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Alameda County
Environmental Health

December 16, 2009

Mr. Paresh Khatri
Alameda County Health Care Services Agency
Department of Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: **Remediation Well Installation Report**
Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California
ACEH Case No. 304

Dear Mr. Khatri:

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. has prepared this *Remediation Well Installation Report* for the subject site. This report describes the installation and development of two dual-phase extraction wells. This work was outlined in Pangea's *Interim Remediation Report and Corrective Action Plan* (CAP) dated December 9, 2008, which was approved by the Alameda County Environmental Health in a letter dated January 16, 2009.

If you have any questions or comments, please call me at (510) 435-8664 or email briddell@pangeaenv.com.

Sincerely,
Pangea Environmental Services, Inc.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Remediation Well Installation Report*

cc: Mr. Hooshang Hadjian, 2108 San Ramon Valley Blvd, San Ramon, CA 94583
Mr. Jim Lange, 6500 Dublin Blvd., Suite 202, Dublin, CA 94568
Geotracker

REMEDIATION WELL INSTALLATION REPORT

Dublin Auto Wash
7240 Dublin Boulvelard
Dublin, California
ACHCSA Case No. 304

December 16, 2009

Prepared for:

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

Prepared by:

Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, California 94612

Written by:

REGISTERED PROFESSIONAL ENGINEER
ROBERT G. CLARK-RIDDELL
No. C 049629
Exp. SEPT 2010
CIVIL
STATE OF CALIFORNIA

Morgan Gillies
Project Manager

Bob Clark-Riddell, P.E.
Principal Engineer

INTRODUCTION

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. (Pangea) has prepared this *Remediation Well Installation Report* (report) for the above-referenced site. The report describes the installation of two dual-phase extraction wells to facilitate implementation of the approved corrective action plan (CAP). The site background and remediation well installation are described below.

SITE BACKGROUND

Site Description

The Dublin Auto Wash is located at the southwest corner of Dublin Boulevard and Village Parkway in Dublin, California (Figure 1). The site elevation is approximately 321 feet above mean sea level (msl), with the topography sloping gently to the south from the central and western portions of the site, toward a flood control channel. The natural topography slopes gently to the southeast on the eastern portion of the site. Onsite facilities consist of two dispenser islands (four dispensers), three 10,000-gallon underground storage tanks (USTs), and a station building with a car wash (Figure 2). Land use immediately surrounding the site is commercial, with Interstate 680 located southwest of the site, across the flood control channel.

Summary of Previous Environmental Work

Chevron Release – 1988 to 1996

The first environmental investigation at the site was performed in early 1988 when Chevron Products Company (Chevron), the previous owner/operator, hired EA Engineering, Science, and Technology, Inc. (EA), to conduct a soil vapor investigation at the site. The results of the soil gas survey indicated elevated levels of hydrocarbons beneath the site, especially around the southern pump island. Subsequently, groundwater monitoring wells were installed and quarterly groundwater monitoring began. In February 1989, one 5,000-gallon and two 10,000-gallon underground storage tanks (USTs) were excavated and removed from the site and replaced with three new USTs. A soil vapor extraction (SVE) system was operated between March 1992 and April 1996, removing approximately 15,000 pounds of hydrocarbons. Between 1994 and 1996, additional groundwater monitoring wells were installed and added to the quarterly monitoring program. A December 1996 Risk Based Corrective Action (RBCA) report concluded that the site is a "Low Risk" soil and groundwater petroleum release site, and ACEH subsequently approved SVE system shutdown.

New Release – February 1997

In February 1997, a leak in a stainless steel product line flex hose was discovered and reported to ACEH. The leak location was immediately south of the north-westernmost dispenser (dispenser No. 2). During June 1997 testing, the secondary piping failed a pressure test. Subsequently, a new product delivery system was installed to replace the existing lines. During the system modifications in July 1997, Parker Environmental Services collected soil samples via hand auger at locations B-1 through B-4. About 31 cubic yards of soil were removed from the release area to a depth of 8 feet bgs. The results of subsequent groundwater monitoring events in December 1998 and March 1999 indicated free product was present in well MW-3. The detection of free product in MW-3 (up to 0.1 feet thick) corresponds to the historically lowest groundwater elevation observed during site monitoring activities, when the depth to groundwater in well MW-3 was 12.92 feet in December 1998.

Gettler-Ryan, Inc. (GRI), a subcontractor of Chevron, monitored the eight existing groundwater monitoring wells at the site until the first quarter of 2003. In 2003, SOMA began performing groundwater monitoring at the site on behalf of Mr. Hadjian. SOMA noted 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 northeast direction. SOMA believed the groundwater flow direction may have been affected by the 18" diameter vitrified clay pipe (VCP) sewer line running beneath the southern portion of Dublin Boulevard immediately north of the site. Information provided by Gettler-Ryan indicated 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 ft bgs.

In 2003, SOMA also conducted further characterization and remediation activities at the site. SOMA advanced seven shallow soil borings using hand augers (B-1 through B-8), nine soil borings using a Geoprobe™ direct push rig, and one soil boring using a drill rig equipped with hollow stem augers. Initially, the Geoprobe borings were intended to be used for cone penetrometer testing (CPT) to log the borings; however, due to subsurface conditions the borings were logged using electric conductivity sensors. The direct push borings included collection of discrete depth groundwater samples to assess the vertical extent of contamination.

SOMA's investigation confirmed that contaminant concentrations were highest near the northern central portion of the site, and concluded that the 18" diameter sewer line located immediately north of the site is intercepting groundwater contamination. Fill material around the sewer line could be acting as a preferential pathway for the contamination conveyance to the east and then southeast, the sewer flow direction. SOMA also found contamination in deeper groundwater. SOMA concluded that there are three relatively higher permeability zones on the site acting as water bearing zones – Shallow (10 – 15 to 19 – 23 feet bgs), Middle (19 – 23 to 32 – 36 feet bgs), and Deep (32 – 36 to 43 – 47 feet bgs) – with an Upper Shallow zone (at

approximately 2 to 6 feet bgs) noted in a few of the borings. In several locations, an insufficient amount of water was present in the potential water bearing zones, so no groundwater samples were obtained by SOMA. Since wells EA-1, EA-2, EA-3, and MW-1 are screened across the various water bearing zones at the site, SOMA recommended that these wells be destroyed to prevent them from acting as vertical conduits for the migration of the contaminants. SOMA also recommended that wells be installed in the Shallow, Middle, and Deep zones at the site to determine the groundwater flow directions in the various zones.

In November 2004, Pangea Environmental Services, Inc. (Pangea) of Oakland, California, assumed the lead role as consultant for Mr. Hadjian. During first, second and fourth quarters of 2005 and the first quarter 2006 groundwater monitoring events free product was again observed in well MW-3.

In February 2005, Pangea prepared a soil and groundwater investigation workplan, which included an evaluation of local and regional geology and hydrogeology, a review of soil and groundwater sampling data from the site (including detailed cross sections), a conduit study, and a sensitive receptor survey to assess potential impacts to wells and surface water bodies. The closest water supply well was identified approximately 1,900 feet southwest of the site, and was not considered to be potentially impacted by site contamination. The adjacent flood control channel is the only nearby surface water body that could potentially be impacted by site contamination. The workplan recommended installing borings along the sanitary sewer line in Dublin Boulevard and destruction of select wells screened across multiple water-bearing zones. The workplan also recommended installation of new monitoring wells within the multiple water-bearing zones and implementation of interim remediation using vacuum extraction to remove groundwater and free product from selected site wells. During subsequent correspondence, ACEH requested installation of a soil boring (SB-2) downgradient of the 1997 release.

During workplan implementation in March through May 2006, Pangea installed fourteen monitoring wells (MW-3A, MW-6A, MW-6B, MW-7AA, MW-7A, MW-7B, MW-7C, MW-8A, MW-9A, MW-9C, MW-10A, MW-10C and MW-11C) to help define the vertical and lateral extent of groundwater contamination. Pangea abandoned wells EA-1, EA-2, EA-3 and MW-3 to reduce the risk of vertical contaminant migration and improve the quality of monitoring data. Pangea drilled three soil borings (SB-1, SB-1A and SB-2) to help evaluate subsurface conditions downgradient of the 1997 release and north of the site, and the potential for contamination migration along the 18-inch sanitary sewer line in Dublin Boulevard. Soil borings SB-1 was located near the intersection of Dublin Boulevard and Village Parkway and boring SB-1A was located approximately 3 ft south of SB-1. Results are detailed in the August 11, 2006 Site Investigation Report prepared by Pangea.

In July 2006, Pangea conducted vacuum extraction from well MW-3A and MW-7AA using a vacuum truck. The vacuum extraction was conducted to provide cost-effective removal of source area material and additional

information about subsurface conditions. The results of the vacuum extraction led Pangea to recommend conducting *short-term feasibility testing/source removal* on key site wells (MW-3A, MW-7AA, MW-7A, MW-6A) detailed in the August 11, 2006 *Site Investigation Report.* ACEH approved the proposed feasibility testing and requested a corrective action plan (CAP) in a letter dated November 9, 2007. The ACEH letter also approved discontinuance of groundwater monitoring of C-zone wells, because monitoring data suggested the C-zone was not impacted.

Site Geology and Hydrogeology

Subsurface soil encountered at the site consists primarily of clay, silty clay and clayey sand. Groundwater has been encountered at depths of approximately 12 to 19 feet below grade surface (bgs) during well installation and soil boring activities, and subsequently rose to 8.8 to 12.9 ft bgs. These observations suggest that site groundwater is under confined to semi-confined conditions. Historically, the depth to groundwater in site monitoring wells has ranged from approximately 7.2 to 13.2 feet bgs.

Throughout much of the site, saturated-zone soil is primarily clay down to approximately 15 ft bgs, although sporadic thin seams of coarser material are also present. Generally, the piezometric surface for the deeper confined to semi-confined water-bearing units lies within this relatively low permeability unit, and the coarser materials within the unit often contain perched groundwater with piezometric surfaces that differ significantly from those of the deeper units. The shallowest groundwater monitoring wells and vapor monitoring wells (MW7AA, VW-1, VW-2 and VW-3) are screened within this unit, which is referred to as the upper shallow 'AA' zone. This nomenclature differs slight from prior reports by SOMA, which restricted their "upper shallow zone" to depths of 3 to 6 ft bgs. A water-bearing unit comprised of clayey sand and sandy clay is present at approximately 15 to 18 ft bgs and appears to be laterally persistent throughout most of the site. This is referred to as the shallow 'A' zone. The shallow wells (MW-6A, MW-8A, MW-9A and MW-10A) were screened into this unit of higher permeability materials. The shallow source zone well MW-3A is screened across the 'A' zone but the screen was extended up above the 'A' zone piezometric surface to 9' bgs so as to intersect SPH that had been previously encountered in well MW-3 in the upper shallow 'AA' zone.

Beneath approximately 18 ft bgs, soil is primarily clay until a depth of approximately 26 ft bgs, where water-bearing units of sandy clay and clayey sand interbedded with layers of clay are present to a depth of approximately 30 ft bgs. The mid-level wells (MW-6B and MW-7B) were screened into this unit of higher permeability material ('B' zone). Beneath approximately 30 ft bgs soil is again primarily clay to approximately 34 ft bgs. At approximately 34 ft bgs clayey sand, sandy clay, and clay with sand is encountered interbedded with layers of clay to a total explored depth of approximately 45 ft bgs. The deep-level wells (MW-6C, MW-7C, MW-9C, MW-10C and MW-11C) are screened in this zone ('C' zone). Soil contamination appears to be highest at depths between approximately 10 and 15 ft bgs.

Groundwater Flow Direction and Gradient

Groundwater flow at the site is complex due to the combined effects of a generally upward gradient, the nearby creek/flood control channel, seasonal fluctuations in flow direction, and possible influences of the city sewer line located beneath Dublin Boulevard. Depth-to-water measurements collected during prior monitoring events indicate that the horizontal component of the groundwater flow direction to the north of the site has been consistently *southward to southeastward* for the *shallow* wells, but gradient directions in the southern portion of the site have fluctuated significantly, possibly due to the influence of the nearby flood control channel. As shown on Figure 2, the horizontal component of the groundwater flow direction in the *shallow* wells at the site appears to converge to the northeast along Dublin Boulevard and is possibly influenced by permeable backfill around the sanitary sewer line beneath Dublin Boulevard. The groundwater flow direction for the shallow water-bearing zone may also be affected by surface water infiltration from the onsite car wash. Pangea measured the depth to the top of the sanitary sewer line to be approximately 14 ft bgs and the depth to water in boring SB-1A adjacent to this line was 11.2 feet. Although this boring was not surveyed relative to the other wells, this depth is apparently lower than water table elevations in the nearby monitoring wells, suggesting that the flow may be towards the sanitary sewer. Depth to water in wells MW-1, MW-3 and EA-3 near the sanitary sewer has historically ranged from approximately 9 to 13 ft bgs.

Hydrocarbon Distribution in Groundwater

As shown on Figure 2, the highest concentrations of TPHg and benzene are generally found in upper shallow-zone wells (MW-7AA, MW-3A) in the vicinity of the northernmost dispenser island, immediately south of Dublin Boulevard. These wells have contained several thousand µg/L TPHg and several hundred µg/L benzene. Well MW-3A contained SPH in May 2006, and the well that it replaced (MW-3) contained SPH during quarterly monitoring events continuously from May 2003 until August 2005 (Table 1). Both of these wells are screened at very shallow depths across the piezometric surface. These observations are consistent with the location of the 1997 release from the flex hose between the dispensers, and the approximate location of previously excavated source soil. The 'A' zone wells screened in the more permeable shallow "A" zone water-bearing unit encountered at approximately 15 to 18 feet bgs appear to have considerably lower TPHg and benzene concentrations than the nearby shallower wells, indicating that downward migration of contamination from the shallow highly impacted SPH-bearing clays is not significant.

Considering that the vapor wells are screened from approximately 3 to 9 ft bgs, analytical results suggest that the primary zones of hydrocarbon contamination are in the upper shallow 'AA' and shallow A' water-bearing zones. Broadly, the lateral extent of petroleum hydrocarbon contamination in the shallow 'A' zone appears to be defined by wells MW-10A to the south and MW-9A to the east, while wells MW-1 (screened from approximately 5 to 25 ft bgs) and MW-2 (screened from approximately 5 to 20 ft bgs) define the extent of

hydrocarbon contamination to the west. However, it is not know how far west towards MW-1 and MW-2 the highly impacted groundwater in the upper shallow 'AA' and 'A' zones extends from the MW-7 well group.

No contaminants have been detected in the B-zone or C-zone wells, except for low concentrations during the first one or two monitoring events following well installation in June 2006. The November 9, 2007 ACEH letter approved discontinuance of groundwater monitoring of C-zone wells.

Fuel Oxygenate Distribution in Groundwater

The lateral distribution of MTBE in groundwater is similar to that of benzene and TPHg, except that relatively high MTBE concentrations were found in boring SB-1A drilled next to the Dublin Boulevard sewer line and were historically found in well MW-1, also located close to the sewer line (Figure 2). This data suggests that contaminated groundwater has migrated both westward and eastward through the backfill of the sanitary sewer line. The vertical extent of MTBE is also similar to the extent of benzene contamination, and has been delineated by the newly installed deep monitoring wells. The lateral extent of MTBE contamination has not been fully defined to the west and north of the dispenser islands. It is possible that the 1997 release near the dispensers migrated west toward MW-1.

During second quarter 2006 monitoring, all groundwater samples that contained detectable concentrations of MTBE by EPA Method 8021B were analyzed for 5 oxygenates (MTBE, TAME, TBA, DIPE and ETBE) by EPA Method 8260B. No oxygenates other than MTBE were detected above reporting limits, with the exception of 12 µg/L TAME in vapor well VW-1. Third quarter 2009 monitoring results indicate that MTBE concentrations have been stable and/or declining, with dramatic concentration reductions in select site wells.

WELL INSTALLATION

On July 15, 2009, Pangea oversaw installation of two dual-phase extraction wells to facilitate implementation of the approved corrective action plan. The dual-phase extraction wells (DPE-1 and DPE-2) were constructed to allow removal of shallow groundwater and hydrocarbon vapors from the vadose zone and capillary fringe. Site well locations are shown on Figure 2.

Well Drilling Activities

A comprehensive Site Safety Plan was prepared to protect site workers, and the plan was kept onsite during all field activities. A drilling permit was obtained from the Zone 7 Water Agency. A copy of the permit is presented in Appendix A. The proposed drilling locations were marked and Underground Service Alert was notified at least 72 hours before the proposed field activities. Each well location was hand augured to 5 ft bgs to help avoid subsurface utilities.

Pangea retained Environmental Control Associates of Aptos, California, to install the remediation wells. The wells were drilled with 10-inch diameter hollow-stem augers and were screened to a depth of 9-14 feet below ground surface (bgs). The drilling and well installation was observed in the field by Pangea project manager Morgan Gillies and supervised by Bob Clark-Riddell, a California Professional Civil Professional Engineer (P.E.).

Well Construction

The two DPE wells were constructed of 4-inch diameter, Schedule-40 PVC casing with 0.010-inch slotted screen and #2/12 sand. The wells were screened from 9-14 feet bgs. Well construction details for the existing and new wells are summarized on Table 2. Each well was protected by a traffic-rated vault and locking well cap. The soil characteristics and well construction details for the wells are shown on the boring logs in Appendix B.

Well Development

Pangea coordinated development of the new remediation wells by surge-block agitation and evacuation on August 13, 2009. Groundwater evacuation was conducted using a disposable bailer. Both of the remediation wells dewatered during development. The investigation-derived waste generated during drilling was temporarily stored onsite in 55-gallon DOT-approved drums pending disposal by a properly licensed disposal company.

Additional well installation and development procedures are presented in Pangea's *Standard Operating Procedures for Monitoring Wells* in Appendix C. The well development field data sheets are presented in Appendix D.

Remediation Well Sampling

To help control cost Pangea coordinated sampling of the new remediation wells immediately following well development. 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 analytical 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. Remediation well sampling data and purge information is included at the bottom of each well development data sheet (Appendix D).

Remediation Well Sampling Results

The highest TPHg, benzene and MTBE concentrations detected in the new remediation wells were 25,000 µg/L, 240 µg/L and 2,000 µg/L respectively, in well DPE-1. The laboratory analytical report is included in Appendix E. Wells DPE-1 and DPE-2 are located between well MW-7AA, the most impacted site monitoring well, and the San Ramon Creek/Flood Control Channel. TPHg concentrations in both of the new remediation wells are greater than any TPHg concentration detected in site monitoring wells sampled during the August 2009 groundwater monitoring event. Benzene and MTBE concentrations in the new remediation wells are lower than concentrations in source area well MW-7AA, but are elevated compared to other site wells. This data indicates that the newly installed DPE wells are appropriately targeted to remediate site soil and groundwater.

CONCLUSIONS AND RECOMMENDATIONS

Based on the above information, Pangea offers the following conclusions and recommendations:

- The most highly impacted groundwater at the site is primarily west of the dispenser islands, in the upper-shallow (AA) water-bearing zone between approximately 8 and 14 ft bgs. The relatively high concentration of TPHg detected in the new DPE wells suggests that site contaminants have migrated west from the source area towards the San Ramon Creek/Flood Control Channel.

- The elevated contaminant concentrations detected in the newly installed DPE wells indicate that these wells are appropriately located and screened to target residual hydrocarbons at the site. Pangea recommends initiation of the site remediation using these new wells and other site wells, as described in the approved CAP.

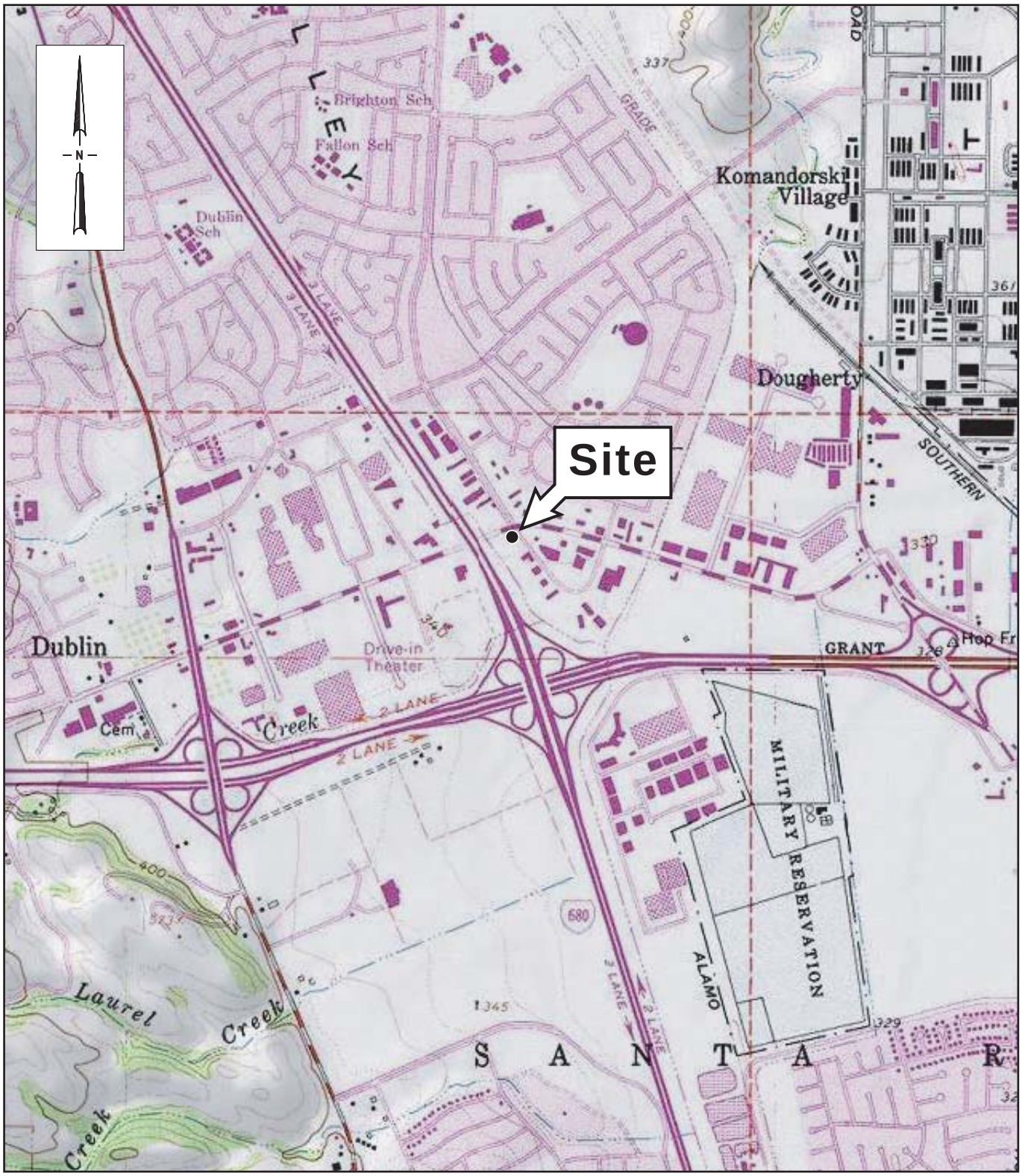
ATTACHMENTS

Figure 1 – Vicinity Map
Figure 2 – Groundwater Elevation Contour, Hydrocarbon Concentration and Well Location Map

Table 1 – Groundwater Analytical Data
Table 2 – Well Construction Details

Appendix A – Permit
Appendix B – Boring Logs
Appendix C – Standard Operating Procedures
Appendix D – Well Development Field Data Sheets
Appendix E – Laboratory Analytical Report

2/17/2005



SOURCE: TOPO! MAPS

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

Figure 1

Dublin Auto Wash

7240 Dublin Boulevard
Dublin, California

PANGEA

Site Location Map

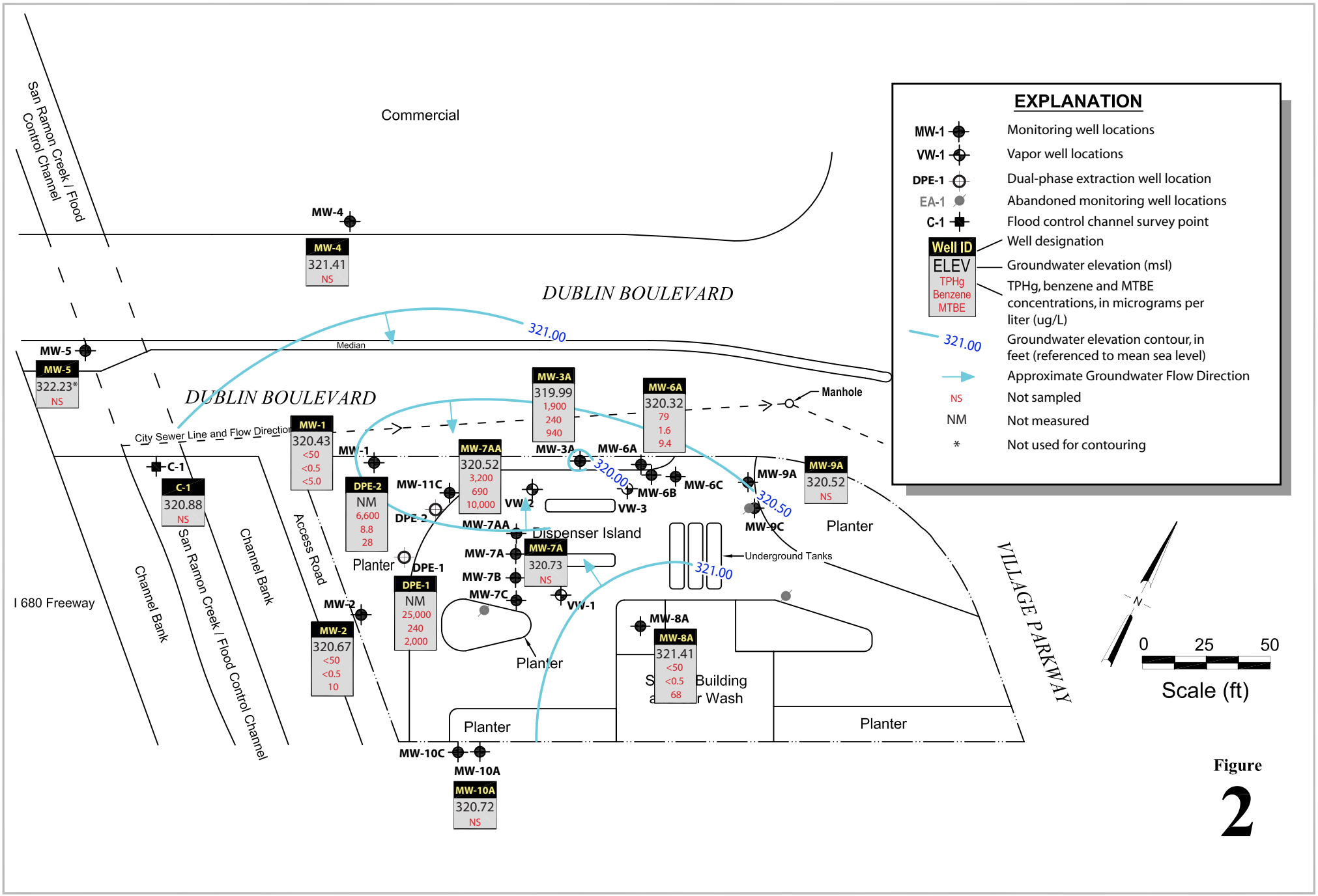


Figure 2

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

PANGEA

Groundwater Elevation Contour and Hydrocarbon Concentration and Well Location Map

August 13, 2009

Pangea

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Surface Water (Flood Control Channel)											
C-1	08/17/06	11.60	321.29	--	--	--	--	--	--	--	Gauge data - flood control channel
332.89	11/24/06	12.10	320.79	--	--	--	--	--	--	--	
	02/21/07	12.10	320.79	--	--	--	--	--	--	--	
	05/15/07	12.05	320.84	--	--	--	--	--	--	--	
	08/28/07	11.90	320.99	--	--	--	--	--	--	--	
	12/21/07	12.16	320.73	--	--	--	--	--	--	--	
	02/26/08	12.21	320.68	--	--	--	--	--	--	--	
	05/21/08	12.40	320.49	--	--	--	--	--	--	--	
	08/13/08	11.95	320.94	--	--	--	--	--	--	--	
	11/13/08	12.40	320.49	--	--	--	--	--	--	--	
	02/06/09	12.02	320.87	--	--	--	--	--	--	--	
	05/28/09	11.98	320.91	--	--	--	--	--	--	--	
	08/13/09	**12.01**	**320.88**	--	--	--	--	--	--	--	
Upper Shallow (AA-Zone) Wells											
DPE-1	**08/13/09**	**10.55**	**--**	**25,000**	**240**	**160**	**530**	**3,900**	**2,000**	**--**	
DPE-2	**08/13/09**	**11.06**	**--**	**6,600**	**8.8**	**<2.5**	**<2.5**	**710**	**28**	**--**	
MW-7AA	05/31/06	9.18	321.49	12,000	1,000	410	180	1,600	23,000 (21,000)	0.44	TAME, TBA, DIPE, ETBE=ND
330.67	07/07/06	9.15	321.52	--	--	--	--	--	--	--	
	08/17/06	8.75	321.92	25,000	2,200	210	780	1,400	36,000(42,000)	0.24	
	11/24/06	9.84	320.83	27,000	3,400	1,100	1,300	3,400	37,000	0.33	
	02/21/07	9.60	321.07	18,000	2,400	670	200	2,800	41,000	0.58	
	05/15/07	10.20	320.47	11,000	1,500	200	520	1,100	47,000	0.49	
	08/28/07	10.20	320.47	4,500	720	13	73	100	18,000	0.33	
	12/21/07	10.09	320.58	3,700	550	32	74	330	12,000	0.58	
	02/26/08	8.96	321.71	5,400	970	7.2	320	100	15,000	0.74	
	05/21/08	10.28	320.39	22,000	2,700	19	940	440	28,000	0.71	
	08/13/08	10.38	320.29	3,900	510	<5.0	150	42	15,000	0.77	
	11/13/08	10.35	320.32	8,000	1,100	20	290	280	19,000	0.80	
	02/06/09	10.31	320.36	11,000	1,200	37	500	800	13,000	0.79	
	05/28/09	10.05	320.62	7,600	1,100	34	390	870	6,100	0.73	
	08/13/09	**10.15**	**320.52**	**3,200**	**690**	**5.4**	**54**	**92**	**10,000**	**0.87**	
VW-1	02/21/06	7.95	322.48	860	120	1.4	32	4.4	390 (440)	1.97	
330.43	06/01/06	7.89	322.54	1,100	92	2.2	11	1.4	600 (550)	0.11	TAME=12µg/L, TBA,DIPE,ETBE=ND
	07/07/06	7.71	322.72	--	--	--	--	--	--	--	
	08/17/06	7.65	322.78	--	--	--	--	--	--	0.07	
	11/24/06	7.75	322.68	Insufficient Water to Sample						0.48	
	02/21/07	7.81	322.62	620	52	4.3	<0.5	2.7	340	0.22	
	05/15/07	7.94	322.49	2,000	270	6.4	1.2	15	720	0.10	
	08/28/07	8.07	322.36	2,400	400	4.6	<0.5	23	610	0.27	
	12/21/07	8.20	322.23	Insufficient Water to Sample							
	02/26/08	8.20	322.23	Insufficient Water to Sample							
	05/21/08	8.21	322.22	Insufficient Water to Sample							
	08/13/08	8.27	322.16	Insufficient Water to Sample							
	11/13/08	5.97	324.46	<50	<0.5	<0.5	<0.5	<0.5	46	1.10	
	02/06/09	6.04	324.39	<50	<0.5	<0.5	<0.5	<0.5	80	0.97	
	05/28/09	6.30	324.13	--	--	--	--	--	--	--	
	08/13/09	**6.61**	**323.82**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
VW-2	02/21/06	6.01	324.16	1,600	150	2.7	55	20	1,700 (1,600)	1.97	
330.17	06/01/06	6.17	324.00	1,500	140	3.3	24	19	1,600 (1,600)	0.29	TAME, TBA, DIPE, ETBE=ND
	07/07/06	7.02	323.15	--	--	--	--	--	--	--	
	08/17/06	7.23	322.94	--	--	--	--	--	--	0.14	
	11/24/06	5.55	324.62	<50	5.7	<0.5	<0.5	<0.5	260	0.20	
	02/21/07	6.22	323.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.42	
	05/15/07	7.54	322.63	430	40	1.5	<0.5	1.0	470	0.28	
	08/28/07	7.82	322.35	1,200	170	5.0	<0.5	20	160	0.35	
	12/21/07	4.44	325.73	<50	<0.5	<0.5	<0.5	<0.5	100	0.70	
	02/26/08	4.56	325.61	<50	<0.5	<0.5	<0.5	<0.5	21	0.75	
	05/21/08	7.65	322.52	300	28	1.7	<0.5	0.97	<45	0.71	
	08/13/08	7.92	322.25	Insufficient Water to Sample						1.58	
	11/13/08	5.96	324.21	<50	8.0	<0.5	<0.5	<0.5	53	0.97	
	02/06/09	6.06	324.11	<50	<0.5	<0.5	<0.5	<0.5	38	0.95	
	05/28/09	6.90	323.27	--	--	--	--	--	--	--	
	08/13/09	**7.52**	**322.65**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
VW-3	02/21/06	6.10	324.39	8,900	390	29	490	650	<50	2.28	
330.49	06/01/06	6.22	324.27	5,900	230	4.5	270	63	<35 (15)	0.21	TAME, TBA, DIPE, ETBE=ND
	07/07/06	4.44	326.05	--	--	--	--	--	--	--	
	08/17/06	4.4 *	326.09	4,200	120	1.7	39	30	<25	0.10	
	11/24/06	6.15	324.34	7,600	310	9.9	270	420	<50	0.21	
	02/21/07	6.87	323.62	8,800	260	5.1	130	160	<90	0.29	
	05/15/07	7.13	323.36	5,600	270	6.9	110	110	<90	0.36	
	08/28/07	7.41	323.08	10,000	320	5.9	150	140	84	0.39	
	12/21/07	6.28	324.21	3,900	140	1.9	54	29	<50	0.66	
	02/26/08	6.09	324.40	5,600	270	4.5	68	130	<90	0.69	
	05/21/08	6.46	324.03	3,800	210	3.0	32	47	56	0.77	
	08/13/08	6.93	323.56	9,300	400	4.8	87	60	100	0.59	
	11/13/08	7.45	323.04	13,000	600	9.6	220	120	170	2.79	
	02/06/09	7.41	323.08	9,400	300	9.1	140	230	<150	2.16	
	05/28/09	5.93	324.56	--	--	--	--	--	--	--	
	08/13/09	**6.40**	**324.09**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen	Notes
				←			µg/L		→	mg/L	
Shallow (A-Zone) Wells											
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	<0.5	<0.5	<0.5	<0.5	4,420		
	05/01/01	12.6	321.06	SAMPLED SEMI-ANNUALLY							
	08/28/01	12.74	320.92	<50	<0.5	<0.5	<0.5	<0.5	4,800		
	11/27/01	12.7	320.96	SAMPLED SEMI-ANNUALLY							
	02/28/02	12.7	320.96	<50	<0.5	<0.5	<0.5	<1.5	1,400		
	05/22/02	12.38	321.28	SAMPLED SEMI-ANNUALLY							
	08/20/02	12.57	321.09	<50	<0.5	<0.5	<0.5	<1.5	1,400		
	11/11/02	11.31	322.35	SAMPLED SEMI-ANNUALLY							
	05/08/03	11.85	321.81	<50	<0.5	<0.5	<0.5	<0.5	1,300 (1,200)		
	12/15/04	12.80	320.86	<50	<0.5	<0.5	<0.5	<0.5	1,700 (1,900)		
	02/21/05	11.81	321.85	<100	<1.0	<1.0	<1.0	<1.0	3,000 (3,800)	0.82	
	05/17/05	12.51	321.15	<120	<1.2	<1.2	<1.2	<1.2	3,400 (4,400)	0.75	
	08/17/05	12.35	321.31	<170	<1.7	<1.7	<1.7	<1.7	4,500 (4,900)	0.77	
	11/27/05	13.18	320.48	<170	<1.7	<1.7	<1.7	<1.7	5,400 (4,400)	0.90	
	02/21/06	12.61	321.05	<170	<1.7	<1.7	<1.7	<1.7	5,000 (5,400)	0.29/0.71	
333.69	06/01/06	12.47	321.22	<250	<2.5	<2.5	<2.5	<2.5	6,400 (6,300)	0.46	TAME, TBA, DIPE, ETBE=ND
	07/07/06	12.60	321.09	--	--	--	--	--	--	--	
	08/17/06	11.93	321.76	<250	<2.5	<2.5	<2.5	<2.5	7,700 (9,100)	0.43	
	11/24/06	13.01	320.68	<250	<2.5	<2.5	<2.5	<2.5	8,400	0.29	
	02/21/07	12.91	320.78	<50	<0.5	<0.5	<0.5	<0.5	3,600	0.24	
	05/15/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	2,500	0.29	
	08/28/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	170	0.40	
	12/21/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68	
	02/26/08	12.60	321.09	<50	<0.5	<0.5	<0.5	<0.5	7.0	0.86	
	05/21/08	13.45	320.24	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.94	
	08/13/08	13.37	320.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91	
	11/13/08	13.50	320.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.94	
	02/06/09	13.67	320.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.87	
	05/28/09	13.25	320.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.71	
	08/13/09	**13.26**	**320.43**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.77**	
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	<0.5	<0.5	<0.5	<0.5	642		
	05/01/01	8.43	320.86	70.8	<0.5	<0.5	<0.5	<0.5	342		
	08/28/01	8.39	320.9	<50	<0.5	<0.5	<0.5	<0.5	530		
	11/27/01	8.46	320.83	210	<0.5	<0.5	<0.5	<1.5	260		
	02/28/02	8.48	320.81	<50	<0.5	<0.5	<0.5	<1.5	180		
	05/22/02	8.14	321.15	<50	<0.5	<0.5	<0.5	<1.5	180		
	08/20/02	8.24	321.05	<50	<0.5	<0.5	<0.5	<1.5	160		
	11/11/02	8.06	321.23	<50	<0.5	<0.5	<0.5	<1.5	130		
	05/08/03	7.86	321.43	<50	<0.5	<0.5	<0.5	<0.5	180 (160)		
	12/15/04	8.60	320.69	<50	<0.5	<0.5	<0.5	<0.5	1,400 (1,600)		
	02/21/05	7.55	321.74	<50	<0.5	<0.5	<0.5	<0.5	800 (1,100)	1.35	
	05/17/05	8.52	320.77	<50	<0.5	<0.5	<0.5	<0.5	160 (210)	1.06	
	08/17/05	8.16	321.13	<50	<0.5	<0.5	<0.5	<0.5	190 (210)	0.90	
	11/27/05	9.00	320.29	<50	<0.5	<0.5	<0.5	<0.5	200 (210)	0.92	
	02/21/06	8.51	320.78	<50	<0.5	<0.5	<0.5	<0.5	240 (270)	0.33/0.46	
329.48	06/01/06	8.50	320.98	<50	<0.5	<0.5	<0.5	<0.5	120 (110)	0.38	TAME, TBA, DIPE, ETBE=ND
	07/07/06	8.57	320.91	--	--	--	--	--	--	--	
	08/17/06	8.21	321.27	<50	<0.5	<0.5	<0.5	<0.5	230(230)	0.30	
	11/24/06	8.87	320.61	<50	<0.5	<0.5	<0.5	<0.5	760	0.24	
	02/21/07	8.80	320.68	<50	<0.5	<0.5	<0.5	<0.5	1,100	0.21	
	05/15/07	8.94	320.54	<50	<0.5	<0.5	<0.5	<0.5	1,400	0.25	
	08/28/07	8.83	320.65	<50	<0.5	<0.5	<0.5	<0.5	1,800	0.33	
	12/21/07	8.93	320.55	<50	<0.5	<0.5	<0.5	<0.5	1,700	0.49	
	02/26/08	8.49	320.99	<50	<0.5	<0.5	<0.5	<0.5	590	0.51	
	05/21/08	9.06	320.42	<50	<0.5	<0.5	<0.5	<0.5	230	0.67	
	08/13/08	8.89	320.59	<50	<0.5	<0.5	<0.5	<0.5	190	0.77	
	11/13/08	9.16	320.32	<50	<0.5	<0.5	<0.5	<0.5	77	0.86	
	02/06/09	9.39	320.09	<50	<0.5	<0.5	<0.5	<0.5	20	0.81	
	05/28/09	8.86	320.62	<50	<0.5	<0.5	<0.5	<0.5	12	0.74	
	08/13/09	**8.81**	**320.67**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**10**	**0.69**	
MW-3A	05/29/06	10.13	321.28	--	--	--	--	--	--	--	0.03 SPH
331.39	07/07/06	10.15	321.24	4,200	340	27	75	79	32,000	--	
	08/17/06	9.56	321.83	6,200	410	68	100	650	28,000(34,000)	0.19	
	11/24/06	10.73	320.66	2,100	190	11	72	220	7,900	0.10	
	02/21/07	10.52	320.87	7,100	890	28	440	470	8,400	0.17	
	05/15/07	11.46	319.93	1,800	210	11	96	88	3,500	0.25	
	08/28/07	11.62	319.77	1,900	260	6.9	110	74	3,400	0.28	

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen	Notes
				←			µg/L		→	mg/L	
MW-3A (cont'd)	12/21/07	11.33	320.06	4,700	570	160	120	970	2,800	0.54	
	02/26/08	10.25	321.14	7,200	550	32	440	690	1,800	0.49	
	05/21/08	11.52	319.87	1,600	130	2.9	40	94	700	0.55	
	08/13/08	11.62	319.77	2,900	280	3.4	52	56	1,300	0.52	
	11/13/08	11.55	319.84	1,200	150	3.5	22	31	1,100	0.64	
	02/06/09	11.70	319.69	5,800	780	25	260	390	1,600	0.69	
	05/28/09	11.30	320.09	1,500	200	9.0	57	190	500	0.70	
	08/13/09	**11.40**	**319.99**	**1,900**	**240**	**6.3**	**29**	**72**	**940**	**0.81**	
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	<0.5	<0.5	<0.5	<0.5	<5.0		
	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	<0.5	<0.5	<0.5	<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)	1.60	
	05/17/05	10.20	322.43	SAMPLED ANNUALLY						1.29	
	08/17/05	10.50	322.13	SAMPLED ANNUALLY						1.10	
	11/27/05	11.07	321.56	SAMPLED ANNUALLY						1.01	
	02/21/06	10.53	322.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.14/0.90	
332.64	05/29/06	10.33	322.31	SAMPLED ANNUALLY						--	
	07/07/06	10.52	322.12	--	--	--	--	--	--	--	
	08/17/06	10.45	322.19	--	--	--	--	--	--	--	
	11/24/06	10.95	321.69	--	--	--	--	--	--	0.22	
	02/21/07	10.71	321.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.40	
	05/15/07	11.24	321.40	--	--	--	--	--	--	--	
	08/28/07	11.42	321.22	--	--	--	--	--	--	0.52	
	12/21/07	11.26	321.38	--	--	--	--	--	--	0.81	
	02/26/08	10.12	322.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.06	
	05/21/08	11.30	321.34	--	--	--	--	--	--	0.98	
	08/13/08	11.23	321.41	--	--	--	--	--	--	0.71	
	11/13/08	10.93	321.71	--	--	--	--	--	--	--	
	02/06/09	10.98	321.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.67	
	05/28/09	10.96	321.68	--	--	--	--	--	--	--	
	08/13/09	**11.23**	**321.41**	--	--	--	--	--	--	--	
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		
	03/25/99	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	<0.5	<0.5	<0.5	<0.5	<5.0		
	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	<0.5	<0.5	<0.5	<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	9.90	323.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0 (0.54)	1.62	
	05/17/05	10.33	322.71	SAMPLED ANNUALLY						1.47	
	08/17/05	10.40	322.64	SAMPLED ANNUALLY						1.18	
333.13	11/27/05	10.43	322.61	SAMPLED ANNUALLY						1.19	
	02/21/06	10.32	322.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.48/0.76	
	05/29/06	10.41	322.72	SAMPLED ANNUALLY						--	
	07/07/06	10.46	322.67	--	--	--	--	--	--	--	
	08/17/06	10.49	324.19	--	--	--	--	--	--	--	
	11/24/06	10.92	322.21	--	--	--	--	--	--	0.27	
	02/21/07	10.90	322.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73	
	05/15/07	10.97	322.16	--	--	--	--	--	--	--	
	08/28/07	11.07	322.06	--	--	--	--	--	--	0.55	
	12/21/07	10.80	322.33	--	--	--	--	--	--	0.97	
	02/26/08	10.38	322.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.01	
	05/21/08	10.97	322.16	--	--	--	--	--	--	0.95	
	08/13/08	10.98	322.15	--	--	--	--	--	--	0.99	
	11/13/08	11.01	322.12	--	--	--	--	--	--	--	
	02/06/09	11.05	322.08	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82	
	05/28/09	10.80	322.33	--	--	--	--	--	--	--	
	08/13/09	**10.90**	**322.23**	--	--	--	--	--	--	--	
MW-6A	06/01/06	10.38	321.43	620	20	<2.5	<2.5	43	5,700 (5,300)	0.73	TAME, TBA, DIPE, ETBE=ND
331.81	07/07/06	10.15	321.66	--	--	--	--	--	--	--	
	08/17/06	9.69	322.12	860	55	3.1	31	41	5,300(6,200)	0.49	
	11/24/06	11.10	320.71	330	14	<2.5	11	3.4	5,500	0.37	
	02/21/07	10.72	321.09	360	13	1.8	16	34	4,400	0.50	
	05/15/07	11.69	320.12	<500	40	5.3	11	16	7,300	0.52	
	08/28/07	11.98	319.83	<250	<2.5	<2.5	<2.5	<2.5	7,300	0.39	
	12/21/07	11.31	320.50	4,400	200	45	50	550	3,500	0.45	
	02/26/08	10.15	321.66	6,800	740	130	290	600	330	0.61	
	05/21/08	11.60	320.21	1,900	150	8.1	44	100	88	0.63	
	08/13/08	11.91	319.90	1,200	84	3.7	36	18	<75	0.42	
	11/13/08	11.73	320.08	150	15	1.4	3.0	4.2	35	0.44	
	02/06/09	11.66	320.15	550	100	9.3	22	34	<90	0.48	
	05/28/09	11.45	320.36	600	98	14	21	42	48	0.55	
	08/13/09	**11.49**	**320.32**	**79**	**1.6**	**1.5**	**0.66**	**0.76**	**9.4**	**0.69**	

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
MW-7A	05/31/06	9.19	321.52	<50	1.3	<0.5	0.79	0.82	760 (770)	0.40	TAME, TBA, DIPE, ETBE=ND
330.71	07/07/06	9.17	321.54	--	--	--	--	--	--	--	
	08/17/06	8.68	322.03	60	1.1	<0.5	<0.5	1.1	930(1,400)	0.29	
	11/24/06	9.88	320.83	<50	<0.5	<0.5	<0.5	<0.5	260	0.20	
	02/21/07	9.59	321.12	<50	4.6	<0.5	0.62	2.2	270	0.35	
	05/15/07	10.15	320.56	<50	<0.5	<0.5	<0.5	<0.5	45	0.40	
	08/28/07	10.09	320.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.42	
	12/21/07	10.00	320.71	3,200	180	38	100	410	890	0.68	
	02/26/08	8.78	321.93	1,300	150	1.8	59	99	410	0.90	
	05/21/08	10.16	320.55	200	18	<0.5	3.3	<0.5	30	0.75	
	08/13/08	10.27	320.44	<50	<0.5	<0.5	<0.5	<0.5	24	0.81	
	11/13/08	10.27	320.44	<50	<0.5	<0.5	<0.5	<0.5	30	0.85	
	02/06/09	10.22	320.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.83	
	05/28/09	9.91	320.80	--	--	--	--	--	--	--	
	08/13/09	**9.98**	**320.73**	--	--	--	--	--	--	--	
MW-8A	05/29/06	9.55	321.64	<50	<0.5	<0.5	<0.5	<0.5	20 (18)	0.39	TAME, TBA, DIPE, ETBE=ND
331.19	07/07/06	9.20	321.99	--	--	--	--	--	--	--	
	08/17/06	8.73	322.46	<50	<0.5	<0.5	<0.5	<0.5	19 (26)	0.26	
	11/24/06	9.80	321.39	<50	<0.5	<0.5	<0.5	<0.5	34	0.21	
	02/21/07	9.81	321.38	<50	<0.5	<0.5	<0.5	<0.5	16	0.29	
	05/15/07	10.05	321.14	<50	<0.5	<0.5	<0.5	<0.5	13	0.33	
	08/28/07	9.83	321.36	<50	<0.5	<0.5	<0.5	<0.5	19	0.35	
	12/21/07	10.36	320.83	<50	<0.5	<0.5	<0.5	<0.5	16	0.61	
	02/26/08	8.33	322.86	<50	<0.5	<0.5	<0.5	<0.5	38	0.77	
	05/21/08	9.99	321.20	<50	<0.5	<0.5	<0.5	<0.5	13	0.81	
	08/13/08	10.49	320.70	<50	<0.5	<0.5	<0.5	<0.5	68	0.65	
	11/13/08	10.39	320.80	<50	<0.5	<0.5	<0.5	<0.5	110	0.68	
	02/06/09	10.42	320.77	<50	<0.5	<0.5	<0.5	<0.5	75	0.70	
	05/28/09	9.90	321.29	<50	<0.5	<0.5	<0.5	<0.5	36	0.66	
	08/13/09	**9.78**	**321.41**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**68**	**0.74**	
MW-9A	05/29/06	10.13	321.04	<50	<0.5	<0.5	<0.5	<0.5	210 (210)	0.46	TAME, TBA, DIPE, ETBE=ND
331.17	07/07/06	9.96	321.21	--	--	--	--	--	--	--	
	08/17/06	9.40	321.77	150	<0.5	1.3	<0.5	<0.5	79(100)	0.53	
	11/24/06	11.02	320.15	200	<0.5	2.4	<0.5	<0.5	31	0.38	
	02/21/07	10.53	320.64	<50	<0.5	<0.5	<0.5	<0.5	21	0.33	
	05/15/07	10.81	320.36	86	<0.5	<0.5	<0.5	<0.5	31	0.45	
	08/28/07	11.11	320.06	95	<0.5	1.4	<0.5	<0.5	10	0.38	
	12/21/07	10.76	320.41	120	<0.5	2.9	<0.5	0.51	9.5	0.50	
	02/26/08	9.71	321.46	120	<0.5	1.2	<0.5	<0.5	9.5	0.86	
	05/21/08	10.75	320.42	86	<0.5	<0.5	<0.5	<0.5	6.3	0.84	
	08/13/08	11.31	319.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.76	
	11/13/08	11.14	320.03	52	<0.5	<0.5	<0.5	<0.5	5.5	0.63	
	02/06/09	11.16	320.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.61	
	05/28/09	10.75	320.42	--	--	--	--	--	--	--	
	08/13/09	**10.65**	**320.52**	--	--	--	--	--	--	--	
MW-10A	05/29/06	11.60	318.33	<50	<0.5	<0.5	<0.5	0.67	5.3 (4.7)	0.68	TAME, TBA, DIPE, ETBE=ND
329.93	07/07/06	9.78	320.15	--	--	--	--	--	--	--	
	08/17/06	8.80	321.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.47	
	11/24/06	12.61	317.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.26	
	02/21/07	8.96	320.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.25	
	05/15/07	9.22	320.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.30	
	08/28/07	8.44	321.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.35	
	12/21/07	8.81	321.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.47	
	02/26/08	7.34	322.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70	
	05/21/08	9.22	320.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.64	
	08/13/08	9.25	320.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.61	
	11/13/08	9.47	320.46	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70	
	02/06/09	9.50	320.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68	
	05/28/09	9.11	320.82	--	--	--	--	--	--	--	
	08/13/09	**9.21**	**320.72**	--	--	--	--	--	--	--	
Intermediate-Depth (B-zone) Wells											
MW-6B	06/01/06	8.41	322.49	<50	<0.5	<0.5	<0.5	<0.5	18 (16)	0.34	TAME, TBA, DIPE, ETBE=ND
330.9	07/07/06	8.55	322.35	--	--	--	--	--	--	--	
	08/17/06	8.66	322.24	<50	<0.5	<0.5	<0.5	<0.5	8.5(9.6)	0.40	
	11/24/06	9.25	321.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
	02/21/07	8.80	322.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.37	
	05/15/07	9.21	321.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
	08/28/07	9.60	321.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	12/21/07	9.42	321.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82	
	02/26/08	7.87	323.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.80	
	05/21/08	9.37	321.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.87	
	08/13/08	9.70	321.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.81	
	11/13/08	9.62	321.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.78	
	02/06/09	9.53	321.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.71	
	05/28/09	9.23	321.67	--	--	--	--	--	--	--	
	08/13/09	**9.63**	**321.27**	--	--	--	--	--	--	--	
MW-7B	05/31/06	9.05	321.64	<50	0.79	<0.5	<0.5	0.75	6.4 (6.6)	0.17	TAME, TBA, DIPE, ETBE=ND
330.69	07/07/06	9.03	321.66	--	--	--	--	--	--	--	
	08/17/06	8.62	322.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	9.75	320.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.27	
	02/21/07	9.44	321.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	
	02/21/07	9.44	321.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	
	05/15/07	9.97	320.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	08/28/07	9.96	320.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	12/21/07	9.87	320.82	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.53	
	02/26/08	8.64	322.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.59	
	05/21/08	10.05	320.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.56	
	08/13/08	10.17	320.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	11/13/08	10.15	320.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.53	
	02/06/09	10.18	320.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.55	
	05/28/09	9.80	320.89	--	--	--	--	--	--	--	
	08/13/09	**9.89**	**320.80**	--	--	--	--	--	--	--	

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Deep (C-Zone) Wells											
MW-6C	06/01/06	8.21	322.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	TAME, TBA, DIPE, ETBE=ND
330.88	07/07/06	8.41	322.47	--	--	--	--	--	--	--	
	08/17/06	8.56	322.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
	11/24/06	9.12	321.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	
	02/21/07	8.62	322.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
MW-7C	05/31/06	8.65	322.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.12	TAME, TBA, DIPE, ETBE=ND
330.74	07/07/06	8.70	322.04	--	--	--	--	--	--	--	
	08/17/06	8.52	322.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.17	
	11/24/06	9.42	321.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.19	
	02/21/07	9.01	321.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
MW-9C	05/29/06	16.59	314.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	TAME, TBA, DIPE, ETBE=ND
331.48	07/07/06	8.85	322.63	--	--	--	--	--	--	--	
	08/17/06	9.20	322.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
	11/24/06	9.61	321.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	02/21/07	8.94	322.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.46	
MW-10C	05/29/06	7.28	322.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.16	TAME, TBA, DIPE, ETBE=ND
329.66	07/07/06	7.28	322.38	--	--	--	--	--	--	--	
	08/17/06	7.29	322.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	10.75	318.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	02/21/07	7.69	321.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.39	
MW-11C	05/31/06	9.90	321.71	<50	<0.5	<0.5	<0.5	<0.5	11 (11)	0.29	TAME, TBA, DIPE, ETBE=ND
331.61	07/07/06	10.02	321.59	--	--	--	--	--	--	--	
	08/17/06	9.60	322.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	10.60	321.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	
	02/21/07	10.30	321.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.43	
Destroyed Wells											
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	<l00	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	322.06	--	--	--	--	--	--	1.29	0.01 SPH
	05/17/05	11.63	321.29	--	--	--	--	--	--	1.06	0.08 SPH
	08/17/05	10.83	322.03	39,000	1,500	260	780	2,700	42,000 (47,000)	0.93	
	11/27/05	12.29	320.72	--	--	--	--	--	--	--	0.19 SPH
	02/21/06	11.73	321.28	--	--	--	--	--	--	--	0.19 SPH
	03/30/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
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	--		
	11/06/89	10.65	322.76	<500	<3.0	<5.0	<5.0	<5.0	--		
	01/25/90	10.6	322.81	<50	<0.5	<0.5	<0.5	<0.5	--		
	04/23/90	10.58	322.83	71	2	5	3	8	--		
	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		
	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	<l25		
	06/27/96	10.21	320.82	3,600	22	130	130	49	46		

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen	Notes
				←			µg/L		→	mg/L	
EA-1 (cont'd)	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
	05/17/05	--	--	--	--	--	--	--	--		Inaccessible
	08/17/05	--	--	--	--	--	--	--	--		Inaccessible
	11/27/05	--	--	--	--	--	--	--	--		Inaccessible
	02/21/06	--	--	--	--	--	--	--	--		Inaccessible
	03/31/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
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	--		
	08/02/89	9.44	323.15	<50	<0.1	<0.1	<0.1	<0.1	--		
	11/06/89	9.53	323.06	<500	<3.0	<5.0	<5.0	<5.0	--		
	01/25/90	9.27	323.32	<50	<0.5	<0.5	<0.5	<0.5	--		
	04/23/90	9.35	323.24	<50	0.6	0.8	<0.5	2	--		
	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)	0.64	
	05/17/05	8.21	322.20			SAMPLED ANNUALLY				0.77	
	08/17/05	7.97	322.44			SAMPLED ANNUALLY				0.85	
	11/27/05	9.83	320.58			SAMPLED ANNUALLY				0.84	
	02/21/06	8.78	321.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51/0.68	
	03/28/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
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	--		
	11/06/89	10.78	322.86	<500	<3.0	<5.0	<5.0	<5.0	--		
	01/25/90	10.66	322.98	<50	<0.5	<0.5	<0.5	<0.5	--		
	04/23/90	10.68	322.96	<50	0.8	<0.5	0.9	<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	--		

Table 1. Groundwater Elevation and Analytical Data - 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	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
EA-3 (cont'd)	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		
	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	<0.5	<0.5	<0.5	<0.5	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)	0.69	
	05/17/05	9.57	321.93	140	0.68	<0.5	6.6	0.94	250 (340)	0.86	
	08/17/05	9.23	322.27	3,800	11	3.7	110	24	200 (200)	0.99	
	11/27/05	11.05	320.45	150	<0.5	1.8	2.4	0.56	88 (85)	0.81	
	02/21/06	10.10	321.40	83	<0.5	0.72	1.7	<0.5	40 (49)	0.38/0.65	
	04/03/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
Grab Groundwater Analytical Data											
SB-1A-W	05/18/06	11.20	NA	170	1.5	1.5	1.2	5.9	570 (500)	--	TAME=90µg/L, TBA,DIPE,ETBE=ND
DPB-1	05/01/03	16-20	NA	12,000	25	440	440	2,180	8,100	--	
DPB-2	04/22/03	NA	NA	710	1.1	<1	18	74	540	--	
DPB-3	04/17/03	16-20	NA	48,000	400	5,800	1,500	9,500	8,900	--	
	04/17/03	27-31	NA	62,000	700	9,900	1,300	7,900	4,200	--	
	04/17/03	39-43	NA	27,000	210	3,200	640	4,100	7,700	--	
DPB-4	04/17/03	32-36	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-5	04/30/03	7-11	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/17/03	11-15	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/30/03	26-30	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/17/03	36-40	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-6	04/18/03	15-19	NA	7,700	18	77	170	640	5.9	--	
	04/18/03	26-30	NA	4,700	21	76	160	650	6.2	--	
	04/18/03	35-39	NA	2,900	8.8	24	54	249	100	--	
DPB-7	04/18/03	15-19	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/18/03	20-24	NA	7,000	42	640	190	990	300	--	
	04/18/03	35-39	NA	150	<0.5	1.8	0.8	5.7	<0.5	--	
DPB-8	05/01/03	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-S	04/18/03	14-18	NA	20,000	<170	<170	380	6,600	53,000	--	
	04/18/03	26-30	NA	1,500	7.1	<3.1	7.4	170	760	--	
	04/18/03	35-39	NA	4,300	<63	<63	<63	910	42,000	--	

ABBREVIATIONS AND NOTES:

SPH = Separate-phase hydrocarbons; calculated groundwater elevation corrected for SPH by the relation: Groundwater Elevation = Well Elevation - Depth to Water +(0.8xSPH Thickness)
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
mg/L = Milligrams per liter - approximately equal to parts per million = ppm
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C
BTEX = Benzene, toluene, ethylbenzene, and xylenes 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
TAME = Tertiary amyl methyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
DIPE = Diispopropyl ether by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether by EPA Method 8260B
-- = Not Measured/Not Analyzed
1 Laboratory report indicates weathered gasoline C6-C12
Dissolved oxygen concentrations measured downhole pre-purge or pre-purge/post-purge
* = Cap loose, sprinkler runoff entering well

Table 2 –Well Construction Details –7240 Dublin Blvd., Dublin, CA

Well ID (TOC Elev)	Total Depth of Well (feet bgs)	Screened Interval (ft bgs)	Drill Hole Diameter (inches)	Casing Diameter (inches)	Surface Seal Depth (ft bgs)
MW-1	25	5-25	8	2	0-4
MW-2	20	5-20	8	2	0-4
MW-3A	17	10-17	10	4	0-9
MW-4	20	8.5-20	8	2	0-8
MW-5	21	8.5-21	8	2	0-8
MW-6A	20	15-20	10	4	0-14
MW-6B	30	26-30	8	2	0-25
MW-6C	44	34-44	8	2	0-33
MW-7AA	14	9-14	10	4	0-8
MW-7A	20	16-20	10	4	0-15
MW-7B	30	26-30	8	2	0-25
MW-7C	45	35-45	12	2	0-34
MW-8A	20	15-20	8	2	0-4
MW-9A	20	15-20	8	2	0-14
MW-9C	45	35-45	12	2	0-34
MW-10A	20	15-20	8	2	0-14
MW-10C	45	35-45	8	2	0-34
MW-11C	43.5	33.5-43.5	8	2	0-32
VW-1	9	3-9	8	2	0-2.5
VW-2	9	3-9	8	2	0-2.5
VW-3	9	3-9	8	2	0-2.5

APPENDIX A

Permit

ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306
E-MAIL whong@zone7water.com

DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 7240 Dublin Blvd.
Dublin, CA

Coordinates Source _____ ft. Accuracy _____ ft.
LAT: _____ ft. LONG: _____ ft.
APN 941-1401-019

CLIENT
Name Haesheng Hadjian
Address 2108 San Ramon Valley Blvd. Phone _____
City San Ramon, CA Zip 94583

APPLICANT
Name Panyen Environmental Services, Inc., Morgan Gillics
Email mgillics@panyenenv.com Fax (510) 836-3709
Address 1710 Franklin St, Ste 200 Phone (510) 836-3700
City Oakland, CA Zip 94612

TYPE OF PROJECT:

(Well Construction)	9	Geotechnical Investigation	9
Well Destruction	9	Contamination Investigation	9
Cathodic Protection	9	Other _____	9

PROPOSED WELL USE:

Domestic	9	Irrigation	9
Municipal	9	(Remediation)	9
Industrial	9	Groundwater Monitoring	9
Dewatering	9	Other _____	9

DRILLING METHOD:

Mud Rotary	9	Air Rotary	9	(Hollow Stem Auger)	9
Cable Tool	9	Direct Push	9	Other _____	9

DRILLING COMPANY Environmental Control Associates

DRILLER'S LICENSE NO. 695970

WELL SPECIFICATIONS: DPE-1 and DPE-2
Drill Hole Diameter 10 in. Maximum
Casing Diameter 4 in. Depth 14 ft.
Surface Seal Depth 8 ft. Number 2

SOIL BORINGS:
Number of Borings _____ Maximum
Hole Diameter _____ in. Depth _____ ft.

ESTIMATED STARTING DATE 7/8/09
ESTIMATED COMPLETION DATE 7/10/09

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE _____ Date 6/5/09

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 29045
WELL NUMBER 3S/1W-1F36 & 1F37 (DPE-1 & DPE-2)
APN 941-1401-019-00

PERMIT CONDITIONS
(Circled Permit Requirements Apply)

(A.) GENERAL
1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date
2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller**.
3. Permit is void if project not begun within 90 days of approval date.

B. WATER SUPPLY WELLS
1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

(C.) GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS
1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

(G.) SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results**.

Approved Wyman Hong Date 7/1/09
Wyman Hong

Revised: April 23, 2008

APPENDIX B

Boring Logs

Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER DPE-1

CLIENT Hadjian **PROJECT NAME** Hadjian - Dublin

PROJECT NUMBER 1001.001 **PROJECT LOCATION** 7240 Dublin Blvd

DATE STARTED 7/15/09 **COMPLETED** 7/15/09 **GROUND ELEVATION** _____ **HOLE SIZE** 10"

DRILLING CONTRACTOR ECA **GROUND WATER LEVELS:**

DRILLING METHOD Hollow Stem Auger - 10" **AT TIME OF DRILLING** ---

LOGGED BY Morgan Gillies **CHECKED BY** Bob Clark-Riddell **AT END OF DRILLING** ---

NOTES Hand Auger to 5'; logged from cuttings. **AFTER DRILLING** ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 **Topsoil.**	Concrete
				CL		**Clay with Sand (CL)**; black; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand stringers.	Portland Cement
5							Bentonite Seal
							#2/12 Sand
10						@10' Hydrocarbon odor.	0.010" Slotted 4" SCH 40 PVC
15						15.0 Bottom of hole at 15.0 feet.	Slough

Pangea Environmental Services, Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612

WELL NUMBER DPE-2

CLIENT Hadjian **PROJECT NAME** Hadjian - Dublin

PROJECT NUMBER 1001.001 **PROJECT LOCATION** 7240 Dublin Blvd

DATE STARTED 7/15/09 **COMPLETED** 7/15/09 **GROUND ELEVATION** _____ **HOLE SIZE** 10"

DRILLING CONTRACTOR ECA **GROUND WATER LEVELS:**

DRILLING METHOD Hollow Stem Auger - 10" **AT TIME OF DRILLING** ---

LOGGED BY Morgan Gillies **CHECKED BY** Bob Clark-Riddell **AT END OF DRILLING** ---

NOTES Hand Auger to 5'; logged from cuttings. **AFTER DRILLING** ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						0.5 **Grass, Topsoil.**	Concrete
				CL		**Clay with Sand (CL)**; black; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand stringers.	Portland Cement
5							Bentonite Seal
							#2/12 Sand
						@9' Hydrocarbon odor.	
10							0.010" Slotted 4" SCH 40 PVC
							Slough
15						15.0 Bottom of hole at 15.0 feet.	

APPENDIX C

Standard Operating Procedures

STANDARD FIELD PROCEDURES FOR MONITORING WELLS

This document describes Pangea Environmental Services' standard field methods for drilling, installing, developing and sampling groundwater monitoring wells. These procedures are designed to comply with Federal, State and local regulatory guidelines. Specific field procedures are summarized below.

Well Construction and Surveying

Groundwater monitoring wells are installed in soil borings to monitor groundwater quality and determine the groundwater elevation, flow direction and gradient. Well depths and screen lengths are based on groundwater depth, occurrence of hydrocarbons or other compounds in the borehole, stratigraphy and State and local regulatory guidelines. Well screens typically extend 10 to 15 feet below and 5 feet above the static water level at the time of drilling. However, the well screen will generally not extend into or through a clay layer that is at least three feet thick.

Well casing and screen are flush-threaded, Schedule 40 PVC. Screen slot size varies according to the sediments screened, but slots are generally 0.010 or 0.020 inches wide. A rinsed and graded sand occupies the annular space between the boring and the well screen to about one to two ft above the well screen. A two feet thick hydrated bentonite seal separates the sand from the overlying sanitary surface seal composed of Portland type I, II cement.

Well-heads are secured by locking well-caps inside traffic-rated vaults finished flush with the ground surface. A stovepipe may be installed between the well-head and the vault cap for additional security. The well top-of-casing elevation is surveyed with respect to mean sea level and the well is surveyed for horizontal location with respect to an onsite or nearby offsite landmark.

Well Development

Wells are generally developed using a combination of groundwater surging and extraction. Surging agitates the groundwater and dislodges fine sediments from the sand pack. Wells may be surged prior to installation of the well seal to ensure that there are no voids in the sand pack. Development occurs 24 to 72 hours after seal installation to ensure that the Portland cement has set up correctly. After about ten minutes of surging, groundwater is extracted from the well using bailing, pumping and/or reverse air-lifting through an eductor pipe to remove the sediments from the well. Surging and extraction continue until at least ten well-casing volumes of groundwater are extracted and the sediment volume in the groundwater is negligible.

All equipment is steam-cleaned prior to use and air used for air-lifting is filtered to prevent oil entrained in the compressed air from entering the well. Wells that are developed using air-lift evacuation are not sampled until at least 24 hours after they are developed.

Groundwater Sampling

Depending on local regulatory guidelines, three to four well-casing volumes of groundwater are purged prior to sampling. Purging continues until groundwater pH, conductivity, and temperature have stabilized. Groundwater samples are collected using bailers or pumps and are decanted into the appropriate containers supplied by the analytic laboratory. Samples are labeled, placed in protective foam sleeves, stored on crushed ice at or below 4°C, and transported under chain-of-custody to the laboratory. Laboratory-supplied trip blanks accompany the samples and are analyzed to check for cross-contamination. An equipment blank may be analyzed if non-dedicated sampling equipment is used.

APPENDIX D

Well Development Field Data Sheets

Pangea
ENVIRONMENTAL SERVICES, INC.

Well Gauging Data Sheet

Project.Task #:1001.001 220				Project Name: Dublin Car Wash			
Address: 7420 Dublin Boulevard, Dublin, CA						Date:8/13/09	
Name: Sanjiv Gill				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
DPE-1	4"	8:36			10.55	13.76	TOC
DPE-2	4"	8:40			11.06	13.76	↓

Comments:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: DPE-1

Project.Task #: 1001.001 220	Project Name: Dublin Car Wash
Address: 7420 Dublin Boulevard, Dublin, CA	
Date: 8/13/09	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 13.76	Depth to Product:
Depth to Water (DTW): 10.55	Product Thickness:
Water Column Height: 3.21	1 Casing Volume: 2.08 gallons
Reference Point: TOC	10 Casing Volumes: 20.8 ~~21~~ gallons

Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
* 9:37	19.1	7.74	3077	slightly turbid			2	11.80
12:45	Hard Bottom at			13.76			~~4~~	12.97
							~~6~~	
							~~8~~	
							~~10~~	
							~~12~~	
							~~14~~	
							~~16~~	
							~~18~~	
							~~20.8~~	

Comments: YSI 550A DO meter

pre purge DO = mg/l

post purge DO = mg/l

* Surged at 9:20 - ~~9:30~~ 9:35, Dewatered at 9:42

Sample ID: DPE-1	Sample Time: 12:53
Laboratory: McCampbell Analytical, INC.	Sample Date: 8/13/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: DPE-2

Project.Task #: 1001.001 220	Project Name: Dublin Car Wash
Address: 7420 Dublin Boulevard, Dublin, CA	
Date: 8/13/09	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 13.76	Depth to Product:
Depth to Water (DTW): 11.06	Product Thickness:
Water Column Height: 2.70	1 Casing Volume: 1.75 gallons
Reference Point: TOC	10 Casing Volumes: 17.5 gallons

Purging Device: Disposable Bailer, 3" PVC Bailer, Parastaltic Pump, Whal Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
* 8:43	20.5	7.20	3472	slightly turbid			1.75	12.20
12:42		Hard bottom		at 13.76			~~3.50~~	12.92
							~~5.25~~	
							~~7.00~~	
							~~8.75~~	
							~~10.50~~	
							~~12.25~~	
							~~14.00~~	
							~~15.75~~	
							~~17.50~~	

Comments: YSI 550A DO meter

pre purge DO = mg/l

post purge DO = mg/l

* Surged at 8:25 - 8:40, dewatered at 8:50,

Sample ID: DPE-2	Sample Time: 12:47
Laboratory: McCampbell Analytical, INC.	Sample Date: 8/13/09
Containers/Preservative: Voa/HCl	
Analyzed for: 8015, 8021	
Sampler Name: Sanjiv Gill	Signature:

APPENDIX E

Laboratory Analytical Report

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1001.001; Dublin Car Wash	Date Sampled: 08/13/09
		Date Received: 08/14/09
	Client Contact: Erica Ray	Date Reported: 08/20/09
	Client P.O.:	Date Completed: 08/20/09

WorkOrder: 0908389

August 20, 2009

Dear Erica:

Enclosed within are:

1) The results of the **2** analyzed samples from your project: **#1001.001; Dublin Car Wash,**
2) A QC report for the above samples,
3) A copy of the chain of custody, and
4) An invoice for analytical services.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits.

If you have any questions or concerns, please feel free to give me a call. Thank you for choosing

McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

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 DAY

EDF Required? Coelt (Normal) No Write On (DW) No — Yes

Report To: Erica Ray Bill To: Pangea Environmental

Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200
Oakland, CA 94612 E-Mail: eray@pangeaenv.com

Tele: 510-836-3702 Fax: (510) 836-3709

Project #: 1001.001 Project Name: Dublin Car Wash

Project Location: 7420 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	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015)	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other	Comments: Filter Samples for Metals analysis: Yes / No
+ DPE-1		8-13-09	12:53	3	Voa	X					X	X			X																	
+ DPE-2		↓	12:47	↓	↓	X					X	X			X																	

Relinquished By:	Date:	Time:	Received By:
[signature]	8/14	1pm	Envirotech - RC
C.B. Chris Bowlin	8/14	18:00	ENVIROTECH DON M 8-14-09 1800
ENVIROTECH DON M	8/14/09	19:50	[signature]

ICE/t° Yes 7.2°C
GOOD CONDITION ✓
HEAD SPACE ABSENT ✓
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS MB
PRESERVED IN LAB MB

PRESERVATION VOAS | O&G | METALS pH<2 | OTHER

COMMENTS:

Still has cool

McCampbell Analytical, Inc.
1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0908389 **ClientCode: PEO**

☐ WaterTrax ☐ WriteOn ☑ EDF ☐ Excel ☐ Fax ☑ Email ☐ HardCopy ☐ ThirdParty ☐ J-flag

Report to:
Erica Ray
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612
(510) 836-3700 FAX (510) 836-3709

Email: eray@pangeaenv.com
cc:
PO:
ProjectNo: #1001.001; Dublin Car Wash

Bill to:
Bob Clark-Riddell
Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Requested TAT: 5 days

Date Received: **08/14/2009**
Date Printed: **08/14/2009**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
0908389-001	DPE-1	Water	8/13/2009 12:53	☐	A	A										
0908389-002	DPE-2	Water	8/13/2009 12:47	☐	A											

Test Legend:

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

Prepared by: Ana Venegas

Comments:

NOTE: Soil samples are discarded 60 days after results are reported unless other arrangements are made (Water samples are 30 days).
Hazardous samples will be returned to client or disposed of at client expense.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **8/14/2009 8:45:12 PM**

Project Name: **#1001.001; Dublin Car Wash**
Checklist completed and reviewed by: Ana Venegas

WorkOrder N°: **0908389** Matrix Water
Carrier: EnviroTech

Chain of Custody (COC) Information

Chain of custody present?	Yes ☑	No ☐
Chain of custody signed when relinquished and received?	Yes ☑	No ☐
Chain of custody agrees with sample labels?	Yes ☑	No ☐
Sample IDs noted by Client on COC?	Yes ☑	No ☐
Date and Time of collection noted by Client on COC?	Yes ☑	No ☐
Sampler's name noted on COC?	Yes ☑	No ☐

Sample Receipt Information

Custody seals intact on shipping container/cooler?	Yes ☐	No ☐	NA ☑
Shipping container/cooler in good condition?	Yes ☑	No ☐	
Samples in proper containers/bottles?	Yes ☑	No ☐	
Sample containers intact?	Yes ☑	No ☐	
Sufficient sample volume for indicated test?	Yes ☑	No ☐	

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 7.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	No VOA vials submitted ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
TTLC Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

** NOTE: If the "No" box is checked, see comments below.*

Client contacted: Date contacted: Contacted by:

Comments:

McCampbell Analytical, Inc.
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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

Pangea Environmental Svcs., Inc.	Client Project ID: #1001.001; Dublin Car Wash	Date Sampled: 08/13/09
		Date Received: 08/14/09
1710 Franklin Street, Ste. 200	Client Contact: Erica Ray	Date Extracted: 08/18/09-08/19/09
Oakland, CA 94612	Client P.O.:	Date Analyzed: 08/18/09-08/19/09

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

Extraction method: SW5030B Analytical methods: SW8021B/8015Bm Work Order: 0908389

Lab ID	Client ID	Matrix	TPH(g)	MTBE	Benzene	Toluene	Ethylbenzene	Xylenes	DF	% SS	Comments
001A	DPE-1	W	25,000	2000	240	160	530	3900	50	100	d1
002A	DPE-2	W	6600	28	8.8	ND<2.5	ND<2.5	710	5	98	d2

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	µg/L
	S	1.0	0.05	0.005	0.005	0.005	0.005	mg/Kg

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

cluttered chromatogram; sample peak coelutes w/surrogate peak; low surrogate recovery due to matrix interference.

+The following descriptions of the TPH chromatogram are cursory in nature and McCampbell Analytical is not responsible for their interpretation:

d1) weakly modified or unmodified gasoline is significant
d2) heavier gasoline range compounds are significant (aged gasoline?)

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Web: www.mccampbell.com E-mail: main@mccampbell.com
Telephone: 877-252-9262 Fax: 925-252-9269

QC SUMMARY REPORT FOR SW8021B/8015Bm

W.O. Sample Matrix: Water QC Matrix: Water BatchID: 45213 WorkOrder: 0908389

EPA Method SW8021B/8015Bm **Extraction SW5030B** **Spiked Sample ID: 0908386-017A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	LCSD	LCS-LCSD	Acceptance Criteria (%)			
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	% Rec.	% RPD	MS / MSD	RPD	LCS/LCSD	RPD
TPH(btex)£	ND	60	121	129	5.81	120	120	0	70 - 130	20	70 - 130	20
MTBE	ND	10	119	120	0.452	112	108	3.58	70 - 130	20	70 - 130	20
Benzene	ND	10	108	107	1.33	104	108	3.27	70 - 130	20	70 - 130	20
Toluene	ND	10	97.2	104	6.58	93.3	96.8	3.70	70 - 130	20	70 - 130	20
Ethylbenzene	ND	10	98.8	100	1.35	94.6	98.1	3.61	70 - 130	20	70 - 130	20
Xylenes	ND	30	113	111	1.57	108	112	3.58	70 - 130	20	70 - 130	20
%SS:	102	10	98	102	4.11	97	97	0	70 - 130	20	70 - 130	20

All target compounds in the Method Blank of this extraction batch were ND less than the method RL with the following exceptions:
NONE

BATCH 45213 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
0908389-001A	08/13/09 12:53 PM	08/18/09	08/18/09 11:33 PM	0908389-002A	08/13/09 12:47 PM	08/19/09	08/19/09 8:20 PM

MS = Matrix Spike; MSD = Matrix Spike Duplicate; LCS = Laboratory Control Sample; LCSD = Laboratory Control Sample Duplicate; RPD = Relative Percent Deviation.

% Recovery = 100 * (MS-Sample) / (Amount Spiked); RPD = 100 * (MS - MSD) / ((MS + MSD) / 2).

MS / MSD spike recoveries and / or %RPD may fall outside of laboratory acceptance criteria due to one or more of the following reasons: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) the spiked sample's matrix interferes with the spike recovery.

£ TPH(btex) = sum of BTEX areas from the FID.

cluttered chromatogram; sample peak coelutes with surrogate peak.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.

NR = matrix interference and/or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content, or inconsistency in sample containers.

DHS ELAP Certification 1644

QA/QC Officer