RO-304

Pangea
ENVIRONMENTAL SERVICES, INC.

April 25, 2005

Mr. Robert Schultz
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Groundwater Monitoring Report - First Quarter 2005**
Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California
Fuel Leak Case No. RO0000304

Dear Mr. Schultz:

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. has prepared this *Groundwater Monitoring Report –First Quarter 2005.* The report describes groundwater monitoring and sampling activities conducted at the subject site. The report also describes other site activities and planned activities for the subject site.

If you have any questions or comments, please call me at (510) 435-8664.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring Report – First Quarter 2005*

cc: Mr. Hooshang Hadjian, 2108 San Ramon Valley Blvd, San Ramon, CA 94583

Pangea Environmental Services, Inc., 64 Sonia Street, Suite B, Oakland, California 94618
(510) 435-8664 tel • (510) 654-4006 fax • inquiry@pangeaenv.com • www.pangeaenv.com

"Environmental Specialists Providing Quality Service"

Pangea
ENVIRONMENTAL SERVICES, INC.

GROUNDWATER MONITORING REPORT – FIRST QUARTER 2005

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

April 25, 2005

Prepared for:

Mr. Hooshang Hadjian
2108 San Ramon Valley Blvd
San Ramon, CA 94583

Prepared by:

Pangea Environmental Services, Inc.
64 Sonia Street, Suite B
Oakland, California 94618

Written by:

REGISTERED PROFESSIONAL ENGINEER
ROBERT G. CLARK-RIDDELL
No. C 049629
Exp. SEPT 2006
CIVIL
STATE OF CALIFORNIA

Morgan Gillies
Project Manager

Bob Clark-Riddell, P.E.
Principal Engineer

Groundwater Monitoring Report
7240 Dublin Boulevard
Dublin, California
April 25, 2005

INTRODUCTION

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. (Pangea) coordinated groundwater monitoring and sampling during this quarter at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate groundwater flow direction and dissolved hydrocarbon concentrations The groundwater monitoring well locations and select site features are shown on Figure 2. Historical and current analytical results and groundwater elevation data are summarized on Table 1 and Figure 2.

SITE BACKGROUND

The Chevron-branded service station is located at the southwest corner of Dublin Boulevard and Village Parkway in Dublin, California (Figure 1).The site currently contains three underground storage tanks (USTs). Land use surrounding the site is mixed residential and commercial. Chevron Products Company performed assessment and remediation of an unauthorized release from approximately 1988 to 1997. Mr. Hadjian is the responsible party for an unauthorized release near the northernmost dispenser island in February 1997.

GROUNDWATER MONITORING AND SAMPLING

On February 21, 2005, groundwater monitoring and sampling was conducted at the site. Site monitoring wells were gauged for depth to water. Groundwater samples were obtained from seven of the eight groundwater monitoring wells. Monitoring well EA-1 was inaccessible and not gauged or sampled. Prior to sample collection, approximately three casing volumes of water were purged using disposable bailers, an electric submersible pump, positive air displacement pump, or a peristaltic pump. During well purging, field technicians measured the pH, temperature, conductivity and turbidity. A groundwater sample was collected from each well with a disposable bailer, and decanted into the appropriate containers supplied by the analytic laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4° C. All samples were transported under chain-of-custody to the State-certified analytical laboratory. Purge water was stored onsite in DOT-approved 55-gallon drums. Field data sheets are presented as Appendix A.

MONITORING RESULTS

Current and historical groundwater elevation data and analytical results are described below and summarized on Table 1 and Figure 2. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C, and benzene, toluene, ethylene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. If MTBE was detected, a confirmation was conducted by EPA Method 8260B. Samples were analyzed by McCampbell Analytical, Inc. of Pacheco, California, a State-certified laboratory. The laboratory analytical report is included in Appendix B.

Groundwater Flow Direction

The inferred groundwater flow direction based on depth-to-water data from February 21, 2005 is shown on Figure 2. Groundwater apparently flowed from offsite wells MW-4 and MW-5 toward the site in the approximate southeast direction, while groundwater at the eastern portion of the site apparently flowed in the northwest direction. The groundwater elevation was lowest in site well MW-2 located in the southwestern corner of the site. The inferred groundwater flow direction is fairly consistent with the two most recent monitoring events of February 2003 and December 2004. The groundwater flow direction may be affected by the 18" diameter sanitary sewer line running beneath the southern portion of Dublin Boulevard. In a letter dated October 30, 1995 to the County, Gettler Ryan Inc. stated that the top of the sanitary sewer line was approximately 16 feet below grade surface (bgs), while the depth to water in nearby wells MW-1 and MW-3 has ranged from approximately 11 to 13 feet bgs. Depth-to-water and groundwater elevation data for the site are presented in Table 1.

Hydrocarbon Distribution in Groundwater

Separate-phase hydrocarbon (SPH) was noticed by the field technician in well MW-3 after purging 3 liters of groundwater from the well. The SPH thickness was then measured at 0.01 feet. Petroleum hydrocarbons were only detected in one of the sampled wells (EA-3), as shown on Table 1 and Figure 2. No TPHg or benzene was detected in well EA-3 above method reporting limits , but trace concentrations of ethylbenzene (2.3 µg/L) and xylenes (1.4 µg/L) were detected in EA-3.

Fuel Oxygenate Distribution in Groundwater

MTBE was detected by EPA Method 8021 above reporting limits in five of the six sampled wells. As confirmed by EPA Method 8260B, the concentrations of MTBE in wells MW-1, MW-2, MW-5, EA-2 and EA-3 were 3,800 µg/L, 1,100 µg/L, 0.54 µg/L, 11 µg/L, and 290 µg/L, respectively (Table 1 and Figure 2).

PLANNED SITE ACTIVITIES

Soil and Water Investigation Workplan

As required by the November 2, 2004 letter from the Alameda County Environmental Health (ACEH), Pangea prepared a *Soil and Water Investigation Workplan* (Workplan) dated February 20, 2005. Upon approval by the ACEH, Pangea will implement the Workplan.

Upcoming Monitoring and Proposed Frequency

Pangea will continue quarterly groundwater monitoring and sampling at the site in accordance with the approved sampling frequency. Pangea proposes to sample five key site wells quarterly (EA-1, EA-3, MW-1, MW-2 and MW-3) and three wells annually (EA-2, MW-4 and MW-5). This sampling frequency is based on the prior approved sampling frequency, with the slight modification of quarterly sampling for wells EA-3 and MW-1 rather than semi-annual sampling. This monitoring frequency will be modified after decommissioning of select wells and installation of new wells in accordance with the Workplan.

All wells will be gauged for depth to water, and well MW-3 will be inspected for SPH. All groundwater samples will be analyzed for TPHg/BTEX/MTBE by EPA Method 8015Cm,/8021B. If detected by Method 8021B, MTBE will be confirmed by EPA Method 8260B. Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

ATTACHMENTS

Figure 1 – Vicinity Map
Figure 2 - Groundwater Elevation Contour and Hydrocarbon Concentration Map

Table 1 – Groundwater Elevation and Analytical Data

Appendix A – Groundwater Monitoring Field Data Sheets
Appendix B – Laboratory Analytical Report

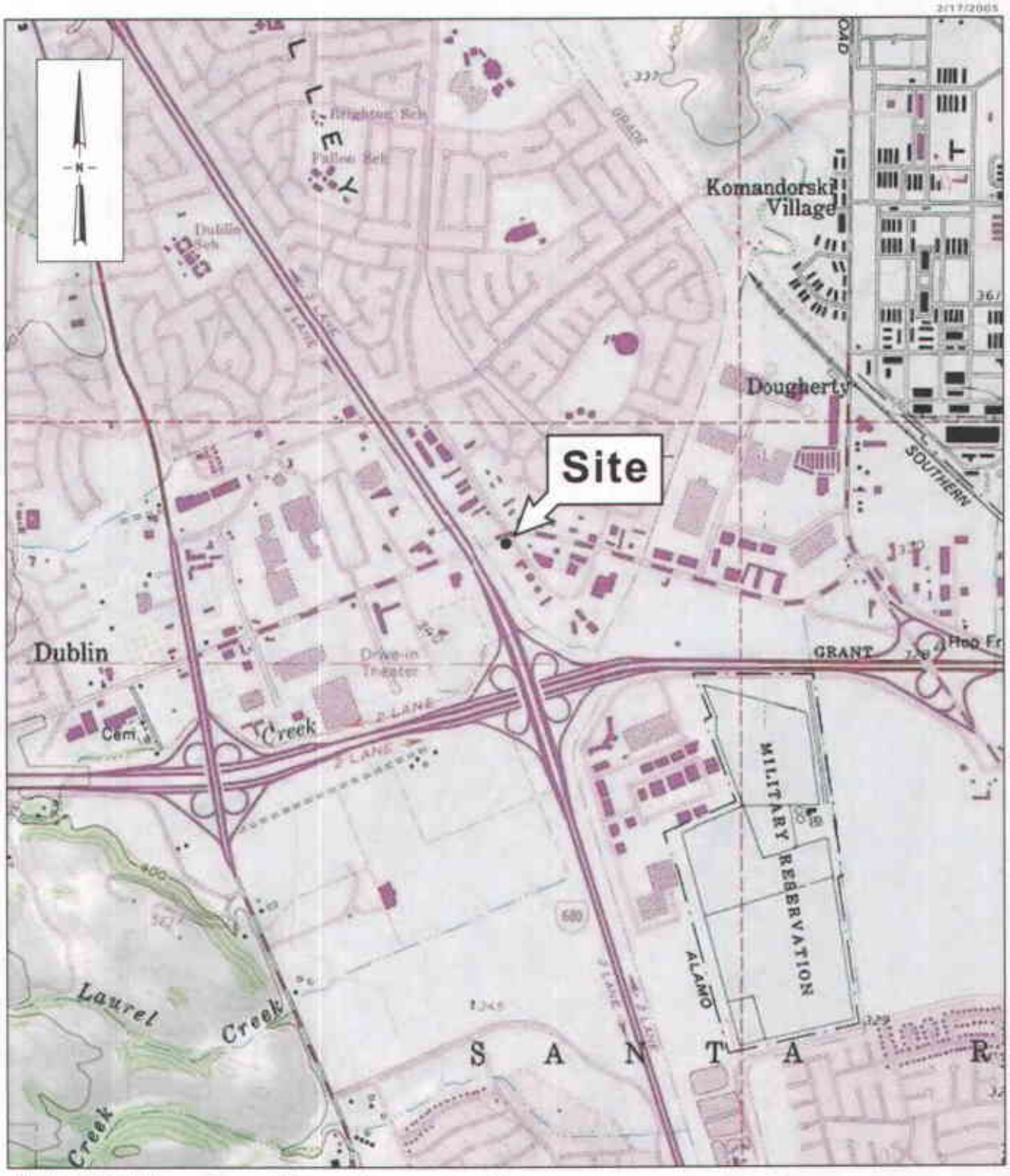

Figure 1

Site Location Map

Dublin Auto Wash

7240 Dublin Boulevard

Dublin, California

Pangea
ENVIRONMENTAL SERVICES, INC.

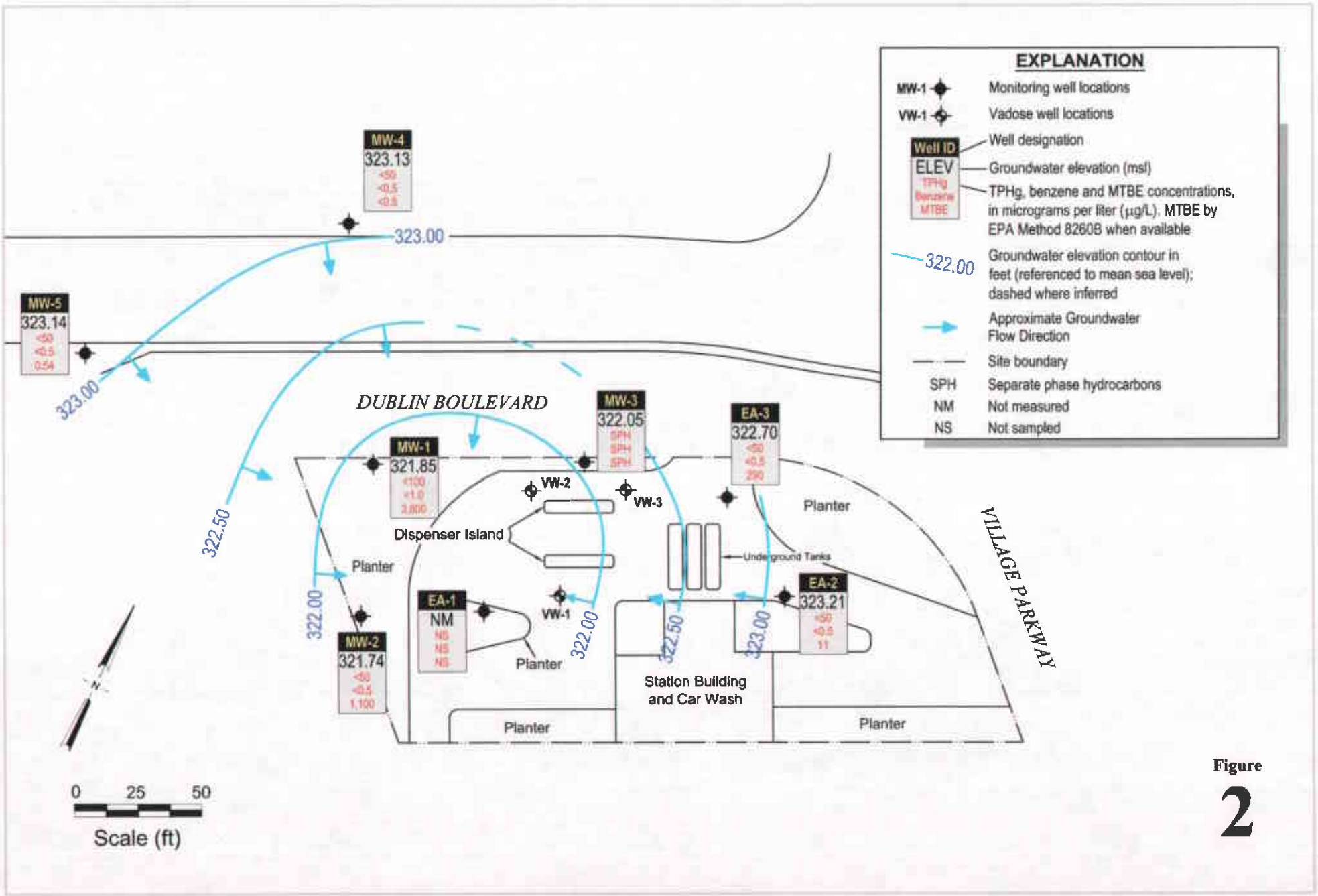

Figure 2

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

Pangea
Environmental Services, Inc.

Groundwater Elevation and Hydrocarbon Concentration Map
February 21, 2005

Pangea

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID	Date	Depth	Groundwater							
TOC Elev	Sampled	to Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
(ft)		(ft)	(ft, msl)	←			µg/L			→	
EA-1	10/17/88	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	--	
331.21	10/24/88	10.64	322.77	--	--	--	--	--	--	--	
	11/02/88	10.69	322.72	--	--	--	--	--	--	--	
	12/20/88	10.51	322.9	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	03/28/89	9.87	323.54	<250	<0.5	<0.5	<0.5	<0.5	--	--	
	08/02/89	10.34	323.07	<50	<0.1	<0.1	<0.1	<0.1	--	<0.1	
	11/06/89	10.65	322.76	<500	<3.0	<5.0	<5.0	<5.0	--	<5.0	
	01/25/90	10.6	322.81	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	
	04/23/90	10.58	322.83	71	2	5	3	8	--	<0.5	
	08/01/90	10.88	322.53	300	86	21	10	33	--	--	
	10/24/91	11.12	322.29	280	69	13	11	16	--	--	
	01/31/91	11.16	322.25	460	160	11	17	17	--	--	
	08/21/91	10.8	322.61	2,400	400	220	44	120	--	--	
	08/21/91	10.8	322.61	2,300	390	210	42	120	--	--	Duplicate
	10/07/91	10.79	322.62	--	--	--	--	--	--	--	
	01/28/92	10.79	322.62	3,600	320	360	110	310	--	--	
	01/28/92	10.79	322.62	3,000	290	320	99	270	--	--	Duplicate
	06/05/92	10.84	322.57	1,700	290	89	61	130	--	--	
	09/30/92	11.06	322.35	2,100	160	260	80	350	--	--	
	12/30/92	10.15	323.26	3,200	240	180	110	310	--	--	
	03/29/93	9.42	323.99	23,000	700	3,000	610	3,000	--	--	
	06/25/93	10.42	322.99	2.7	130	590	130	590	--	--	
	09/16/93	10.66	322.75	3.9	410	830	220	890	--	--	
	12/20/93	10.6	322.81	27	1,200	2,600	1,100	4,200	--	--	
	03/29/94	10.41	323	6.3	250	700	200	830	--	--	
	06/22/94	10.4	323.01	4.1	71	240	110	460	<30	<10	
	09/20/94	10.37	323.04	8,500	1,200	1,300	370	1,400	--	--	
	10/04/94	10.34	323.07	7,600	97	360	150	620	--	--	
	11/30/94	9.46	323.95	8,800	180	490	240	900	--	--	
	03/02/95	9.96	321.07	6.9	82	570	210	970	--	--	
	06/15/95	9.8	321.23	4.8	44	210	160	620	<25	--	
	09/26/95	10.48	320.55	13,000	150	620	370	1,400	<125	--	
	12/28/95	10.14	320.89	11,000	74	250	200	750	79	--	
	02/29/96	8.74	322.29	17,000	59	480	350	1,600	<125	--	
	06/27/96	10.21	320.82	3,600	22	130	130	49	46	--	
	09/12/96	10.49	320.72	2,000	20	<10	18	44	<50	--	
	03/31/97	10.19	321.02	17,000	87	230	330	1,200	310	--	
	12/23/98	9.83	321.38	290	20	0.88	1.1	16	<2.5	--	
	03/25/99	9.13	322.08	500	21	<0.5	21	<0.5	18	--	
	02/03/00	9.05	322.16	2,310	35.7	90	21.8	147	1,280 (365)	--	
	01/23/01	--	--	--	--	--	--	--	--	--	Inaccessible
	05/01/01	9.82	321.39	7,710	19.9	12.6	22.3	64	31.8	--	
	08/28/01	10.04	321.17	4,800	69	<25	50	140	160	--	
	11/27/01	10.05	321.16	5,300	25	<5.0	30	120	<20	--	
	02/28/02	--	--	--	--	--	--	--	--	--	Inaccessible
	05/22/02	9.05	322.16	110	<1.0	<0.50	1	<1.5	<2.5	--	
	08/20/02	9.21	322	410	2.6	<0.50	8.5	29	<5.0	--	
	11/11/02	9.01	322.2	3,800	<0.50	1.3	17	47	<5.0	--	
	05/08/03	8.23	322.98	1,700	11	0.97	63	161	<2.0	--	
	12/15/04	--	--	--	--	--	--	--	--	--	Inaccessible
	02/21/05	--	--	--	--	--	--	--	--	--	Inaccessible

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID *TOC Elev* *(ft)*	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
				←			µg/L			→	
EA-2	10/17/88	--	--	<50	<0.5	<0.5	<0.5	1.2	--	--	
330.41	10/24/88	9.7	322.89	--	--	--	--	--	--	--	
	11/02/88	10.03	322.56	--	--	--	--	--	--	--	
	12/20/88	9.98	322.61	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	03/28/89	8.8	323.79	<250	<2	<0.5	<0.5	<0.5	--	<0.5	
	08/02/89	9.44	323.15	<50	<0.1	<0.1	<0.1	<0.1	--	<0.1	
	11/06/89	9.53	323.06	<500	<3.0	<5.0	<5.0	<5.0	--	<5.0	
	01/25/90	9.27	323.32	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	
	04/23/90	9.35	323.24	<50	0.6	0.8	<0.5	2	--	<0.5	
	08/01/90	9.71	322.88	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	10/24/90	10.08	322.51	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	01/31/91	10.21	322.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	01/31/91	10.21	322.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	Duplicate
	08/21/91	9.8	322.79	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	10/07/91	9.98	322.61	--	--	--	--	--	--	--	
	01/28/92	9.81	322.78	<50	0.8	<0.5	<0.5	<0.5	--	--	
	06/05/92	9.86	322.73	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	09/30/92	10.6	321.99	66	1	3.2	1.3	7.4	--	--	
	12/30/92	9.11	323.48	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	03/29/93	7.73	324.86	<50	<0.5	<0.5	<0.5	<1.5	--	--	
	06/25/93	9.22	323.37	<50	<0.5	<0.5	<0.5	<1.5	--	--	
	09/16/93	10	322.59	<50	<0.5	<0.5	<0.5	<1.5	--	--	
	12/20/93	9.38	323.21	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	03/29/94	9.3	323.29	<50	<0.5	0.6	<0.5	<0.5	--	--	
	06/22/94	9.49	323.1	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	09/26/94	9.72	322.87	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	10/04/94	9.58	323.01	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	11/30/94	8.7	323.89	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	03/02/95	8.54	321.67	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	06/07/95	8.42	321.79	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	09/26/95	9.34	320.87	540	6.8	<0.5	47	29	13	--	
	12/28/95	8.84	321.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	02/29/96	7.44	322.77	<50	<0.5	<0.5	<0.5	1.5	<2.5	--	
	06/27/96	8.83	321.38	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	09/12/96	9.4	321.01	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	03/31/97	9.11	321.3	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	12/23/98	8.91	321.5	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	03/25/99	8.1	322.31	<50	<0.5	<0.5	<0.5	<0.5	2.7	--	
	02/03/00	8.36	322.05	<50	<0.5	<0.5	<0.5	<0.5	<2.5 (<2.0)	--	
	01/23/01	9.08	321.33	441 (1)	1.27	0.542	40.3	31	72.9	--	
	05/01/01	8.87	321.54				SAMPLED ANNUALLY				
	08/28/01	9.45	320.96				SAMPLED ANNUALLY				
	11/27/01	9.5	320.91				SAMPLED ANNUALLY				
	02/28/02	9.05	321.36	<50	<0.50	<0.50	<0.5	<1.5	74		
	05/22/02	9.04	321.37				SAMPLED ANNUALLY				
	08/20/02	9	321.41				SAMPLED ANNUALLY				
	11/11/02	9.03	321.38				SAMPLED ANNUALLY				
	05/08/03	7.26	323.15	<50	<0.5	<0.5	<0.5	<0.5	2.2/0.9	--	
	12/15/04	8.96	321.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	
	02/21/05	**7.20**	**323.21**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**13 (11)**	--	

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID *TOC Elev* *(ft)*	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
				←			µg/L			→	
EA-3	10/17/88	--	--	<50	1.8	<0.5	<0.5	3	--	--	
331.5	10/24/88	11.03	322.61	--	--	--	--	--	--	--	
	11/02/88	11.03	322.61	--	--	--	--	--	--	--	
	12/20/88	10.96	322.68	240	90	1.2	13	3.3	--	--	
	03/28/89	9.77	323.87	2,300	380	130	240	910	--	--	
	08/02/89	10.65	322.99	<50	<0.1	<0.1	<0.1	<0.1	--	<0.1	
	11/06/89	10.78	322.86	<500	<3.0	<5.0	<5.0	<5.0	--	<5.0	
	01/25/90	10.66	322.98	<50	<0.5	<0.5	<0.5	<0.5	--	<0.5	
	04/23/90	10.68	322.96	<50	0.8	<0.5	0.9	<0.5	--	<0.5	
	08/01/90	11.03	322.61	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	10/24/90	11.35	322.29	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	01/31/91	11.52	322.12	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	08/21/91	--	--	--	--	--	--	--	--	--	
	10/07/91	11.15	322.49	180	40	20	4.7	8.4	--	--	
	10/7/1991	--	--	200	43	17	4.1	6.7	--	--	Duplicate
	01/28/92	11.08	322.56	640	69	85	13	46	--	--	
	06/05/92	10.98	322.66	250	63	8.3	3	9.5	--	--	
	09/30/92	11.38	322.26	330	120	33	6.3	22	--	--	
	12/30/92	10.48	323.16	58	7.6	1.3	2.5	5.4	--	--	
	03/29/93	9.3	324.34	120	11	4.5	6.2	13	--	--	
	06/25/93	10.46	323.18	<50	<0.5	<0.5	<0.5	<1.5	--	--	
	09/16/93	10.9	322.74	85	3.9	8.8	4.5	22	--	--	
	12/20/93	10.66	322.98	190	12	12	13	50	--	--	
	03/29/94	10.5	323.14	<50	<0.5	1.2	<0.5	0.9	--	--	
	06/22/94	10.64	323	<50	<0.5	<0.5	<0.5	<0.5	<3.0	<1.0	
	09/26/94	10.72	322.92	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	10/04/94	10.68	322.96	<50	<0.5	<0.5	<0.5	0.7	--	--	
	11/30/94	9.66	323.98	170	6.1	3	6.5	28	--	--	
	03/02/95	9.92	321.38	<50	<0.5	<0.5	<0.5	<0.5	--	--	
	06/07/95	9.72	321.58	<50	<0.5	<0.5	<0.5	<0.5	3.2	--	
	09/26/95	10.6	320.7	2,000	140	<5.0	<5.0	190	280	--	
	12/28/95	9.82	321.48	<50	<0.5	<0.5	<0.5	<0.5	26	--	
	02/29/96	8.28	323.02	<50	2.1	<0.5	2.5	6	31	--	
	06/27/96	9.91	321.39	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	09/12/96	10.59	320.91	13,000	<20	<20	<20	<20	48	--	
	03/31/97	--	--	--	--	--	--	--	--	--	Inaccessible
	04/15/97	10.25	321.25	<125	2	<1.2	<1.2	<1.2	680	--	
	12/23/98	--	--	--	--	--	--	--	--	--	Inaccessible
	03/25/99	--	--	--	--	--	--	--	--	--	Inaccessible
	02/03/00	--	--	--	--	--	--	--	--	--	Inaccessible
	01/23/01	10.31	321.19	862 (1)	3.97	1.15	18.9	48.6	289	--	
	05/01/01	10.15	321.35				SAMPLED SEMI-ANNUALLY				
	08/28/01	10.56	320.94	<50	<0.50	<0.50	<0.50	<0.50	37	--	
	11/27/01	10.65	320.85				SAMPLED SEMI-ANNUALLY				
	02/28/02	10.37	321.13	<50	1.3	<0.50	2	1.8	90	--	
	05/22/02	10.27	321.23				SAMPLED SEMI-ANNUALLY				
	08/20/02	10.3	321.2	<50	<0.50	<0.50	<0.50	<1.5	40	--	
	11/11/02	9.05	322.45				SAMPLED SEMI-ANNUALLY				
	05/08/03	8.83	322.67	<50	<0.5	<0.5	<0.5	<0.5	39/37	--	
	12/15/04	10.39	321.11	<50	<0.5	<0.5	<0.5	<0.5	18 (17)	--	
	02/21/05	**8.80**	**322.70**	**<50**	**<0.5**	**<0.5**	**2.3**	**1.4**	**180 (290)**	--	

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID *TOC Elev* *(ft)*	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
				←			µg/L			→	
MW-1	10/04/94	12.8	320.76	2,100	150	170	61	320	--	--	
333.66	11/30/94	12.38	321.18	1,500	210	17	73	130	--	--	
	03/02/95	12.88	320.68	2,600	510	<10	160	<10	--	--	
	06/07/95	12.58	320.98	710	160	<2.0	45	<2.0	<10	--	
	09/26/95	13.15	320.41	1,100	140	1.4	92	1.8	<5.0	--	
	12/28/95	13.09	320.47	750	96	2.5	61	7.4	37	--	
	02/29/96	12.17	321.39	250	17	<0.5	18	0.81	9	--	
	06/27/96	12.95	320.61	710	72	<2.0	92	2.2	<10	--	
	09/12/96	13.11	320.55	300	53	<0.5	32	0.65	21	--	
	03/31/97	12.99	320.67	<200	4.1	<2.0	4.8	<2.0	640	--	
	12/23/98	13.87	319.79	<50	<50	<0.5	<0.5	<0.5	3200	--	
	03/25/99	12.01	321.65	<50	<0.5	<0.5	<0.5	<0.5	5,200 (5,200)	--	
	02/03/00	11.91	321.75	<500	<5.0	<5.0	<5.0	<5.0	3,180 (3,350)	--	
	01/23/01	12.57	321.09	<50.0	<0.500	<0.500	<0.500	<0.500	4,420	--	
	05/01/01	12.6	321.06				SAMPLED SEMI-ANNUALLY				
	08/28/01	12.74	320.92	<50	<0.50	<0.50	<0.50	<0.50	4,800	--	
	11/27/01	12.7	320.96				SAMPLED SEMI-ANNUALLY				
	02/28/02	12.7	320.96	<50	<0.50	<0.50	<0.50	<1.5	1,400	--	
	05/22/02	12.38	321.28				SAMPLED SEMI-ANNUALLY				
	08/20/02	12.57	321.09	<50	<0.50	<0.50	<0.50	<1.5	1,400	--	
	11/11/02	11.31	322.35				SAMPLED SEMI-ANNUALLY				
	05/08/03	11.85	321.81	<50	<0.50	<0.50	<0.50	<0.50	1,300 (1,200)	--	
	12/15/04	12.80	320.86	<50	<0.50	<0.50	<0.50	<0.50	1,700 (1,900)	--	
	02/21/05	**11.81**	**321.85**	**<100**	**<1.0**	**<1.0**	**<1.0**	**<1.0**	**3,000 (3,800)**	--	
MW-2	10/04/94	8.56	320.62	2300	160	280	96	480	--	--	
329.29	11/30/94	8.33	320.85	1,600	170	16	110	120	--	--	
	03/02/95	8.35	320.83	1,200	220	5.6	140	36	--	--	
	06/07/95	8.62	320.56	160	25	<0.5	16	<0.5	240	--	
	09/26/95	8.71	320.47	150	15	<0.5	7.2	<0.5	120	--	
	12/28/95	8.78	320.4	400	34	1.3	26	5.1	170	--	
	02/29/96	7.82	321.36	120	29	<0.5	<0.5	<0.5	790	--	
	06/27/96	8.72	320.46	150	13	<0.5	7	<0,5	850	--	
	09/12/96	8.81	320.48	<1,000	18	<10	<10	<10	3,100	--	
	03/31/97	8.65	320.64	<500	<5.0	<5.0	<5.0	<5.0	1,400	--	
	12/23/98	8.32	320.97	<50	<0.5	<0.5	<0.5	<1.5	900	--	
	03/25/99	7.89	321.4	<50	2.6	<0.5	<0.5	<0.5	1,100 (670)	--	
	02/03/00	7.53	321.76	<125	<1.25	<1.25	<1.25	<1.25	1,020 (1,100)	--	
	01/23/01	8.18	321.11	<50.0	<0.500	<0.500	<0.500	<0.500	642	--	
	05/01/01	8.43	320.86	70.8	<0.500	<5.00	<5.00	<5.00	342	--	
	08/28/01	8.39	320.9	<50	<0.50	<0.50	<0.50	<0.50	530	--	
	11/27/01	8.46	320.83	210	<0.50	<0.50	<0.50	<1.5	260	--	
	02/28/02	8.48	320.81	<50	<0.50	<0.50	<0.50	<1.5	180	--	
	05/22/02	8.14	321.15	<50	<0.50	<0.50	<0.50	<1.5	180	--	
	08/20/02	8.24	321.05	<50	<0.50	<0.50	<0.50	<1.5	160	--	
	11/11/02	8.06	321.23	<50	<0.50	<0.50	<0.50	<1.5	130	--	
	05/08/03	7.86	321.43	<50	<0.50	<0.50	<0.50	<0.50	180 (160)	--	
	12/15/04	8.60	320.69	<50	<0.50	<0.50	<0.50	<0.50	1,400 (1,600)	--	
	02/21/05	**7.55**	**321.74**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**800 (1,100)**	--	

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID *TOC Elev* *(ft)*	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
				←			µg/L			→	
MW-3	10/04/94	12.06	320.67	6,300	610	750	68	670	--	--	
332.86	11/30/94	11.38	321.35	17	3,600	490	430	610	--	--	
	03/02/95	11.97	320.76	8,500	2,200	<50	240	<50	64,000	--	
	06/07/95	11.54	321.19	3,000	710	18	220	44	3,100	--	
	09/26/95	12.36	320.37	<10,000	230	<100	130	<100	64,000	--	
	12/28/95	12.07	320.66	<12,500	760	<125	<125	<125	100,000	--	
	02/29/96	11.01	321.72	1,600	380	<10	84	17	33,000	--	
	06/27/96	11.93	320.8	1,400	<2.5	4.3	130	4	96,000	--	
	09/12/96	12.26	320.6	<10,000	560	<100	110	<100	100,000	--	
	03/31/97	12.04	320.82	<25,000	1,200	370	<250	380	130,000	--	
	12/23/98	12.92	319.94	--	--	--	--	--	--	--	0.1' SPH; 0.079 gal SPH removed
	03/25/99	12.56	320.3	--	--	--	--	--	--	--	0.05' SPH; 0.05 gal SPH removed
	02/03/00	11.12	321.74	92,100	4,780	11,400	2,270	15,800	137,000 (162,000)	--	
	1/23/2001	11.78	321.08	60,600	4,810	7,500	1,870	11,000	148,000	--	Absorbent sock in well
	5/1/2001	10.66	322.2	56,000	3,760	5,640	<2,500	8,740	136,000	--	Absorbent sock in well
	8/28/2001	11.79	321.07	32,000	3,800	2,600	1,200	7,500	160,000	--	Absorbent sock in well
	11/27/2001	11.98	320.88	110,000	1,300	2,400	1,500	9,400	90,000	--	Absorbent sock removed
	02/28/02	11.81	321.05	24,000	1,900	820	520	3,100	90,000	--	
	05/22/02	11.6	321.26	110,000	4,000	3,200	2,800	18,000	140,000	--	
	08/20/02	11.81	321.05	37,000	2,600	1,500	890	4,800	110,000	--	
	11/11/02	11.63	321.23	81,000	2,900	2,100	2,100	14,000	110,000	--	
	05/08/03	10.91	321.95	5,700	770	69	130	365	76,000 (70,000)	--	
	12/15/04	11.97	320.89	33,000	1,700	430	1,300	7,000	70,000 (89,000)	--	
	02/21/05	**10.81**	**322.05**	--	--	--	--	--	--	--	**0.01 SPH**
MW-4	03/01/96	9.9	322.74	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
332.63	04/02/96	9.77	322.87	--	--	--	--	--	--	--	
	06/27/96	10	322.64	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	09/12/96	11.67	320.96	<50	<0.5	<0.5	<0.5	<0.5	3.5	--	
	03/31/97	10.59	322.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	12/23/98	10.37	322.26	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--	
	03/25/99	9.91	322.72	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	02/03/00	10.32	322.31	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0 (3)	--	
	01/23/01	10.54	322.09	<50	<0.500	<0.500	<0.500	<0.500	<5.00	--	
	05/01/01	10.32	322.31				SAMPLED ANNUALLY				
	08/28/01	10.57	322.06				SAMPLED ANNUALLY				
	11/27/01	10.29	322.34				SAMPLED ANNUALLY				
	02/28/02	10.3	322.33	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	
	05/22/02	10.12	322.51				SAMPLED ANNUALLY				
	08/20/02	10.43	322.2				SAMPLED ANNUALLY				
	11/11/02	9.89	322.74				SAMPLED ANNUALLY				
	05/08/03	9.79	322.84	<50	<0.5	<0.5	<0.5	<0.5	<2	--	
	12/15/04	10.56	322.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	
	02/21/05	**9.50**	**323.13**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0 (<0.5)**	--	
MW-5	03/01/96	10.62	322.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
333.47	04/02/96	10.14	323.06	--	--	--	--	--	--	--	
	06/27/96	10.22	322.98	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	09/12/96	10.85	322.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	03/31/97	10.44	322.6	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	12/23/98	10.21	322.83	<50	<0.5	<0.5	<0.5	<1.5	<2.5	--	

Table 1. Groundwater Monitoring Data and Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Well ID *TOC Elev* *(ft)*	Date Sampled	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	1,2-DCA	Notes
				←			µg/L			→	
MW-5 (Cont'd)	D3/25/99	9.92	323.12	<50	<0.5	<0.5	<0.5	<0.5	<2.5	--	
	02/03/00	9.63	323.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.03	--	
	01/23/01	10.35	322.69	<50	<0.500	<0.500	<0.500	<0.500	<5.00	--	
	05/01/01	10.34	322.7				SAMPLED ANNUALLY				
	08/28/01	10.44	322.6				SAMPLED ANNUALLY				
	11/27/01	10.17	322.87				SAMPLED ANNUALLY				
	02/28/02	10.2	322.84	<50	<0.50	<0.50	<0.50	<1.5	<2.5	--	
	05/22/02	10.38	322.66				SAMPLED ANNUALLY				
	08/20/02	10.36	322.68				SAMPLED ANNUALLY				
	11/11/02	10.03	323.01				SAMPLED ANNUALLY				
	05/08/03	9.56	323.48	<50	<0.5	<0.5	<0.5	<0.5	3.4/<0.5	--	
	12/15/04	10.08	322.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0	--	
	02/21/05	**9.9**	**323.14**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0 (0.54)**	--	

ABBREVIATIONS AND NOTES:

Groundwater monitoring data and laboratory analytical results prior to December 14, 2004, were scanned from a report by SOMA.
(ft) = Feet
(msl) = Mean sea level
TOC Elev. (ft) = Top of casing elevation
µg/L = micrograms per liter - approximately equal to parts per billion = ppb
TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015M.
BTEX by EPA Method 8020/8021.
MTBE = Methyl tertiary-butyl ether by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B).
1,2-DCA = 1,2-Dichloroethane
SPH = Separate Phase Hydrocarbons Thickness, in feet
-- = Not Measured/Not Analyzed
1 Laboratory report indicates weathered gasoline C6-C12.

APPENDIX A

Groundwater Monitoring Field Data Sheets

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL GAUGING SHEET

Client: Pangea Environmental Services, Inc.

Site Address: 7240 Dublin Blvd. Dublin, CA

Date: 2/21/2005 **Signature:**

Well ID	Time	Depth to SPH	Depth to Water	SPH Thickness	Depth to Bottom	Comments
MW-1	8:10		11.81		25.36	Well EA-1 was inaccessible, VW-1 insufficient water
MW-2	8:05		7.55		20.00	
MW-3	8:15		10.81		22.12	
MW-4	6:45		9.50		19.75	
MW-5	7:50		9.90		20.94	
EA-1	Inaccessible					
EA-2	7:55		7.20		39.15	
EA-3	8:00		8.80		34.70	
VW-1	8:20		8.32		8.36	
VW-2	8:25		4.15		8.30	
VW-3	8:30		6.33		8.35	

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	MW-1
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	Disposable Bailer

Total Well Depth:	25.36
Depth to Water:	11.81
Water Column Height:	13.55
Volume/ft:	0.16
1 Casing Volume (gal):	2.17
3 Casing Volumes (gal):	6.50

Fe=	**mg/L**
ORP=	**mV**
DO= 0.82	**mg/L**

COMMENTS:

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
1:30	2.2	24.1	7.12	680
1:40	4.3	24.1	7.09	1042
1:50	6.5	24.0	7.10	1066

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-1	2/21/2005	1:55	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	MW-2
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	Disposable Bailer

Total Well Depth:	20.00	**Fe=**	**mg/L**
Depth to Water:	7.55	**ORP=**	**mV**
Water Column Height:	12.45	**DO=**	1.35 **mg/L**
Volume/ft:	0.16		
1 Casing Volume (gal):	1.99	**COMMENTS:**	
3 Casing Volumes (gal):	5.98		

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
12:55	2.0	23.9	7.07	1292
1:05	4.0	24.2	7.14	1260
1:15	6.0	24.1	7.11	1268

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-2	2/21/2005	1:20	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	MW-3
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	

Total Well Depth:	22.12	**Fe=**	**mg/L**
Depth to Water:	10.81	**ORP=**	**mV**
Water Column Height:	11.31	**DO=**	1.29 **mg/L**
Volume/ft:	0.16		
1 Casing Volume (gal):	1.81		
3 Casing Volumes (gal):	5.43		

COMMENTS:
NO SAMPLE TAKE, SPH in well after purging 3 liters from well, SPH level at 12.09, water level at 12.10.

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
2:05	0.8			

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-3	2/21/2005		Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	MW-4
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	Disposable Bailer

Total Well Depth:	19.75
Depth to Water:	9.50
Water Column Height:	10.25
Volume/ft:	0.16
1 Casing Volume (gal):	1.64
3 Casing Volumes (gal):	4.92

Fe=	**mg/L**
ORP=	**mV**
DO= 1.60	**mg/L**

COMMENTS:

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
10:10	1.6	23.1	7.40	1962
10:15	3.3	23.5	7.35	2048
10:20	4.9	23.3	7.38	2019

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-4	2/21/2005	10:25	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	MW-5
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	Disposable Bailer

Total Well Depth:	20.94
Depth to Water:	9.90
Water Column Height:	11.04
Volume/ft:	0.16
1 Casing Volume (gal):	1.77
3 Casing Volumes (gal):	5.30

Fe=	**mg/L**
ORP=	**mV**
DO=	1.62 **mg/L**

COMMENTS:

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
10:35	1.8	23.7	7.19	1861
10:45	3.5	23.2	7.11	1295
10:55	5.3	23.3	7.15	1260

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
MW-5	2/21/2005	11:00	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	EA-2
Well Diameter:	4"
Purging Device:	Whal Pump
Sampling Method:	Disposable Bailer

Total Well Depth:	39.15
Depth to Water:	7.20
Water Column Height:	31.95
Volume/ft:	0.65
1 Casing Volume (gal):	20.77
3 Casing Volumes (gal):	62.30

Fe=	**mg/L**
ORP=	**mV**
DO=	0.64 **mg/L**

COMMENTS:

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
11:20	20.8	23.4	7.31	770
11:30	41.5	23.6	7.09	794
11:40	62.3	23.6	7.04	779

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
EA-2	2/21/2005	11:45	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B

Signature:

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	EA-3
Well Diameter:	4"
Purging Device:	Whal Pump
Sampling Method:	Disposable Bailer

Total Well Depth:	34.70
Depth to Water:	8.80
Water Column Height:	25.90
Volume/ft:	0.65
1 Casing Volume (gal):	16.84
3 Casing Volumes (gal):	50.51

Fe=	**mg/L**
ORP=	**mV**
DO=	0.69 **mg/L**

COMMENTS:

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
11:55	16.8	24.3	7.06	549
12:05	33.7	24.1	7.03	556
12:15	50.5	24.3	7.05	533

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
EA-3	2/21/2005	12:20	Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	VW-2
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	

Total Well Depth:	8.30	**Fe=**	**mg/L**
Depth to Water:	4.15	**ORP=**	**mV**
Water Column Height:	4.15	**DO=**	0.33 **mg/L**
Volume/ft:	0.16		
1 Casing Volume (gal):	0.66		
3 Casing Volumes (gal):	1.99		

COMMENTS:
Well dewatered no sample taken.

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
9:30	0.7			
DEWATERED @ 9:31				

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
VW-2	2/21/2005		Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

MUSKAN
ENVIRONMENTAL
SAMPLING

WELL SAMPLING FORM

Date:	2/21/2005
Client:	Pangea Environmental Services, Inc.
Site Address:	7240 Dublin Blvd. Dublin, CA
Well ID:	VW-3
Well Diameter:	2"
Purging Device:	Disposable Bailer
Sampling Method:	

Total Well Depth:	8.35
Depth to Water:	6.33
Water Column Height:	2.02
Volume/ft:	0.16
1 Casing Volume (gal):	0.32
3 Casing Volumes (gal):	0.97

Fe=	**mg/L**
ORP=	**mV**
DO=	0.37 **mg/L**

COMMENTS:
Well dewatered no sample taken

TIME:	CASING VOLUME (gal)	TEMP (Celsius)	pH	COND. (microns)
9:45	0.3			
DEWATERED @ 9:46				

Sample ID:	Date:	Time	Container Type	Preservative	Analytes	Method
VW-3	2/21/2005		Voa	HCl	TPHg, BTEX, MTBE	8015B, 8021, 8260B
				Signature:		

APPENDIX B

Laboratory Analytical Report

McCampbell Analytical, Inc.
110 Second Avenue South, #D7
Pacheco, CA 94553-5560
(925) 798-1620

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0502375 **ClientID: PEO**

Report to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
64 Sonia Street
Oakland, CA 94618
TEL: (510) 435-8664
FAX: (510) 654-4006
ProjectNo: Dublin Car Wash
PO:

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
64 Sonia Street
Oakland, CA 94618

Requested TAT: **5 days**
Date Received: **02/24/2005**
Date Printed: **04/19/2005**

Sample ID	ClientSampID	Matrix	Collection Date	Hold	Requested Tests (See legend below)														
					1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
0502375-001	MW-1	Water	2/21/05 1:55:00 PM	☐	A	B	A												
0502375-002	MW-2	Water	2/21/05 1:20:00 PM	☐	A	B													
0502375-003	MW-4	Water	2/21/05 10:25:00	☐	A	B													
0502375-004	MW-5	Water	2/21/05 11:00:00	☐	A	B													
0502375-005	EA-2	Water	2/21/05 11:45:00	☐	A	B													
0502375-006	EA-3	Water	2/21/05 12:20:00	☐	A	B													

Test Legend:

1	G-MBTEX_W	2	MTBE_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12		13		14		15	

Prepared by: Rosa Venegas

Comments:

NOTE: Samples are discarded 60 days after results are reported unless other arrangements are made. Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: Dublin Car Wash	Date Sampled: 02/21/05
64 Sonia Street		Date Received: 02/24/05
Oakland, CA 94618	Client Contact: Bob Clark-Riddell	Date Extracted: 02/25/05-03/01/05
	Client P.O.:	Date Analyzed: 02/25/05-03/01/05

Gasoline Range (C6-C12) Volatile Hydrocarbons as Gasoline with BTEX and MTBE*

Extraction method: SW5030B Analytical methods: SW8021B/8015Cm Work Order: 0502375

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS
001A	MW-1	W	ND<100,j	3000	ND<1.0	ND<1.0	ND<1.0	ND<1.0	2	110
002A	MW-2	W	ND	800	ND	ND	ND	ND	1	119
003A	MW-4	W	ND	ND	ND	ND	ND	ND	1	109
004A	MW-5	W	ND	ND	ND	ND	ND	ND	1	110
005A	EA-2	W	ND	13	ND	ND	ND	ND	1	114
006A	EA-3	W	ND	180	ND	ND	2.3	1.4	1	98

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	50	5.0	0.5	0.5	0.5	0.5	1	µg/L
	S	NA	NA	NA	NA	NA	NA	1	mg/Kg

* water and vapor samples and all TCLP & SPLP extracts are reported in ug/L, soil/sludge/solid samples in mg/kg, wipe samples in µg/wipe, product/oil/non-aqueous liquid samples in mg/L.

cluttered chromatogram; sample peak coelutes with surrogate peak.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation: a) unmodified or weakly modified gasoline is significant; b) heavier gasoline range compounds are significant(aged gasoline?); c) lighter gasoline range compounds (the most mobile fraction) are significant; d) gasoline range compounds having broad chromatographic peaks are significant; biologically altered gasoline?; e) TPH pattern that does not appear to be derived from gasoline (stoddard solvent / mineral spirit?); f) one to a few isolated non-target peaks present; g) strongly aged gasoline or diesel range compounds are significant; h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) reporting limit raised due to high MTBE content; k) TPH pattern that does not appear to be derived from gasoline (aviation gas). m) no recognizable pattern; n) TPH(g) range non-target isolated peaks subtracted out of the TPH(g) concentration at the client's request.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.

110 2nd Avenue South, #D7, Pacheco, CA 94553-5560
Telephone : 925-798-1620 Fax : 925-798-1622
Website: www.mccampbell.com E-mail: main@mccampbell.com

Pangea Environmental Svcs., Inc.	Client Project ID: Dublin Car Wash	Date Sampled: 02/21/05
64 Sonia Street		Date Received: 02/24/05
Oakland, CA 94618	Client Contact: Bob Clark-Riddell	Date Extracted: 02/25/05-02/28/05
	Client P.O.:	Date Analyzed: 02/25/05-02/28/05

Methyl tert-Butyl Ether*

Extraction method: SW5030B Analytical methods: SW8260B Work Order: 0502375

Lab ID	Client ID	Matrix	Methyl-t-butyl ether (MTBE)	DF	% SS
001B	MW-1	W	3800	200	103
002B	MW-2	W	1100	100	104
003B	MW-4	W	ND	1	102
004B	MW-5	W	0.54	1	102
005B	EA-2	W	11	1	105
006B	EA-3	W	290	20	103

Reporting Limit for DF =1; ND means not detected at or above the reporting limit	W	0.5	µg/L
	S	NA	NA

* water and vapor samples are reported in µg/L, soil/sludge/solid samples in mg/kg, product/oil/non-aqueous liquid samples and all TCLP & SPLP extracts are reported in mg/L, wipe samples in µg/wipe.

ND means not detected above the reporting limit; N/A means analyte not applicable to this analysis.

surrogate diluted out of range or surrogate coelutes with another peak.

h) lighter than water immiscible sheen/product is present; i) liquid sample that contains greater than ~1 vol. % sediment; j) sample diluted due to high organic content/matrix interference; k) reporting limit near, but not identical to our standard reporting limit due to variable Encore sample weight; m) reporting limit raised due to insufficient sample amount; n) results are reported on a dry weight basis; p) see attached narrative.

DHS Certification No. 1644

Angela Rydelius, Lab Manager

PEO 0502375

McCAMPBELL ANALYTICAL, INC.

110 2nd AVENUE SOUTH, #D7
PACHECO, CA 94553-5560
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DA

EDF Required? (Yes) No

Report To: Bob Clark-Riddell Bill To: Pangea Environmental Services, Inc.
Company: Pangea Environmental Services, Inc.
64 Sonia Street, Ste. B
Oakland, CA 94618 E-Mail: ber@pangeaenv.com
Tele: (510) 435-8664 Fax: (510) 654-4006
Project #: Project Name: Dublin Car Wash
Project Location: 7240 Dublin Blvd., Dublin, CA
Sampler Signature: Muskan Environmental Sampling

SAMPLE ID (Field Point Name)	LOCATION	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX (Water, Soil, Air, Sludge, Other)	METHOD PRESERVED (ICE, HCL, HNO3, Other)	Analysis Request: MTBE / BTEX & TPH as Gas (602 / 8021 + 8015)	MTBE / BTEX ONLY (EPA 602 / 8021)	TPH as Diesel / Motor Oil (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 502.2 / 601 / 8010 / 8021 (HVOCs)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	EPA 524.2 / 624 / 8260 (VOCs)	Fuel Additives (MTBE, ETBE, TAME, DIPE, TBA, 1,2 – DCA, 1,2 – EDB, ethanol) by 8260B	TPHg by 8015 M	VOCs and fuel additives by 8260	TPHg / BTEX & MTBE by (8015 / 8020)	Other: MTBE by 8260B	Comment: Filter Samples for Metals analysis: Yes / No
MW-1		2-21-05	1:55	3	VOA	X	X X	X															X	
MW-2			1:20			X	X	X															X	
MW-4			10:25			X	X	X															X	
MW-5			11:05			X	X	X															X	
EA-2			11:45			X	X	X															X	
EA-3		↓	12:20	↓	↓	X	X	X															X	

Relinquished By:	Date:	Time:	Received By:
	2/24/05	3:00	
Relinquished By:	Date:	Time:	Received By:
	2/24/05	5:00	

ICE/t ✓
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS ✓
PRESERVED IN LAB
PRESERVATION

VOAS	O&G	METALS	OTHER