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

May 28, 2014

VIA ALAMEDA COUNTY FTP SITE

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

Re: **Groundwater Monitoring and Enhanced Bioremediation Pilot Test Report - First Half 2014**
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 *Groundwater Monitoring and Enhanced Bioremediation Pilot Test Report – First Half 2014*. This report describes groundwater monitoring activities and pilot testing procedures and results.

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

Attachment: *Groundwater Monitoring and Enhanced Bioremediation Pilot Test Report – First Half 2014*

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

GROUNDWATER MONITORING AND ENHANCED BIOREMEDIATON PILOT TEST REPORT – FIRST HALF 2014

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

May 28, 2014

Prepared for:

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

Prepared by:

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

Written by:

REGISTERED PROFESSIONAL ENGINEER
ROBERT G. CLARK-RIDDELL
No. C 049629
Exp. 3/31/2014
CIVIL
STATE OF CALIFORNIA

Morgan Gillies
Project Manager

Bob Clark-Riddell, P.E.
Principal Engineer

INTRODUCTION

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and bioremediation pilot testing during this period at the subject site (Figure 1). The purpose of the monitoring and sampling is to evaluate groundwater flow direction and dissolved contaminant concentrations, and to inspect site wells for separate-phase hydrocarbons (SPH). The purpose of the bioremediation pilot testing is to enhance hydrocarbon biodegradation and evaluate the presence of potential submerged free product. Current groundwater analytical results and elevation data are shown on Figure 2. Well construction details are presented in Table 1. Current and historical data are summarized on Table 2.

SITE BACKGROUND

The Dublin Auto Wash retail gasoline station is located at the southwest corner of Dublin Boulevard and Village Parkway in Dublin, California (Figure 1). Currently, there are three 10,000-gallon underground storage tanks (USTs) and a carwash at the site. Land use immediately surrounding the station is commercial.

Summary of Previous Environmental Work

Chevron Release – 1988 to 1996

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

New Release – February 1997

In February 1997, a leak in a stainless steel product line flex hose was discovered and reported to ACEH. The leak location was immediately south of the north-westernmost dispenser (dispenser No. 2). During June 1997 testing, the secondary piping failed a pressure test. Subsequently, a new product delivery system was installed to replace the existing lines. During the system modifications in July 1997, Parker Environmental Services collected soil samples via hand auger at locations B-1 through B-4. About 31 cubic yards of soil were removed

from the release area to a depth of 8 feet bgs. The results of subsequent groundwater monitoring events in December 1998 and March 1999 indicated free product was present in well MW-3. The detection of free product in MW-3 (up to 0.1 feet thick) corresponds to the historically lowest groundwater elevation observed during site monitoring activities, when the depth to groundwater in well MW-3 was 12.92 feet in December 1998.

Gettler-Ryan, Inc. (GRI), a subcontractor of Chevron, monitored the eight existing groundwater monitoring wells at the site until the first quarter of 2003. In 2003, SOMA began performing groundwater monitoring at the site on behalf of Mr. Hadjian. SOMA noted groundwater apparently flowed from offsite wells MW-4 and MW-5 toward the site in the approximate southeast direction, while groundwater at the eastern portion of the site apparently flowed in the northeast direction. SOMA believed the groundwater flow direction may have been affected by the 18" diameter vitrified clay pipe (VCP) sewer line running beneath the southern portion of Dublin Boulevard immediately north of the site. Information provided by Gettler-Ryan indicated that the top of the sanitary sewer line was approximately 16 feet below grade surface (bgs), while the depth to water in nearby wells MW-1 and MW-3 has ranged from approximately 11 to 13 ft bgs.

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

SOMA's investigation confirmed that contaminant concentrations were highest near the northern central portion of the site, and concluded that the 18" diameter sewer line located immediately north of the site is intercepting groundwater contamination. Fill material around the sewer line could be acting as a preferential pathway for the contamination conveyance to the east and then southeast, the sewer flow direction. SOMA also found contamination in deeper groundwater. SOMA concluded that there are three relatively higher permeability zones on the site acting as water bearing zones – Shallow (10 – 15 to 19 – 23 feet bgs), Middle (19 – 23 to 32 – 36 feet bgs), and Deep (32 – 36 to 43 – 47 feet bgs) – with an Upper Shallow zone (at approximately 2 to 6 feet bgs) noted in a few of the borings. In several locations, an insufficient amount of water was present in the potential water bearing zones, so no groundwater samples were obtained by SOMA. Since wells EA-1, EA-2, EA-3, and MW-1 are screened across the various water bearing zones at the site, SOMA recommended that these wells be destroyed to prevent them from acting as vertical conduits for the migration of the contaminants. SOMA also recommended that wells be installed in the Shallow, Middle, and Deep zones at the site to determine the groundwater flow directions in the various zones.

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

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

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

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

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 *Interim Remediation Report and Corrective Action Plan* (CAP) 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.

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 *Remediation Well Installation Report* dated December 16, 2009.

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 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. DPE operation was very costly due to high energy costs, because PG&E could not provide electrical service before the rainy season and PG&E required very costly re-engineering of the existing electrical service ($20,000 or more). The utilized DPE equipment required diesel fuel and a diesel generator to power the vacuum pump and required propane as supplementary fuel for the oxidizer.

On May 28, 2013, Pangea and ACEH met to discuss site conditions with respect to the State Water Resources Control Board's recently adopted *Low Threat Closure Policy* (LTCP). Following the meeting the ACEH issued a May 28, 2013 directive letter determining that the site fails to meet select LTCP general and media-specific criteria. ACEH expressed concerns about potential submerged free product, the appropriateness of existing well screen intervals, and the adjacent sanitary sewer that could act as a preferential pathway for hydrocarbon migration. As directed, Pangea performed the approved bioremediation pilot test and updated the site conceptual model.

GROUNDWATER MONITORING AND SAMPLING

On April 24 and 25, 2014, groundwater monitoring and sampling was conducted at the site. The sampling was performed shortly after enhanced bioremediation pilot testing. The approved semi-annual groundwater monitoring program is summarized on Table A in Appendix A. The depth to water at survey point C-1 above the flood control channel was also measured.

Before well purging, the dissolved oxygen (DO) concentration was measured in each sampled well. DO was measured by lowering a downwell sensor to the approximate middle of the water column, and allowing the reading to stabilize during gentle height adjustment. Prior to sample collection, approximately three casing volumes of water (unless the well dewatered) were purged using disposable bailers, a PVC bailer, an electric

submersible pump, positive air displacement pump, or a peristaltic pump. During well purging, field technicians measured the pH, temperature and conductivity. Groundwater samples were collected from each well with a disposable bailer, and decanted into the appropriate containers supplied by the analytical laboratory. Groundwater samples were labeled, placed in protective plastic bags, and stored on crushed ice at or below 4° C. All samples were transported under chain-of-custody to a State-certified analytical laboratory. Purge water was temporarily stored onsite in DOT-approved 55-gallon drums. Groundwater monitoring field data sheets are presented in Appendix B.

MONITORING RESULTS

Current and historical groundwater elevation data and analytical results are described below and summarized on Table 2. Groundwater samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) by modified EPA Method 8015C; and benzene, toluene, ethylbenzene, xylenes (BTEX), and methyl tertiary butyl ether (MTBE) by EPA Method 8021B. Select samples were analyzed for naphthalene by EPA Method 8260. For the bioremediation pilot test, select samples were also analyzed for residual BOC compounds as cobalt thiocyanante active substances/non-ionic surfactants (CTAS) by EPA Method 5540D and 2-propanol (IPA) by EPA Method 8260B. Samples were analyzed by McCampbell Analytical, Inc. of Pittsburg, California, a State-certified laboratory. The laboratory analytical report is included in Appendix B. DO concentrations ranged from 0.00 mg/L (wells MW-2, MW-3A, MW-6A, MW-7A, MW-7B, DPE-2 and VW-2) to 1.06 mg/L (well DPE-1).

Groundwater Flow Direction

Based on depth-to-water data collected April 24, 2014 groundwater elevations in shallow and intermediate zones are shown on Figure 2 and discussed below. Groundwater flow at the site is complex due to the combined effects of a generally upward gradient, the nearby creek/flood control channel, seasonal fluctuations in flow direction, and possible influences of the city sewer line located beneath Dublin Boulevard.

Vertical Gradient Evaluation: A comparison of clustered well pairs screened at different depths indicates that a consistent *upward* gradient component of approximately 0.05 to 0.15 ft/ft is present between the shallow and intermediate water-bearing zones at the portion of the site north of the dispenser islands (MW-6A and 6B), and a much smaller *upward* gradient was present southwest of the dispenser islands (MW-7A and MW-7B) this event, as shown below on Table A. A *downward* gradient appears to be present between vapor wells VW-1, VW-2 and VW-3 and the upper shallow AA-zone monitoring wells, although this apparent gradient may be due to *perched* groundwater.

Table A – Vertical Gradient Evaluation using Paired Monitoring Wells

Monitoring Well Pair	Groundwater Elevation	Mean Screen Depth	Calculated Vertical Gradient
MW-6A	320.72	17.5	
MW-6B	321.26	28	
Difference	*0.54*	*10.5*	*0.05 (upwards)*
MW-7A	320.89	18	
MW-7B	320.95	28	
Difference	*0.06*	*10*	*0.006 (upwards)*

Horizontal Gradient Evaluation: Depth-to-water measurements collected during this and prior groundwater monitoring events indicate that the horizontal component of groundwater flow direction north of the site has been consistently *southward to southeastward* for the *shallow* wells. However, gradient directions in the southern portion of the site have fluctuated significantly, possibly due to the influence of the nearby flood control channel and/or City sewer line beneath Dublin Boulevard. As shown on Figure 2, the horizontal component of the groundwater flow direction in the *shallow* wells at the site for the current monitoring event is primarily *south* to *southwestwards* north and west of the site and *eastwards* in the eastern portion of the site. This change from the typical groundwater flow direction at the site may have been influenced by drought conditions in the San Ramon Creek Flood Control Channel. Additionally, the onsite carwash was not operating for at least two weeks prior to this monitoring event potentially resulting in a lack of water infiltration from the onsite car wash compared to previous monitoring events. The horizontal component of groundwater flow in the *intermediate-depth* wells could not be determined since only two wells are screened at that depth.

Conclusion: The primary observation regarding the piezometric surface is that a moderately well-defined *upward* gradient is present in wells north of the dispenser islands. The horizontal gradient is complex and likely affected by the many factors described above. Historical depth-to-water and groundwater elevation data for the site are presented in Table 1.

Hydrocarbon Distribution in Groundwater

Based on recent results, hydrocarbon contamination is concentrated in the upper shallow (AA) and shallow (A) water-bearing zones in the vicinity of the fuel dispensers, as shown in Table 2 and on Figure 2. The estimated extent of TPHg and benzene are shown on Figures 3 and 4, respectively. TPHg and benzene concentration trends in key site wells are graphed on Figures 5 and 6, respectively.

During this monitoring event, the highest TPHg (3,300 µg/L) and benzene (150 µg/L) concentrations were detected in wells MW-3A and MW-6A, respectively.

Naphthalene was detected this event at concentrations of 170 µg/L and 68 µg/L, respectively, in wells MW-3A and MW-6A. These concentrations exceed environmental screening levels (ESLs) established by the RWQCB.

No separate-phase hydrocarbons (SPH) were detected in site wells this quarter. SPH was previously detected in MW-3 and replacement well MW-3A, but has not been detected in MW-3A since May 2006, shortly after well installation. Hydrocarbon concentrations generally show stable to decreasing trends in all site wells, although concentrations remain elevated in select source area wells (MW-3A and MW-6A).

Fuel Oxygenate Distribution in Groundwater

MTBE was detected above reporting limits in six of the seventeen sampled wells, as shown in Table 2 and on Figure 2. MTBE concentrations in sampled wells were at or near *historic lows*. The highest MTBE concentration detected this quarter was 120 µg/L in well MW-3A. MTBE concentration trends in key wells are shown on Figure 5.

ENHANCED BIOREMEDATION PILOT TEST

Pangea implemented the enhanced bioremediation pilot test proposed in the *Enhanced Bioremediation Pilot Test Workplan* dated June 14, 2013. The pilot test was performed to help determine if residual free product persists at the site, and if bioremediation techniques could accelerate attenuation of source area hydrocarbons. The testing involved monitoring of key parameters, air injection testing, and injection of a bio-organic catalyst (BOC), water, and air into two source areas. After the BOC injection, periodic groundwater extraction was performed to evaluate capture of desorbed hydrocarbons and to assess dissolved hydrocarbon concentrations.

Air Injection Testing

An air injection test was conducted on April 3, 2014 to determine the air pressure required to inject air into source area wells. Air injection was planned to help distribute the BOC catalyst and to provide oxygen for microbial bacteria use during bioremediation. Pangea used a 2 hp air compressor to inject air into these site wells.

Air injection data for wells MW-3A and MW-6A is summarized below in Table B. Air was initially injected into well MW-3A at a flow rate of approximately 2.0 standard cubic feet per minute (scfm) and incrementally increased to up to 3 scfm to evaluate the pressure required to achieve the various flow rates. During air injection at 2 scfm, an initial air pressure of 14 psi was required for breakthrough. The pressure decreased to 9 psi with a corresponding flow rate of 3 scfm. Well MW-3A is screened from 10 to 17 ft bgs, with well screen starting near the water table elevation at testing time (10.15 ft below top of casing). The soil consists of silty clay, with some sand found in the silty clay between 15 and 17 ft depth and 19.5 and 20 ft depth. Pangea suspects that the air flow entered the relatively higher permeability materials within the well, which is likely the partially sandy units at 15 to 17 ft depth and 19.5 to 20 ft depth.

Table B - Air Injection Data

Well	Air Flow (scfm)	Pressure (psi)	Comments
MW-3A	2.0	14	Apparent breakthrough pressure. Pressure subsequently dropped to 10 psi.
	2.5	10	Pressure stable.
	3.0	9	Pressure dropped slightly.
MW-6A	2.5	18	Apparent breakthrough pressure. Pressure subsequently dropped to 12 psi.
	3.0	10	Pressure slowly dropping.
	3.5	8	Pressure continues to drop as flow increases.
	3.5	7	Pressure stable at 7 psi.

During air injection testing on well MW-6A, air was initially injected at a flow rate of approximately 2.5 scfm and incrementally increased to up to 3.5 scfm to evaluate the pressure required to achieve the various flow rates. During air injection at 2.5 scfm, an initial air pressure of 18 psi was required for breakthrough. The pressure decreased to 7 psi with a corresponding flow rate of 3.5 scfm. Well MW-6A is screened from 15 to 20 ft bgs in predominant clayey soil with sandy clay lenses at 15 to 15.5 ft and 18 to 18.5 ft bgs. The depth to water in well MW-6A was approximately 10.4 ft prior to air injection testing. The 5 ft of water pressure in well MW-6A above the 15 ft depth to sandy clay is equivalent to approximately 2.5 psi. Since the groundwater level was only five feet above the screened interval these results suggest that the surrounding soil is relatively difficult for air to penetrate (similar to well MW-3A results). Pangea suspects that the air flow entered the relatively higher permeability materials within the well, which is likely the partially sandy clay lenses at 15 to 15.5 ft depth and/or 18 to 18.5 ft depth.

Bio-Organic Catalyst Injection

To enhance biodegradation of subsurface hydrocarbons, Pangea introduced a bio-organic catalyst (BOC) into two source area wells on April 3, 2014. To help distribute the BOC, Pangea also injected water and air into the source area wells (MW-3A and MW-6A) on the same day. On subsequent days, Pangea extracted groundwater in an effort to recover hydrocarbons desorbed by the BOC material.

Table C summarizes the injection volumes of BOC, water, and air into wells MW-3A and MW-6A. Pangea first injected 2.5 gallons of BOC into well MW-3A, followed by the injection of 20 gallons of tap water and then 244 ft^3 of air over 90 minutes. For well MW-6A, Pangea injected 2.5 gallons of BOC, followed by 20 gallons of tap water and 190 ft^3 of air over 60 minutes.

Table C – Injection Volumes of BOC, Water and Air

Injection Well	BOC Volume (gal)	Water Volume (gal)	Air Injection Volume (cubic feet)
MW-3A	2.5	20	244
MW-6A	2.5	20	190

Initial Monitoring

An April 3, 2014, prior to air injection testing, Pangea collected dissolved oxygen (DO) and oxygen reduction potential (ORP) readings from key site wells MW-3A, MW-6A, MW-7A and MW-7AA. After BOC/water/air injection, Pangea measured DO concentrations and ORP readings in key wells for comparison to pre-injection data. Pre- and post-injection data for DO and ORP is summarized below on Tables D and E, respectively.

Air injection for approximately 90 minutes in well MW-3A significantly increased DO concentrations from 0.00 mg/L before testing to 4.89 mg/L after testing. Air injection for approximately 60 minutes in well MW-6A significantly increased DO concentrations in both wells. DO concentration in nearby monitoring well MW-7A increased slightly, while DO in nearby well MW-7AA decreased slightly. ORP levels in the two injection wells (MW-3A and MW-6A) and two nearby wells (MW-7A and MW-7AA) increased after injection.

Table D – Initial DO Measurements (mg/L)

Well ID	Pre	Post	% change
MW-3A	0.00	4.89	+48,900%
MW-6A	0.03	3.31	+10,933%
MW-7A	0.00	0.10	+900%
MW-7AA	0.10	0.02	-80%

Table E – Initial ORP Measurements (mV)

Well ID	Pre	Post	% change
MW-3A	-156.2	-25.1	+84%
MW-6A	-178.6	-83.6	+53%
MW-7A	+26.7	+41.5	+55%
MW-7AA	+10.6	+47.1	+344%

Water Extraction and Monitoring

Following BOC injection on April 3, 2014, Pangea conducted periodic groundwater purging and sampling from the two injection wells to evaluate capture of desorbed hydrocarbons and to assess dissolved hydrocarbon concentrations. The groundwater purging was performed on April 4, 7, 9, 10, 11, 18, 24, and May 8, 2014. During each event, Pangea removed approximately 10 or less gallons of groundwater from each well before dewatering of each well. Field forms are included in Appendix B. The April 24 event coincided with the semi-annual groundwater monitoring sampling of all program wells. Additionally, on April 7 and 10, 2014, groundwater samples were collected from nearby well MW-7A to check for lateral migration of BOC and/or contaminants.

Post-injection contaminant concentrations in injection wells MW-3A and MW-6A and nearby well MW-7A remained relatively stable, as shown on Table 1. TPHg concentrations in well MW-3A ranged from 3,300 to 3,700 µg/L, while benzene concentrations ranged from 100 to 150 µg/L. TPHg concentrations in well MW-6A ranged from 800 to 1,000 µg/L, while benzene concentrations ranged from 94 to 160 µg/L. No contaminant

concentrations were detected in well MW-7A during post injection monitoring, except for 0.56 µg/L benzene and 10 µg/L MTBE on April 10, 2014. These results suggest that BOC injection did not increase contaminant concentration recovery during groundwater extraction. No significant contaminant concentration increases were detected during monitoring of nearby well MW-7A (April 7, 10, and 24). Additionally, no significant contaminant concentration increases were detected in nearby wells during the regular groundwater monitoring on April 24. These results indicate that BOC injection has not significantly mobilized site contaminants.

To analyze for residual BOC in site groundwater, Pangea had a sample of BOC analyzed for ethanol, methanol, 2-propanol and CTAS/non-ionic surfactants for baseline data. The BOC sample contained ethanol (250,000 µg/L), 2-propanol (940,000 µg/L), and CTAS (56,000,000 µg/L). To evaluate residual BOC in the subsurface, Pangea analyzed the May 8 samples from injection wells MW-3A and MW-6A for 2-propanol and CTAS. Both well MW-3A and MW-6A contained CTAS/non-ionic surfactants at a concentration of 14,000 µg/L (this represents only 0.025% of the injected BOC solution). 2-propanol was detected in well MW-3A at a concentration of 1,200 µg/L (this represents only 0.13% of the injected BOC solution) and in well MW-6A at a concentration of 1,300 µg/L (this represents only 0.14% of the injected BOC solution). The detected concentration of CTAS/non-ionic surfactants and 2-propanol in the wells demonstrates that residual BOC is still present in groundwater beneath the site, but at a very low concentration. Residual BOC will attenuate with time.

Enhanced Bioremediation Pilot Test Conclusions

Based on the above information, Pangea offers the following pilot test conclusions:

- Pangea successfully injected bio-organic catalyst (BOC), water, and air into the hydrocarbon secondary source area. Air sparging successfully increased dissolved oxygen (DO) concentrations and ORP measurements in source area wells MW-3A and MW-6A.

- BOC injection did not increase hydrocarbon concentrations or hydrocarbon recovery within source area wells MW-3A and MW-6A. This suggests that there is no significant mass of residual free product at the site.

- While residual BOC (<0.15%) was present in source area wells MW-3A and MW-6A, no migration of BOC or hydrocarbons to nearby wells MW-7A and MW-7AA was observed during well monitoring.

- Future groundwater monitoring will confirm BOC attenuation. If ACEH is concerned about potential migration of residual hydrocarbons adjacent the sewer conduit, pilot testing confirmed that biosparging can be used to effectively increase DO concentrations for accelerated bioremediation of source area hydrocarbons.

OTHER SITE ACTIVITIES

Updated Site Conceptual Model

Pangea will submit an Updated Site Conceptual Model requested by ACEH letter dated August 9, 2013.

Future Groundwater Monitoring

The semi-annual groundwater monitoring program is shown in Appendix A. The next monitoring event will be performed during the third quarter of 2014. During our May 28, 2013 meeting, ACEH requested modifications to the groundwater monitoring program as necessary to address any identified data gaps. To address a data gap, Pangea plans to analyze groundwater for naphthalene during the next monitoring event for wells DPE-2, MW-7A, MW-8A, MW-9A to delineate impact near wells MW-3A and MW-6A.

ATTACHMENTS

Figure 1 – Site Location Map
Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map – Shallow
Figure 3 – Extent of TPHg in Shallow Groundwater
Figure 4 – Extent of Benzene in Shallow Groundwater
Figure 5 – TPHg Concentration Trends in Key Wells
Figure 6 – Benzene Concentration Trends in Key Wells
Figure 7 – MTBE Concentration Trends in Key Wells

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

Appendix A – Groundwater Monitoring Program
Appendix B – Groundwater Monitoring Field Data Sheets
Appendix C – Laboratory Analytical Results

2/17/2005

SOURCE: TOPO! MAPS

0 1/8 1/4 1/2 1

SCALE : 1" = 1/4 MILE

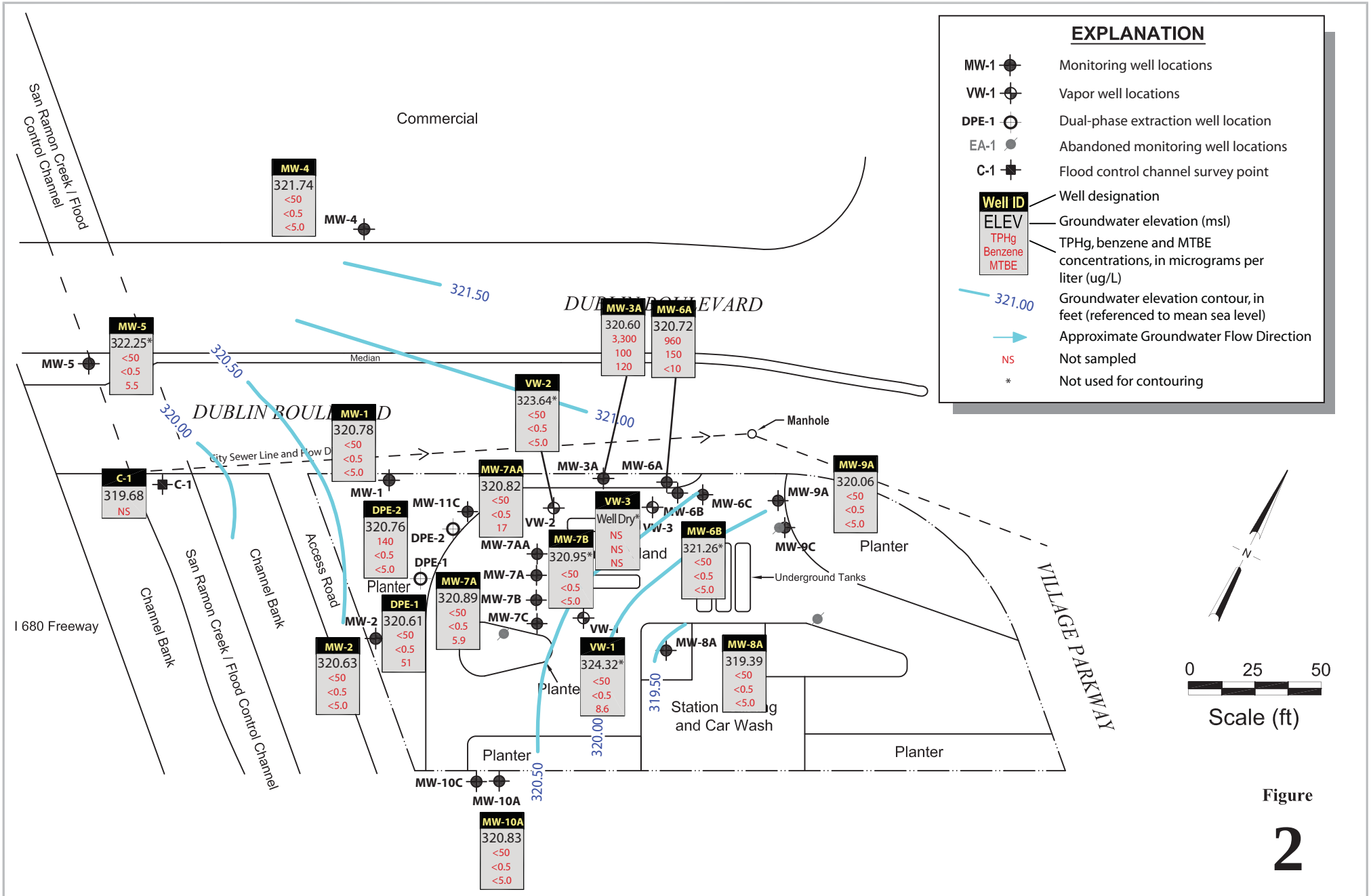
Figure 1

Dublin Auto Wash

7240 Dublin Boulevard
Dublin, California

PANGEA

Site Location Map



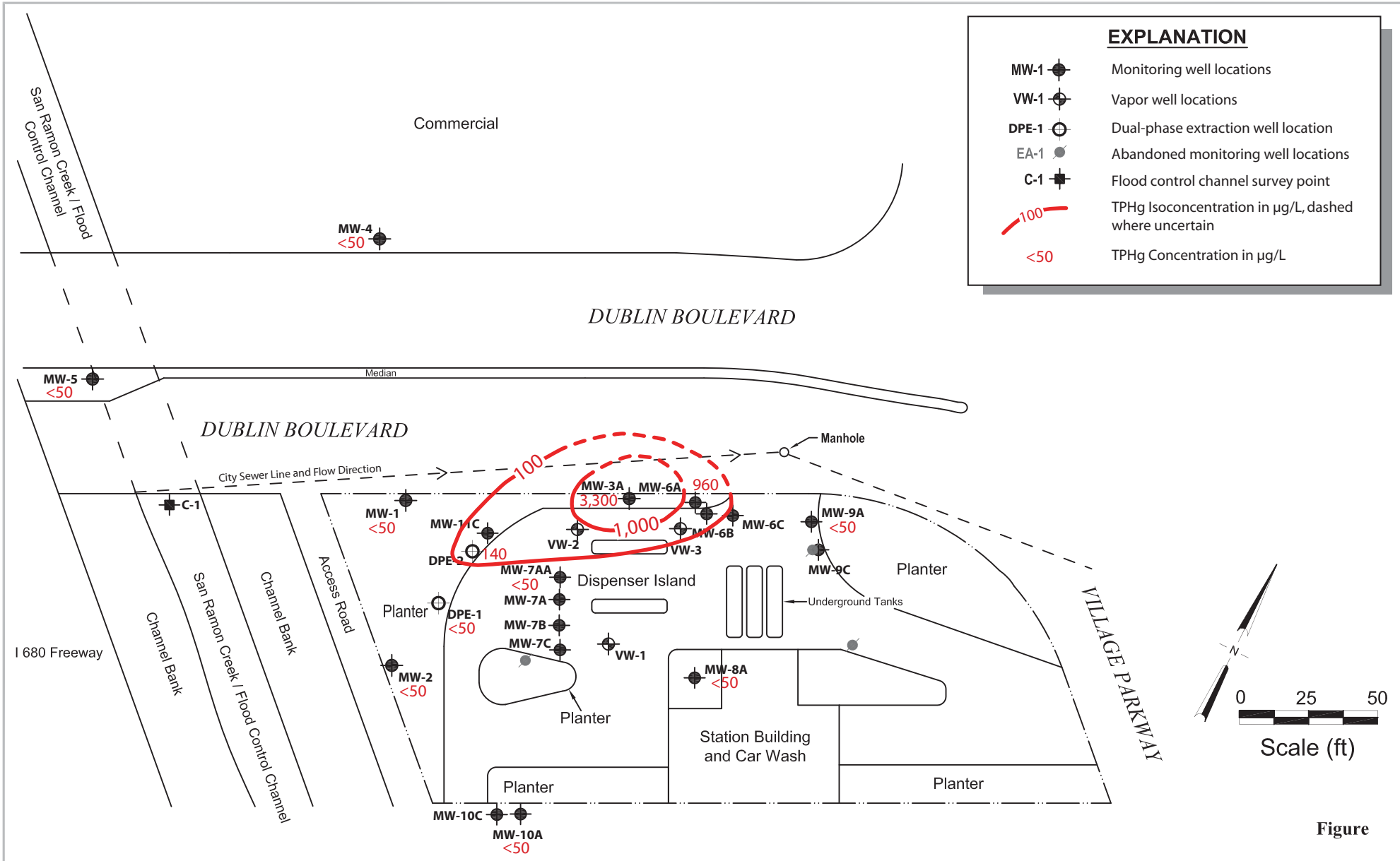
Figure

2

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

PANGEA

Groundwater Elevation Contour and Hydrocarbon Concentration Map
April 24, 2014



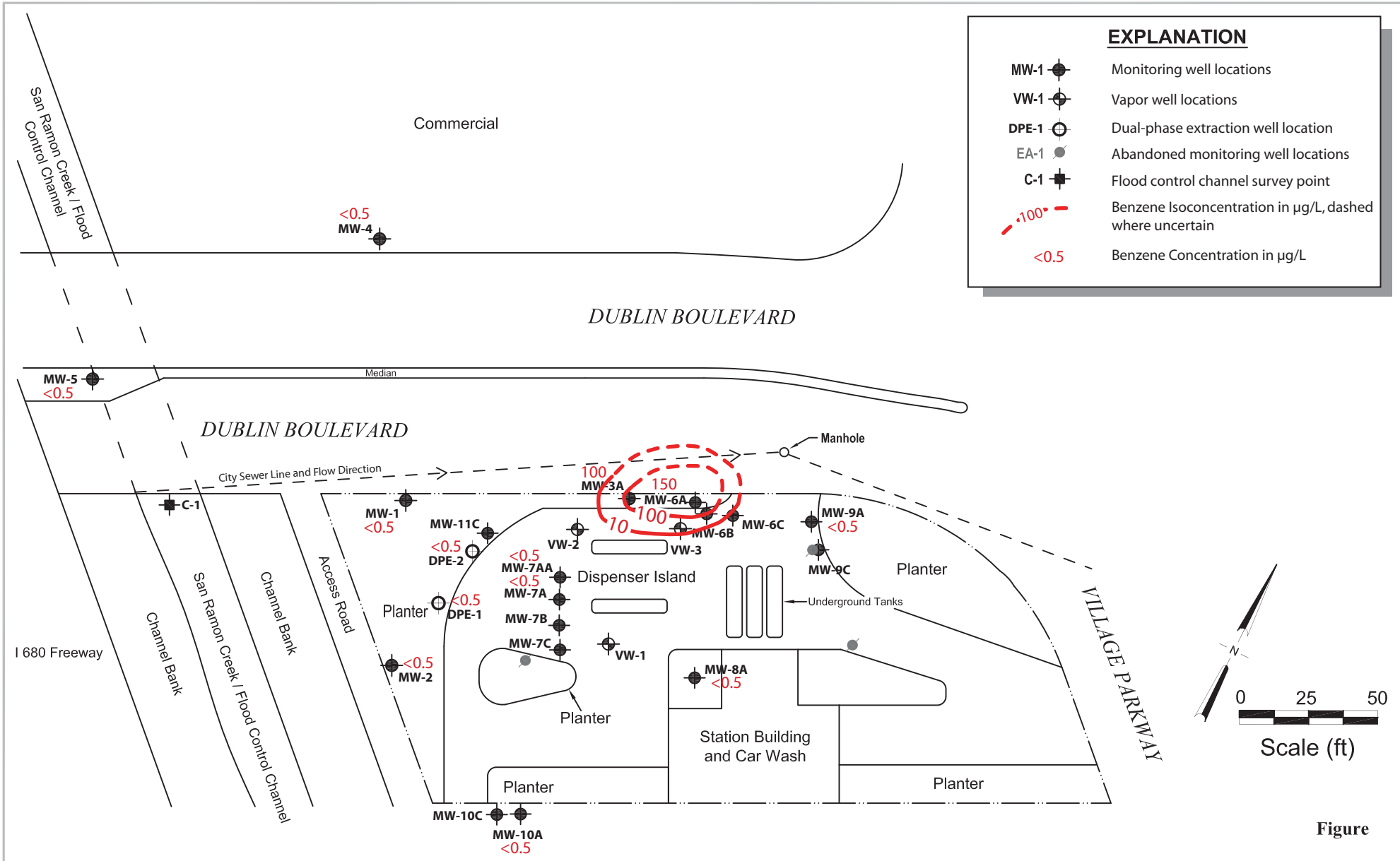
Figure

3

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

PANGEA

Extent of TPHg in Shallow Groundwater
April 24, 2014



Figure

4

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

PANGEA

Extent of Benzene in Shallow Groundwater
April 24, 2014

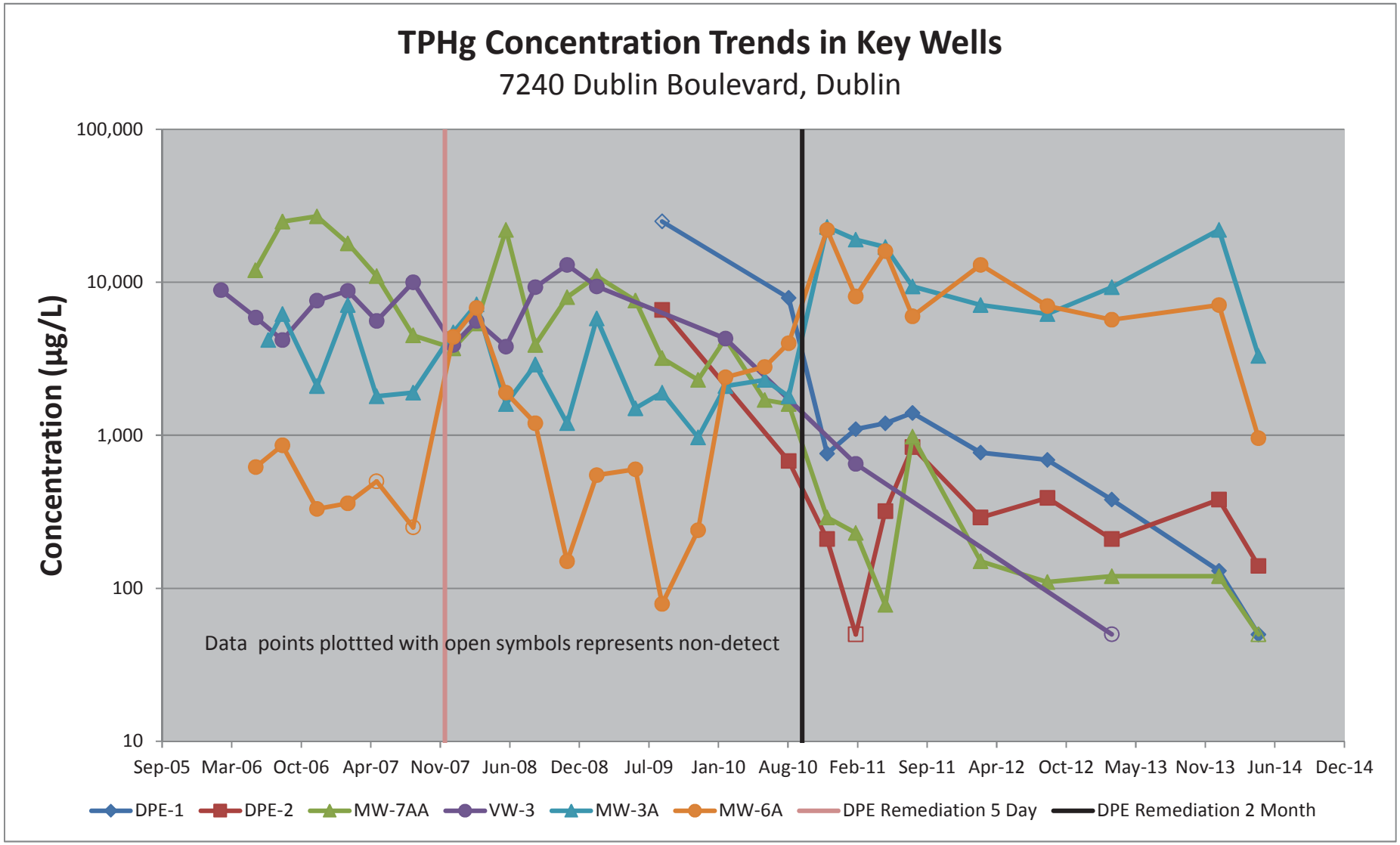


Figure 5. TPHg Concentration Trends in Key Wells

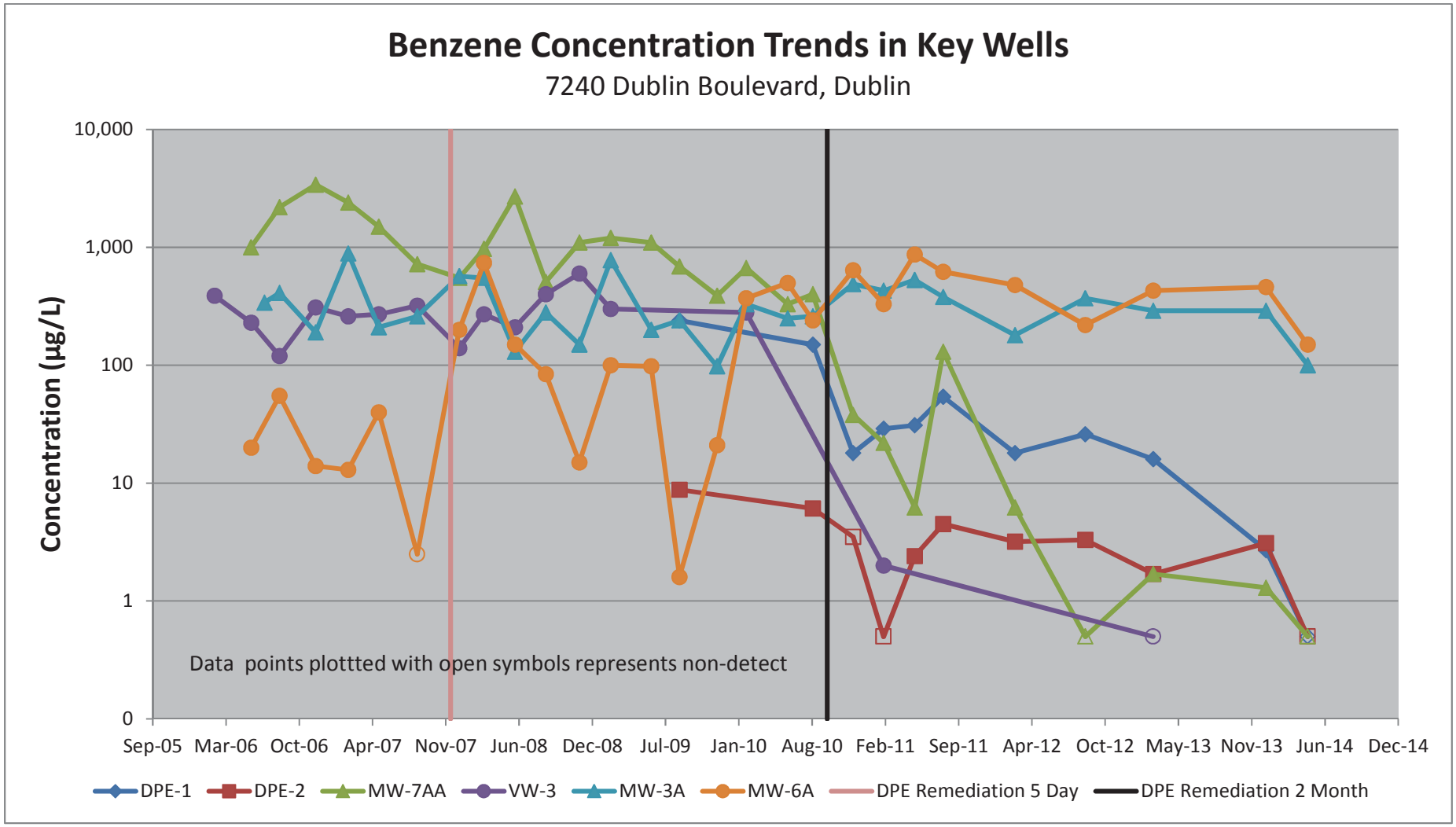


Figure 6. Benzene Concentration Trends in Key Wells

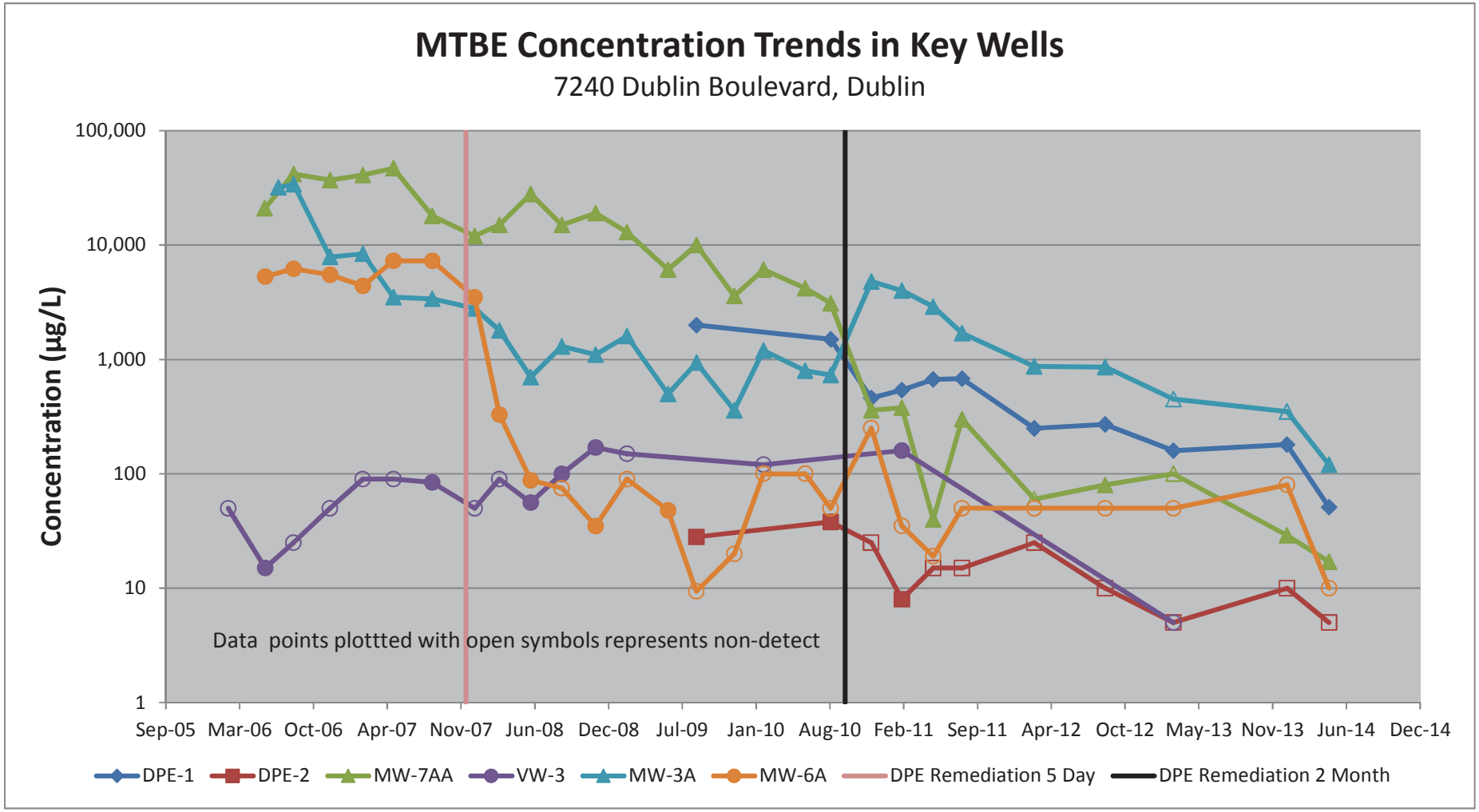


Figure 7. MTBE Concentration Trends in Key Wells

Table 1 –Well Construction Details –7240 Dublin Blvd., Dublin, CA

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

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Surface Water (Flood Control Channel)											
C-1	08/17/06	11.60	321.29	--	--	--	--	--	--	--	Gauge data - flood control channel
332.89	11/24/06	12.10	320.79	--	--	--	--	--	--	--	
	02/21/07	12.10	320.79	--	--	--	--	--	--	--	
	05/15/07	12.05	320.84	--	--	--	--	--	--	--	
	08/28/07	11.90	320.99	--	--	--	--	--	--	--	
	12/21/07	12.16	320.73	--	--	--	--	--	--	--	
	02/26/08	12.21	320.68	--	--	--	--	--	--	--	
	05/21/08	12.40	320.49	--	--	--	--	--	--	--	
	08/13/08	11.95	320.94	--	--	--	--	--	--	--	
	11/13/08	12.40	320.49	--	--	--	--	--	--	--	
	02/06/09	12.02	320.87	--	--	--	--	--	--	--	
	05/28/09	11.98	320.91	--	--	--	--	--	--	--	
	08/13/09	12.01	320.88	--	--	--	--	--	--	--	
	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**	**--**	**--**	**--**	**--**	**--**	**--**	**--**	
Vapor Wells											
VW-1	02/21/06	7.95	322.48	860	120	1.4	32	4.4	390 (440)	1.97	
330.43	06/01/06	7.89	322.54	1,100	92	2.2	11	1.4	600 (550)	0.11	TAME=12µg/L, TBA,DIPE,ETBE=ND
	07/07/06	7.71	322.72	--	--	--	--	--	--	--	
	08/17/06	7.65	322.78	--	--	--	--	--	--	0.07	
	11/24/06	7.75	322.68	Insufficient Water to Sample						0.48	
	02/21/07	7.81	322.62	620	52	4.3	<0.5	2.7	340	0.22	
	05/15/07	7.94	322.49	2,000	270	6.4	1.2	15	720	0.10	
	08/28/07	8.07	322.36	2,400	400	4.6	<0.5	23	610	0.27	
	12/21/07	8.20	322.23	Insufficient Water to Sample							
	02/26/08	8.20	322.23	Insufficient Water to Sample							
	05/21/08	8.21	322.22	Insufficient Water to Sample							
	08/13/08	8.27	322.16	Insufficient Water to Sample							
	11/13/08	5.97	324.46	<50	<0.5	<0.5	<0.5	<0.5	46	1.10	
	02/06/09	6.04	324.39	<50	<0.5	<0.5	<0.5	<0.5	80	0.97	
	05/28/09	6.30	324.13	--	--	--	--	--	--	--	
	08/13/09	6.61	323.82	--	--	--	--	--	--	--	
	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	02/21/06	6.01	324.16	1,600	150	2.7	55	20	1,700 (1,600)	1.97	
330.17	06/01/06	6.17	324.00	1,500	140	3.3	24	19	1,600 (1,600)	0.29	TAME, TBA, DIPE, ETBE=ND
	07/07/06	7.02	323.15	--	--	--	--	--	--	--	
	08/17/06	7.23	322.94	--	--	--	--	--	--	0.14	
	11/24/06	5.55	324.62	<50	5.7	<0.5	<0.5	<0.5	260	0.20	
	02/21/07	6.22	323.95	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.42	
	05/15/07	7.54	322.63	430	40	1.5	<0.5	1.0	470	0.28	
	08/28/07	7.82	322.35	1,200	170	5.0	<0.5	20	160	0.35	
	12/21/07	4.44	325.73	<50	<0.5	<0.5	<0.5	<0.5	100	0.70	
	02/26/08	4.56	325.61	<50	<0.5	<0.5	<0.5	<0.5	21	0.75	
	05/21/08	7.65	322.52	300	28	1.7	<0.5	0.97	<45	0.71	
	08/13/08	7.92	322.25	Insufficient Water to Sample						1.58	
	11/13/08	5.96	324.21	<50	8.0	<0.5	<0.5	<0.5	53	0.97	
	02/06/09	6.06	324.11	<50	<0.5	<0.5	<0.5	<0.5	38	0.95	
	05/28/09	6.90	323.27	--	--	--	--	--	--	--	
	08/13/09	7.52	322.65	--	--	--	--	--	--	--	
	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	---	---	---	---	---	---	---	
	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	---	---	---	---	---	---	---	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
VW-2 (cont'd)	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	
	04/24/14	**6.53**	**323.64**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.00**	
VW-3	02/21/06	6.10	324.39	8,900	390	29	490	650	<50	2.28	
330.49	06/01/06	6.22	324.27	5,900	230	4.5	270	63	<35 (15)	0.21	TAME, TBA, DIPE, ETBE=ND
	07/07/06	4.44	326.05	--	--	--	--	--	--	--	
	08/17/06	4.40*	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	
	04/24/14	**--**	**--**				**Well Dry**				
Upper Shallow (AA-Zone) Wells											
DPE-1	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	
331.01	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	
	04/24/14	**10.40**	**320.61**	**<50**	**<0.5**	**0.69**	**<0.5**	**<0.5**	**51**	**1.06**	
DPE-2	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	
331.42	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	
	04/24/14	**10.66**	**320.76**	**140**	**<0.5**	**4.2**	**<0.5**	**<0.5**	**<5.0**	**0.00**	
MW-7AA	05/31/06	9.18	321.49	12,000	1,000	410	180	1,600	23,000 (21,000)	0.44	TAME, TBA, DIPE, ETBE=ND
330.67	07/07/06	9.15	321.52	--	--	--	--	--	--	--	
	08/17/06	8.75	321.92	25,000	2,200	210	780	1,400	36,000(42,000)	0.24	
	11/24/06	9.84	320.83	27,000	3,400	1,100	1,300	3,400	37,000	0.33	
	02/21/07	9.60	321.07	18,000	2,400	670	200	2,800	41,000	0.58	
	05/15/07	10.20	320.47	11,000	1,500	200	520	1,100	47,000	0.49	
	08/28/07	10.20	320.47	4,500	720	13	73	100	18,000	0.33	
	12/21/07	10.09	320.58	3,700	550	32	74	330	12,000	0.58	
	02/26/08	8.96	321.71	5,400	970	7.2	320	100	15,000	0.74	
	05/21/08	10.28	320.39	22,000	2,700	19	940	440	28,000	0.71	
	08/13/08	10.38	320.29	3,900	510	<5.0	150	42	15,000	0.77	
	11/13/08	10.35	320.32	8,000	1,100	20	290	280	19,000	0.80	
	02/06/09	10.31	320.36	11,000	1,200	37	500	800	13,000	0.79	
	05/28/09	10.05	320.62	7,600	1,100	34	390	870	6,100	0.73	
	08/13/09	10.15	320.52	3,200	690	5.4	54	92	10,000	0.87	
	11/24/09	10.06	320.61	2,300	390	7.2	50	150	3,600	0.81	
	02/11/10	9.56	321.11	4,300	670	9.0	73	240	6,100	0.64	
	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	After 2 months DPE.
	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	

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

Well ID	Date	Depth	Groundwater							Dissolved	
TOC Elev	Measured	to Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Oxygen	Notes
(ft)		(ft)	(ft, msl)	←			µg/L		→	mg/L	
MW-7AA (cont'd)	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	
	04/24/14	**9.85**	**320.82**	**<50**	**<0.5**	**0.87**	**<0.5**	**<0.5**	**17**	**0.24**	
Shallow (A-Zone) Wells											
MW-1	10/04/94	12.8	320.76	2,100	150	170	61	320	--		
333.66	11/30/94	12.38	321.18	1,500	210	17	73	130	--		
	03/02/95	12.88	320.68	2,600	510	<10	160	<10	--		
	06/07/95	12.58	320.98	710	160	<2.0	45	<2.0	<10		
	09/26/95	13.15	320.41	1,100	140	1.4	92	1.8	<5.0		
	12/28/95	13.09	320.47	750	96	2.5	61	7.4	37		
	02/29/96	12.17	321.39	250	17	<0.5	18	0.81	9		
	06/27/96	12.95	320.61	710	72	<2.0	92	2.2	<10		
	09/12/96	13.11	320.55	300	53	<0.5	32	0.65	21		
	03/31/97	12.99	320.67	<200	4.1	<2.0	4.8	<2.0	640		
	12/23/98	13.87	319.79	<50	<50	<0.5	<0.5	<0.5	3200		
	03/25/99	12.01	321.65	<50	<0.5	<0.5	<0.5	<0.5	5,200 (5,200)		
	02/03/00	11.91	321.75	<500	<5.0	<5.0	<5.0	<5.0	3,180 (3,350)		
	01/23/01	12.57	321.09	<50.0	<0.5	<0.5	<0.5	<0.5	4,420		
	05/01/01	12.6	321.06			SAMPLED SEMI-ANNUALLY					
	08/28/01	12.74	320.92	<50	<0.5	<0.5	<0.5	<0.5	4,800		
	11/27/01	12.7	320.96			SAMPLED SEMI-ANNUALLY					
	02/28/02	12.7	320.96	<50	<0.5	<0.5	<0.5	<1.5	1,400		
	05/22/02	12.38	321.28			SAMPLED SEMI-ANNUALLY					
	08/20/02	12.57	321.09	<50	<0.5	<0.5	<0.5	<1.5	1,400		
	11/11/02	11.31	322.35			SAMPLED SEMI-ANNUALLY					
	05/08/03	11.85	321.81	<50	<0.5	<0.5	<0.5	<0.5	1,300 (1,200)		
	12/15/04	12.80	320.86	<50	<0.5	<0.5	<0.5	<0.5	1,700 (1,900)		
	02/21/05	11.81	321.85	<100	<1.0	<1.0	<1.0	<1.0	3,000 (3,800)	0.82	
	05/17/05	12.51	321.15	<120	<1.2	<1.2	<1.2	<1.2	3,400 (4,400)	0.75	
	08/17/05	12.35	321.31	<170	<1.7	<1.7	<1.7	<1.7	4,500 (4,900)	0.77	
	11/27/05	13.18	320.48	<170	<1.7	<1.7	<1.7	<1.7	5,400 (4,400)	0.90	
	02/21/06	12.61	321.05	<170	<1.7	<1.7	<1.7	<1.7	5,000 (5,400)	0.29/0.71	
333.69	06/01/06	12.47	321.22	<250	<2.5	<2.5	<2.5	<2.5	6,400 (6,300)	0.46	TAME, TBA, DIPE, ETBE=ND
	07/07/06	12.60	321.09	--	--	--	--	--	--	--	
	08/17/06	11.93	321.76	<250	<2.5	<2.5	<2.5	<2.5	7,700 (9,100)	0.43	
	11/24/06	13.01	320.68	<250	<2.5	<2.5	<2.5	<2.5	8,400	0.29	
	02/21/07	12.91	320.78	<50	<0.5	<0.5	<0.5	<0.5	3,600	0.24	
	05/15/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	2,500	0.29	
	08/28/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	170	0.40	
	12/21/07	13.40	320.29	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68	
	02/26/08	12.60	321.09	<50	<0.5	<0.5	<0.5	<0.5	7.0	0.86	
	05/21/08	13.45	320.24	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.94	
	08/13/08	13.37	320.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.91	
	11/13/08	13.50	320.19	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.94	
	02/06/09	13.67	320.02	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.87	
	05/28/09	13.25	320.44	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.71	
	08/13/09	13.26	320.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.77	
	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	
	04/24/14	**12.91**	**320.78**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.09**	
MW-2	10/04/94	8.56	320.62	2300	160	280	96	480	--		
329.29	11/30/94	8.33	320.85	1,600	170	16	110	120	--		
	03/02/95	8.35	320.83	1,200	220	5.6	140	36	--		
	06/07/95	8.62	320.56	160	25	<0.5	16	<0.5	240		
	09/26/95	8.71	320.47	150	15	<0.5	7.2	<0.5	120		
	12/28/95	8.78	320.4	400	34	1.3	26	5.1	170		
	02/29/96	7.82	321.36	120	29	<0.5	<0.5	<0.5	790		
	06/27/96	8.72	320.46	150	13	<0.5	7	<0,5	850		
	09/12/96	8.81	320.48	<1,000	18	<10	<10	<10	3,100		
	03/31/97	8.65	320.64	<500	<5.0	<5.0	<5.0	<5.0	1,400		
	12/23/98	8.32	320.97	<50	<0.5	<0.5	<0.5	<1.5	900		
	03/25/99	7.89	321.4	<50	2.6	<0.5	<0.5	<0.5	1,100 (670)		
	02/03/00	7.53	321.76	<125	<1.25	<1.25	<1.25	<1.25	1,020 (1,100)		
	01/23/01	8.18	321.11	<50.0	<0.5	<0.5	<0.5	<0.5	642		
	05/01/01	8.43	320.86	70.8	<0.5	<0.5	<0.5	<0.5	342		
	08/28/01	8.39	320.9	<50	<0.5	<0.5	<0.5	<0.5	530		
	11/27/01	8.46	320.83	210	<0.5	<0.5	<0.5	<1.5	260		
	02/28/02	8.48	320.81	<50	<0.5	<0.5	<0.5	<1.5	180		
	05/22/02	8.14	321.15	<50	<0.5	<0.5	<0.5	<1.5	180		

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
MW-2 (cont'd)	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	05/29/06	10.13	321.28	--	--	--	--	--	--	--	0.03 SPH
331.39	07/07/06	10.15	321.24	4,200	340	27	75	79	32,000	--	
	08/17/06	9.56	321.83	6,200	410	68	100	650	28,000(34,000)	0.19	
	11/24/06	10.73	320.66	2,100	190	11	72	220	7,900	0.10	
	02/21/07	10.52	320.87	7,100	890	28	440	470	8,400	0.17	
	05/15/07	11.46	319.93	1,800	210	11	96	88	3,500	0.25	
	08/28/07	11.62	319.77	1,900	260	6.9	110	74	3,400	0.28	
	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**
MW-4	03/01/96	9.9	322.74	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
332.63	04/02/96	9.77	322.87	--	--	--	--	--	--		
	06/27/96	10	322.64	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	09/12/96	11.67	320.96	<50	<0.5	<0.5	<0.5	<0.5	3.5		
	03/31/97	10.59	322.04	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	12/23/98	10.37	322.26	<50	<0.5	<0.5	<0.5	<1.5	<2.5		
	03/25/99	9.91	322.72	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	02/03/00	10.32	322.31	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.0 (3)		
	01/23/01	10.54	322.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	05/01/01	10.32	322.31				SAMPLED ANNUALLY				
	08/28/01	10.57	322.06				SAMPLED ANNUALLY				

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

Well ID	Date	Depth	Groundwater						Dissolved	
TOC Elev	Measured	to Water	Elevation	TPHg	Benzene	Toluene	Ethylbenzene	Xylenes	MTBE	Oxygen	Notes
(ft)		(ft)	(ft, msl)	←			µg/L		→	mg/L	
MW-4 (cont'd)	11/27/01	10.29	322.34				SAMPLED ANNUALLY				
	02/28/02	10.3	322.33	<50	<0.5	<0.5	<0.5	<1.5	<2.5		
	05/22/02	10.12	322.51				SAMPLED ANNUALLY				
	08/20/02	10.43	322.2				SAMPLED ANNUALLY				
	11/11/02	9.89	322.74				SAMPLED ANNUALLY				
	05/08/03	9.79	322.84	<50	<0.5	<0.5	<0.5	<0.5	<2		
	12/15/04	10.56	322.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	02/21/05	9.50	323.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0 (<0.5)	1.60	
	05/17/05	10.20	322.43				SAMPLED ANNUALLY			1.29	
	08/17/05	10.50	322.13				SAMPLED ANNUALLY			1.10	
	11/27/05	11.07	321.56				SAMPLED ANNUALLY			1.01	
	02/21/06	10.53	322.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.14/0.90	
332.64	05/29/06	10.33	322.31				SAMPLED ANNUALLY			--	
	07/07/06	10.52	322.12	--	--	--	--	--	--	--	
	08/17/06	10.45	322.19	--	--	--	--	--	--	--	
	11/24/06	10.95	321.69	--	--	--	--	--	--	0.22	
	02/21/07	10.71	321.93	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.40	
	05/15/07	11.24	321.40	--	--	--	--	--	--	--	
	08/28/07	11.42	321.22	--	--	--	--	--	--	0.52	
	12/21/07	11.26	321.38	--	--	--	--	--	--	0.81	
	02/26/08	10.12	322.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.06	
	05/21/08	11.30	321.34	--	--	--	--	--	--	0.98	
	08/13/08	11.23	321.41	--	--	--	--	--	--	0.71	
	11/13/08	10.93	321.71	--	--	--	--	--	--	--	
	02/06/09	10.98	321.66	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.67	
	05/28/09	10.96	321.68	--	--	--	--	--	--	--	
	08/13/09	11.23	321.41	--	--	--	--	--	--	--	
	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	03/01/96	10.62	322.58	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
333.47	04/02/96	10.14	323.06	--	--	--	--	--	--		
	06/27/96	10.22	322.98	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	09/12/96	10.85	322.19	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	03/31/97	10.44	322.6	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	12/23/98	10.21	322.83	<50	<0.5	<0.5	<0.5	<1.5	<2.5		
	03/25/99	9.92	323.12	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	02/03/00	9.63	323.41	<50	<0.5	<0.5	<0.5	<0.5	<2.5/<2.03		
	01/23/01	10.35	322.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	05/01/01	10.34	322.7				SAMPLED ANNUALLY				
	08/28/01	10.44	322.6				SAMPLED ANNUALLY				
	11/27/01	10.17	322.87				SAMPLED ANNUALLY				
	02/28/02	10.2	322.84	<50	<0.5	<0.5	<0.5	<1.5	<2.5		
	05/22/02	10.38	322.66				SAMPLED ANNUALLY				
	08/20/02	10.36	322.68				SAMPLED ANNUALLY				
	11/11/02	10.03	323.01				SAMPLED ANNUALLY				
	05/08/03	9.56	323.48	<50	<0.5	<0.5	<0.5	<0.5	3.4/<0.5		
	12/15/04	10.08	322.96	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	02/21/05	9.90	323.14	<50	<0.5	<0.5	<0.5	<0.5	<5.0 (0.54)	1.62	
	05/17/05	10.33	322.71				SAMPLED ANNUALLY			1.47	
	08/17/05	10.40	322.64				SAMPLED ANNUALLY			1.18	
333.13	11/27/05	10.43	322.61				SAMPLED ANNUALLY			1.19	
	02/21/06	10.32	322.81	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.48/0.76	
	05/29/06	10.41	322.72				SAMPLED ANNUALLY			--	
	07/07/06	10.46	322.67	--	--	--	--	--	--	--	
	08/17/06	10.49	324.19	--	--	--	--	--	--	--	
	11/24/06	10.92	322.21	--	--	--	--	--	--	0.27	
	02/21/07	10.90	322.23	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.73	
	05/15/07	10.97	322.16	--	--	--	--	--	--	--	
	08/28/07	11.07	322.06	--	--	--	--	--	--	0.55	
	12/21/07	10.80	322.33	--	--	--	--	--	--	0.97	
	02/26/08	10.38	322.75	<50	<0.5	<0.5	<0.5	<0.5	<5.0	1.01	
	05/21/08	10.97	322.16	--	--	--	--	--	--	0.95	
	08/13/08	10.98	322.15	--	--	--	--	--	--	0.99	
	11/13/08	11.01	322.12	--	--	--	--	--	--	--	
	02/06/09	11.05	322.08	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82	
	05/28/09	10.80	322.33	--	--	--	--	--	--	--	
	08/13/09	10.90	322.23	--	--	--	--	--	--	--	
	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	---	---	---	---	---	---	---	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
MW-5 (cont'd)	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	
	04/24/14	**10.88**	**322.25**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**5.5**	**0.09**	
MW-6A	06/01/06	10.38	321.43	620	20	<2.5	<2.5	43	5,700 (5,300)	0.73	TAME, TBA, DIPE, ETBE=ND
331.81	07/07/06	10.15	321.66	--	--	--	--	--	--	--	
	08/17/06	9.69	322.12	860	55	3.1	31	41	5,300(6,200)	0.49	
	11/24/06	11.10	320.71	330	14	<2.5	11	3.4	5,500	0.37	
	02/21/07	10.72	321.09	360	13	1.8	16	34	4,400	0.50	
	05/15/07	11.69	320.12	<500	40	5.3	11	16	7,300	0.52	
	08/28/07	11.98	319.83	<250	<2.5	<2.5	<2.5	<2.5	7,300	0.39	
	12/21/07	11.31	320.50	4,400	200	45	50	550	3,500	0.45	
	02/26/08	10.15	321.66	6,800	740	130	290	600	330	0.61	
	05/21/08	11.60	320.21	1,900	150	8.1	44	100	88	0.63	
	08/13/08	11.91	319.90	1,200	84	3.7	36	18	<75	0.42	
	11/13/08	11.73	320.08	150	15	1.4	3.0	4.2	35	0.44	
	02/06/09	11.66	320.15	550	100	9.3	22	34	<90	0.48	
	05/28/09	11.45	320.36	600	98	14	21	42	48	0.55	
	08/13/09	11.49	320.32	79	1.6	1.5	0.66	0.76	9.4	0.69	
	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
	04/04/14	**10.28**	**321.53**	**920**	**94**	**2.7**	**9.8**	**35**	**3.2**	**2.44/0.97**	**Post AS/BOC Naphthalene = 25 µg/L**
	04/07/14	**10.44**	**321.37**	**1,000**	**130**	**3.1**	**5.3**	**42**	**<10**	**0.30/0.18**	**Naphthalene = 67 µg/L**
	04/09/14	**11.10**	**320.71**	**940**	**150**	**2.6**	**12**	**39**	**<10**	**0.34/3.11**	**Naphthalene = 35 µg/L**
	04/10/14	**10.75**	**321.06**	**800**	**140**	**2.4**	**12**	**50**	**<10**	**0.09/1.08**	**Naphthalene = 39 µg/L**
	04/11/14	**10.72**	**321.09**	**1,000**	**150**	**2.4**	**10**	**50**	**<10**	**0.02/1.41**	**Naphthalene = 46 µg/L**
	04/18/14	**10.94**	**320.87**	**920**	**160**	**2.9**	**13**	**43**	**<10**	**0.52/0.98**	
	04/24/14	**11.09**	**320.72**	**960**	**150**	**1.7**	**9.0**	**26**	**<10**	**0.00**	**Naphthalene = 68 µg/L**
MW-7A	05/31/06	9.19	321.52	<50	1.3	<0.5	0.79	0.82	760 (770)	0.40	TAME, TBA, DIPE, ETBE=ND
330.71	07/07/06	9.17	321.54	--	--	--	--	--	--	--	
	08/17/06	8.68	322.03	60	1.1	<0.5	<0.5	1.1	930 (1,400)	0.29	
	11/24/06	9.88	320.83	<50	<0.5	<0.5	<0.5	<0.5	260	0.20	
	02/21/07	9.59	321.12	<50	4.6	<0.5	0.62	2.2	270	0.35	
	05/15/07	10.15	320.56	<50	<0.5	<0.5	<0.5	<0.5	45	0.40	
	08/28/07	10.09	320.62	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.42	
	12/21/07	10.00	320.71	3,200	180	38	100	410	890	0.68	
	02/26/08	8.78	321.93	1,300	150	1.8	59	99	410	0.90	
	05/21/08	10.16	320.55	200	18	<0.5	3.3	<0.5	30	0.75	
	08/13/08	10.27	320.44	<50	<0.5	<0.5	<0.5	<0.5	24	0.81	
	11/13/08	10.27	320.44	<50	<0.5	<0.5	<0.5	<0.5	30	0.85	
	02/06/09	10.22	320.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.83	
	05/28/09	9.91	320.80	--	--	--	--	--	--	--	
	08/13/09	9.98	320.73	--	--	--	--	--	--	--	
	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	---	---	---	---	---	---	---	
	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**
	04/10/14	**9.45**	**321.26**	**<50**	**0.56**	**<0.5**	**<0.5**	**<0.5**	**10**	**0.01/0.00**	**Naphthalene = <0.5**
	04/24/14	**9.82**	**320.89**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**5.9**	**0.00**	
MW-8A	05/29/06	9.55	321.64	<50	<0.5	<0.5	<0.5	<0.5	20 (18)	0.39	TAME, TBA, DIPE, ETBE=ND
331.19	07/07/06	9.20	321.99	--	--	--	--	--	--	--	
	08/17/06	8.73	322.46	<50	<0.5	<0.5	<0.5	<0.5	19 (26)	0.26	
	11/24/06	9.80	321.39	<50	<0.5	<0.5	<0.5	<0.5	34	0.21	
	02/21/07	9.81	321.38	<50	<0.5	<0.5	<0.5	<0.5	16	0.29	
	05/15/07	10.05	321.14	<50	<0.5	<0.5	<0.5	<0.5	13	0.33	
	08/28/07	9.83	321.36	<50	<0.5	<0.5	<0.5	<0.5	19	0.35	
	12/21/07	10.36	320.83	<50	<0.5	<0.5	<0.5	<0.5	16	0.61	
	02/26/08	8.33	322.86	<50	<0.5	<0.5	<0.5	<0.5	38	0.77	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
MW-8A (cont'd)	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	05/29/06	10.13	321.04	<50	<0.5	<0.5	<0.5	<0.5	210 (210)	0.46	TAME, TBA, DIPE, ETBE=ND
331.17	07/07/06	9.96	321.21	--	--	--	--	--	--	--	
	08/17/06	9.40	321.77	150	<0.5	1.3	<0.5	<0.5	79(100)	0.53	
	11/24/06	11.02	320.15	200	<0.5	2.4	<0.5	<0.5	31	0.38	
	02/21/07	10.53	320.64	<50	<0.5	<0.5	<0.5	<0.5	21	0.33	
	05/15/07	10.81	320.36	86	<0.5	<0.5	<0.5	<0.5	31	0.45	
	08/28/07	11.11	320.06	95	<0.5	1.4	<0.5	<0.5	10	0.38	
	12/21/07	10.76	320.41	120	<0.5	2.9	<0.5	0.51	9.5	0.50	
	02/26/08	9.71	321.46	120	<0.5	1.2	<0.5	<0.5	9.5	0.86	
	05/21/08	10.75	320.42	86	<0.5	<0.5	<0.5	<0.5	6.3	0.84	
	08/13/08	11.31	319.86	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.76	
	11/13/08	11.14	320.03	52	<0.5	<0.5	<0.5	<0.5	5.5	0.63	
	02/06/09	11.16	320.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.61	
	05/28/09	10.75	320.42	--	--	--	--	--	--	--	
	08/13/09	10.65	320.52	--	--	--	--	--	--	--	
	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	05/29/06	11.60	318.33	<50	<0.5	<0.5	<0.5	0.67	5.3 (4.7)	0.68	TAME, TBA, DIPE, ETBE=ND
329.93	07/07/06	9.78	320.15	--	--	--	--	--	--	--	
	08/17/06	8.80	321.13	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.47	
	11/24/06	12.61	317.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.26	
	02/21/07	8.96	320.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.25	
	05/15/07	9.22	320.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.30	
	08/28/07	8.44	321.49	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.35	
	12/21/07	8.81	321.12	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.47	
	02/26/08	7.34	322.59	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70	
	05/21/08	9.22	320.71	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.64	
	08/13/08	9.25	320.68	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.61	
	11/13/08	9.47	320.46	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.70	
	02/06/09	9.50	320.43	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.68	
	05/28/09	9.11	320.82	--	--	--	--	--	--	--	
	08/13/09	9.21	320.72	--	--	--	--	--	--	--	
	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	
	04/24/14	**9.10**	**320.83**	**<50**	**<0.5**	**<0.5**	**<0.5**	**0.54**	**<5.0**	**0.07**	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Intermediate-Depth (B-zone) Wells											
MW-6B	06/01/06	8.41	322.49	<50	<0.5	<0.5	<0.5	<0.5	18 (16)	0.34	TAME, TBA, DIPE, ETBE=ND
330.9	07/07/06	8.55	322.35	--	--	--	--	--	--	--	
	08/17/06	8.66	322.24	<50	<0.5	<0.5	<0.5	<0.5	8.5(9.6)	0.40	
	11/24/06	9.25	321.65	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
	02/21/07	8.80	322.10	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.37	
	05/15/07	9.21	321.69	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
	08/28/07	9.60	321.30	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	12/21/07	9.42	321.48	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.82	
	02/26/08	7.87	323.03	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.80	
	05/21/08	9.37	321.53	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.87	
	08/13/08	9.70	321.20	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.81	
	11/13/08	9.62	321.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.78	
	02/06/09	9.53	321.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.71	
	05/28/09	9.23	321.67	--	--	--	--	--	--	--	
	08/13/09	9.63	321.27	--	--	--	--	--	--	--	
	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	
	04/24/14	**9.64**	**321.26**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.25**	
MW-7B	05/31/06	9.05	321.64	<50	0.79	<0.5	<0.5	0.75	6.4 (6.6)	0.17	TAME, TBA, DIPE, ETBE=ND
330.69	07/07/06	9.03	321.66	--	--	--	--	--	--	--	
	08/17/06	8.62	322.07	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	9.75	320.94	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.27	
	02/21/07	9.44	321.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	
	02/21/07	9.44	321.25	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	
	05/15/07	9.97	320.72	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	08/28/07	9.96	320.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	12/21/07	9.87	320.82	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.53	
	02/26/08	8.64	322.05	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.59	
	05/21/08	10.05	320.64	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.56	
	08/13/08	10.17	320.52	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51	
	11/13/08	10.15	320.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.53	
	02/06/09	10.18	320.51	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.55	
	05/28/09	9.80	320.89	--	--	--	--	--	--	--	
	08/13/09	9.89	320.80	--	--	--	--	--	--	--	
	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	
	04/24/14	**9.74**	**320.95**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**	**<5.0**	**0.00**	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Deep (C-Zone) Wells											
MW-6C	06/01/06	8.21	322.67	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.29	TAME, TBA, DIPE, ETBE=ND
330.88	07/07/06	8.41	322.47	--	--	--	--	--	--	--	
	08/17/06	8.56	322.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
	11/24/06	9.12	321.76	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	
	02/21/07	8.62	322.26	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
MW-7C	05/31/06	8.65	322.09	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.12	TAME, TBA, DIPE, ETBE=ND
330.74	07/07/06	8.70	322.04	--	--	--	--	--	--	--	
	08/17/06	8.52	322.22	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.17	
	11/24/06	9.42	321.32	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.19	
	02/21/07	9.01	321.73	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.31	
MW-9C	05/29/06	16.59	314.89	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	TAME, TBA, DIPE, ETBE=ND
331.48	07/07/06	8.85	322.63	--	--	--	--	--	--	--	
	08/17/06	9.20	322.28	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.21	
	11/24/06	9.61	321.87	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	02/21/07	8.94	322.54	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.46	
MW-10C	05/29/06	7.28	322.38	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.16	TAME, TBA, DIPE, ETBE=ND
329.66	07/07/06	7.28	322.38	--	--	--	--	--	--	--	
	08/17/06	7.29	322.37	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	10.75	318.91	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.33	
	02/21/07	7.69	321.97	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.39	
MW-11C	05/31/06	9.90	321.71	<50	<0.5	<0.5	<0.5	<0.5	11 (11)	0.29	TAME, TBA, DIPE, ETBE=ND
331.61	07/07/06	10.02	321.59	--	--	--	--	--	--	--	
	08/17/06	9.60	322.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.22	
	11/24/06	10.60	321.01	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.28	
	02/21/07	10.30	321.31	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.43	

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
Destroyed Wells											
MW-3	10/04/94	12.06	320.67	6,300	610	750	68	670	--		
332.86	11/30/94	11.38	321.35	17	3,600	490	430	610	--		
	03/02/95	11.97	320.76	8,500	2,200	<50	240	<50	64,000		
	06/07/95	11.54	321.19	3,000	710	18	220	44	3,100		
	09/26/95	12.36	320.37	<10,000	230	<100	130	<100	64,000		
	12/28/95	12.07	320.66	<12,500	760	<125	<125	<125	100,000		
	02/29/96	11.01	321.72	1,600	380	<10	84	17	33,000		
	06/27/96	11.93	320.8	1,400	<2.5	4.3	130	4	96,000		
	09/12/96	12.26	320.6	<10,000	560	<l00	110	<100	100,000		
	03/31/97	12.04	320.82	<25,000	1,200	370	<250	380	130,000		
	12/23/98	12.92	319.94	--	--	--	--	--	--		0.1' SPH; 0.079 gal SPH removed
	03/25/99	12.56	320.3	--	--	--	--	--	--		0.05' SPH; 0.05 gal SPH removed
	02/03/00	11.12	321.74	92,100	4,780	11,400	2,270	15,800	137,000 (162,000)		
	1/23/2001	11.78	321.08	60,600	4,810	7,500	1,870	11,000	148,000		Absorbent sock in well
	5/1/2001	10.66	322.2	56,000	3,760	5,640	<2,500	8,740	136,000		Absorbent sock in well
	8/28/2001	11.79	321.07	32,000	3,800	2,600	1,200	7,500	160,000		Absorbent sock in well
	11/27/2001	11.98	320.88	110,000	1,300	2,400	1,500	9,400	90,000		Absorbent sock removed
	02/28/02	11.81	321.05	24,000	1,900	820	520	3,100	90,000		
	05/22/02	11.6	321.26	110,000	4,000	3,200	2,800	18,000	140,000		
	08/20/02	11.81	321.05	37,000	2,600	1,500	890	4,800	110,000		
	11/11/02	11.63	321.23	81,000	2,900	2,100	2,100	14,000	110,000		
	05/08/03	10.91	321.95	5,700	770	69	130	365	76,000 (70,000)		
	12/15/04	11.97	320.89	33,000	1,700	430	1,300	7,000	70,000 (89,000)		
	02/21/05	10.81	322.06	--	--	--	--	--	--	1.29	0.01 SPH
	05/17/05	11.63	321.29	--	--	--	--	--	--	1.06	0.08 SPH
	08/17/05	10.83	322.03	39,000	1,500	260	780	2,700	42,000 (47,000)	0.93	
	11/27/05	12.29	320.72	--	--	--	--	--	--	--	0.19 SPH
	02/21/06	11.73	321.28	--	--	--	--	--	--	--	0.19 SPH
	03/30/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
EA-1	10/17/88	--	--	<50	<0.5	<0.5	<0.5	<0.5	--		
331.21	10/24/88	10.64	322.77	--	--	--	--	--	--		
	11/02/88	10.69	322.72	--	--	--	--	--	--		
	12/20/88	10.51	322.9	<50	<0.5	<0.5	<0.5	<0.5	--		
	03/28/89	9.87	323.54	<250	<0.5	<0.5	<0.5	<0.5	--		
	08/02/89	10.34	323.07	<50	<0.1	<0.1	<0.1	<0.1	--		
	11/06/89	10.65	322.76	<500	<3.0	<5.0	<5.0	<5.0	--		
	01/25/90	10.6	322.81	<50	<0.5	<0.5	<0.5	<0.5	--		
	04/23/90	10.58	322.83	71	2	5	3	8	--		
	08/01/90	10.88	322.53	300	86	21	10	33	--		
	10/24/91	11.12	322.29	280	69	13	11	16	--		
	01/31/91	11.16	322.25	460	160	11	17	17	--		
	08/21/91	10.8	322.61	2,400	400	220	44	120	--		
	08/21/91	10.8	322.61	2,300	390	210	42	120	--		Duplicate
	10/07/91	10.79	322.62	--	--	--	--	--	--		
	01/28/92	10.79	322.62	3,600	320	360	110	310	--		
	01/28/92	10.79	322.62	3,000	290	320	99	270	--		Duplicate
	06/05/92	10.84	322.57	1,700	290	89	61	130	--		
	09/30/92	11.06	322.35	2,100	160	260	80	350	--		
	12/30/92	10.15	323.26	3,200	240	180	110	310	--		
	03/29/93	9.42	323.99	23,000	700	3,000	610	3,000	--		
	06/25/93	10.42	322.99	2.7	130	590	130	590	--		
	09/16/93	10.66	322.75	3.9	410	830	220	890	--		
	12/20/93	10.6	322.81	27	1,200	2,600	1,100	4,200	--		
	03/29/94	10.41	323	6.3	250	700	200	830	--		
	06/22/94	10.4	323.01	4.1	71	240	110	460	<30		
	09/20/94	10.37	323.04	8,500	1,200	1,300	370	1,400	--		
	10/04/94	10.34	323.07	7,600	97	360	150	620	--		
	11/30/94	9.46	323.95	8,800	180	490	240	900	--		
	03/02/95	9.96	321.07	6.9	82	570	210	970	--		
	06/15/95	9.8	321.23	4.8	44	210	160	620	<25		
	09/26/95	10.48	320.55	13,000	150	620	370	1,400	<125		
	12/28/95	10.14	320.89	11,000	74	250	200	750	79		
	02/29/96	8.74	322.29	17,000	59	480	350	1,600	<l25		
	06/27/96	10.21	320.82	3,600	22	130	130	49	46		

Table 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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
EA-1 (cont'd)	09/12/96	10.49	320.72	2,000	20	<10	18	44	<50		
	03/31/97	10.19	321.02	17,000	87	230	330	1,200	310		
	12/23/98	9.83	321.38	290	20	0.88	1.1	16	<2.5		
	03/25/99	9.13	322.08	500	21	<0.5	21	<0.5	18		
	02/03/00	9.05	322.16	2,310	35.7	90	21.8	147	1,280 (365)		
	01/23/01	--	--	--	--	--	--	--	--		Inaccessible
	05/01/01	9.82	321.39	7,710	19.9	12.6	22.3	64	31.8		
	08/28/01	10.04	321.17	4,800	69	<25	50	140	160		
	11/27/01	10.05	321.16	5,300	25	<5.0	30	120	<20		
	02/28/02	--	--	--	--	--	--	--	--		Inaccessible
	05/22/02	9.05	322.16	110	<1.0	<0.50	1	<1.5	<2.5		
	08/20/02	9.21	322	410	2.6	<0.50	8.5	29	<5.0		
	11/11/02	9.01	322.2	3,800	<0.50	1.3	17	47	<5.0		
	05/08/03	8.23	322.98	1,700	11	0.97	63	161	<2.0		
	12/15/04	--	--	--	--	--	--	--	--		Inaccessible
	02/21/05	--	--	--	--	--	--	--	--		Inaccessible
	05/17/05	--	--	--	--	--	--	--	--		Inaccessible
	08/17/05	--	--	--	--	--	--	--	--		Inaccessible
	11/27/05	--	--	--	--	--	--	--	--		Inaccessible
	02/21/06	--	--	--	--	--	--	--	--		Inaccessible
	03/31/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed
EA-2	10/17/88	--	--	<50	<0.5	<0.5	<0.5	1.2	--		
330.41	10/24/88	9.7	322.89	--	--	--	--	--	--		
	11/02/88	10.03	322.56	--	--	--	--	--	--		
	12/20/88	9.98	322.61	<50	<0.5	<0.5	<0.5	<0.5	--		
	03/28/89	8.8	323.79	<250	<2	<0.5	<0.5	<0.5	--		
	08/02/89	9.44	323.15	<50	<0.1	<0.1	<0.1	<0.1	--		
	11/06/89	9.53	323.06	<500	<3.0	<5.0	<5.0	<5.0	--		
	01/25/90	9.27	323.32	<50	<0.5	<0.5	<0.5	<0.5	--		
	04/23/90	9.35	323.24	<50	0.6	0.8	<0.5	2	--		
	08/01/90	9.71	322.88	<50	<0.5	<0.5	<0.5	<0.5	--		
	10/24/90	10.08	322.51	<50	<0.5	<0.5	<0.5	<0.5	--		
	01/31/91	10.21	322.38	<50	<0.5	<0.5	<0.5	<0.5	--		
	01/31/91	10.21	322.38	<50	<0.5	<0.5	<0.5	<0.5	--		Duplicate
	08/21/91	9.8	322.79	<50	<0.5	<0.5	<0.5	<0.5	--		
	10/07/91	9.98	322.61	--	--	--	--	--	--		
	01/28/92	9.81	322.78	<50	0.8	<0.5	<0.5	<0.5	--		
	06/05/92	9.86	322.73	<50	<0.5	<0.5	<0.5	<0.5	--		
	09/30/92	10.6	321.99	66	1	3.2	1.3	7.4	--		
	12/30/92	9.11	323.48	<50	<0.5	<0.5	<0.5	<0.5	--		
	03/29/93	7.73	324.86	<50	<0.5	<0.5	<0.5	<1.5	--		
	06/25/93	9.22	323.37	<50	<0.5	<0.5	<0.5	<1.5	--		
	09/16/93	10	322.59	<50	<0.5	<0.5	<0.5	<1.5	--		
	12/20/93	9.38	323.21	<50	<0.5	<0.5	<0.5	<0.5	--		
	03/29/94	9.3	323.29	<50	<0.5	0.6	<0.5	<0.5	--		
	06/22/94	9.49	323.1	<50	<0.5	<0.5	<0.5	<0.5	--		
	09/26/94	9.72	322.87	<50	<0.5	<0.5	<0.5	<0.5	--		
	10/04/94	9.58	323.01	<50	<0.5	<0.5	<0.5	<0.5	--		
	11/30/94	8.7	323.89	<50	<0.5	<0.5	<0.5	<0.5	--		
	03/02/95	8.54	321.67	<50	<0.5	<0.5	<0.5	<0.5	--		
	06/07/95	8.42	321.79	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	09/26/95	9.34	320.87	540	6.8	<0.5	47	29	13		
	12/28/95	8.84	321.37	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	02/29/96	7.44	322.77	<50	<0.5	<0.5	<0.5	1.5	<2.5		
	06/27/96	8.83	321.38	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	09/12/96	9.4	321.01	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	03/31/97	9.11	321.3	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	12/23/98	8.91	321.5	<50	<0.5	<0.5	<0.5	<0.5	<2.5		
	03/25/99	8.1	322.31	<50	<0.5	<0.5	<0.5	<0.5	2.7		
	02/03/00	8.36	322.05	<50	<0.5	<0.5	<0.5	<0.5	<2.5 (<2.0)		
	01/23/01	9.08	321.33	441 (1)	1.27	0.542	40.3	31	72.9		
	05/01/01	8.87	321.54			SAMPLED ANNUALLY					
	08/28/01	9.45	320.96			SAMPLED ANNUALLY					
	11/27/01	9.5	320.91			SAMPLED ANNUALLY					
	02/28/02	9.05	321.36	<50	<0.50	<0.50	<0.5	<1.5	74		
	05/22/02	9.04	321.37			SAMPLED ANNUALLY					
	08/20/02	9	321.41			SAMPLED ANNUALLY					
	11/11/02	9.03	321.38			SAMPLED ANNUALLY					
	05/08/03	7.26	323.15	<50	<0.5	<0.5	<0.5	<0.5	2.2/0.9		
	12/15/04	8.96	321.45	<50	<0.5	<0.5	<0.5	<0.5	<5.0		
	02/21/05	7.20	323.21	<50	<0.5	<0.5	<0.5	<0.5	13 (11)	0.64	
	05/17/05	8.21	322.20			SAMPLED ANNUALLY				0.77	
	08/17/05	7.97	322.44			SAMPLED ANNUALLY				0.85	
	11/27/05	9.83	320.58			SAMPLED ANNUALLY				0.84	
	02/21/06	8.78	321.63	<50	<0.5	<0.5	<0.5	<0.5	<5.0	0.51/0.68	
	03/28/06	--	--	--		**Well Destroyed**		--	--	--	Well Destroyed

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
EA-3	10/17/88	--	--	<50	1.8	<0.5	<0.5	3	--		
331.5	10/24/88	11.03	322.61	--	--	--	--	--	--		
	11/02/88	11.03	322.61	--	--	--	--	--	--		
	12/20/88	10.96	322.68	240	90	1.2	13	3.3	--		
	03/28/89	9.77	323.87	2,300	380	130	240	910	--		
	08/02/89	10.65	322.99	<50	<0.1	<0.1	<0.1	<0.1	--		
	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	--		
	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

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	Xylenes	MTBE	Dissolved Oxygen mg/L	Notes
				←			µg/L		→		
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	--	
DPB-4	04/17/03	32-36	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-5	04/30/03	7-11	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/17/03	11-15	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/30/03	26-30	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/17/03	36-40	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-6	04/18/03	15-19	NA	7,700	18	77	170	640	5.9	--	
	04/18/03	26-30	NA	4,700	21	76	160	650	6.2	--	
	04/18/03	35-39	NA	2,900	8.8	24	54	249	100	--	
DPB-7	04/18/03	15-19	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
	04/18/03	20-24	NA	7,000	42	640	190	990	300	--	
	04/18/03	35-39	NA	150	<0.5	1.8	0.8	5.7	<0.5	--	
DPB-8	05/01/03	NA	NA	<50	<0.5	<0.5	<0.5	<0.5	<0.5	--	
DPB-S	04/18/03	14-18	NA	20,000	<170	<170	380	6,600	53,000	--	
	04/18/03	26-30	NA	1,500	7.1	<3.1	7.4	170	760	--	
	04/18/03	35-39	NA	4,300	<63	<63	<63	910	42,000	--	

ABBREVIATIONS AND NOTES:

SPH = Separate-phase hydrocarbons; calculated groundwater elevation corrected for SPH by the relation: Groundwater Elevation = Well Elevation - Depth to Water +(0.8xSPH Thickness)
Groundwater monitoring data and laboratory analytical results prior to December 14, 2004, were scanned from a report by SOMA.
(ft) = Feet
(msl) = Mean sea level
TOC Elev. (ft) = Top of casing elevation
µg/L = Micrograms per liter - approximately equal to parts per billion = ppb
mg/L = Milligrams per liter - approximately equal to parts per million = ppm
TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C
BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020/8021.
MTBE = Methyl tertiary butyl ether by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B).
1,2-DCA = 1,2-Dichloroethane
TAME = Tertiary amyl methyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
DIPE = Diispopropyl ether by EPA Method 8260B
ETBE = Ethyl tertiary butyl ether by EPA Method 8260B
-- = Not Measured/Not Analyzed
1 Laboratory report indicates weathered gasoline C6-C12
Dissolved oxygen concentrations measured downhole pre-purge or pre-purge/post-purge
* = Cap loose, sprinkler runoff entering well

APPENDIX A

Groundwater Monitoring Program

Table A. Semi-Annual Groundwater Monitoring Program - 7240 Dublin Boulevard, Dublin, CA

Well ID	Well Type	Screened Interval (ft bgs)	Well Location for Monitoring	Casing Diam. (in)	Gauge Frequency	Sample Frequency[1, 2]	Naphthalene[3]
Surface Water							
C-1*	Gauging Point	--	W, Flood Control Channel	--	1st, 3rd	---	---
Vapor Wells							
VW-1	Mon+SVE (Proposed DPE)	3-9	Source	2	1st, 3rd	1st	---
VW-2	Mon+SVE (Proposed DPE)	3-9	Source	2	1st, 3rd	1st	---
VW-3	Mon+SVE (Proposed DPE)	3-9	Source	2	1st, 3rd	1st	---
Upper Shallow AA-Zone Wells							
DPE-1	DPE	9-14	W Intermediate	4	1st, 3rd	1st, 3rd	---
DPE-2	DPE	9-14	W Intermediate	4	1st, 3rd	1st, 3rd	---
MW-7AA	Mon (Proposed DPE)	9-14	Source	4	1st, 3rd	1st, 3rd	---
Shallow A-Zone Wells							
MW-1	Mon	5-25	W, Adjacent SS	2	1st, 3rd	1st, 3rd	---
MW-2	Mon	5-20	W, Adjacent Flood Channel	2	1st, 3rd	1st, 3rd	---
MW-3A	Mon (Proposed DPE)	10-17	N Source, Adjacent SS	4	1st, 3rd	1st, 3rd	1st, 3rd
MW-4	Mon	8.5-20	NW Upgradient, Offsite	2	1st, 3rd	1st	---
MW-5	Mon	8.5-21	W Upgradient, Offsite	2	1st, 3rd	1st	---
MW-6A	Mon (Proposed DPE)	15-20	N Source, Adjacent SS	4	1st, 3rd	1st, 3rd	1st, 3rd
MW-7A	Mon (Proposed DPE)	16-20	Source	4	1st, 3rd	1st, 3rd	3rd
MW-8A	Mon	15-20	S, Adjacent Building	2	1st, 3rd	1st, 3rd	3rd
MW-9A	Mon	15-20	NE Perimeter	2	1st, 3rd	1st, 3rd	3rd
MW-10A	Mon	15-20	S Perimeter	2	1st, 3rd	1st	---
Intermediate Depth B-Zone Wells							
MW-6B	Mon	26-30	N Source, Adjacent SS	2	1st, 3rd	1st	---
MW-7B	Mon	26-30	Source	2	1st, 3rd	1st	---
Deep C-Zone Wells							
MW-6C	Mon	34-44	N Source, Adjacent SS	2	---	---	---
MW-7C	Mon	35-45	Source	2	---	---	---
MW-9C	Mon	35-45	NE Perimeter	2	---	---	---
MW-10C	Mon	35-45	S Perimeter	2	---	---	---
MW-11C	Mon	33.5-43.5	W Intermediate	2	---	---	---

Notes and Abbreviations:

1 = Summary: 10 wells sampled 3rd quarter, 16 wells sampled 1st quarter. 5 C-zone wells not sampled.

2 = Sample Analytes: Total Petroleum Hydrocarbons as Gasoline (TPHg), benzene, toluene, ethylbenzene, xylenes (BTEX) and methyl tertiary butyl ether (MTBE) by EPA Method 8015Cm/8021B.

3 = Naphthalene by EPA Method 8260B.

1st = 1st quarter, typically February

3rd = 3rd quarter, typically August

Mon = Groundwater Monitoring Only

SVE = Soil Vapor Extraction

DPE = Dual Phase Extraction

N, S, W, E = Cardinal directions North, South, West, East and other directions (e.g., Northeast = NE)

SS = Sanitary Sewer beneath Dublin Blvd

* = Surface water level gauging point, not a well.

-- = Not gauged or sampled.

APPENDIX B

Groundwater Monitoring Field Data Sheets

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-4-14	Weather: Overcast - cool
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): ~~19'~~ 17'	Depth to Product: —
Depth to Water (DTW): ~~10.09'~~ 10.89'	Product Thickness: —
Water Column Height: ~~8.91~~ 6.91'	1 Casing Volume: 4.49 gallons
Reference Point: N side TOC	3 Casing Volumes: 13.47 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
~~13:30~~	18.9	6.73	1974	-	Pre: 1.30	-154.0	-	10.09'
13:24	18.9	7.36	1911	-	-	88	1.5	
13:30	18.2	7.22	1855	-	-	84	4.0	
13:36	18.3	7.20	1955	-	-	72	10.0	
13:40	well dewatered							
14:45	-	-	-	-	1.56	-100.3		
								12.81

Comments: H2O dark grey color @ 10 gal purge
Dewatered @ 11.0 gal purged
Reduced surface tension & bubbles observed

Sample ID: MW-3A	Sample Time: 14:45
Laboratory: McCampbell	Sample Date: 4-4-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Rowan Johnson	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-4-14	Weather: Overcast - Cool
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19'	Depth to Product: —
Depth to Water (DTW): 10.28'	Product Thickness: —
Water Column Height: 8.72'	1 Casing Volume: 1.39 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.18 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:40	18.2	6.62			Pre: 2.44	-125.4	-	10.28'
12:57	19.4	7.69	1602	-	-	105	1.0	
13:11	Well Dewatered							
14:20	-	-	-	-	0.97	-145.8		
								10.85'

Comments: Water dark grey color at first purge - Moderate reduced Surface Tension
Mild Sulfur Odor - Light amount of bubbles w/ Sandy
H2O clear @ 1.5 gal purged High Vol of bubbles in
Total Vol removed 6 gal purge H2O

Sample ID: MW-6A	Sample Time: 14:20
Laboratory: McCampbell	Sample Date: 4-4-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE/ Naphthalene	
Sampler Name: Zoran Johnson	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-7-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 17'	Depth to Product: —
Depth to Water (DTW): 10.35'	Product Thickness: —
Water Column Height: 6.65'	1 Casing Volume: 4.32 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.96 gallons
Purging Device: ~~Disposable~~ ~~Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:45	-	-	-	-	Pre: 0.04	-168.8		
12:47	-	-	-	-	0.63	-148.6		

Comments: Post Purge DTW - 16.25'
Light bubbles observed
Post Sample Parameters -
DO - 0.63 mg/L
ORP - -148.6
*Decreased Surface tension observed

Sample ID: MW-3A	Sample Time: 12:47
Laboratory: McCampbell	Sample Date: 4-7-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / ~~MT~~ Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-7-14	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius^2 * 0.163
Total Depth (TD): 19'	Depth to Product: ~~N/A~~
Depth to Water (DTW): 10.44'	Product Thickness: ~~N/A~~
Water Column Height: 8.56	1 Casing Volume: 1.36 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.10 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:45	-	-	-	-	Pre: 0.30	-176.5		
12:35	-	-	-	-	0.18	-184.0		

Comments: Light bubbles observed in purge H2O DO Post Purge 0.18 mg/L
Post Purge DTW = 14.10' ORP Post Purge -184.0
7 gal purged total *Decreased surface tension observed
well recharged to 11.10'

Sample ID: MW-6A	Sample Time: 12:35
Laboratory: McCampbell	Sample Date: 4-7-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Zonen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-7-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.3'	Depth to Product: -
Depth to Water (DTW): 9.30	Product Thickness: -
Water Column Height: 10.00'	1 Casing Volume: 6.5 gallons
Reference Point: N side TOC	3 Casing Volumes: 19.5 gallons
Purging Device: Disposable Bailer	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:45	-	-	-	-	Pre: 0.10	-104.5		
13:00	-	-	-	-	0.01	-95.4		

Comments: DTW Post Purge 10.80' Post Sample Parameters
20 gal purged total DO - 0.01 mg/L
ORP - -95.4
Normal Surface tension observed

Sample ID: MW-7A	Sample Time: 13:00
Laboratory: McCampbell	Sample Date: 4-7-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-9-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 17.00'	Depth to Product: —
Depth to Water (DTW): 10.45'	Product Thickness: —
Water Column Height: 6.55'	1 Casing Volume: 4.25 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.77 gallons
Purging Device: ~~Disposable~~ ~~Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:55					Pre: 0.06	-177.2		
14:55					0.86	-156.7		

Comments: DTW post purge 16.53' - DTW before Sample 13.81'
Well dewatered @ 12 gal
Mob-Boc observed while purging
Decreased surface tension observed

Sample ID: MW-3A	Sample Time: 14:55
Laboratory: McCampbell	Sample Date: 4-9-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-9-14	Weather: Sunny
Well Diameter: ~~19.00'~~ 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.00'	Depth to Product: —
Depth to Water (DTW): 11.10'	Product Thickness: —
Water Column Height: 7.9'	1 Casing Volume: 1.26 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.79 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:00					Pre:0.34	-191.4		
14:45					3.11	-147.6		

Comments: DTW post purge - 18.00' Decreased ~~water~~ surface tension observed
DTW before Sample - 11.84'
Mod -BOC observed while purging well
well dewatered @ 6 gal

Sample ID: MW-6A	Sample Time: 14:45
Laboratory: McCampbell	Sample Date: 4-9-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-10-14	Weather: Sunny
Well Diameter: ~~2~~ 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 17'	Depth to Product: -
Depth to Water (DTW): 10.49	Product Thickness: -
Water Column Height: 6.51'	1 Casing Volume: 4.23 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.69 gallons
Purging Device: ~~Disposable~~ ~~Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:50					Pre: 0.06	-165.0		
12:50					0.81	-152.4		

Comments: Post Purge DTW 16.4' DTW before Sample 12.00'
12.5 gal purged total Decreased Surface tension observed
BOC observed while purging
~~bail dust~~

Sample ID: MW-3A	Sample Time: 12:50
Laboratory: McCampbell	Sample Date: 4-10-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE/ Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-10-14	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19'	Depth to Product: —
Depth to Water (DTW): 10.75'	Product Thickness: —
Water Column Height: 8.25'	1 Casing Volume: 1.32 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.96' gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:50					Pre: 0.09	-158.3		
12:30					1.08	-164.0		

Comments: Post Purge DTW - 18.5 Decreased Surface tension observed
8 gal purged total
BOC observed while purging
DTW before Sample 12.00'

Sample ID: MW-6A	Sample Time: 12:30
Laboratory: McCampbell	Sample Date: 4-10-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Ronen Johnsen	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-10-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.35'	Depth to Product: -
Depth to Water (DTW): 9.45'	Product Thickness: -
Water Column Height: 9.9'	1 Casing Volume: 6.43 gallons
Reference Point: N side TOC	3 Casing Volumes: 19.30 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
~~11:40~~ ↑					Pre: 0.01	-123.8		
11:50								
13:10					0.00	-96.5		

Comments: 20 gal purged total
DTW before sample 9.5'
Normal surface tension observed

Sample ID: MW-7A	Sample Time: 13:10
Laboratory: McCampbell	Sample Date: 4-10-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-11-14	Weather: Overcast
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 17.00'	Depth to Product: ~
Depth to Water (DTW): 10.72'	Product Thickness: ~
Water Column Height: 6.28'	1 Casing Volume: 4.08 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.24 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:30					Pre: 0.14	-167.2		
13:55					0.33	-162.2		
							12gal total	

Comments: Most DOC observed @ 10 gal
Post Purge DTW 15.97'
Pre Sampling DTW - 12.90'
~~Most~~ DOC

Sample ID: MW-3A	Sample Time: 14:00
Laboratory: McCampbell	Sample Date: 4-11-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Romar Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-11-14	Weather: Overcast
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19'	Depth to Product: —
Depth to Water (DTW): 10.72'	Product Thickness: —
Water Column Height: 8.28'	1 Casing Volume: 1.32 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.97 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:30					Pre: 0.02	-173.1		
13:42					1.41	-168.2		

Comments: BOC observed while purging 6 gal purged total
DTW post purge 18.52'
DTW @ sample 11.65'
Reduced surface tension while sampling

Sample ID: MW-6A	Sample Time: 13:42
Laboratory: McCampbell	Sample Date: 4-11-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Raven Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-18-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 17.00'	Depth to Product: —
Depth to Water (DTW): 10.65'	Product Thickness: —
Water Column Height: 6.35'	1 Casing Volume: 4.12 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.38 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:23					Pre: 0.00	-204.4		
12:45					1.09	-177.7	12.00	16.32'

Comments: Moderate BOC observed while purging
12 gal purged total - well dewatered
DTW before Sample - 13.35'

Sample ID: MW-3A	Sample Time: 13:20
Laboratory: McCampbell	Sample Date: 4-18-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-18-14	Weather:
Well Diameter: 2"	Volume/ft. 1" = 0.04, 2" = 0.16, 3" = 0.37, 4" = 0.65, 6" = 1.47, radius^2 * 0.163
Total Depth (TD): 19.00'	Depth to Product: —
Depth to Water (DTW): 10.94'	Product Thickness: —
Water Column Height: 8.06'	1 Casing Volume: 1.28 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.86 gallons
Purging Device: ~~Disposable Bailer~~ Monsoon Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:20					Pre: 0.52	-181.4	—	
12:34					0.98	-173.3	6.00	17.31'

Comments: Light BOC observed @ end of purge
6 gals purged total - well dehatered
DTW @ Sample time 11.80'

Sample ID: MW-6A	Sample Time: 13:00
Laboratory: McCampbell	Sample Date: 4-18-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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Well Gauging Data Sheet

Project.Task #: 1001.001				Project Name:Dublin Auto Wash			
Address: 7240 Dublin Blvd						Date: 4/24/14	
Name: Roman Johnson				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-1	2"	11:50	-	-	12.91'	25.00'	N Side TOC
MW-2	2"	12:06	-	-	8.85'	19.80'	N Side TOC
MW-3A	4"	13:30	-	-	10.79'	17.00'	N Side TOC
MW-4	2"	13:16	-	-	10.90'	19.50'	N Side TOC
MW-5	2"	16:26	-	-	10.88'	20.00'	N Side TOC
MW-6A	2"	13:45	-	-	11.09'	19.35'	N Side TOC
MW-6B	2"	12:36	-	-	9.64'	29.55'	N Side TOC
MW-7A	4"	15:15	-	-	9.82'	19.31'	"
MW-7AA	4"	10:58	-	-	9.85	13.65'	"
MW-7B	2"	14:57	-	-	9.74'	28.05'	"
MW-8A	2"	14:30	-	-	11.80'	18.82'	"

Comments:

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Well Gauging Data Sheet

Project.Task #: 1001.001				Project Name:Dublin Auto Wash			
Address: 7240 Dublin Blvd						Date: 4/24/14	
Name: Zonen Johnson				Signature:			
Well ID	Well Size (in.)	Time	Depth to Immiscible Liquid (ft)	Thickness of Immiscible Liquid (ft)	Depth to Water (ft)	Total Depth (ft)	Measuring Point
MW-9A	2"	14:19	-	-	11.11'	19.45'	N Side TOC
MW-10A	2"	16:03	-	-	9.10'	19:30'	N Side TOC
DPE-1	4"	11:15	-	-	10.40'	13.55'	N Side TOC
DPE-2	4"	11:28	-	-	10.66'	13.50'	N Side TOC
VW-1	2"	14:45	-	-	6.11'	8.2'	N Side TOC
VW-2	2"	15:10	-	-	6.53'	8.30'	N Side TOC
VW-3	2"	Dry	Dry	Dry	Dry	Dry	N Side TOC
C-1	-				13.21'	-	Surveyed Mark on Curb
~~MW-7A~~							
~~MW-7B~~							
~~MW-8A~~							

Comments:

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MONITORING FIELD DATA SHEET

Well ID: MW-1

Project.Task #: 1001.001	Project Name: Dublin Auto Wash			
Address: 7240 Dublin Blvd., Dublin				
Date: 4-25-14	Weather: Overcast			
Well Diameter: 2"	Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47
		2" = 0.16	4" = 0.65	radius^2 * 0.163
Total Depth (TD): 25.00'	Depth to Product:			
Depth to Water (DTW): 12.91'	Product Thickness:			
Water Column Height: 12.09'	1 Casing Volume: 1.9 gallons			
Reference Point: N side TOC	3 Casing Volumes: 5.8 gallons			
Purging Device: ~~Disposable Bailer~~ Submersable Pump				
Sampling Device: Disposable Bailer				

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:50	18.0	6.73	-	-	Pre: 0.09	-35.7	-	12.91'
11:53	17.3	6.98	3372	-	-	35	1.5	
11:55	17.4	6.87	3353	-	-	36	6.0	

Comments: Post Purge DTW - 19.10'
9.0 gal purged total
Pre-Sample DTW - 10.14'

Sample ID: MW-1	Sample Time: 14:55
Laboratory: McCampbell	Sample Date: 4/25/14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-2

Project.~~Task~~ #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-25-14	Weather: Overcast - Rain
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.8'	Depth to Product: -
Depth to Water (DTW): 8.85'	Product Thickness: -
Water Column Height: 10.95'	1 Casing Volume: 1.75* gallons
Reference Point: N side TOC	3 Casing Volumes: 5.25 gallons
Purging Device: ~~Disposable Bailer~~ ~~Monsoon~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:06	18.2	6.97	-	-	Pre: 0.0	-0.6	-	8.85
12:10	17.7	7.06	4092	-	-	59	1.0	—
12:12	17.9	7.03	3585	-	-	59	5.0	—

Comments: 6 gal purged total
Post Purge DTW - 12.85'
Pre Sample DTW - 11.05'

Sample ID: MW-2	Sample Time: 15:06
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Overcast
Well Diameter: 4"	Volume/ft. 1" = 0.04; 2" = 0.16; 3" = 0.37; 4" = 0.65; 6" = 1.47; radius² * 0.163
Total Depth (TD): (RT) ~~10.79'~~ 17.00'	Depth to Product: —
Depth to Water (DTW): (RT) ~~17.00'~~ 10.79'	Product Thickness: —
Water Column Height: 6.21	1 Casing Volume: 4.03 gallons
Reference Point: N side TOC	3 Casing Volumes: 12.10 gallons
Purging Device: ~~Disposable~~ ~~Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:30	19.00	6.40	1963	-	Pre: 0.0	-161.1	-	10.79'
13:35	19.1	6.43	1960	-	-	-	4 gal	
13:47	19.3	6.70	1988	-	-	-	7 gal	

Comments: Well dewatered @ 7 gal
TOC observed
No SPH observed
Pre Sample DTW - 10.19'

Sample ID: MW-3A	Sample Time: 15:18
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-4

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-25-14	Weather: Overcast
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 19.5'	Depth to Product: -
Depth to Water (DTW): 10.90'	Product Thickness: -
Water Column Height: 8.6'	1 Casing Volume: 1.37 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.1 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:16	20.1	6.81	-	-	Pre: 0.06	-48.0	-	10.90'
13:21	19.6	7.04	3070	-	-	101	2.0	
13:25	19.6	7.17	3185	-	-	97	5.0	

Comments: Post Purge DTW - 12.90
5 gal total purge
Pre-Sample DTW - 10.42'

Sample ID: MW-4	Sample Time: 15:37
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Zoren Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-5

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 20.00'	Depth to Product:
Depth to Water (DTW): 10.88'	Product Thickness:
Water Column Height: 9.12'	1 Casing Volume: ~~1.74~~ 1.45 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.37 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
16:26	18.6	7.08	-	-	Pre: 0.09	-80.5	-	10.88
16:30	18.8	7.25	2325	-	-	109	2.5	
16:33	18.1	"	1589	-	-	83	5.0	

Comments: Post Purge DTW - 12.41'
5 gal purged total
Pre-Sample DTW -

Sample ID: MW-5	Sample Time: 15:45
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Zoran Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: 6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): ~~19~~ 19.35'	Depth to Product: —
Depth to Water (DTW): 11.09'	Product Thickness: —
Water Column Height: 8.26	1 Casing Volume: 1.32 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.96 gallons
Purging Device: ~~Disposable Bailer~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:45	19.5	6.93	1801	-	Pre: 0.0	-138.8	2.5	
							6 total	

Comments: BOC observed toward end of purge
6 gal purged total
well dewatered
Pre sample DTW - 12.82'

Sample ID: MW-6A	Sample Time: 15:51
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE / Naphthalene	
Sampler Name: Zoren Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-6B

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-25-14	Weather: Overcast - light Rain
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 29.55'	Depth to Product: —
Depth to Water (DTW): 9.64'	Product Thickness: —
Water Column Height: 19.91'	1 Casing Volume: 3.18 gallons
Reference Point: N side TOC	3 Casing Volumes: 9.55 gallons
Purging Device: ~~Disposable Bailer~~ Submersable pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
12:36	19.9	7.15	-	-	Pre: 0.25	108.4	-	9.64'
12:40	18.9	7.31	2468	-	-	78	1.0	
12:43	19.2	7.38	3792	-	-	51	6.0	

Comments: Post Purge DTW 17.65'
10 gal purged total
Pre-Sample DTW - 9.78'

Sample ID: MW-6B	Sample Time: 16:00
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.31	Depth to Product: —
Depth to Water (DTW): 9.82'	Product Thickness: —
Water Column Height: 9.49'	1 Casing Volume: 6.16 gallons
Reference Point: N side TOC	3 Casing Volumes: 18.50 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
15:15	19.2	7.14	—	—	Pre: 0.0	-65.8	-	9.82
15:18	20.4	7.66	1613	-	-	69.0	2.0	—
15:21	20.7	7.26	1564	-	-	37.0	10.0	

Comments: DTW post purge 13.03'
20 gal total purged
Pre-Sample DTW - 9.42'

Sample ID: MW-7A	Sample Time: 17:08
Laboratory: McCampbell	Sample Date:
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Tonen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7AA

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-25-14	Weather: Overcast
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 13.65'	Depth to Product: —
Depth to Water (DTW): 9.85'	Product Thickness: —
Water Column Height: 3.8'	1 Casing Volume: 2.47 gallons
Reference Point: N side TOC	3 Casing Volumes: 7.41 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
10:58	18.8	6.96	-	-	Pre: 0.24	-77.1	-	9.85'
11:03	19.2	7.48	1722	-	-	90	1.0	
11:05	19.0	7.26	1698	-	-	104	5.0	

Comments: Post purge DTW 13.30
7 gal purged
Pre-Sample DTW - 12.87'

Sample ID: MW-7AA	Sample Time: 17:15
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Renen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-7B

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny - Windy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 28.05'	Depth to Product: -
Depth to Water (DTW): 9.74'	Product Thickness: -
Water Column Height: 18.31'	1 Casing Volume: 2.92 gallons
Reference Point: N side TOC	3 Casing Volumes: 8.78 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:57	19.3	7.15	-	-	Pre: 0.0	-84.0	-	9.74'
15:05	19.9	8.46	1021	-	-	45	2.0	
15:10	20.0	8.04	1104	-	-	63	6.0	

Comments: 10 gal purged total
well dewatered

Sample ID: MW-7B	Sample Time: 16:58
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

Pangea
ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-8A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny - Windy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 18.82'	Depth to Product: —
Depth to Water (DTW): 11.80'	Product Thickness: —
Water Column Height: 7.02'	1 Casing Volume: 1.12 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.36 gallons
Purging Device: ~~Disposable Bailer~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:30	18.2	7.21	—	—	Pre: 0.53	-22.4	—	18.82'
14:34	18.7	7.04	1357	—	—	108	1.5	

Comments: Well dewatered @ 5 gal
Pre-Sample DTW - 15.12'

Sample ID: MW-8A	Sample Time: 16:26
Laboratory: McCampbell	Sample Date: 4.25.14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: MW-9A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: (P) ~~4"~~ 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 19.45'	Depth to Product: —
Depth to Water (DTW): (D) ~~8.34'~~ 11.11'	Product Thickness: —
Water Column Height: 8.34'	1 Casing Volume: 1.33 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.00 gallons
Purging Device: ~~Disposable Bailer~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:19	20.3	7.76			Pre: 1.03	-15.9	—	11.11'
14:25	22.2	7.70	(D) ~~693~~ (C) 692.9	—	—	66	3.5	

Comments: Dewatered @ 4.5 gal
Post-Purge DTW - 19.32'
Pre-Sample DTW - 11.99'

Sample ID: MW-9A	Sample Time: 16:10
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-10A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius² * 0.163
Total Depth (TD): 19.30'	Depth to Product: —
Depth to Water (DTW): 9.10	Product Thickness: —
Water Column Height: 10.20'	1 Casing Volume: 1.6 gallons
Reference Point: N side TOC	3 Casing Volumes: 4.8 gallons
Purging Device: ~~Disposable Bailer~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
16:03	19.1	6.89			Pre: 0.07	-31.6	—	9.10
16:05	19.4	7.19	2253	—	—	90	3.0	

Comments: Well dewatered @ 5.0 gal
Pre-Sample DTW - 17.54'

Sample ID: MW-10A	Sample Time: 16:36
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Jonen Johnsen	Signature:

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MONITORING FIELD DATA SHEET

Well ID: DPE-1

Project.Task #: 1001.001	Project Name: Dublin Auto Wash			
Address: 7240 Dublin Blvd., Dublin				
Date: 4-25-14	Weather: Sunny			
Well Diameter: 4"	Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47
		2" = 0.16	4" = 0.65	radius^2 * 0.163
Total Depth (TD): 13.58'	Depth to Product: -			
Depth to Water (DTW): 10.40'	Product Thickness: -			
Water Column Height: 3.15'	1 Casing Volume: 2.04 gallons			
Reference Point: N side TOC	3 Casing Volumes: 6.14 gallons			
Purging Device: ~~Disposable Bailer~~ Submersible Pump				
Sampling Device: Disposable Bailer				

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:15	17.2	6.80	-	-	Pre: ~~0.0~~	~~-25.4~~	-	
11:18	17.4	6.98	6932	-	1.06	-58.4	-	10.40
↓	↓	↓	↓	-	-	-3	1.5	
11:23	17.3	6.88	6720	-	-	-18	5.0	

Comments: 6 gal purged total
DTW - Post Purge 13.25
Pre-Sample DTW - 11.12'

Sample ID: ~~MW-~~ DPE-1	Sample Time: 16:45
Laboratory: McCampbell	Sample Date: 4.25.14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Raven Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: DPE-2

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-25-14	Weather: Overcast
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 13.50'	Depth to Product: -
Depth to Water (DTW): 10.66'	Product Thickness: -
Water Column Height: 2.84'	1 Casing Volume: 1.84 gallons
Reference Point: N side TOC	3 Casing Volumes: 5.53 gallons

Purging Device: ~~Disposable~~ ~~Bailer~~ Submersable Pump

Sampling Device: Disposable Bailer

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
11:28	17.2	7.04	-	-	Pre: 0.0	3.2	-	10.66'
11:33	17.3	7.26	2283	-	-	8	1.5	
11:35	17.0	7.12	2278			11	5.0	

Comments: 5.5 gal purged
Post Purge DTW - 13.10'
Pre-Sample DTW - 11.94'

Sample ID: DPE-2	Sample Time: 16:52
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: VW-1

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny - Windy
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 8.2'	Depth to Product: —
Depth to Water (DTW): 6.11'	Product Thickness: —
Water Column Height: 2.09'	1 Casing Volume: 0.33 gallons
Reference Point: N side TOC	3 Casing Volumes: 1.00 gallons
Purging Device: ~~Disposable Bailer~~ Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
14:45	19.2	7.11	-	-	Pre: 0.12	38.0	-	6.11'
14:50	19.8	7.33	2892	-	-	91.0	2.0	

Comments: Well dewatered @ 2 gal
Pre-Sample DTW - 7.11'

Sample ID: VW-1	Sample Time: 17:34
Laboratory: McCampbell	Sample Date: 4.25.14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Roger Johnson	Signature:

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MONITORING FIELD DATA SHEET

Well ID: ~~MW-7AA~~ VW-2

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 4-24-14	Weather: Sunny
Well Diameter: ~~4~~ 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): ~~13.65'~~ 8.30'	Depth to Product: —
Depth to Water (DTW): ~~9.85'~~ 6.53'	Product Thickness: —
Water Column Height: 1.77'	1 Casing Volume: 0.28 gallons
Reference Point: N side TOC	3 Casing Volumes: 0.84 gallons
Purging Device: ~~Disposable Bailer~~ Submersible Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
15:10	19.0	6.98	—	—	Pre: 0.0	-106.4	—	9.85'
15:30	19.6	7.15	1203	-	—	2	1.5	

Comments: Well dewatered @ 1.5 gal
Mild Hydrocarbon odor
Pre-Sample DTW - 7.49'

Sample ID: VW-2	Sample Time: 17:26
Laboratory: McCampbell	Sample Date: 4-25-14
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Zonen Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: VW-3

Project.Task #: 1001.001	Project Name: Dublin Auto Wash			
Address: 7240 Dublin Blvd., Dublin				
Date: 4.25.14	Weather: Overcast			
Well Diameter: 2"	Volume/ft.	1" = 0.04	3" = 0.37	6" = 1.47
		2" = 0.16	4" = 0.65	radius^2 * 0.163
Total Depth (TD): Dry	Depth to Product: —			
Depth to Water (DTW): Dry	Product Thickness: —			
Water Column Height: Dry	1 Casing Volume: — gallons			
Reference Point: N side TOC	3 Casing Volumes: — gallons			
Purging Device: Disposable Bailer				
Sampling Device: Disposable Bailer				

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
					Pre:			

Comments: Well completly dry

Sample ID:	Sample Time:
Laboratory: McCampbell	Sample Date:
Containers/Preservative: 3 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Zoren Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-3A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 5/8/14	Weather: Overcast
Well Diameter: 4"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 16.55'	Depth to Product: —
Depth to Water (DTW): 10.85'	Product Thickness: —
Water Column Height: 5.7'	1 Casing Volume: 3.70 gallons
Reference Point: N side TOC	3 Casing Volumes: 11.11 gallons
Purging Device: Submersible pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:14	18.6	7.51	1960	-	Pre: —	-76	1.0	
13:16	18.8	7.19	1969	-	-	-86	7.5	16.09

Comments: BOC observed - Moderate Amount
8 gal purged total
Well dewatered
13.55

Sample ID: MW-3A	Sample Time: 13:50
Laboratory: McCampbell	Sample Date: 5-8-14
Containers/Preservative: NP Amber L, 2 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ramen Johnson	Signature:

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ENVIRONMENTAL SERVICES, INC.

MONITORING FIELD DATA SHEET

Well ID: MW-6A

Project.Task #: 1001.001	Project Name: Dublin Auto Wash
Address: 7240 Dublin Blvd., Dublin	
Date: 5/8/14	Weather: Overcast
Well Diameter: 2"	Volume/ft. 1" = 0.04 | 2" = 0.16 | 3" = 0.37 | 4" = 0.65 | 6" = 1.47 | radius^2 * 0.163
Total Depth (TD): 18.00'	Depth to Product: -
Depth to Water (DTW): 11.22'	Product Thickness: -
Water Column Height: 6.78'	1 Casing Volume: 1.08 gallons
Reference Point: N side TOC	3 Casing Volumes: 3.25 gallons
Purging Device: Submersable Pump	
Sampling Device: Disposable Bailer	

Time	Temp ©	pH	Cond (µs)	NTU	DO(mg/L)	ORP (mV)	Vol(gal)	DTW
13:05	19.1	7.98	1804	-	Pre: -	-69	1.5	
13:07	19.4	7.28	1851			-70	3.5	16.56

Comments: BOC observed - Mod amount
4 gal purged total
well dewatered
DTW @ Sample time 11.80'

Sample ID: MW-6A	Sample Time: 13:40
Laboratory: McCampbell	Sample Date: 5-8-14
Containers/Preservative: NP Amber L, 2 HCL VOAs	
Analyzed for: TPHg/BTEX/MTBE	
Sampler Name: Ronen Johnson	Signature:

APPENDIX C

Laboratory Analytical Results

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1404A72

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

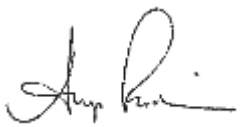
Project Contact: Morgan Gillies
Project P.O.:
Project Name: #7240 Dublin Blvd

Project Received: 04/28/2014

Analytical Report reviewed & approved for release on 05/05/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com

NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: #7240 Dublin Blvd
WorkOrder: 1404A72

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

d1	weakly modified or unmodified gasoline is significant

Quality Control Qualifiers

F1	MS/MSD recovery and/or RPD was out of acceptance criteria; LCS validated the prep batch.
F3	the surrogate standard recovery is outside of acceptance limits.

McCampbell Analytical, Inc.
"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8260B
Date Prepared:	5/1/14	**Unit:**	µg/L

Naphthalene by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404A72-007B**	**Water**	**04/25/2014 15:18**	**GC28**	**89940**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**170**	5.0	10	05/01/2014 16:15

Surrogates	REC (%)	Limits	
4-BFB	107	70-130	05/01/2014 16:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404A72-010B**	**Water**	**04/25/2014 15:51**	**GC28**	**89940**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**68**	1.2	2.5	05/01/2014 16:55

Surrogates	REC (%)	Limits	
4-BFB	106	70-130	05/01/2014 16:55

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
DPE-1	**1404A72-001A**	**Water**	**04/25/2014 16:45**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 21:19
MTBE	**51**	5.0	1	04/30/2014 21:19
Benzene	ND	0.50	1	04/30/2014 21:19
Toluene	**0.69**	0.50	1	04/30/2014 21:19
Ethylbenzene	ND	0.50	1	04/30/2014 21:19
Xylenes	ND	0.50	1	04/30/2014 21:19

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	04/30/2014 21:19

DPE-2	1404A72-002A	Water	04/25/2014 16:52	GC3	89901

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**140**	50	1	04/29/2014 20:01
MTBE	ND	5.0	1	04/29/2014 20:01
Benzene	ND	0.50	1	04/29/2014 20:01
Toluene	**4.2**	0.50	1	04/29/2014 20:01
Ethylbenzene	ND	0.50	1	04/29/2014 20:01
Xylenes	ND	0.50	1	04/29/2014 20:01

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	119	70-130		04/29/2014 20:01

VW-1	1404A72-003A	Water	04/25/2014 17:34	GC3	89901

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 22:49
MTBE	**8.6**	5.0	1	04/30/2014 22:49
Benzene	ND	0.50	1	04/30/2014 22:49
Toluene	ND	0.50	1	04/30/2014 22:49
Ethylbenzene	ND	0.50	1	04/30/2014 22:49
Xylenes	ND	0.50	1	04/30/2014 22:49

Surrogates	REC (%)	Limits	
aaa-TFT	97	70-130	04/30/2014 22:49

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
VW-2	**1404A72-004A**	**Water**	**04/25/2014 17:26**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/29/2014 23:02
MTBE	ND	5.0	1	04/29/2014 23:02
Benzene	ND	0.50	1	04/29/2014 23:02
Toluene	ND	0.50	1	04/29/2014 23:02
Ethylbenzene	ND	0.50	1	04/29/2014 23:02
Xylenes	ND	0.50	1	04/29/2014 23:02

Surrogates	REC (%)	Limits	
aaa-TFT	98	70-130	04/29/2014 23:02

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-1	**1404A72-005A**	**Water**	**04/25/2014 14:55**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/29/2014 23:32
MTBE	ND	5.0	1	04/29/2014 23:32
Benzene	ND	0.50	1	04/29/2014 23:32
Toluene	ND	0.50	1	04/29/2014 23:32
Ethylbenzene	ND	0.50	1	04/29/2014 23:32
Xylenes	ND	0.50	1	04/29/2014 23:32

Surrogates	REC (%)	Limits	
aaa-TFT	96	70-130	04/29/2014 23:32

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-2	**1404A72-006A**	**Water**	**04/25/2014 15:06**	**GC3**	**89942**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 18:14
MTBE	ND	5.0	1	04/30/2014 18:14
Benzene	ND	0.50	1	04/30/2014 18:14
Toluene	ND	0.50	1	04/30/2014 18:14
Ethylbenzene	ND	0.50	1	04/30/2014 18:14
Xylenes	ND	0.50	1	04/30/2014 18:14

Surrogates	REC (%)	Limits	
aaa-TFT	97	70-130	04/30/2014 18:14

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404A72-007A**	**Water**	**04/25/2014 15:18**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3300**	500	10	04/30/2014 04:59
MTBE	**120**	50	10	04/30/2014 04:59
Benzene	**100**	5.0	10	04/30/2014 04:59
Toluene	**7.6**	5.0	10	04/30/2014 04:59
Ethylbenzene	**54**	5.0	10	04/30/2014 04:59
Xylenes	**230**	5.0	10	04/30/2014 04:59

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	107	70-130		04/30/2014 04:59

MW-4	1404A72-008A	Water	04/25/2014 15:37	GC3	89942

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	05/01/2014 00:19
MTBE	ND	5.0	1	05/01/2014 00:19
Benzene	ND	0.50	1	05/01/2014 00:19
Toluene	ND	0.50	1	05/01/2014 00:19
Ethylbenzene	ND	0.50	1	05/01/2014 00:19
Xylenes	ND	0.50	1	05/01/2014 00:19

Surrogates	REC (%)	Limits	
aaa-TFT	95	70-130	05/01/2014 00:19

MW-5	1404A72-009A	Water	04/25/2014 15:45	GC3	89942

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	05/01/2014 18:37
MTBE	**5.5**	5.0	1	05/01/2014 18:37
Benzene	ND	0.50	1	05/01/2014 18:37
Toluene	ND	0.50	1	05/01/2014 18:37
Ethylbenzene	ND	0.50	1	05/01/2014 18:37
Xylenes	ND	0.50	1	05/01/2014 18:37

Surrogates	REC (%)	Limits	
aaa-TFT	96	70-130	05/01/2014 18:37

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404A72-010A**	**Water**	**04/25/2014 15:51**	**GC3**	**89942**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**960**	50	1	05/01/2014 21:12
MTBE	ND	10	1	05/01/2014 21:12
Benzene	**150**	5.0	10	05/01/2014 01:49
Toluene	**1.7**	0.50	1	05/01/2014 21:12
Ethylbenzene	**9.0**	0.50	1	05/01/2014 21:12
Xylenes	**26**	0.50	1	05/01/2014 21:12

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	99	70-130		05/01/2014 21:12

MW-7A	1404A72-011A	Water	04/25/2014 17:08	GC3	89942

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	05/01/2014 02:19
MTBE	**5.9**	5.0	1	05/01/2014 02:19
Benzene	ND	0.50	1	05/01/2014 02:19
Toluene	ND	0.50	1	05/01/2014 02:19
Ethylbenzene	ND	0.50	1	05/01/2014 02:19
Xylenes	ND	0.50	1	05/01/2014 02:19

Surrogates	REC (%)	Limits	
aaa-TFT	100	70-130	05/01/2014 02:19

MW-8A	1404A72-012A	Water	04/25/2014 16:26	GC3	89901

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 02:30
MTBE	ND	5.0	1	04/30/2014 02:30
Benzene	ND	0.50	1	04/30/2014 02:30
Toluene	ND	0.50	1	04/30/2014 02:30
Ethylbenzene	ND	0.50	1	04/30/2014 02:30
Xylenes	ND	0.50	1	04/30/2014 02:30

Surrogates	REC (%)	Limits	
aaa-TFT	104	70-130	04/30/2014 02:30

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-9A	**1404A72-013A**	**Water**	**04/25/2014 16:10**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 03:00
MTBE	ND	5.0	1	04/30/2014 03:00
Benzene	ND	0.50	1	04/30/2014 03:00
Toluene	ND	0.50	1	04/30/2014 03:00
Ethylbenzene	ND	0.50	1	04/30/2014 03:00
Xylenes	ND	0.50	1	04/30/2014 03:00

Surrogates	REC (%)	Limits	
aaa-TFT	104	70-130	04/30/2014 03:00

MW-10A	1404A72-014A	Water	04/25/2014 16:36	GC3	89901

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 04:29
MTBE	ND	5.0	1	04/30/2014 04:29
Benzene	ND	0.50	1	04/30/2014 04:29
Toluene	ND	0.50	1	04/30/2014 04:29
Ethylbenzene	ND	0.50	1	04/30/2014 04:29
Xylenes	**0.54**	0.50	1	04/30/2014 04:29

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	04/30/2014 04:29

MW-6B	1404A72-015A	Water	04/25/2014 16:00	GC3	89901

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 05:29
MTBE	ND	5.0	1	04/30/2014 05:29
Benzene	ND	0.50	1	04/30/2014 05:29
Toluene	ND	0.50	1	04/30/2014 05:29
Ethylbenzene	ND	0.50	1	04/30/2014 05:29
Xylenes	ND	0.50	1	04/30/2014 05:29

Surrogates	REC (%)	Limits	
aaa-TFT	97	70-130	04/30/2014 05:29

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Project:	#7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/28/14 14:50	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/29/14-5/1/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-7B	**1404A72-016A**	**Water**	**04/25/2014 16:58**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 23:19
MTBE	ND	5.0	1	04/30/2014 23:19
Benzene	ND	0.50	1	04/30/2014 23:19
Toluene	ND	0.50	1	04/30/2014 23:19
Ethylbenzene	ND	0.50	1	04/30/2014 23:19
Xylenes	ND	0.50	1	04/30/2014 23:19

Surrogates	REC (%)	Limits	
aaa-TFT	97	70-130	04/30/2014 23:19

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-7AA	**1404A72-017A**	**Water**	**04/25/2014 17:15**	**GC3**	**89901**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/30/2014 23:49
MTBE	**17**	5.0	1	04/30/2014 23:49
Benzene	ND	0.50	1	04/30/2014 23:49
Toluene	**0.87**	0.50	1	04/30/2014 23:49
Ethylbenzene	ND	0.50	1	04/30/2014 23:49
Xylenes	ND	0.50	1	04/30/2014 23:49

Surrogates	REC (%)	Limits	
aaa-TFT	99	70-130	04/30/2014 23:49

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Date Prepared:	5/1/14	**BatchID:**	89940
Date Analyzed:	4/30/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#7240 Dublin Blvd	**Sample ID:**	MB/LCS-89940 1404B18-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	19.9	0.50	20	-	99.4	70-130
Benzene	ND	21.6	0.50	20	-	108	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	72.7	2.0	80	-	90.9	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	22.0	0.50	20	-	110	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	21.0	0.50	20	-	105	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	19.0	0.50	20	-	95	70-130
1,1-Dichloroethene	ND	20.9	0.50	20	-	105	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Date Prepared:	5/1/14	**BatchID:**	89940
Date Analyzed:	4/30/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#7240 Dublin Blvd	**Sample ID:**	MB/LCS-89940 1404B18-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	19.7	0.50	20	-	98.7	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	19.8	0.50	20	-	99	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.3	0.50	20	-	96.5	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	22.6	0.50	20	-	113	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	21.6	0.50	20	-	108	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	27.9	50.6		45	112	112	70-130
Toluene-d8	29.5	52.6		45	118	117	70-130
4-BFB	2.55	4.49		4.5	102	100	70-130

(Cont.)

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"When Quality Counts"

1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Date Prepared:	5/1/14	**BatchID:**	89940
Date Analyzed:	4/30/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	#7240 Dublin Blvd	**Sample ID:**	MB/LCS-89940 1404B18-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	21.0	21.2	20	ND	105	106	70-130	1.08	20
Benzene	21.4	21.0	20	ND	107	105	70-130	1.91	20
t-Butyl alcohol (TBA)	85.6	86.7	80	ND	107	108	70-130	1.29	20
Chlorobenzene	20.9	20.8	20	ND	105	104	70-130	0.418	20
1,2-Dibromoethane (EDB)	21.7	22.1	20	ND	109	110	70-130	1.50	20
1,2-Dichloroethane (1,2-DCA)	19.4	19.6	20	ND	97.3	98.2	70-130	0.982	20
1,1-Dichloroethene	20.1	20.2	20	ND	100	101	70-130	0.395	20
Diisopropyl ether (DIPE)	20.3	20.1	20	ND	102	100	70-130	1.36	20
Ethyl tert-butyl ether (ETBE)	20.9	20.7	20	ND	104	104	70-130	0	20
Methyl-t-butyl ether (MTBE)	20.5	21.1	20	ND	102	105	70-130	2.69	20
Toluene	21.4	21.0	20	ND	107	105	70-130	1.90	20
Trichloroethene	20.9	20.9	20	ND	105	104	70-130	0.208	20
Surrogate Recovery									
Dibromofluoromethane	51.2	51.6	45		114	115	70-130	0.796	20
Toluene-d8	50.5	49.9	45		112	111	70-130	1.13	20
4-BFB	4.38	4.43	4.5		97	98	70-130	1.09	20

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Date Prepared:	4/29/14	**BatchID:**	89901
Date Analyzed:	4/29/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#7240 Dublin Blvd	**Sample ID:**	MB/LCS-89901 1404A45-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	56.4	40	60	-	93.9	70-130
MTBE	ND	10.1	5.0	10	-	101	70-130
Benzene	ND	9.42	0.50	10	-	94.2	70-130
Toluene	ND	9.30	0.50	10	-	93	70-130
Ethylbenzene	ND	9.31	0.50	10	-	93.1	70-130
Xylenes	ND	28.1	0.50	30	-	93.7	70-130
Surrogate Recovery							
aaa-TFT	9.52	9.50		10	95	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	338	333	60	279.3	98.5	89.9	70-130	1.53	20
MTBE	13.7	12.4	10	ND	137,F1	124	70-130	9.80	20
Benzene	NR	NR	10	184.3	NR	NR	70-130	NR	20
Toluene	39.8	38.3	10	32.26	75	60.5,F1	70-130	3.71	20
Ethylbenzene	12.6	11.7	10	2.719	98.4	90.2	70-130	6.76	20
Xylenes	45.2	42.4	30	16.17	96.9	87.5	70-130	6.40	20
Surrogate Recovery									
aaa-TFT	13.4	13.1	10		134,F3	131,F3	70-130	2.07	20

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404A72
Date Prepared:	5/1/14	**BatchID:**	89942
Date Analyzed:	4/30/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	#7240 Dublin Blvd	**Sample ID:**	MB/LCS-89942 1404A72-006AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	55.6	40	60	-	92.7	70-130
MTBE	ND	10.3	5.0	10	-	103	70-130
Benzene	ND	9.14	0.50	10	-	91.4	70-130
Toluene	ND	9.01	0.50	10	-	90.1	70-130
Ethylbenzene	ND	9.13	0.50	10	-	91.3	70-130
Xylenes	ND	27.8	0.50	30	-	92.6	70-130
Surrogate Recovery							
aaa-TFT	9.48	9.49		10	95	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	51.3	57.7	60	ND	85.4	96.2	70-130	11.9	20
MTBE	13.7	13.6	10	ND	137,F1	136,F1	70-130	0.486	20
Benzene	9.45	9.46	10	ND	94.5	94.6	70-130	0.0970	20
Toluene	9.32	9.36	10	ND	93.2	93.6	70-130	0.341	20
Ethylbenzene	9.38	9.36	10	ND	93.8	93.6	70-130	0.204	20
Xylenes	28.4	28.4	30	ND	94.6	94.6	70-130	0	20
Surrogate Recovery									
aaa-TFT	9.47	9.46	10		95	95	70-130	0	20

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404A72 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: #7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/28/2014**
Date Printed: **05/02/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404A72-001	DPE-1	Water	4/25/2014 16:45	☐		A	A									
1404A72-002	DPE-2	Water	4/25/2014 16:52	☐		A										
1404A72-003	VW-1	Water	4/25/2014 17:34	☐		A										
1404A72-004	VW-2	Water	4/25/2014 17:26	☐		A										
1404A72-005	MW-1	Water	4/25/2014 14:55	☐		A										
1404A72-006	MW-2	Water	4/25/2014 15:06	☐		A										
1404A72-007	MW-3A	Water	4/25/2014 15:18	☐	B	A										
1404A72-008	MW-4	Water	4/25/2014 15:37	☐		A										
1404A72-009	MW-5	Water	4/25/2014 15:45	☐		A										
1404A72-010	MW-6A	Water	4/25/2014 15:51	☐	B	A										
1404A72-011	MW-7A	Water	4/25/2014 17:08	☐		A										
1404A72-012	MW-8A	Water	4/25/2014 16:26	☐		A										
1404A72-013	MW-9A	Water	4/25/2014 16:10	☐		A										
1404A72-014	MW-10A	Water	4/25/2014 16:36	☐		A										
1404A72-015	MW-6B	Water	4/25/2014 16:00	☐		A										
1404A72-016	MW-7B	Water	4/25/2014 16:58	☐		A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

Comments:

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

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404A72 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: #7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/28/2014**
Date Printed: **05/02/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404A72-017	MW-7AA	Water	4/25/2014 17:15	☐		A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: #7240 Dublin Blvd
Comments:

QC Level: LEVEL 2
Client Contact: Morgan Gillies
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

Work Order: 1404A72
Date Received: 4/28/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404A72-001A	DPE-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:45	5 days	Present	☐	
1404A72-002A	DPE-2	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:52	5 days	Present	☐	
1404A72-003A	VW-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 17:34	5 days	Present	☐	
1404A72-004A	VW-2	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 17:26	5 days	Present	☐	
1404A72-005A	MW-1	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 14:55	5 days	Present	☐	
1404A72-006A	MW-2	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 15:06	5 days	Present	☐	
1404A72-007A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/25/2014 15:18	5 days	None	☐	
1404A72-007B	MW-3A	Water	SW8260B (VOCs) <Naphthalene>	1	VOA w/ HCl	☐	4/25/2014 15:18	5 days	None	☐	
1404A72-008A	MW-4	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 15:37	5 days	Present	☐	
1404A72-009A	MW-5	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 15:45	5 days	Present	☐	
1404A72-010A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/25/2014 15:51	5 days	Present	☐	
1404A72-010B	MW-6A	Water	SW8260B (VOCs) <Naphthalene>	1	VOA w/ HCl	☐	4/25/2014 15:51	5 days	Present	☐	
1404A72-011A	MW-7A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 17:08	5 days	Present	☐	
1404A72-012A	MW-8A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:26	5 days	Present	☐	
1404A72-013A	MW-9A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:10	5 days	Present	☐	
1404A72-014A	MW-10A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:36	5 days	None	☐	
1404A72-015A	MW-6B	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:00	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: #7240 Dublin Blvd
Comments:

QC Level: LEVEL 2
Client Contact: Morgan Gillies
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

Work Order: 1404A72
Date Received: 4/28/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404A72-016A	MW-7B	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 16:58	5 days	Present	☐	
1404A72-017A	MW-7AA	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/25/2014 17:15	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

EDF Required? Coelt (Normal) No **Write On (DW)** No

Report To: Morgan Gillies **Bill To:** Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612

E-Mail: mgillies@pangeaenv.com

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

Project #: 7240 Dublin Blvd **Project Name:** 7240 Dublin Blvd

Project Location: 7240 Dublin Blvd., Dublin, CA

Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Naphthalene (8260B)	Other	Other	Comments
DPE-1		4.25.14	16:45	3	VOA	X					X	X			X																X			Report EDF
DPE-2			16:52			X									X																			
VW-1			17:34			X									X																			
VW-2			17:26			X									X																			
MW-1			14:55			X									X																			
MW-2			15:06			X									X																			
MW-3A			15:18			X									X																X			
MW-4			15:37			X									X																			
MW-5			15:45			X									X																			
MW-6A			15:51			X									X																X			
MW-7A			17:08			X									X																			
MW-8A			16:26			X									X																			
MW-9A			16:10			X									X																			
MW-10A			16:36			X					X	X			X																			

Relinquished By:	Date:	Time:	Received By:
	4/28/14	1205	
Relinquished By:	Date:	Time:	Received By:
	4/28/14	1430	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4-5
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

COMMENTS:

1404A72 Page 2 of 2

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☐ 5 DAY

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

Report To: Morgan Gillies Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 7240 Dublin Blvd Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA
Sampler Signature: [signature]

Analysis Request columns: BTEX & TPH as Gas (602/8020 + 8015)/MTBE; TPH as Diesel (8015) w/ Silica Gel Cleanup; Total Petroleum Oil & Grease (5520 E&F/B&F); Total Petroleum Hydrocarbons (418.1); EPA 601 / 8010 / 8021; BTEX ONLY (EPA 602 / 8020); EPA 608 / 8081; EPA 608 / 8082 PCB's ONLY; EPA 8140 / 8141; EPA 8150 / 8151; EPA 524.2 / 624 / 8260; EPA 525 / 625 / 8270; PAH's / PNA's by EPA 625 / 8270 / 8310; CAM-17 Metals (6010 / 6020); LUFT 5 Metals (6010 / 6020); Lead (200.8 / 200.9 / 6010)

Other: Naphthalene –(8260B)

Comments: Filter Samples for Metals analysis: Yes / No; Report EDF

SAMPLE ID	LOCATION (Field Point Name)	Date	Time	# Containers	Type Containers	Water	Soil	Air	Sludge	Other	ICE	HCL	HNO₃	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE
MW-6B		4-25-14	16:00	3	VOA	X					X	X			x
MW-7B		↓	16:58	↓	↓	X					↓	↓			x
MW-7AA		↓	17:15	↓	↓	X					↓	↓			x
															x
															x
															x
															x
															x
															x
															x
															x
															x
															x
															x

Relinquished By:	Date:	Time:	Received By:
[signature]	4/28/14	12:05	[signature]
[signature]	4/28/14	1430	[signature]

ICE/t° 4.5
GOOD CONDITION____
HEAD SPACE ABSENT____
DECHLORINATED IN LAB____
APPROPRIATE CONTAINERS____
PRESERVED IN LAB____

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/28/2014 2:50:45 PM**

Project Name: **#7240 Dublin Blvd**
LogIn Reviewed by: Daniel Loa

WorkOrder N°: **1404A72** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1404238

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

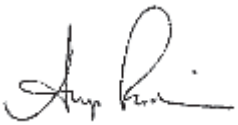
Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/07/2014

Analytical Report reviewed & approved for release on 04/11/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com

NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404238

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/7/14 20:23	**Analytical Method:**	SW8260B
Date Prepared:	4/8/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW3A	**1404238-001B**	**Water**	**04/04/2014 14:45**	**GC16**	**89146**

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	**11**	5.0	10	04/08/2014 14:45
t-Butyl alcohol (TBA)	**690**	20	10	04/08/2014 14:45
Diisopropyl ether (DIPE)	ND	5.0	10	04/08/2014 14:45
Ethyl tert-butyl ether (ETBE)	ND	5.0	10	04/08/2014 14:45
Methyl-t-butyl ether (MTBE)	**87**	5.0	10	04/08/2014 14:45
Naphthalene	**110**	5.0	10	04/08/2014 14:45

Surrogates	REC (%)	Limits	
Dibromofluoromethane	110	70-130	04/08/2014 14:45
Toluene-d8	91	70-130	04/08/2014 14:45
4-BFB	84	70-130	04/08/2014 14:45

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404238-002B**	**Water**	**04/04/2014 14:20**	**GC16**	**89146**

Analytes	Result	RL	DF	Date Analyzed
tert-Amyl methyl ether (TAME)	ND	1.0	2	04/08/2014 21:21
t-Butyl alcohol (TBA)	**240**	4.0	2	04/08/2014 21:21
Diisopropyl ether (DIPE)	**1.1**	1.0	2	04/08/2014 21:21
Ethyl tert-butyl ether (ETBE)	ND	1.0	2	04/08/2014 21:21
Methyl-t-butyl ether (MTBE)	**3.2**	1.0	2	04/08/2014 21:21
Naphthalene	**25**	1.0	2	04/08/2014 21:21

Surrogates	REC (%)	Limits	
Dibromofluoromethane	109	70-130	04/08/2014 21:21
Toluene-d8	93	70-130	04/08/2014 21:21
4-BFB	94	70-130	04/08/2014 21:21

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/7/14 20:23	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/9/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW3A	**1404238-001A**	**Water**	**04/04/2014 14:45**	**GC3**	**89140**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3700**	50	1	04/09/2014 03:35
MTBE	ND	120	1	04/09/2014 03:35
Benzene	**100**	0.50	1	04/09/2014 03:35
Toluene	**5.1**	0.50	1	04/09/2014 03:35
Ethylbenzene	**50**	0.50	1	04/09/2014 03:35
Xylenes	**240**	0.50	1	04/09/2014 03:35

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	119	70-130		04/09/2014 03:35

MW-6A	1404238-002A	Water	04/04/2014 14:20	GC3	89140

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**920**	50	1	04/09/2014 04:05
MTBE	ND	10	1	04/09/2014 04:05
Benzene	**94**	0.50	1	04/09/2014 04:05
Toluene	**2.7**	0.50	1	04/09/2014 04:05
Ethylbenzene	**9.8**	0.50	1	04/09/2014 04:05
Xylenes	**35**	0.50	1	04/09/2014 04:05

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	118	70-130		04/09/2014 04:05

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1534 Willow Pass Road, Pittsburg, CA 94565-1701
Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Date Prepared:	4/9/14	**BatchID:**	89146
Date Analyzed:	4/8/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89146 1404177-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	17.34	0.50	20	-	86.7	70-130
Benzene	ND	18.96	0.50	20	-	94.8	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	67.62	2.0	80	-	84.5	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	18.58	0.50	20	-	92.9	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	19.29	0.50	20	-	96.5	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	20.08	0.50	20	-	100	70-130
1,1-Dichloroethene	ND	19.75	0.50	20	-	98.8	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Date Prepared:	4/9/14	**BatchID:**	89146
Date Analyzed:	4/8/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89146 1404177-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	18.41	0.50	20	-	92	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	18.33	0.50	20	-	91.6	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	17.66	0.50	20	-	88.3	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	17.97	0.50	20	-	89.9	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	19.47	0.50	20	-	97.4	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	28.04	48.3		45	112	107	70-130
Toluene-d8	22.84	38.58		45	91	86	70-130
4-BFB	2.282	3.907		4.5	91	87	70-130

(Cont.)

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http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Date Prepared:	4/9/14	**BatchID:**	89146
Date Analyzed:	4/8/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89146 1404177-004AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	17.18	18.75	20	ND	85.9	93.8	70-130	8.74	20
Benzene	16.86	18.7	20	ND	84.3	93.5	70-130	10.3	20
t-Butyl alcohol (TBA)	76.1	83.64	80	ND	95.1	105	70-130	9.44	20
Chlorobenzene	16.04	17.88	20	ND	80.2	89.4	70-130	10.9	20
1,2-Dibromoethane (EDB)	18.54	20.12	20	ND	92.7	101	70-130	8.16	20
1,2-Dichloroethane (1,2-DCA)	19.6	21.28	20	ND	98	106	70-130	8.20	20
1,1-Dichloroethene	17.34	19.24	20	ND	86.7	96.2	70-130	10.3	20
Diisopropyl ether (DIPE)	17.26	18.86	20	ND	86.3	94.3	70-130	8.82	20
Ethyl tert-butyl ether (ETBE)	17.86	19.52	20	ND	89.3	97.6	70-130	8.87	20
Methyl-t-butyl ether (MTBE)	17.97	19.41	20	ND	89.9	97.1	70-130	7.70	20
Toluene	15.52	17.39	20	ND	77.6	86.9	70-130	11.4	20
Trichloroethene	17.38	19.31	20	ND	86.9	96.5	70-130	10.5	20
Surrogate Recovery									
Dibromofluoromethane	47.83	49.78	45		106	111	70-130	3.99	20
Toluene-d8	36.27	38.22	45		81	85	70-130	5.25	20
4-BFB	3.589	3.83	4.5		80	85	70-130	6.49	20

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404238
Date Prepared:	4/8/14	**BatchID:**	89140
Date Analyzed:	4/8/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89140 1404304-001BMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	59.94	40	60	-	99.9	70-130
MTBE	ND	10.41	5.0	10	-	104	70-130
Benzene	ND	9.055	0.50	10	-	90.5	70-130
Toluene	ND	9.174	0.50	10	-	91.7	70-130
Ethylbenzene	ND	9.062	0.50	10	-	90.6	70-130
Xylenes	ND	27.44	0.50	30	-	91.5	70-130
Surrogate Recovery							
aaa-TFT	9.55	9.166		10	95	92	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.98	59.65	60	ND	100	99.4	70-130	0.548	20
MTBE	9.989	9.876	10	ND	99.9	98.8	70-130	1.14	20
Benzene	9.507	9.359	10	ND	95.1	93.6	70-130	1.57	20
Toluene	9.515	9.376	10	ND	95.1	93.8	70-130	1.47	20
Ethylbenzene	9.464	9.368	10	ND	94.6	93.7	70-130	1.02	20
Xylenes	28.73	28.32	30	ND	95.8	94.4	70-130	1.43	20
Surrogate Recovery									
aaa-TFT	9.388	9.226	10		94	92	70-130	1.73	20

McCampbell Analytical, Inc.
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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404238 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: 04/07/2014
Date Printed: 04/07/2014

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404238-001	MW3A	Water	4/4/2014 14:45	☐	B	A	A									
1404238-002	MW-6A	Water	4/4/2014 14:20	☐	B	A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Jena Alfaro

Comments:

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

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Toll Free Telephone: (877) 252-9262 / Fax: (925) 252-9269
http://www.mccampbell.com / E-mail: main@mccampbell.com

WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: 7240 Dublin Blvd
Comments:

QC Level: LEVEL 2
Client Contact: Morgan Gillies
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

Work Order: 1404238
Date Received: 4/7/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404238-001A	MW3A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/4/2014 14:45	5 days	Present	☐	
1404238-001B	MW3A	Water	SW8260B (VOCs) <Diisopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), Methyl-t-butyl ether (MTBE), Naphthalene, t-Butyl alcohol (TBA), tert-Amyl methyl ether (TAME)>	2	VOA w/ HCl	☐	4/4/2014 14:45	5 days	Present	☐	
1404238-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/4/2014 14:20	5 days	Present	☐	
1404238-002B	MW-6A	Water	SW8260B (VOCs) <Diisopropyl ether (DIPE), Ethyl tert-butyl ether (ETBE), Methyl-t-butyl ether (MTBE), Naphthalene, t-Butyl alcohol (TBA), tert-Amyl methyl ether (TAME)>	2	VOA w/ HCl	☐	4/4/2014 14:20	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404238

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

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

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 7240 Dublin Blvd	Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Naphthalene And OXY3 by 8260	Other	Comments: Filter Samples for Metals analysis: Yes / No
MW3A		4-4-14	14:45	3	VOA	X						X			X																X		
MW-6A		4-4-14	14:20	3	VOA	X						X			X																X		

EDF

Relinquished By:	Date:	Time:	Received By:
[signature]	4/7/14	1250	[signature]
[signature]	4/7/14	1530	[signature]

ICE/t° 3.2
GOOD CONDITION____
HEAD SPACE ABSENT____
DECHLORINATED IN LAB____
APPROPRIATE CONTAINERS____
PRESERVED IN LAB____

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

COMMENTS:

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/7/2014 8:23:52 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Jena Alfaro

WorkOrder N°: **1404238** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.2°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

McCampbell Analytical, Inc.

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Analytical Report

WorkOrder: 1404303

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

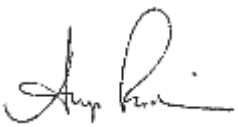
Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/08/2014

Analytical Report reviewed & approved for release on 04/16/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404303

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

S	spike recovery outside accepted recovery limits
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant

Quality Control Qualifiers

F2	LCS recovery for this compound is outside of acceptance limits.

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/8/14 19:10	**Analytical Method:**	SW8260B
Date Prepared:	4/9/14-4/15/14	**Unit:**	µg/L

Naphthalene by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404303-001B**	**Water**	**04/07/2014 12:47**	**GC18**	**89193**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**130**	5.0	10	04/09/2014 22:24

Surrogates	REC (%)	Limits	
4-BFB	77	70-130	04/09/2014 22:24

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404303-002B**	**Water**	**04/07/2014 12:35**	**GC18**	**89193**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**67**	5.0	10	04/09/2014 23:03

Surrogates	REC (%)	Limits	
4-BFB	83	70-130	04/09/2014 23:03

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-7A	**1404303-003B**	**Water**	**04/07/2014 13:00**	**GC16**	**89193**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	04/15/2014 02:21

Surrogates	REC (%)	Limits	
4-BFB	100	70-130	04/15/2014 02:21

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/8/14 19:10	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/10/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404303-001A**	**Water**	**04/07/2014 12:47**	**GC3**	**89198**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3300**	500	10	04/10/2014 01:36
MTBE	**100**	50	10	04/10/2014 01:36
Benzene	**110**	5.0	10	04/10/2014 01:36
Toluene	**5.1**	5.0	10	04/10/2014 01:36
Ethylbenzene	**46**	5.0	10	04/10/2014 01:36
Xylenes	**270**	5.0	10	04/10/2014 01:36

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	104	70-130		04/10/2014 01:36

MW-6A	1404303-002A	Water	04/07/2014 12:35	GC3	89198

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**1000**	50	1	04/10/2014 00:08
MTBE	ND	10	1	04/10/2014 00:08
Benzene	**130**	0.50	1	04/10/2014 00:08
Toluene	**3.1**	0.50	1	04/10/2014 00:08
Ethylbenzene	**5.3**	0.50	1	04/10/2014 00:08
Xylenes	**42**	0.50	1	04/10/2014 00:08

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d1,c4	
aaa-TFT	134	S	70-130		04/10/2014 00:08

MW-7A	1404303-003A	Water	04/07/2014 13:00	GC3	89198

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/10/2014 03:34
MTBE	ND	5.0	1	04/10/2014 03:34
Benzene	ND	0.50	1	04/10/2014 03:34
Toluene	ND	0.50	1	04/10/2014 03:34
Ethylbenzene	ND	0.50	1	04/10/2014 03:34
Xylenes	ND	0.50	1	04/10/2014 03:34

Surrogates	REC (%)	Limits	
aaa-TFT	102	70-130	04/10/2014 03:34

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Date Prepared:	4/10/14	**BatchID:**	89193
Date Analyzed:	4/9/14	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89193 1404303-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	15.56	0.50	20	-	77.8	70-130
Benzene	ND	17.29	0.50	20	-	86.4	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	39.02	2.0	80	-	48.8, F2	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	19.01	0.50	20	-	95.1	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	18.96	0.50	20	-	94.8	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	15.93	0.50	20	-	79.6	70-130
1,1-Dichloroethene	ND	18.34	0.50	20	-	91.7	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Date Prepared:	4/10/14	**BatchID:**	89193
Date Analyzed:	4/9/14	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89193 1404303-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	16.13	0.50	20	-	80.6	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	15.3	0.50	20	-	76.5	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	15.65	0.50	20	-	78.3	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	16.94	0.50	20	-	84.7	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	19.93	0.50	20	-	99.6	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	27.74	44.02		45	111	98	70-130
Toluene-d8	23.95	42.04		45	96	93	70-130
4-BFB	2.093	3.59		4.5	84	80	70-130

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Date Prepared:	4/10/14	**BatchID:**	89193
Date Analyzed:	4/9/14	**Extraction Method:**	SW5030B
Instrument:	GC18	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89193 1404303-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	19.04	18.41	20	ND	95.2	92.1	70-130	3.34	20
Benzene	19.75	19.11	20	ND	98.8	95.6	70-130	3.31	20
t-Butyl alcohol (TBA)	NR	NR	80	430	NR	NR	70-130	NR	20
Chlorobenzene	21.65	20.74	20	ND	108	104	70-130	4.31	20
1,2-Dibromoethane (EDB)	23.1	22.53	20	ND	115	113	70-130	2.49	20
1,2-Dichloroethane (1,2-DCA)	19.36	18.51	20	ND	96.8	92.6	70-130	4.48	20
1,1-Dichloroethene	20.66	20.4	20	ND	103	102	70-130	1.29	20
Diisopropyl ether (DIPE)	18.78	18.13	20	ND	93.9	90.7	70-130	3.54	20
Ethyl tert-butyl ether (ETBE)	18.44	17.77	20	ND	92.2	88.8	70-130	3.70	20
Methyl-t-butyl ether (MTBE)	21	20.17	20	2.5	92.3	88.2	70-130	4.02	20
Toluene	18.69	18.01	20	ND	93.4	90.1	70-130	3.67	20
Trichloroethene	22.26	21.49	20	ND	111	107	70-130	3.54	20
Surrogate Recovery									
Dibromofluoromethane	48.41	47.28	45		108	105	70-130	2.36	20
Toluene-d8	43.81	42.97	45		97	95	70-130	1.93	20
4-BFB	3.728	3.665	4.5		83	81	70-130	1.71	20

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404303
Date Prepared:	4/9/14	**BatchID:**	89198
Date Analyzed:	4/9/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89198 1404303-003AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	59.74	40	60	-	99.6	70-130
MTBE	ND	10.78	5.0	10	-	108	70-130
Benzene	ND	10.2	0.50	10	-	102	70-130
Toluene	ND	10.17	0.50	10	-	102	70-130
Ethylbenzene	ND	10.21	0.50	10	-	102	70-130
Xylenes	ND	30.97	0.50	30	-	103	70-130
Surrogate Recovery							
aaa-TFT	9.506	9.494		10	95	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	61.62	63.87	60	ND	103	106	70-130	3.59	20
MTBE	9.801	9.533	10	ND	98	95.3	70-130	2.77	20
Benzene	9.576	9.786	10	ND	95.8	97.9	70-130	2.17	20
Toluene	9.648	9.842	10	ND	96.5	98.4	70-130	1.99	20
Ethylbenzene	9.759	9.839	10	ND	97.6	98.4	70-130	0.811	20
Xylenes	29.48	29.38	30	ND	98.3	97.9	70-130	0.345	20
Surrogate Recovery									
aaa-TFT	9.557	9.88	10		96	99	70-130	3.32	20

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(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404303 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: #7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/08/2014**
Date Printed: **04/09/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404303-001	MW-3A	Water	4/7/2014 12:47	☐	B	A										
1404303-002	MW-6A	Water	4/7/2014 12:35	☐	B	A										
1404303-003	MW-7A	Water	4/7/2014 13:00	☐	B	A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Shana Carter

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: 7240 Dublin Blvd
Comments:

QC Level: LEVEL 2
Client Contact: Morgan Gillies
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

Work Order: 1404303
Date Received: 4/8/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404303-001A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/7/2014 12:47	5 days	Present	☐	
1404303-001B	MW-3A	Water	SW8260B (VOCs) <Naphthalene>	2	VOA w/ HCl	☐	4/7/2014 12:47	5 days	Present	☐	
1404303-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/7/2014 12:35	5 days	Present	☐	
1404303-002B	MW-6A	Water	SW8260B (VOCs) <Naphthalene>	2	VOA w/ HCl	☐	4/7/2014 12:35	5 days	Present	☐	
1404303-003A	MW-7A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/7/2014 13:00	5 days	Present	☐	
1404303-003B	MW-7A	Water	SW8260B (VOCs) <Naphthalene>	2	VOA w/ HCl	☐	4/7/2014 13:00	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404303

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1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

TURN AROUND TIME: ☐ RUSH ☐ 24 HR ☐ 48 HR ☐ 72 HR ☒ 5 DAY

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

Report To: Morgan Gillies | Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702 | Fax: (510) 836-3709
Project #: 7240 Dublin Blvd | Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd, Dublin, CA
Sampler Signature: [signature]

SAMPLE ID	LOCATION (Field Point Name)	Sampling Date	Sampling Time	# Containers	Type Containers	Matrix: Water	Soil	Air	Sludge	Other	Method Preserved: ICE	HCL	HNO_3	Other	BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Napthalene 8260	Other	Other	Comments
MW-3A		4-7-14	12:47	3	VOA	X						X			X																X			
MW-6A		↓	12:35	3	↓	X						X			X																X			
MW-7A		↓	13:00	3	↓	X						X			X																X			

Comments: Filter Samples for Metals analysis: Yes / No

Report EDF

Relinquished By:	Date:	Time:	Received By:
[signature]	4/7/14	14:34	[signature] 4/8/14 1340
[signature]	4/8/14	1530	Shana Carter 4/8/14 15:30

ICE/t° 3.5
GOOD CONDITION____
HEAD SPACE ABSENT____
DECHLORINATED IN LAB____
APPROPRIATE CONTAINERS____
PRESERVED IN LAB____

COMMENTS:

PRESERVATION____ VOAS O&G METALS OTHER pH<2

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/8/2014 7:10:11 PM**

Project Name: **#7240 Dublin Blvd**
LogIn Reviewed by: Shana Carter

WorkOrder N°: **1404303** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 3.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

McCampbell Analytical, Inc.

"When Quality Counts"

Analytical Report

WorkOrder: 1404426

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/10/2014

Analytical Report reviewed & approved for release on 04/17/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

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NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404426

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/10/14 18:19	**Analytical Method:**	SW8260B
Date Prepared:	4/15/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404426-001B**	**Water**	**04/09/2014 14:55**	**GC16**	**89346**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**130**	5.0	10	04/15/2014 03:04

Surrogates	REC (%)	Limits	
4-BFB	94	70-130	04/15/2014 03:04

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404426-002B**	**Water**	**04/09/2014 14:45**	**GC16**	**89346**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**35**	0.50	1	04/15/2014 03:47

Surrogates	REC (%)	Limits	
4-BFB	97	70-130	04/15/2014 03:47

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/10/14 18:19	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/11/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404426-001A**	**Water**	**04/09/2014 14:55**	**GC3**	**89261**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3600**	500	10	04/11/2014 04:16
MTBE	**130**	50	10	04/11/2014 04:16
Benzene	**130**	5.0	10	04/11/2014 04:16
Toluene	**6.6**	5.0	10	04/11/2014 04:16
Ethylbenzene	**60**	5.0	10	04/11/2014 04:16
Xylenes	**320**	5.0	10	04/11/2014 04:16

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	114	70-130		04/11/2014 04:16

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404426-002A**	**Water**	**04/09/2014 14:45**	**GC3**	**89261**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**940**	50	1	04/11/2014 04:45
MTBE	ND	10	1	04/11/2014 04:45
Benzene	**150**	0.50	1	04/11/2014 04:45
Toluene	**2.6**	0.50	1	04/11/2014 04:45
Ethylbenzene	**12**	0.50	1	04/11/2014 04:45
Xylenes	**39**	0.50	1	04/11/2014 04:45

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	120	70-130		04/11/2014 04:45

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Date Prepared:	4/15/14	**BatchID:**	89346
Date Analyzed:	4/14/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89346 1404431-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	18.52	0.50	20	-	92.6	70-130
Benzene	ND	19.3	0.50	20	-	96.5	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	89.27	2.0	80	-	112	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	18.75	0.50	20	-	93.7	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	19.81	0.50	20	-	99	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	21.56	0.50	20	-	108	70-130
1,1-Dichloroethene	ND	23.14	0.50	20	-	116	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Date Prepared:	4/15/14	**BatchID:**	89346
Date Analyzed:	4/14/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89346 1404431-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	19.54	0.50	20	-	97.7	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	19.93	0.50	20	-	99.6	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.31	0.50	20	-	96.5	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	18.54	0.50	20	-	92.7	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	19.24	0.50	20	-	96.2	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	28.05	49.33		45	112	110	70-130
Toluene-d8	23.16	39.17		45	93	87	70-130
4-BFB	2.518	4.064		4.5	101	90	70-130

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Date Prepared:	4/15/14	**BatchID:**	89346
Date Analyzed:	4/14/14	**Extraction Method:**	SW5030B
Instrument:	GC16	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89346 1404431-001AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	19.67	20.79	20	ND	98.4	104	70-130	5.49	20
Benzene	20.38	21.34	20	ND	102	107	70-130	4.58	20
t-Butyl alcohol (TBA)	101.2	89.62	80	ND	127	112	70-130	12.1	20
Chlorobenzene	18.8	19.49	20	ND	94	97.4	70-130	3.60	20
1,2-Dibromoethane (EDB)	20.33	20.81	20	ND	102	104	70-130	2.29	20
1,2-Dichloroethane (1,2-DCA)	23.03	24.05	20	ND	115	120	70-130	4.31	20
1,1-Dichloroethene	25.53	21.37	20	ND	128	107	70-130	17.7	20
Diisopropyl ether (DIPE)	20.53	21.52	20	ND	103	108	70-130	4.70	20
Ethyl tert-butyl ether (ETBE)	20.91	22.07	20	ND	105	110	70-130	5.41	20
Methyl-t-butyl ether (MTBE)	20.34	21.54	20	ND	102	108	70-130	5.69	20
Toluene	18.61	19.24	20	ND	93	96.2	70-130	3.36	20
Trichloroethene	20.33	21.03	20	ND	102	105	70-130	3.39	20
Surrogate Recovery									
Dibromofluoromethane	50.92	52.1	45		113	116	70-130	2.28	20
Toluene-d8	38.68	39.1	45		86	87	70-130	1.08	20
4-BFB	4.085	4.173	4.5		91	93	70-130	2.12	20

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404426
Date Prepared:	4/11/14	**BatchID:**	89261
Date Analyzed:	4/10/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89261 1404360-001AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	60.24	40	60	-	100	70-130
MTBE	ND	11.1	5.0	10	-	111	70-130
Benzene	ND	10.03	0.50	10	-	100	70-130
Toluene	ND	10.02	0.50	10	-	100	70-130
Ethylbenzene	ND	10.12	0.50	10	-	101	70-130
Xylenes	ND	30.61	0.50	30	-	102	70-130
Surrogate Recovery							
aaa-TFT	9.604	9.464		10	96	95	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	112	112.1	60	58.29	89.4	89.6	70-130	0.0895	20
MTBE	11.83	12.03	10	ND	118	120	70-130	1.65	20
Benzene	14.28	14.36	10	5.254	90.2	91.1	70-130	0.589	20
Toluene	11.84	11.83	10	2.658	91.9	91.7	70-130	0.106	20
Ethylbenzene	22.05	21.97	10	13.84	82.1	81.3	70-130	0.377	20
Xylenes	42.38	42.83	30	14.87	91.7	93.2	70-130	1.06	20
Surrogate Recovery									
aaa-TFT	10.83	11.01	10		108	110	70-130	1.64	20

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404426 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/10/2014**
Date Printed: **04/10/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404426-001	MW-3A	Water	4/9/2014 14:55	☐	B	A	A									
1404426-002	MW-6A	Water	4/9/2014 14:45	☐	B	A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Jena Alfaro

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
Project: 7240 Dublin Blvd
Comments:

QC Level: LEVEL 2
Client Contact: Morgan Gillies
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

Work Order: 1404426
Date Received: 4/10/2014

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404426-001A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/9/2014 14:55	5 days	Present	☐	
1404426-001B	MW-3A	Water	SW8260B (VOCs) <Naphthalene>	2	VOA w/ HCl	☐	4/9/2014 14:55	5 days	Present	☐	
1404426-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	1	VOA w/ HCl	☐	4/9/2014 14:45	5 days	Present	☐	
1404426-002B	MW-6A	Water	SW8260B (VOCs) <Naphthalene>	2	VOA w/ HCl	☐	4/9/2014 14:45	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404426

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CHAIN OF CUSTODY RECORD

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

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

Report To: Morgan Gillies Bill To: Pangea

Company: Pangea Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, CA 94612

E-Mail: mgillies@pangeaenv.com

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

Project #: 7240 Dublin Blvd Project Name: 7240 Dublin Blvd

Project Location: 7240 Dublin Blvd., Dublin, CA

Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: Naphthalene 8260	Comments
MW-3A		4-9-14	14:55	3	VOA	X					X	X			X																X	Report EDF
MW-6A		4-9-14	14:45	3	VOA	X					X	X			X																X	

Relinquished By:	Date:	Time:	Received By:
	4/10/14	10:30	
	4/10	17:00	

ICE/t° 1.0 COMMENTS:

GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/10/2014 6:19:22 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Jena Alfaro

WorkOrder N°: **1404426** Matrix: Water
Carrier: Brian STANFORD (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 1°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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Analytical Report

WorkOrder: 1404492

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/11/2014

Analytical Report reviewed & approved for release on 04/18/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com

NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404492

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

S	spike recovery outside accepted recovery limits
c4	surrogate recovery outside of the control limits due to coelution with another peak(s) / cluttered chromatogram.
d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/11/14 20:53	**Analytical Method:**	SW8260B
Date Prepared:	4/17/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404492-001B**	**Water**	**04/10/2014 12:50**	**GC28**	**89498**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**160**	5.0	10	04/17/2014 17:15

Surrogates	REC (%)	Limits	
4-BFB	91	70-130	04/17/2014 17:15

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404492-002B**	**Water**	**04/10/2014 12:30**	**GC28**	**89498**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**39**	0.50	1	04/17/2014 17:54

Surrogates	REC (%)	Limits	
4-BFB	94	70-130	04/17/2014 17:54

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-7A	**1404492-003B**	**Water**	**04/10/2014 13:10**	**GC28**	**89498**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	ND	0.50	1	04/17/2014 16:37

Surrogates	REC (%)	Limits	
4-BFB	93	70-130	04/17/2014 16:37

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/11/14 20:53	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/15/14-4/16/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404492-001A**	**Water**	**04/10/2014 12:50**	**GC3**	**89342**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3600**	50	1	04/15/2014 04:55
MTBE	**130**	5.0	1	04/15/2014 04:55
Benzene	**150**	0.50	1	04/15/2014 04:55
Toluene	**7.4**	0.50	1	04/15/2014 04:55
Ethylbenzene	**75**	0.50	1	04/15/2014 04:55
Xylenes	**360**	0.50	1	04/15/2014 04:55

Surrogates	REC (%)	Qualifiers	Limits	Analytical Comments: d1,c4	
aaa-TFT	147	S	70-130		04/15/2014 04:55

MW-6A	1404492-002A	Water	04/10/2014 12:30	GC3	89342

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**800**	50	1	04/15/2014 05:24
MTBE	ND	10	1	04/15/2014 05:24
Benzene	**140**	0.50	1	04/15/2014 05:24
Toluene	**2.4**	0.50	1	04/15/2014 05:24
Ethylbenzene	**12**	0.50	1	04/15/2014 05:24
Xylenes	**50**	0.50	1	04/15/2014 05:24

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	114	70-130		04/15/2014 05:24

MW-7A	1404492-003A	Water	04/10/2014 13:10	GC3	89342

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	ND	50	1	04/16/2014 00:17
MTBE	**10**	5.0	1	04/16/2014 00:17
Benzene	**0.56**	0.50	1	04/16/2014 00:17
Toluene	ND	0.50	1	04/16/2014 00:17
Ethylbenzene	ND	0.50	1	04/16/2014 00:17
Xylenes	ND	0.50	1	04/16/2014 00:17

Surrogates	REC (%)	Limits		
aaa-TFT	98	70-130		04/16/2014 00:17

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Date Prepared:	4/18/14	**BatchID:**	89498
Date Analyzed:	4/17/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89498 1404610-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	20.0	0.50	20	-	99.7	70-130
Benzene	ND	21.2	0.50	20	-	106	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	80.5	2.0	80	-	101	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	20.0	0.50	20	-	99.8	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	19.0	0.50	20	-	94.8	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	20.1	0.50	20	-	101	70-130
1,1-Dichloroethene	ND	22.0	0.50	20	-	110	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Date Prepared:	4/18/14	**BatchID:**	89498
Date Analyzed:	4/17/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89498 1404610-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	20.5	0.50	20	-	102	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	20.6	0.50	20	-	103	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	20.3	0.50	20	-	101	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.5	0.50	20	-	103	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	20.1	0.50	20	-	101	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	25.7	46.2		45	103	103	70-130
Toluene-d8	26.1	45.1		45	105	100	70-130
4-BFB	2.28	4.27		4.5	91	95	70-130

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Date Prepared:	4/18/14	**BatchID:**	89498
Date Analyzed:	4/17/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89498 1404610-001BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	18.9	19.2	20	ND	94.3	95.7	70-130	1.50	20
Benzene	19.3	20.3	20	ND	96.3	102	70-130	5.23	20
t-Butyl alcohol (TBA)	79.7	79.7	80	ND	99.6	99.6	70-130	0	20
Chlorobenzene	18.2	18.9	20	ND	90.7	94.3	70-130	3.88	20
1,2-Dibromoethane (EDB)	18.0	18.2	20	ND	90	90.9	70-130	0.993	20
1,2-Dichloroethane (1,2-DCA)	18.9	19.3	20	ND	94.4	96.4	70-130	2.14	20
1,1-Dichloroethene	19.5	20.2	20	ND	97.4	101	70-130	3.92	20
Diisopropyl ether (DIPE)	18.9	19.7	20	ND	94.3	98.6	70-130	4.43	20
Ethyl tert-butyl ether (ETBE)	19.4	20.0	20	ND	97	99.9	70-130	2.93	20
Methyl-t-butyl ether (MTBE)	19.5	20.0	20	ND	97.3	99.8	70-130	2.51	20
Toluene	18.6	19.3	20	ND	92.8	96.5	70-130	3.98	20
Trichloroethene	18.0	18.7	20	ND	89.9	93.4	70-130	3.74	20
Surrogate Recovery									
Dibromofluoromethane	44.7	45.8	45		99	102	70-130	2.49	20
Toluene-d8	43.5	43.9	45		97	98	70-130	1.04	20
4-BFB	3.96	4.12	4.5		88	91	70-130	3.80	20

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404492
Date Prepared:	4/14/14	**BatchID:**	89342
Date Analyzed:	4/14/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89342 1404519-008AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	60.4	40	60	-	101	70-130
MTBE	ND	10.3	5.0	10	-	103	70-130
Benzene	ND	9.78	0.50	10	-	97.8	70-130
Toluene	ND	9.79	0.50	10	-	97.9	70-130
Ethylbenzene	ND	9.83	0.50	10	-	98.3	70-130
Xylenes	ND	29.6	0.50	30	-	98.7	70-130
Surrogate Recovery							
aaa-TFT	9.65	9.82		10	96	98	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.4	66.7	60	ND	99	111	70-130	11.6	20
MTBE	10.4	11.0	10	ND	104	110	70-130	4.93	20
Benzene	9.58	9.71	10	ND	90	91.2	70-130	1.28	20
Toluene	9.55	9.86	10	ND	95.5	98.6	70-130	3.22	20
Ethylbenzene	9.65	9.71	10	ND	96.5	97.1	70-130	0.633	20
Xylenes	29.2	29.3	30	ND	97.3	97.7	70-130	0.342	20
Surrogate Recovery									
aaa-TFT	9.73	9.91	10		97	99	70-130	1.91	20

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404492 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/11/2014**
Date Printed: **04/11/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404492-001	MW-3A	Water	4/10/2014 12:50	☐	B	A	A									
1404492-002	MW-6A	Water	4/10/2014 12:30	☐	B	A										
1404492-003	MW-7A	Water	4/10/2014 13:10	☐	B	A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
QC Level: LEVEL 2
Work Order: 1404492
Project: 7240 Dublin Blvd
Client Contact: Morgan Gillies
Date Received: 4/11/2014
Comments:
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404492-001A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/10/2014 12:50	5 days	Present	☐	
1404492-001B	MW-3A	Water	SW8260B (VOCs) <Naphthalene, Xylenes, Total>	1	VOA w/ HCl	☐	4/10/2014 12:50	5 days	Present	☐	
1404492-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/10/2014 12:30	5 days	Present	☐	
1404492-002B	MW-6A	Water	SW8260B (VOCs) <Naphthalene, Xylenes, Total>	1	VOA w/ HCl	☐	4/10/2014 12:30	5 days	Present	☐	
1404492-003A	MW-7A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/10/2014 13:10	5 days	Present	☐	
1404492-003B	MW-7A	Water	SW8260B (VOCs) <Naphthalene, Xylenes, Total>	1	VOA w/ HCl	☐	4/10/2014 13:10	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404492

McCAMPBELL ANALYTICAL, INC.

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Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

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

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 7240 Dublin Blvd	Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	Analysis Request: TPH as Diesel (8015) w/ Silica Gel Cleanup	Analysis Request: Total Petroleum Oil & Grease (5520 E&F/B&F)	Analysis Request: Total Petroleum Hydrocarbons (418.1)	Analysis Request: EPA 601 / 8010 / 8021	Analysis Request: BTEX ONLY (EPA 602 / 8020)	Analysis Request: EPA 608 / 8081	Analysis Request: EPA 608 / 8082 PCB's ONLY	Analysis Request: EPA 8140 / 8141	Analysis Request: EPA 8150 / 8151	Analysis Request: EPA 524.2 / 624 / 8260	Analysis Request: EPA 525 / 625 / 8270	Analysis Request: PAH's / PNA's by EPA 625 / 8270 / 8310	Analysis Request: CAM-17 Metals (6010 / 6020)	Analysis Request: LUFT 5 Metals (6010 / 6020)	Analysis Request: Lead (200.8 / 200.9 / 6010)	Other: Naphthalene 8260	Other	Other	Comments: Filter Samples for Metals analysis: Yes / No
MW-3A		4-10-14	12:50	3	VOA	X					X	X			X														X			Report EDF
MW-6A		↓	12:30	↓	↓	X					X	X			X														X			
MW-7A		↓	13:10	↓	↓	X					X	X			X														X			

Relinquished By:	Date: 4/11/14	Time: 15:00	Received By:
Relinquished By:	Date: 4/11	Time: 16:11	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 2.5 COMMENTS:
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

VOAS O&G METALS OTHER
PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/11/2014 8:53:06 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Daniel Loa

WorkOrder N°: **1404492** Matrix: Water
Carrier: Brian STANFORD (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 5.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☑	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☑	No ☐	NA ☐
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments: Sample MW-3A (1404492-001) contained headspace.

McCampbell Analytical, Inc.

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Analytical Report

WorkOrder: 1404491

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/11/2014

Analytical Report reviewed & approved for release on 04/18/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404491

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/11/14 20:42	**Analytical Method:**	SW8260B
Date Prepared:	4/17/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404491-001B**	**Water**	**04/11/2014 14:00**	**GC28**	**89452**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**150**	5.0	10	04/17/2014 04:44

Surrogates	REC (%)	Limits	
4-BFB	96	70-130	04/17/2014 04:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404491-002B**	**Water**	**04/11/2014 13:42**	**GC28**	**89452**

Analytes	Result	RL	DF	Date Analyzed
Naphthalene	**46**	1.0	2	04/17/2014 23:03

Surrogates	REC (%)	Limits	
4-BFB	92	70-130	04/17/2014 23:03

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/11/14 20:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/15/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404491-001A**	**Water**	**04/11/2014 14:00**	**GC3**	**89342**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3300**	170	3.3	04/15/2014 22:48
MTBE	ND	180	3.3	04/15/2014 22:48
Benzene	**130**	1.7	3.3	04/15/2014 22:48
Toluene	**4.8**	1.7	3.3	04/15/2014 22:48
Ethylbenzene	**54**	1.7	3.3	04/15/2014 22:48
Xylenes	**280**	1.7	3.3	04/15/2014 22:48

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	113	70-130		04/15/2014 22:48

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404491-002A**	**Water**	**04/11/2014 13:42**	**GC3**	**89342**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**1000**	50	1	04/15/2014 23:18
MTBE	ND	10	1	04/15/2014 23:18
Benzene	**150**	0.50	1	04/15/2014 23:18
Toluene	**2.4**	0.50	1	04/15/2014 23:18
Ethylbenzene	**10**	0.50	1	04/15/2014 23:18
Xylenes	**50**	0.50	1	04/15/2014 23:18

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	107	70-130		04/15/2014 23:18

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Date Prepared:	4/14/14	**BatchID:**	89342
Date Analyzed:	4/14/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89342 1404519-008AMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	60.4	40	60	-	101	70-130
MTBE	ND	10.3	5.0	10	-	103	70-130
Benzene	ND	9.78	0.50	10	-	97.8	70-130
Toluene	ND	9.79	0.50	10	-	97.9	70-130
Ethylbenzene	ND	9.83	0.50	10	-	98.3	70-130
Xylenes	ND	29.6	0.50	30	-	98.7	70-130
Surrogate Recovery							
aaa-TFT	9.65	9.82		10	96	98	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	59.4	66.7	60	ND	99	111	70-130	11.6	20
MTBE	10.4	11.0	10	ND	104	110	70-130	4.93	20
Benzene	9.58	9.71	10	ND	90	91.2	70-130	1.28	20
Toluene	9.55	9.86	10	ND	95.5	98.6	70-130	3.22	20
Ethylbenzene	9.65	9.71	10	ND	96.5	97.1	70-130	0.633	20
Xylenes	29.2	29.3	30	ND	97.3	97.7	70-130	0.342	20
Surrogate Recovery									
aaa-TFT	9.73	9.91	10		97	99	70-130	1.91	20

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Date Prepared:	4/17/14	**BatchID:**	89452
Date Analyzed:	4/16/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89452 1404431-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	19.1	0.50	20	-	95.5	70-130
Benzene	ND	20.7	0.50	20	-	104	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	74.4	2.0	80	-	93.1	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	19.8	0.50	20	-	98.7	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	18.4	0.50	20	-	91.9	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	19.3	0.50	20	-	96.3	70-130
1,1-Dichloroethene	ND	20.7	0.50	20	-	103	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Date Prepared:	4/17/14	**BatchID:**	89452
Date Analyzed:	4/16/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89452 1404431-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	19.9	0.50	20	-	99.6	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	19.8	0.50	20	-	99	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	19.2	0.50	20	-	96	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.5	0.50	20	-	102	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	20.4	0.50	20	-	102	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	26.3	45.6		45	105	101	70-130
Toluene-d8	25.7	44.9		45	103	100	70-130
4-BFB	2.48	4.49		4.5	99	100	70-130

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404491
Date Prepared:	4/17/14	**BatchID:**	89452
Date Analyzed:	4/16/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89452 1404431-005AMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	20.4	20.2	20	ND	102	101	70-130	0.808	20
Benzene	21.5	21.8	20	ND	107	109	70-130	1.27	20
t-Butyl alcohol (TBA)	80.1	80.1	80	ND	100	100	70-130	0	20
Chlorobenzene	19.8	19.7	20	ND	98.8	98.6	70-130	0.192	20
1,2-Dibromoethane (EDB)	18.8	18.6	20	ND	93.8	92.7	70-130	1.21	20
1,2-Dichloroethane (1,2-DCA)	20.2	20.6	20	ND	101	103	70-130	1.88	20
1,1-Dichloroethene	19.5	20.4	20	ND	97.3	102	70-130	4.50	20
Diisopropyl ether (DIPE)	21.3	21.3	20	ND	106	106	70-130	0	20
Ethyl tert-butyl ether (ETBE)	21.4	21.4	20	ND	107	107	70-130	0	20
Methyl-t-butyl ether (MTBE)	20.7	20.6	20	ND	104	103	70-130	0.491	20
Toluene	20.1	20.5	20	ND	100	102	70-130	1.84	20
Trichloroethene	20.0	20.6	20	ND	99.8	103	70-130	2.92	20
Surrogate Recovery									
Dibromofluoromethane	47.2	47.8	45		105	106	70-130	1.43	20
Toluene-d8	44.6	44.6	45		99	99	70-130	0	20
4-BFB	4.28	4.29	4.5		95	95	70-130	0	20

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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404491 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **04/11/2014**
Date Printed: **04/11/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404491-001	MW-3A	Water	4/11/2014 14:00	☐	B	A	A									
1404491-002	MW-6A	Water	4/11/2014 13:42	☐	B	A										

Test Legend:

1	8260VOC_W	2	G-MBTEX_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Daniel Loa

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
QC Level: LEVEL 2
Work Order: 1404491
Project: 7240 Dublin Blvd
Client Contact: Morgan Gillies
Date Received: 4/11/2014
Comments:
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404491-001A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/11/2014 14:00	5 days	Present	☐	
1404491-001B	MW-3A	Water	SW8260B (VOCs) <Naphthalene, Xylenes, Total>	1	VOA w/ HCl	☐	4/11/2014 14:00	5 days	Present	☐	
1404491-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	2	VOA w/ HCl	☐	4/11/2014 13:42	5 days	Present	☐	
1404491-002B	MW-6A	Water	SW8260B (VOCs) <Naphthalene, Xylenes, Total>	1	VOA w/ HCl	☐	4/11/2014 13:42	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404491

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CHAIN OF CUSTODY RECORD

TURN AROUND TIME: RUSH ☐ 1 DAY ☐ 2 DAY ☐ 3 DAY ☐ 5 DAY ☒

GeoTracker EDF ☐ PDF ☐ EDD ☐ Write On (DW) ☐ EQuIS ☐ 10 DAY ☐

Effluent Sample Requiring "J" flag ☐ **UST Clean Up Fund Project** ☐; **Claim #**_____

Report To: Morgan Gillies **Bill To:** Pangea

Company: Pangea Environmental Services

1710 Franklin St Suite 200, Oakland CA 94612

E-Mail: mgillies@pangeaenv.com

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

Project #: 7240 Dublin Blvd **Project Name:** 7240 Dublin Blvd

Project Location: 7240 Dublin Blvd **Purchase Order#**

Sampler Signature: Dublin CA

SAMPLE ID	Location/ Field Point Name	SAMPLING Date	SAMPLING Time	# Containers	MATRIX: Ground Water	Waste Water	Drinking Water	Sea Water	Soil	Air	Sludge	Other	METHOD PRESERVED: HCL	HNO_3	Other	Analysis Request: BTEX/ MTBE & TPH as Gas (8021/ 8015)	TPH as Diesel (8015)	Total Petroleum Oil & Grease (1664 / 5520 E/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 505/ 608 / 8081 (Cl Pesticides)	EPA 608 / 8082 PCB's ; Aroclors / Congeners	EPA 507 / 8141 (NP Pesticides)	EPA 515 / 8151 (Acidic Cl Herbicides)	BTEX/ MTBE & TPH as Gas (8260)	EPA 524.2 / 624 / 8260 (VOCs)	EPA 525.2 / 625 / 8270 (SVOCs)	EPA 8270 SIM / 8310 (PAHs / PNAs)	CAM 17 Metals (200.7 / 200.8 / 6010 / 6020)	LUFT 5 Metals (200.7 / 200.8 / 6010 / 6020)	Metals (200.7 / 200.8 / 6010 / 6020)	Filter sample for DISSOLVED metals analysis	Naphthalene 8260		Report EDF	
MW-3A		4-11-14	14:00	3	X								X			X																X			
MW-6A		4-11-14	13:42	3	X								X			X																X			

****MAI clients MUST disclose any dangerous chemicals known to be present in their submitted samples in concentrations that may cause immediate harm or serious future health endangerment as a result of brief, gloved, open air, sample handling by MAI staff. Non-disclosure incurs an immediate $250 surcharge and the client is subject to full legal liability for harm suffered. Thank you for your understanding and for allowing us to work safely.**

Relinquished By:	Date:	Time:	Received By:
	4-11-14	15:00	
Relinquished By:	Date:	Time:	Received By:
	4-11	16:11	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 5-5
GOOD CONDITION_____
HEAD SPACE ABSENT_____
DECHLORINATED IN LAB_____
APPROPRIATE CONTAINERS_____
PRESERVED IN LAB_____

COMMENTS:

VOAS O&G METALS OTHER HAZARDOUS:
PRESERVATION_____ pH<2_____

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/11/2014 8:42:54 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Daniel Loa

WorkOrder N°: **1404491** Matrix: Water
Carrier: Brian STANFORD (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 5.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☑	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments: Both samples contained headspace.

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Analytical Report

WorkOrder: 1404876

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 04/22/2014

Analytical Report reviewed & approved for release on 04/29/2014 by:

Question about your data?

Click here to email McCampbell

Angela Rydelius,
Laboratory Manager

McCampbell Analytical, Inc.
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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1404876

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

Analytical Qualifier

d1	weakly modified or unmodified gasoline is significant

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404876
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	4/22/14 16:42	**Analytical Method:**	SW8021B/8015Bm
Date Prepared:	4/24/14-4/26/14	**Unit:**	µg/L

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

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1404876-001A**	**Water**	**04/18/2014 13:20**	**GC3**	**89746**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**3700**	500	10	04/24/2014 22:38
MTBE	**130**	50	10	04/24/2014 22:38
Benzene	**140**	5.0	10	04/24/2014 22:38
Toluene	**7.2**	5.0	10	04/24/2014 22:38
Ethylbenzene	**72**	5.0	10	04/24/2014 22:38
Xylenes	**280**	5.0	10	04/24/2014 22:38

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	109	70-130		04/24/2014 22:38

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1404876-002A**	**Water**	**04/18/2014 13:00**	**GC3**	**89746**

Analytes	Result	RL	DF	Date Analyzed
TPH(g)	**920**	100	2	04/26/2014 01:06
MTBE	ND	10	2	04/26/2014 01:06
Benzene	**160**	1.0	2	04/26/2014 01:06
Toluene	**2.9**	1.0	2	04/26/2014 01:06
Ethylbenzene	**13**	1.0	2	04/26/2014 01:06
Xylenes	**43**	1.0	2	04/26/2014 01:06

Surrogates	REC (%)	Limits	Analytical Comments: d1	
aaa-TFT	117	70-130		04/26/2014 01:06

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1404876
Date Prepared:	4/24/14	**BatchID:**	89746
Date Analyzed:	4/24/14	**Extraction Method:**	SW5030B
Instrument:	GC3	**Analytical Method:**	SW8021B/8015Bm
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-89746 1404982-001EMS/MSD

QC Summary Report for SW8021B/8015Bm

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
TPH(btex)	ND	57.1	40	60	-	95.2	70-130
MTBE	ND	10.1	5.0	10	-	101	70-130
Benzene	ND	10.7	0.50	10	-	107	70-130
Toluene	ND	10.7	0.50	10	-	107	70-130
Ethylbenzene	ND	10.7	0.50	10	-	107	70-130
Xylenes	ND	32.3	0.50	30	-	108	70-130
Surrogate Recovery							
aaa-TFT	10.3	9.86		10	103	99	70-130

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
TPH(btex)	56.4	55.9	60	ND	94	93.2	70-130	0.831	20
MTBE	8.54	8.56	10	ND	85.3	85.6	70-130	0.301	20
Benzene	9.78	9.73	10	ND	97.8	97.3	70-130	0.459	20
Toluene	9.75	9.72	10	ND	97.5	97.2	70-130	0.226	20
Ethylbenzene	9.94	9.81	10	ND	99.4	98.1	70-130	1.33	20
Xylenes	29.9	29.7	30	ND	99.7	98.9	70-130	0.789	20
Surrogate Recovery									
aaa-TFT	10.0	9.96	10		100	100	70-130	0	20

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1404876 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: 04/22/2014
Date Printed: 04/22/2014

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1404876-001	MW-3A	Water	4/18/2014 13:20	☐	A	A										
1404876-002	MW-6A	Water	4/18/2014 13:00	☐	A											

Test Legend:

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

Prepared by: Shana Carter

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
QC Level: LEVEL 2
Work Order: 1404876
Project: 7240 Dublin Blvd
Client Contact: Morgan Gillies
Date Received: 4/22/2014
Comments:
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1404876-001A	MW-3A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/18/2014 13:20	5 days	Present	☐	
1404876-002A	MW-6A	Water	SW8021B/8015Bm (G/MBTEX)	3	VOA w/ HCl	☐	4/18/2014 13:00	5 days	Present	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:
VOA w/ HCl = 43mL VOA w/ HCl

1404876

McCAMPBELL ANALYTICAL, INC.

1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

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

Report To: Morgan Gillies	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702	Fax: (510) 836-3709
Project #: 7240 Dublin Blvd	Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other
MW-3A		4-18-14	13:20	3	VOA	X					X	X		
MW-6A		4-18-14	13:00	3	VOA	X					X	X		

Analysis Request

BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)
X															
X															

Other

Comments: Filter Samples for Metals analysis: Yes / No

Report EDF

Relinquished By:	Date:	Time:	Received By:
	4/22/14	9:15	
Relinquished By:	Date:	Time:	Received By:
	4/22/14	1430	Mara Carter 4/22 1430
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4°C

GOOD CONDITION____
HEAD SPACE ABSENT____
DECHLORINATED IN LAB____
APPROPRIATE CONTAINERS____
PRESERVED IN LAB____

COMMENTS:

	VOAS	O&G	METALS	OTHER
PRESERVATION			pH<2	

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **4/22/2014 4:42:25 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Shana Carter

WorkOrder N°: **1404876** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 4.5°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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Analytical Report

WorkOrder: 1405303

Report Created for: Pangea Environmental Svcs., Inc.
1710 Franklin Street, Ste. 200
Oakland, CA 94612

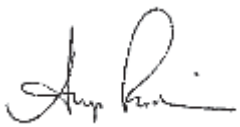
Project Contact: Morgan Gillies
Project P.O.:
Project Name: 7240 Dublin Blvd

Project Received: 05/08/2014

Analytical Report reviewed & approved for release on 05/15/2014 by:

Question about your data?

Click here to email McCampbell



Angela Rydelius,
Laboratory Manager

The report shall not be reproduced except in full, without the written approval of the laboratory. The analytical results relate only to the items tested. Results reported conform to the most current NELAP standards, where applicable, unless otherwise stated in the case narrative.

1534 Willow Pass Rd. Pittsburg, CA 94565 ♦ TEL: (877) 252-9262 ♦ FAX: (925) 252-9269 ♦ www.mccampbell.com

NELAP: 4033ORELAP ♦ ELAP: 1644 ♦ ISO/IEC: 17025:2005 ♦ WSDE: C972-11 ♦ ADEC: UST-098 ♦ UCMR3

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Glossary of Terms & Qualifier Definitions

Client: Pangea Environmental Svcs., Inc.
Project: 7240 Dublin Blvd
WorkOrder: 1405303

Glossary Abbreviation

95% Interval	95% Confident Interval
DF	Dilution Factor
DUP	Duplicate
EDL	Estimated Detection Limit
ITEF	International Toxicity Equivalence Factor
LCS	Laboratory Control Sample
MB	Method Blank
MB % Rec	% Recovery of Surrogate in Method Blank, if applicable
MDL	Method Detection Limit
ML	Minimum Level of Quantitation
MS	Matrix Spike
MSD	Matrix Spike Duplicate
ND	Not detected at or above the indicated MDL or RL
NR	Matrix interferences, or analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix; or sample diluted due to high matrix or analyte content.
RD	Relative Difference
RL	Reporting Limit (The RL is the lowest calibration standard in a multipoint calibration.)
RPD	Relative Percent Deviation
RRT	Relative Retention Time
SPK Val	Spike Value
SPKRef Val	Spike Reference Value
TEQ	Toxicity Equivalence

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Project:	7240 Dublin Blvd	**Extraction Method:**	SW5030B
Date Received:	5/8/14 15:08	**Analytical Method:**	SW8260B
Date Prepared:	5/14/14	**Unit:**	µg/L

Volatile Organics by P&T and GC/MS

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1405303-001A**	**Water**	**05/08/2014 13:50**	**GC28**	**90318**

Analytes	Result	RL	DF	Date Analyzed
2-Propanol	**1200**	500	10	05/14/2014 04:44

Surrogates	REC (%)	Limits	
Dibromofluoromethane	95	70-130	05/14/2014 04:44

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1405303-002A**	**Water**	**05/08/2014 13:40**	**GC28**	**90318**

Analytes	Result	RL	DF	Date Analyzed
2-Propanol	**1300**	500	10	05/14/2014 05:23

Surrogates	REC (%)	Limits	
Dibromofluoromethane	97	70-130	05/14/2014 05:23

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Analytical Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Project:	7240 Dublin Blvd	**Extraction Method:**	SM5540D
Date Received:	5/8/14 15:08	**Analytical Method:**	SM5540D
Date Prepared:	5/8/14	**Unit:**	mg/L

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-3A	**1405303-001B**	**Water**	**05/08/2014 13:50**	**SPECTROPHOTOMETER**	**90215**

Analytes	Result	RL	DF	Date Analyzed
CTAS	**14**	0.50	5	05/09/2014 20:40

Client ID	Lab ID	Matrix/ExtType	Date Collected	Instrument	Batch ID
MW-6A	**1405303-002B**	**Water**	**05/08/2014 13:40**	**SPECTROPHOTOMETER**	**90215**

Analytes	Result	RL	DF	Date Analyzed
CTAS	**14**	0.50	5	05/09/2014 20:45

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Date Prepared:	5/12/14	**BatchID:**	90318
Date Analyzed:	5/12/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-90318 1405379-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Acetone	ND	-	10	-	-	-	-
tert-Amyl methyl ether (TAME)	ND	18.2	0.50	20	-	91.3	70-130
Benzene	ND	19.3	0.50	20	-	96.4	70-130
Bromobenzene	ND	-	0.50	-	-	-	-
Bromochloromethane	ND	-	0.50	-	-	-	-
Bromodichloromethane	ND	-	0.50	-	-	-	-
Bromoform	ND	-	0.50	-	-	-	-
Bromomethane	ND	-	0.50	-	-	-	-
2-Butanone (MEK)	ND	-	2.0	-	-	-	-
t-Butyl alcohol (TBA)	ND	67.2	2.0	80	-	84	70-130
n-Butyl benzene	ND	-	0.50	-	-	-	-
sec-Butyl benzene	ND	-	0.50	-	-	-	-
tert-Butyl benzene	ND	-	0.50	-	-	-	-
Carbon Disulfide	ND	-	0.50	-	-	-	-
Carbon Tetrachloride	ND	-	0.50	-	-	-	-
Chlorobenzene	ND	19.9	0.50	20	-	99.6	70-130
Chloroethane	ND	-	0.50	-	-	-	-
Chloroform	ND	-	0.50	-	-	-	-
Chloromethane	ND	-	0.50	-	-	-	-
2-Chlorotoluene	ND	-	0.50	-	-	-	-
4-Chlorotoluene	ND	-	0.50	-	-	-	-
Dibromochloromethane	ND	-	0.50	-	-	-	-
1,2-Dibromo-3-chloropropane	ND	-	0.20	-	-	-	-
1,2-Dibromoethane (EDB)	ND	19.8	0.50	20	-	99.1	70-130
Dibromomethane	ND	-	0.50	-	-	-	-
1,2-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,3-Dichlorobenzene	ND	-	0.50	-	-	-	-
1,4-Dichlorobenzene	ND	-	0.50	-	-	-	-
Dichlorodifluoromethane	ND	-	0.50	-	-	-	-
1,1-Dichloroethane	ND	-	0.50	-	-	-	-
1,2-Dichloroethane (1,2-DCA)	ND	17.8	0.50	20	-	89.1	70-130
1,1-Dichloroethene	ND	20.9	0.50	20	-	104	70-130
cis-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
trans-1,2-Dichloroethene	ND	-	0.50	-	-	-	-
1,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,3-Dichloropropane	ND	-	0.50	-	-	-	-
2,2-Dichloropropane	ND	-	0.50	-	-	-	-
1,1-Dichloropropene	ND	-	0.50	-	-	-	-
cis-1,3-Dichloropropene	ND	-	0.50	-	-	-	-
trans-1,3-Dichloropropene	ND	-	0.50	-	-	-	-

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Date Prepared:	5/12/14	**BatchID:**	90318
Date Analyzed:	5/12/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-90318 1405379-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
Diisopropyl ether (DIPE)	ND	18.0	0.50	20	-	89.8	70-130
Ethylbenzene	ND	-	0.50	-	-	-	-
Ethyl tert-butyl ether (ETBE)	ND	18.2	0.50	20	-	91.1	70-130
Freon 113	ND	-	0.50	-	-	-	-
Hexachlorobutadiene	ND	-	0.50	-	-	-	-
Hexachloroethane	ND	-	0.50	-	-	-	-
2-Hexanone	ND	-	0.50	-	-	-	-
Isopropylbenzene	ND	-	0.50	-	-	-	-
4-Isopropyl toluene	ND	-	0.50	-	-	-	-
Methyl-t-butyl ether (MTBE)	ND	18.7	0.50	20	-	93.4	70-130
Methylene chloride	ND	-	0.50	-	-	-	-
4-Methyl-2-pentanone (MIBK)	ND	-	0.50	-	-	-	-
Naphthalene	ND	-	0.50	-	-	-	-
n-Propyl benzene	ND	-	0.50	-	-	-	-
Styrene	ND	-	0.50	-	-	-	-
1,1,1,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
1,1,2,2-Tetrachloroethane	ND	-	0.50	-	-	-	-
Tetrachloroethene	ND	-	0.50	-	-	-	-
Toluene	ND	20.9	0.50	20	-	105	70-130
1,2,3-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,2,4-Trichlorobenzene	ND	-	0.50	-	-	-	-
1,1,1-Trichloroethane	ND	-	0.50	-	-	-	-
1,1,2-Trichloroethane	ND	-	0.50	-	-	-	-
Trichloroethene	ND	20.0	0.50	20	-	100	70-130
Trichlorofluoromethane	ND	-	0.50	-	-	-	-
1,2,3-Trichloropropane	ND	-	0.50	-	-	-	-
1,2,4-Trimethylbenzene	ND	-	0.50	-	-	-	-
1,3,5-Trimethylbenzene	ND	-	0.50	-	-	-	-
Vinyl Chloride	ND	-	0.50	-	-	-	-
Xylenes, Total	ND	-	0.50	-	-	-	-
Surrogate Recovery							
Dibromofluoromethane	23.4	43.4		45	94	96	70-130
Toluene-d8	26.2	47.4		45	105	105	70-130
4-BFB	2.45	4.50		4.5	98	100	70-130

(Cont.)

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Date Prepared:	5/12/14	**BatchID:**	90318
Date Analyzed:	5/12/14	**Extraction Method:**	SW5030B
Instrument:	GC28	**Analytical Method:**	SW8260B
Matrix:	Water	**Unit:**	µg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-90318 1405379-003BMS/MSD

QC Summary Report for SW8260B

Analyte	MS Result	MSD Result	SPK Val	SPKRef Val	MS %REC	MSD %REC	MS/MSD Limits	RPD	RPD Limit
tert-Amyl methyl ether (TAME)	20.0	20.4	20	ND	99.8	102	70-130	2.08	20
Benzene	19.0	19.5	20	ND	95.1	97.4	70-130	2.42	20
t-Butyl alcohol (TBA)	72.5	72.6	80	ND	90.7	90.7	70-130	0	20
Chlorobenzene	19.6	20.0	20	ND	97.8	99.9	70-130	2.17	20
1,2-Dibromoethane (EDB)	20.7	20.9	20	ND	104	104	70-130	0	20
1,2-Dichloroethane (1,2-DCA)	18.5	18.8	20	ND	92.3	94.2	70-130	1.99	20
1,1-Dichloroethene	19.2	20.2	20	ND	96.2	101	70-130	4.70	20
Diisopropyl ether (DIPE)	18.4	18.9	20	ND	91.8	94.4	70-130	2.72	20
Ethyl tert-butyl ether (ETBE)	19.4	19.9	20	ND	96.8	99.6	70-130	2.82	20
Methyl-t-butyl ether (MTBE)	19.5	20.1	20	ND	97.6	101	70-130	3.10	20
Toluene	19.8	20.3	20	ND	98.9	101	70-130	2.61	20
Trichloroethene	18.9	19.9	20	0.5354	91.8	97	70-130	5.30	20
Surrogate Recovery									
Dibromofluoromethane	43.1	43.9	45		96	97	70-130	1.82	20
Toluene-d8	46.4	46.8	45		103	104	70-130	0.773	20
4-BFB	4.29	4.28	4.5		95	95	70-130	0	20

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Quality Control Report

Client:	Pangea Environmental Svcs., Inc.	**WorkOrder:**	1405303
Date Prepared:	5/8/14	**BatchID:**	90215
Date Analyzed:	5/9/14	**Extraction Method:**	SM5540D
Instrument:	SPECTROPHOTOMETER	**Analytical Method:**	SM5540D
Matrix:	Water	**Unit:**	mg/L
Project:	7240 Dublin Blvd	**Sample ID:**	MB/LCS-90215

QC Summary Report for SM5540D

Analyte	MB Result	LCS Result	RL	SPK Val	MB SS %REC	LCS %REC	LCS Limits
CTAS	ND	0.906	0.10	1	-	90.6	85-115

McCampbell Analytical, Inc.
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Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1405303 **ClientCode: PEO**

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

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

Email: mgillies@pangeaenv.com; tdelafuente@pa
cc/3rd Party:
PO:
ProjectNo: 7240 Dublin Blvd

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

Requested TAT: 5 days

Date Received: **05/08/2014**
Date Printed: **05/08/2014**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1405303-001	MW-3A	Water	5/8/2014 13:50	☐	A	B	A									
1405303-002	MW-6A	Water	5/8/2014 13:40	☐	A	B										

Test Legend:

1	8260VOC_W	2	CTAS_W	3	PREDF REPORT	4		5	
6		7		8		9		10	
11		12							

Prepared by: Maria Venegas

Comments:

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

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WORK ORDER SUMMARY

Client Name: PANGEA ENVIRONMENTAL SVCS., INC.
QC Level: LEVEL 2
Work Order: 1405303
Project: 7240 Dublin Blvd
Client Contact: Morgan Gillies
Date Received: 5/8/2014
Comments:
Contact's Email: mgillies@pangeaenv.com; tdelafuente@pangeaenv.com

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

Lab ID	Client ID	Matrix	Test Name	Number of Containers	Bottle & Preservative	De-chlorinated	Collection Date & Time	TAT	Sediment Content	Hold	SubOut
1405303-001A	MW-3A	Water	SW8260B (VOCs) <2-Propanol>	2	VOA w/ HCl	☐	5/8/2014 13:50	5 days	Trace	☐	
1405303-001B	MW-3A	Water	SM5540D (Non-ionic Surfactants)	1	1LA	☐	5/8/2014 13:50	5 days	Trace	☐	
1405303-002A	MW-6A	Water	SW8260B (VOCs) <2-Propanol>	2	VOA w/ HCl	☐	5/8/2014 13:40	5 days	Trace	☐	
1405303-002B	MW-6A	Water	SM5540D (Non-ionic Surfactants)	1	1LA	☐	5/8/2014 13:40	5 days	Trace	☐	

*** NOTE: STLC and TCLP extractions require 48 hrs to complete; therefore, all TATs begin after the extraction is completed (i.e., 24hr TAT yields results in 72 hrs from sample submission).**

Bottle Legend:

1LA = 1L Amber Glass Jar, Unpreserved
VOA w/ HCl = 43mL VOA w/ HCl

1405303

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1534 Willow Pass Road
Pittsburg, CA 94565
Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 252-9262 Fax: (925) 252-9269

CHAIN OF CUSTODY RECORD

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

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

Report To: Morgan Gillies Bill To: Pangea
Company: Pangea Environmental Services, Inc.
1710 Franklin Street, Suite 200, Oakland, CA 94612
E-Mail: mgillies@pangeaenv.com
Tele: (510) 836-3702 Fax: (510) 836-3709
Project #: 7240 Dublin Blvd Project Name: 7240 Dublin Blvd
Project Location: 7240 Dublin Blvd., Dublin, CA
Sampler Signature:

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	MATRIX Soil	MATRIX Air	MATRIX Sludge	MATRIX Other	METHOD PRESERVED ICE	METHOD PRESERVED HCL	METHOD PRESERVED HNO_3	METHOD PRESERVED Other	Analysis Request: BTEX & TPH as Gas (602/8020 + 8015)/MTBE	TPH as Diesel (8015) w/ Silica Gel Cleanup	Total Petroleum Oil & Grease (5520 E&F/B&F)	Total Petroleum Hydrocarbons (418.1)	EPA 601 / 8010 / 8021	BTEX ONLY (EPA 602 / 8020)	EPA 608 / 8081	EPA 608 / 8082 PCB's ONLY	EPA 8140 / 8141	EPA 8150 / 8151	EPA 524.2 / 624 / 8260	EPA 525 / 625 / 8270	PAH's / PNA's by EPA 625 / 8270 / 8310	CAM-17 Metals (6010 / 6020)	LUFT 5 Metals (6010 / 6020)	Lead (200.8 / 200.9 / 6010)	Other: CTAS by EPA 5540D	Other: 2-propanol by EPA 8260	Comments
MW-3A		5/8/14	13:50	3	VOA Amber	X					X	X																			X	X	
MW-6A		5/8/14	13:40	3	VOA Amber	X					X	X																			X	X	

Filter Samples for Metals analysis: Yes / No

Report EDF

Relinquished By:	Date:	Time:	Received By:
	5/8/14	15:00	
Relinquished By:	Date:	Time:	Received By:
Relinquished By:	Date:	Time:	Received By:

ICE/t° 16.0
GOOD CONDITION ✓
HEAD SPACE ABSENT
DECHLORINATED IN LAB ✓
APPROPRIATE CONTAINERS
PRESERVED IN LAB

COMMENTS:

PRESERVATION VOAS O&G METALS OTHER pH<2

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **5/8/2014 3:08:04 PM**

Project Name: **7240 Dublin Blvd**
LogIn Reviewed by: Maria Venegas

WorkOrder N°: **1405303** Matrix: Water
Carrier: Client Drop-In

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☑	No ☐	
Container/Temp Blank temperature	Cooler Temp: 16°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☑	No ☐	NA ☐
Sample labels checked for correct preservation?	Yes ☑	No ☐	
pH acceptable upon receipt (Metal: pH<2; 522: pH<4)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments:

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Analytical Report

Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1140.001; Baker - Millbrae	Date Sampled: 08/31/12
		Date Received: 09/04/12
	Client Contact: Tina De La Fuente	Date Reported: 09/11/12
	Client P.O.:	Date Completed: 09/11/12

WorkOrder: 1209019

September 11, 2012

Dear Tina:

Enclosed within are:

1) The results of the **1** analyzed sample from your project: **#1140.001; Baker - Millbrae,**
2) QC data for the above sample, and
3) A copy of the chain of custody.

All analyses were completed satisfactorily and all QC samples were found to be within our control limits. If you have any questions or concerns, please feel free to give me a call. Thank you for choosing McCampbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McCampbell Analytical, Inc.

The analytical results relate only to the items tested.

McCAMPBELL ANALYTICAL, INC.

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1209019

CHAIN OF CUSTODY RECORD

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

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

Report To: Tina de la Fuente	Bill To: Pangea
Company: Pangea Environmental Services, Inc.	
1710 Franklin Street, Suite 200, Oakland, CA 94612	
	E-Mail: tdelafuente@pangeaenv.com
Tele: (510) 836-3700	Fax: (510) 836-3709
Project #: 1140.001	Project Name: Baker - Millbrae
Project Location: 1009 El Camino Real, Millbrae	
Sampler Signature:	

SAMPLE ID	LOCATION (Field Point Name)	SAMPLING Date	SAMPLING Time	# Containers	Type Containers	MATRIX Water	Soil	Air	Sludge	Other	METHOD PRESERVED ICE	HCL	HNO_3	Other	TPHg (8015Cm)	BTEX/MTBE (8260B)	7 Oxygenates (8260B)	CTAS - NON-Ionic Surfactants	HPLC - Alcohol, methanol, ethanol, isopropanol by 8260	Other	Comments
+1 BOC		8/31/12	1415	2	poly Amber					X	X							X	X		Filter Samples for Metals analysis: Yes / No

Relinquished By:	Date:	Time:	Received By:
	9/4/12	1515	
Relinquished By:	Date:	Time:	Received By:
	9/4/12	1500	
Relinquished By:	Date:	Time:	Received By:

ICE/t° 4.8 COMMENTS:
GOOD CONDITION
HEAD SPACE ABSENT
DECHLORINATED IN LAB
APPROPRIATE CONTAINERS
PRESERVED IN LAB

VOAS O&G METALS OTHER
PRESERVATION pH<2

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

CHAIN-OF-CUSTODY RECORD

WorkOrder: 1209019 **ClientCode: PEO**

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

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

Email: tdelafuente@pangeaenv.com
cc:
PO:
ProjectNo: #1140.001; Baker - Millbrae

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

Requested TAT: 5 days

Date Received: **09/04/2012**
Date Printed: **09/04/2012**

Lab ID	Client ID	Matrix	Collection Date	Hold	Requested Tests (See legend below)											
					1	2	3	4	5	6	7	8	9	10	11	12
1209019-001	BOC	Water	8/31/2012 14:15	☐	B	A										

Test Legend:

1	ALCOHOLS_W	2	CTAS_W	3		4		5	
6		7		8		9		10	
11		12							

Prepared by: Zoraida Cortez

Comments:

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

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Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**
Date and Time Received: **9/4/2012 5:13:12 PM**

Project Name: **#1140.001; Baker - Millbrae**
LogIn Reviewed by: Zoraida Cortez

WorkOrder N°: **1209019** Matrix: Water
Carrier: Rob Pringle (MAI Courier)

Chain of Custody (COC) Information

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

Sample Receipt Information

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

Sample Preservation and Hold Time (HT) Information

All samples received within holding time?	Yes ☐	No ☑	
Container/Temp Blank temperature	Cooler Temp: 4.8°C		NA ☐
Water - VOA vials have zero headspace / no bubbles?	Yes ☐	No ☐	No VOA vials submitted ☑
Sample labels checked for correct preservation?	Yes ☑	No ☐	
Metal - pH acceptable upon receipt (pH<2)?	Yes ☐	No ☐	NA ☑
Samples Received on Ice?	Yes ☑	No ☐	

(Ice Type: WET ICE)

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

Comments: CTAS received out of hold time.

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Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612	Client Project ID: #1140.001; Baker - Millbrae	Date Sampled: 08/31/12
		Date Received: 09/04/12
	Client Contact: Tina De La Fuente	Date Extracted: 09/11/12
	Client P.O.:	Date Analyzed: 09/11/12

Volatile Organics by P&T and GC/MS*

Extraction Method: SW5030B | Analytical Method: SW8260B | Work Order: 1209019

					Reporting Limit for DF =1	
Lab ID	1209019-001B					
Client ID	BOC					
Matrix	W					
DF	100				S	W
Compound	**Concentration**				ug/kg	µg/L
Ethanol	250,000				NA	50
Methanol	ND<50,000				NA	500
2-Propanol	940,000				NA	50
Surrogate Recoveries (%)						
%SS1:	108					
%SS2:	102					
Comments	b1					

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

ND means not detected above the reporting limit/method detection limit; N/A means analyte not applicable to this analysis; %SS = Percent Recovery of Surrogate Standard; DF = Dilution Factor

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

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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Pangea Environmental Svcs., Inc.	Client Project ID: #1140.001; Baker - Millbrae	Date Sampled: 08/31/12
		Date Received: 09/04/12
1710 Franklin Street, Ste. 200	Client Contact: Tina De La Fuente	Date Extracted: 09/05/12
Oakland, CA 94612	Client P.O.:	Date Analyzed: 09/06/12

CTAS (Cobalt Thiocyanate Active Subtances)/Non-ionic Surfactants

Analytical Method: SM5540D Work Order: 1209019

Lab ID	Client ID	Matrix	CTAS	DF	Comments
1209019-001A	BOC	W	56,000	1	b1

Reporting Limit for DF = 1; ND means not detected at or above the reporting limit	W	0.1 mg/L	
	S	NA	

*water samples are reported in mg/L.

b1) aqueous sample that contains greater than ~1 vol. % sediment

DHS ELAP Certification 1644

Angela Rydelius, Lab Manager

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QC SUMMARY REPORT FOR SW8260B

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 70641 | WorkOrder: 1209019

EPA Method: SW8260B **Extraction: SW5030B** **Spiked Sample ID: 1209192-001B**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	µg/L	µg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
tert-Amyl methyl ether (TAME)	ND	10	97.6	92.4	5.44	100	70 - 130	20	70 - 130
Benzene	ND	10	91	88.4	2.81	98.1	70 - 130	20	76 - 106
t-Butyl alcohol (TBA)	ND	40	89.1	96.1	7.47	90.8	70 - 130	20	70 - 130
Chlorobenzene	ND	10	88.4	86.4	2.32	96.5	70 - 130	20	79 - 105
1,2-Dibromoethane (EDB)	ND	10	96.8	95.7	1.07	101	70 - 130	20	76 - 116
1,2-Dichloroethane (1,2-DCA)	ND	10	91.3	89.5	1.91	97.3	70 - 130	20	69 - 111
1,1-Dichloroethene	ND	10	90.6	87	3.98	98.4	70 - 130	20	70 - 104
Diisopropyl ether (DIPE)	ND	10	92.1	89.4	2.93	99.2	70 - 130	20	79 - 111
Ethyl tert-butyl ether (ETBE)	ND	10	93.7	91.6	2.26	101	70 - 130	20	70 - 130
Methyl-t-butyl ether (MTBE)	ND	10	91.5	89.5	2.04	98.6	70 - 130	20	70 - 130
Toluene	ND	10	86.6	83.3	3.88	95.7	70 - 130	20	70 - 130
Trichloroethene	ND	10	92	91.1	1.01	100	70 - 130	20	70 - 130
%SS1:	106	25	109	108	0.504	108	70 - 130	20	70 - 130
%SS2:	100	25	101	99	1.87	101	70 - 130	20	70 - 130
%SS3:	107	2.5	106	106	0	101	70 - 130	20	70 - 130

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

BATCH 70641 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1209019-001B	08/31/12 2:15 PM	09/11/12	09/11/12 1:33 PM	1209019-001B	08/31/12 2:15 PM	09/11/12	09/11/12 2:51 PM

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

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

* MS and / or MSD spike recoveries may not be near 100% or the RPDs near 0% if: a) the sample is inhomogenous AND contains significant concentrations of analyte relative to the amount spiked, or b) if that specific sample matrix interferes with spike recovery.

N/A = not enough sample to perform matrix spike and matrix spike duplicate.
NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

Laboratory extraction solvents such as methylene chloride and acetone may occasionally appear in the method blank at low levels.

DHS ELAP Certification 1644

QA/QC Officer

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QC SUMMARY REPORT FOR SM5540D

W.O. Sample Matrix: Water | QC Matrix: Water | BatchID: 70422 | WorkOrder: 1209019

EPA Method: SM5540D **Extraction: SM5540D** **Spiked Sample ID: N/A**

Analyte	Sample	Spiked	MS	MSD	MS-MSD	LCS	Acceptance Criteria (%)		
	mg/L	mg/L	% Rec.	% Rec.	% RPD	% Rec.	MS / MSD	RPD	LCS
CTAS	N/A	1	N/A	N/A	N/A	95.2	N/A	N/A	85 - 115

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

BATCH 70422 SUMMARY

Lab ID	Date Sampled	Date Extracted	Date Analyzed	Lab ID	Date Sampled	Date Extracted	Date Analyzed
1209019-001A	08/31/12 2:15 PM	09/05/12	09/06/12 2:49 PM				

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

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

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

N/A = not applicable to this method.

NR = analyte concentration in sample exceeds spike amount for soil matrix or exceeds 2x spike amount for water matrix or sample diluted due to high matrix or analyte content.

DHS ELAP Certification 1644

QA/QC Officer