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By Alameda County Environmental Health at 3:14 pm, Jun 27, 2014

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

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

**Re: Dublin Auto Wash**

7240 Dublin Boulevard  
Dublin, California  
ACHCSA Case No. 304

Dear Mr. Chan:

I, Mr. Hooshang Hadjian, have retained Pangea Environmental Services, Inc. (Pangea) as the environmental consultant for the project referenced above. Pangea is submitting the attached report on my behalf.

I declare, under penalty of perjury, that the information and/or recommendations contained in the attached report is true and correct to the best of my knowledge.

Sincerely,

  
Hooshang Hadjian



June 23, 2014

**VIA ALAMEDA COUNTY FTP SITE**

Mr. Jerry Wickham  
Alameda County Environmental Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, CA 94502-6577

Re: **Conceptual Site Model**  
Dublin Auto Wash  
7240 Dublin Boulevard  
Dublin, California  
ACEH Case No. 304

Dear Mr. Wickham:

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. has prepared this *Conceptual Site Model* (CSM) in tabular format. The CSM in tabular format was requested by your letter dated August 9, 2013. The purpose of the CSM is to compile historical site data, assess the data, and evaluate site conditions for potential data gaps impeding site closure. The tabular CSM is presented in Table A. Figures, tables and appendices are attached.

Recent actions have addressed data gaps. In April and May 2014, Pangea completed a biosparging and bio-organic catalyst (BOC) injection pilot test to help determine if residual free product persists at the site, and if bioremediation techniques could accelerate attenuation of source area hydrocarbons. The pilot test results suggest that there is no significant free product trapped near wells MW-3A and MW-6A. The testing also demonstrated that biosparging could effectively increase dissolved oxygen concentrations. Naphthalene analysis has been performed during the last three monitoring events, finding naphthalene concentrations in wells MW-3A and MW-6A ranging from 25 to 660 micrograms per liter ( $\mu\text{g/L}$ ). Pangea plans to collect samples from other nearby site wells for naphthalene analysis during the next regular groundwater monitoring event to delineate the extent of naphthalene in site groundwater.

Potential data gaps identified in Table A include soil gas assessment, lateral hydrocarbon delineation north of source area wells MW-3A and MW-6A, naphthalene delineation, and preferential pathway analysis. Pangea recommends drilling two confirmation borings to collect soil samples for comparison to direct contact criteria in the Regional Water Quality Control Board's (RWQCB's) Low Threat Closure Policy (LTCP). Additionally, Pangea also recommends installing soil gas probes within those borings to compare soil gas concentrations to LTCP criteria. During these boring activities additional borings could be installed to address remaining soil and groundwater delineation data gaps, if merited.

**PANGEA Environmental Services, Inc.**

1710 Franklin Street, Suite 200, Oakland, CA 94612 Telephone 510.836.3700 Facsimile 510.836.3709 [www.pangeaenv.com](http://www.pangeaenv.com)

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

Sincerely,

**Pangea Environmental Services, Inc.**



Bob Clark-Riddell, P.E.  
Principal Engineer



cc: Mr. Hooshang Hadjian, 2108 San Ramon Valley Blvd, San Ramon, CA 94583  
Mr. Ellie Lange (electronic copy)  
Mallik (electronic copy)  
SWRCB Geotracker (electronic copy)

## ATTACHMENTS

Table A – Conceptual Site Model

Figure 1 – Vicinity Map

Figure 2 - Site Map

Figure 3 - Groundwater Elevation Contour and Hydrocarbon Concentration Map

Figure 4 - Extent of TPH in Shallow Groundwater

Figure 5 - Extent of Benzene in Shallow Groundwater

Figure 6 - TPHg Concentration Trends in Key Wells

Figure 7 - Benzene Concentration Trends in Key Wells

Figure 8 - MTBE Concentration Trends in Key Wells

Figure 9 - Geologic Cross Section A-A' Showing Historic Benzene Concentrations in Soil

Figure 10 - Geologic Cross Section B-B' Showing Historic Benzene Concentrations in Soil

Figure 11 - Geologic Cross Section A-A' Showing Current Benzene Concentrations in Groundwater

Figure 12 - Geologic Cross Section B-B' Showing Current Benzene Concentrations in Groundwater

Figure 13 - Vicinity Well Location Map

Table 1 - Soil Analytical Results

Table 2 - Groundwater Elevation and Analytical Data

Table 3 - SVE (DPE) Performance Data

Table 4 - GWE (DPE) System Performance Summary

Table 5 - Well Survey Summary

Appendix A – Boring Logs and Well Construction Details

Appendix B – Groundwater Gradient Evaluation Table

Appendix C - Utility Location Map

**PANGEA Environmental Services, Inc.**

**TABLE A - CONCEPTUAL SITE MODEL**

<b>Site Address:</b>	7240 Dublin Blvd.	<b>ACEH Case No.</b>	304	
<b>City:</b>	Dublin	<b>Regulator:</b>	Dilan Roe	
<b>CSM Element</b>	<b>CSM Sub-Element</b>	<b>Description</b>	<b>Data Gap</b>	<b>How to Address</b>
Introduction	Site Description	The Dublin Auto Wash retail gasoline station 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 residential land use further from the Site.	None	NA
	Nearby Sites	According to GeoTracker, there is one current UST site located near the site at 6973 Village Parkway (Corwood Carwash). There is one current dry cleaner site located approximately 300 ft east of the site at 7100 - 7120 Dublin Boulevard. There are two current "other cleanup sites" located west of the site at 7499 Dublin Boulevard and 7544 Dublin Boulevard/6707 Golden Gate Drive. These two sites are former automotive repair and sales facilities. There are several former or closed UST sites located within the vicinity of the site.	None	NA
Geology and Hydrogeology	Regional	The Site is situated within the Coastal Range geomorphic province in California. The Coast Ranges are northwest-trending mountain ranges (2,000 to 4,000, occasionally 6,000 feet elevation above sea level), and valleys. The ranges and valleys trend northwest, subparallel to the San Andreas Fault. Strata dip beneath alluvium of	None - See <i>Pangea's Soil and Water Investigation Workplan</i> dated	NA



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		<p>the Great Valley. The Pacific Ocean is to the west. The northern portion of the Calaveras Fault is located approximately 4,000 to 5,000 ft west of the site.</p> <p>According to the map of groundwater basins and subbasins of California, the Site is located in the Livermore Valley Groundwater Basin. The entire floor of Livermore Valley and portions of the upland areas on all sides of the valley overly groundwater-bearing materials. The materials are continental deposits from alluvial fans, outwash plains, and lakes. They include valley-fill materials, the Livermore Formation, and the Tassajara Formation.</p> <p>The valley-fill materials are a few tens of feet to nearly 400 feet thick. They are stream channel deposits, alluvium, alluvial fan deposits, and terrace deposits, and consist of unconsolidated sand, gravel, silt, and clay. In the central and southern portions of the valley, 50 to 80 percent of the valley-fill is comprised of aquifer material that yields significant quantities of water to wells. Clay deposits up to 40 feet thick cap the valley-fill in the western part of the Basin; where deep wells draw groundwater from underlying aquifer material. The Site is located in the western part of the basin.</p>	February 5, 2005 for more in depth geologic information.	

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	Local	<p><b>Geology:</b> The Site is underlain by undivided Holocene and Pleistocene deposits. The basin deposits consist of very fine silty clay to clay deposits occupying flat-floored basins at the distal edge of alluvial fans.</p> <p>Subsurface soil encountered onsite has consisted primarily of clay, silty clay and clayey sand. 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. 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. 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 '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 49 ft bgs. The 'C' zone is present between 34 and 45 ft bgs. Boring logs and well construction details are presented in Appendix A. The site well construction details table is included in Appendix B. Site geology is also shown on Figures 9 through 12.</p> <p><b>Hydrogeology:</b> Groundwater has been encountered between 12 to 19 ft bgs during well installation and soil borings. Depth to groundwater in monitoring wells has ranged from 7.2 to 13.2 ft.</p>	None - Soil logged to 49 ft bgs (SB-1).	NA

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Surface Water	Pangea reviewed the USGS topographic maps for the Site vicinity and conducted a Site reconnaissance visit to identify surface water bodies in the Site vicinity. A flood control channel is located immediately west of the Site and flows to the southeast (Figure 2). The flood channel is unlined (earthen) except in areas adjacent to bridges crossing the channel. The elevation of the channel is approximately 10 feet lower than the Site surface elevation. Another flood control channel is located approximately 700 feet east of the Site and flows to the southwest where it has a confluence with the stream adjacent to the Site. A channelized stream, Dublin Creek, is located approximately 1600 feet southwest of the Site and flows to the east where it has a confluence with the stream adjacent to the Site. Wells adjacent to the flood control channel suggest that there is no chemical impact near the channel.	None	NA	
Groundwater Flow	A comparison of clustered well pairs screened at different well depths indicates that a consistent <i>upward</i> gradient has been present between shallow and intermediate depth water-bearing zones. A greater upward gradient is present north of the dispenser islands, while a much smaller upward gradient is observed southwest of the dispenser islands. A downward gradient appears to be present between upper shallow AA-zone vapor wells (VW-1, VW-2, and VW-3) and the shallow A-zone monitoring wells; this may be due to perched groundwater. No current chemical impact in deeper water-bearing zones.	None	NA	

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	Horizontal Gradient	<p>Groundwater flow at the site is complex due to combined effects of an upward gradient, the nearby creek/flood control channel, seasonal fluctuations in flow direction, and likely influence of the city sewer line located beneath Dublin Boulevard. North of the site (offsite) the groundwater flow direction has consistently ranged from <i>southerly</i> to <i>easterly</i>. Onsite groundwater flow has ranged from <i>northwesterly</i> to <i>southeasterly</i>, with consistent convergence occurring near source area wells and Dublin Boulevard. The inferred groundwater flow direction at this site is potentially suspect because groundwater is very slow to equilibrate to atmospheric conditions when the caps are removed. To address this issue during the first quarter 2007 groundwater monitoring event Pangea removed well caps one day prior to measuring water levels to allow for groundwater equilibration. Well caps were removed one day prior to measuring water levels for each monitoring event through third quarter 2010, except for the first quarter 2009 event (due to rain). During those 13 monitoring events, shallow groundwater flow north of the site (<i>offsite</i>) was towards the southeast 11 times and the other two times flow was towards the east or south. Shallow <i>onsite</i> groundwater flow during those 13 monitoring events was towards the northwest 12 times. Pangea concludes that the groundwater flow direction inferred during these 13 monitoring events is more representative of site conditions than other monitoring events. The inferred flow direction during these monitoring events suggest that the dominant feature effecting groundwater flow is the sewer line beneath Dublin Blvd. The recent groundwater flow direction is shown on Figure 3. The groundwater gradient evaluation table and some example groundwater contour maps from 2008 and 2009 are included in Appendix B.</p>	None	NA

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Contaminant Release and Environmental Work	Source/Release Information	<p><b>Chevron Release – 1988 to 1996:</b> 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.</p> <p><b>New Release 1997:</b> 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.</p>	None	NA
	Chemicals of Concern	The chemicals of concern (COC) is site soil and groundwater are the following petroleum hydrocarbons and gasoline oxygenates: total petroleum hydrocarbons as gasoline (TPHg); benzene, toluene, ethylbenzene, xylenes (BTEX); and methyl tert-butyl ether (MTBE).	None	NA



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Previous Environmental Work	<p>Work Initiation</p> <p>In 1988, the initial authorized release was reported at the site following EA's soil gas survey.</p> <p>In February 1997, a second separate fuel release was discovered and reported to ACEH, and the current case #304 was opened.</p>			
Soil & Groundwater Investigation Activities	<p>Following the initial soil gas survey, groundwater monitoring wells were installed and quarterly groundwater monitoring began. 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.</p> <p>Following the second discovered fuel release, 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.</p> <p>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. OMA 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.</p>	None	NA	

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		<p>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.</p> <p>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.</p> <p>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</p>		

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		<p>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.</p> <p>In November 2004, Pangea Environmental Services, Inc. (Pangea) of Oakland, California, assumed the lead role as consultant. 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.</p> <p>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</p>		

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		<p>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. Boring SB-2 was located near MW-7C in the southwestern portion of the property. Results are detailed in the August 11, 2006 Site Investigation Report prepared by Pangea.</p> <p>An ACEH letter dated November 9, 2007 approved discontinuance of groundwater monitoring of C-zone wells, because monitoring data suggested the C-zone was not impacted.</p> <p>In July 2009, Pangea installed two dual-phase extraction (DPE) wells to facilitate implementation of the approved DPE corrective action plan (CAP). Wells DPE-1 and DPE-2 were constructed of 4-inch diameter and screened from 9 to 14 feet bgs. Details of the DPE well installation are described in Pangea's <i>Remediation Well Installation Report</i> dated December 16, 2009. Historic soil and groundwater analytical results are summarized on Tables 1 and 2, respectively.</p>		
	Remedial Activities	A soil vapor extraction system (SVE) was operated onsite, in conjunction with the original release, between March 1992 and April 1996. The SVE system removed approximately 15,000 pounds of hydrocarbons.	None	N/A

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		<p>Approximately 31 cubic yards of soil were excavated in July 1997, following the discovery of the second release.</p> <p>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 <i>short-term feasibility testing/source removal</i> on key site wells (MW-3A, MW-7AA, MW-7A, MW-6A) detailed in the August 11, 2006 <i>Site Investigation Report</i>. ACEH approved the proposed feasibility testing and requested a corrective action plan (CAP) in a letter dated November 9, 2007.</p> <p>In November 2007, Pangea conducted a five-day dual-phase extraction (DPE) test (and interim remediation event) to evaluate the effectiveness of DPE as remedial technique and to provide additional source removal. On December 9, 2008, Pangea submitted an <i>Interim Remediation Report and Corrective Action Plan (CAP)</i> describing DPE testing and proposing short-term dual phase extraction (DPE) as the most appropriate and cost-effective technique for site remediation. In a letter dated January 16, 2009, ACEH approved short-term DPE for additional source removal to help facilitate case closure.</p> <p>To remediate the small localized impact area, DPE was conducted between September 15, 2010 and November 15, 2010 until low contaminant removal rates were observed. The DPE system operated for a total of about 1,189 hours (approximately 50 days). Laboratory analytical data indicates that the system removed a total of</p>		



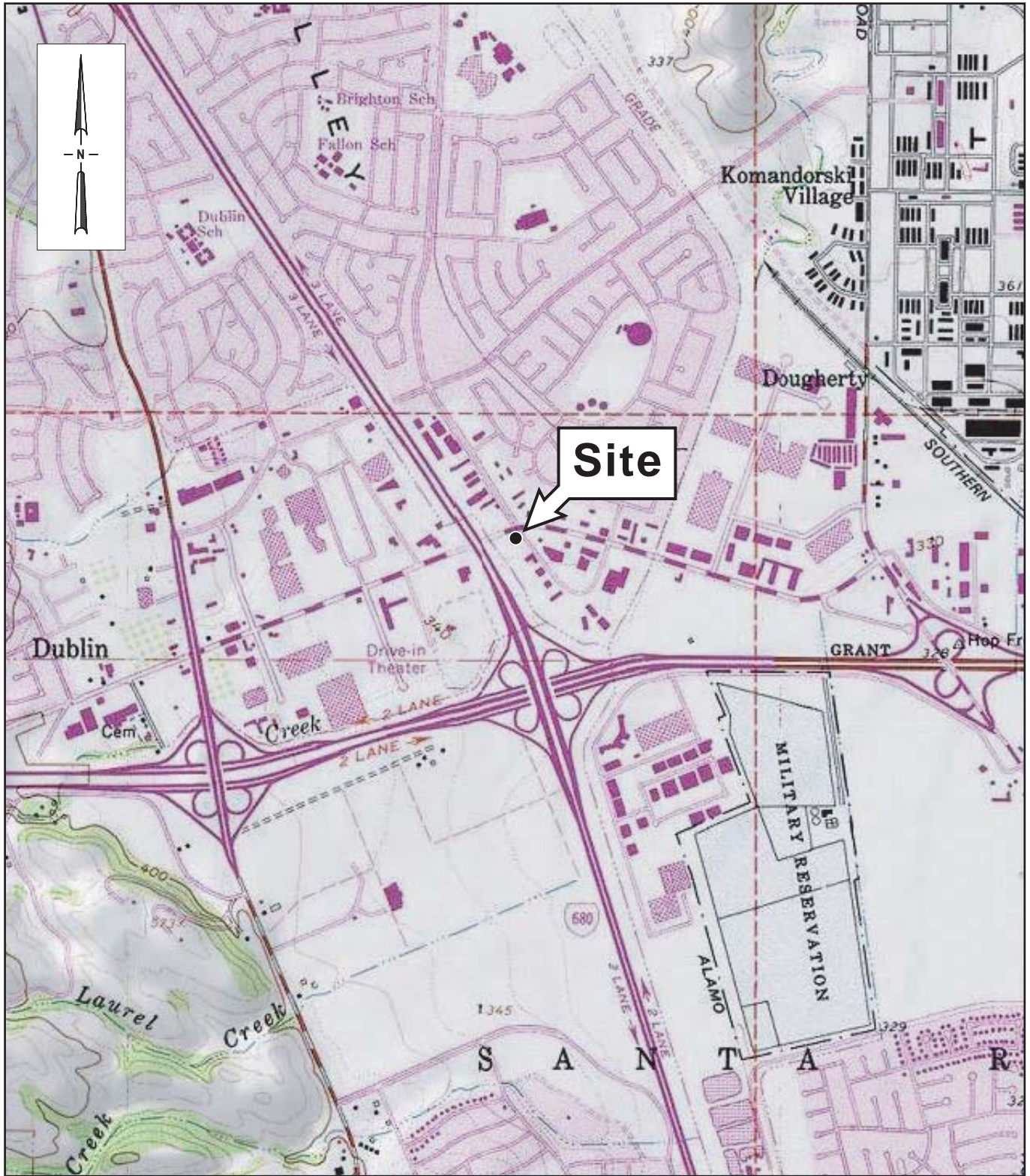
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		<p>approximately 443 lbs TPHg and 3.8 lbs benzene in vapor phase, and 0.4 lbs TPHg, 0.01 lbs benzene and 0.25 lbs MTBE in aqueous phase. The DPE system was shutdown on November 15, 2010 due to low contaminant removal rates, the small localized extent of site contamination, the commencement of the winter rainy season, and cost control. System operation and performance data is summarized on Tables 3 and 4.</p> <p>On April 3, 2014, Pangea conducted pilot testing of enhanced bioremediation to help determine if residual free product persists at the site, and if bioremediation techniques could accelerate attenuation of source area hydrocarbons. The test involved injection of bio-organic catalyst (BOC), water, and air into the hydrocarbon secondary source area, followed by extraction of groundwater from select site wells. Air sparging successfully increased dissolved oxygen (DO) concentrations in source area wells MW-3A and MW-6A. BOC injection did not increase hydrocarbon concentrations within source area wells MW-3A and MW-6A or increase hydrocarbon recovery rates from these wells (during groundwater extraction). This suggests that there is no significant mass of residual free product at the site.</p>		
Characterization of Contaminant Extent and Stability	Free Product	Separate phase hydrocarbons or free product has been observed onsite in destroyed well MW-3 at a maximum measured thickness of 1.29 ft (2/21/05) and in replacement well MW-3A at a maximum measured thickness of 0.03 ft (5/29/06). Free product has not been observed onsite since May 2006. April 2014 pilot test results suggest that there is no significant mass of residual free product at the site.	None	Consider borings (along with other possible borings) to confirm no SPH. Could use Laser Induced Florescence (LIF)/Ultra Violet Optical Screening Tool (UVOST) assessment techniques.

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Soil Contamination	Table 1 presents historic soil data for onsite and offsite soil borings/monitoring wells. Elevated contaminant concentrations were detected west of the dispenser island. Historic hydrocarbon concentrations in soil from select borings located near the northern dispenser island exceed the LTCP criteria for direct exposure. Boring B-1 (1997) at 9 ft depth contained 13 mg/Kg benzene, B-2 (2003) at 4 ft contained 12 mg/Kg benzene and 240 mg/Kg ethylbenzene, boring B-7 (2003) at 4 ft depth contained 170 mg/Kg ethylbenzene (Figure 2). There is also no naphthalene data for site soil to compare to LTCP criteria.	Evaluation of LTCP criteria for direct exposure and lateral delineation north of wells MW-3A and MW-6A.	Consider shallow soil borings to evaluate data gap.	
Groundwater Contamination	<b>Shallow Groundwater:</b> The current lateral extent of TPHg and benzene are shown on Figures 4 and 5, respectively. The downgradient extent of hydrocarbons is well defined by wells MW-2 and MW-10A. Furthermore, the up/crossgradient extent is well defined by wells MW-1 and MW-9A. The lateral extent of shallow groundwater contamination is not delineated north of wells MW-3A and MW-6A. Concentration trends of key site wells are graphed on Figures 6 through 8. <b>Vertical Assessment:</b> Installation of the C-zone wells (MW-6C, MW-7C, and MW-9C) provided vertical delineation of groundwater contamination. The historic and current vertical extent of contaminants are illustrated on Figures 9 through 12, cross-sectional representations of onsite and offsite conditions.	No lateral delineation of shallow groundwater north of wells MW-3A and MW-6A.	Consider borings to address this data gap.	
Soil Vapor Contamination	No soil gas sampling has been performed onsite.	No soil gas sampling has been performed. Only limited soil gas impact	Property owner considering sale for site redevelopment. Consider a soil gas survey to evaluate	

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			suspected near station building.	potential future vapor intrusion concerns.
Assessment of Contaminant Impact on Public Health & Environment	Well Survey	A well survey was conducted at the site in 2005 and was reported in detail in Pangea's <i>Soil and Water Investigation Workplan</i> dated February 20, 2005. The data provided by DWR indicated that forty existing well sites are located within approximately 8,000 feet of the Site, as summarized on Table 5. Twelve of the forty well sites identified by the DWR are located within 2,000 ft of the Site, and are shown on Figure 13. Three of the twelve wells are non-monitoring wells; one well is a municipal well owned by the Dublin-San Ramon Valley Community Services District, the second is a test well owned by the Alameda County Flood Control Agency, and the third is a cathode protection well owned by the Livermore –Amador Valley Management Agency; they are located approximately 500 feet east, 1,000 feet north-northeast, and 1,900 feet south-southwest, respectively, of the Site. These wells are installed to total depth of 500, 112, and 210 feet, respectively. These wells are identified as numbers 2, 3, and 9 on Figure 13. The groundwater flow direction at the Site has been determined to be southeast and northwest; therefore, the identified municipal well is not expected to be impacted by the Site.	None	NA
	Buried Conduits	In 2003, SOMA Environmental performed a preferential pathway analysis; the findings were reported in SOMA's <i>Soil and Groundwater Investigation</i> dated June 3, 2003. SOMA identified an 18-inch diameter vitrified clay pipe (VCP) sewer line just north of the site along Dublin Boulevard. The sewer line has an approximate depth of 16 to 17 ft bgs. VCP utilities are typically surrounded with coarse-grained materials and that due to the depth of the utility the sewer line may be acting as a preferential path for contaminant	Conduit study complete, but limited evaluation of migration potential performed. Limited residual	Consider borings along sewer or other investigation techniques.

<b>Site Address:</b>	7240 Dublin Blvd.	<b>ACEH Case No.</b>	304	
<b>City:</b>	Dublin	<b>Regulator:</b>	Dilan Roe	
<b>CSM Element</b>				
<b>CSM Sub-Element</b>	<b>Description</b>	<b>Data Gap</b>	<b>How to Address</b>	
	migration as depth-to-water onsite has ranged from 7 to 13 ft bgs. The utility location map is included in Appendix C. Boring SB-1 was completed in 2006 to evaluate this conduit as a potential migration pathway, and did not find significant impact (Figure 2).	impact detected near wells MW-3A and MW-6A during recent pilot test.		
Remediation Status	An enhanced bioremediation pilot test was conducted in April 2014. The pilot test indicated that key site wells MW-3A and MW-6A are conducive to biosparging. Brief testing in these two wells increased dissolved oxygen concentrations significantly. Bio-organic catalyst (BOC) injection and subsequent groundwater monitoring did not increase contaminant concentrations in key wells MW-3A and MW-6A. These results suggest that longer term biosparging would help increase dissolved oxygen concentrations potentially increasing the rate of natural attenuation of site contaminants.	?	Consider biosparging if remediation merited to reduce potential for migration along preferential pathway (sewer).	





SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

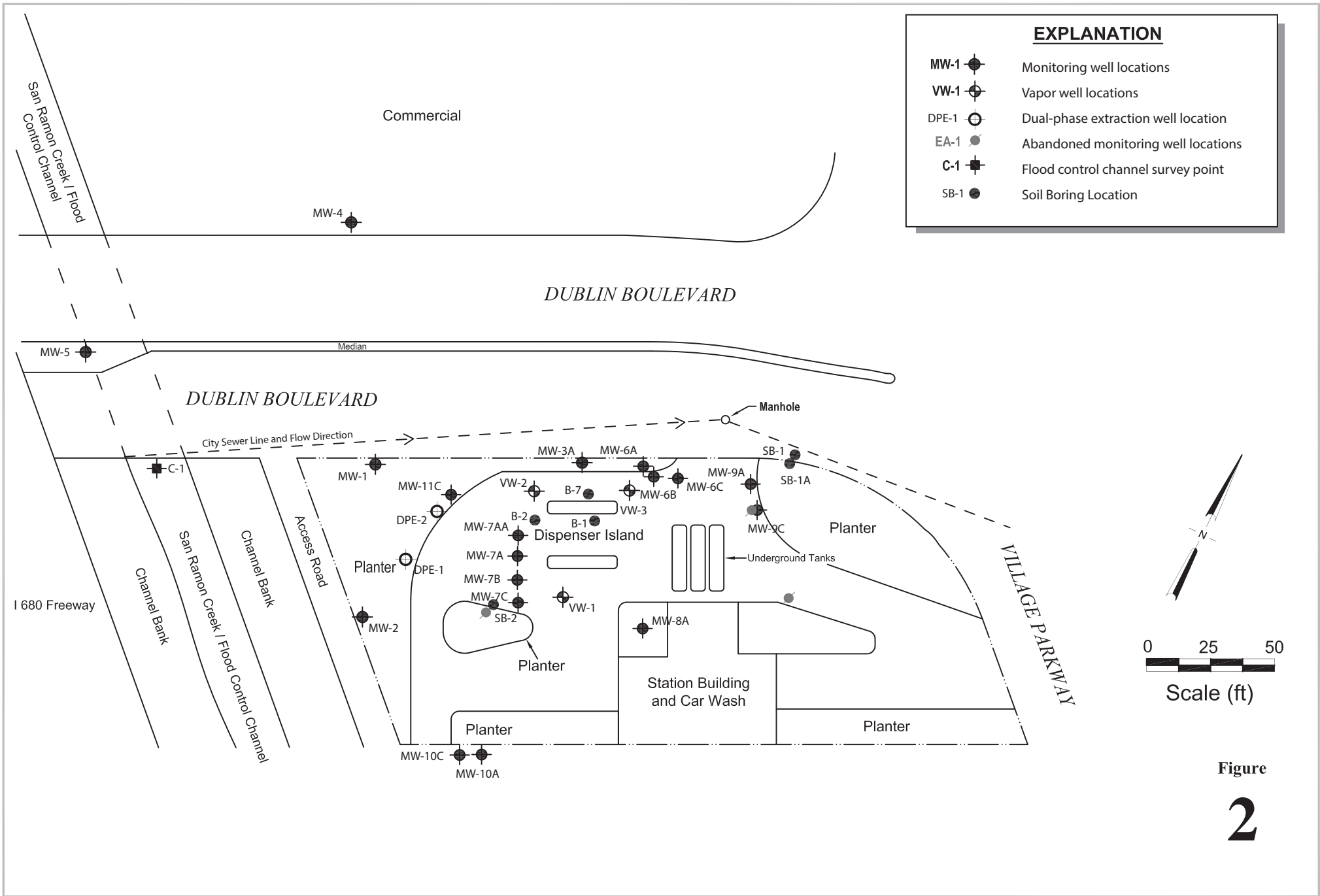
Figure 1

Dublin Auto Wash  
 7240 Dublin Boulevard  
 Dublin, California



Site Location Map





**Dublin Auto Wash**  
7240 Dublin Boulevard  
Dublin, California



Site Map

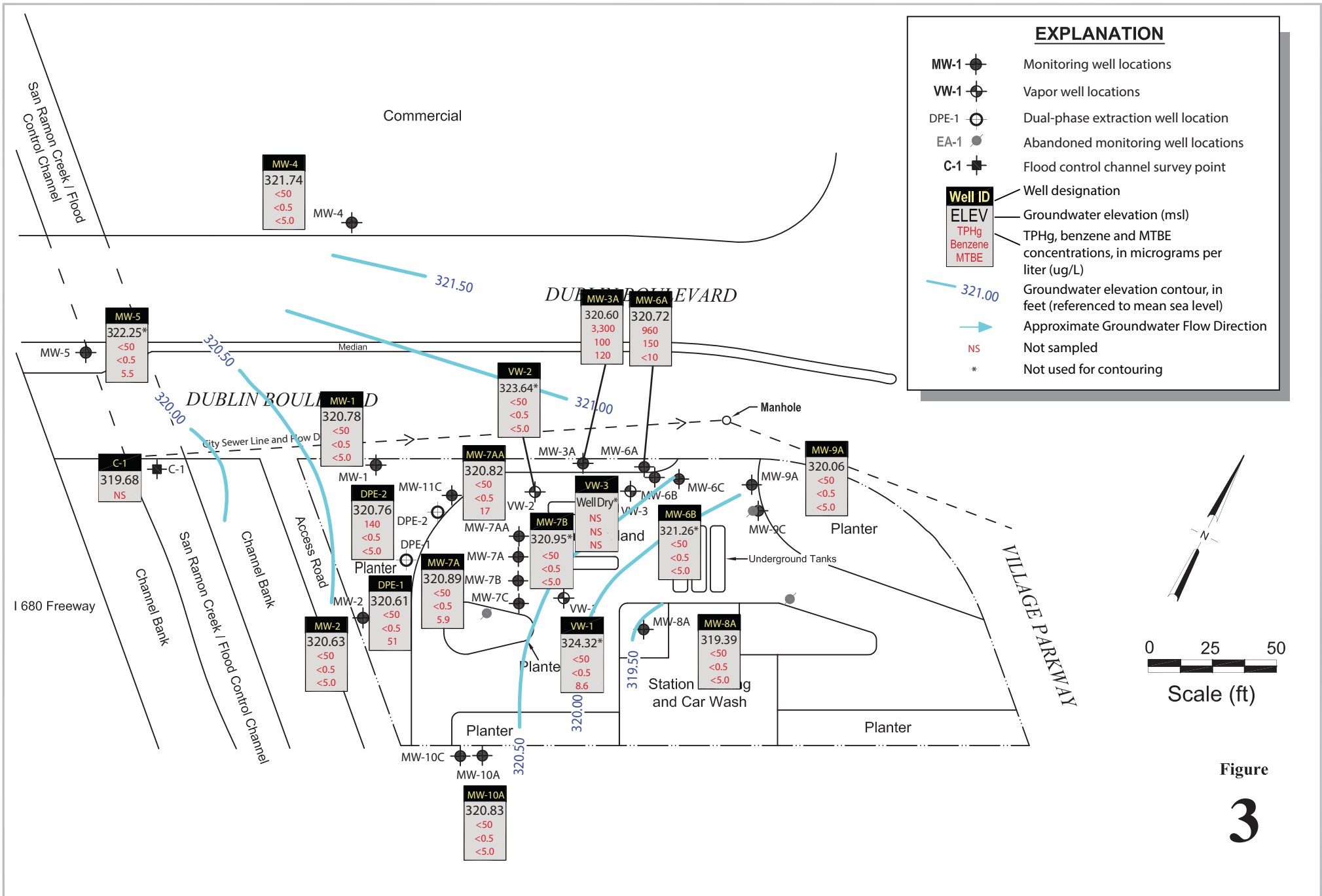
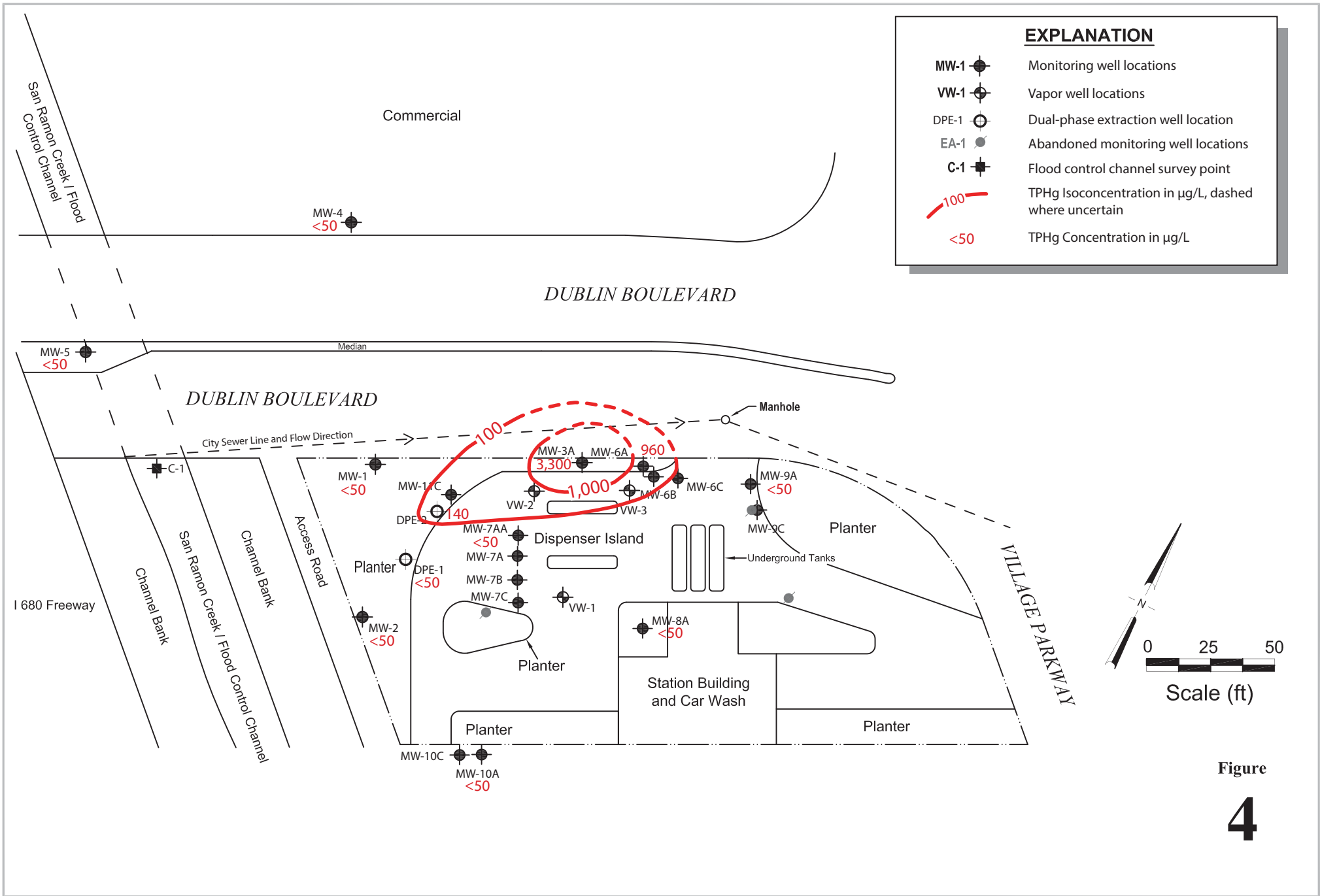


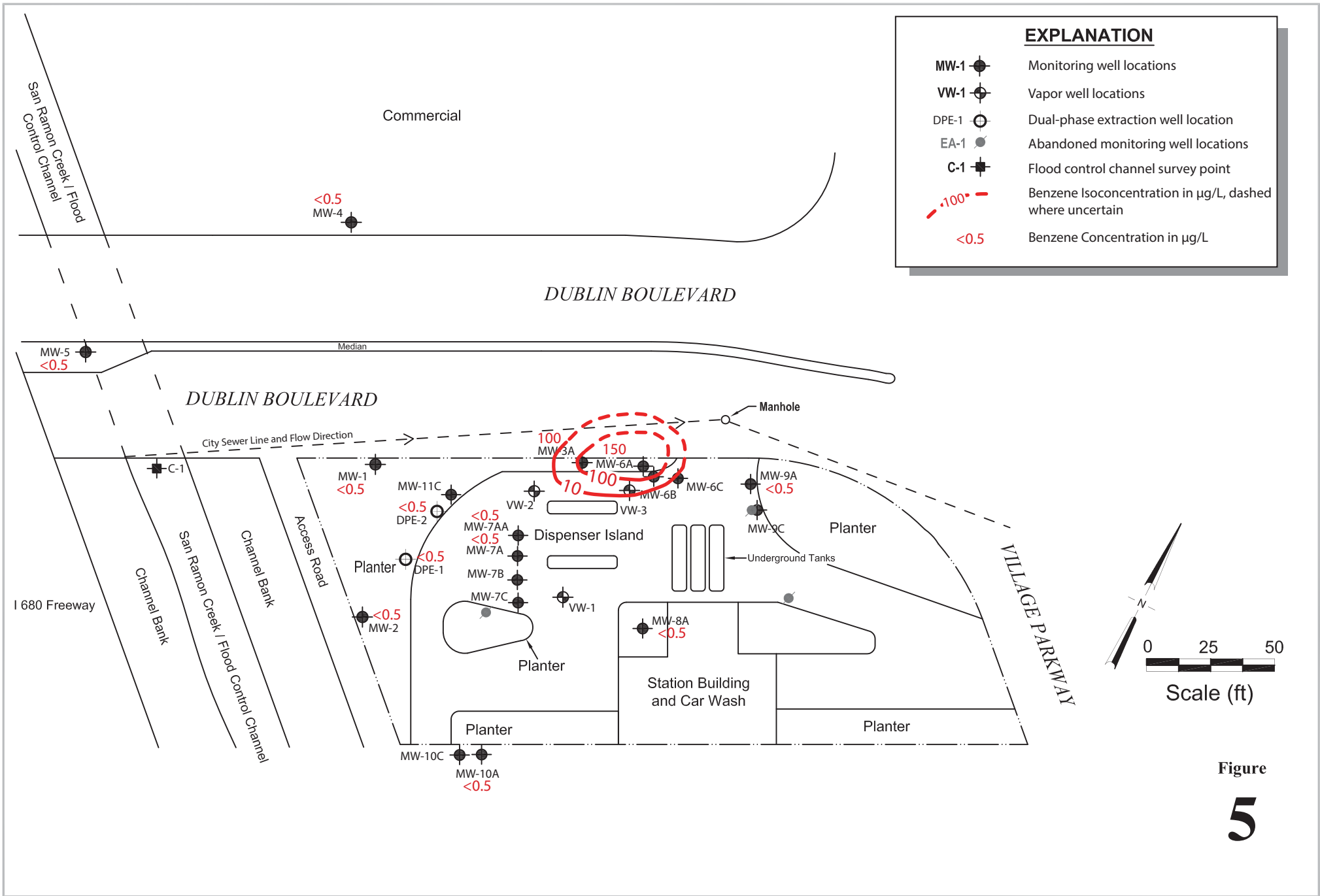
Figure  
**3**



**Dublin Auto Wash**  
 7240 Dublin Boulevard  
 Dublin, California



**Extent of TPHg in  
 Shallow Groundwater**  
 April 24, 2014



**Dublin Auto Wash**  
 7240 Dublin Boulevard  
 Dublin, California



**Extent of Benzene in  
 Shallow Groundwater**  
 April 24, 2014

## TPHg Concentration Trends in Key Wells

7240 Dublin Boulevard, Dublin

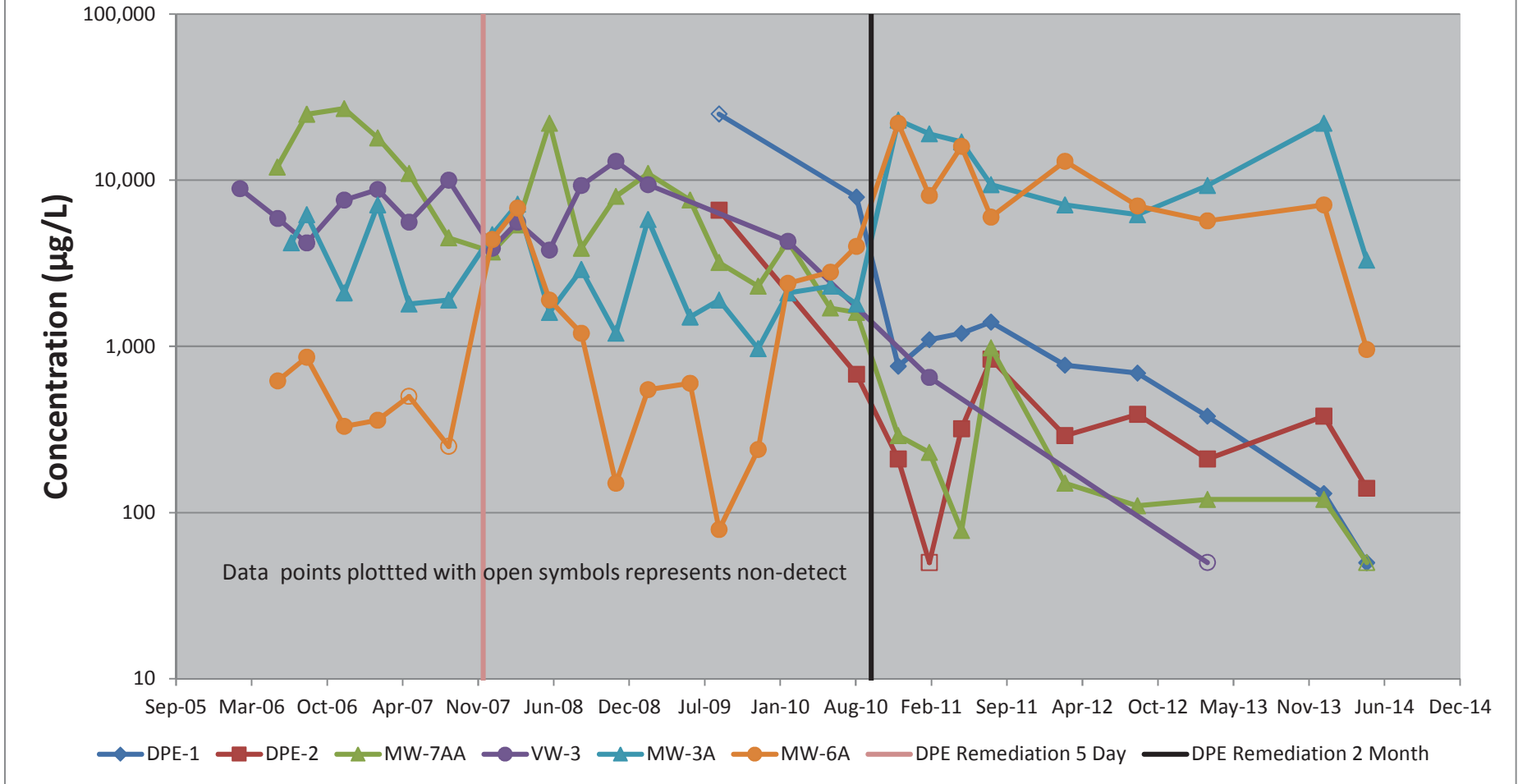


Figure 6. TPHg Concentration Trends in Key Wells



# Benzene Concentration Trends in Key Wells

7240 Dublin Boulevard, Dublin

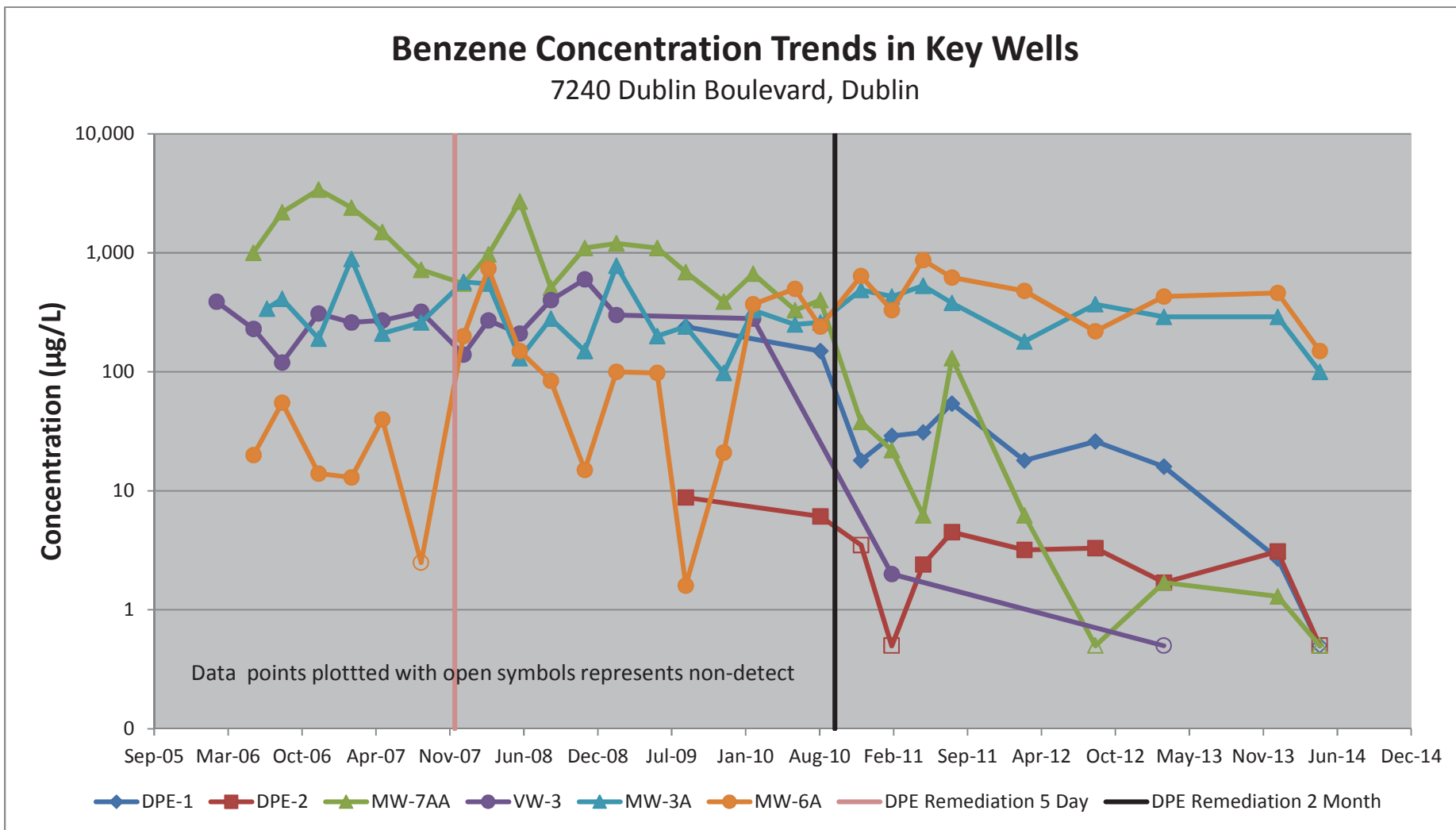


Figure 7. Benzene Concentration Trends in Key Wells

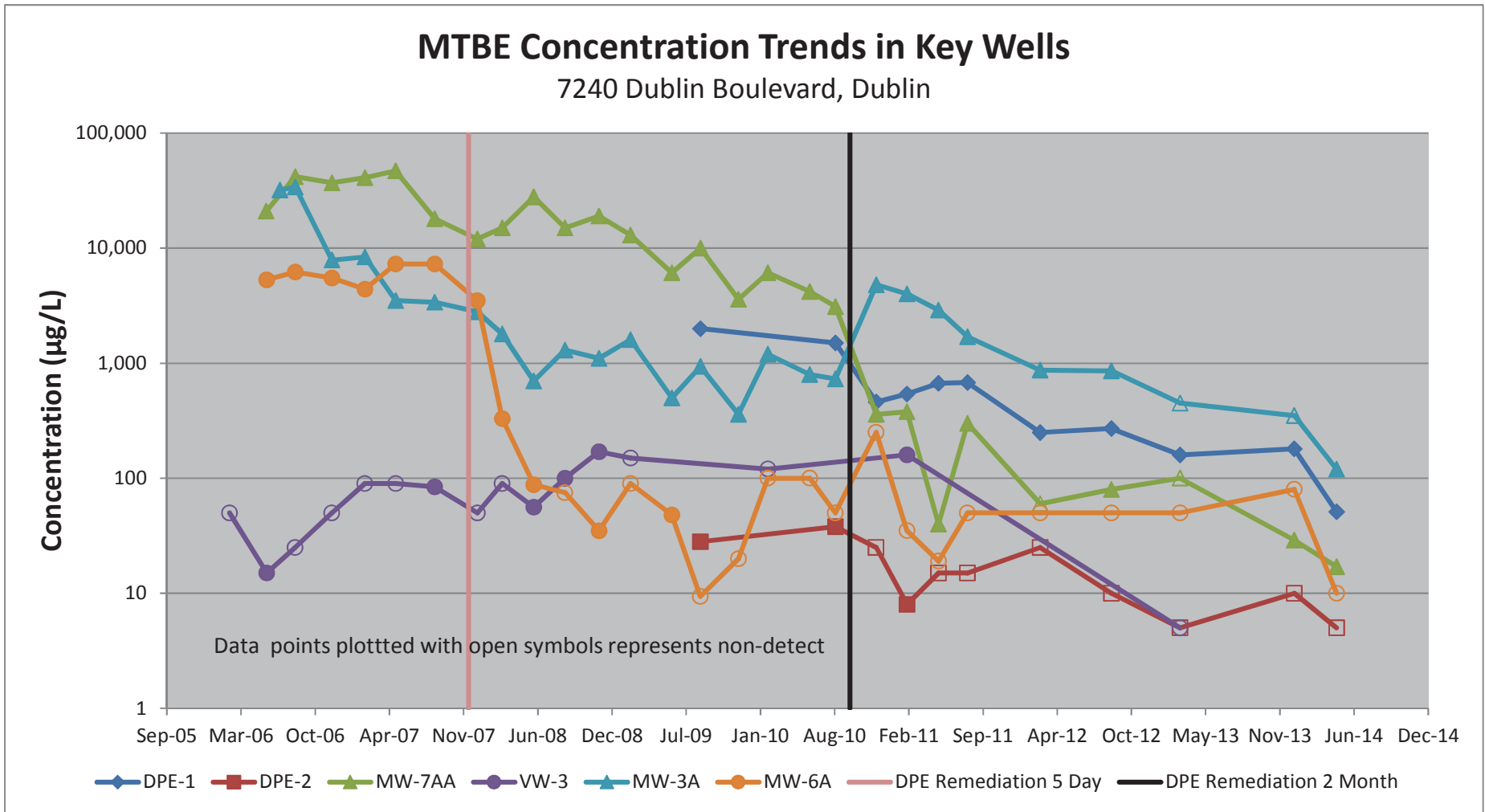


Figure 8. MTBE Concentration Trends in Key Wells

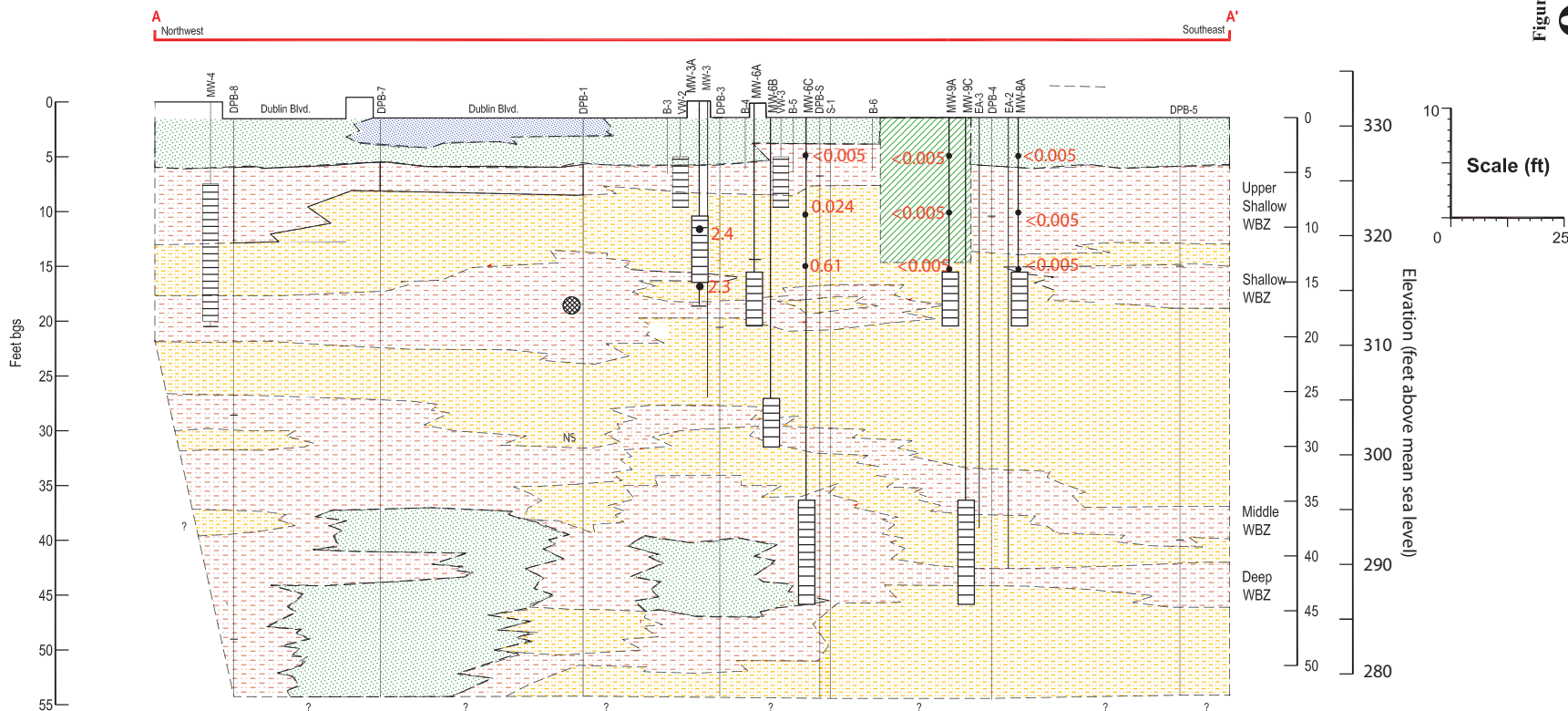
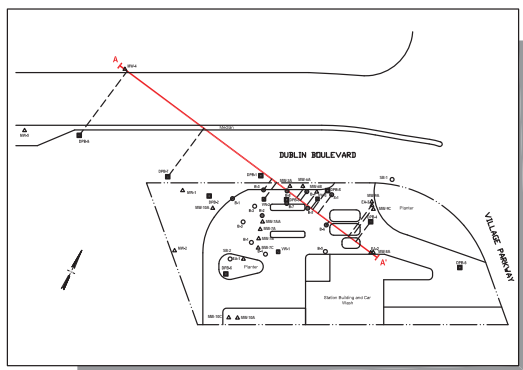
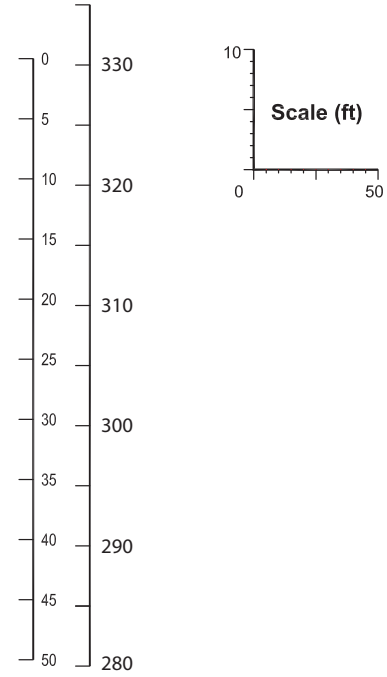
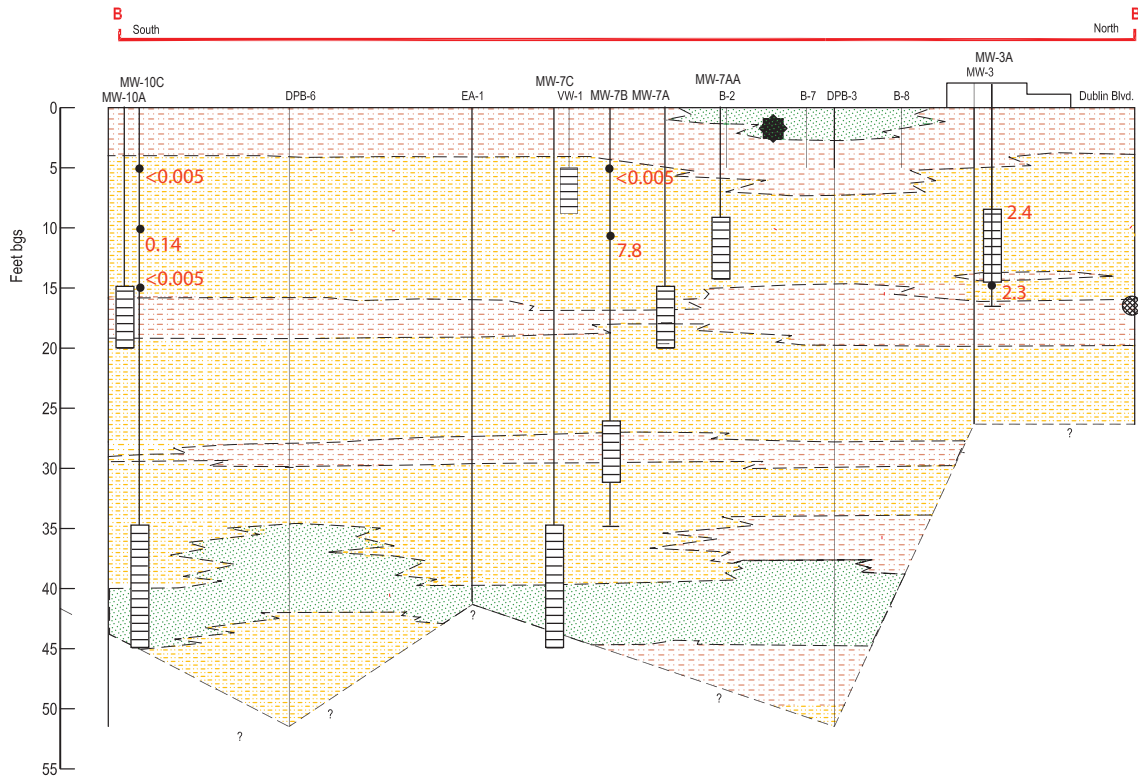


Figure 9

Cross Section A-A'  
Showing Historic Benzene Concentrations in Soil  
June 2006



EXPLANATION	
	UST Area
	Moderate to High Permeability [SANDS (SW, SP), GRAVELS (GW, GP)]
	Low to Moderate Permeability [Clayey to Silty SANDS (SC, SM), Clayey to Silty Gravels (GC, GM)]
	Low Permeability [Sandy SILTS (ML, MH), Sandy CLAYS (CL, CH)]
	Very Low Permeability [SILTS (ML, MH), CLAYS (CL, CH), Silty CLAY / Clayey SILT (ML, CL)]
	Dublin Sanitary Sewer (18" Diameter)
	Well Casing
	Screened Interval
	Soil Boring Trace
	Sample Point
	Benzene Concentration (mg/kg) in Soil (3-5/06)



**EXPLANATION**

- |  |   |  |                                      |  |  |
|--|---|--|--------------------------------------|--|--|
|  | Low to Moderate Permeability [Clayey to Silty SANDS (SC, SM), Clayey to Silty Gravels (GC, GM)] |  | Dublin Sanitary Sewer (18" Diameter) |  | Flex Hose Leak Location (February 1997)                          |
|  | Lower Permeability [Sandy SILTS (ML, MH), Sandy CLAYS (CL, CH)]                                 |  | Well Casing                          |  | <math><0.05</math> Benzene Concentration(mg/kg) in Soil (3-5/06) |
|  | Very Low Permeability [SILTS (ML, MH), CLAYS (CL, CH), Silty CLAY / Clayey SILT (ML, CL)]       |  | Screened Interval                    |  |  |
|  |   |  | Soil Boring Trace                    |  |  |
|  |   |  | Sample Point                         |  |  |

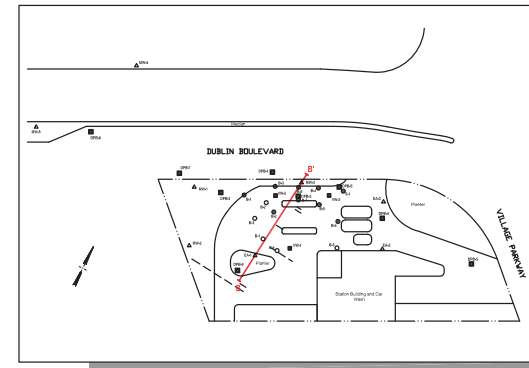


Figure **10**

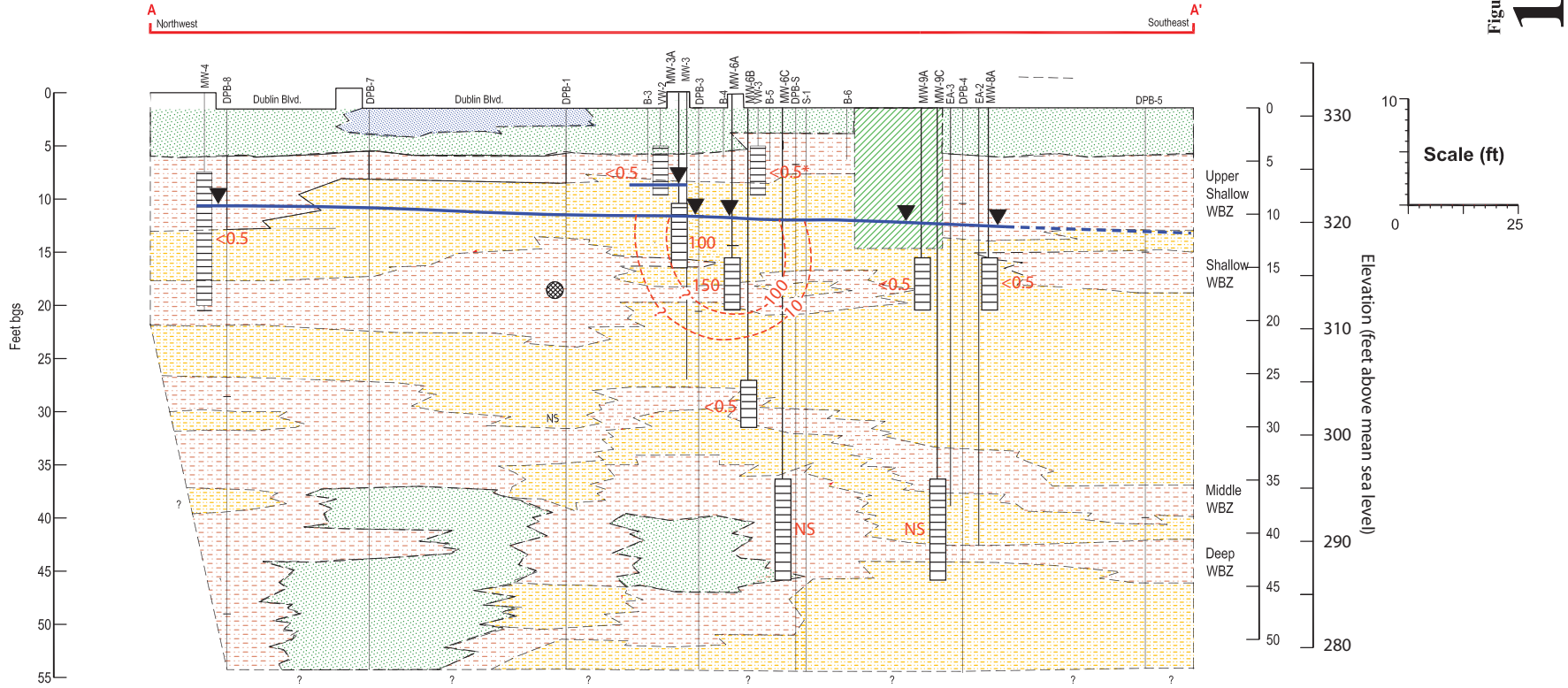
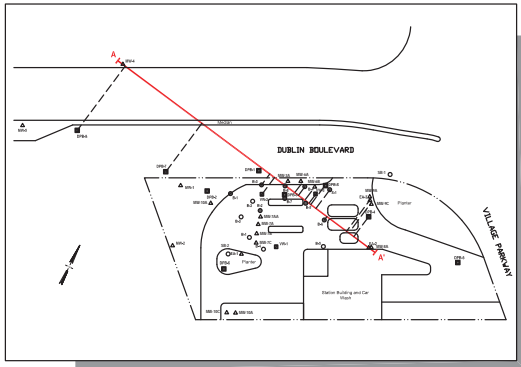


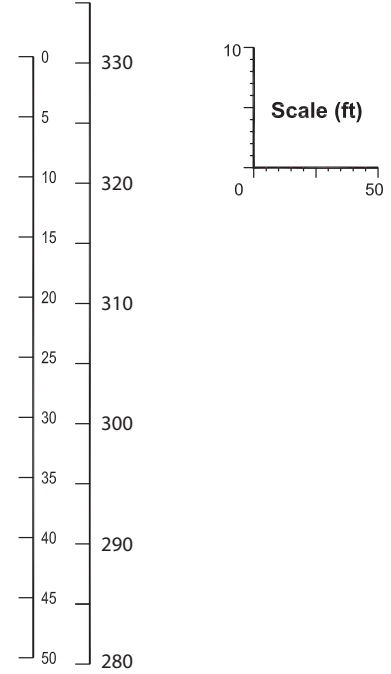
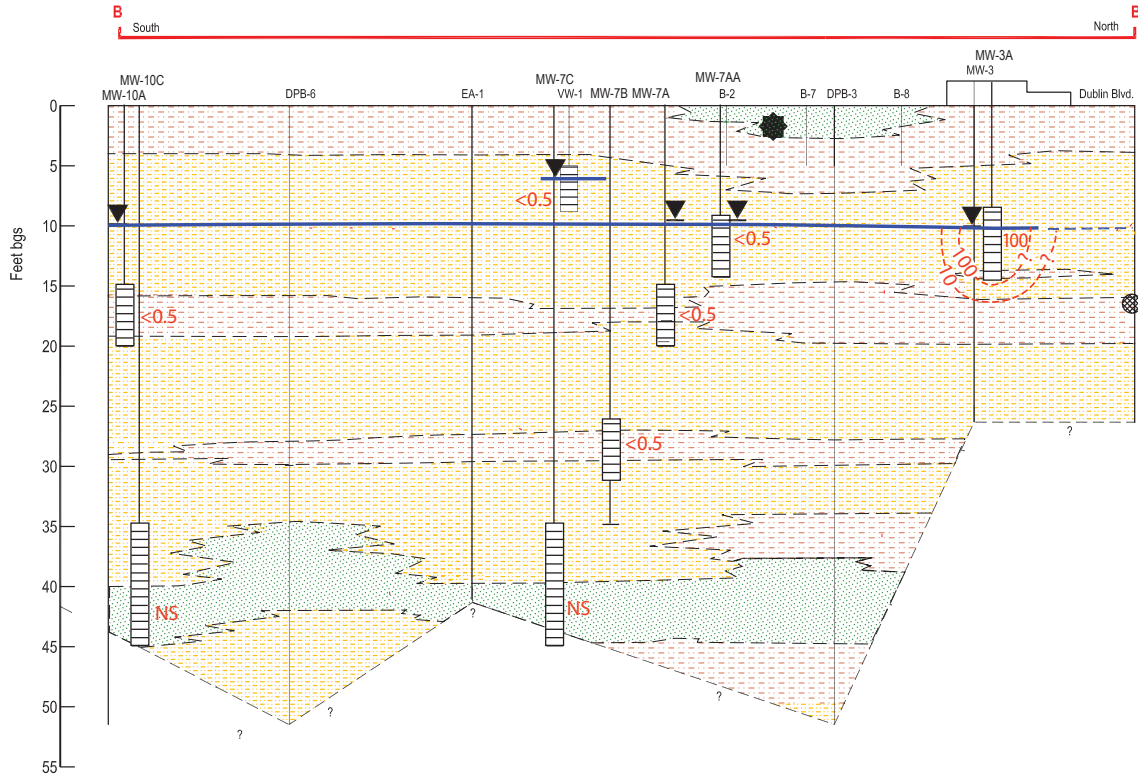
Figure 11

Geologic Cross Section A-A'  
Showing Current Benzene  
Concentrations in Groundwater  
April 24, 2014



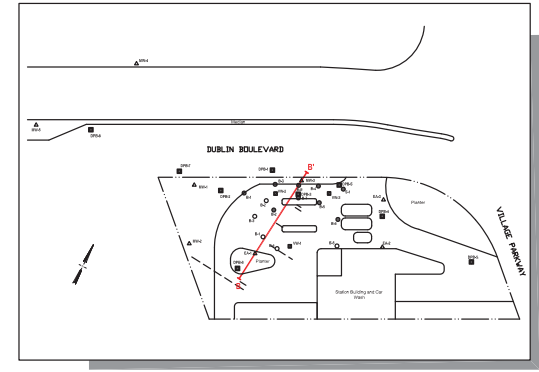
EXPLANATION	
	UST Area
	Moderate to High Permeability [SANDS (SW, SP), GRAVELS (GW, GP)]
	Low to Moderate Permeability [Clayey to Silty SANDS (SC, SM), Clayey to Silty GRAVELS (GC, GM)]
	Low Permeability [Sandy SILTS (ML, MH), Sandy CLAYS (CL, CH)]
	Very Low Permeability [SILTS (ML, MH), CLAYS (CL, CH), Silty CLAY / Clayey SILT (ML, CL)]
	Dublin Sanitary Sewer (18" Diameter)
	Well Casing
	Screened Interval
	Soil Boring Trace
	NS Not sampled
	100 Benzene Concentration in Groundwater (µg/L)
	10 Benzene Isoconcentration Contour (µg/L); queried where uncertain
	Water Table (4/24/14)
	Static Water Depth (4/24/14)
	* Denotes Concentration Data from 2/26/13

Figure 12

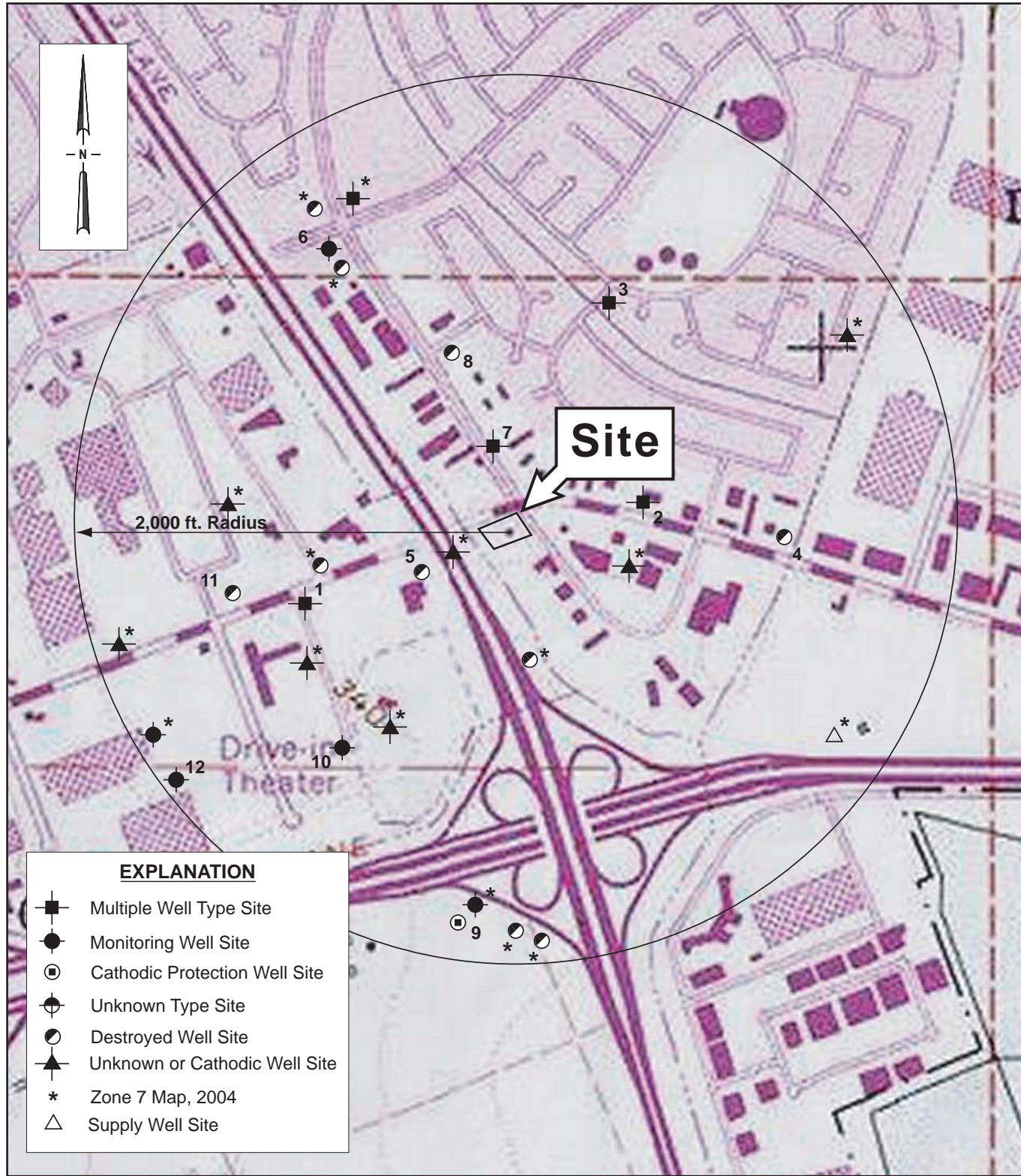


**EXPLANATION**

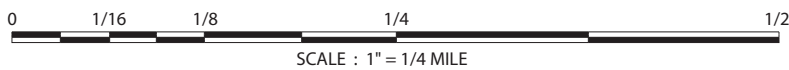
	Low to Moderate Permeability [Clayey to Silty SANDS (SC, SM), Clayey to Silty Gravels (GC, GM)]		Dublin Sanitary Sewer (18" Diameter)		<0.5 Benzene Concentration (µg/L) in Groundwater (5/31/06)
	Lower Permeability [Sandy SILTS (ML, MH), Sandy CLAYS (CL, CH)]		Well Casing		NS Not sampled
	Very Low Permeability [SILTS (ML, MH), CLAYS (CL, CH), Silty CLAY / Clayey SILT (ML, CL)]		Screened Interval		10 Benzene Isoconcentration Contour (µg/L); queried where uncertain
			Soil Boring Trace		Water Table (4/24/14)
			Flex Hose Leak Location (February 1997)		Static Water Depth (4/24/14)







SOURCE: TOPOI MAPS



Figure

13

Dublin Auto Wash  
 7240 Dublin Boulevard  
 Dublin, California



Vicinity Well Location Map

# Pangea

**Table 1. Soil Analytical Results** - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Boring/Well ID	Consultant	Date Sampled	Sample Depth (feet)	mg/kg										Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	TAME	TBA	Ethanol	
Final ESL - Commercial, Drinking Water Resource				83	0.044	2.9	3.3	2.3	1.2	0.023	NE	0.075	NE	
LTCP Commercial/Industrial Criteria (0 to 5 feet bgs)				--	8.2	--	89	--	45	--	--	--	--	
LTCP Commercial/Industrial Criteria (5 to 10 feet bgs)				--	12	--	134	--	45	--	--	--	--	

**WELL INSTALLATION & SOIL BORINGS - 2006**

MW-3A-10	PANGEA	3/30/2006	10	1,500	2.4	5.2	19	83	--	<10 (0.54)	<0.33	<3.3	--
MW-3A-15	PANGEA	3/30/2006	15	140	2.3	2.6	2.4	16	--	2.7 (2.6)	<0.10	<1.0	--
MW-6C-5	PANGEA	3/30/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-6C-10	PANGEA	3/30/2006	10	50	0.024	0.072	0.13	1.5	--	<0.05	--	--	--
MW-6C-15	PANGEA	3/30/2006	15	130	0.61	0.29	1.4	9.3	--	<0.50 (0.050)	<0.020	<0.20	--
MW-7B-5	PANGEA	3/29/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	0.17 (0.11)	<0.005	<0.05	--
MW-7B-11	PANGEA	3/29/2006	11	1,800	7.8	14	30	170	--	16 (13)	<0.50	<5.0	--
MW-8A-5	PANGEA	5/17/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-8A-10	PANGEA	5/17/2006	10	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-8A-15	PANGEA	5/17/2006	15	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-9A-5	PANGEA	4/3/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-9A-10	PANGEA	4/3/2006	10	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-9A-15	PANGEA	4/3/2006	15	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-10C-5	PANGEA	3/27/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-10C-10	PANGEA	3/27/2006	10	17	0.14	0.063	0.46	1.3	--	<0.05	--	--	--
MW-10C-15	PANGEA	3/27/2006	15	<1.0	<0.005	<0.005	0.0065	0.023	--	<0.05	--	--	--
MW-11C-5	PANGEA	3/28/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
MW-11C-11	PANGEA	3/28/2006	11	700	1.4	12	14	65	--	<10 (3.1)	<0.33	<3.3	--
MW-11C-15	PANGEA	3/28/2006	15	<1.0	<0.005	0.023	0.014	0.073	--	1.0 (0.80)	<0.033	0.41	--
SB-1-7	PANGEA	5/18/2006	7	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
SB-1-11	PANGEA	5/18/2006	11	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
SB-1-14	PANGEA	5/18/2006	14	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
SB-1A-15	PANGEA	5/18/2006	15	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
SB-2-5	PANGEA	5/18/2006	5	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--
SB-2-10	PANGEA	5/18/2006	10	790	<1.0	2.9	10	58	--	<10	--	--	--
SB-2-15	PANGEA	5/18/2006	15	310	2.5	2.4	6.4	27	--	<5.0	--	--	--
SB-2-20	PANGEA	5/18/2006	20	<1.0	<0.005	<0.005	<0.005	<0.005	--	<0.05	--	--	--

# Pangea

**Table 1. Soil Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Boring/Well ID	Consultant	Date Sampled	Sample Depth (feet)	mg/kg										Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	TAME	TBA	Ethanol	
Final ESL - Commercial, Drinking Water Resource				83	0.044	2.9	3.3	2.3	1.2	0.023	NE	0.075	NE	
LTCP Commercial/Industrial Criteria (0 to 5 feet bgs)				--	8.2	--	89	--	45	--	--	--	--	
LTCP Commercial/Industrial Criteria (5 to 10 feet bgs)				--	12	--	134	--	45	--	--	--	--	

**WELL INSTALLATION & SOIL BORINGS - HISTORICAL**

EA-1	EA	10/17/1988	6.5 & 11.5	<0.05	0.0019	0.0097	<0.0005	0.0018	--	--	--	--	--	
			16	<0.05	0.0007	0.0015	<0.0005	0.0008	--	--	--	--	--	
			21	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	--	
EA-2	EA	10/20/1988	6	0.14	0.02	0.0013	0.0037	0.0018	--	--	--	--	--	
			11	0.11	0.0093	0.0034	0.0013	<0.0005	--	--	--	--	--	
			16	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	--	
			21	0.14	0.02	0.0059	0.0045	0.0043	--	--	--	--	--	
EA-3	EA	10/21/1988	6	0.086	0.0054	0.0013	0.0049	0.0024	--	--	--	--	--	
			11	0.27	0.032	0.0043	0.0067	<0.0005	--	--	--	--	--	
			16	<0.05	0.0016	0.0037	<0.0005	<0.0005	--	--	--	--	--	
			21-36	<0.05	<0.0005	<0.0005	<0.0005	<0.0005	--	--	--	--	--	
B-1	WGR	3/17/1989	3-4	<0.5	0.24	<0.5	<0.5	<0.5	--	--	--	--	--	
			4.5-5.5	<0.5	0.43	<0.5	<0.5	<0.5	--	--	--	--	--	
			6.5-7.5	<0.5	0.13	<0.5	<0.5	<0.5	--	--	--	--	--	
			9.5-10.5	<0.5	0.09	<0.5	<0.5	<0.5	--	--	--	--	--	
			14.5-15.5	1.8	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
B-2	WGR	3/17/1989	3.5-4.5	NA	NA	NA	NA	NA	--	--	--	--	--	
			5.5-6.5	<0.5	0.06	<0.5	<0.5	<0.5	--	--	--	--	--	
			9.5-10.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
			14.5-15.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
B-3	WGR	3/17/1989	5.5-6.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
			3/18/1989	9.5-10.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--
B-4	WGR	3/18/1989	3-4	<0.5	0.06	<0.5	<0.5	<0.5	--	--	--	--	--	
			5.5-6.5	<0.5	0.07	<0.5	<0.5	<0.5	--	--	--	--	--	
			9.5-10.5	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
B-5	WGR	3/18/1989	3-4	<0.5	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	
			5.5-6.5	<0.5	0.06	0.2	<0.5	0.1	--	--	--	--	--	
			9.5-10.5	<0.5	0.9	0.4	0.08	0.09	--	--	--	--	--	
MW-1	GTI	9/13/1994	10	ND	ND	0.0099	ND	ND	--	--	--	--	--	
			15	23	0.14	0.47	0.37	1.5	--	--	--	--	--	
MW-2	GTI	9/13/1994	10	980	2.7	19	15	78	--	--	--	--	--	
			15	ND	ND	ND	ND	ND	--	--	--	--	--	
MW-3	GTI	9/13/1994	10	2,500	0.8	4.8	5.1	120	--	--	--	--	--	
			15	37	0.21	0.48	0.32	1.5	--	--	--	--	--	
MW-4	GRI	2/22/1996	9.5	<1	<0.005	<0.005	<0.005	<0.005	--	<0.025	--	--	--	
MW-5	GRI	2/22/1996	9.5	<1	<0.005	<0.005	<0.005	<0.005	--	<0.025	--	--	--	
B-1	PES	7/14/1997	5	10	0.41	0.027	0.16	0.01	--	6	--	--	--	hand augered

**Table 1. Soil Analytical Results - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Boring/Well ID	Consultant	Date Sampled	Sample Depth (feet)	mg/kg										Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	TAME	TBA	Ethanol	
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LTCP Commercial/Industrial Criteria (0 to 5 feet bgs)				--	8.2	--	89	--	45	--	--	--	--	
LTCP Commercial/Industrial Criteria (5 to 10 feet bgs)				--	12	--	134	--	45	--	--	--	--	
B-2	PES	7/14/1997	9	1,400	13	45	26	130	--	4.5	--	--	--	
			5	1.8	0.006	0.007	0.013	0.033	--	0.33	--	--	--	hand augered
B-3	PES	7/15/1997	10	1,100	11	35	18	91	--	20	--	--	--	
			7	230	2.4	2	3.8	19	--	6	--	--	--	hand augered
B-4	PES	7/15/1997	10	1,000	9.8	32	17	84	--	10	--	--	--	
			7	33	0.11	0.034	0.39	0.87	--	1.5	--	--	--	hand augered
			10	1,900	2.2	14	19	170	--	<4.5	--	--	--	
B-1	SOMA	4/23/2003	3.5-4	<0.2	<0.005	<0.005	<0.005	<0.005	--	<0.005	<0.0005	<0.1	<1	hand augered
B-2	SOMA	4/23/2003	3.5-4	92,000	12	560	240	1,550	--	21	20	<100	<1,000	hand augered
B-3	SOMA	4/23/2003	3.5-4	<0.19	<0.0043	<0.0043	<0.0043	<0.0043	--	<0.0043	<0.0043	0.086	0.86	hand augered
B-4	SOMA	4/23/2003	2.5-3	<0.17	<0.0042	<0.0042	<0.0042	<0.0042	--	<0.0042	<0.0042	0.083	0.83	hand augered
B-5	SOMA	4/23/2003	3.5-4	<0.19	<0.0047	<0.0047	<0.0047	0.0079	--	<0.0047	<0.0047	0.094	0.94	hand augered
B-6	SOMA	4/23/2003	2.5-3	<0.17	<0.0043	<0.0043	<0.0043	<0.0043	--	<0.0043	<0.0043	0.086	0.86	hand augered
B-7	SOMA	4/23/2003	3.5-4	8,700	7.7	270	170	920	--	7.1	<10	<140	<1,400	hand augered
B-8	SOMA	4/23/2003	4-5-7.5	9.9	0.0064	<0.0044	0.033	0.2	--	0.047	0.012	0.088	0.88	hand augered
DPB-3	SOMA	4/17/2003	14-15	3,500	6.6	120	43	251	--	17	--	--	--	
			18.5-19.5	<0.16	<0.0042	<0.0042	<0.0042	<0.0042	--	1.4	--	--	--	
DPB-4	SOMA	4/17/2003	9-10	0.2	<0.0039	<0.0039	<0.0039	<0.0039	--	0.041	--	--	--	
DPB-5	SOMA	4/17/2003	11-12	<0.17	<0.0041	<0.0041	<0.0041	<0.0041	--	0.0045	--	--	--	
DPB-6	SOMA	4/18/2003	18-18.75	<0.15	<0.004	<0.004	<0.004	<0.004	--	<0.004	--	--	--	
DPB-7	SOMA	4/18/2003	15.5-16.5	<0.2	<0.005	<0.005	<0.005	<0.005	--	<0.005	--	--	--	
DPB-S	SOMA	4/18/2003	15-16	1.2	<0.13	<0.13	<0.13	0.36	--	3.5	--	--	--	

**ABBREVIATIONS AND NOTES:**

TPHg = Total petroleum hydrocarbons as gasoline by EPA Method 8015M.  
 MTBE = Methyl tert-butyl ether by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B)  
 TAME = Tert-amyl methyl ether by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B)  
 TBA = Tert-butyl alcohol by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B)  
 mg/kg = milligram per kilogram  
 EA = EA Engineering Science and Technology Inc.  
 WGR = Western Geologic Resources  
 GTI = Groundwater Technology  
 GRI = Gettler-Ryan Inc.  
 PES = Parker Environmental Services  
 SOMA = SOMA Environmental Engineering Inc.

# Pangea

**Table 1. Soil Analytical Results** - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA

Boring/Well ID	Consultant	Date Sampled	Sample Depth (feet)	mg/kg										Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	Naphthalene	MTBE	TAME	TBA	Ethanol	
Final ESL - Commercial, Drinking Water Resource				<b>83</b>	<b>0.044</b>	2.9	3.3	2.3	1.2	<b>0.023</b>	NE	<b>0.075</b>	NE	
LTCP Commercial/Industrial Criteria (0 to 5 feet bgs)				--	<b>8.2</b>	--	<b>89</b>	--	<b>45</b>	--	--	--	--	
LTCP Commercial/Industrial Criteria (5 to 10 feet bgs)				--	<b>12</b>	--	<b>134</b>	--	<b>45</b>	--	--	--	--	

ESL = Environmental Screening Levels for Shallow soil with commercial/industrial land use where groundwater is a current or potential drinking water resource from Table A-2, established by SFBRWQCB, Interim Final - November 2007 (Revised February 2013).

LTCP = Low Threat Closure Policy established by the State Water Resources Control Board and adopted May 1, 2012. Direct contact and outdoor air exposure.

**8.2** = Above LTCP criteria for direct contact or outdoor air exposure (based on depth of sample).

-- = Not analyzed

< = Not detected at or above indicated detection limit

**Bold** = Analytical results at or above the final ESL

NE = Not established



# Pangea

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg ←	Benzene	Toluene	Ethylbenzene μg/L	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
<b>Surface Water (Flood Control Channel)</b>											
C-1 332.89	08/17/06	11.60	321.29	--	--	--	--	--	--	--	Gauge data - flood control channel
	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	--	--	--	--	--	--	--	
	11/24/09	11.92	320.97	--	--	--	--	--	--	--	
	02/11/10	11.95	320.94	--	--	--	--	--	--	--	
	06/04/10	11.98	320.91	--	--	--	--	--	--	--	
	08/12/10	11.94	320.95	--	--	--	--	--	--	--	
	11/30/10	11.68	321.21	--	--	--	--	--	--	--	
	02/21/11	10.27	322.62	--	--	--	--	--	--	--	
	05/17/11	12.02	320.87	--	--	--	--	--	--	--	
	08/03/11	12.10	320.79	--	--	--	--	--	--	--	
	02/15/12	12.51	320.38	--	--	--	--	--	--	--	
	08/25/12	10.33	322.56	--	--	--	--	--	--	--	
02/26/13	12.27	320.62	--	--	--	--	--	--	--		
12/31/13	12.38	320.51	--	--	--	--	--	--	--		
04/24/14	13.21	319.68	--	--	--	--	--	--	--		
<b>Vapor Wells</b>											
VW-1 330.43	02/21/06	7.95	322.48	860	120	1.4	32	4.4	390 (440)	1.97	TAME=12μg/L, TBA,DIPE,ETBE=ND
	06/01/06	7.89	322.54	1,100	92	2.2	11	1.4	600 (550)	0.11	
	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	--	--	--	--	--	--	--	
	11/24/09	6.99	323.44	--	--	--	--	--	--	--	
	02/11/10	7.30	323.13	<50	<0.5	<0.5	<0.5	<0.5	29	1.16	
	06/04/10	6.00	324.43	--	--	--	--	--	--	--	
	08/12/10	6.30	324.13	--	--	--	--	--	--	--	
	11/30/10	6.95	323.48	--	--	--	--	--	--	--	
	02/21/11	7.25	323.18	<50	<0.5	<0.5	<0.5	<0.5	15	0.93	
	05/17/11	5.72	324.71	--	--	--	--	--	--	--	
08/03/11	7.08	323.35	--	--	--	--	--	--	--		
02/15/12	7.22	323.21	<50	<0.5	<0.5	<0.5	<0.5	13	1.03		
08/25/12	7.85	322.58	--	--	--	--	--	--	--		
02/26/13	6.48	323.95	<50	<0.5	<0.5	<0.5	<0.5	11	1.7		
12/31/13	6.39	324.04	--	--	--	--	--	--	2.53		
04/24/14	6.11	324.32	<50	<0.5	<0.5	<0.5	<0.5	8.6	0.12		
VW-2 330.17	02/21/06	6.01	324.16	1,600	150	2.7	55	20	1,700 (1,600)	1.97	TAME, TBA, DIPE, ETBE=ND
	06/01/06	6.17	324.00	1,500	140	3.3	24	19	1,600 (1,600)	0.29	
	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	--	--	--	--	--	--	--	
	11/24/09	6.28	323.89	--	--	--	--	--	--	--	
02/11/10	5.65	324.52	<50	<0.5	<0.5	<0.5	<0.5	39	0.91		
06/04/10	5.72	324.45	--	--	--	--	--	--	--		
08/12/10	1.50	328.67	--	--	--	--	--	--	--		



# Pangea

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----→						Dissolved Oxygen mg/L	Notes	
				TPHg	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE			
VW-2 <i>(cont'd)</i>	11/30/10	2.46	327.71	---	---	---	---	---	---	---		
	02/21/11	4.06	326.11	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.03		
	05/17/11	3.58	326.59	---	---	---	---	---	---	---		
	08/03/11	7.01	323.16	---	---	---	---	---	---	---		
	02/15/12	4.62	325.55	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.62		
	08/25/12	6.89	323.28	---	---	---	---	---	---	---		
	02/26/13	6.30	323.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.7		
	12/31/13	6.00	324.17	---	---	---	---	---	---	0.42		
	<b>04/24/14</b>	<b>6.53</b>	<b>323.64</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.00</b>		
	VW-3 330.49	02/21/06	6.10	324.39	8,900	390	29	490	650	<50	2.28	
		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		4.40*	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	---	---	---	---	---	---	---		
11/24/09		6.75	323.74	---	---	---	---	---	---	---		
02/11/10		6.08	324.41	4300	280	3.7	52	80	<120	1.77		
06/04/10		6.41	324.08	---	---	---	---	---	---	---		
08/12/10		6.51	323.98	---	---	---	---	---	---	---		
11/30/10		8.22	322.27	---	---	---	---	---	---	---		
02/21/11		7.45	323.04	650	2.0	<0.5	<0.5	87	160	1.25		
05/17/11		7.51	322.98	---	---	---	---	---	---	---		
08/03/11	7.36	323.13	---	---	---	---	---	---	---			
02/15/12	---	---	---	---	---	Well Dry	---	---	---			
08/25/12	8.36	322.13	---	---	---	---	---	---	---			
02/26/13	5.56	324.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.1			
12/31/13	5.68	324.81	---	---	---	---	---	---	1.85			
<b>04/24/14</b>	---	---	---	---	---	Well Dry	---	---	---			

**Upper Shallow (AA-Zone) Wells**

DPE-1 331.01	08/13/09	10.55	--	25,000	240	160	530	3,900	2,000	--	
	08/12/10	10.20	--	7,900	150	17	110	1,000	1,500	1.12	
	11/30/10	10.47	320.54	760	18	1.6	25	87	460	0.97	
	02/21/11	9.91	321.10	1,100	29	1.1	5.3	97	540	0.73	
	05/17/11	10.21	320.80	1,200	31	2.4	62	65	670	0.69	
	08/03/11	10.28	320.73	1,400	54	1.7	160	42	680	0.73	
	02/15/12	10.71	320.30	770	18	2.2	20	37	250	0.69	
	08/25/12	10.21	320.80	690	26	0.95	27	78	270	0.86	
	02/26/13	10.42	320.59	380	16	2.3	9.8	49	160	2.6	
	12/31/13	10.42	320.59	130	2.7	1.6	<0.5	0.75	180	0.81	
	<b>04/24/14</b>	<b>10.40</b>	<b>320.61</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>0.69</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>51</b>	<b>1.06</b>	
DPE-2 331.42	08/13/09	11.06	--	6,600	8.8	<2.5	<2.5	710	28	--	
	08/12/10	10.49	--	680	6.1	4.7	<0.5	1.4	38	1.74	
	11/30/10	10.63	320.79	210	3.5	1.7	0.70	1.8	<25	1.40	
	02/21/11	9.83	321.59	<50	<0.5	<0.5	<0.5	<0.5	8.0	1.12	
	05/17/11	10.50	320.92	320	2.4	1.5	12	3.0	<15	1.34	
	08/03/11	10.62	320.80	840	4.5	3.5	24	5.4	<15	0.62	
	02/15/12	11.19	320.23	290	3.2	4.5	<0.5	1.1	<25	0.79	
	08/25/12	10.57	320.85	390	3.3	5.0	2.8	0.79	<10	0.97	
	02/26/13	10.83	320.59	210	1.7	5.5	<0.5	<0.5	<5.0	2.7	
	12/31/13	10.65	320.77	380	3.1	6.4	11	4.1	<10	0.65	
	<b>04/24/14</b>	<b>10.66</b>	<b>320.76</b>	<b>140</b>	<b>&lt;0.5</b>	<b>4.2</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.00</b>	
MW-7AA 330.67	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
	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		
11/24/09	10.06	320.61	2,300	390	7.2	50	150	3,600	0.81		

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	← μg/L →						Dissolved Oxygen mg/L	Notes		
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE				
MW-7AA (cont'd)	02/11/10	9.56	321.11	4,300	670	9.0	73	240	6,100	0.64	After 2 months DPE.		
	06/04/10	9.51	321.16	1,700	330	3.7	<1.7	120	4,200	0.61			
	08/12/10	9.63	321.04	1,600	400	3.0	50	7.0	3,100	0.70			
	11/30/10	9.70	320.97	290	38	0.95	6.1	19	360	0.89			
	02/21/11	8.57	322.10	230	22	<0.5	<0.5	7.2	380	0.54			
	05/17/11	9.51	321.16	78	6.2	1.1	<0.5	<0.5	40	1.31			
	08/03/11	9.71	320.96	980	130	1.4	49	53	300	0.83			
	02/15/12	10.42	320.25	150	6.2	1.7	<0.5	<0.5	<60	0.86			
	08/25/12	9.74	320.93	110	<0.5	1.8	<0.5	<0.5	80	0.49			
	02/26/13	9.89	320.78	120	1.7	2.1	<0.5	<0.5	<100	2.5			
	12/31/13	9.99	320.68	120	1.3	2.5	<0.5	1.1	29	0.57			
	<b>04/24/14</b>	<b>9.85</b>	<b>320.82</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>0.87</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>17</b>	<b>0.24</b>			
	<b>Shallow (A-Zone) Wells</b>												
	MW-1 333.66	10/04/94	12.8	320.76	2,100	150	170	61	320	--			
		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				
11/24/09	13.28	320.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.80				
02/11/10	13.04	320.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.81				
06/04/10	12.93	320.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.94				
08/12/10	12.80	320.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.77				
11/30/10	13.08	320.61	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.72				
02/21/11	12.38	321.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91				
05/17/11	12.82	320.87	---	---	---	---	---	---	---				
08/03/11	12.88	320.81	---	---	---	---	---	---	---				
02/15/12	13.42	320.27	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.83				
08/25/12	12.77	320.92	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73				
02/26/13	13.15	320.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.8				
12/31/13	13.10	320.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.38				
<b>04/24/14</b>	<b>12.91</b>	<b>320.78</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.09</b>				
MW-2 329.29	10/04/94	8.56	320.62	2300	160	280	96	480	--				
	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				

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----→						Dissolved Oxygen mg/L	Notes	
				TPHg	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE			
MW-2 (cont'd)	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		
11/24/09		9.04	320.44	<50	<0.5	<0.5	<0.5	<0.5	13	0.80		
02/11/10		7.50	321.98	<50	<0.5	<0.5	<0.5	<0.5	7.8	0.76		
06/04/10		8.80	320.68	<50	<0.5	<0.5	<0.5	<0.5	6.5	0.82		
08/12/10		8.61	320.87	<50	<0.5	<0.5	<0.5	<0.5	8.0	0.85		
11/30/10		8.99	320.49	<50	<0.5	<0.5	<0.5	<0.5	6.8	0.93		
02/21/11		8.46	321.02	<50	<0.5	<0.5	<0.5	<0.5	7.5	0.95		
05/17/11		8.58	320.90	---	---	---	---	---	---	---		
08/03/11		8.82	320.66	---	---	---	---	---	---	---		
02/15/12		9.09	320.39	<50	<0.5	<0.5	<0.5	<0.5	7.2	1.31		
08/25/12		8.72	320.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.74		
02/26/13		8.90	320.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.1		
12/31/13		8.81	320.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.41		
04/24/14		8.85	320.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.00		
MW-3A 331.39	05/29/06	10.13	321.28	--	--	--	--	--	--	--	0.03 SPH	
	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		
	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		
	11/24/09	11.22	320.17	970	98	5.2	25	41	360	0.79		
	02/11/10	10.87	320.52	2,100	330	8.6	27	34	1,200	0.72		
	06/04/10	10.60	320.79	2,300	250	31	40	330	800	0.69		
	08/12/10	10.75	320.64	1,800	260	9.2	50	120	730	0.63		
	11/30/10	10.61	320.78	23,000	490	140	220	5,800	4,800	0.80		
	02/21/11	9.59	321.80	19,000	430	33	160	3,500	4,000	0.74		
	05/17/11	10.56	320.83	17,000	530	27	390	3,000	2,900	0.43		
	08/03/11	10.68	320.71	9,400	380	13	380	730	1,700	0.56		
	02/15/12	11.46	319.93	7,100	180	15	89	360	870	0.62		
	08/25/12	10.76	320.63	6,200	370	10	39	80	860	0.92		
	02/26/13	10.35	321.04	9,300	290	37	290	1,600	<450	1.0	Naphthalene = 240 µg/L	
	12/31/13	10.30	321.09	22,000	290	25	400	3,000	<350	0.41	Naphthalene = 660 µg/L	
	04/04/14	10.09	321.30	3,700	100	5.1	50	240	87	1.30/1.56	Post AS/BOC Naphthalene = 110 µg/L	
04/07/14	10.35	321.04	3,300	110	5.1	46	270	100	0.04/0.63	Naphthalene = 130 µg/L		
04/09/14	10.45	320.94	3,600	130	6.6	60	320	130	0.06/0.86	Naphthalene = 130 µg/L		
04/10/14	10.49	320.90	3,600	150	7.4	75	360	130	0.06/0.81	Naphthalene = 160 µg/L		
04/11/14	10.72	320.67	3,300	130	4.8	54	280	<180	0.14/0.33	Naphthalene = 150 µg/L		
04/18/14	10.65	320.74	3,700	140	7.2	72	280	130	0.00/1.09			
04/24/14	10.79	320.60	3,300	100	7.6	54	230	120	0.00	Naphthalene = 170 µg/L		

# Pangea

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	TPHg ←	Benzene	Toluene	Ethylbenzene μg/L	Xylenes	MTBE →	Dissolved Oxygen mg/L	Notes
MW-4 332.63	03/01/96	9.9	322.74	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	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	
	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	--	--	--	--	--	--	--		
11/24/09	11.15	321.49	--	--	--	--	--	--	--		
02/11/10	10.17	322.47	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.69		
06/04/10	10.52	322.12	---	---	---	---	---	---	---		
08/12/10	10.72	321.92	---	---	---	---	---	---	---		
11/30/10	10.75	321.89	---	---	---	---	---	---	---		
02/21/11	9.29	323.35	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.61		
05/17/11	10.37	322.27	---	---	---	---	---	---	---		
08/03/11	10.49	322.15	---	---	---	---	---	---	---		
02/15/12	11.18	321.46	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.89		
08/25/12	10.83	321.81	--	--	--	--	--	--	--		
02/26/13	11.00	321.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.7		
12/31/13	11.15	321.49	--	--	--	--	--	--	0.73		
04/24/14	10.90	321.74	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.06		
MW-5 333.47	03/01/96	10.62	322.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	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	
	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		

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----µg/L-----→						Dissolved Oxygen mg/L	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
MW-5 (cont'd)	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	--	--	--	--	--	--	--	
	11/24/09	10.96	322.17	--	--	--	--	--	--	--	
	02/11/10	10.50	322.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.80	
	06/04/10	10.68	322.45	---	---	---	---	---	---	---	
	08/12/10	10.61	322.52	---	---	---	---	---	---	---	
	11/30/10	10.68	322.45	---	---	---	---	---	---	---	
	02/21/11	10.35	322.78	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.78	
	05/17/11	10.56	322.57	---	---	---	---	---	---	---	
	08/03/11	10.66	322.47	---	---	---	---	---	---	---	
	02/15/12	10.82	322.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.02	
	08/25/12	10.70	322.43	--	--	--	--	--	--	--	
	02/26/13	10.65	322.48	<50	<0.5	<0.5	<0.5	<0.5	7.0	2.7	
	12/31/13	10.91	322.22	--	--	--	--	--	--	0.49	
	<b>04/24/14</b>	<b>10.88</b>	<b>322.25</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>5.5</b>	<b>0.09</b>
MW-6A 331.81	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
	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	
	11/24/09	11.15	320.66	240	21	3.7	5.8	20	<20	0.72	
	02/11/10	10.80	321.01	2,400	370	65	47	320	<100	0.55	
	06/04/10	10.44	321.37	2,800	500	85	87	500	<100	0.68	
	08/12/10	10.65	321.16	4,000	240	39	160	770	<50	0.72	
	11/30/10	10.69	321.12	22,000	640	210	940	4,300	<250	0.89	
	02/21/11	9.79	322.02	8,100	330	93	340	1,700	<35	0.62	
	05/17/11	10.78	321.03	16,000	870	75	780	2,500	<19	0.83	
	08/03/11	10.92	320.89	6,000	620	24	340	830	<50	0.47	
02/15/12	11.95	319.86	13,000	480	49	580	1,300	<50	0.78		
08/25/12	11.20	320.61	7,000	220	34	200	840	<50	0.47		
02/26/13	11.90	319.91	5,700	430	31	190	730	<50	0.97	Naphthalene = 310 µg/L	
12/31/13	11.02	320.79	7,100	460	20	150	520	<80	0.61	Naphthalene = 330 µg/L	
<b>04/04/14</b>	<b>10.28</b>	<b>321.53</b>	<b>920</b>	<b>94</b>	<b>2.7</b>	<b>9.8</b>	<b>35</b>	<b>3.2</b>	<b>2.44/0.97</b>	<b>0.30/0.18</b>	Post AS/BOC Naphthalene = 25 µg/L
<b>04/07/14</b>	<b>10.44</b>	<b>321.37</b>	<b>1,000</b>	<b>130</b>	<b>3.1</b>	<b>5.3</b>	<b>42</b>	<b>&lt;10</b>	<b>0.30/0.18</b>	<b>0.34/3.11</b>	Naphthalene = 67 µg/L
<b>04/09/14</b>	<b>11.10</b>	<b>320.71</b>	<b>940</b>	<b>150</b>	<b>2.6</b>	<b>12</b>	<b>39</b>	<b>&lt;10</b>	<b>0.09/1.08</b>	<b>0.02/1.41</b>	Naphthalene = 35 µg/L
<b>04/10/14</b>	<b>10.75</b>	<b>321.06</b>	<b>800</b>	<b>140</b>	<b>2.4</b>	<b>12</b>	<b>50</b>	<b>&lt;10</b>	<b>0.09/1.08</b>	<b>0.52/0.98</b>	Naphthalene = 39 µg/L
<b>04/11/14</b>	<b>10.72</b>	<b>321.09</b>	<b>1,000</b>	<b>150</b>	<b>2.4</b>	<b>10</b>	<b>50</b>	<b>&lt;10</b>	<b>0.02/1.41</b>	<b>0.00</b>	Naphthalene = 46 µg/L
<b>04/18/14</b>	<b>10.94</b>	<b>320.87</b>	<b>920</b>	<b>160</b>	<b>2.9</b>	<b>13</b>	<b>43</b>	<b>&lt;10</b>	<b>0.52/0.98</b>		
<b>04/24/14</b>	<b>11.09</b>	<b>320.72</b>	<b>960</b>	<b>150</b>	<b>1.7</b>	<b>9.0</b>	<b>26</b>	<b>&lt;10</b>	<b>0.00</b>		Naphthalene = 68 µg/L
MW-7A 330.71	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
	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	--	--	--	--	--	--	--	
	11/24/09	9.93	320.78	--	--	--	--	--	--	--	
	02/11/10	9.39	321.32	360	75	0.83	4.8	62	200	0.90	
	06/04/10	9.43	321.28	---	---	---	---	---	---	---	
	08/12/10	9.50	321.21	---	---	---	---	---	---	---	
	11/30/10	9.73	320.98	---	---	---	---	---	---	---	
	02/21/11	8.37	322.34	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.87	
	05/17/11	9.33	321.38	---	---	---	---	---	---	---	

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----→						Dissolved Oxygen mg/L	Notes	
				TPHg	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE			
MW-7A (cont'd)	08/03/11	9.58	321.13	---	---	---	---	---	---	---		
	02/15/12	10.54	320.17	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.85		
	08/25/12	9.66	321.05	--	--	--	--	--	--	--		
	02/26/13	9.77	320.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.0		
	12/31/13	9.94	320.77	--	--	--	--	--	--	0.49		
	04/07/14	9.30	321.41	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.10/0.01	Post AS/BOC Naphthalene = <0.5 Naphthalene = <0.5	
	04/10/14	9.45	321.26	<50	0.56	<0.5	<0.5	<0.5	10	0.01/0.00		
04/24/14	9.82	320.89	<50	<0.5	<0.5	<0.5	<0.5	5.9	0.00			
MW-8A 331.19	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	
	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		
	11/24/09	9.76	321.43	<50	<0.5	<0.5	<0.5	<0.5	66	0.71		
	02/11/10	9.33	321.86	<50	<0.5	<0.5	<0.5	<0.5	56	0.63		
	06/04/10	8.95	322.24	<50	<0.5	<0.5	<0.5	<0.5	30	0.69		
	08/12/10	9.24	321.95	<50	<0.5	<0.5	<0.5	<0.5	28	0.75		
	11/30/10	13.19	318.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.69		
	02/21/11	12.65	318.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68		
	05/17/11	9.44	321.75	---	---	---	---	---	---	---		
	08/03/11	9.14	322.05	---	---	---	---	---	---	---		
02/15/12	9.33	321.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.91			
08/25/12	13.25	317.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.40			
02/26/13	11.86	319.33	<50	<0.5	<0.5	<0.5	<0.5	<5.0	4.3			
12/31/13	10.91	320.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.56			
04/24/14	11.80	319.39	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.53			
MW-9A 331.17	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	
	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	--	--	--	--	--	--	--		
	11/24/09	10.48	320.69	--	--	--	--	--	--	--		
	02/11/10	10.16	321.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.63		
	06/04/10	9.80	321.37	---	---	---	---	---	---	---		
	08/12/10	10.08	321.09	---	---	---	---	---	---	---		
	11/30/10	10.10	321.07	---	---	---	---	---	---	---		
	02/21/11	9.45	321.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73		
	05/17/11	10.07	321.10	---	---	---	---	---	---	---		
	08/03/11	10.38	320.79	---	---	---	---	---	---	---		
02/15/12	11.52	319.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73			
08/25/12	10.78	320.39	--	--	--	--	--	--	--			
02/26/13	11.00	320.17	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.0			
12/31/13	11.21	319.96	--	--	--	--	--	--	0.61			
04/24/14	11.11	320.06	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.03			
MW-10A 329.93	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	
	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	--	--	--	--	--	--	--		

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←----- µg/L -----→						Dissolved Oxygen mg/L	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
MW-10A (cont'd)	08/13/09	9.21	320.72	--	--	--	--	--	--	--	
	11/24/09	9.26	320.67	--	--	--	--	--	--	--	
	02/11/10	8.35	321.58	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.64	
	06/04/10	8.73	321.20	---	---	---	---	---	---	---	
	08/12/10	8.85	321.08	---	---	---	---	---	---	---	
	11/30/10	9.02	320.91	---	---	---	---	---	---	---	
	02/21/11	7.78	322.15	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70	
	05/17/11	11.61	318.32	---	---	---	---	---	---	---	
	08/03/11	11.39	318.54	---	---	---	---	---	---	---	
	02/15/12	9.68	320.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.26	
	08/25/12	9.11	320.82	--	--	--	--	--	--	--	
	02/26/13	9.16	320.77	<50	<0.5	<0.5	<0.5	<0.5	<5.0	3.0	
	12/31/13	9.32	320.61	--	--	--	--	--	--	0.70	
	<b>04/24/14</b>	<b>9.10</b>	<b>320.83</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>0.54</b>	<b>&lt;5.0</b>	<b>0.07</b>

**Intermediate-Depth (B-zone) Wells**

MW-6B 330.9	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
	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	--	--	--	--	--	--	--	
	11/24/09	9.63	321.27	--	--	--	--	--	--	--	
	02/11/10	8.41	322.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68	
	06/04/10	8.72	322.18	---	---	---	---	---	---	---	
	08/12/10	9.10	321.80	---	---	---	---	---	---	---	
	11/30/10	9.02	321.88	---	---	---	---	---	---	---	
	02/21/11	8.11	322.79	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.66	
	05/17/11	8.83	322.07	---	---	---	---	---	---	---	
	08/03/11	9.16	321.74	---	---	---	---	---	---	---	
02/15/12	9.83	321.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91		
08/25/12	9.81	321.09	--	--	--	--	--	--	--		
02/26/13	9.41	321.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	2.1		
12/31/13	9.88	321.02	--	--	--	--	--	--	0.68		
<b>04/24/14</b>	<b>9.64</b>	<b>321.26</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.25</b>	
MW-7B 330.69	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
	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	--	--	--	--	--	--	--	
	11/24/09	9.85	320.84	--	--	--	--	--	--	--	
	02/11/10	9.24	321.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.81	
	06/04/10	9.35	321.34	---	---	---	---	---	---	---	
	08/12/10	9.37	321.32	---	---	---	---	---	---	---	
	11/30/10	9.80	320.89	---	---	---	---	---	---	---	
	02/21/11	8.69	322.00	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.85	
	05/17/11	9.23	321.46	---	---	---	---	---	---	---	
08/03/11	9.42	321.27	---	---	---	---	---	---	---		
02/15/12	10.18	320.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73		
08/25/12	9.64	321.05	--	--	--	--	--	--	--		
02/26/13	9.70	320.99	<50	<0.5	<0.5	<0.5	<0.5	<5.0	5.0		
12/31/13	9.90	320.79	--	--	--	--	--	--	4.62		
<b>04/24/14</b>	<b>9.74</b>	<b>320.95</b>	<b>&lt;50</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;0.5</b>	<b>&lt;5.0</b>	<b>0.00</b>	



# Pangea

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID <i>TOC Elev</i> <i>(ft)</i>	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----→						Dissolved Oxygen mg/L	Notes
				TPHg	Benzene	Toluene	Ethylbenzene µg/L	Xylenes	MTBE		
<b>Deep (C-Zone) Wells</b>											
<b>MW-6C</b> <i>330.88</i>	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
	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	
<b>MW-7C</b> <i>330.74</i>	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
	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	
<b>MW-9C</b> <i>331.48</i>	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
	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	
<b>MW-10C</b> <i>329.66</i>	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
	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	
<b>MW-11C</b> <i>331.61</i>	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
	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	

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID <i>TOC Elev</i> (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←-----→						Dissolved Oxygen mg/L	Notes
				TPHg	Benzene	Toluene	Ethylbenzene μg/L	Xylenes	MTBE		
<b>Destroyed Wells</b>											
<b>MW-3</b> 332.86	10/04/94	12.06	320.67	6,300	610	750	68	670	--		
	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	322.06	--	--	--	--	--	--	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	--	--	--	--	<b>Well Destroyed</b>	--	--	--	--	Well Destroyed
	<b>EA-1</b> 331.21	10/17/88	--	--	<50	<0.5	<0.5	<0.5	<0.5	--	
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	<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			

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater Elevation (ft, msl)	←----- μg/L -----→						Dissolved Oxygen mg/L	Notes
				TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE		
EA-1 (cont'd)	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	--	--	--	--	<b>Well Destroyed</b>			--	--	Well Destroyed
EA-2 330.41	10/17/88	--	--	<50	<0.5	<0.5	<0.5	1.2	--	--	
	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	--	--	--	--	<b>Well Destroyed</b>			--	--	Well Destroyed	
EA-3 331.5	10/17/88	--	--	<50	1.8	<0.5	<0.5	3	--	--	
	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	--	--		
06/05/92	10.98	322.66	250	63	8.3	3	9.5	--	--		

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID TOC Elev (ft)	Date Measured	Depth to Water (ft)	Groundwater							Dissolved Oxygen mg/L	Notes	
			Elevation (ft, msl)	TPHg ←	Benzene	Toluene	Ethylbenzene μg/L	Xylenes	MTBE →			
EA-3 (cont'd)	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	--	
DPB-3	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	--	
	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	--	
DPB-6	04/17/03	36-40	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	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	--	
DPB-7	04/18/03	35-39	NA	2,900	8.8	24	54	249	100	--	
	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	--	
DPB-8	04/18/03	35-39	NA	150	<0.5	1.8	0.8	5.7	<0.5	--	
	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 = Diisopropyl ether by EPA Method 8260B

ETBE = Ethyl tertiary butyl ether by EPA Method 8260B

# Pangea

**Table 2. Groundwater Elevation and Analytical Data - Dublin Auto Wash, 7240 Dublin Boulevard, Dublin, CA**

Well ID	Date	Depth	Groundwater	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Dissolved	Notes
<i>TOC Elev</i>	Measured	to Water	Elevation							Oxygen	
(ft)		(ft)	(ft, msl)	←			μg/L		→	mg/L	

-- = 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

# Pangea

Table 3. SVE (DPE) Performance Data - 7240 Dublin Blvd, Dublin, CA											Removal				Emission Reporting						Notes		
Date	Wells	Oxidizer Hr Meter Reading (hours)	Total Time (days)	Interval Time (days)	System Vapor Flow Rate (cfm)	Lab Applied Vacuum ("Hg)	Sample ID	Influent TPHg Lab (ppmv)	Influent Benzene Lab Data (ppmv)	Influent OVA Reading (ppmv)	SVE Removal Rate (lbs/day)	TPHg Removal Rate (lbs/day)	Benzene Removal Rate (lbs/day)	Cumulative SVE Removal (lbs)	Cumulative TPHg Removal (lbs)	Cumulative Benzene Removal (lbs)	Effluent TPHg Lab (ppmv)	Effluent Benzene Lab (ppmv)	TPHg Abatement Efficiency (%)	Benzene Abatement Efficiency (%)		Benzene Emission Rate (lbs/day)	Cumulative Benzene Emission (lbs)
09/15/10	All	1079.8	0.00	0.00	63	15	---	700	10	504	14.1	0.18	0.0	0	---	< 0.077	---	---	< 0.001	< 0.000	0	0	Startup Test
09/16/10	MW-3A,6A,7AA+VW-3	1082.7	0.12	0.12	65	21	---	800	10	596	16.7	0.19	2.0	0.02	---	< 0.077	---	---	< 0.001	< 0.000	11,310	11,310	Off on arrival. Suspect water backflow.
09/17/10	MW-3A,6A,7AA+VW-3	1086.0	0.26	0.14	65	21	---	800	10	596	16.7	0.19	4.3	0.05	---	< 0.077	---	---	< 0.001	< 0.000	24,180	24,180	Installed water check valve. Restart u
09/20/10	MW-3A,6A,7AA+VW-3	1090.8	0.46	0.20	62	22	Influent	<b>810</b>	<b>11</b>	586	16.1	0.20	7.5	0.09	< <b>7.0</b>	< <b>0.077</b>	> <b>99.1</b>	> <b>99.3</b>	< 0.001	< 0.001	42,036	42,036	Off. Turn on. Collect vapor samples.
09/21/10	MW-3A,6A,7AA+VW-3	1111.2	1.31	0.85	88	20	---	800	15	940	22.6	0.38	26.7	0.42	---	< 0.077	---	---	< 0.002	< 0.002	149,748	149,748	On. Water samples.
09/23/10	MW-3A,6A,7AA+VW-3	1163.0	3.47	2.16	88	20	---	800	15	NM	22.6	0.38	75.5	1.24	---	< 0.077	---	---	< 0.002	< 0.007	423,252	423,252	Off about noon. Refuel 2:45pm. Off
09/24/10	MW-3A,6A,7AA+VW-3	1163.0	3.47	0.00	88	20	---	750	12	NM	21.2	0.31	75.5	1.24	---	< 0.077	---	---	< 0.002	< 0.007	423,252	423,252	Turn On 6:30 am.
09/25/10	MW-3A,6A,7AA+VW-3	1179.0	4.13	0.67	88	20	---	700	10	NM	19.8	0.26	88.7	1.41	---	< 0.077	---	---	< 0.002	< 0.008	507,732	507,732	On. Diesel delivery.
09/27/10	MW-3A,6A,7AA+VW-3	1226.5	6.11	1.98	88	20	---	700	10	NM	19.8	0.26	127.8	1.92	---	< 0.077	---	---	< 0.002	< 0.012	758,532	758,532	Off. Diesel delivery. Restart 8 pm.
09/29/10	MW-3A,6A,7AA+VW-3	1230.7	6.29	0.18	96	20	Influent	<b>640</b>	<b>6.8</b>	388	19.7	0.19	131.2	1.95	< <b>7.0</b>	< <b>0.077</b>	> <b>98.9</b>	> <b>98.9</b>	< 0.002	< 0.012	782,724	782,724	Off. Restart. Hi temp issue addressed
10/08/10	MW-3A,6A,7AA+VW-3	1384.0	12.68	6.39	94	16.5	---	640	6.8	477	19.3	0.19	254.4	3.14	---	< 0.077	---	---	< 0.002	< 0.026	1,646,416	1,646,416	
10/14/10	MW-3A,6A,7AA+VW-3	1498.5	17.45	4.77	92	15.5	INF-A	<b>410</b>	<b>2.5</b>	295	12.1	0.07	311.9	3.46	< <b>7.0</b>	< <b>0.077</b>	> <b>98.3</b>	> <b>96.9</b>	< 0.002	< 0.035	2,276,395	2,276,395	Off on arrival. Out of diesel. Restart.
10/20/10	MW-3A,6A,7AA+VW-3	1641.1	23.39	5.94	97	12.0	---	350	1.5	140	10.9	0.04	376.4	3.71	---	< 0.077	---	---	< 0.002	< 0.048	3,103,760	3,103,760	
10/27/10	MW-3A,6A,7AA+VW-3	1811.0	30.47	7.08	76	12.5	INF-A	<b>140</b>	<b>0.67</b>	78	3.4	0.01	400.4	3.81	< <b>7.0</b>	< <b>0.077</b>	> <b>95.0</b>	> <b>88.5</b>	< 0.002	< 0.060	3,873,407	3,873,407	
11/03/10	MW-3A,6A,7AA+VW-3	1979.1	37.47	7.00	90	12.5	---	120	0.5	65	3.4	0.01	424.6	3.91	---	< 0.077	---	---	< 0.002	0.074	4,777,214	4,777,214	
11/10/10	MW-3A,6A,7AA+VW-3	2134.6	43.95	6.48	90	12.5	INF-A	<b>99</b>	<b>0.35</b>	50	2.9	0.01	443.2	3.97	< <b>7.0</b>	< <b>0.077</b>	> <b>92.9</b>	> <b>78.0</b>	< 0.002	< 0.087	5,618,780	5,618,780	
11/12/10	MW-3A,6A,7AA+VW-3	2191.5	46.32	2.37	90	12.5	---	90	0.3	NM	2.6	0.01	449.3	3.98	---	< 0.077	---	---	< 0.002	< 0.092	5,926,040	5,926,040	On. Water samples.
11/15/10	MW-3A,6A,7AA+VW-3	2268.1	49.51	3.19	90	12.5	---	90	0.3	NM	2.6	0.01	457.6	4.01	---	< 0.077	---	---	< 0.002	< 0.099	6,339,680	6,339,680	System shut down.

**Notes:**

ALL = Wells DPE-1, DPE-2, MW-3A, MW-6A, MW-7AA, MW-7A and VW-3

NA = not analyzed; NM = not measured; --- = not available

System data estimated when specific data not available.

cfm = actual cubic feet (cf) per minute based on anemometer readings (from near wellhead and/or from pressure side of vacuum pump during SVE).

ppmv = parts per million on volume to volume basis. Actual lab data shown in **bold**. Lab data estimated for dates without lab data to allow mass removal calculation.

lbs = Pounds

"Hg = Inches of mercury vacuum

SVE = Soil Vapor Extraction

OVA = Organic Vapor Analyzer (Horiba Model MEXA 324JU)

TPHg and Benzene Removal Rates = For dates where no laboratory analytical data was collected, the previous lab data entry was used to calculate period and cumulative mass removal.

Hydrocarbon Removal/Emission Rate = Rate based on Bay Area Air Quality Management District's Manual of Procedures for Soil Vapor Extraction dated July 17, 1991.

Rate = lab concentration (ppmv) x system flowrate (scfm) x (11b-mole/386 ft<sup>3</sup>) x molecular weight (86 lb/lb-mole for TPH-Gas hexane) x 1440 min/day x 1/1,000,000.

# Pangea

**Table 4. GWE (DPE) System Performance Summary - 7240 Dublin Blvd, Dublin, California**

Well ID	Date	Totalizer Reading <sup>1</sup> (gallons)	Interval Flow Volume (gallons)	Interval Duration (days)	Average Flow Rate (gpm)	TPHd Concentration (ug/L)	TPHg Concentration (ug/L)	Benzene Concentration (ug/L)	MTBE Concentration (ug/L)	TPHg Removed (Lbs)	Benzene Removed (Lbs)	MTBE Removed (Lbs)	Comments
<b>System Inflow</b>	09/20/10	0	0	0	--	---	---	---	---	0.000	0.000	0.000	System startup testing
	09/21/10	1,725	1,725	1	1.20	<b>1,900</b>	<b>3,400</b>	<b>110</b>	<b>1,800</b>	0.049	0.002	0.026	Startup water sampling of influent
	09/29/10	7,104	5,379	8	0.47	---	---	---	---	0.152	0.005	0.081	
	10/08/10	13,091	5,987	9	0.46	---	---	---	---	0.169	0.005	0.090	
	10/14/10	17,023	3,931	6	0.46	<b>430</b>	<b>220</b>	<b>ND (&lt;0.5)</b>	<b>500</b>	0.007	0.000	0.016	O&M Visit; sample collection
	10/20/10	19,351	2,329	6	0.27	---	---	---	---	0.004	0.000	0.010	
	10/27/10	21,052	1,700	7	0.17	---	---	---	---	0.003	0.000	0.007	
	11/03/10	22,889	1,838	7	0.18	---	---	---	---	0.003	0.000	0.008	
	11/10/10	24,814	1,925	7	0.19	---	---	---	---	0.004	0.000	0.008	
	11/12/10	25,392	578	2	0.20	<b>210</b>	<b>380</b>	<b>2.6</b>	<b>250</b>	0.002	0.000	0.001	Sample collection; system shutoff soon
	11/15/10	26,433	1,040	3	0.24	---	---	---	---	0.003	0.000	0.002	System Shutoff; final totalizer reading
										<b>0.397</b>	<b>0.012</b>	<b>0.248</b>	<b>Total Cumulative Removal (Lbs)</b>
<b>System Midpoint</b>	09/20/10	---	---	---	---	---	---	---	---	---	---	---	
	09/21/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Startup water sampling of midpoint
	10/14/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	O&M Visit; sample collection
	11/12/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Sample collection; system shutoff soon
<b>System Effluent</b>	09/20/10	---	---	---	---	---	---	---	---	---	---	---	
	09/21/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Startup water sampling of effluent
	10/14/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	O&M Visit; sample collection
	11/12/10	---	---	---	---	<b>ND (&lt;50)</b>	<b>ND (&lt;50)</b>	<b>ND (&lt;0.5)</b>	<b>ND (&lt;5.0)</b>	---	---	---	Sample collection, system shutoff soon

<b>Discharge Limit</b>	<b>15,000</b>	<b>15,000</b>	<b>1,000</b>	<b>1,000,000</b>
	<i>(TPHg+TPHd)</i>	<i>(TPHg+TPHd)</i>	<i>(BTEX Total)</i>	<i>(MTBE)</i>

**ABBREVIATIONS AND NOTES:**

1 = Initial totalizer reading was 9,997,126 (or -2,874 gallons). After reaching 9,999,999 the meter returns to 0,000,000. Therefore, shown reading above 0 is actual reading plus 2,874. The 9/21/10 reading of 9,998,851 less 9,997,126 equals 1,725 gallons discharged.

gpm = Gallons per minute

TPHd = Total Petroleum Hydrocarbon as Diesel analyzed by EPA Method 8015B with silica gel cleanup

TPHg = Total Petroleum Hydrocarbon as Gasoline analyzed by EPA Method 8015B

Benzene analyzed by EPA Method 8021B

MTBE = Methyl tertiary butyl ether analyzed by EPA Method 8021 Cm

-- = not measured/not available

\* Estimated contaminant mass calculated by multiplying average concentration detected during period (Table 1) by volume of extracted groundwater. Uses most recent lab data.



# Pangea

**Table 5. Well Survey Summary -Dublin Car Wash, 7240 Dublin Boulevard, Dublin, CA**

Map ID	Township, Range, and Section (DWR Well No.)	Owner's Well ID	Installation Date	Owner	Use	Total Depth (ft)	Well Location	Distance from site (ft)	Map	Comments
1	03S01W1 (E10)	MW-16	Aug-89	Enea Plaza	DES	26.5	Amador Plaza Road, Dublin, CA	800	M	Destroyed 4/27/98
1	03S01W1 (E11)	MW-4	Dec-93	Enea Plaza	DES	23	Amador Plaza Road, Dublin, CA	800	M	Destroyed 4/27/98
1	03S01W1 (E11)	MW-4	Dec-93	Enea Plaza	MON	23	Amador Plaza Road, Dublin, CA	800	M	
1	03S01W1 (E12)	PZ-1	Feb-94	Enea Plaza	DES	20	Amador Plaza Road, Dublin, CA	800	M	Destroyed 4/27/98
1	03S01W1 (E13)	EW-1	Feb-94	Enea Plaza	DES	22	Amador Plaza Road, Dublin, CA	800	M	Destroyed 4/27/98
2	03S01W1 (B10)	N/A	Feb-96	Dublin San Ramon Service District	MON	560	7051 Dublin Blvd, Dublin, CA	500	M	
2	03S01W1 (B11)	N/A	Feb-96	Dublin San Ramon Service District	MON	560	7051 Dublin Blvd, Dublin, CA	500	M	
2	03S01W1 (B2)	N/A	Aug-72	Valley Community Service District	MUN	530	Dublin Blvd behind VCSD office, Dublin, CA	500	M	
2	03S01W1 (B3)	N/A	UNK	Dublin San Ramon Valley Community Service District	DES	500	7051 Dublin Blvd, Dublin, CA	500	M	Destroyed 1980
2	03S01W1 (B3)	5	Jun-73	Dublin San Ramon Service District	MUN	500	Dublin Blvd, Dublin, CA	500	M	
2	03S01W1 (B9)	N/A	Feb-96	Dublin San Ramon Service District	MON	560	7051 Dublin Blvd, Dublin, CA	500	M	
3	03S01W1 (B4)	N/A	May-76	Zone 7 Water Agency	MON	25	Near Maple Avenue and Flood Control Channel F-4, Dublin, CA	1000	M	
3	03S01W1 (B5)	N/A	May-79	Alameda County Flood Control Dublin San Ramon Service District	TEST	112	Maple Ave at flood control channel, Dublin, CA	1000	M	
4	03S01W1 (H2)	#4	UNK	Dublin San Ramon Service District	DES	35 (?)	1/2 Block E of 7051 Dublin Blvd, Dublin, CA	700	M	Destroyed 1/17/85
5	03S01W1 (F19)	MW-4	Aug-93	Caltrans	DES	119.3	Dublin Blvd and 680, Dublin, CA	100	M	Destroyed 1/28/99
6	03S01W1 (C1)	MW-9	Feb-89	Shell	MON	18	7194 Amador Valley Blvd, Dublin, CA	1700	M	
6	03S01W1 (C2)	MW-11	Feb-89	Shell	MON	18	7194 Amador Valley Blvd, Dublin, CA	1700	M	
6	03S01W1 (C3)	MW-12	Feb-89	Shell	MON	18	7194 Amador Valley Blvd, Dublin, CA	1700	M	
7	03S01W1 (B6M)	MW-1	Feb-94	Interstate Brands	DES	18.5	6841 Village Pkwy, Dublin, CA	500	M	Destroyed 1/30/97
7	03S01W1 (B6M)	MW-1	Feb-94	Continental Baking	MON	18.5	6841 Village Pkwy, Dublin, CA	500	M	
7	03S01W1 (B7)	MW-2	Feb-94	Continental Baking	MON	18.5	6841 Village Pkwy, Dublin, CA	500	M	
7	03S01W1 (B7M)	MW-2	Feb-94	Interstate Brands	DES	18.5	6841 Village Pkwy, Dublin, CA	500	M	Destroyed 1/30/97
7	03S01W1 (B7M)	MW-2	1994	Continental Baking	MON	18.5	6841 Village Pkwy, Dublin, CA	500	M	
7	03S01W1 (B8M)	MW-3	Mar-94	Interstate Brands	DES	18.2	6841 Village Pkwy, Dublin, CA	500	M	Destroyed 1/30/97
7	03S01W1 (B8M)	MW-3	Mar-94	Continental Baking	MON	18.2	6841 Village Pkwy, Dublin, CA	500	M	
8	03S01W1 (C4)	MW-1	Jun-93	Corwood Car Wash	DES	26	6973 Village Parkway, Dublin, CA	700	M	Destroyed 12/10/98

**Table 5. Well Survey Summary -Dublin Car Wash, 7240 Dublin Boulevard, Dublin, CA**

Map ID	Township, Range, and Section (DWR Well No.)	Owner's Well ID	Installation Date	Owner	Use	Total Depth (ft)	Well Location	Distance from site (ft)	Map	Comments
8	03S01W1 (C5)	MW-2	Jun-93	Corwood Car Wash	DES	26	6973 Village Parkway, Dublin, CA	700	M	Destroyed 12/10/98
8	03S01W1 (C6)	MW-3	Jun-93	Corwood Car Wash	DES	26	6973 Village Parkway, Dublin, CA	700	M	Destroyed 12/10/98
9	03S01W1 (K3)	N/A	Jan-79	Livermore-Amador Valley Mgmt Agency	CAT	210	SW Corner 580 and 680, Pleasanton, CA	1900	M	
10	03S01W1 (E12)	EW-1	Feb-94	Enea Properties	MON	UNK	6700-6780 Amador Plaza Rd., Dublin, CA	1500	M	
10	03S01W1 (E13)	PZ-1	Feb-94	Enea Properties	MON	20	6700-6780 Amador Plaza Rd., Dublin, CA	1500	M	
11	03S01W1	7	Jan-89	Montgomery Ward	ABA	3	Dublin, CA	2200	NM	Abandoned due to punctured water line
11	03S01W1 (E10)	16	Aug-89	Montgomery Ward	MON	26.5	Dublin, CA	2200	NM	
11	03S01W1 (E14)	MW-100	May-93	Montgomery Ward	DES	28	7575 Dublin Blvd, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E15)	MW-101	May-93	Montgomery Ward	DES	28	7575 Dublin Blvd, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E16)	MW-102	May-93	Montgomery Ward	DES	28	7575 Dublin Blvd, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E2)	5	Jan-89	Montgomery Ward	MON	22	Dublin, CA	2200	NM	
11	03S01W1 (E3)	6	Jan-89	Montgomery Ward	MON	V/P	Dublin, CA	2200	NM	
11	03S01W1 (E4)	8	Jan-89	Montgomery Ward	MON	V/P	Dublin, CA	2200	NM	
11	03S01W1 (E5)	R-5	Feb-89	Montgomery Ward	DES	22	Dublin Blvd near Golden Gate Drive, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E5)	9	Jan-89	Montgomery Ward	MON	V/P	Dublin, CA	2200	NM	
11	03S01W1 (E6)	R-10	Feb-89	Montgomery Ward	DES	22	Dublin Blvd near Golden Gate Drive, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E6)	10	Feb-89	Montgomery Ward	MON	22.5	Dublin, CA	2200	NM	
11	03S01W1 (E7)	R-12	Feb-89	Montgomery Ward	DES	22	Dublin Blvd near Golden Gate Drive, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E7)	12	Dec-88	Montgomery Ward	MON	V/P	Dublin, CA	2200	NM	
11	03S01W1 (E8)	13	Dec-88	Montgomery Ward	MON	13.5	Dublin, CA	2200	NM	
11	03S01W1 (E9)	MW-15	Aug-89	Montgomery Ward	DES	23	Dublin Blvd near Golden Gate Drive, Dublin, CA	2200	NM	Destroyed 4/27/98
11	03S01W1 (E9)	15	Aug-89	Montgomery Ward	MON	23	Dublin, CA	2200	NM	
12	03S01W1 (M1)	MW-1	Nov-91	Bedford Properties	MON	30	6700 Golden Gateway, Dublin, CA	1500	M	
--	03S01W1 (B1)	UNK	Jan-92	UNK	DES	UNK	UNK	?	--	Destroyed 1/7/92
--	03S01W1 (D4)	MW-1	Feb-91	Target	MON	20.5	Dublin, CA	2500	NM	
--	03S01W1 (D5)	MW-2	Feb-91	Target	MON	20.5	Dublin, CA	2500	NM	

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**Table 5. Well Survey Summary -Dublin Car Wash, 7240 Dublin Boulevard, Dublin, CA**

Map ID	Township, Range, and Section (DWR Well No.)	Owner's Well ID	Installation Date	Owner	Use	Total Depth (ft)	Well Location	Distance from site (ft)	Map	Comments
--	03S01W1 (D6)	MW-3	Feb-91	Target	MON	20.5	Dublin, CA	2500	NM	
--	03S01W1 (D7)	MW-4	Feb-91	Target	MON	23	Dublin, CA	2500	NM	
--	03S01W1 (D8)	MW-5	Jun-91	Target	MON	20	7608 Amador Valley Blvd, Dublin, CA	2500	NM	
--	03S01W1 (D9)	MW-6	Sep-91	Target	MON	15	7601 Amador Valley Blvd, Dublin, CA	2500	NM	
--	03S01W1 (F1)	1	Feb-60	Volk-McLain Co.	DOM	583	Near Old Hwy 50 and 5000 feet east of San Ramon Rd, Dublin, CA	8000	NM	
--	03S01W1 (F7)	MW-1	Jan-93	Enea Properties	DES	16	6670 Dublin Blvd, Dublin, CA	2700	NM	Destroyed 4/27/98
--	03S01W1 (F7)	MW-1	Jan-93	Enea Properties	MON	16	6620 Amador Valley Blvd, Dublin, CA	4800	NM	
--	03S01W1 (F8)	MW-2	Jan-93	Enea Properties	DES	13	6670 Dublin Blvd, Dublin, CA	2700	NM	Destroyed 4/27/98
--	03S01W1 (F8)	MW-2	Jan-93	Enea Properties	MON	16	6620 Amador Valley Blvd, Dublin, CA	4800	NM	
--	03S01W1 (F9)	MW-3	Jan-93	Enea Properties	DES	16	6670 Dublin Blvd, Dublin, CA	2700	NM	Destroyed 4/27/98
--	03S01W1 (F9)	MW-3	Jan-93	Enea Properties	MON	16	6620 Amador Valley Blvd, Dublin, CA	4800	NM	
--	03S01W1 (G1)	3	Sep-61	Volk-McLain Co.	MUN	610	Near State Rd 21 and N. Country Club Rd, Dublin, CA	8000	NM	
--	03S01W1 (J1)	N/A	Dec-84	Dublin San Ramon Service District	MON	44	Near Johnson Drive S of 580, Pleasanton, CA	2600	NM	
--	03S01W1 (J2)	N/A	Dec-84	Dublin San Ramon Service District	MON	37	Near Johnson Drive S of 580, Pleasanton, CA	2600	NM	
--	03S01W1 (L1)	N/A	UNK	Mozart Development	DES	53	West of 680 near 580, Pleasanton, CA	6000	NM	Destroyed 5/24/85
--	03S01W1 (L1)	N/A	Jun-49	J. R. Cronin	IRR	52	Dublin, CA	6000	NM	
--	03S01W1 (L2)	N/A	UNK	Mozart Development	DES	50	West of 680 near 580, Pleasanton, CA	6000	NM	Destroyed 5/24/85
--	03S01W1 (L4)	N/A	UNK	Mozart Development	DES	53	West of 680 near 580, Pleasanton, CA	6000	NM	Destroyed 5/24/85
--	03S01W1 (N1)	SR-1	May-91	Stoneridge Chrysler	MON	30	5440 Stoneridge Mall Road, Pleasanton, CA	3200	NM	
--	03S01W1 (N2)	SR-2	May-91	Stoneridge Chrysler	MON	30.5	5440 Stoneridge Mall Road, Pleasanton, CA	3200	NM	
--	03S01W1 (N3)	SR-3	May-91	Stoneridge Chrysler	MON	30	5440 Stoneridge Mall Road, Pleasanton, CA	3200	NM	
--	03S01W1 (N4)	SR-4	May-91	Stoneridge Chrysler	MON	30	5440 Stoneridge Mall Road, Pleasanton, CA	3200	NM	
--	03S01W1 (N5)	1N5	Jul-98	Safeway	MON	35	5918 Stoneridge Mall Road, Pleasanton, CA	4800	NM	
--	03S01W1 (N5)	EB-1	Jul-98	Safeway	UNK	38	Stoneridge Mall Road/Canyon Way, Pleasanton, CA	4800	NM	
--	03S01W1 (R2M)	#1	Feb-90	Clorox	IND	210	7200 Johnson Drive, Pleasanton, CA	4400	NM	
--	03S01W1 (R3M)	#2	Feb-90	Clorox	IND	211	7200 Johnson Drive, Pleasanton, CA	4400	NM	

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**Table 5. Well Survey Summary -Dublin Car Wash, 7240 Dublin Boulevard, Dublin, CA**

Map ID	Township, Range, and Section (DWR Well No.)	Owner's Well ID	Installation Date	Owner	Use	Total Depth (ft)	Well Location	Distance from site (ft)	Map	Comments
--	03S01W1 (R4)	MW-1	May-92	Clorox	MON	25	7034 Commerce Circle, Pleasanton, CA	3500	NM	
--	03S01W1 (R5)	MW-2	Apr-97	Corning	MON	21.6	7035 Commerce Circle, Pleasanton, CA	3400	NM	
--	03S01W1 (R6)	MW-3	Apr-97	Corning	MON	19.8	7035 Commerce Circle, Pleasanton, CA	3400	NM	
--	03S01W1 (R7)	MW-4	Apr-97	Corning	MON	20	7035 Commerce Circle, Pleasanton, CA	3400	NM	
--	03S01W1 (R8)	MW-5	May-97	Corning	MON	21	7035 Commerce Circle, Pleasanton, CA	3400	NM	
--	03S01W2 (A2)	N/A	Jun-76	Zone 7 Water Agency	MON	47	San Ramon Road and Amador Valley Blvd, Dublin, CA	4000	M	
--	03S01W2 (A3)	N/A	UNK	Public Storage Inc.	DES	UNK	7436 San Ramon Road, Dublin, CA	5000	NM	Destroyed 7/27/90
SITE	03S01W1 (F1)	EA-1	Oct-88	Chevron	MON	40	7240 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F17)	MW-5	Feb-96	Chevron	MON	21.5	7420 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F18)	MW-4	Feb-96	Chevron	MON	21.5	7420 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F2)	EA-2	Oct-88	Chevron	MON	40	7240 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F3)	EA-3	Oct-88	Chevron	MON	40	7240 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F4)	VW-1	May-90	Chevron	MON	9	7240 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F5)	VW-2	May-90	Chevron	MON	9	7240 Dublin Blvd, Dublin, CA	SITE		
SITE	03S01W1 (F6)	VW-3	May-90	Chevron	MON	9	7240 Dublin Blvd, Dublin, CA	SITE		

**Abbreviations:**

BOR = boring (may be geotechnical)  
 CAT = Cathodic protection well  
 DES = Destroyed Well  
 PIE = Piezometer  
 TES = Test Well  
 ? = information not available

GEO = boring (may be geotechnical or geoprobe boring)  
 M = Well location shown on map  
 NM = Not mapped, well is not a potential sensitive receptor  
 \* = unspecified note added by ACPWA  
 IRR = Irrigation Well  
 MON = Monitoring Well

DIS = Disposal Well  
 DOM = Domestic Well  
 UNK = Unknown  
 N/A = Not applicable  
 ABA = Boring abandoned  
 V/P = Vapor/Product Removal Well

MUN = Municipal well  
 IND = Industrial well  
 TEST = Test Well

## **APPENDIX A**

### Boring Logs and Well Construction Details

**LOW THREAT CLOSURE POLICY – CONCEPTUAL SITE MODEL**

**Site Well Construction Details**

Well ID	Location (Onsite/Offsite, Downgradient, Upgradient or Cross Gradient)	Highest Measured Depth to Water		Lowest Measured Depth to Water		Screen Interval (ft bgs)	Total Depth	Submerged (% of events)	Dry (% of Events)	Status (Active, Abandon ed, Lost)
		Date	Feet bgs	Date	Feet bgs					
MW-1	Onsite, crossgradient	02/21/05	11.81	02/06/09	13.67	5-25	25	0	0	Active
MW-2	Onsite, downgradient	02/11/10	7.5	02/06/09	9.39	5-20	20	0	0	Active
MW-3A	Onsite	08/17/06	9.56	02/06/09	11.70	10-17	17	7.7%	0	Active
MW-4	Offsite, upgradient	02/21/11	9.29	08/28/07	11.42	8.5-20	20	0	0	Active
MW-5	Offsite, Upgradient	05/08/03	9.56	08/28/07	11.07	8.5-21	21	0	0	Active
MW-6A	Onsite, North of Source	08/17/06	9.69	02/15/12	11.95	15-20	20	100%	0	Active
MW-6B	Onsite, North of Source	02/26/08	7.87	02/06/09 & 02/15/12	10.18	26-30	30	100%	0	Active
MW-7AA	Onsite, source	02/21/11	8.57	02/15/12	10.42	9-14	14	7.7%	0	Active
MW-7A	Onsite, Source	02/21/11	8.37	02/15/12	10.54	16-20	20	100%	0	Active
MW-7B	Onsite, Source	08/17/06	8.62	02/06/09 & 02/15/12	10.18	26-30	30	100%	0	Active
MW-7C	Onsite, Source	08/17/16	8.52	11/24/06	9.42	35-45	45	100%	0	Inactive
MW-8A	Onsite, upgradient	02/26/08	8.33	08/25/12	13.25	15-20	20	100%	0	Active
MW-9A	Onsite, crossgradient	08/17/06	9.40	02/15/12	11.52	15-20	20	100%	0	Active
MW-9C	Onsite, crossgradient	07/07/06	8.85	05/29/06	16.59	35-45	45	100%	0	Inactive
MW-10A	Onsite, crossgradient	02/26/08	7.34	11/24/06	12.61	15-20	20	100%	0	Active
MW-10C	Onsite, crossgradient	05/29/06 & 07/07/06	7.28	11/24/16	10.75	35-45	45	100%	0	Inactive
MW-11C	Onsite	08/17/06	9.60	11/24/06	10.60	33.5-43.5	43.5	100%	0	Inactive
DPE-1	Onsite, downgradient	02/21/11	9.91	02/15/12	10.71	9-14	14	0	0	Active
DPE-2	Onsite	02/21/11	9.83	02/15/12	11.19	9-14	14	0	0	Active
VW-1	Onsite, Source	05/17/11	5.72	08/13/08	8.27	3-9	9	0	0	Active
VW-2	Onsite, Source	08/12/10	1.5	08/13/08	7.92	3-9	9	7.4%	0	Active
VW-3	Onsite, Source	08/17/06	4.4	08/25/12	8.36	3-9	9	0	7.1%	Active
MW-3	Onsite, North of source	05/01/01	10.66	12/23/98	12.92	4.5-24	24	0	0	Destroyed
EA-1	Onsite, downgradient	05/08/03	8.23	01/31/91	11.16	10-40	40	27.6%	0	Destroyed
EA-2	Onsite, upgradient	05/08/03	7.26	01/31/91	10.21	10-40	40	90%	0	Destroyed
EA-3	Onsite, crossgradient	02/29/96	8.28	01/31/91	11.52	5-35	35	0	0	Destroyed



EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY, INC.

**LOG OF SOIL BORING: EA 1**

Coordinates: 121 55' 20" West  
37 41' 10" North  
Elevation top of casing: 333.41  
Casing below surface: 0.28 ft

CLIENT Chevron USA	STATION # SS 9-2582	LOCATION 7240 Dublin Blvd Dublin, California
DRILLING AND SAMPLING METHODS Rotary with 10 inch hollow stem auger and CA modified split tube sampler lined with 2 inch brass sleeves; HEW Drilling Co. C57-384167		
WATER LEVEL	10.71	10.39
TIME	1200	1205
DATE	10-20	10-21
REFERENCE	T of C	T of C
DRILLING START		FINISH
TIME	0930	TIME 1230
DATE	10-17	DATE 10-17

Inches Driven	Recover	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS	DESCRIPTION by:
					0		Landscaped grass	T. R. Winsor <i>RW</i>
					1			Dark greenish-black silt and clay-rich soil, with rare coarse sand grains, abundant tree roots and organics.
					2			
					3			
					4			
18	12	3 3 4	0		5	CL		Dark greenish-black silty clay, angular silt sized fragments of quartz in plastic clay; locally goes to gray-green and has the appearance of a fill; aggregated chunks and pieces of clay-rich material; very plastic, damp, no odor.
					6			
					7			
					8			
					9			
18	14	3 4 6	0.6		10	CH		Dark olive-gray to greenish-gray clay; soft and lustrous, plastic and pliable, damp but no odor; rare sand/silt grains, still has the aggregated look of a fill.
					11			
					12			
					13			
					14			
18	16	3 5 6	0		15	CH		Olive-gray clay, loses the aggregated appearance of a fill, very rare silt grain, damp, no odor, plastic; a consistent clay
					16			
					17			
					18			
					19			
					20			





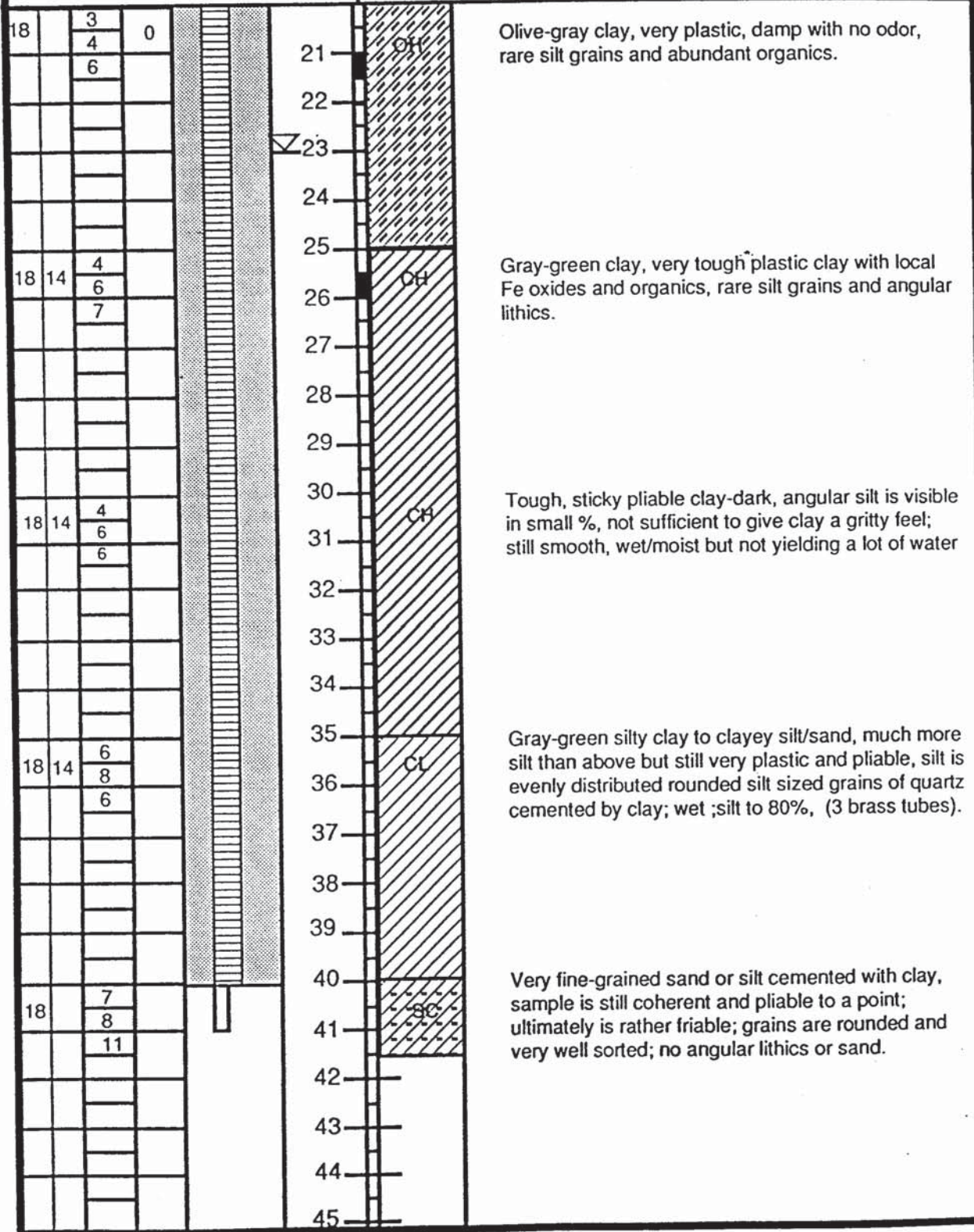
EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY, INC.

CLIENT  
Chevron USA

STATION #  
SS 9-2582

LOCATION  
7240 Dublin Blvd  
Dublin, California

LOG OF SOIL BORING EA1







EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY, INC.

**LOG OF SOIL BORING: EA 2**  
Coordinates: 121 55'20" West  
37 41'10" North  
Elevation top of casing: 332.59  
Casing below surface: 0.26 ft

CLIENT Chevron USA	STATION # SS 9-2582	LOCATION 7240 Dublin Blvd Dublin, California
DRILLING AND SAMPLING METHODS Rotary with 10 inch hollow stem auger and CA split spoon sampler lined with 2 inch brass sleeves: HEW Drilling Co. C57-384167		
WATER LEVEL	10.09	
TIME	12:00	
DATE	10-21	
REFERENCE	T of C	
		DRILLING START FINISH
		TIME 09:30 TIME 12:30
		DATE 10-20-88 DATE 10-20-88

Inches Driven	Recover	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS
					0		Level asphalt SE corner of tank field
					1		Concrete.  Right at the edge of the tank field: - part of the sample is fill; rounded sand and gravel - part is olive-gray clay, moist.
					2		
					3		
					4		
18	15	4 2 4	90		5	CL	Olive-gray fine grained sand and olive-gray clay; some odor.
					6		
					7		
					8		
					9		
18		4 4 7	1		10	CH	Olive-gray clay, very plastic with no obvious grit, faint odor.
					11		
					12		
					13		
					14		
18		4 6 8	0		15		Olive-gray, plastic clay, moist, rare subangular sand grains; local Fe oxide mottling distributed thru an apparent but weak, blocky, jointing; black carbon also distributed throughout; clay is very pliable, almost elastic.
					16		
					17		
					18		
					19		Water at 19 ft., can feel grit in clay on bit, no odor.
					20		





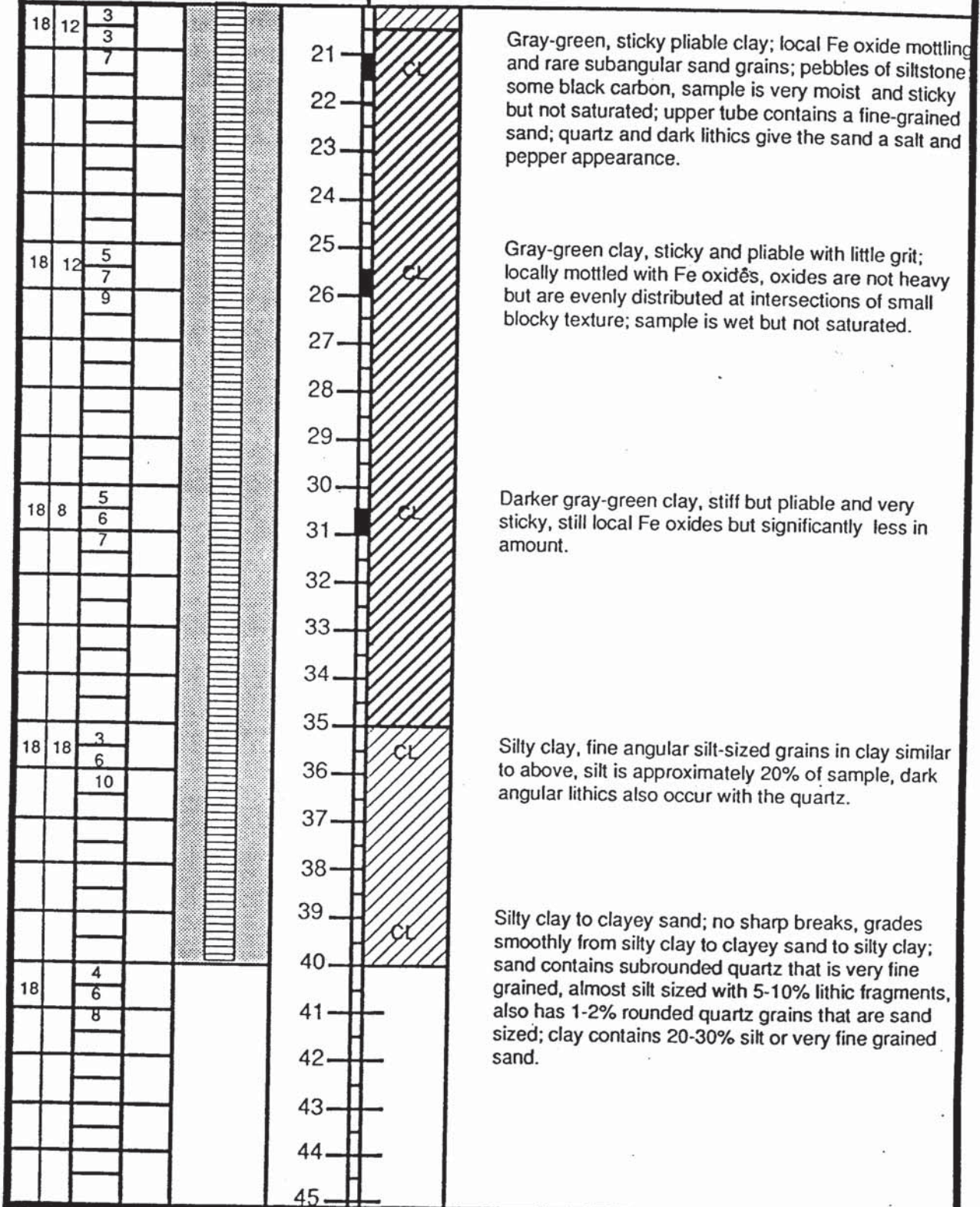
EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY, INC.

CLIENT  
Chevron USA

STATION #  
SS 9-2582

LOCATION  
7240 Dublin Blvd  
Dublin, California

LOG OF SOIL BORING EA 2







EA ENGINEERING,  
SCIENCE, AND  
TECHNOLOGY, INC.

**LOG OF SOIL BORING: EA 3**

Coordinates: 121 55'20" West  
37 41'10" North  
Elevation top of casing: 333.64  
Casing below surface: 0.30 ft

CLIENT Chevron USA	STATION # SS 9-2582	LOCATION 7240 Dublin Blvd Dublin, California
DRILLING AND SAMPLING METHODS Rotary drill with 10 inch hollow stem auger with CA split spoon auger lined with 2 inch brass liners; HEW Drilling Co. C57: 384167		
WATER LEVEL		
TIME		DRILLING START FINISH
DATE		TIME 08:30 TIME 15:30
REFERENCE		DATE 10-21-88 DATE 10-21-88

Inches Driven	Recoveries	Blows/6" Sampler	OVA Reading	WELL DETAIL	DEPTH (Feet)	GRAPHIC LOG	SURFACE CONDITIONS Concrete that slopes to the south
					0		DESCRIPTION by: T. R. Winsor <i>TRW</i>
					1	CL	
					2		
					3		
					4		Olive-gray clay, plastic, locally with high silt but generally high clay, odor.
18	10		20		5		
					6	SC	Very fine grained sand, salt and pepper appears with quartz and dark lithics, clay approximately 10%, subangular quartz.
					7		
					8	CL	Olive-gray clay, silt evenly dispersed, less than 2% in otherwise homogeneous clay, some clay is lighter colored gray giving a variegated appearance, sample is moist with very weak odor, rare pebbles of siltstone
					9		
18	10	2 4 7			10		
					11		
					12		
					13		
					14		
18	10	2 5 7			15	CH	Olive-gray clay, less than 1% silt, rare pebbles or grains of siltstone, similar olive-gray/gray variegation to above, spotty Fe oxides, some organic debris; clay is almost elastic; clay is almost vitreous.
					16		
					17		
					18		
					19		
					20		Fine-grained sand and clay is lithic-rich and subangular, still with significant clay content.



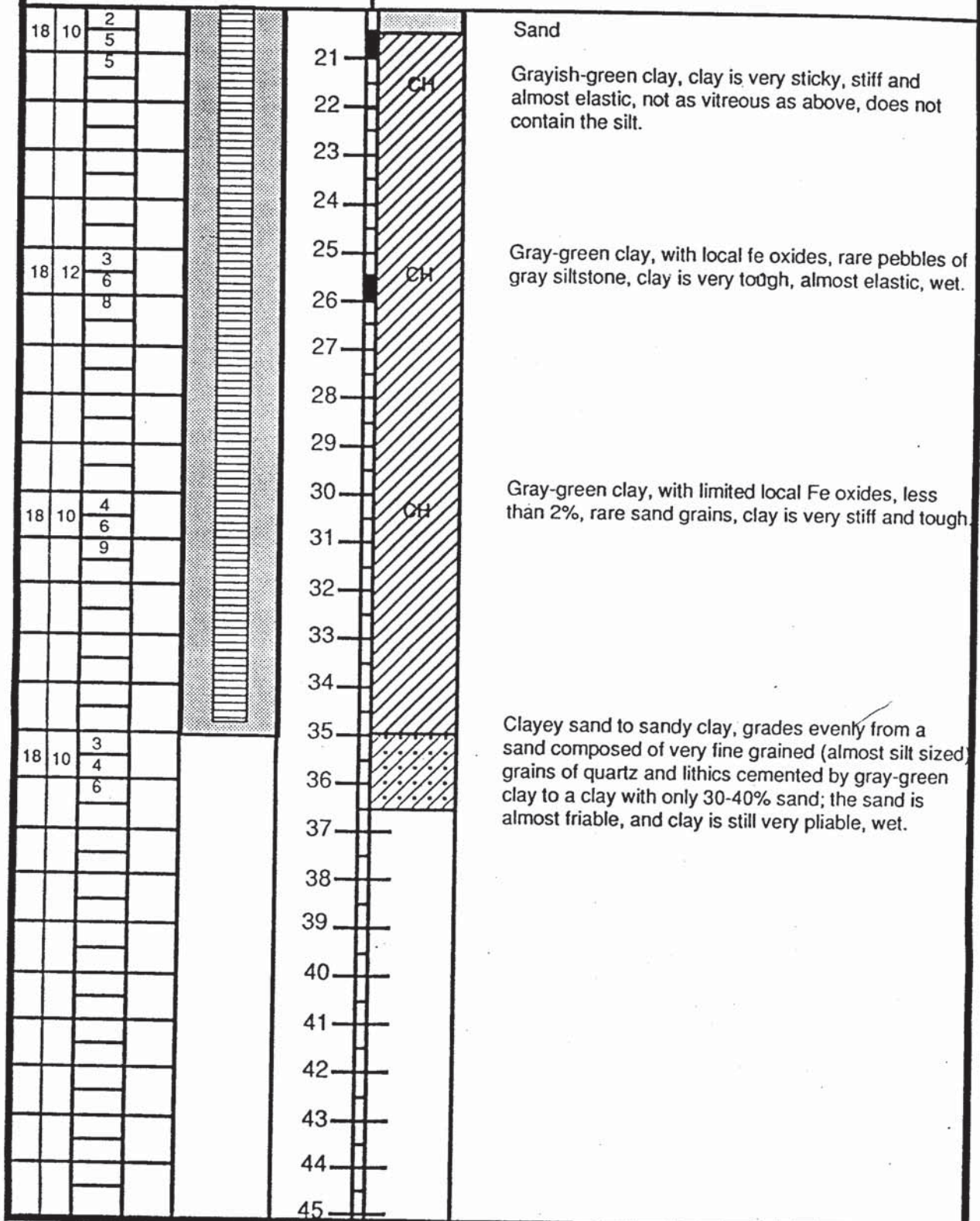
EA ENGINEERING,  
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CLIENT  
Chevron USA

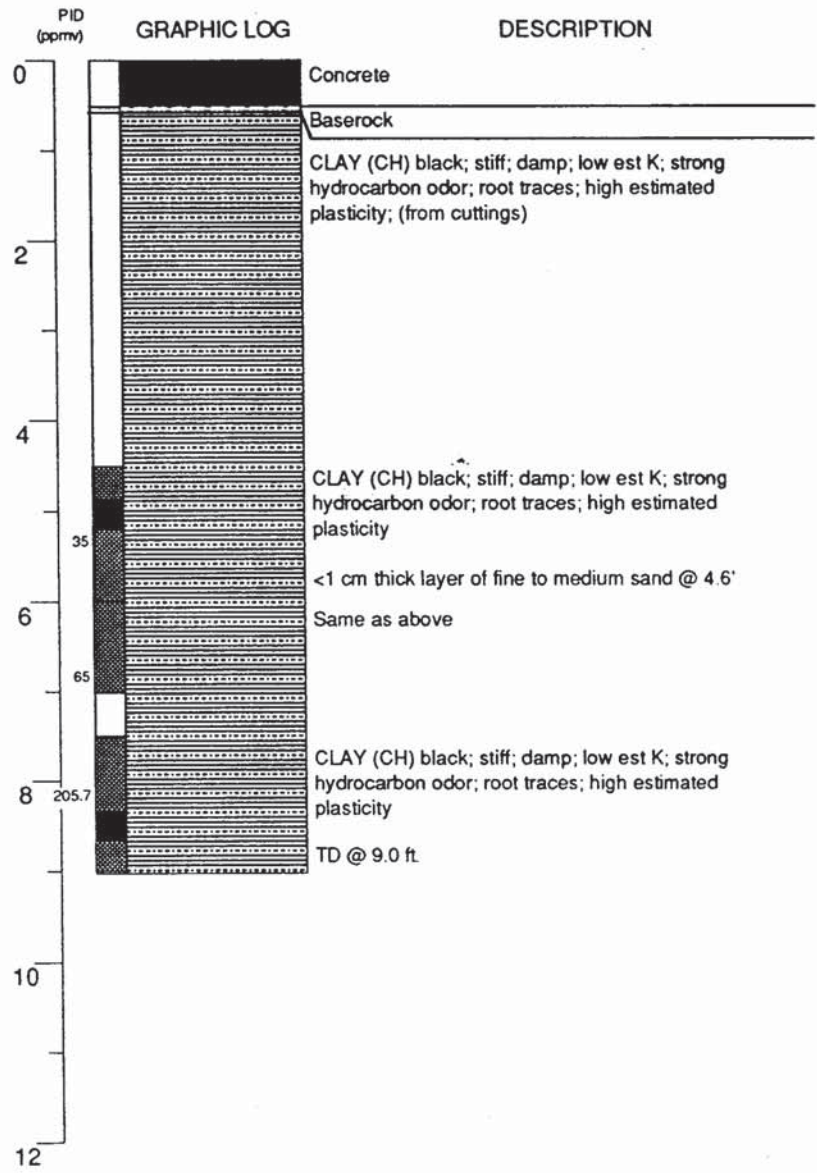
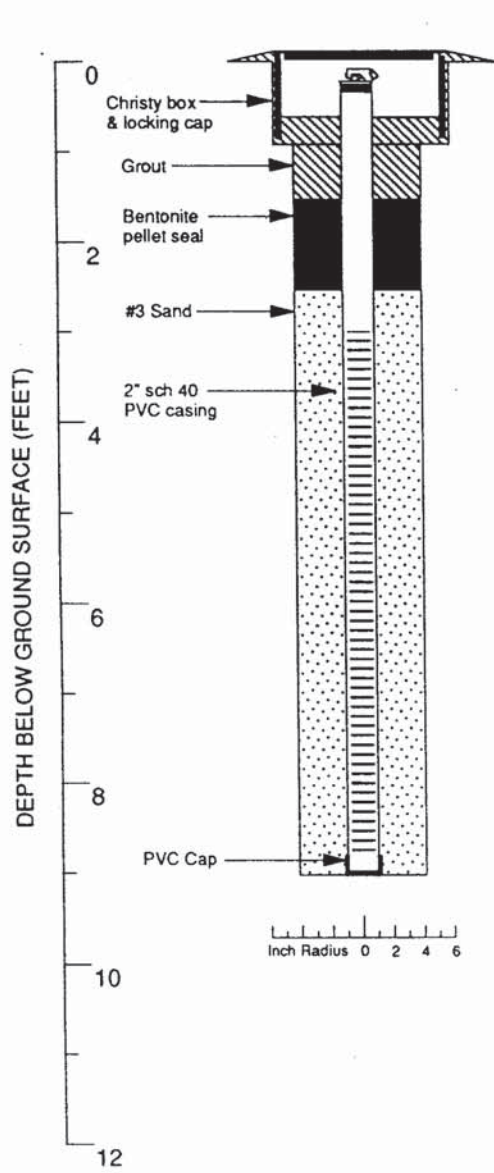
STATION #  
SS 9-2582

LOCATION  
7240 Dublin Blvd  
Dublin, California

LOG OF SOIL BORING EA 3







Logged by: Ken Leonard  
Project Mgr: Tom Howard  
Dates Drilled: 5/1/90

Drilling Company: B & F Drilling (Chempro)  
Drilling Method: 8.25" Hollow stem auger  
Driller: Breese Franks

Well Head Completion: Christy box & locking cap  
Type of Sampler: 2" split barrel  
TD (Total Depth): 9.0 ft.

**EXPLANATION**

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR No recovery

**Boring Log and Well Completion Details  
VW-1 (Boring B-6)**

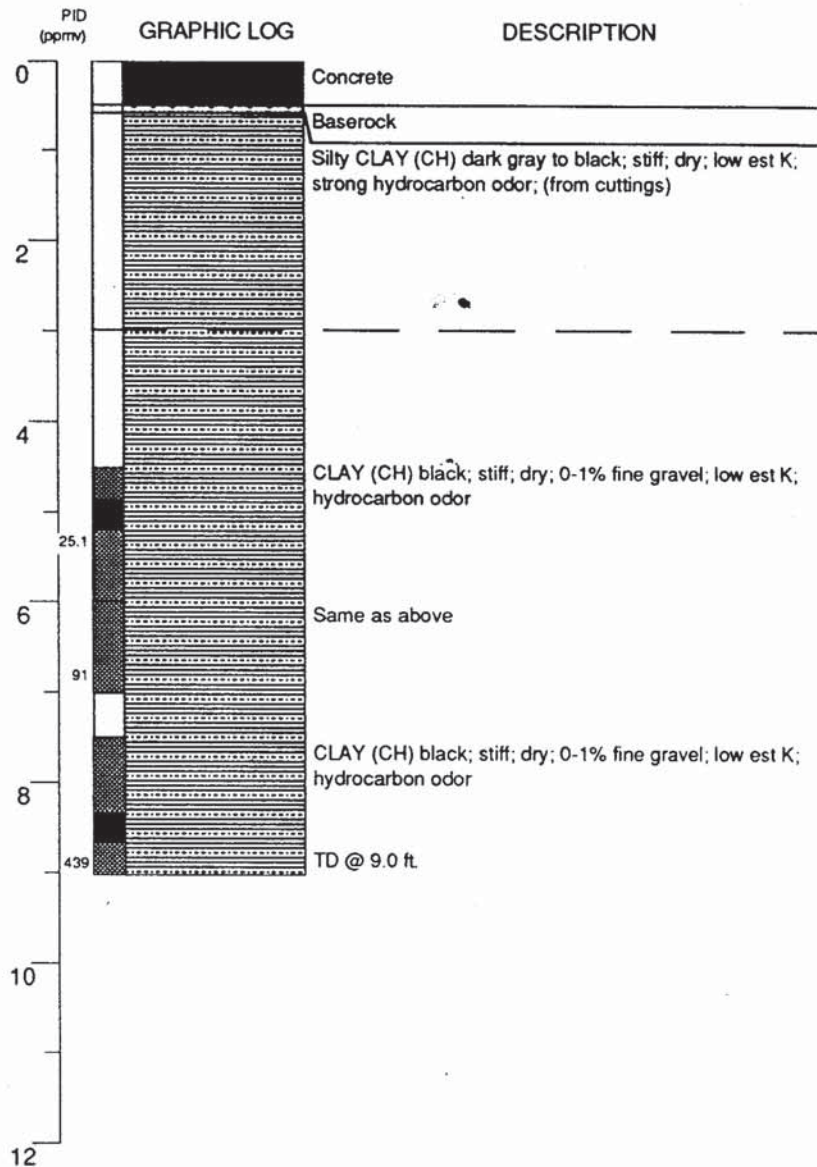
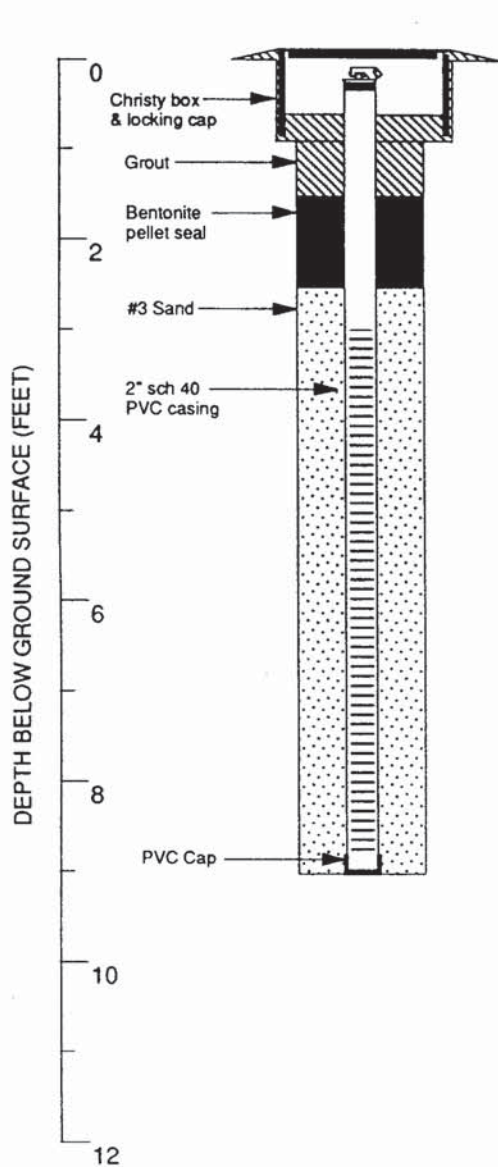
Chevron Service Station #92582  
Dublin, California

**WESTERN GEOLOGIC RESOURCES, INC.**

**VADOSE  
WELL**

**1**

1-124.05



Logged by: Ken Leonard  
 Project Mgr: Tom Howard  
 Dates Drilled: 5/1/90

Drilling Company: B & F Drilling (Chempro)  
 Drilling Method: 8.25" Hollow stem auger  
 Driller: Breese Franks

Well Head Completion: Christy box & locking cap  
 Type of Sampler: 2" split barrel  
 TD (Total Depth): 9.0 ft.

**EXPLANATION**

- Water level during drilling
- Water level in completed well
- Location of recovered drill sample
- Location of sample sealed for chemical analysis
- Sieve sample
- Grab sample
- Contacts: Solid where certain
- Dotted where approximate
- Dashed where uncertain
- Hachured where gradational
- est K Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
- NR No recovery

**Boring Log and Well Completion Details  
 VW-2 (Boring B-7)**

Chevron Service Station #92582  
 Dublin, California

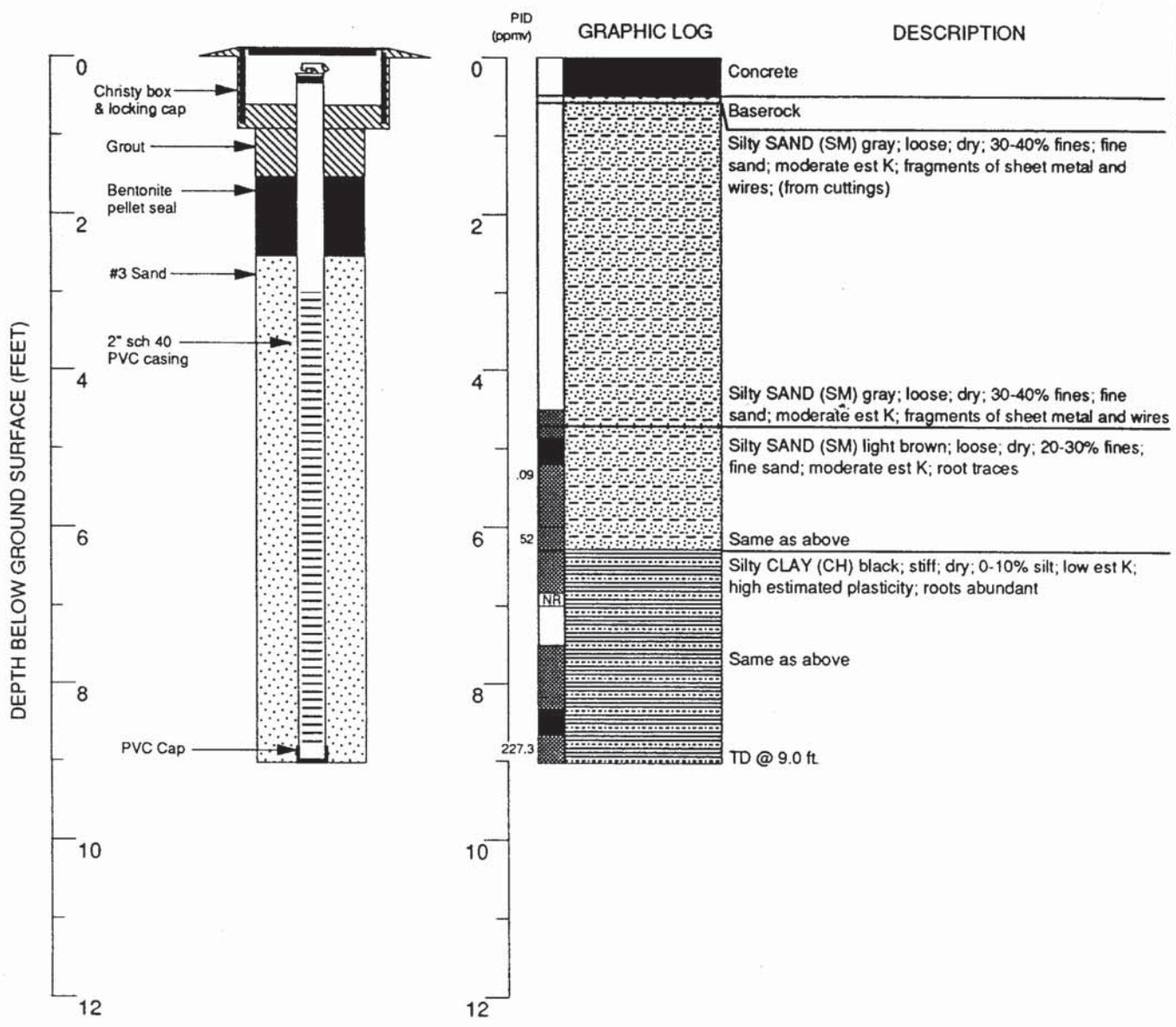
VADOSE  
 WELL

**2**

WESTERN GEOLOGIC RESOURCES, INC.

1-124.05





Logged by: Ken Leonard  
 Project Mgr: Tom Howard  
 Dates Drilled: 5/1/90

Drilling Company: B & F Drilling (Chempro)  
 Drilling Method: 8.25" Hollow stem auger  
 Driller: Breese Franks

Well Head Completion: Christy box & locking cap  
 Type of Sampler: 2" split barrel  
 TD (Total Depth): 9.0 ft.

EXPLANATION	
	Water level during drilling
	Water level in completed well
	Location of recovered drill sample
	Location of sample sealed for chemical analysis
	Sieve sample
	Grab sample
	Contacts: Solid where certain
	Dotted where approximate
	Dashed where uncertain
	Hachured where gradational
	est K Estimated permeability (hydraulic conductivity) 1K = primary 2K = secondary
	NR No recovery

Boring Log and Well Completion Details  
 VW-3 (Boring B-8)

Chevron Service Station #92582  
 Dublin, California

**WESTERN GEOLOGIC RESOURCES, INC.**

VADOSE WELL

**3**

1-124.05



Project Chevron-Dublin Owner Chevron USA Products Company  
 Location 7240 Dublin Boulevard, Dublin, CA Proj. No. 02070 0027  
 Surface Elev. 333.8 ft. Total Hole Depth 26.5 ft. Diameter 8 in.  
 Top of Casing 333.56 ft. Water Level Initial 18 ft. Static 12.81 ft.  
 Screen: Dia 2 in. Length 20 ft. Type/Size 0.020 in.  
 Casing: Dia 2 in. Length 5 ft. Type Sch 40 PVC  
 Fill Material #3 Sand Rig/Core CME-55/Spilt Spoon  
 Drill Co. SES, Inc. Method Hollow Stem Auger/PID  
 Driller Morris Peterson Log By Bruce Beale Date 09/13/94 Permit # \_\_\_\_\_  
 Checked By Ed Simonis License No. RG#4422

See Site Map  
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0							Grass over dark brown silty CLAY (moist, no hydrocarbon odor)
2						CL	
4							Grayish brown silty CLAY (40, 60) with roots from nearby redwood tree (moist, no hydrocarbon odor)
6		1.0	MW-1 -5'	5 8 10		CL	
8							(grades dark gray with white chalky patches, very stiff)
10		1.0	MW-1 -10'	5 9 10		CL	
12							Static 09/23/94
14							(grades very plastic, hydrocarbon odor)
16		80	MW-1 -15'			CL	
18							Encountered Water, 09/13/94, 10:30am.
20		3.0	MW-1 -20'	3 5 8		CL	
22						CL	Mottled gray, greenish gray, and brown silty CLAY (moist to wet, no hydrocarbon odor)
24						CL	





Project Chevron-Dublin

Owner Chevron USA Products Company

Location 7240 Dublin Boulevard, Dublin, CA

Proj. No. 02070 0027

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ X Recovery	Graphic Log	USCS Class.	Description
							(Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
24		2	MW-1 -25'	3 4 6		CL	Tan and light gray CLAY (wet, no hydrocarbon odor)
26							End of boring. Installed monitoring well.
28							
30							
32							
34							
36							
38							
40							
42							
44							
46							
48							
50							
52							
54							
56							

Project Chevron-Dublin Owner Chevron USA Products Company  
 Location 7240 Dublin Boulevard, Dublin, CA Proj. No. 02070 0027  
 Surface Elev. 329.4 ft. Total Hole Depth 21.5 ft. Diameter 8 in.  
 Top of Casing 329.18 ft. Water Level Initial 16.5 ft. Static 8.5 ft.  
 Screen: Dia 2 in. Length 15 ft. Type/Size 0.020 in.  
 Casing: Dia 2 in. Length 5 ft. Type Sch 40 PVC  
 Fill Material #3 Sand Rig/Core CME-55/Spill Spoon  
 Drill Co. SES, Inc. Method Hollow Stem Auger/PID  
 Driller Morris Peterson Log By Bruce Beale Date 09/13/94 Permit # \_\_\_\_\_  
 Checked By Ed Simonis License No. RG#4422

See Site Map  
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0							
2						GC	Brown gravelly SAND SILT CLAY mixture (dry, no hydrocarbon odor)
4							
6	1		MW-2 -5'	7 8 9		CL	Dark brown-gray mottled with tan and brown-orange silty CLAY (30, 70) (dry to moist, plastic, no hydrocarbon odor)
8							Static 09/23/94
10	25		MW-2 -10'	3 5 8		CL	Dark gray with brown mottling, sandy silty CLAY (5, 10, 85) with white calc areous specks (moist, moderate hydrocarbon odor)
12							
14							
16	18		MW-2 -15'	3 5 8		CL	Dark brown, silty CLAY (10, 90) (moist to wet, plastic, increasing hydrocarbon odor)
18							Encountered Water, 09/13/94, 10:30am.
20	2		MW-2 -20'	2 4 8		CL	Mottled green-gray and brown gray CLAY (moist to wet, no hydrocarbon odor)
22							End of boring. Installed monitoring well.
24							





Project Chevron-Dublin Owner Chevron USA Products Company  
 Location 7240 Dublin Boulevard, Dublin, CA Proj. No. 02070 0027  
 Surface Elev. 333.1 ft. Total Hole Depth 26.5 ft. Diameter 8 in.  
 Top of Casing 332.73 ft. Water Level Initial 18 ft. Static 12.07 ft.  
 Screen: Dia 2 in. Length 20 ft. Type/Size 0.020 in.  
 Casing: Dia 2 in. Length 5 ft. Type Sch 40 PVC  
 Fill Material #3 Sand Rig/Core CME-55/Spilt Spoon  
 Drill Co. SES, Inc. Method Hollow Stem Auger/PID  
 Driller Morris Peterson Log By Bruce Beale Date 09/13/94 Permit # \_\_\_\_\_  
 Checked By Ed Simonis License No. RG#4422

See Site Map  
For Boring Location

COMMENTS:

Depth (ft.)	Well Completion	PID (ppm)	Sample ID	Blow Count/ x Recovery	Graphic Log	USCS Class.	Description (Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
-2							
0							Grass over gray brown silty CLAY with pieces of glass
2						CL	(grades with chunks of concrete)
4							Mottled brown and tan silty CLAY (30, 70) with white calcareous specks (moist, no hydrocarbon odor)
6		0	MW-3	4		CL	
8				8			
10		160	MW-3	2		CL	Dark gray-brown silty CLAY (40, 60) (stiff, moist/dry, non plastic, moderate to strong hydrocarbon odor)
12				3			Static 09/23/94
14				7		CL	
16		30	MW-3	2		CL	Mottled gray/brown-gray CLAY (30, 70) with pale gray chalky patches (moist, plastic, moderate hydrocarbon odor)
18				3			
20				6		CL	Encountered Water, 09/13/94, 17:10pm.
22		3	MW-3	2		CL	Mottled gray and brown silty sandy CLAY (10, 40, 50) (moist, very slight hydrocarbon odor)
24				3			
				8		CL	



Project Chevron-Dublin Owner Chevron USA Products Company  
 Location 7240 Dublin Boulevard, Dublin, CA Proj. No. 02070 0027

Depth (ft.)	Well Completion	PID (ppm)	Sample ID Blow Count/ % Recovery	Graphic Log	USCS Class.	Description
						(Color, Texture, Structure) Trace < 10%, Little 10% to 20%, Some 20% to 35%, And 35% to 50%
24		0	MW-3 -25'		CL	(grades silty clay (20, 80) with light gray irregular-shaped hard calcareous concentrations to 1' long, no hydrocarbon odor)
26						End of boring. Installed monitoring well.
28						
30						
32						
34						
36						
38						
40						
42						
44						
46						
48						
50						
52						
54						
56						



Gettler-Ryan, Inc.

Log of Boring MW-4

PROJECT: Chevron SS# 9-2582

LOCATION: 7240 Dublin Boulevard, Dublin, CA

G-R PROJECT NO.: 5274.01

SURFACE ELEVATION: 332.64 feet MSL

DATE STARTED: 02/22/96

WL (ft. bgs): 11.5 DATE: 02/22/96 TIME: 14:40

DATE FINISHED: 02/22/96

WL (ft. bgs): 10.4 DATE: 02/22/96 TIME: 15:20

DRILLING METHOD: 8 in. Hollow Stem Auger

TOTAL DEPTH: 21.5 Feet

DRILLING COMPANY: Bay Area Exploration, Inc.

GEOLOGIST: B. Sieminski

DEPTH feet	PIID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - concrete over sand.	
5	0	8	MW4-8			CL	CLAY (CL) - black (10YR 2/1), damp, stiff, medium plasticity; 100% clay.	
						CL	CLAY (CL) - very dark grayish brown (10YR 3/2), mottled strong brown (7.5YR 3/4), moist, stiff, low plasticity; 95% clay, 5% fine sand.	
						CL/SC	SANDY CLAY WITH LENSES OF CLAYEY SAND (CL/SC) - very dark gray (5Y 3/1), moist, stiff, low plasticity; 70% clay, 30% fine sand.	
10	0	12	MW4-9.5			CH	CLAY (CH) - black (N/0) mottled gray (N 5/0), moist, stiff, high plasticity; 95-100% clay, 0-5% carbonate nodules.	
						CL	SANDY CLAY (CL) - dark gray (10YR 4/1) mottled light brownish gray (10 YR 6/1), saturated, stiff, low plasticity; 70% clay, 30% fine to coarse sand consisting of carbonate grains.	
15	0	11	MW4-18					
20	0	10	MW4-21			CL	CLAY (CL) - dark gray (5Y 4/1) mottled olive (5Y 4/3), damp to moist, stiff, medium plasticity; 95% clay, 5% fine sand.	
25							Bottom of boring at 21.5 feet, 02/22/96.	
30							(* = converted to equivalent standard penetration blows/ft.)	
35								



Gettler-Ryan, Inc.

Log of Boring MW-5

PROJECT: Chevron SS# 9-2582

LOCATION: 7240 Dublin Boulevard, Dublin, CA

G-R PROJECT NO.: 5274.01

SURFACE ELEVATION: 333.20 feet MSL

DATE STARTED: 02/22/96

WL (ft. bgs): 17.0 DATE: 02/22/96 TIME: 11:10

DATE FINISHED: 02/22/96

WL (ft. bgs): 9.7 DATE: 02/22/96 TIME: 12:30

DRILLING METHOD: 8 in. Hollow Stem Auger

TOTAL DEPTH: 21.5 Feet

DRILLING COMPANY: Bay Area Exploration, Inc.

GEOLOGIST: B. Sieminski

DEPTH feet	PID (ppm)	BLOWS/FT. *	SAMPLE NUMBER	SAMPLE INT.	GRAPHIC LOG	SOIL CLASS	GEOLOGIC DESCRIPTION	WELL DIAGRAM
							PAVEMENT - clay bricks over sand, asphalt and baserock.	
5	0	8	MW5-6			CL	CLAY (CL) - black (10YR 2/1), damp, stiff, medium plasticity; 100% clay.	
	0	6	MW5-8			CL/SC	SANDY CLAY WITH GRAVEL AND LENSES OF CLAYEY SAND (CL/SC) - dark gray (10YR 4/1), moist, stiff, low plasticity; 60% clay, 30% fine sand, 10% fine gravel.	
	0	10	MW5-9.5			CH	CLAY (CH) - black (10YR 2/1), moist, stiff, high plasticity; 100% clay.	
10						CL	With carbonate nodules.	
	0	11	MW5-14			CL	CLAY WITH SAND (CL) - very dark gray (5Y 3/1), moist, stiff, medium plasticity; 85% clay, 15% fine to coarse sand consisting of carbonate grains.	
15	0	12	MW5-16			CL	With olive (5Y 4/3) mottling. Sand increases to 25%, no olive mottling, low plasticity.	
						CL/SC	CLAYEY SAND WITH LENSES OF SANDY CLAY (CL/SC) - dark gray (5Y 4/1) mottled olive (5Y 4/3), saturated, medium dense; 50% fine sand, 50% clay; soft drilling at 17-18 feet.	
20	0	13	MW5-21			CL	CLAY (CL) - dark gray (5Y 4/1) mottled olive (5Y 4/3), moist, stiff, medium plasticity; 90% clay, 10% fine sand; carbonate nodules.	
25							Bottom of boring at 21.5 feet, 02/22/96.	
30							(* = converted to equivalent standard penetration blows/ft.)	
35								





# GEOLOGIC LOG OF BOREHOLE S-1

Boring Location:  
See Site Map.

Project: 2692  
Site Location: 7240 Dublin Blvd  
Dublin CA  
Drilling Method: HSA  
Driller: Woodward Drilling (Frank Ramirez)  
Logged By: R Papler

Date Drilled: April 25, 2003  
Casing Elevation: NA  
Depth to 1st Groundwater: 6.5 ft  
Approved By: M Sepehr PE

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	continuous core SAMPLED blow count per 1 ft	POTENTIAL WATER-BEARING ZONE AS PER EC LOGS
				4" concrete over 3" baserock		
	0		CH	CLAY: dark gray brown, firm to stiff, moist, highly plastic. No petroleum hydrocarbon (PHC) odors.		
	0		CL	SANDY CLAY: dark gray brown, firm to stiff, moist, plastic, 30-40% very fine sand. No PHC odor.		
	5		SM&ML	SILTY SAND & SANDY SILT: light gray brown, loose to medium dense, firm, moist to v. moist becoming wet at 5 to 6'. No PHC odor.	10	UPPER-SHALLOW
	115		CL	SILTY CLAY: dark gray brown, stiff to v. stiff, moist, plastic w/ stringer of moist v. fine sand at 7'. Moderate PHC odor.	17	
	180		CL		23	
	10		CL	As Above with some caliche below 11'	12	
	56		CL		21	
	31		CL		18	
	15		SC/CL	CLAYEY SAND/SANDY CLAY: light gray brown, firm to stiff, moist, slightly to moderately plastic, 40-60% v. fine sand w/ v. moist stringers of med. to fine sand. Slight PHC odor.	32	
	20		CH	CLAY: gray, firm to stiff, moist, highly plastic w/ gastropod shells and carbonaceous deposits. No PHC odor.	24	
	15		CH	CLAY: gray, firm to stiff, moist, highly plastic w/ gastropod shells and carbonaceous deposits. No PHC odor.	28	
	10		SM	SILTY SAND: brownish gray, loose to med. dense, v. moist to wet, fine to coarse, moderately sorted. No PHC odor.	16	SHALLOW
	5		CL	SANDY CLAY: gray, stiff, moist, plastic, 30-40% v. fine sand w/ v. moist stringer of sandy silt at 19.5'. No PHC odor.	19	
	20		CL	SANDY CLAY: gray, stiff, moist, plastic, 30-40% v. fine sand w/ v. moist stringer of sandy silt at 19.5'. No PHC odor.	12	
	5		CL	SANDY CLAY: gray, stiff, moist, plastic, 30-40% v. fine sand w/ v. moist stringer of sandy silt at 19.5'. No PHC odor.	18	
	20		CL	GRAVELLY CLAY w/some Sand: ls brownish gray, wet, 20-30% well rounded gravel to 1/2", <15% v. fine sand. No PHC odor.	40	
	0		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff to hard, plastic w/ some caliche. No PHC odor.	43	
	0		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff to hard, plastic w/ some caliche. No PHC odor.	10	
	25		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff to hard, plastic w/ some caliche. No PHC odor.	22	
	25		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff to hard, plastic w/ some caliche. No PHC odor.	15	
	25		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff to hard, plastic w/ some caliche. No PHC odor.	23	





# GEOLOGIC LOG OF BOREHOLE S-1

Boring Location:  
See Site Map.

Project: 2692  
Site Location: 7240 Dublin Blvd  
Dublin CA  
Drilling Method: HSA  
Driller: Woodward Drilling (Frank Ramirez)  
Logged By: R Papler

Date Drilled: April 25, 2003  
Casing Elevation: NA  
Depth to 1st Groundwater: NA  
Approved By: M Sepehr PE

PID ppm	DEPTH	GRAPHIC LOG	SOIL CLASS.	GEOLOGIC DESCRIPTION	continuous SAMPLED blow counts	POTENTIAL WATER-BEARING ZONE AS PER EC LOGS	
	0		CL	SILTY CLAY: gray brown mottled gray, moist, v. stiff, to hard, plastic w/ some caliche. No PHC odor	25	MIDDLE	
	30		CL	As Above	33		
	0		CL	SANDY CLAY: gray, stiff, v. moist, plastic, 15-30% v. fine sand. No PHC odor.	28		
	30		CL	As Above	40		
	0		SP&ML	SAND interbedded w/ SANDY SILT: gray, loose to medium dense, wet, v. fine, well sorted. No PHC odor.	20	DEEPER	
	35		SC/CL	CLAYEY SAND/SANDY CLAY: gray becoming grayish brown w/ depth, medium dense to dense, moist, plastic. No PHC odor.	37		
	40		SC/CL	As above w/ stringer of wet silty sand at 36'.	22		
	40		SC	CLAYEY SAND: gray brown mottled gray, medium dense to dense, moist to v. moist, slightly plastic w/ stringers of wet silty sand at 41', 41.5', and 43'. No PHC odor.	38		
	45		SC	As above with stringers of wet silty sand at 41', 41.5', and 43'.	20		
	45		CL	SILTY CLAY: gray brown mottled gray, v. stiff to hard, moist, plastic w/ stringer of v. moist silty sand at 47.25' w/ abundant caliche at 45-46'. No PHC odor.	36		
	50		CL	As above with moist silty sand stringer at 47'.	54		
		Total Depth: 49 ft bgs					64



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# BORING NUMBER SB-2

PAGE 1 OF 1

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dulbin Blvd
<b>DATE STARTED</b> 5/18/06	<b>COMPLETED</b> 5/18/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 2"
<b>LOGGED BY</b> Morgan Gillies	<b>GROUND WATER LEVELS:</b>
<b>CHECKED BY</b> Bob Clark-Riddell	<b>AT TIME OF DRILLING</b> ---
<b>NOTES</b> Concrete cored - hand auger to 5'.	<b>AT END OF DRILLING</b> ---
	<b>AFTER DRILLING</b> ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					Concrete	Concrete
1.0					Clay (CL); black; 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers; moist.	
5	SB-2-5	3				
10	SB-2-10	81	CL		Clay with sand (CL); black and grey; 70-80% medium plasticity fines; 20-30% fine- to coarse-grain sand stringers; trace fine gravel; moist; no odor. @9.5' strong hydrocarbon odor.  @12' no odor	Portland Cement
15	SB-2-15	62			Clay (CL); black and grey; 85-95% medium plasticity fines; 5-15% fine- to coarse-grain sand stringers; trace (less than 5%) fine gravel.	
20	SB-2-20	2			Clay with sand (CL); brown and grey; 60-70% medium plasticity fines; 20-30% fine- to coarse-grain sand; 10% fine gravel; moist.  @19.5' A 1" lense of Clayey Gravel with sand; 50-60% fine gravel; 20-30% coarse grain sand; 20-30% medium plasticity fines.  (@16' Set temporary casing and left in open borehole for 4.5 hours. No water. @20' Set temporary casing and left open for 1.5 hours. No Water.) Bottom of hole at 20.0 feet.	

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# BORING NUMBER SB-1

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 5/18/06	<b>COMPLETED</b> 5/18/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 2"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> Hand Auger to 5'	<b>GROUND WATER LEVELS:</b>
	<b>AT TIME OF DRILLING</b> ---
	<b>AT END OF DRILLING</b> ---
	<b>AFTER DRILLING</b> ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0.0						
0.3				Asphalt		
2.5				Well graded sandy gravel(GW); grey; baserock; 75-85% fine gravel to 1/2"; 15-25% fine- to coarse-grain sand; moist.		Concrete
3.0			CL	Clay (CL); black, 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers; moist.		
4.0				Well graded sandy gravel(GW); grey; baserock; 75-85% fine gravel to 1/2"; 15-25% fine- to coarse-grain sand; moist.		
5.0			GW	No Recovery		
7.5	SB-1-7	5		Well graded sandy gravel(GW); grey; baserock; 75-85% fine gravel to 1/2"; 15-25% fine- to coarse-grain sand; moist.		Portland Cement
10.0						
12.5	SB-1-11		GW			
14.0	SB-1-14	274			@13' Strong hydrocarbon odor. (@14' hit something solid (top of sewer line) and stop. Moved 2' south and start new hole (SB-1A). Bottom of hole at 14.0 feet.	

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# WELL NUMBER MW-11C

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 3/28/06	<b>COMPLETED</b> 3/28/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> _____	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 19.0 ft
	∇ <b>AT END OF DRILLING</b> ---
	∇ <b>7hrs AFTER DRILLING</b> 9.0 ft

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; black; organics; roots.	
						<b>Clay with sand (CL)</b> ; grey; 70-80% medium plasticity fines; 20-30% fine-to coarse-grain sand.	Concrete
5	MW-11C-5						
						∇	
10	MW-11C-11	69	3 4 10 3 4 6 3 6 11			<b>Clay (CL)</b> ; grey and brown; 80-90% medium plasticity fines; 10-20% medium- to coarse-grain sand stringers; moist; strong hydrocarbon odor.	
						@13' Increased sand stringers (30-40%)	
						@15' Decreased sand stringers (10-20%)	
15	MW-11C-15	5	5 10 3 4 5 4 5 5 2 2 0 4 3 4 4 5 6 7 5 7 8	CL		∇ @19' Increased moisture	Portland Cement
						@21' Decreased sand stringers (trace - 5%); black; stiff.	
						@23' Brown	
25						<b>Sandy Clay with gravel (CL)</b> ; grey; 40-50% medium to high plasticity fines; 20-30% medium- to coarse-grain sand; 20-30% fine gravel; moist.	

TOTAL WELL LOG DULBIN MW11C.GPJ GINT US.GDT 11/19/07





CLIENT Hadjian

PROJECT NAME Hadjian - Dublin

PROJECT NUMBER 1001.001

PROJECT LOCATION 7240 Dublin Blvd

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM	
25								
		0	5			<b>Clay (CL)</b> ; grey and brown; 80-90% medium plasticity fines; 10-20% medium- to coarse-grain sand stringers; moist; strong hydrocarbon odor. (continued)		
			7			<b>Sandy Clay with gravel (CL)</b> ; grey; 40-50% medium to high plasticity fines; 20-30% medium- to coarse-grain sand; 20-30% fine gravel; moist.		
			8			<b>Clay (CL)</b> ; grey and brown; 80-90% medium plasticity fines; 10-20% medium- to coarse-grain sand stringers; moist; strong hydrocarbon odor.		
			3					
			4					
			4					
			3					
			6					
			6					
30		0	3	CL				@29' Less stiff.
			5					@30' More stiff as before; increased sand; 20-30% medium- to coarse-grain sand stringers.
			2					
			3					
			6					
			4					
			5					
			6					
			4					
35		0	5	SC		<b>Clayey Sand (SC)</b> ; grey; 50-60% fine- to coarse-grain sands; 40-50% medium plasticity fines; moist.		
			3					
			5					
			6					
			3					
			4					
			8	SP-SC		<b>Poorly graded sand with clay (SP-SC)</b> ; 85-95% fine- to medium-grain sand; 5-15% non plastic fines; wet.		
			3					
			4					
40		0	3	CL		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
			5	SP-SC		<b>Poorly graded sand with clay (SP-SC)</b> ; 85-95% fine- to medium-grain sand; 5-15% non plastic fines; wet.		
			7	CL		<b>Poorly graded sand with clay (SP-SC)</b> ; 85-95% fine- to medium-grain sand; 5-15% non plastic fines; wet.		
			3	CL		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
			4	SP-SC		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
			7	CL		<b>Poorly graded sand with clay (SP-SC)</b> ; 85-95% fine- to medium-grain sand; 5-15% non plastic fines; wet.		
			3	SP-SC		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
			4	SP-SC		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
			7	SP-SC		<b>Clay (CL)</b> ; 80-90% medium plasticity fines; 10-20% fine- to medium-grain sand.		
45		0	3			<b>Poorly graded sand with clay (SP-SC)</b> ; 85-95% fine- to medium-grain sand; 5-15% non plastic fines; wet.		
						Bottom of hole at 45.0 feet.		

TOTAL WELL LOG DULBIN MW11C.GPJ GINT US.GDT 11/19/07





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# WELL NUMBER DPE-2

<b>CLIENT</b> <u>Hadjian</u>	<b>PROJECT NAME</b> <u>Hadjian - Dublin</u>
<b>PROJECT NUMBER</b> <u>1001.001</u>	<b>PROJECT LOCATION</b> <u>7240 Dublin Blvd</u>
<b>DATE STARTED</b> <u>7/15/09</u> <b>COMPLETED</b> <u>7/15/09</u>	<b>GROUND ELEVATION</b> _____ <b>HOLE SIZE</b> <u>10"</u>
<b>DRILLING CONTRACTOR</b> <u>ECA</u>	<b>GROUND WATER LEVELS:</b>
<b>DRILLING METHOD</b> <u>Hollow Stem Auger - 10"</u>	<b>AT TIME OF DRILLING</b> <u>---</u>
<b>LOGGED BY</b> <u>Morgan Gillies</u> <b>CHECKED BY</b> <u>Bob Clark-Riddell</u>	<b>AT END OF DRILLING</b> <u>---</u>
<b>NOTES</b> <u>Hand Auger to 5'; logged from cuttings.</u>	<b>AFTER DRILLING</b> <u>---</u>

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

TOTAL WELL LOG\_DUBLIN DPE-2.GPJ GINT US.GDT 10/28/09



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# BORING NUMBER SB-1A

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 5/18/06	<b>COMPLETED</b> 5/18/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 2"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> _____	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 14.0 ft
	<b>AT END OF DRILLING</b> ---
	∇ <b>1hrs AFTER DRILLING</b> 11.2 ft

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	BORING DIAGRAM
0					Asphalt	
			GW		<b>Well graded sandy gravel (GW)</b> ; grey; baserock; 75-85% fine gravel to 1/2"; 15-25% fine- to coarse-grain sand; moist.	Concrete
			CL		<b>Clay (CL)</b> ; black, 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers; moist.	
5	SB-1A-5		GW		<b>Well graded sandy gravel (GW)</b> ; baserock; 75-85% fine gravel to 1/2"; 15-25% fine- to coarse-grain sand; moist.	
			CL		<b>Clay (CL)</b> ; black and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand; trace gravel.	
					No Recovery	Portland Cement
			CL		<b>Clay (CL)</b> ; black and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand; trace gravel.	
			SC		<b>Clayey Sand (SC)</b> ; black; 80-90% fine-grain sand; 10-20% medium plasticity fines; wet.	
15	SB-1A-15		CL		<b>Clay (CL)</b> ; black and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand; trace gravel.	
					(@ 16' Set temporary casing and left in open borehole for 1 hour. Water sample SB-1A-W.)	
					Bottom of hole at 16.0 feet.	

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# WELL NUMBER MW-10C

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 3/27/06	<b>COMPLETED</b> 3/27/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> Hand Auger to 5'	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 17.0 ft
	<b>AT END OF DRILLING</b> ---
	<b>AFTER DRILLING</b> ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							
0.5					Asphalt	Asphalt	
5	MW-10C-5				CL	Clay (CL); black and brown; 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers.	
					CL	@5' No odor.	
10	MW-10C-10	129	2 5 5 3 5 5 3 4 6 4		CL	Clay (CL); black and brown; 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers.	
					CL	@10' Gray and black; trace roots; moist; hydrocarbon odor.	
15	MW-10C-15	101	6 6 3 3 5 4 7 11 3 6 3 4 7 8 4 7 8 4 6 9		CL	Clay with sand (CL); grey and black; 75-85% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; trace to 5% fine gravel; stiff; increased moisture.	
					CL	@14.5' No odor.	
20		3	4 3 7 8 4 7 8 4 6 9		CL	Clay with sand (CL); grey and black; 75-85% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; trace to 5% fine gravel; stiff; increased moisture.	
					CL	@24' Increased sand; 20-30% fine- to coarse-grain sand stringers; no gravel.	
25					CL		← Portland Cement

TOTAL WELL LOG DUBLIN MW10C.GPJ GINT US.GDT 11/19/07



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# WELL NUMBER MW-10C

CLIENT Hadjian

PROJECT NAME Hadjian - Dublin

PROJECT NUMBER 1001.001

PROJECT LOCATION 7240 Dublin Blvd

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM	
25								
		0	4					
			7					
			7	CL				
			4					
			6					
			7					
			3	SC		28.3		<b>Clayey Sand (SC);</b> grey; 75-85% fine- to medium-grain sand; 15-25% medium plasticity fines; moist. <b>Clay with sand (CL);</b> grey and black; 75-85% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; trace to 5% fine gravel; stiff; increased moisture.
			5					
			6					
30			4					
		22	9					
			10					
			4					
			6					
			7					
			4					
			6					
			7					
			4					
			6					
			7					
			4					
			5					
35			5					
		0	6	CL		@35' decreased sand; 5-10% medium- to coarse-grain sand stringers.		
			4					
			5					
			9			@36' increased sand; 20-30% fine- to coarse-grain sand stringers.		
			5					
			6					
			7			@38' decreased sand; 5-10% medium- to coarse-grain sand stringers.		
			5					
			8					
			9					
40			9					
		2	4					
			12					
			14					
			5					
			6					
			7	SC	40.0	<b>Sand with silt (SC);</b> grey; 60-70% fine- to medium-grain sand; 30-40% low plasticity fines; moist. <b>@43' Sand;</b> grey; 95-100% fine- to coarse-grain sand; trace to 5% non-plastic fines.		
			6					
			9					
			11					
45		2	7			45.0		
						Bottom of hole at 45.0 feet.		

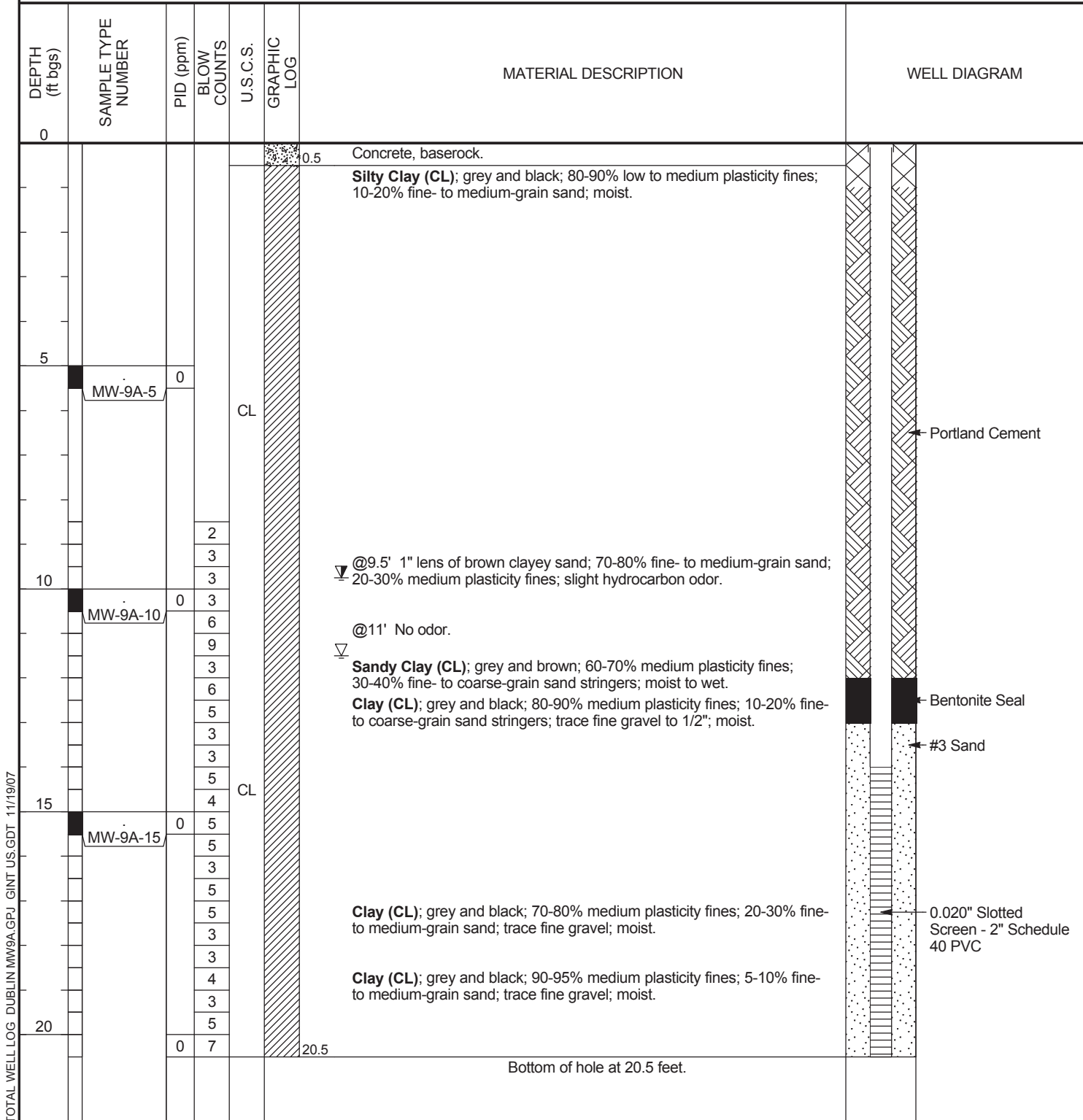
TOTAL WELL LOG DUBLIN MW10C.GPJ GINT US.GDT 11/19/07



Pangea Environmental Services, Inc.  
 1710 Franklin Street, Suite 200  
 Oakland, CA 94612  
 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-9A

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 4/3/06	<b>COMPLETED</b> 4/3/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>GROUND WATER LEVELS:</b>
<b>CHECKED BY</b> Bob Clark-Riddell	∇ <b>AT TIME OF DRILLING</b> 11.5 ft
<b>NOTES</b> Concrete cored; hand auger to 5'.	∇ <b>AT END OF DRILLING</b> ---
	∇ <b>10hrs AFTER DRILLING</b> 9.8 ft



TOTAL WELL LOG DUBLIN MW9A.GPJ GINT U.S.GDT 11/19/07



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 1710 Franklin Street, Suite 200  
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 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-8A

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 5/17/06	<b>COMPLETED</b> 5/17/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> Concrete cored; hand Auger to 5'	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 14.5 ft
	<b>AT END OF DRILLING</b> ---
	<b>AFTER DRILLING</b> ---

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0							
5	MW-8A-5	4		CL		<b>Clay (CL);</b> black; 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand stringers; moist.	Concrete
10	MW-8A-10	2		CL		(@11' Driller noted 'soft' drilling)	Portland Cement Type II
15	MW-8A-15	5		SC		14.5 ∇ <b>Clayey sand (SC);</b> brown; 70-80% fine-grain sand; 20-30% medium plasticity fines; increased moisture.	Bentonite
				CL		15.5 <b>Clay (CL);</b> black; 70-80% medium plasticity fines; 10-20% fine- to coarse-grain sand; trace to 10% fine gravel.	#3 Sand
20				CL		20.0 <b>Clay (CL);</b> black; 90-95% medium plasticity fines; 5-10% fine- to coarse-grain sand.	0.02" Schedule 40 PVC
						Bottom of hole at 20.0 feet.	

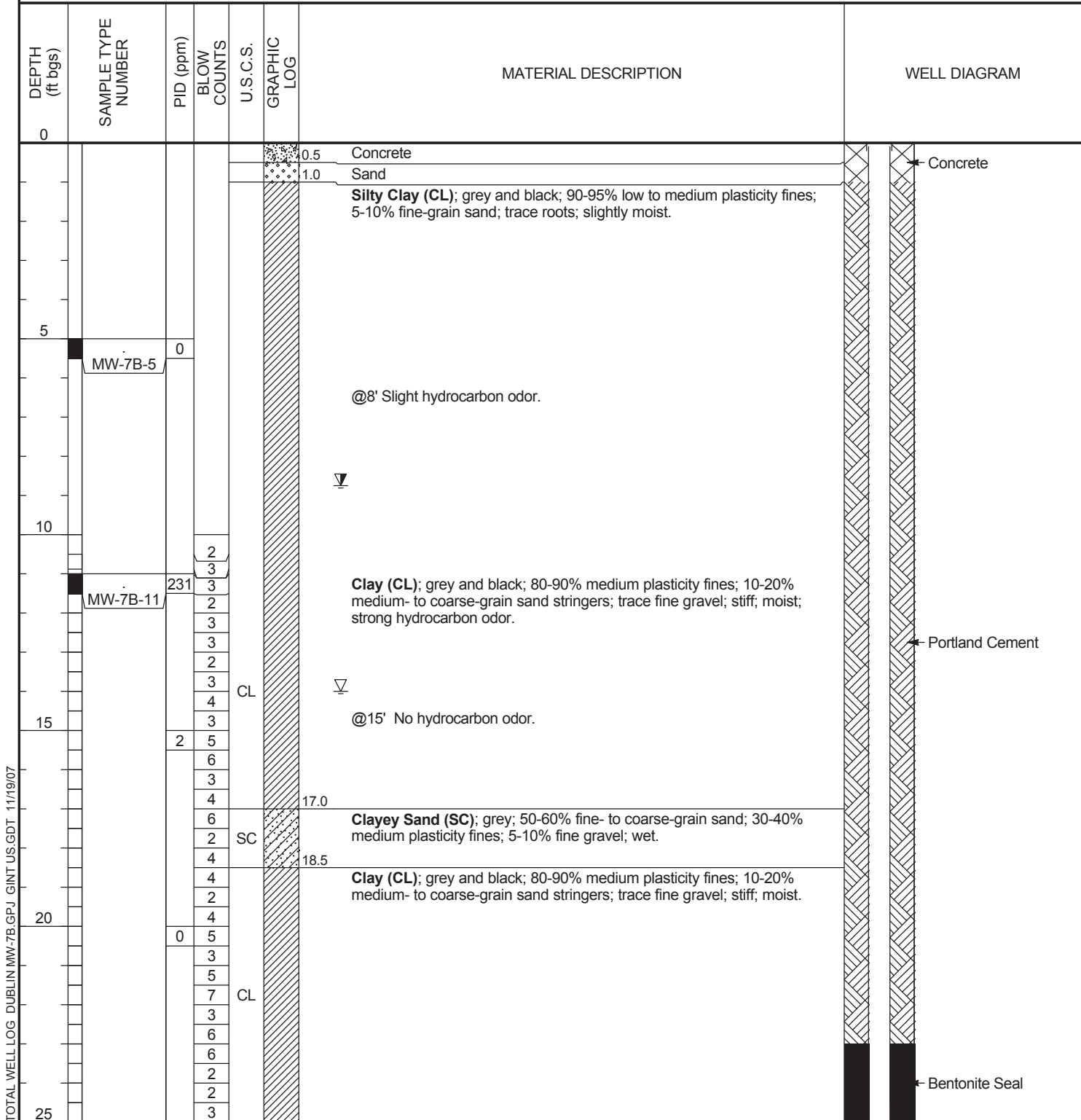
TOTAL WELL LOG DUBLIN MW8A.GPJ GINT U.S.GDT 11/19/07



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 1710 Franklin Street, Suite 200  
 Oakland, CA 94612  
 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-7B

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 3/29/06	<b>COMPLETED</b> 3/29/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Hollow Stem Auger - 8"	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>GROUND WATER LEVELS:</b>
<b>CHECKED BY</b> Bob Clark-Riddell	∇ <b>AT TIME OF DRILLING</b> 14.0 ft
<b>NOTES</b> Concrete cored; Hand Auger to 5'.	∇ <b>AT END OF DRILLING</b> ---
	∇ <b>29hrs AFTER DRILLING</b> 8.8 ft



TOTAL WELL LOG DUBLIN MW-7B.GPJ GINT US.GDT 11/19/07





Pangea Environmental Services, Inc.  
 1710 Franklin Street, Suite 200  
 Oakland, CA 94612  
 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-7B

CLIENT Hadjian

PROJECT NAME Hadjian - Dublin

PROJECT NUMBER 1001.001

PROJECT LOCATION 7240 Dublin Blvd

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM	
25								
		0	3	CL		<b>Clay (CL)</b> ; grey and black; 80-90% medium plasticity fines; 10-20% medium- to coarse-grain sand stringers; trace fine gravel; stiff; moist. <i>(continued)</i>		
			5					27.0
			6					
			2	SC		<b>Clayey Sand (SC)</b> ; grey; 70-80% fine- to medium-grain sand; 20-30% medium plasticity fines; wet.		
			2					29.0
			3					
			3	CL		<b>Clay (CL)</b> ; brown and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; stiff to medium stiff.		
			5					
			6					
30		0	6	CL		<b>Clay (CL)</b> ; brown and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; stiff to medium stiff.		
			8					
			5					
			9					
			9					
			5					
			6	CL		<b>Clay (CL)</b> ; brown and grey; 80-90% medium plasticity fines; 10-20% fine- to coarse-grain sand stringers; stiff to medium stiff.		
			7					
			4					
35		0	6					
						Bottom of hole at 35.5 feet.		

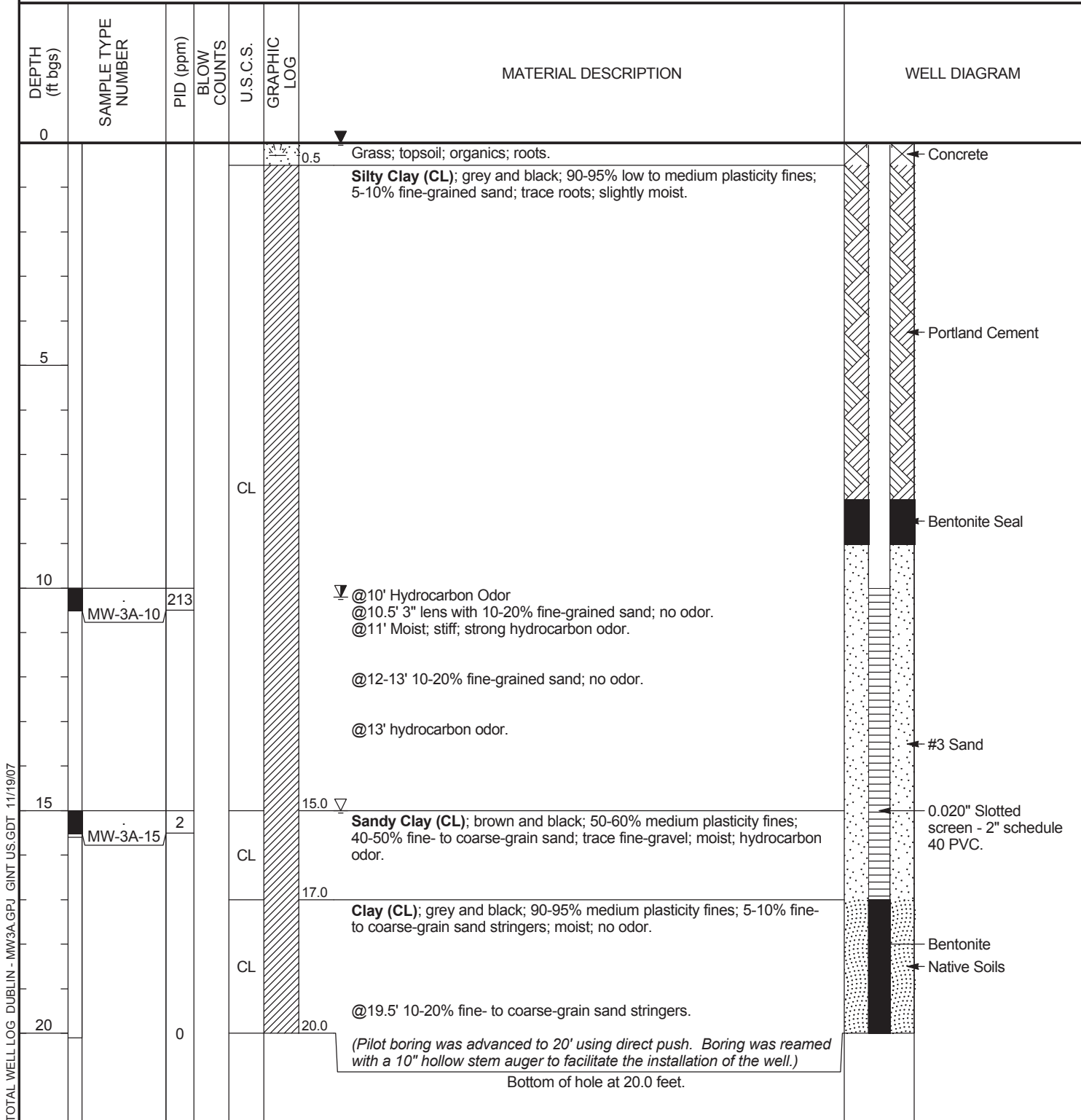
TOTAL WELL LOG DUBLIN MW-7B.GPJ GINT US.GDT 11/19/07



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 1710 Franklin Street, Suite 200  
 Oakland, CA 94612  
 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-3A

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b>
<b>DATE STARTED</b> 3/30/06	<b>COMPLETED</b> 3/30/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b>
<b>DRILLING METHOD</b> Direct Push - Single Wall	<b>HOLE SIZE</b> 10"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> Hand Auger to 5', Pilot boring continuously cored to 20' bgs.	<b>GROUND WATER LEVELS:</b>
	▽ <b>AT TIME OF DRILLING</b> 15.0 ft
	▽ <b>AT END OF DRILLING</b> 0.0 ft
	▽ <b>4hrs AFTER DRILLING</b> 10.2 ft



TOTAL WELL LOG DUBLIN - MW3A.GPJ GINT US.GDT 11/19/07



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 1710 Franklin Street, Suite 200  
 Oakland, CA 94612  
 Telephone: 510-836-3700  
 Fax: 510-836-3709

# WELL NUMBER MW-6C

<b>CLIENT</b> Hadjian	<b>PROJECT NAME</b> Hadjian - Dublin
<b>PROJECT NUMBER</b> 1001.001	<b>PROJECT LOCATION</b> 7240 Dublin Blvd
<b>DATE STARTED</b> 3/30/06	<b>COMPLETED</b> 3/30/06
<b>DRILLING CONTRACTOR</b> Gregg Drilling	<b>GROUND ELEVATION</b> _____
<b>DRILLING METHOD</b> Hollow Stem Auger - 8"	<b>HOLE SIZE</b> 8"
<b>LOGGED BY</b> Morgan Gillies	<b>CHECKED BY</b> Bob Clark-Riddell
<b>NOTES</b> Concrete cored, hand auger to 5'.	<b>GROUND WATER LEVELS:</b>
	∇ <b>AT TIME OF DRILLING</b> 15.0 ft
	∇ <b>AT END OF DRILLING</b> ---
	∇ <b>AFTER DRILLING</b> 9.0 ft

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
0						Concrete; baserock.	
1.0							Concrete
						<b>Silty Clay (CL)</b> ; grey and black; 90-95% low to medium plasticity fines; 5-10% fine-grained sand; slightly moist.	
5	MW-6C-5	0					
10	MW-6C-10	87		CL		∇ @10' Hydrocarbon Odor	
						<b>Sandy Clay (CL)</b> ; brown; 60-70% medium plasticity fines; 30-40% fine- to coarse-grain sand; trace fine-gravel; trace roots; no odor. <b>Clay (CL)</b> ; grey and black; 70-80% medium to high plasticity fines; 20-30% fine- to coarse-grain sand stringers; strong hydrocarbon odor.	
15	MW-6C-15	5				∇ <b>Sandy Clay</b> ; brown; 60-70% meidum plasticity fines; 30-40% fine- to coarse-grained sand; moist, decreased odor. <b>Clay (CL)</b> ; grey and black; 90-95% medium to high plasticity fines; 5-10% fine- to coarse-grain sand stringers; faint hydrocarbon odor.	Portland Cement
18.0							
18.5				SC		<b>Clayey Sand (SC)</b> ; brown; 60-70% fine- to medium-grain sand; 30-40% medium plasticity fines; moist; no odor.	
20			14			<b>Clay (CL)</b> ; grey and black; 90-95% medium to high plasticity fines; 5-10% fine- to coarse-grain sand stringers; no odor. <b>Clay (CL)</b> ; grey and black; 70-80% medium to high plasticity fines; 20-30% fine- to coarse-grain sand stringers; no odor. <b>Clay (CL)</b> ; grey and black; 90-95% medium to high plasticity fines; 5-10% fine- to coarse-grain sand stringers; no odor.	
				CL		<b>Sandy Clay (CL)</b> ; brown; 60-70% medium plasticity fines; 30-40% fine- to coarse-grain sand; no odor. <b>Clay (CL)</b> ; grey and black; 90-95% medium to high plasticity fines; 5-10% fine- to coarse-grain sand stringers; no odor.	
25							

TOTAL WELL LOG DUBLIN MW-6C.GPJ GINT.US.GDT 11/19/07



CLIENT Hadjian

PROJECT NAME Hadjian - Dublin

PROJECT NUMBER 1001.001

PROJECT LOCATION 7240 Dublin Blvd

DEPTH (ft bgs)	SAMPLE TYPE NUMBER	PID (ppm)	BLOW COUNTS	U.S.C.S.	GRAPHIC LOG	MATERIAL DESCRIPTION	WELL DIAGRAM
25							
		21				<b>Sandy Clay (CL)</b> ; brown; 60-70% medium plasticity fines; 30-40% fine- to coarse-grain sand; no odor.	
				CL		<b>Clay (CL)</b> ; brown and grey; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand; trace fine gravel to 1/2"; stiff.	
30						<b>Sandy Clay (CL)</b> ; grey and black; 70-80% low to medium plasticity fines; 20-30% fine- to coarse-grain sand; trace gravel to 1/2"; soft; moist.	
		33				<b>Clay (CL)</b> ; brown and grey; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand; stiff.	
						<b>Sandy Clay (CL)</b> ; grey and black; 70-80% low to medium plasticity fines; 20-30% fine- to coarse-grain sand; soft; wet.	Bentonite Seal
35						<b>Clay (CL)</b> ; brown and grey; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand; trace fine gravel to 1/2"; stiff.	
		29					0.020" Slotted screen - 2" schedule 40 PVC.
				CL		<b>Sandy Clay (CL)</b> ; grey and black; 70-80% low to medium plasticity fines; 20-30% fine- to coarse-grain sand; soft; moist.	#3 Sand
40						@40' Wet	
		0				<b>Clay (CL)</b> ; brown and grey; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand; stiff.	
						<b>Clayey Sand (SC)</b> ; brown; 60-70% fine- to medium-grain sand; 30-40% medium plasticity fines; trace fine gravel; moist; no odor.	
		0		SC			
						(Pilot boring continuously cored to 44' bgs.)	
						Bottom of hole at 44.0 feet.	

TOTAL WELL LOG DUBLIN MW-6C.GPJ GINT.US.GDT 11/19/07



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.	
						Clay with Sand (CL); black; 80-90% medium to high plasticity fines; 10-20% fine- to coarse-grain sand stringers.	Concrete
5							Portland Cement
				CL			Bentonite Seal
10						@10' Hydrocarbon odor.	#2/12 Sand
							0.010" Slotted 4" SCH 40 PVC
15							Slough
						Bottom of hole at 15.0 feet.	

TOTAL WELL LOG\_DUBLIN DPE-1.GPJ GINT US.GDT 10/28/09



## **APPENDIX B**

### Groundwater Gradient Evaluation Table

Groundwater Gradient Evaluation

Monitoring Event	Well Caps Removed one day before	Upper Shallow Wells (AA-Zone)					Shallow Wells (A-Zone)											
		DPE-1	DPE-2	MW-7AA	VW-1	VW-2	VW-3	MW-1	MW-2	MW-3A	MW-4	MW-5	MW-6A	MW-7A	MW-8A	MW-9A		MW-10A
4/24/2014		x	x	x				x	x	x	x		x	x	x	x	x	north of site S & SW; onsite E
12/31/2013		x	x	x				x	x		x		x	x	x	x	x	north of site S; onsite E
2/26/2013		x	x	x				x	x		x		x	x	x	x	x	north of site SE; onsite E
08/25/12		x	x	x				x	x	x	x		x		x	x	x	east to northeast
02/15/12		x	x	x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
08/03/11		x	x	x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW & S
02/21/11		x	x					x	x	x	x		x		x	x		SE
11/30/10		x	x	x				x	x	x	x		x	x		x	x	north of site SE; onsite SW
08/12/10	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
06/04/10	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
02/11/10	X			x				x	x	x	x		x		x	x	x	north of site SE; onsite NW
11/24/09	X			x				x	x	x	x		x	x	x	x	x	noth of site SE; onsite NW
08/13/09	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
05/28/09	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
02/06/09				x				x	x	x	x		x	x	x	x	x	north of site SE; onsite W
11/13/08	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
08/13/08	X			x				x	x	x	x		x	x	x	x	x	north of site E; onsite NW
05/21/08	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
02/26/08	X			x				x	x	x	x		x	x	x	x	x	north of site S to SW; onsite NW
12/21/07	X																	
8/28/2007	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
5/15/2007	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite NW
2/21/2007	X			x				x	x	x	x		x	x	x	x	x	north of site SE; onsite S (?)
11/24/2006				x				x	x	x	x		x	x	x	x	x	north of site SE; onsite N & NW
8/17/2006				x				x	x	x	x		x	x	x	x	x	north of site S; onsite NE & SW
7/7/2006				x				x	x	x	x		x	x	x	x	x	north of site S to SE; onsite S
2/21/2006								x	x		x	x						north of site S to SE; onsite SE
11/27/2005								x	x		x	x						north of site E to SE; onsite SW
5/17/2005								x	x		x	x						north of site E; onsite W
2/21/2005								x	x		x	x						north of site E to SE; onsite W
12/15/2004								x	x		x	x						north of site E to SE; onsite uses EA wells



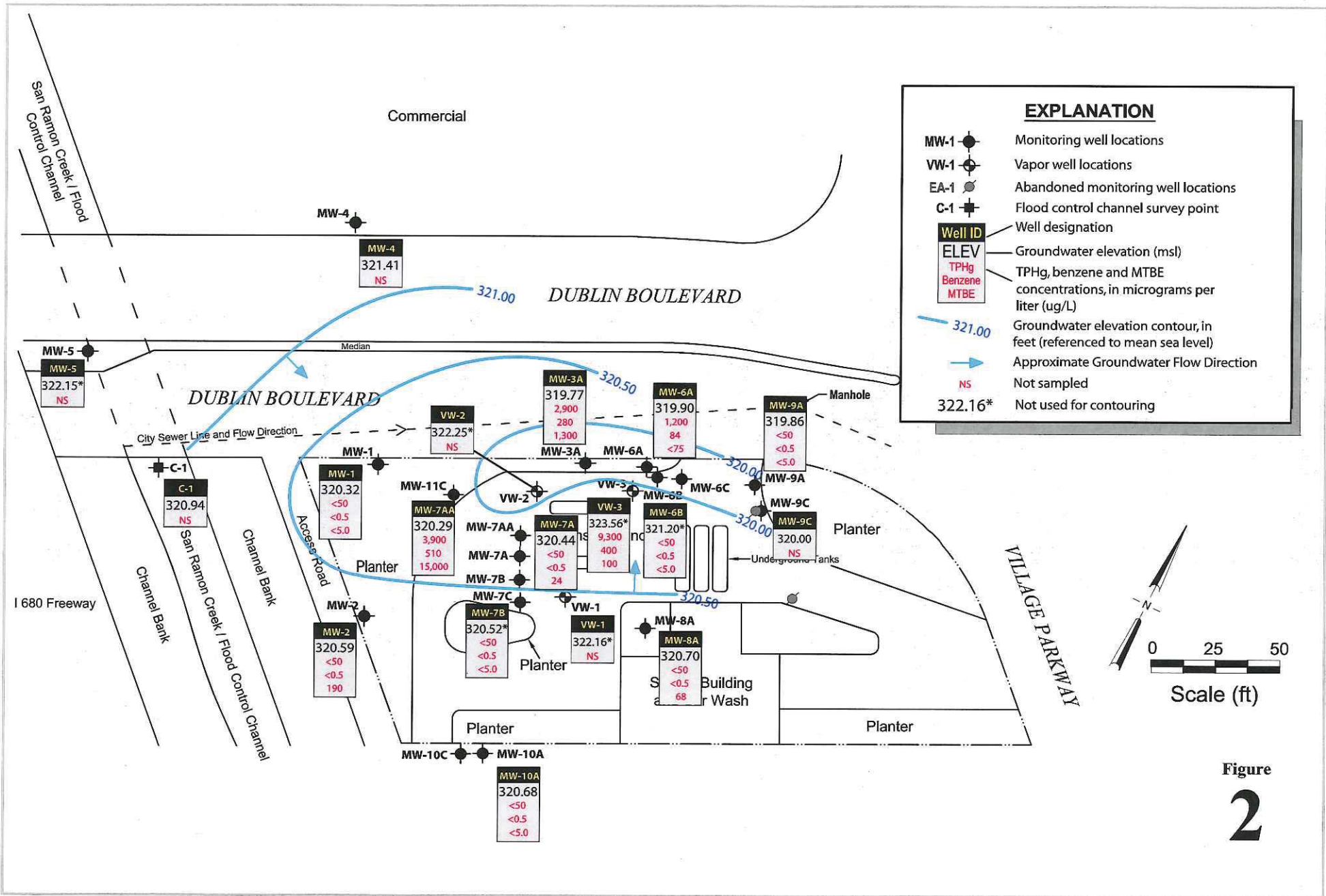


Figure 2

Dublin Auto Wash  
 7240 Dublin Boulevard  
 Dublin, California



Groundwater Elevation Contour and  
 Hydrocarbon Concentration Map  
 August 13, 2008









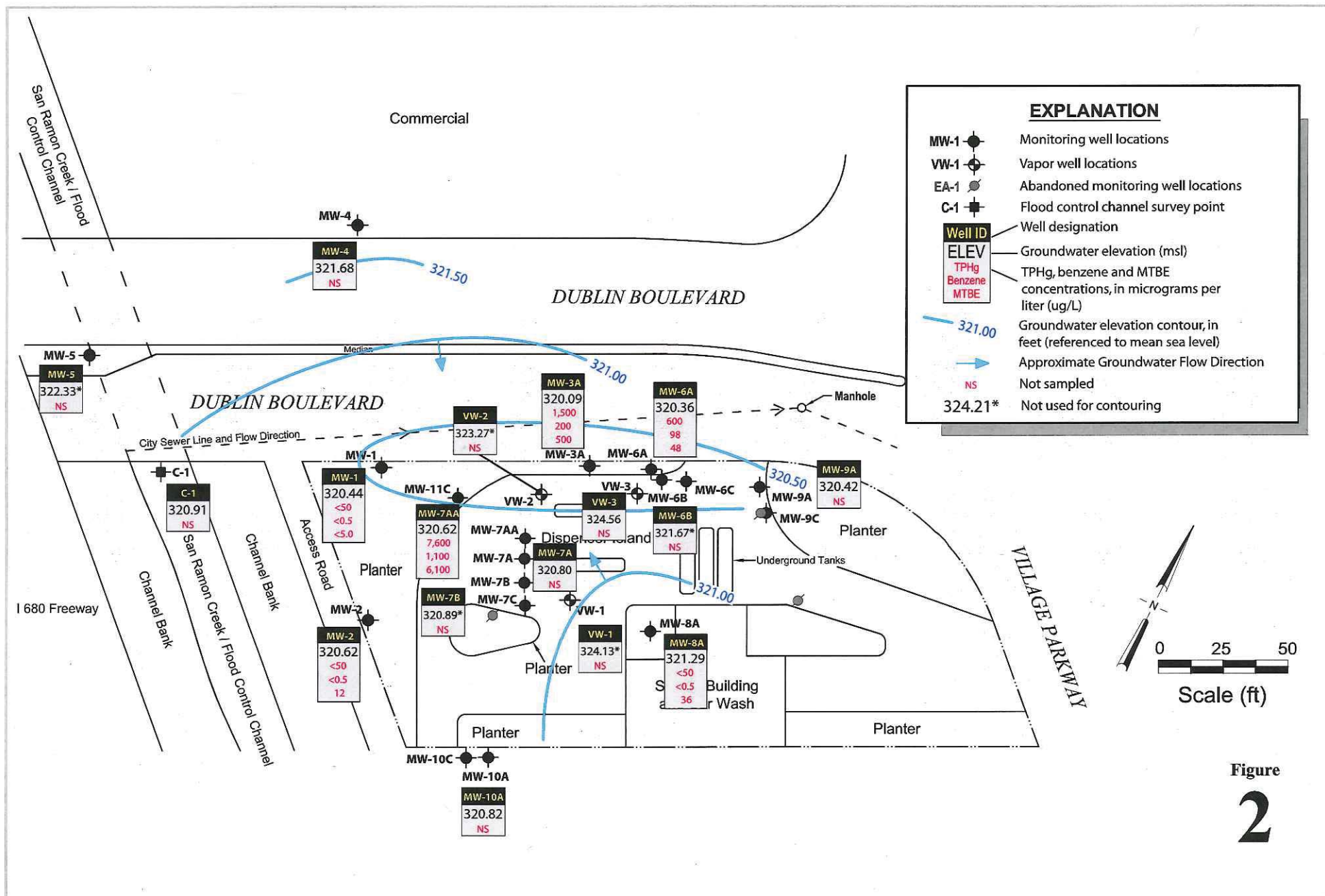


Figure  
**2**



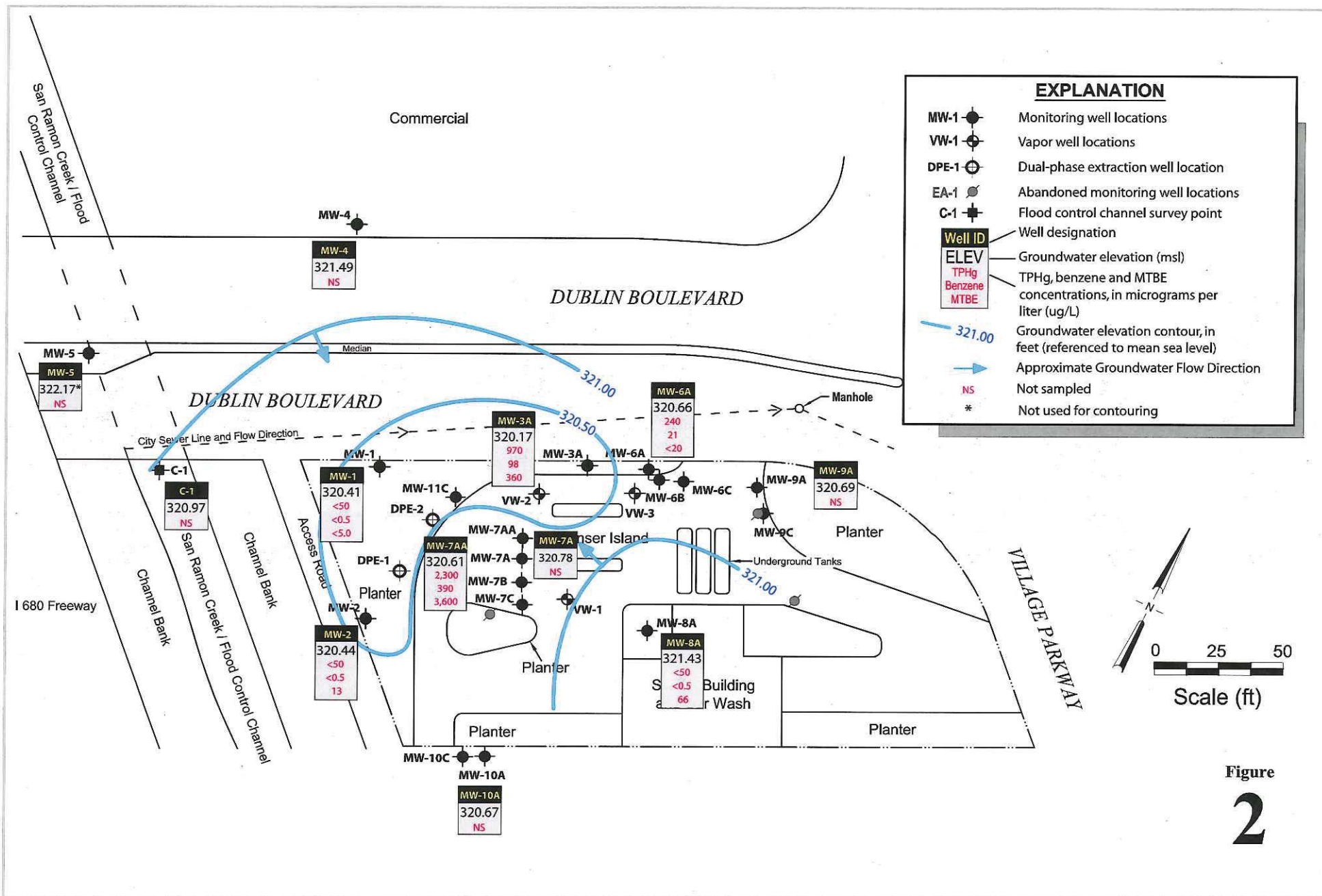


Figure  
**2**

**Dublin Auto Wash**  
7240 Dublin Boulevard  
Dublin, California



**Groundwater Elevation Contour and  
Hydrocarbon Concentration Map**  
November 24, 2009

## **APPENDIX C**

### Utility Location Map



