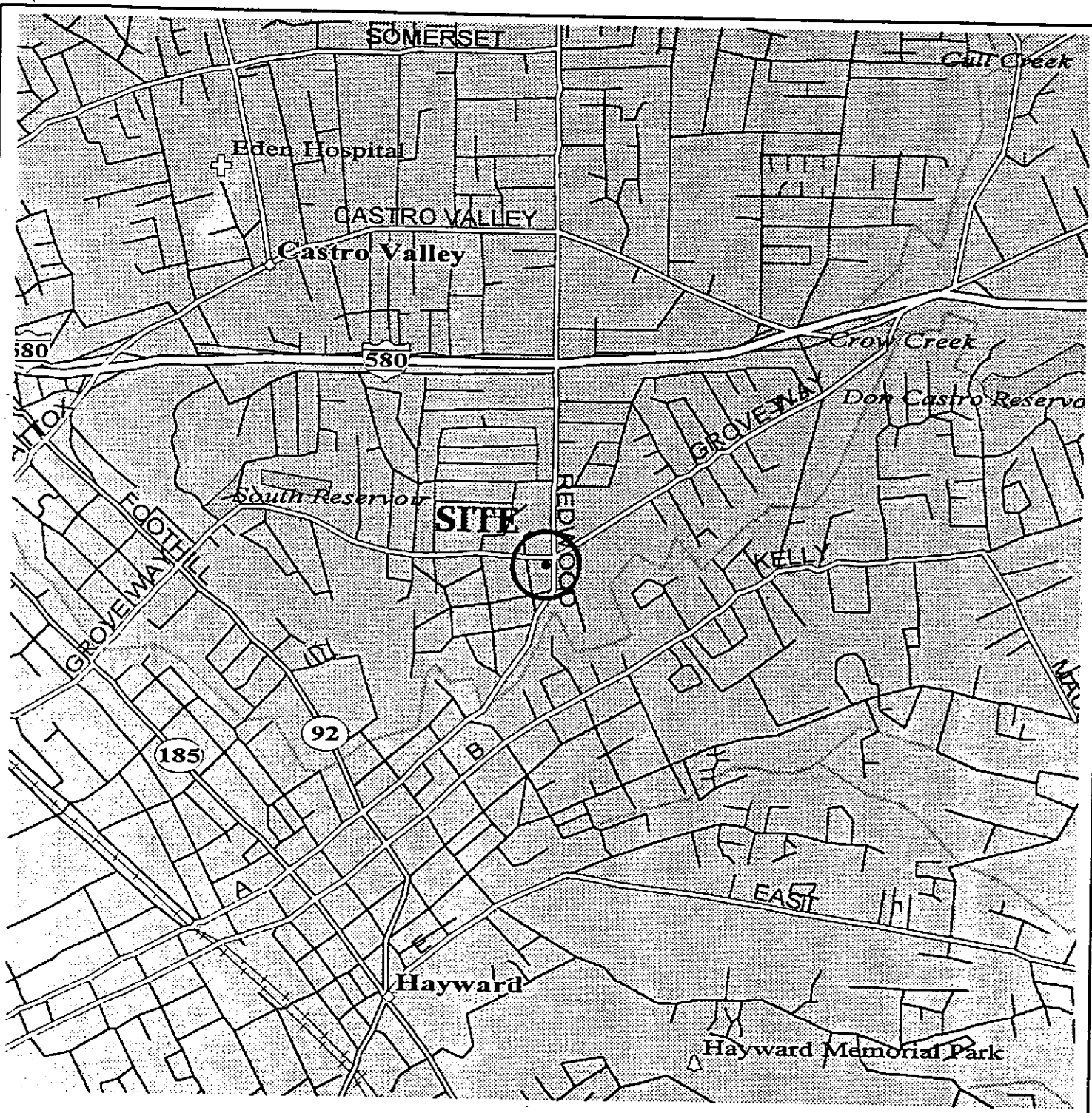
EL DORADO ENVIRONMENTAL, INC.

Dale A. van Dam, R.G.
Hydrogeologist

DAvD/davd

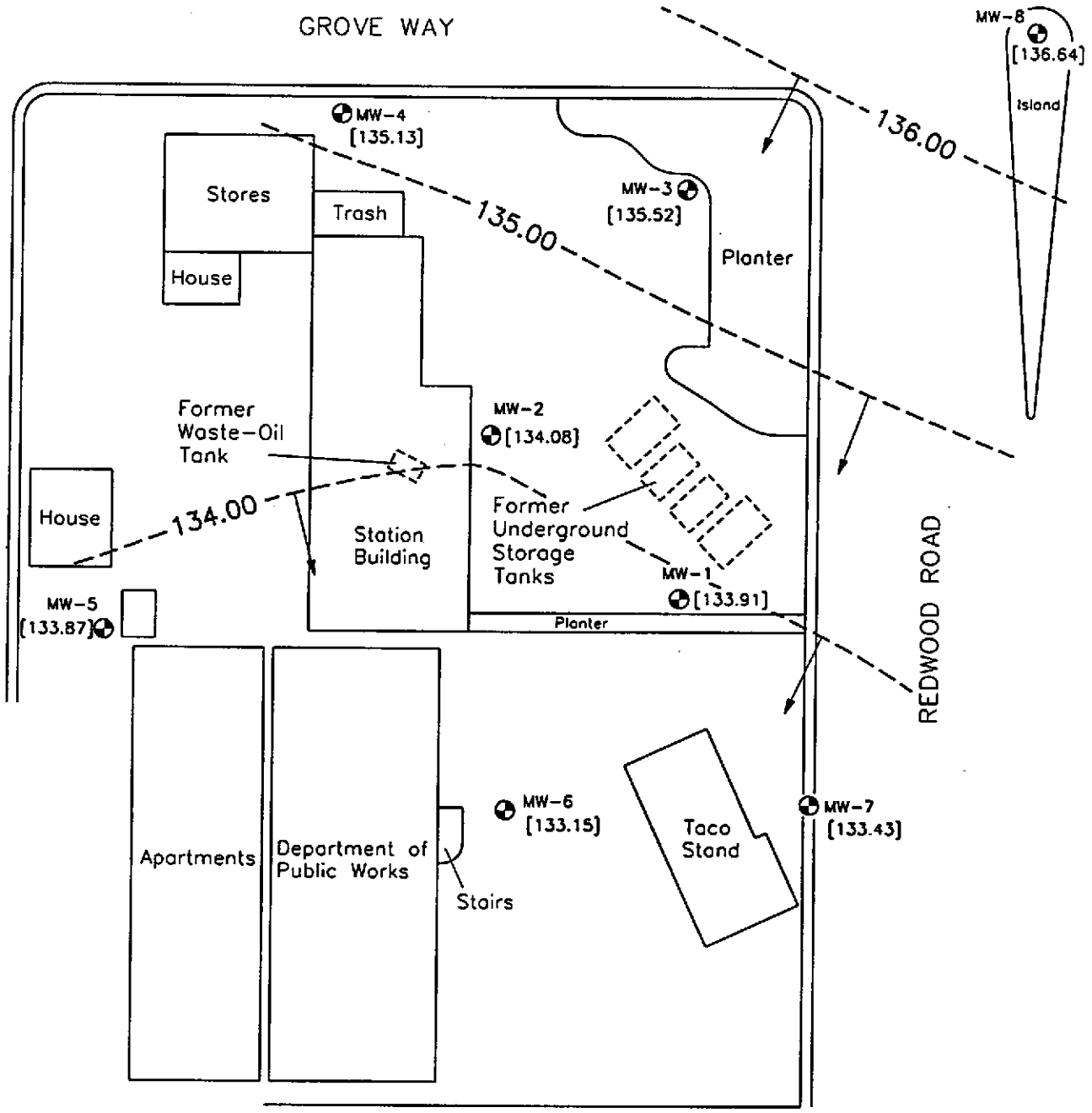
Attachments





SITE LOCATION MAP	FIGURE 1
BEACON STATION #574 22315 REDWOOD ROAD CASTRO VALLEY, CALIFORNIA	PROJECT NUMBER: U065.01
	DRAWN BY: D.A.V.D.
EL DORADO ENVIRONMENTAL, INC.	CHECKED BY:

SOURCE: STREET ATLAS U.S.A., DELORME MAPPING, 1994



EXPLANATION

MW-1 ⊕ Monitoring Well Location

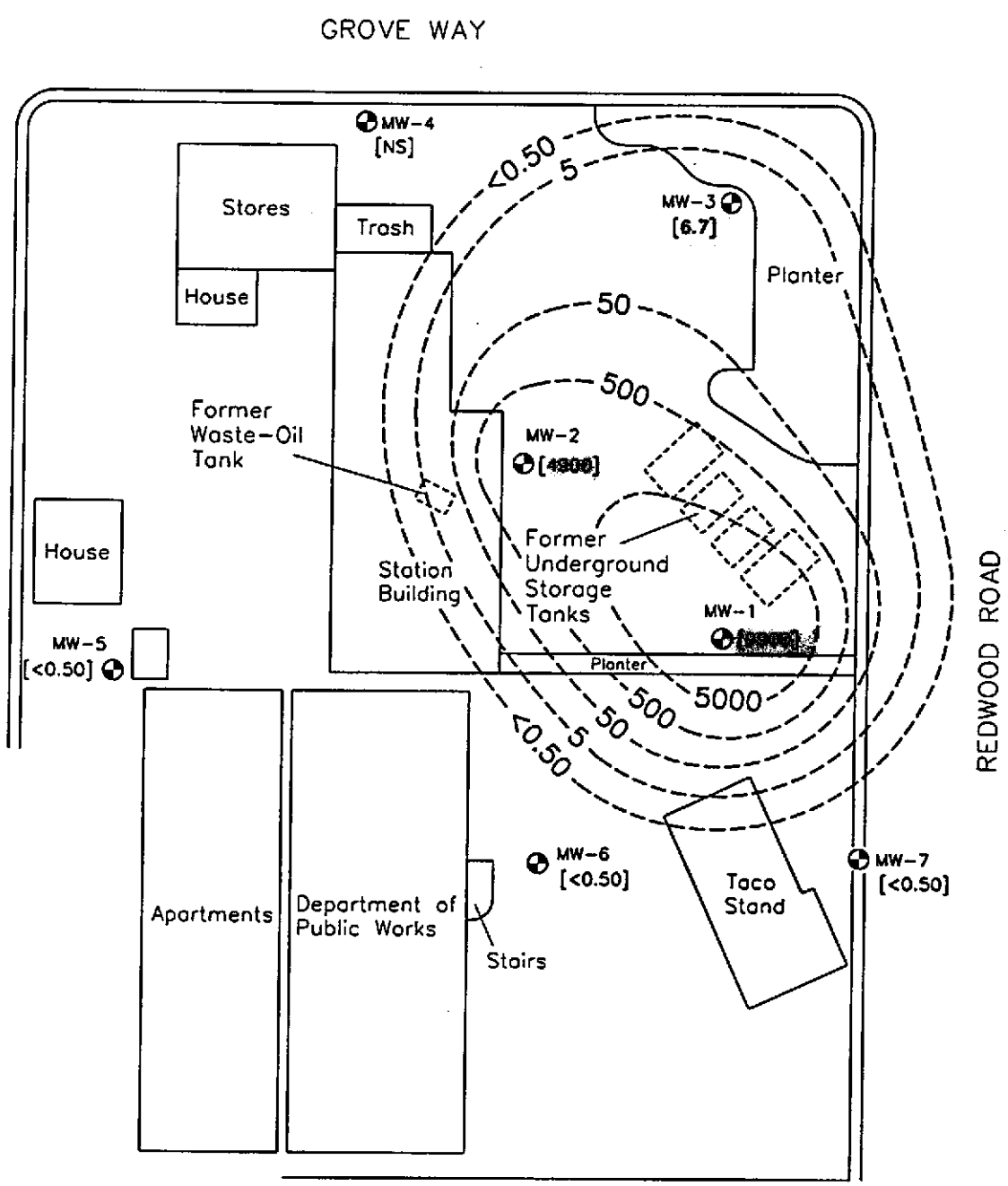
[133.91] Elevation of Ground Water Measured in Feet; Datum is Mean Sea Level

134.00 Line of Equal Elevation of Ground Water Measured in Feet; Datum is Mean Sea Level

Inferred Direction of Ground Water Flow

SOURCE: FIGURE MODIFIED FROM DRAWING PROVIDED BY FUGRO WEST, INC.

GROUND WATER CONTOUR MAP, AUGUST 31, 1998	FIGURE 2
BEACON STATION #574 22315 REDWOOD ROAD CASTRO VALLEY, CALIFORNIA	PROJECT NUMBER: U065.01 DRAWN BY: D.A.
EL DORADO ENVIRONMENTAL, INC.	CHECKED BY: DnD



EXPLANATION

MW-2 ⊕ Monitoring Well Location

[14000] Concentration of **Benzene** in Ground Water; Concentration in Micrograms per Liter

[NS] Well Not Sampled

50 Line of Equal Concentration of Benzene in Ground Water; Concentration in Micrograms per Liter

0 50

SCALE IN FEET

SOURCE: FIGURE MODIFIED FROM DRAWING PROVIDED BY FUGRO WEST, INC.

DISSOLVED BENZENE DISTRIBUTION MAP, AUGUST 31, 1998	FIGURE 3
BEACON STATION #574 22315 REDWOOD ROAD CASTRO VALLEY, CALIFORNIA	PROJECT NUMBER: U065.01 DRAWN BY: D.A.
EL DORADO ENVIRONMENTAL, INC.	CHECKED BY: DP

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-1	03/27/92	156.55	22.43	134.12	---	
	06/04/92		23.40	133.15	---	
	09/23/92		24.07	132.48	---	
	11/12/92		24.16	132.39	29.33	
	02/02/93		21.87	134.68	29.80	
	05/07/93		22.58	133.97	29.84	
	05/18/93		22.66	133.89	---	
	08/11/93		23.41	133.14	29.81	
	11/05/93		24.09	132.46	29.81	
	03/01/94		22.76	133.79	29.85	
	06/02/94		23.24	133.31	29.85	
	09/09/94		23.93	132.62	29.86	
	12/20/94		22.94	133.61	29.85	
	03/08/95		22.20	134.35	29.71	
	06/14/95		22.65	133.90	29.70	
	09/26/95		23.44	133.11	29.71	
	12/27/95		23.04	133.51	29.72	
	03/26/96		21.39	135.16	29.71	
	06/05/96		22.43	134.12	29.73	
	09/16/96		24.42	132.13	29.74	
	12/02/96		23.14	133.41	29.75	
	03/10/97		22.30	134.25	29.76	
	06/12/97		22.97	133.58	29.76	
	09/29/97		23.35	133.20	29.78	
	12/01/97		22.73	133.82	29.79	
	03/19/98		20.56	135.99	29.78	
	05/28/98		21.78	134.77	29.76	
	08/31/98		22.64	133.91	29.78	
MW-2	03/27/92	155.17	20.82	134.35	---	
	06/04/92		21.81	133.36	---	
	09/23/92		22.45	132.72	---	
	11/12/92		22.60	132.57	29.71	
	02/02/93		20.28	134.89	29.73	
	05/07/93		20.97	134.20	29.73	
	05/18/93		21.06	134.11	---	
	08/11/93		21.85	133.32	29.70	
	11/05/93		22.32	132.85	29.70	
	03/01/94		21.19	133.98	29.68	
	06/02/94		21.59	133.58	29.69	
	09/09/94		22.33	132.84	29.66	
	12/20/94		21.37	133.80	29.65	
	03/08/95		20.60	134.57	29.52	
	06/14/95		21.04	134.13	29.54	
	09/26/95		21.84	133.33	29.53	
	12/27/95		21.44	133.73	29.56	
	03/26/96		19.81	135.36	29.56	
	06/05/96		20.83	134.34	29.59	
	09/16/96		21.93	133.24	29.58	
	12/02/96		21.54	133.63	29.58	
	03/10/97		20.71	134.46	29.58	
	06/12/97		21.41	133.76	29.52	
	09/29/97		21.26	133.91	29.51	
	12/01/97		20.97	134.20	29.50	
	03/19/98		18.98	136.19	29.51	
	05/28/98		20.22	134.95	29.50	
	08/31/98		21.09	134.08	29.51	

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.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-3	03/27/92	157.13	21.46	135.67	---	
	06/04/92		22.34	134.79	---	
	09/23/92		22.84	134.29	---	
	11/12/92		23.04	134.09	29.55	
	02/02/93		21.03	136.10	29.45	
	05/07/93		21.59	135.54	29.53	
	05/18/93		21.73	135.40	---	
	08/11/93		22.31	134.82	29.41	
	11/05/93		22.85	134.28	29.41	
	03/01/94		21.97	135.16	29.55	
	06/02/94		22.29	134.84	29.56	
	09/09/94		22.91	134.22	29.56	
	12/20/94		22.11	135.02	29.54	
	03/08/95		21.40	135.73	29.38	
	06/14/95		21.80	135.33	29.36	
	09/26/95		22.38	134.75	29.37	
	12/27/95		22.07	135.06	29.37	
	03/26/96		20.73	136.40	29.38	
	06/05/96		21.54	135.59	29.40	
	09/16/96		22.37	134.76	29.43	
	12/02/96		22.35	134.78	29.45	
	03/10/97		21.44	135.69	29.47	
	06/12/97		21.97	135.16	29.45	
	09/29/97		22.30	134.83	29.45	
	12/01/97		21.78	135.35	29.46	
	03/19/98		19.88	137.25	29.46	
	05/28/98		20.91	136.22	29.47	
	08/31/98		21.61	135.52	29.47	
MW-4	05/18/93	151.96	17.55	134.41	---	
	08/11/93		17.50	134.46	28.43	
	11/05/93		15.84	136.12	28.43	
	03/01/94		17.35	134.61	28.11	
	06/02/94		17.68	134.28	28.12	
	09/09/94		18.19	133.77	28.13	
	12/20/94		17.52	134.44	28.10	
	03/08/95		16.82	135.14	27.97	
	06/14/95		17.22	134.74	27.97	
	09/26/95		17.79	134.17	27.91	
	12/27/95		17.47	134.49	27.89	
	03/26/96		16.32	135.64	27.89	
	06/05/96		17.10	134.86	27.88	
	09/16/96		17.85	134.11	27.89	
	12/02/96		17.59	134.37	27.88	
	03/10/97		16.79	135.17	27.89	
	06/12/97		17.49	134.47	27.90	
	09/29/97		18.33	133.63	27.91	
	12/01/97		17.36	134.60	27.90	
	03/19/98		15.90	136.06	27.91	
	05/28/98		16.34	135.62	27.90	
	08/31/98		16.83	135.13	27.90	

NOTES:
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--- = Not measured.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-5	05/18/93	148.68	15.72	132.96	—	
	08/11/93		16.42	132.26	25.43	
	11/05/93		16.92	131.76	25.43	
	03/01/94		15.54	133.14	25.00	
	06/02/94		16.19	132.49	25.00	
	09/09/94		16.87	131.81	25.00	
	12/20/94		15.84	132.84	25.01	
	03/08/95		15.11	133.57	24.85	
	06/14/95		15.69	132.99	24.86	
	09/26/95		16.46	132.22	24.81	
	12/27/95		15.91	132.77	24.80	
	03/26/96		14.31	134.37	24.81	
	06/05/96		15.43	133.25	24.75	
	09/16/96		16.52	132.16	24.74	
	12/02/96		16.05	132.63	24.76	
	03/10/97		14.80	133.88	24.74	
	06/12/97		15.95	132.78	24.75	
	09/29/97		16.33	132.35	24.76	
	12/01/97		15.48	133.20	24.78	
	03/19/98		13.16	135.52	24.77	
	05/28/98		14.04	134.64	24.78	
	08/31/98		14.81	133.87	24.79	
MW-6	05/18/93	153.96	20.80	133.16	—	
	08/11/93		21.64	132.32	31.15	
	11/05/93		22.11	131.85	31.15	
	03/01/94		20.80	133.16	29.96	
	06/02/94		21.37	132.59	29.98	
	09/09/94		22.05	131.91	29.96	
	12/20/94		21.06	132.90	29.89	
	03/08/95		20.29	133.67	29.67	
	06/14/95		20.81	133.15	29.65	
	09/26/95		21.62	132.34	29.66	
	12/27/95		21.12	132.84	29.63	
	03/26/96		19.50	134.46	29.60	
	06/05/96		20.56	133.40	29.63	
	09/16/96		21.70	132.26	29.65	
	12/02/96		21.25	132.71	29.66	
	03/10/97		20.16	133.80	29.64	
	06/12/97		21.16	132.80	29.62	
	09/29/97		21.51	132.45	29.62	
	12/01/97		20.89	133.07	29.61	
	03/19/98		18.71	135.25	29.60	
	05/28/98		19.99	133.97	29.62	
	08/31/98		20.81	133.15	29.63	

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.

TABLE 1
GROUND WATER ELEVATION DATA
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(Measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)[1]	Depth to Ground Water[1]	Ground Water Elevation[2]	Well Depth	Comments
MW-7	05/18/93	156.09	22.64	133.45	---	
	08/11/93		23.25	132.84	30.75	
	11/05/93		23.93	132.16	30.75	
	03/01/94		22.72	133.37	30.11	
	06/02/94		23.22	132.87	30.12	
	09/09/94		23.90	132.19	30.12	
	12/20/94		22.98	133.11	30.10	
	03/08/95		22.14	133.95	29.91	
	06/14/95		22.61	133.48	29.91	
	09/26/95		23.43	132.66	29.90	
	12/27/95		23.01	133.08	29.90	
	03/26/96		21.32	134.77	29.87	
	06/05/96		22.37	133.72	29.91	
	09/16/96		23.51	132.58	29.90	
	12/02/96		23.08	133.01	29.91	
	03/10/97		21.94	134.15	29.90	
	06/12/97		22.96	133.13	29.88	
	09/29/97		23.35	132.74	29.87	
	12/01/97		22.68	133.41	29.88	
	03/19/98		20.52	135.57	29.88	
	05/28/98		21.76	134.33	29.88	
	08/31/98		22.66	133.43	29.86	
MW-8	05/18/93	158.04	21.55	136.49	---	
	08/11/93		22.43	135.61	34.82	
	11/05/93		23.00	135.04	34.82	
	03/01/94		22.05	135.99	34.04	
	06/02/94		22.29	135.75	34.04	
	09/09/94		22.99	135.05	34.04	
	12/20/94		22.14	135.90	33.98	
	03/08/95		21.25	136.79	34.48	
	06/14/95		21.70	136.34	34.49	
	09/26/95		22.29	135.75	34.40	
	12/27/95		21.96	136.08	34.43	
	03/26/96		20.48	137.56	34.42	
	06/05/96		21.50	136.54	34.41	
	09/16/96		22.38	135.66	34.43	
	12/02/96		22.39	135.65	34.42	
	03/10/97		20.89	137.16	34.43	
	06/12/97		21.80	136.24	34.42	
	09/29/97		22.81	135.23	34.40	
	12/01/97		21.70	136.34	34.41	
	03/19/98		19.35	138.69	34.42	
	05/28/98		20.52	137.52	34.41	
	08/31/98		21.40	136.64	34.40	

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.

TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics				
		Gasoline	Diesel	Motor Oil	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-1	03/27/92	5,600	<50	<50		760	900	230	1,100
	06/04/92	2,600	<800	NA		270	57	230	440
	09/23/92	3,400	NA	NA		480	430	110	550
	11/12/92	2,700	NA	NA		5.8	<5.0	140	340
	02/02/93	8,500	NA	NA		760	770	250	1,200
	05/07/93	7,700	NA	NA		970	630	280	1,500
	08/11/93	11,000	NA	NA		1,400	1,000	260	1,600
	11/05/93	36,000	NA	NA		6,200	4,700	1,400	7,100
	03/01/94	3,800	NA	NA		580	490	110	620
	06/02/94	8,900	NA	NA		1,900	1,200	420	2,100
	09/09/94	4,300	NA	NA		740	290	200	630
	12/20/94	3,900	NA	NA		550	260	150	510
	03/08/95	8,100	NA	NA		1,100	540	250	1,100
	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	8,600	NA	NA		2,100	550	420	1,300
	12/27/95	NS	NS	NS		NS	NS	NS	NS
	03/26/96	21,000	NA	NA		7,000	2,700	590	7,000
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	13,000	NA	NA	1,400	3,200	770	470	2,900
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	30,000	NA	NA	1,100	7,300	1,900	850	7,100
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	25,000	NA	NA	840	5,500	920	920	4,000
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	90,000	NA	NA	<1,500	15,000	7,000	3,300	20,000
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	50,000	NA	NA	890	9,900	1,500	2,100	9,400
MW-2	03/27/92	18,000	<50	<50		2,400	2,300	870	3,300
	06/04/92	14,000	<5,000	NA		1,900	1,700	580	2,300
	09/23/92	22,000	NA	NA		2,100	1,500	760	2,900
	11/12/92	29,000	NA	NA		2,400	860	540	3,500
	02/02/93	24,000	NA	NA		2,700	1,900	590	2,600
	05/07/93	19,000	NA	NA		1,800	1,300	460	2,600
	08/11/93	23,000	NA	NA		2,300	1,500	550	2,300
	11/05/93	30,000	NA	NA		3,100	2,900	860	3,700
	03/01/94	13,000	NA	NA		1,500	490	350	1,000
	06/02/94	12,000	NA	NA		2,000	790	460	1,300
	09/09/94	13,000	NA	NA		1,800	660	440	1,000
	12/20/94	16,000	NA	NA		2,300	1,000	650	1,900
	03/08/95	16,000	NA	NA		2,200	1,000	550	2,100
	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	18,000	NA	NA		2,500	1,000	770	2,700
	12/27/95	NS	NS	NS		NS	NS	NS	NS
	03/26/96	33,000	NA	NA		4,200	2,600	1,000	5,000
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	19,000	NA	NA	940	2,600	490	560	2,000
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	23,000	NA	NA	1,400	3,700	870	650	3,000
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	30,000	NA	NA	1,400	4,900	880	990	3,800
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	72,000	NA	NA	<1,500	14,000	9,500	2,300	11,000
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	29,000	NA	NA	890	4,900	1,600	960	3,900

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TABLE 2
GROUND WATER ANALYTICAL RESULTS
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics				
		Gasoline	Diesel	Motor Oil	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-3	03/27/92	160	<50	<50		9.2	4.8	10	23
	06/04/92	120	<50	NA		7.5	2.7	0.5	15
	09/23/92	220	NA	NA		8.3	4.3	6.2	19
	11/12/92	230	NA	NA		12	5.5	7.7	19
	02/02/93	86	NA	NA		2.4	0.71	2.7	6.2
	05/07/93	140	NA	NA		2.6	1.2	3.9	8.4
	08/11/93	490	NA	NA		15	8.1	14	37
	11/05/93	820	NA	NA		45	24	34	93
	03/01/94	410	NA	NA		7.4	2.7	5.6	10
	06/02/94	440	NA	NA		13	4.9	14	31
	09/09/94	620	NA	NA		12	4.8	9.7	20
	12/20/94	770	NA	NA		24	11	16	36
	03/08/95	300	NA	NA		6.1	0.97	4.8	7.5
	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	130	NA	NA		4.8	1.6	4.8	9.4
	12/27/95	NS	NS	NS		NS	NS	NS	NS
	03/26/96	<50	NA	NA		<0.50	<0.50	<0.50	<0.50
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	170	NA	NA	<5.0	10	2.9	4.4	15
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	84	NA	NA	<5.0	2.3	<0.50	1.4	2.6
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	740	NA	NA	<5.0	61	9.8	42	61
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	<50	NA	NA	<5.0	<0.50	<0.50	<0.50	<0.50
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	320	NA	NA	3.4	6.7	1.0	10	9.3
MW-4	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/01/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	NS	NS	NS		NS	NS	NS	NS
	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	NS	NS	NS		NS	NS	NS	NS
	12/27/95	NS	NS	NS		NS	NS	NS	NS
	03/26/96	NS	NS	NS		NS	NS	NS	NS
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	<50	NA	NA	<5.0	<0.50	<0.50	<0.50	<0.50
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	NS	NS	NS	NS	NS	NS	NS	NS
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	NS	NS	NS	NS	NS	NS	NS	NS
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	NS	NS	NS	NS	NS	NS	NS	NS
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	NS	NS	NS	NS	NS	NS	NS	NS

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GROUND WATER ANALYTICAL RESULTS
BEACON STATION #574
22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics				
		Gasoline	Diesel	Motor Oil	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-5	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/01/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/14/95	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/26/95	<50	NA	NA		<0.50	<0.50	<0.50	<0.50
	12/27/95	<50	NA	NA		<0.50	<0.50	<0 50	<0.50
	03/26/96	<50	NA	NA		<0.50	<0.50	<0 50	<0.50
	06/05/96	<50	NA	NA	15	<0.50	<0.50	<0 50	<0.50
	09/16/96	<50	NA	NA	20	<0.50	<0.50	<0 50	<0.50
	12/02/96	<50	NA	NA	12	<0.50	<0.50	<0 50	<0.50
	03/10/97	<50	NA	NA	7.0	<0.50	<0.50	<0 50	<0.50
	06/12/97	<50	NA	NA	7.2	<0.50	<0.50	<0 50	<0.50
	09/29/97	<50	NA	NA	<5.0	<0.50	<0.50	<0 50	<0.50
	12/01/97	<50	NA	NA	<5.0	<0.50	<0.50	<0 50	<0.50
	03/19/98	<50	NA	NA	<5.0	<0.50	<0.50	<0 50	<0.50
	05/28/98	<50	NA	NA	<5.0	<0.50	<0.50	<0 50	<0.50
	08/31/98	<50	NA	NA	<0.50	<0.50	<0.50	<0 50	<0.50
MW-6	05/18/93	170	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	78	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	170	NA	NA		<0.5	<0.5	<0.5	0.65
	03/01/94	210	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94	190	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	140	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	210	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	180*	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/14/95	220*	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/26/95	110*	NA	NA		<0.50	<0.50	<0 50	<0.50
	12/27/95	130*	NA	NA		<0.50	<0.50	<0 50	<0.50
	03/26/96	100*	NA	NA		<0.50	<0.50	<0 50	<0.50
	06/05/96	100*	NA	NA	430	<0.50	<0.50	<0 50	<0.50
	09/16/96	170	NA	NA	430	<0.50	<0.50	<0 50	<0.50
	12/02/96	160	NA	NA	160	<0.50	<0.50	<0 50	<0.50
	03/10/97	140	NA	NA	390	<0.50	<0.50	<0 50	<0.50
	06/12/97	<50	NA	NA	330	<0.50	<0.50	<0 50	<0.50
	09/29/97	<50	NA	NA	130	<0.50	<0.50	<0 50	<0.50
	12/01/97	<50	NA	NA	200	<0.50	<0.50	<0 50	<0.50
	03/19/98	<50	NA	NA	240	<0.50	<0.50	<0 50	<0.50
	05/28/98	<50	NA	NA	290	<0.50	<0.50	<0 50	<0.50
	08/31/98	<50	NA	NA	290	<0.50	<0.50	<0 50	<0.50

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22315 REDWOOD ROAD, CASTRO VALLEY, CALIFORNIA
(All results in micrograms per Liter)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics				
		Gasoline	Diesel	Motor Oil	MTBE[1]	Benzene	Toluene	Ethyl-benzene	Total Xylenes
MW-7	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/01/94	60	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/14/95	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/26/95	<50	NA	NA		<0.50	<0.50	<0.50	<0.50
	12/27/95	<50	NA	NA		<0.50	<0.50	<0 50	<0.50
	03/26/96	<50	NA	NA		<0.50	<0.50	<0 50	<0.50
	06/05/96	<50	NA	NA	20	<0.50	<0.50	<0.50	<0.50
	09/16/96	<50	NA	NA	26	<0.50	<0.50	<0.50	<0.50
	12/02/96	140	NA	NA	140	<0.50	<0.50	<0.50	<0.50
	03/10/97	<50	NA	NA	29	<0.50	<0.50	<0 50	<0.50
	06/12/97	<50	NA	NA	28	<0.50	<0.50	<0 50	<0.50
	09/29/97	<50	NA	NA	27	<0.50	<0.50	<0 50	<0.50
	12/01/97	<50	NA	NA	29	<0.50	<0.50	<0 50	<0.50
	03/19/98	<50	NA	NA	6.0	<0.50	<0.50	<0 50	<0.50
	05/28/98	<50	NA	NA	25	<0.50	<0.50	<0 50	<0.50
	08/31/98	<50	NA	NA	20	<0.50	<0.50	<0 50	<0.50
MW-8	05/18/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	08/11/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	11/05/93	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/01/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	06/02/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	09/09/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	12/20/94	<50	NA	NA		<0.5	<0.5	<0.5	<0.5
	03/08/95	NS	NS	NS		NS	NS	NS	NS
	06/14/95	NS	NS	NS		NS	NS	NS	NS
	09/26/95	NS	NS	NS		NS	NS	NS	NS
	12/27/95	NS	NS	NS		NS	NS	NS	NS
	03/26/96	NS	NS	NS		NS	NS	NS	NS
	06/05/96	NS	NS	NS		NS	NS	NS	NS
	09/16/96	<50	NA	NA	<5.0	<0.50	<0.50	<0 50	<0.50
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	NS	NS	NS	NS	NS	NS	NS	NS
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	NS	NS	NS	NS	NS	NS	NS	NS
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	NS	NS	NS	NS	NS	NS	NS	NS
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	NS	NS	NS	NS	NS	NS	NS	NS

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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 #574, 22315 Redwood Rd. Date: 8-31-98

Castro Valley, CA Project No.: 94-574-01

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	10:53		29.64	29.78				Petroleum odor no sheen
MW-2	10:39		21.09	29.51				Petroleum odor no sheen
MW-3	10:33		21.61	29.47				Petroleum odor no sheen
MW-4	10:18		16.83	27.90				
MW-5	10:15		14.81	24.79				no odor no sheen
MW-6	10:26		20.81	29.63				no odor no sheen
MW-7	10:21		22.66	29.86				no odor no sheen
MW-8	10:30		21.40	34.40				

Notes:

DOULOS ENVIRONMENTAL COMPANY — SAMPLING INFORMATION SHEET

Client: Ultramar — Sampling Date: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 1

Castro Valley, 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 X 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
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposal 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: 10:53
Depth of well: 29.78
Depth to water: 22.64

Recharge Measurement
Time: 2:09
Depth to water: 23.17

Calculated purge: 18.5 gal
Actual purge: 18.5 gal

Start purge: 12:46 Sampling time: 2:11

Time	Temp.	E.C.	pH	Turbidity	Volume
12:50	72.9	1940	5.50	—	1
12:56	71.6	1810	5.10	—	2
12:59	70.4	1799	4.90	—	3
1:06	70.1	1798	4.81	—	4

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: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 2

Castro Valley, 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 X 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
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposal 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: 10:39
Depth of well: 29.51
Depth to water: 21.09

Recharge Measurement
Time: 1:46
Depth to water: 22.10

Calculated purge: 21.8 gal
Actual purge: 21.8 gal

Start purge: 12:21 Sampling time: 1:50

Time	Temp.	E.C.	pH	Turbidity	Volume
12:26	70.1	3116	4.81	—	1
12:30	71.6	3041	4.83	—	2
12:35	71.8	2040	4.60	—	3
12:40	71.9	2046	4.10	—	4

Sample appearance: Clear Lock: Yellow

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: Karl Gla

DOULOS ENVIRONMENTAL COMPANY — SAMPLING INFORMATION SHEET

Client: Ultramar — Sampling Date: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 3

Castro Valley, 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 X 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
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposal 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: 10:33
Depth of well: 29.47
Depth to water: 21.61

Recharge Measurement
Time: 1:30
Depth to water: 22.17

Calculated purge: 20.44
Actual purge: 20.4 Gal

Start purge: 11:58 Sampling time: 1:37

Time	Temp.	E.C.	pH	Turbidity	Volume
11:59	70.1	1810	5.40	———	1
12:04	69.9	1840	5.10	———	2
12:08	68.1	1791	4.98	———	3
12:14	68.4	1780	4.90	———	4

Sample appearance: Clear Lock: Not Found

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: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 5

Castro Valley, 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): 3
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
_____2" PVC bailer
_____4" PVC bailer
_____Submersible pump
_____Dedicated bailer
X Centrifugal pump

Sampled with: Disposal 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: 10:15
Depth of well: 24.79
Depth to water: 14.81

Recharge Measurement
Time: 11:11
Depth to water: 15.10

Calculated purge: 6.3 gal
Actual purge: 6.3 gal

Start purge: 11:01 Sampling time: 11:12

Time	Temp.	E.C.	pH	Turbidity	Volume
11:01	69.4	1510	7.51	—	1
11:03	69.1	1460	7.46	—	2
11:07	68.4	1410	7.40	—	3
11:08	67.1	1360	7.19	—	4

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: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 6

Castro Valley, 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): 10
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 ____2" PVC bailer ____4" PVC bailer ____Submersible pump ____Dedicated bailer X Centrifugal pump

Sampled with: Disposal 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: 10:26
Depth of well: 29.63
Depth to water: 20.81

Recharge Measurement
Time: 11:50
Depth to water: 21.60

Calculated purge: 5.6
Actual purge: 5.6

Start purge: 11:26 Sampling time: 11:51

Time	Temp.	E.C.	pH	Turbidity	Volume
11:37	69.1	1540	7.60	—	1
11:38	70.1	1470	7.51	—	2
11:40	70.4	1331	7.40	—	3
11:41	71.6	1340	7.38	—	4

Sample appearance: Clear Lock: [illegible]

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: [signature]

DOULOS ENVIRONMENTAL COMPANY — SAMPLING INFORMATION SHEET

Client: Ultramar — Sampling Date: 8-31-98

Site: Beacon #574 — Project No.: 94-574-01

22315 Redwood Road — Well Designation: MW- 7

Castro Valley, 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): 6
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
_____ 2" PVC bailer
_____ 4" PVC bailer
_____ Submersible pump
_____ Dedicated bailer
X Centrifugal pump

Sampled with: Disposal 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: 10:21
Depth of well: 29.86
Depth to water: 22.66

Recharge Measurement
Time: 11:25
Depth to water: 23.10

Calculated purge: 4.6 gal
Actual purge: 4.6 gal

Start purge: 11:15 Sampling time: 11:30

Time	Temp.	E.C.	pH	Turbidity	Volume
11:16	80.1	1510	7.50	—	1
11:17	76.1	1470	7.41	—	2
11:18	76.1	1350	7.36	—	3
11:30	76.0	1241	7.30	—	4

Sample appearance: clear Lock: satisfactory

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: Karl Hoff

ATTACHMENT C

HISTORICAL GROUND WATER ELEVATION DATA

TABLE 2

WATER LEVEL DATA
(measurements in feet)

Monitoring Well	Date	Reference Elevation (top of casing)	Depth to Ground Water	Ground Water Elevation
MW-1	04-01-91	156.55	22.37	134.18
	03-27-92		22.43	134.12
	06-04-92		23.40	133.15
	09-23-92		24.07	132.48
	11-12-92		24.16	132.39
	02-02-93		21.87	134.68
	05-18-93		22.66	133.89
MW-2	04-01-91	155.17	20.82	134.25
	03-27-92		20.82	134.35
	06-04-92		21.81	133.36
	09-23-92		22.45	132.72
	11-12-92		22.60	132.57
	02-02-93		20.28	134.89
	05-18-93		21.06	134.11
MW-3	04-01-91	157.13	21.55	135.58
	03-27-92		21.46	135.67
	06-04-92		22.34	134.79
	09-23-92		22.84	134.29
	11-12-92		23.03	134.09
	02-02-93		21.03	136.10
	05-18-93		21.73	135.40
MW-4	05-18-93	151.96	17.55	134.41
MW-5	05-18-93	148.68	15.72	132.96
MW-6	05-18-93	153.96	20.80	133.16
MW-7	05-18-93	156.09	22.64	133.45
MW-8	05-18-93	158.04	21.55	136.49

ATTACHMENT D

HISTORICAL GROUND WATER ANALYTICAL DATA

TABLE 3

GROUND WATER ANALYTICAL RESULTS
(concentrations in parts per billion)

Monitoring Well	Date Collected	Total Petroleum Hydrocarbons			Aromatic Volatile Organics			
		Gasoline	Diesel	Motor Oil	Benzene	Toluene	Ethylbenzene	Total Xylenes
MW-1	04-01-91	4,100	<100	-	140	570	76	460
	03-27-92	5,600	<50	<50	760	900	230	1,100
	06-04-92	2,600	<800	-	270	57	230	440
	09-23-92	3,400	-	-	480	430	110	550
	11-12-92	2,700	-	-	5.8	<5.0	140	340
	02-02-93	8,500	-	-	760	770	250	1,200
	05-07-93	7,700	-	-	970	630	280	1,500
MW-2	04-01-91	10,000	<100	-	650	640	150	960
	03-27-92	18,000	<50	<50	2,400	2,300	870	3,300
	06-04-92	14,000	<5,000	-	1,900	1,700	580	2,300
	09-23-92	22,000	-	-	2,100	1,500	760	2,900
	11-12-92	29,000	-	-	2,400	860	540	3,500
	02-02-93	24,000	-	-	2,700	1,900	590	2,600
	05-07-93	19,000	-	-	1,800	1,300	460	2,600
MW-3	04-01-91	3,100	<100	-	41	91	37	420
	03-27-92	160	<50	<50	9.2	4.8	10	23
	06-04-92	120	<50	-	7.5	2.7	0.5	15
	09-23-92	220	-	-	8.3	4.3	6.2	19
	11-12-92	230	-	-	12	5.5	7.7	19
	02-02-93	86	-	-	2.4	0.71	2.7	6.2
	05-07-93	140	-	-	2.6	1.2	3.9	8.4
MW-4	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-5	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-6	05-18-93	170	-	-	<0.50	<0.50	<0.50	<0.50
MW-7	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50
MW-8	05-18-93	<50	-	-	<0.50	<0.50	<0.50	<0.50

Note: Dash (-) indicates that the sample was not analyzed for this constituent.

ATTACHMENT E

LABORATORY REPORT AND CHAIN-OF-CUSTODY FORM

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

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

Subject : 6 Water Samples
Project Name : Beacon 574
Project Number : 94-574-01

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,

Joel Kiff

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

Project Name : **Beacon 574**
Project Number : **94-574-01**

Sample : **MW-2** Matrix : Water
Sample Date :08/31/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**4900**	25	ug/L	EPA 8020	09/14/98
Toluene	**1600**	25	ug/L	EPA 8020	09/14/98
Ethylbenzene	**960**	25	ug/L	EPA 8020	09/14/98
Total Xylenes	**3900**	25	ug/L	EPA 8020	09/14/98
TPH as Gasoline	**29000**	2500	ug/L	M EPA 8015	09/14/98
Methyl-t-butyl ether (MTBE)	**890**	2.5	ug/L	Mod EPA 8260	09/15/98
Diisopropyl ether (DIPE)	**21**	2.5	ug/L	Mod EPA 8260	09/15/98
Ethyl-t-butyl ether (ETBE)	**< 2.5**	2.5	ug/L	Mod EPA 8260	09/15/98
Tert-amyl methyl ether (TAME)	**< 2.5**	2.5	ug/L	Mod EPA 8260	09/15/98
Tert-Butanol	**390**	25	ug/L	Mod EPA 8260	09/15/98
Methanol	**2500**	250	ug/L	Mod EPA 8260	09/15/98
Ethanol	**< 25**	25	ug/L	Mod EPA 8260	09/15/98
4-Bromofluorobenzene (Surr)	121		% Recovery	Mod EPA 8260	09/15/98
Methanol - d3 (Surr)	122		% Recovery	Mod EPA 8260	09/15/98
aaa-Trifluorotoluene (8020 Surrogate)	108		% Recovery	EPA 8020	09/14/98
aaa-Trifluorotoluene (Gasoline Surrogate)	101		% Recovery	M EPA 8015	09/14/98

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

Project Name : **Beacon 574**
Project Number : **94-574-01**

Sample : **MW-3** Matrix : Water
Sample Date :08/31/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**6.7**	0.50	ug/L	EPA 8020	09/12/98
Toluene	**1.0**	0.50	ug/L	EPA 8020	09/12/98
Ethylbenzene	**10**	0.50	ug/L	EPA 8020	09/12/98
Total Xylenes	**9.3**	0.50	ug/L	EPA 8020	09/12/98
TPH as Gasoline	**320**	50	ug/L	M EPA 8015	09/12/98
Methyl-t-butyl ether (MTBE)	**3.4**	0.50	ug/L	Mod EPA 8260	09/14/98
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-Butanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
Methanol	**< 50**	50	ug/L	Mod EPA 8260	09/14/98
Ethanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
4-Bromofluorobenzene (Surr)	116		% Recovery	Mod EPA 8260	09/14/98
Methanol - d3 (Surr)	110		% Recovery	Mod EPA 8260	09/14/98
aaa-Trifluorotoluene (8020 Surrogate)	97.6		% Recovery	EPA 8020	09/12/98
aaa-Trifluorotoluene (Gasoline Surrogate)	108		% Recovery	M EPA 8015	09/12/98

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

Project Name : **Beacon 574**
Project Number : **94-574-01**

Sample : **MW-5** Matrix : Water
Sample Date :08/31/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	09/12/98
Methyl-t-butyl ether (MTBE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-Butanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
Methanol	**< 50**	50	ug/L	Mod EPA 8260	09/14/98
Ethanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
4-Bromofluorobenzene (Surr)	129		% Recovery	Mod EPA 8260	09/14/98
Methanol - d3 (Surr)	88.2		% Recovery	Mod EPA 8260	09/14/98
aaa-Trifluorotoluene (8020 Surrogate)	104		% Recovery	EPA 8020	09/12/98
aaa-Trifluorotoluene (Gasoline Surrogate)	97.0		% Recovery	M EPA 8015	09/12/98

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

Project Name : **Beacon 574**
Project Number : **94-574-01**

Sample : **MW-6** Matrix : Water
Sample Date :08/31/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	09/12/98
Methyl-t-butyl ether (MTBE)	**290**	2.5	ug/L	Mod EPA 8260	09/14/98
Diisopropyl ether (DIPE)	**3.6**	0.50	ug/L	Mod EPA 8260	09/15/98
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/15/98
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/15/98
Tert-Butanol	**12**	5.0	ug/L	Mod EPA 8260	09/15/98
Methanol	**380**	50	ug/L	Mod EPA 8260	09/15/98
Ethanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/15/98
4-Bromofluorobenzene (Surr)	124		% Recovery	Mod EPA 8260	09/14/98
Methanol - d3 (Surr)	101		% Recovery	Mod EPA 8260	09/14/98
aaa-Trifluorotoluene (8020 Surrogate)	104		% Recovery	EPA 8020	09/12/98
aaa-Trifluorotoluene (Gasoline Surrogate)	95.8		% Recovery	M EPA 8015	09/12/98

Approved By: Joel Kiff

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

KIFF ANALYTICAL LLC

Report Number : 12215
Date : 09/15/98

Project Name : **Beacon 574**
Project Number : **94-574-01**

Sample : **MW-7** Matrix : Water
Sample Date :08/31/98

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Toluene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Ethylbenzene	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
Total Xylenes	**< 0.50**	0.50	ug/L	EPA 8020	09/12/98
TPH as Gasoline	**< 50**	50	ug/L	M EPA 8015	09/12/98
Methyl-t-butyl ether (MTBE)	**20**	0.50	ug/L	Mod EPA 8260	09/14/98
Diisopropyl ether (DIPE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Ethyl-t-butyl ether (ETBE)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-amyl methyl ether (TAME)	**< 0.50**	0.50	ug/L	Mod EPA 8260	09/14/98
Tert-Butanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
Methanol	**56**	50	ug/L	Mod EPA 8260	09/14/98
Ethanol	**< 5.0**	5.0	ug/L	Mod EPA 8260	09/14/98
4-Bromofluorobenzene (Surr)	117		% Recovery	Mod EPA 8260	09/14/98
Methanol - d3 (Surr)	92.0		% Recovery	Mod EPA 8260	09/14/98
aaa-Trifluorotoluene (8020 Surrogate)	103		% Recovery	EPA 8020	09/12/98
aaa-Trifluorotoluene (Gasoline Surrogate)	96.6		% Recovery	M EPA 8015	09/12/98

Approved By: Joel Kiff

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

Ultramar Inc.
CHAIN OF CUSTODY REPORT 12215

BEACON

Beacon Station No.	Sampler (Print Name)			ANALYSES									Date	Form No.
574	Hal Hansen												8-31-98	1 of 1
Project No.	Sampler (Signature)													
94-574-01	Hal Hansen												Standard T/AT	
Project Location	Affiliation													
Casa Valley	Dunlap													
Sample No./Identification	Date	Time	Lab No.	BTEX	TPH (gasoline)	TPH (diesel)						No. of Containers	REMARKS	
MW-1	8-31-98	2:11		X	X							2		
MW-2		1:50												
MW-3		1:37												
MW-5		11:12												
MW-6		11:51											Add Toxics as per Hal Hansen 9/4/98 JLC	
MW-7		11:20												

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Hal Hansen Ultramar	9-1-98	1100			
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation)	Date	Time
			Austin Hunt	9/1/98	11:20

Report To: Dale van Dam

Bill to: ULTRAMAR INC.
525 West Third Street
Hanford, CA 93230
Attention: Joe Aldridge

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

32-8003 1/00