

STIB
3579

REVISION
RESPONSE TO 6/12/01
ALY

**STATUS REPORT
FIRST QUARTER 2001
FORMER BEACON STATION #12574
22315 REDWOOD ROAD
CASTRO VALLEY, CALIFORNIA**

BSK Job 07-4-00237

Submitted to:

ULTRAMAR, INC.

June 7, 2001

437

June 7, 2001

Project 07-4-00237

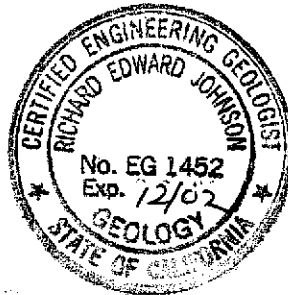
Mr. Joseph A. Aldridge, RG
Senior Project Manager
Retail Environmental Services
Ultramar, Inc.
685 West Third Street
Hanford, CA 93230

Subject: Status Report
First Quarter 2001
Former Beacon Station # 12574
22315 Redwood Road
Castro Valley, California

Dear Mr. Aldridge:

BSK & Associates (BSK) is pleased to submit the attached quarterly status report, which summarizes groundwater monitoring for the first quarter of 2001. Well sampling was conducted for Ultramar, Inc. by Doulos Environmental Company, and analytical testing was conducted by Kiff Analytical. This report summarizes the data provided to us by Doulos Environmental Company and Kiff Analytical.

This report has been prepared according to California Regional Water Quality Control Board - Central Valley Region (RWQCB) requirements as presented in the *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites, Appendix A*. At your request, a copy of this report has been forwarded to Mr. Scott Sceery, Alameda County Department of Environmental Health (ACDEH) and Mr. Richard Hiatt, RWQCB. Should you have questions regarding the report, please do not hesitate to call us.



Sincerely,
BSK & Associates

Richard E. Johnson, CEG
Manager, Environmental Services

Distribution:

- Mr. J. Aldridge, RG (1 original)
- Mr. Amir K. Tholami, ACDEH (1 copy)
- Mr. Richard Hiatt, RWQCB (1 copy)
- Mr. Bill Courtney, Property Manager (1 copy)

A California Corporation

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SITE DESCRIPTION AND HISTORY	1
3.0	QUARTERLY ACTIVITIES	2
3.1	Groundwater Gradient and Flow Direction	2
3.2	Analytical Results	3
4.0	DISCUSSION	3
5.0	LIMITATIONS	3

FIGURES

Figure 1 - Vicinity Map

Figure 2 - Site Plan

Figure 3 - Generalized Potentiometric Surface Map, February 2001

Figure 4 - Dissolved Benzene Distribution Map, February 2001

TABLES

Table 1 - Summary of Groundwater Analytical Results, February 2001

Table 2 - Cumulative Groundwater Elevation Data

Table 3 - Summary of Groundwater Analytical Results

APPENDICES

Appendix A - Ultramar Field Sampling Procedures

Appendix B - Water Sample Logs - Doulos Environmental

Appendix C - Laboratory Reports and Chain of Custody Documentation

1.0 INTRODUCTION

This report presents a summary of the results of quarterly groundwater monitoring at former Beacon Station # 12574 (the Site) during the first quarter of 2001. Figure 1, the Vicinity Map, illustrates the location of the site.

Site information is as follows:

Site Name and Location: Former Ultramar (Beacon) Station # 12574
22315 Redwood Road
Castro Valley, California

Tank Owner and Contact: Ultramar, Inc.,
Mr. Joe Aldridge, RG
685 West Third Street
Hanford, California 93230
(559) 583-3231

2.0 SITE DESCRIPTION AND HISTORY

The Site is located at the intersection of Redwood Road and Grove Way in Castro Valley, California. The Site is currently occupied by commercial businesses in separate suites within a single building. A Site Plan is shown in Figure 2.

In 1981, Shell Oil Co. removed and replaced three underground storage tanks (USTs). Results of the soil samples collected at the time of the UST removal indicated the presence of petroleum hydrocarbons in the soil underlying the USTs.

From 1981 to 1987 Ultramar leased the Site, including the petroleum product storage and piping equipment, and operated a retail gasoline service station. On May 5, 1987 two 5,000-gallon-capacity diesel USTs, a 7,000-gallon-capacity gasoline UST, one 8,000-gallon-capacity gasoline UST, and one 500-gallon-capacity waste oil UST were removed from the Site. Over excavation of the UST basin to a depth of approximately 20 feet below grade was performed on May 18, 1987. Three of seven soil samples collected from the walls and the floor of the excavation contained Total Volatile Hydrocarbons, up to 1,989 parts per million (ppm).

On March 26, 1991, three soil borings were advanced to depths of approximately 30 feet below ground surface (bgs) and completed as 4-inch-diameter monitoring wells MW-1, MW-2, and MW-3 (Figure 2). Soil samples collected from the borings were submitted for laboratory analysis of benzene, toluene, ethylbenzene, total xylenes (BTEX), total petroleum hydrocarbons as gasoline (TPHg), and total petroleum hydrocarbons as diesel (TPHd). None of the soil sample

contained detectable TPHd. The soil samples collected from 10 and 15 feet bgs (above the water table) in boring MW-2 contained 8.1 ppm and 3,200 ppm TPHg, respectively.

On April 1, 1991 groundwater samples were collected from monitoring wells MW-1, MW-2, and MW-3. None of the samples contained detectable levels of TPHd. BTEX and TPHg were detected in samples from each of the three wells. Benzene concentrations ranged from 41 parts per billion (ppb) in MW-3 to 650 ppb in MW-2.

On May 13 and 18, 1993 Acton Mickelson and van Dam (AMV), advanced and sampled five soil borings which were converted to 2-inch-diameter monitoring wells MW-4 through MW-8 (Figure 2). AMV submitted a total of 23 soil samples for laboratory analysis of TPHg and BTEX and none contained detectable petroleum hydrocarbons.

On May 18, 1993, AMV collected groundwater samples from monitoring wells MW-4 through MW-8 for laboratory analysis of TPHg and BTEX. None of the groundwater samples collected contained detectable BTEX, however, the groundwater sample collected from monitoring well MW-6 contained 170 ppb TPHg.

Monitoring wells MW-7 and MW-8 were abandoned during the fall of 1998 as part of a street up-grade on Redwood Road.

3.0 QUARTERLY ACTIVITIES

Quarterly groundwater monitoring and sampling was conducted by Doulos Environmental Company (Doulos). Doulos reports that they conducted well purging, sampling, and sample handling activities in substantial conformance with Ultramar Field Procedures for monitoring well sampling (see Appendix A). Chemical analyses were conducted by Kiff Analytical Laboratory, LLC. Field sample logs are included in Appendix B and analytical reports are included in Appendix C.

3.1 Groundwater Gradient and Flow Direction

Groundwater depths were measured in each well prior to sampling by Doulos. Depths were measured relative to the top of each well casing. Groundwater depths in each well were subtracted from the elevation of that wellhead to establish a groundwater elevation. A cumulative summary of groundwater elevation data is also included in Table 2.

On the basis of the February 26, 2001, groundwater measurements, groundwater appears to flow to the south-southwest with a surface gradient of 0.01. Figure 3 presents a generalized potentiometric surface map for the monitoring event. Water sample logs are included in Appendix B.

3.2 Analytical Results

Groundwater samples were collected by Doulos, and subsequently relinquished to Kiff Analytical, LLC, a State-certified analytical laboratory, under chain-of-custody documentation. The water samples were analyzed for TPHg, BTEX, and MTBE by EPA Method 8260.

The groundwater analytical results are summarized in the Table 1. Benzene concentrations for the February 26, 2001, monitoring event are shown on Figure 4. Cumulative analytical results are summarized in Table 3. Laboratory data reports and chain-of-custody documentation are included in Appendix C.

4.0 DISCUSSION

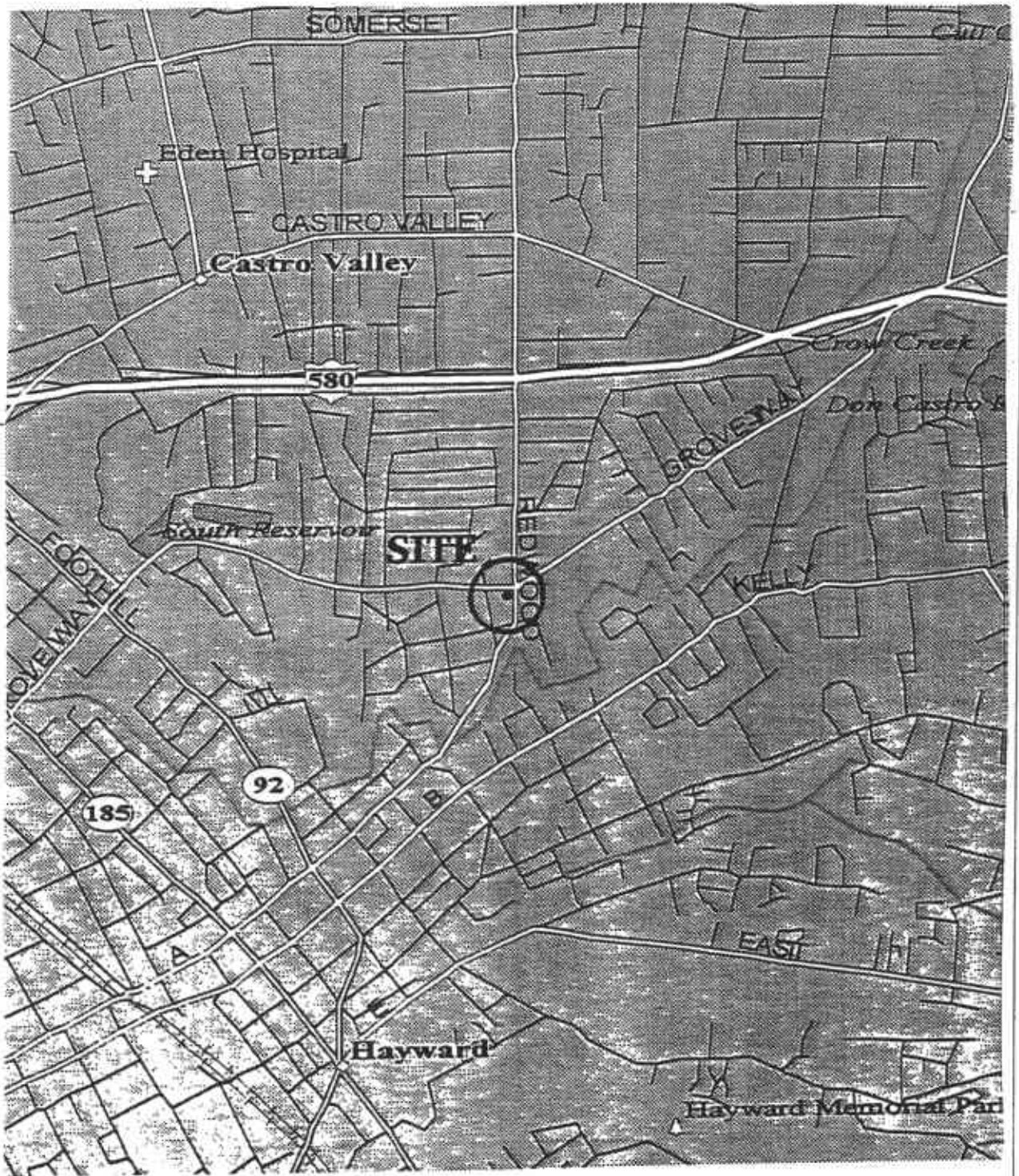
TPHg and BTEX are consistently found in the three on-site monitoring wells in the vicinity of the former UST location, above laboratory detection limits. MTBE was found in samples collected for analysis from monitoring wells MW-1, MW-2, MW-3, and MW-6, with the highest concentrations found in monitoring well MW-1 at 620 $\mu\text{g/L}$. However, concentrations of MTBE in the five monitoring wells sampled during this quarter at the Site, show a decreasing trend.

5.0 LIMITATIONS

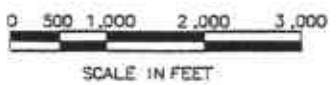
This report has been prepared for the exclusive use of Ultramar, Inc. Unauthorized use of or reliance on the information contained in this report by others, unless given the express written consent by BSK & Associates, is prohibited.

The conclusions presented in this report are professional opinions based on the indicated data described in this report. This report has been prepared in accordance with generally accepted methodologies and standards of professional practice. No other warranties, either expressed or implied, are made as to the findings or conclusions included in the report. Conclusions and recommendations are intended only for the purpose, site location and project indicated.

Opinions presented herein apply to site conditions existing at the time of our study and those reasonably foreseeable. They cannot necessarily apply to site changes of which this office is not aware and has not had the opportunity to evaluate. Changes in the conditions of the subject property can occur with time, because of natural processes or the works of man, on the subject site or on adjacent properties.



PROJECT NORTH
 SCALE: 1" = 2,000'



SITE LOCATION MAP

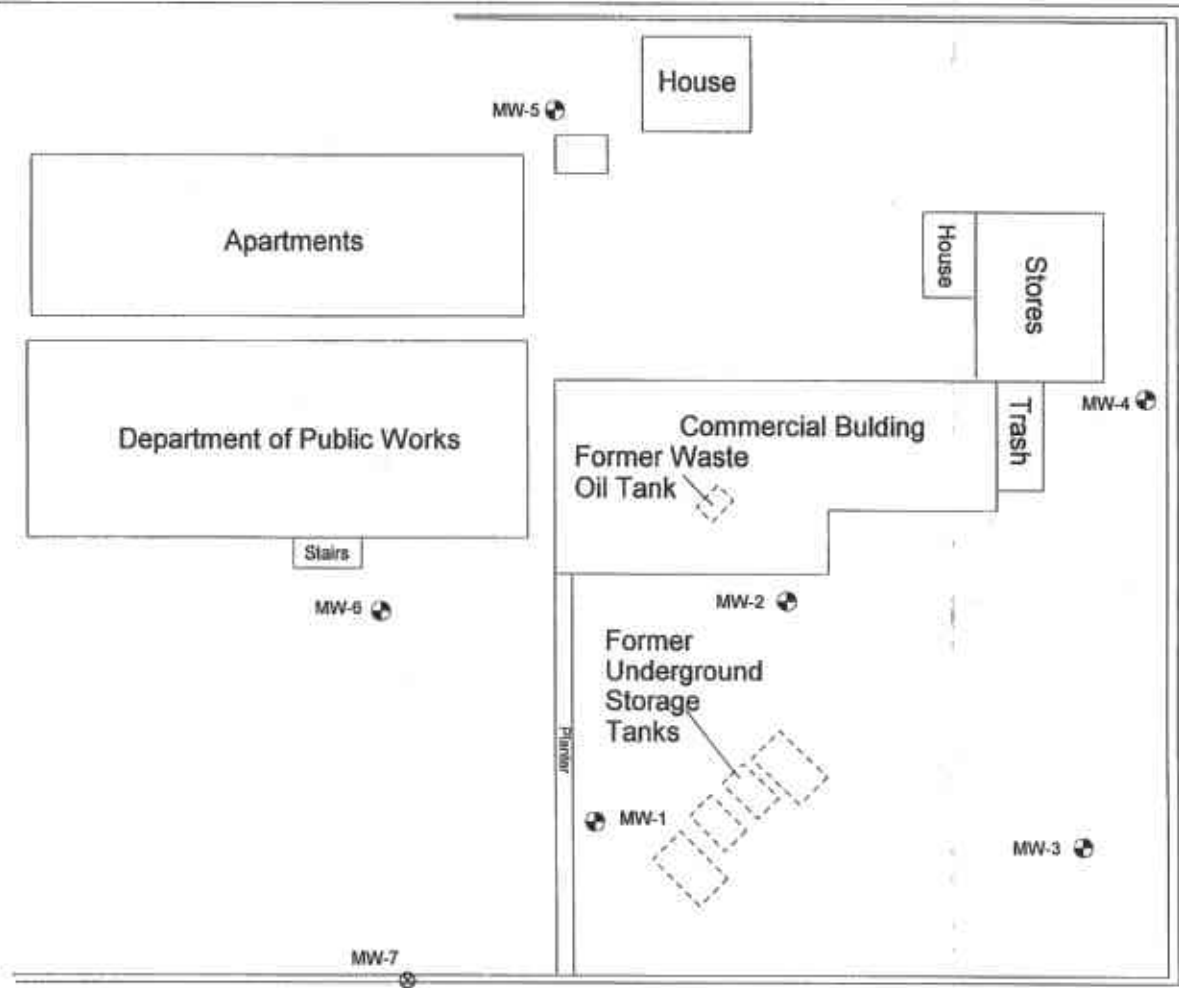
FORMER BEACON STATION #574
 223 15 REDWOOD ROAD
 CASTRO VALLEY, CALIFORNIA

FIGURE 1
 PROJECT : 07400237
 DATE : 5/3/00

BSK Engineers, Geologists,
 Environmental Scientists



Explanation	
MW-1	Monitoring Well Location
MW-7	Abandoned Monitoring Well

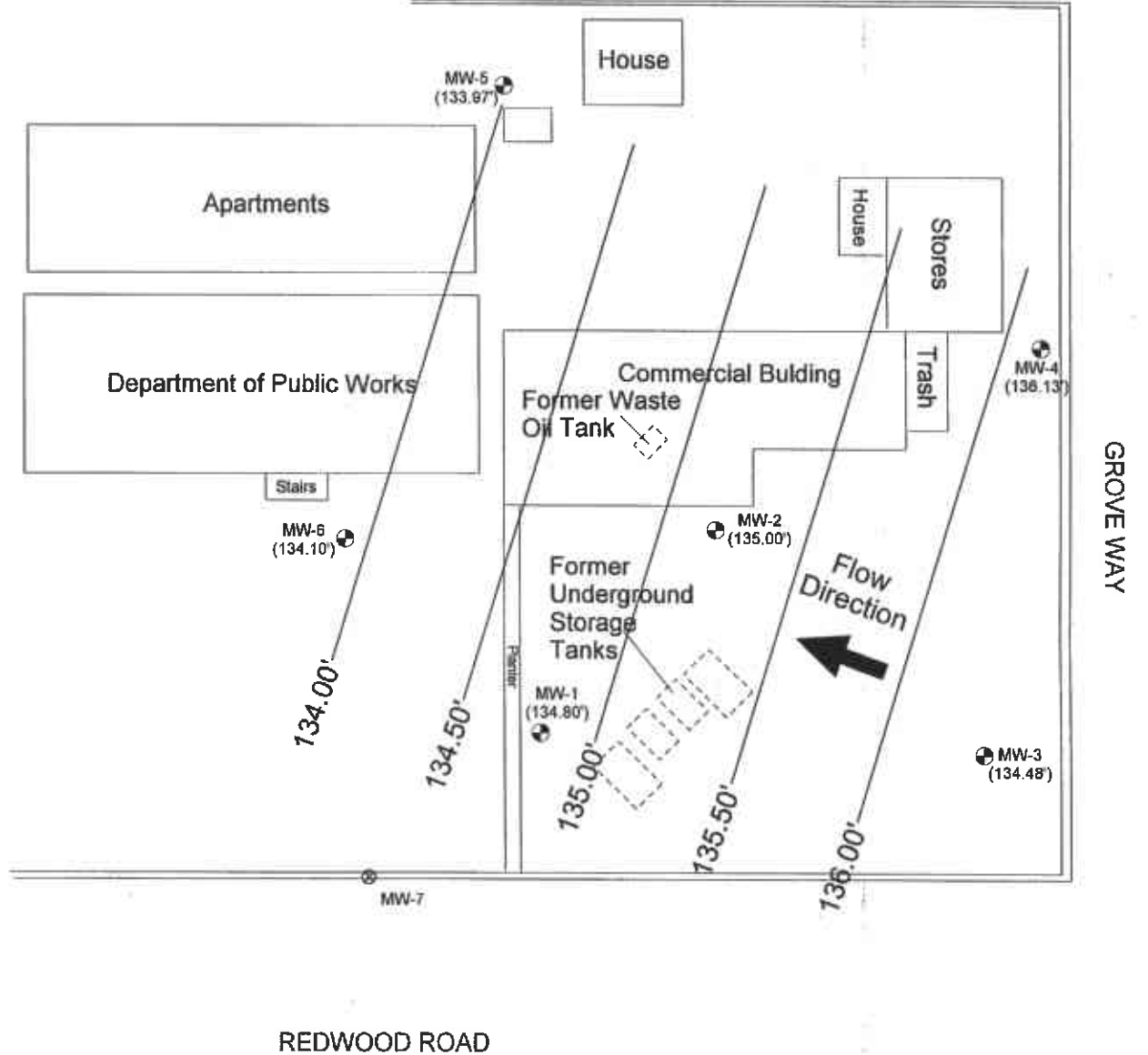


GROVE WAY

REDWOOD ROAD



MW-8



Explanation

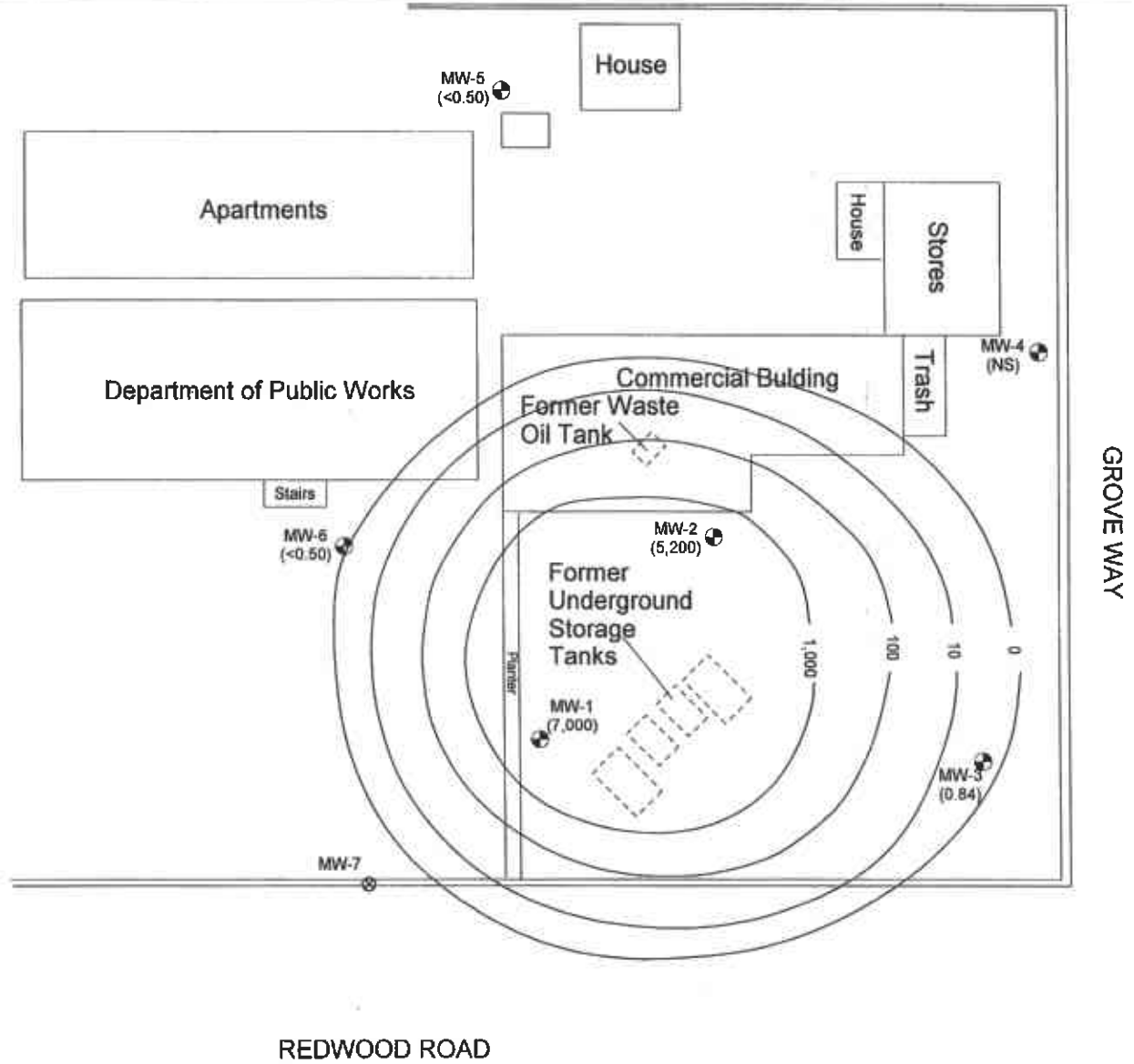
- MW-2 (135.00') ● Monitoring Well Location and Groundwater Elevation (feet msl)
- MW-7 ⊗ Abandoned Monitoring Well
- 135.00' — Potentiometric Surface Contours

dh/dl = 0.01



GENERALIZED POTENTIOMETRIC SURFACE MAP
FEBRUARY 2001
 FORMER BEACON STATION #574
 22315 REDWOOD ROAD
 CASTRO VALLEY, CALIFORNIA

FIGURE 3
 PROJECT: 07400237
 DATE: 3/12/01



Explanation

- MW-1 (7,000) ● Monitoring Well Location
Benzene Concentration (ug/L)
- ⊗ Abandoned Monitoring Well
- Benzene Concentration Contour Line (ug/L)



DISSOLVED BENZENE DISTRIBUTION MAP
 MARCH 2001
 FORMER BEACON STATION #574
 22315 REDWOOD ROAD
 CASTRO VALLEY, CALIFORNIA

FIGURE 4
 PROJECT: 07400237
 DATE: 3/29/01

Table 1
Summary of Groundwater Analytical Results
First Quarter 2001
Former Beacon Station # 12574, Castro Valley, California

Well ID	TPHg (mg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethyl- benzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-1	56,000	7,000	240	2,000	6,800	620
MW-2	33,000	5,200	260	1,400	3,200	740
MW-3	100	0.84	<0.50	3.5	1.7	0.84
MW-4	NS	NS	NS	NS	NS	NS
MW-5	<50	<0.50	<0.50	<0.50	<0.50	<5.0
MW-6	<50	<0.50	<0.50	<0.50	<0.50	130

Notes:
 < Not detected above laboratory's indicated reportable detection limit.
 NS : Not sampled.

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-1	156.55	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	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
		12/08/98	22.87	133.68	29.76
		02/17/99	21.53	135.02	29.75
06/10/99	22.74	133.81	29.74		
09/07/99	23.06	133.49	29.73		
12/13/00	23.06	133.46	29.74		
3/16/00	20.66	135.89	29.75		
6/12/00	22.53	134.02	29.76		
9/5/00	22.73	133.82	29.74		
11/13/00	23.20	133.35	29.74		
2/26/01	21.75	134.80	29.73		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-2	155.17	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	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
		12/08/98	21.31	133.86	29.50
		02/17/99	20.02	135.15	29.51
06/10/99	21.30	133.87	29.50		
09/07/99	21.49	133.68	29.50		
12/13/99	21.52	133.65	29.50		
3/16/00	19.13	136.04	29.50		
6/12/00	20.93	134.24	29.50		
9/5/00	21.15	134.02	29.50		
11/13/00	21.66	133.51	29.50		
2/26/01	20.17	135.00	29.50		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-3	157.13	03/27/92	21.46	135.67	-
		06/04/92	22.34	134.79	-
		09/23/92	22.84	134.29	-
		11/12/92	23.04	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
		12/08/98	21.83	135.30	29.47
		02/17/99	20.81	130.32	29.45
06/10/99	21.61	135.52	29.45		
09/07/99	21.91	135.22	29.45		
12/13/99	21.93	135.20	29.44		
3/16/00	19.86	137.27	29.46		
6/12/00	21.61	135.52	29.46		
9/5/00	21.54	135.59	29.47		
11/13/00	21.98	135.15	29.46		
2/26/01	20.65	136.48	29.46		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-4	151.96	05/18/93	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
		12/08/98	17.37	134.59	27.91
		02/17/99	16.49	135.47	27.98
		06/10/99	17.63	134.33	24.76
		09/07/99	17.80	134.16	24.75
12/13/99	17.82	134.14	24.73		
3/16/00	15.81	136.15	24.71		
6/12/00	16.64	135.32	24.70		
9/5/00	16.71	135.25	24.70		
11/13/00	17.24	134.72	24.70		
2/26/01	15.83	136.13	24.70		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-5	148.68	05/18/93	15.72	132.96	-
		08/11/93	16.42	132.26	28.43
		11/05/93	16.92	131.76	28.43
		03/01/94	15.54	133.14	28.11
		06/02/94	16.19	132.49	28.12
		09/09/94	16.87	131.81	28.13
		12/20/94	15.87	132.84	28.10
		03/08/95	15.11	133.57	27.97
		06/14/95	15.69	132.99	27.97
		09/26/95	16.46	132.22	27.91
		12/27/95	15.91	132.77	27.89
		03/26/96	14.31	134.37	27.89
		06/05/96	15.43	133.25	27.88
		09/16/96	16.52	132.16	27.89
		12/02/96	16.05	132.63	27.88
		03/10/97	14.80	133.88	27.89
		06/12/97	15.95	132.78	27.90
		09/29/97	16.33	132.35	27.91
		12/01/97	15.48	133.20	27.90
		03/19/98	13.16	135.52	27.91
		05/28/98	14.04	134.64	27.90
		08/31/98	14.81	133.87	27.90
		12/08/98	15.75	132.93	27.91
		02/17/99	14.80	133.88	27.98
		06/10/99	15.54	133.14	24.76
		09/07/99	16.01	132.67	24.75
		12/13/99	16.21	132.47	24.73
		3/16/00	14.35	134.33	29.60
6/12/00	15.21	133.47	29.61		
9/5/00	15.80	132.88	29.60		
11/13/00	16.21	132.47	29.60		
2/26/01	14.71	133.97	29.61		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-6	153.96	05/18/93	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
		12/08/98	21.00	132.96	29.64
		02/17/99	19.54	134.42	29.63
		06/10/99	20.74	133.22	27.98
		09/07/99	21.23	132.73	27.98
		12/13/99	21.22	132.74	27.98
		3/16/00	18.79	135.17	27.99
		6/12/00	20.49	133.47	27.99
		9/5/00	20.95	133.01	27.98
11/13/00	21.44	132.52	27.98		
2/26/01	19.86	134.10	27.99		

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-7	156.09	05/18/93	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		
12/08/98 ³					

Table 2
Cumulative Groundwater Elevation Data
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Top of Casing Elevation (Feet) ¹	Date Sounded	Depth to Groundwater (Feet) ¹	Groundwater Elevation (Feet) ²	Well Depth (Feet)
MW-8	158.04	05/18/93	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		
		12/08/98 ³			

NOTES:

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

2 : Elevation reference to mean sea level.

Well Depth : Measured from top of casing to bottom of well.

3 : Well abandoned.

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
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	280	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	480	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	3,200	770	420	2,900	1,400
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	30,000	NA	NA	7,300	1,900	850	7,100	1,100
	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	15,000	7,000	3,300	20,000	<1,500
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	50,000	NA	NA	9,900	1,500	2,100	9,400	890
	12/08/98	NS	NS	NS	NS	NS	NS	NS	NS
	02/17/99	30,000	NA	NA	8,000	1,100	2,200	10,000	720
	06/10/99	NS	NS	NS	NS	NS	NS	NS	NS
	09/07/99	37,000	NA	NA	13,000	410	2,000	10,000	570
	12/13/99	NS	NS	NS	NS	NS	NS	NS	NS
	3/16/00	59,000	NA	NA	9,600	430	2,100	9,200	730
6/12/00	NS	NS	NS	NS	NS	NS	NS	NS	
9/5/00	49,000	NA	NA	8,000	230	2,100	6,400	740	
11/13/00	NS	NS	NS	NS	NS	NS	NS	NS	
2/26/01	56,000	NA	NA	7,000	240	2,000	6,800	620	
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	-

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-2 (cont.)	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	1,100	-
	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	2,600	490	560	2,000	940
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	23,000	NA	NA	3,700	870	650	3,000	1,400
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	30,000	NA	NA	4,900	880	990	3,800	1,400
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	72,000	NA	NA	14,000	9,500	2,300	11,000	<1,500
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	29,000	NA	NA	4,900	1,600	960	3,900	890
	12/08/98	NS	NS	NS	NS	NS	NS	NS	NS
	02/17/99	26,000	NA	NA	5,200	930	1,200	4,400	640
	06/10/99	NS	NS	NS	NS	NS	NS	NS	NS
	09/07/99	32,000	NA	NA	5,700	600	1,200	3,500	1,100
	12/13/99	NS	NS	NS	NS	NS	NS	NS	NS
	3/16/00	38,000	NA	NA	4,900	780	1,100	3,700	870
6/12/00	NS	NS	NS	NS	NS	NS	NS	NS	
9/5/00	21,000	NA	NA	3,400	490	730	2,200	1,000	
11/13/00	NS	NS	NS	NS	NS	NS	NS	NS	
2/26/01	33,000	NA	NA	5,200	260	1,400	3,200	740	
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	62	19	-
	11/12/92	230	NA	NA	12	5.5	77	19	-
	02/02/93	86	NA	NA	2.4	0.71	27	6.2	-
	05/07/93	140	NA	NA	2.6	1.2	39	8.4	-

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-3 (cont.)	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	56	10	-
	06/02/94	440	NA	NA	13	4.9	14	31	-
	09/09/94	620	NA	NA	12	4.8	97	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	10	2.9	44	15	<5.0
	12/02/96	NS	NS	NS	NS	NS	NS	NS	NS
	03/10/97	84	NA	NA	2.3	<0.50	14	2.6	<5.0
	06/12/97	NS	NS	NS	NS	NS	NS	NS	NS
	09/29/97	740	NA	NA	61	9.8	42	61	<5.0
	12/01/97	NS	NS	NS	NS	NS	NS	NS	NS
	03/19/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	05/28/98	NS	NS	NS	NS	NS	NS	NS	NS
	08/31/98	320	NA	NA	6.7	1.0	10	9.3	3.4
	12/08/98	NS	NS	NS	NS	NS	NS	NS	NS
	02/17/99	310	NA	NA	<5.0	8.6	1.8	13	14
	06/10/99	NS	NS	NS	NS	NS	NS	NS	NS
	09/07/99	99	NA	NA	4.2	0.51	4.0	3.0	<5.0
	12/13/99	NS	NS	NS	NS	NS	NS	NS	NS
3/16/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0	
6/12/00	NS	NS	NS	NS	NS	NS	NS	NS	
9/5/00	240	NA	NA	3.0	0.53	9.6	4.0	<5.0	
11/13/00	NS	NS	NS	NS	NS	NS	NS	NS	
2/26/01	100	NA	NA	0.84	<0.50	3.5	1.7	0.84	
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	-

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-4 (cont.)	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	<0.50	<0.50	<0.50	<0.50	<5.0
	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
	12/08/98	NS	NS	NS	NS	NS	NS	NS	NS
	02/17/99	NS	NS	NS	NS	NS	NS	NS	NS
	06/10/99	NS	NS	NS	NS	NS	NS	NS	NS
	09/07/99	NS	NS	NS	NS	NS	NS	NS	NS
	12/13/99	NS	NS	NS	NS	NS	NS	NS	NS
	3/16/00	NS	NS	NS	NS	NS	NS	NS	NS
	6/12/00	NS	NS	NS	NS	NS	NS	NS	NS
9/5/00	NS	NS	NS	NS	NS	NS	NS	NS	
11/13/00	NS	NS	NS	NS	NS	NS	NS	NS	
2/26/01	NS	NS	NS	NS	NS	NS	NS	NS	
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	<0.50	<0.50	<0.50	<0.50	15
	09/16/96	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	20
	12/02/96	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	12
	03/10/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	7.0
06/12/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	7.2	

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-5 (cont.)	09/29/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	12/01/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	03/19/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	05/28/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	08/31/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50
	12/08/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	02/17/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	06/10/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	09/07/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	12/13/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	3/16/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	6/12/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	9/5/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	11/13/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<0.50
2/26/01	<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	<0.5	
	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 ¹	NA	NA	<0.5	<0.5	<0.5	<0.5	
	06/14/95	220 ¹	NA	NA	<0.5	<0.5	<0.5	<0.5	
	09/26/95	110 ¹	NA	NA	<0.50	<0.50	<0.50	<0.50	
	12/27/95	130 ¹	NA	NA	<0.50	<0.50	<0.50	<0.50	
	03/08/95	100 ¹	NA	NA	<0.50	<0.50	<0.50	<0.50	
	06/05/96	100 ¹	NA	NA	<0.50	<0.50	<0.50	<0.50	430
	09/16/96	170	NA	NA	<0.50	<0.50	<0.50	<0.50	430
	12/02/96	160	NA	NA	<0.50	<0.50	<0.50	<0.50	160
	03/10/97	140	NA	NA	<0.50	<0.50	<0.50	<0.50	390
	06/12/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	330
	09/29/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	130
	12/01/97	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	200
	03/19/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	240
	05/28/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	290
08/31/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	290	
12/08/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	230	
02/17/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	200	
06/10/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	290	

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-6 (cont.)	09/07/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	230
	12/13/99	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	180
	3/16/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	260
	6/12/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	160
	9/5/00	<50	NA	NA	<0.50	0.50	<0.50	0.81	170
	11/13/00	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	190
	2/26/01	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	130
	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	
03/08/95		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	
06/05/96		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	20
09/16/96		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	26
12/02/96		140	NA	NA	<0.50	<0.50	<0.50	<0.50	140
03/10/97		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	29
06/12/97		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	28
09/29/97		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	27
12/01/97		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	29
03/19/98		<50	NA	NA	<0.50	<0.50	<0.50	<0.50	6.0
05/28/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	25	
08/31/98	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	20	
12/08/98 ²									
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	-

Table 3
Summary of Groundwater Analytical Results
Former Beacon Station # 12574 - Castro Valley, California

Well ID	Sample Date	TPHg (µg/L)	TPHd (µg/L)	TPHmo (µg/L)	Benzene (µg/L)	Toluene (µg/L)	Ethylbenzene (µg/L)	Xylenes (µg/L)	MTBE (µg/L)
MW-8 (cont.)	12/27/95	NS	NS	NS	NS	NS	NS	NS	-
	03/08/95	NS	NS	NS	NS	NS	NS	NS	-
	06/05/96	NS	NS	NS	NS	NS	NS	NS	-
	09/16/96	<50	NA	NA	<0.50	<0.50	<0.50	<0.50	<5.0
	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
	12/08/98 ²								

Notes:

<: Below indicated detection limit.

NS : Not sampled.

NA : Not Analyzed.

¹ : Product not typical gasoline.

² : Well abandoned

APPENDIX A

Ultramar Field Sampling Procedures

APPENDIX 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 formation 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 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 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.

APPENDIX B

Water Sample Logs - Doulos Environmental

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

Project Address: Beacon 574, 22315 Redwood Rd Date: 2-26-01
Castro Valley Ca Project No.: 94-574-01

Recorded by: _____

Well No	Time	Well Elev. TOC	Depth to Gr. Water	Measured Total Depth	Gr. Water Elevation	Depth to Product	Product Thickness	Comments
MW-1	10:24		21.75	29.73				
MW-2	10:21		20.17	29.50				
MW-3	10:19		20.65	29.46				
MW-4	10:13		15.83	24.70				
MW-5	10:05		14.71	29.61				
MW-6	10:10		19.86	27.99				

Notes:

Client: Ultramar

Sampling Date: 2-26-01

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): 3
 Well cover type: 8" UV _____ 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: Disposal bailer: Teflon bailer: _____

Well Diameter: 2" _____ 4" 6" _____ 8" _____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.
Initial Measurement Recharge Measurement
 Time: 10:24 Time: 1:06 Calculated purge: 20.7
 Depth of well: 29.73 Depth to water: 22.16 Actual purge: 20.7
 Depth to water: 21.75

Start purge: 11:50 Sampling time: 1:08

Time	Temp.	E.C.	pH	Turbidity	Volume
11:52	64.0	1120	7.41	—	1
11:55	64.7	1116	7.35	—	2
11:57	65.0	1113	7.30	—	3
11:59	65.2	1110	7.28	—	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: _____

Client: Ultramar

Sampling Date: 2-26-01

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): 3
 Well cover type: 8" UV _____ 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: Disposal bailer: Teflon bailer: _____

Well Diameter: 2" _____ 4" 6" _____ 8" _____

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

Initial Measurement Recharge Measurement
 Time: 10:21 Time: 12:42 Calculated purge: 24.2
 Depth of well: 29.50 Depth to water: 22.60 Actual purge: 24.2
 Depth to water: 20.17

Start purge: 11:32 Sampling time: 12:45

Time	Temp.	E.C.	pH	Turbidity	Volume
11:33	63.8	1340	7.22	—	1
11:35	64.1	1210	7.20	—	2
11:37	64.9	1199	7.18	—	3
11:39	65.2	1193	7.16	—	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: _____

Client: Ultramar

Sampling Date: 2-26-01

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): 3
 Well cover type: 8" UV _____ 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: Disposal bailer: Teflon bailer: _____

Well Diameter: 2" _____ 4" 6" _____ 8" _____

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

Initial Measurement Recharge Measurement
 Time: 10:19 Time: 12:30 Calculated purge: 22.9
 Depth of well: 29.46 Depth to water: 21.80 Actual purge: 22.9
 Depth to water: 10.65

Start purge: 11:16 Sampling time: 12:31

Time	Temp.	E.C.	pH	Turbidity	Volume
11:18	62.7	1234	7.16	—	1
11:20	63.0	1216	7.11	—	2
11:23	63.7	1199	7.09	—	3
11:25	63.9	1198	7.08	—	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: _____

Client: Ultramar

Sampling Date: 2-26-01

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 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: Disposal bailer: Teflon bailer: _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.
 Initial Measurement Recharge Measurement
 Time: 10:05 Time: 10:45 Calculated purge: 9.5
 Depth of well: 29.61 Depth to water: 15.80 Actual purge: 9.5
 Depth to water: 14.71

Start purge: 10:35 Sampling time: 10:46

Time	Temp.	E.C.	pH	Turbidity	Volume
10:36	65.3	1240	7.53	—	1
10:37	64.1	1210	7.51	—	2
10:38	64.7	1190	7.41	—	3
10:39	64.9	1183	7.40	—	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: _____

Client: Ultramar

Sampling Date: 2-26-01

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 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: Disposal bailer: Teflon bailer: _____

Well Diameter: 2" 4" _____ 6" _____ 8" _____

Purge Vol. Multiplier: 0.16 0.65 1.47 2.61 gal/ft.
Initial Measurement Recharge Measurement
 Time: 10:10 Time: 11:10 Calculated purge: 5.2
 Depth of well: 27.99 Depth to water: 20.86 Actual purge: 5.2
 Depth to water: 19.86

Start purge: 10:59 Sampling time: 11:12

Time	Temp.	E.C.	pH	Turbidity	Volume
11:01	62.3	1370	7.52	—	1
11:02	63.1	1310	7.50	—	2
11:03	63.7	1298	7.41	—	3
11:06	64.0	1290	7.38	—	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: _____

APPENDIX C

Laboratory Reports and Chain of Custody Documentation



Report Number : 19430

Date : 03/15/2001

Richard Johnson
BSK Sacramento
3140 Gold Camp Drive, Suite 160
Rancho Cordova, CA 95670

Subject : 5 Water Samples
Project Name : CASTRO VALLEY 574
Project Number :
P.O. Number : 12574-24

Dear Mr. Johnson,

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



Report Number : 19430

Date : 03/15/2001

Project Name : **CASTRO VALLEY 574**

Project Number :

Sample : **MW-1**

Matrix : Water

Lab Number : 19430-01

Sample Date :02/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	7000	20	ug/L	EPA 8260B	03/12/2001
Toluene	240	20	ug/L	EPA 8260B	03/12/2001
Ethylbenzene	2000	20	ug/L	EPA 8260B	03/12/2001
Total Xylenes	6800	20	ug/L	EPA 8260B	03/12/2001
Methyl-t-butyl ether (MTBE)	620	20	ug/L	EPA 8260B	03/12/2001
TPH as Gasoline	56000	2000	ug/L	EPA 8260B	03/12/2001
Toluene - d8 (Surr)	96.8		% Recovery	EPA 8260B	03/12/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	03/12/2001

Sample : **MW-2**

Matrix : Water

Lab Number : 19430-02

Sample Date :02/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	5200	10	ug/L	EPA 8260B	03/10/2001
Toluene	260	10	ug/L	EPA 8260B	03/10/2001
Ethylbenzene	1400	10	ug/L	EPA 8260B	03/10/2001
Total Xylenes	3200	10	ug/L	EPA 8260B	03/10/2001
Methyl-t-butyl ether (MTBE)	740	10	ug/L	EPA 8260B	03/10/2001
TPH as Gasoline	33000	1000	ug/L	EPA 8260B	03/10/2001
Toluene - d8 (Surr)	98.4		% Recovery	EPA 8260B	03/10/2001
4-Bromofluorobenzene (Surr)	96.7		% Recovery	EPA 8260B	03/10/2001

Approved By: Joel Kiff



Report Number : 19430

Date : 03/15/2001

Project Name : **CASTRO VALLEY 574**

Project Number :

Sample : **MW-3**

Matrix : Water

Lab Number : 19430-03

Sample Date :02/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	0.84	0.50	ug/L	EPA 8260B	03/09/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
Ethylbenzene	3.5	0.50	ug/L	EPA 8260B	03/09/2001
Total Xylenes	1.7	0.50	ug/L	EPA 8260B	03/09/2001
Methyl-t-butyl ether (MTBE)	0.84	0.50	ug/L	EPA 8260B	03/09/2001
TPH as Gasoline	100	50	ug/L	EPA 8260B	03/09/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/09/2001
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	03/09/2001

Sample : **MW-5**

Matrix : Water

Lab Number : 19430-04

Sample Date :02/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
Methyl-t-butyl ether (MTBE)	< 0.50	0.50	ug/L	EPA 8260B	03/09/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/09/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/09/2001
4-Bromofluorobenzene (Surr)	100		% Recovery	EPA 8260B	03/09/2001

Approved By:  Joel Kiff



Report Number : 19430

Date : 03/15/2001

Project Name : **CASTRO VALLEY 574**

Project Number :

Sample : **MW-6**

Matrix : Water

Lab Number : 19430-05

Sample Date :02/26/2001

Parameter	Measured Value	Method Reporting Limit	Units	Analysis Method	Date Analyzed
Benzene	< 0.50	0.50	ug/L	EPA 8260B	03/10/2001
Toluene	< 0.50	0.50	ug/L	EPA 8260B	03/10/2001
Ethylbenzene	< 0.50	0.50	ug/L	EPA 8260B	03/10/2001
Total Xylenes	< 0.50	0.50	ug/L	EPA 8260B	03/10/2001
Methyl-t-butyl ether (MTBE)	130	0.50	ug/L	EPA 8260B	03/10/2001
TPH as Gasoline	< 50	50	ug/L	EPA 8260B	03/10/2001
Toluene - d8 (Surr)	100		% Recovery	EPA 8260B	03/10/2001
4-Bromofluorobenzene (Surr)	102		% Recovery	EPA 8260B	03/10/2001

Approved By:  Joel Kiff

Project Manager:
BSK

Phone No.:

Chain-of-Custody Record and Analysis Request

Company/Address:

FAX No.:

Analysis Request

Project Number:

P.O. No.:
12574-24

Email Address:
 .pdf .xls .doc other

Project Name/Location:
CASTRO VALLEY 574

Sampler Signature:
Edgar Chivela

Sample Designation	Sampling		Container (Type/Amount)			Method Preserved				Matrix	BTEX (8021B)	BTEX/TPH Gas/MTBE (8021B/M8015)	TPH as Diesel (M8015)	TPH as Motor Oil (M8015)	TPH Gas/BTEX/MTBE (8260B)	5 Oxygenates/TPH Gas/BTEX (8260B)	7 Oxygenates/TPH Gas/BTEX (8260B)	5 Oxygenates (8260B)	7 Oxygenates (8260B)	Lead Scav. (1,2 DCA & 1,2 EDB - 8260B)	EPA 8260B (Full List)	Volatile Halocarbons (EPA 8260B)	Lead (7421/239.2)	TOTAL (X) W.E.T. (X)	TAT	For Lab Use Only	
	Date	Time	40 ml VOA	SLEEVE		HCl	HNO ₃	ICE	NONE																		WATER/SOIL
MW-1	2-26-01	1:08	3			X	X			W				X											12 hr/24 hr/48 hr/72 hr/1 wk	101	
MW-2		12:48																								12 hr = R results by 9 a.m. of the next bus. day	102
MW-3		12:31																								24 hr = Results by 5 p.m. of the next bus. day	103
MW-5		10:46																								48 hr = Results by 5 p.m. of the 2nd bus. day	104
MW-6		11:12																								72 hr = Results by 5 p.m. of the 3rd bus. day	105
																										1 wk = Results by 5 p.m. of the 5th bus. day	

Relinquished by: [Signature]

Date: _____ Time: _____ Received by: _____

Remarks:

Relinquished by: _____

Date: _____ Time: _____ Received by: _____

Relinquished by: _____

Date: 03/20/01 Time: 16:04 Received by Laboratory: John Cutler

Bill to: JOE ALDRIDGE