

RECEIVED

10:01 am, May 02, 2008

Alameda County
Environmental Health



April 21, 2008

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

Re: **Groundwater Monitoring Report - First Quarter 2008**

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California
ACEH Case No. 304

Dear Mr. Chan:

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. has prepared this *Groundwater Monitoring Report – First Quarter 2008*. The report describes groundwater monitoring, sampling, and other site activities.

Sincerely,
Pangea Environmental Services, Inc.

A handwritten signature in blue ink that reads "Bob Clark-Riddell". The signature is fluid and cursive.

Bob Clark-Riddell, P.E.
Principal Engineer

Attachment: *Groundwater Monitoring Report – First Quarter 2008*

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

PANGEA Environmental Services, Inc.

1710 Franklin Street, Suite 200, Oakland, California 94612 Telephone 510.836.3700 Facsimile 510.836.3709 www.pangeaenv.com



GROUNDWATER MONITORING REPORT – FIRST QUARTER 2008

Dublin Auto Wash
7240 Dublin Boulevard
Dublin, California

April 21, 2008

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:


Morgan Gillies
Project Manager




Bob Clark-Riddell, P.E.
Principal Engineer

PANGEA Environmental Services, Inc.

INTRODUCTION

On behalf of Mr. Hooshang Hadjian, Pangea Environmental Services, Inc. (Pangea) conducted groundwater monitoring and sampling activities during this quarter 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). Current groundwater analytical results and elevation data are shown on Figure 2. Current and historical data are summarized on Table 1.

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.

From approximately 1988 to 1997, Chevron Products Company performed assessment and remediation of the site. A soil vapor extraction (SVE) system was operated at the site from December 1992 through June 1995. Mr. Hadjian is the responsible party for an unauthorized release from a leaking stainless steel flex-hose near the northernmost dispenser island in February 1997. Subsequently, a new product delivery system was installed and about 31 cubic yards of contaminated soil was removed from the release area. Gettler-Ryan, Inc. monitored the eight existing groundwater wells at the site until 2003, when SOMA Environmental Engineering, Inc., took over groundwater monitoring and conducted further characterization of the site using electrical conductivity logging to identify potential water-bearing zones. In November 2004, Pangea commenced coordination of groundwater monitoring and corrective action for the site. To delineate the contamination detected during SOMA's investigation, Pangea in 2006 installed additional monitoring wells with shorter screen lengths in identified water-bearing zones.

The site subsurface consists primarily of clay, sandy clay, and clayey sand. The shallower soil (<34 ft bgs) is predominantly clay and sandy clay with thin lenses of clayey sand, while the deeper soil (>34 ft bgs) contains clayey sand units of apparently higher permeability than shallower materials. In March, April and May, 2006, Pangea installed fourteen monitoring wells to help define the vertical and lateral extent of groundwater contamination in the identified water-bearing zones. Wells with shorter screen lengths than existing wells were installed in the upper shallow (AA) zone from approximately 9 to 14 ft bgs (MW-7AA), the shallow (A) zone from approximately 15 to 20 ft bgs (MW-3A, MW-6A, MW-7A, MW-8A, MW-9A and MW-10A), the middle (B) zone from approximately 25 to 30 ft bgs (MW-6B and MW-7B), and the deep (C) zone from approximately 34 to 45 ft bgs (MW-6C, MW-7C, MW-9C, MW-10C and MW-11C). The well screen in MW-3A was installed at a shallower depth than the other A-zone wells to intercept the SPH previously observed in abandoned well MW-3.

The shallower (AA, A and B) water-bearing zones primarily consist of thin lenses of clayey sand within sandy clay, while higher permeability silty sand and clayey sand are the predominant soil types constituting the deeper (C) water-bearing zone. Vapor wells VW-1 through VW-3 are screened from approximately 3 to 9 ft bgs above the upper shallow seasonal water-bearing zone, which appears to be a perched zone. In late March and early April 2006, wells EA-1, EA-2, EA-3 and MW-3 were abandoned to reduce the risk of vertical contaminant migration and improve the quality of contaminant concentration and groundwater elevation data. To compare the elevation of surface water in the flood control channel with site groundwater, point C-1 was surveyed on the roadway overpass above the channel. Well construction details are presented in Table 2.

An interim remedial action was conducted by Pangea in July 2006 by extracting approximately 40 gallons of impacted liquid from wells MW-3A and MW-7AA with a vacuum truck. In November 2007, Pangea conducted a five day dual-phase extraction (DPE) test/removal event to evaluate the effectiveness of DPE as remedial technique and to provide additional source removal.

GROUNDWATER MONITORING AND SAMPLING

On February 26 and 27, 2008, groundwater monitoring and sampling was conducted at the site. All well caps were removed the night before monitoring to allow water levels to stabilize. Groundwater samples were obtained from groundwater monitoring wells MW-1, MW-2, MW-3A, MW-4, MW-5, MW-6A, MW-6B, MW-7AA, MW-7A, MW-7B, MW-8A, MW-9A and MW-10A, and from two (VW-2 and VW-3) of the three vapor wells. Vapor well VW-1 contained insufficient water for sampling this quarter. Sampling of the vapor wells was initially requested in a February 9, 2006 letter from Alameda County Environmental Health (ACEH). The depth to water at survey point C-1 above the flood control channel was also measured. Monitoring and sampling of deep monitoring wells MW-6C, MW-7C, MW-9C, MW-10C and MW-11C was discontinued starting the second quarter 2007, as approved by Barney Chan of ACEH in a May 14, 2007 telephone conversation, because no significant contamination had been detected in these deeper site wells during four consecutive quarters.

Before well purging, the dissolved oxygen (DO) concentration was measured in each 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 were purged using disposable bailers, an electric submersible pump, positive air displacement pump, or a peristaltic pump. During well purging, field technicians measured the pH, temperature 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 A.

MONITORING RESULTS

Current and historical groundwater elevation data and analytical results are described below and summarized on Table 1. 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. 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 0.49 mg/L (well MW-3A) to 1.06 mg/L (well MW-4).

Groundwater Flow Direction

Based on depth-to-water data collected February 26, 2008, 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 0.13 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 significantly smaller upward gradient is present southwest of the dispenser islands (MW-7A and MW-7B), as shown below on Table A. A downward gradient appears to be present between the shallow vapor wells (VW-1, VW-2 and VW-3) and the shallow 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 | 321.66 | 17.5 | |
| MW-6B | 323.03 | 28 | |
| <i>Difference</i> | <i>1.37</i> | <i>10.5</i> | <i>0.13 (upwards)</i> |
| MW-7A | 321.93 | 18 | |
| MW-7B | 322.05 | 28 | |

| | | | |
|-------------------|-------------|-----------|-----------------------|
| <i>Difference</i> | <i>0.12</i> | <i>10</i> | <i>0.012(upwards)</i> |
|-------------------|-------------|-----------|-----------------------|

Horizontal Gradient Evaluation: Depth-to-water measurements collected during prior monitoring events indicate that the horizontal component of the groundwater flow direction to the north of the site has been consistently southward to southeastward for the *shallow* wells, but gradient directions in the southern portion of the site have fluctuated significantly, possibly due to the influence of the nearby flood control channel. As shown on Figure 2, the horizontal component of the groundwater flow direction in the *shallow* wells at the site for the current monitoring event appears to converge to the northeast along Dublin Boulevard and is possibly influenced by permeable backfill around the sanitary sewer line beneath Dublin Boulevard. The groundwater flow direction for the shallow water-bearing zone may also be affected by surface water infiltration from the onsite car wash. 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. Future monitoring and analysis will help define the consistency and magnitude of this upward gradient. Historical depth-to-water and groundwater elevation data for the site are presented in Table 1.

Hydrocarbon Distribution in Groundwater

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. A brief interim remedial action conducted on July 7, 2006, and consisting of removal of approximately 40 gallons of impacted liquid from well MW-3A using a vacuum truck, may have improved site conditions near well MW-3A.

Hydrocarbon contamination is concentrated in the upper shallow (AA) and shallow (A) water-bearing zones in the vicinity of the fuel dispensers, as shown on Table 1 and Figure 2. Monitoring well MW-3A, located north of the dispenser islands, had the highest TPHg (7,200 µg/L) concentration, and monitoring well MW-7AA had the highest benzene (970µg/L) concentration of all sampled wells. Petroleum hydrocarbon concentrations detected this quarter were within historic limits in all wells, except for historic high TPHg and benzene concentrations detected in well MW-6A (6,800 and 740 µg/L, respectively), and historic high TPHg concentrations in well MW-3A (7,200 µg/L). These increased concentrations are most likely due to the DPE testing/removal event conducted by Pangea on wells MW-3A, MW-6A, MW-7AA and MW-7A from November 27 to December 1, 2007. No petroleum hydrocarbons were detected above reporting limits in either of the two sampled intermediate (B) depth wells.

Fuel Oxygenate Distribution in Groundwater

MTBE was detected above reporting limits in several wells, as shown on Table 1 and Figure 2. The highest MTBE concentration was in source area well MW-7AA (15,000 µg/L). Historic low MTBE concentrations were detected in wells MW-3A (1,800 µg/L) and MW-6A (330 µg/L). A historic high MTBE concentration was detected in well MW-8A (38 µg/L). MTBE concentrations in other sampled wells were within historic limits.

MTBE concentrations in well MW-1 had been steadily increasing over a three-year period before reaching a historic high of 8,400 µg/L during the fourth quarter 2006 monitoring event, but have been decreasing substantially since then (7.0 µg/L this quarter). The concentration reductions in well MW-1 may be due to MTBE migration from the area.

OTHER SITE ACTIVITIES

Upcoming Monitoring

Pangea will continue quarterly monitoring and sampling of all shallow and intermediate-depth onsite groundwater monitoring wells on the site. Upgradient offsite wells MW-4 and MW-5 will be sampled annually during the first quarter of each year. All monitored wells will be gauged for depth to water and inspected for SPH. All groundwater samples will be analyzed for TPHg/BTEX/MTBE by EPA Method 8015Cm/8021B. Pangea has discontinued sampling of all deep groundwater monitoring wells (MW-6C, MW-7C, MW-9C, MW-10C and MW-11C) with ACEH approval.

The upcoming monitoring will also include the following activities:

- To evaluate shallow conditions at the site, Pangea will continue to gauge vapor wells VW-1 through VW-3 and sample these wells if they contain sufficient water, as directed by the ACEH.
- To compare surface water and groundwater elevation and help evaluate the potential for groundwater to impact the flood control channel, Pangea will measure the depth to water at survey point C-1 at the overpass of the flood control channel.
- To address apparently non-representative prior water level measurements for some site wells due to slow recovery, Pangea will continue to open well caps the day prior to monitoring for future monitoring events. (Note that well caps will not be opened in advance of sampling if significant water is present in a given well vault, or if precipitation is forecast).

Pangea will summarize groundwater monitoring activities and results in a groundwater monitoring report.

Additional Site Remediation

In a letter dated November 9, 2007, the ACEH approved short-term remediation activities proposed in Pangea's *Site Investigation Report* dated August 11, 2006. Between November 27 and December 1, 2007, Pangea performed DPE pilot testing at select site wells to evaluate whether DPE could effectively remove residual hydrocarbons and MTBE from beneath the site. The pilot testing also provided additional source removal. As requested in the November 9 letter, Pangea is currently preparing an *Interim Remediation Report and Corrective Action Plan*, describing short-term remediation activities and results, and proposing remedial action for the site.

Electronic Reporting

The report, laboratory data, and other applicable information will be uploaded to the State Water Resource Control Board's Geotracker database.

ATTACHMENTS

Figure 1 – Site Location Map

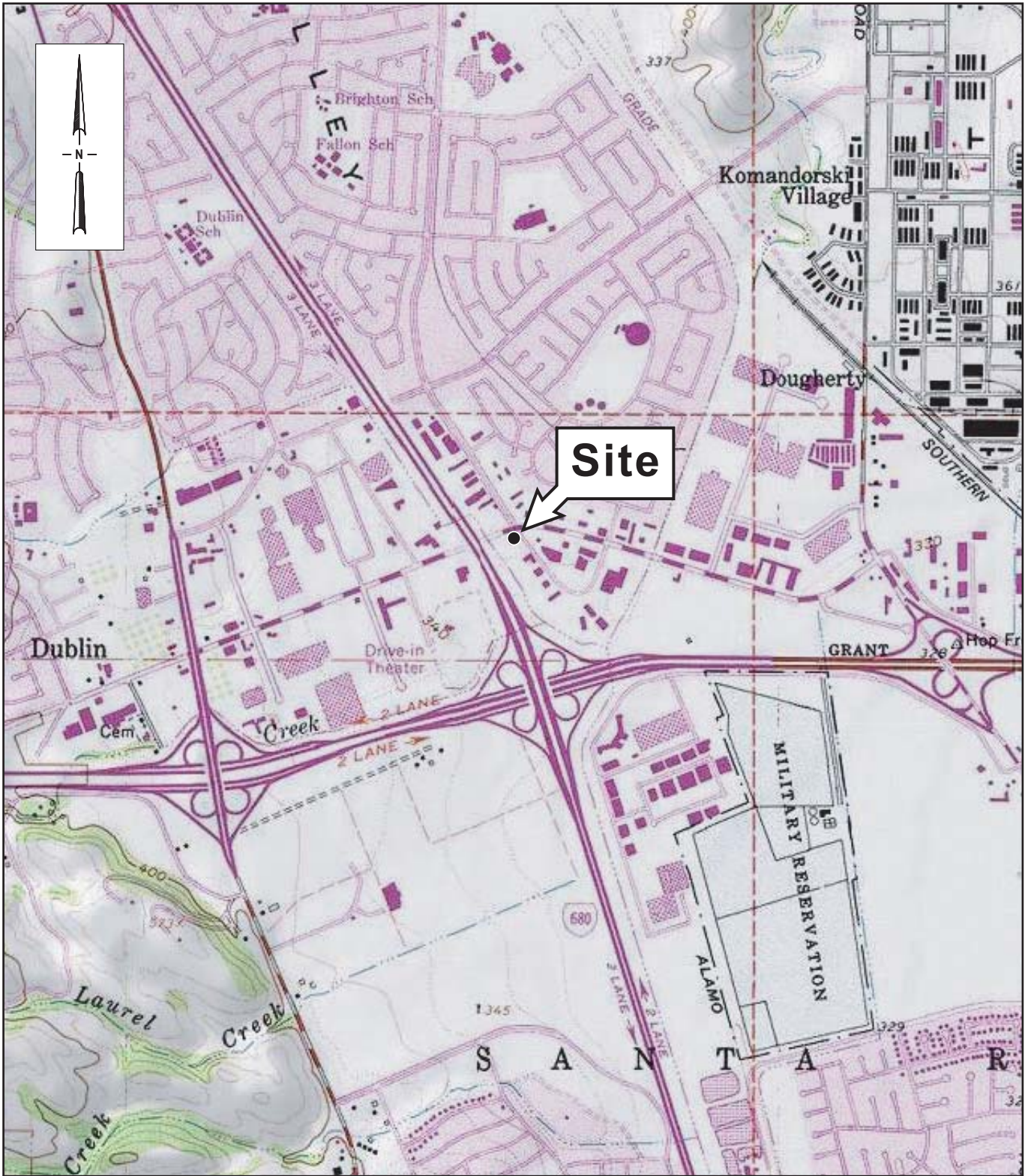
Figure 2 – Groundwater Elevation Contour and Hydrocarbon Concentration Map – Shallow

Table 1 – Groundwater Elevation and Analytical Data

Table 2 – Well Construction Details

Appendix A – Groundwater Monitoring Field Data Sheets

Appendix B – Laboratory Analytical Results



SOURCE: TOPOI MAPS



SCALE : 1" = 1/4 MILE

Figure 1

Dublin Auto Wash
 7240 Dublin Boulevard
 Dublin, California



Site Location Map

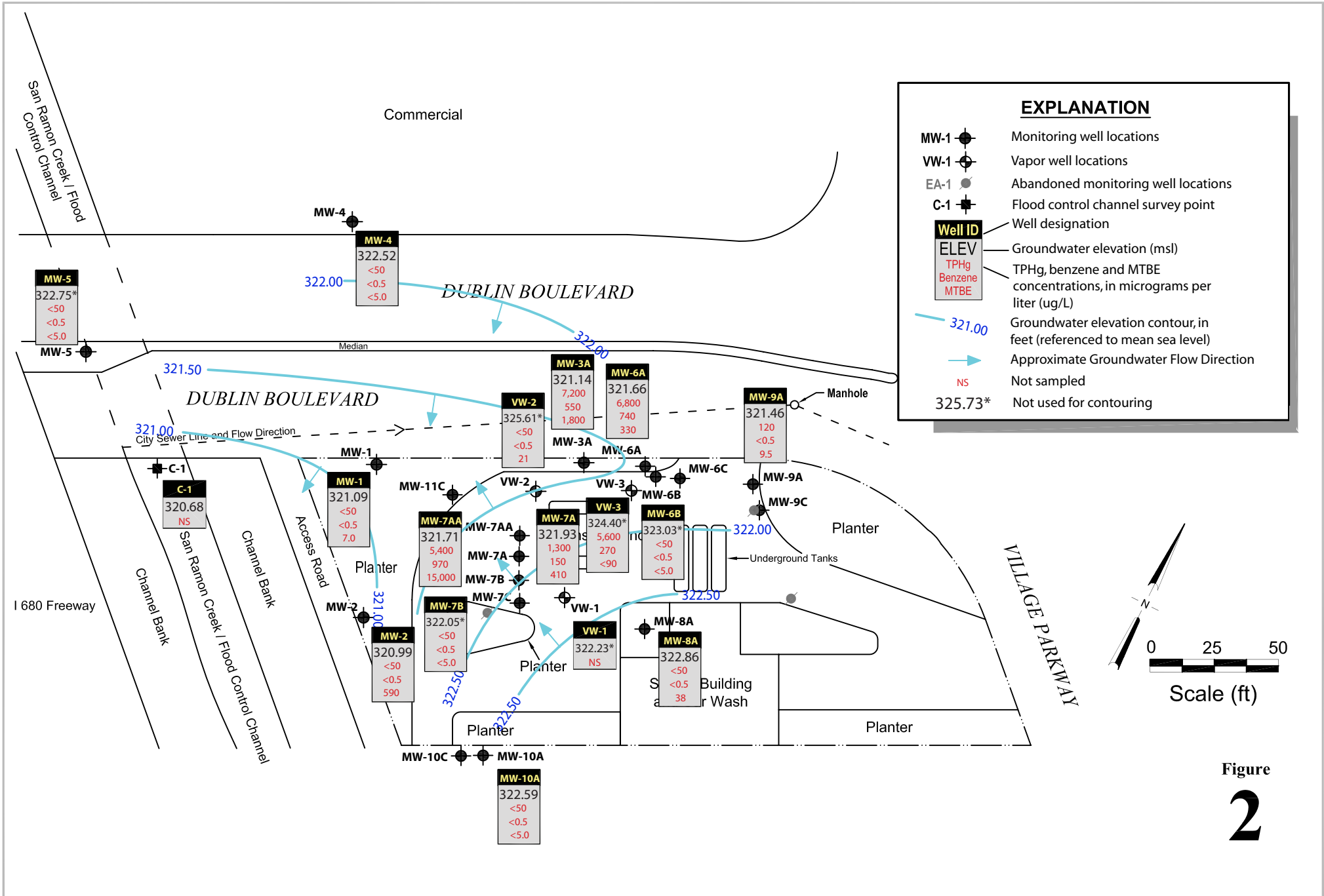


Figure
2

Pangea

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


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

mg/L = Milligrams per liter - approximately equal to parts per million = ppm
 TPHg = Total petroleum hydrocarbons as gasoline by modified EPA Method 8015C
 BTEX = Benzene, toluene, ethylbenzene, and xylenes by EPA Method 8020/8021.
 MTBE = Methyl tertiary butyl ether by EPA Method 8020/8021. (Concentrations in parentheses are by EPA Method 8260B).
 1,2-DCA = 1,2-Dichloroethane
 TAME = Tertiary amyl methyl ether by EPA Method 8260B
 TBA = Tertiary butyl alcohol by EPA Method 8260B
 DIPE = Diisopropyl ether by EPA Method 8260B
 ETBE = Ethyl tertiary butyl ether by EPA Method 8260B
 -- = 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 Field Data Sheets

Well Gauging Data Sheet

| Project Task #: 1001.001 214 | | | | Project Name: Dublin Car Wash | | | |
|--|-----------------|------|---------------------------------|---|---------------------|------------------|-----------------|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | Date: 02/26/08 | |
| Name: Sanjiv Gill | | | | Signature:  | | | |
| Well ID | Well Size (in.) | Time | Depth to Immiscible Liquid (ft) | Thickness of Immiscible Liquid (ft) | Depth to Water (ft) | Total Depth (ft) | Measuring Point |
| MW-1 | 2" | 8:15 | | | 12.60 | 25.32 | TOC |
| MW-2 | 2" | 8:36 | | | 8.49 | 20.00 | |
| MW-3A | 4" | 8:59 | | | 10.25 | 16.78 | |
| MW-4 | 2" | 8:05 | | | 10.12 | 19.78 | |
| MW-5 | 2" | 8:09 | | | 10.38 | 20.56 | |
| MW-6A | 2" | 8:54 | | | 10.15 | 19.13 | |
| MW-6B | 2" | 8:22 | | | 7.87 | 29.73 | |
| MW-7AA | 4" | 8:50 | | | 8.96 | 13.84 | |
| MW-7A | 4" | 8:47 | | | 8.78 | 19.53 | |
| MW-7B | 2" | 8:25 | | | 8.64 | 28.42 | |
| MW-8A | 2" | 8:27 | | | 8.33 | 19.01 | R |

Comments:

Well Gauging Data Sheet

| Project Task #: 1001.001 214 | | | | Project Name: Dublin Car Wash | | | |
|--|-----------------|------|---------------------------------|---|---------------------|------------------|-----------------|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | Date: 02/26/08 | |
| Name: Sanjiv Gill | | | | Signature:  | | | |
| Well ID | Well Size (in.) | Time | Depth to Immiscible Liquid (ft) | Thickness of Immiscible Liquid (ft) | Depth to Water (ft) | Total Depth (ft) | Measuring Point |
| MW-9A | 2" | 8:30 | | | 9.71 | 19.66 | TQC |
| MW-10A | 2" | 8:19 | | | 7.34 | 19.51 | |
| VW-1 | 2" | 8:40 | | | 8.20 | 8.40 | |
| VW-2 | 2" | 8:33 | | | 4.56 | 8.30 | |
| VW-3 | 2" | 8:44 | | | 6.09 | 8.40 | |
| C-1 | — | 8:12 | | | 1221 | — | |
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Comments:

MONITORING FIELD DATA SHEET

Well ID: MW-1

| Project Task #: 1001.001 214 | | | Project Name: Dublin Car Wash | | | | | |
|---|-------------|-------------|-------------------------------|-----------|-----------------------------|-----------|-----------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: <u>02/26/08</u> | | | Weather: <u>Sunny</u> | | | | | |
| Well Diameter: <u>2"</u> | | | Volume/ft. | 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | | |
| | | | 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 | | | |
| Total Depth (TD): <u>25.32</u> | | | Depth to Product: | | | | | |
| Depth to Water (DTW): <u>12.60</u> | | | Product Thickness: | | | | | |
| Water Column Height: <u>12.72</u> | | | 1 Casing Volume: <u>2.03</u> | | | gallons | | |
| Reference Point: TOC | | | 3 Casing Volumes: <u>6.09</u> | | | gallons | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO (mg/L) | ORP (mV) | Vol (gal) | DTW |
| <u>10:25</u> | <u>19.1</u> | <u>7.32</u> | <u>2550</u> | | | | <u>2</u> | |
| <u>10:30</u> | <u>18.5</u> | <u>7.29</u> | <u>2597</u> | | | | <u>4</u> | |
| <u>10:35</u> | <u>18.9</u> | <u>7.30</u> | <u>2561</u> | | | | <u>6</u> | |
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Comments: YSI 550A DO meter pre purge DO = 0.86 mg/l
 post purge DO = mg/l
turbid


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| Sample ID: <u>MW-1</u> | Sample Time: <u>10:40</u> |
| Laboratory: McCampbell Analytical, INC. | Sample Date: <u>02/26/08</u> |
| Containers/Preservative: <u>Voac/HCl</u> | |
| Analyzed for: <u>8015, 8021</u> | |
| Sampler Name: <u>Sanjiv Gill</u> | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: MU-2

| Project Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
|---|-------------|-------------------------------|-------------|---|----------|---|------------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | | | Weather: <u>Sunny</u> | | | | |
| Well Diameter: <u>2"</u> | | | | Volume/ft. <u>1" = 0.04</u> <u>3" = 0.37</u> <u>6" = 1.47</u> | | <u>2" = 0.16</u> <u>4" = 0.65</u> <u>radius² = 0.163</u> | | |
| Total Depth (TD): <u>20.00</u> | | | | Depth to Product: | | | | |
| Depth to Water (DTW): <u>8.49</u> | | | | Product Thickness: | | | | |
| Water Column Height: <u>11.51</u> | | | | 1 Casing Volume: <u>1.84</u> | | gallons | | |
| Reference Point: TOC | | | | 3 Casing Volumes: <u>5.52</u> | | gallons | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| <u>12:25</u> | <u>18.5</u> | <u>7.60</u> | <u>1795</u> | | | | <u>1.5</u> | |
| <u>12:30</u> | <u>18.8</u> | <u>7.69</u> | <u>1659</u> | | | | <u>3</u> | |
| <u>12:35</u> | <u>18.5</u> | <u>7.68</u> | <u>1690</u> | | | | <u>5.5</u> | |
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Comments: YSI 550A DO meter pre purge DO = 0.51 mg/l
 post purge DO = mg/l
turbid

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| Sample ID: <u>MU-2</u> | Sample Time: <u>12:40</u> |
| Laboratory: McCampbell Analytical, INC. | Sample Date: <u>02/26/08</u> |
| Containers/Preservative: <u>Voal/HCl</u> | |
| Analyzed for: <u>8015, 8021</u> | |
| Sampler Name: Sanjiv Gill | Signature:  |



MONITORING FIELD DATA SHEET

Well ID: MW-3A

| Project.Task #: 1001.001 214 | | | | Project Name: Dublin Car Wash | | | | |
|---|-----------|------|-----------|---------------------------------|-----------|-----------|-----------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | | | Weather: | | | | |
| Well Diameter: 4" | | | | Volume/ft. | | | | |
| | | | | 1" = 0.04 | | 3" = 0.37 | | |
| | | | | 2" = 0.16 | | 4" = 0.65 | | |
| | | | | 6" = 1.47 | | | | |
| | | | | radius ² * 0.163 | | | | |
| Total Depth (TD): 16.78 | | | | Depth to Product: | | | | |
| Depth to Water (DTW): 10.25 | | | | Product Thickness: | | | | |
| Water Column Height: 6.53 | | | | 1 Casing Volume: 4.24 gallons | | | | |
| Reference Point: TOC | | | | 3 Casing Volumes: 12.72 gallons | | | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO (mg/L) | ORP (mV) | Vol (gal) | DTW |
| 8:35 | 17.3 | 7.32 | 1992 | | | | 4.5 | |
| 8:40 | 17.2 | 7.28 | 1869 | | | | 9 | |
| 8:45 | 17.9 | 7.22 | 1864 | | | | 13 | |
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Comments: YSI 550A DO meter pre purge DO = 0.49 mg/l
post purge DO = mg/l

odor


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|---|--|-----------------------|--|
| Sample ID: MW-3A | | Sample Time: 8:50 | |
| Laboratory: McCampbell Analytical, INC. | | Sample Date: 02/27/08 | |
| Containers/Preservative: Voa/HCl | | | |
| Analyzed for: 8015, 8021 | | | |
| Sampler Name: Sanjiv Gill | | Signature: | |

MONITORING FIELD DATA SHEET

Well ID: MW-4

| Project.Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | | |
|---|-------------|---|-------------|-----------|-----------|-----------|------------|-----------|-----------------------------|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | | |
| Date: 02/26/08 | | Weather: <u>Sunny</u> | | | | | | | |
| Well Diameter: <u>2"</u> | | Volume/ft. <table border="1" style="display: inline-table; border-collapse: collapse;"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius² * 0.163</td> </tr> </table> | | 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 |
| 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | | | | | | | |
| 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 | | | | | | | |
| Total Depth (TD): <u>19.78</u> | | Depth to Product: | | | | | | | |
| Depth to Water (DTW): <u>10.12</u> | | Product Thickness: | | | | | | | |
| Water Column Height: <u>9.66</u> | | 1 Casing Volume: <u>1.54</u> gallons | | | | | | | |
| Reference Point: TOC | | 3 Casing Volumes: <u>4.62</u> gallons | | | | | | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW | |
| <u>9:30</u> | <u>21.5</u> | <u>6.95</u> | <u>2204</u> | | | | <u>1.5</u> | | |
| <u>9:35</u> | <u>20.9</u> | <u>6.99</u> | <u>2121</u> | | | | <u>3</u> | | |
| <u>9:40</u> | <u>20.9</u> | <u>6.92</u> | <u>2285</u> | | | | <u>4.5</u> | | |
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Comments: YSI 550A DO meter pre purge DO = 1.06 mg/l
 post purge DO = mg/l
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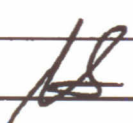
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|--|---|
| Sample ID: <u>MW-4</u> | Sample Time: <u>9:45</u> |
| Laboratory: McCampbell Analytical, INC. | Sample Date: <u>02/26/08</u> |
| Containers/Preservative: <u>Voac/HCl</u> | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: **MW-6B**

| Project Task #: 1001.001 214 | | | | Project Name: Dublin Car Wash | | | | |
|---|-------------|-------------|-------------|-------------------------------|----------|--------------|-------------|-----------------------------|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | | | Weather: Sunny | | | | |
| 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): 29.73 | | | | Depth to Product: | | | | |
| Depth to Water (DTW): 7.87 | | | | Product Thickness: | | | | |
| Water Column Height: 21.86 | | | | 1 Casing Volume: | | 3.49 | gallons | |
| Reference Point: TOC | | | | 3 Casing Volumes: | | 10.47 | gallons | |
| Purging Device: Disposable Bailer , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: Disposable Bailer , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| 7:45 | 18.0 | 7.50 | 2930 | | | | 3.5 | |
| 7:50 | 18.5 | 7.49 | 2860 | | | | 7 | |
| 7:55 | 18.4 | 7.50 | 2795 | | | | 10.5 | |
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Comments: YSI 550A DO meter pre purge DO = **0.80** mg/l
 post purge DO = mg/l


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|---|---|
| Sample ID: MW-6B | Sample Time: 8:00 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voa/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: **MW-7AA**

| | | | | | | | | |
|---|--|-------------------------------|-----------------------------|-----|----------|----------|------------|-----|
| Project.Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | Weather: Sunny | | | | | | |
| Well Diameter: 4" | Volume/ft. 1" = 0.04 3" = 0.37 6" = 1.47 | | radius ² * 0.163 | | | | | |
| | 2" = 0.16 4" = 0.65 | | | | | | | |
| Total Depth (TD): 13.84 | Depth to Product: | | | | | | | |
| Depth to Water (DTW): 8.96 | Product Thickness: | | | | | | | |
| Water Column Height: 4.88 | 1 Casing Volume: 3.17 | | gallons | | | | | |
| Reference Point: TOC | 3 Casing Volumes: 9.51 | | gallons | | | | | |
| Purging Device: Disposable Bailer, Check Valve Tubing, 3" PVC Bailer Whal Pump | | | | | | | | |
| Sampling Device: Disposable Bailer , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| 7:15 | 16.7 | 7.29 | 1751 | | | | 3 | |
| 7:20 | 17.0 | 7.34 | 1729 | | | | 6 | |
| 7:25 | 17.0 | 7.33 | 1721 | | | | 9.5 | |
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Comments: YSI 550A DO meter pre purge DO = **0.74** mg/l
 post purge DO = mg/l

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|---|---|
| Sample ID: MW-7AA | Sample Time: 7:35 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voa/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: **MW-7A**

| Project Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | | |
|---|-------------|--|-------------|-----------|-----------|-----------|-----------|-----------|-----------------------------|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | | |
| Date: 02/20/08 | | Weather: Clear | | | | | | | |
| Well Diameter: 4" | | Volume/ft. <table border="1"><tr><td>1" = 0.04</td><td>3" = 0.37</td><td>6" = 1.47</td></tr><tr><td>2" = 0.16</td><td>4" = 0.65</td><td>radius² * 0.163</td></tr></table> | | 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 |
| 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | | | | | | | |
| 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 | | | | | | | |
| Total Depth (TD): 19.53 | | Depth to Product: | | | | | | | |
| Depth to Water (DTW): 8.78 | | Product Thickness: | | | | | | | |
| Water Column Height: 10.75 | | 1 Casing Volume: 6.98 gallons | | | | | | | |
| Reference Point: TOC | | 3 Casing Volumes: 2094 gallons | | | | | | | |
| Purging Device: Disposable Bailer, Check Valve Tubing, 3" PVC Bailer Whal Pump | | | | | | | | | |
| Sampling Device: Disposable Bailer , Check Valve Tubing | | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW | |
| 6:30 | 17.8 | 7.26 | 1425 | | | | 7 | | |
| 6:40 | 18.5 | 7.19 | 1433 | | | | 14 | | |
| 6:50 | 18.4 | 7.21 | 1436 | | | | 21 | | |
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Comments: YSI 550A DO meter pre purge DO = **0.90** mg/l
post purge DO = _____ mg/l
very turbid, silty


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|---|-------------------------------|
| Sample ID: MW-7A | Sample Time: 6:55 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voal/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature: [Signature] |

MONITORING FIELD DATA SHEET

Well ID: **MW-7B**

| Project Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
|---|--------|--|-----------|-----|----------|----------|----------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | Weather: Clear | | | | | | |
| 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): 28.42 | | Depth to Product: | | | | | | |
| Depth to Water (DTW): 8.64 | | Product Thickness: | | | | | | |
| Water Column Height: 19.78 | | 1 Casing Volume: 3.16 gallons | | | | | | |
| Reference Point: TOC | | 3 Casing Volumes: 9.48 gallons | | | | | | |
| Purging Device: Disposable Bailer , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: Disposable Bailer , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| 6:00 | 18.4 | 7.46 | 854 | | | | 3 | |
| 6:05 | 18.5 | 7.50 | 802 | | | | 6 | |
| 6:10 | 17.8 | 7.59 | 817 | | | | 9.5 | |
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Comments: YSI 550A DO meter pre purge DO = **0.59** mg/l
 post purge DO = mg/l
turbid

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|---|---|
| Sample ID: MW-7B | Sample Time: 6:15 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voal/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: MW-9A

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|---|-----------|---|-----------|-----------|-----------|-----------|-----------|-----------|-----------------------------|
| Project Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | | |
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | | |
| Date: 02/26/08 | | Weather: <u>Sunny</u> | | | | | | | |
| Well Diameter: <u>2''</u> | | Volume/ft. <table border="1"> <tr> <td>1" = 0.04</td> <td>3" = 0.37</td> <td>6" = 1.47</td> </tr> <tr> <td>2" = 0.16</td> <td>4" = 0.65</td> <td>radius² * 0.163</td> </tr> </table> | | 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 |
| 1" = 0.04 | 3" = 0.37 | 6" = 1.47 | | | | | | | |
| 2" = 0.16 | 4" = 0.65 | radius ² * 0.163 | | | | | | | |
| Total Depth (TD): <u>19.66</u> | | Depth to Product: | | | | | | | |
| Depth to Water (DTW): <u>9.71</u> | | Product Thickness: | | | | | | | |
| Water Column Height: <u>9.95</u> | | 1 Casing Volume: <u>1.59</u> gallons | | | | | | | |
| Reference Point: TOC | | <u>3</u> Casing Volumes: <u>4.77</u> gallons | | | | | | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO (mg/L) | ORP (mV) | Vol (gal) | DTW | |
| 10:55 | 20.0 | 8.30 | 721 | | | | 1.5 | | |
| 11:00 | 20.2 | 8.28 | 705 | | | | 3 | | |
| 11:05 | 20.4 | 8.21 | 729 | | | | 5 | | |
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Comments: YSI 550A DO meter pre purge DO = 0.86 mg/l
 post purge DO = mg/l

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| Sample ID: <u>MW-9A</u> | Sample Time: <u>11:10</u> |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/26/08 |
| Containers/Preservative: <u>Voa/HCl</u> | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature: <u>[Signature]</u> |


MONITORING FIELD DATA SHEET

Well ID: **MW-10A**

| Project Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
|---|-------------------------------|-------------------------------|--|-----|----------|----------|----------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | 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): 19.51 | Depth to Product: | | | | | | | |
| Depth to Water (DTW): 7.34 | Product Thickness: | | | | | | | |
| Water Column Height: 12.17 | 1 Casing Volume: 1.94 | | gallons | | | | | |
| Reference Point: TOC | 3 Casing Volumes: 5.82 | | gallons | | | | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (us) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| 11:55 | 19.1 | 7.70 | 2334 | | | | 2 | |
| 12:00 | 19.6 | 7.63 | 2311 | | | | 4 | |
| 12:05 | 19.5 | 7.66 | 2317 | | | | 6 | |
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Comments: YSI 550A DO meter pre purge DO = **0.70** mg/l
 post purge DO = mg/l

turbid

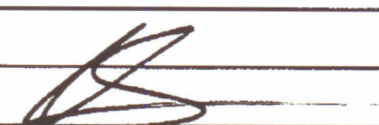
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|---|---|
| Sample ID: MW-10A | Sample Time: 12:10 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/26/08 |
| Containers/Preservative: Voa/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |

MONITORING FIELD DATA SHEET

Well ID: **VW-1**

| | | | | | | | | |
|---|-----------|---|-----------|-----|----------|----------|----------|-----|
| Project.Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | Weather: | | | | | | |
| 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): 8.40 | | Depth to Product: | | | | | | |
| Depth to Water (DTW): 8.20 | | Product Thickness: | | | | | | |
| Water Column Height: 0.20 | | 1 Casing Volume: 0.03 gallons | | | | | | |
| Reference Point: TOC | | 3 Casing Volumes: 0.09 gallons | | | | | | |
| Purging Device: Disposable Bailer, Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: Disposable Bailer, Check Valve Tubing | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| Insufficient Water | | | | | | | | |
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Comments: YSI 550A DO meter pre purge DO = ~~0~~ mg/l
post purge DO = mg/l


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|--|--|---|--|
| Sample ID: | | Sample Time: | |
| Laboratory: McCampbell Analytical, INC. | | Sample Date: /08 | |
| Containers/Preservative: Voa/HCl | | | |
| Analyzed for: 8015, 8021 | | | |
| Sampler Name: Sanjiv Gill | | Signature:  | |

MONITORING FIELD DATA SHEET

Well ID: VN-2

| Project.Task #: 1001.001 214 | | Project Name: Dublin Car Wash | | | | | | |
|---|--------|--|-----------|-----|----------|----------|-----------------------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | Weather: | | | | | | |
| Well Diameter: <u>2"</u> | | Volume/ft. <u>1" = 0.04</u> <u>3" = 0.37</u> <u>6" = 1.47</u> <u>2" = 0.16</u> <u>4" = 0.65</u> radius ² * 0.163 | | | | | | |
| Total Depth (TD): <u>8.30</u> | | Depth to Product: | | | | | | |
| Depth to Water (DTW): <u>4.56</u> | | Product Thickness: | | | | | | |
| Water Column Height: <u>3.74</u> | | 1 Casing Volume: <u>0.59</u> gallons | | | | | | |
| Reference Point: TOC | | <u>3</u> Casing Volumes: <u>1.77</u> gallons | | | | | | |
| Purging Device: <u>Disposable Bailer</u> , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: <u>Disposable Bailer</u> , Check Valve Tubing | | | | | | | | |
| Time | Temp @ | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| <u>1:00</u> | | | | | | | <u>.5</u> | |
| | | <u>Deaerated</u> | | | | | <u>7.0</u> | |
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Comments: YSI 550A DO meter pre purge DO = 0.75 mg/l
post purge DO = mg/l

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|---|---|
| Sample ID: <u>VN-2</u> | Sample Time: <u>9:00</u> |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voa/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature:  |



MONITORING FIELD DATA SHEET

Well ID: **VH-3**

| Project.Task #: 1001.001 214 | | | | Project Name: Dublin Car Wash | | | | |
|---|-----------|------------------|-----------|--------------------------------------|----------|-----------------------------|----------------|-----|
| Address: 7420 Dublin Boulevard, Dublin, CA | | | | | | | | |
| Date: 02/26/08 | | | | Weather: | | | | |
| Well Diameter: 2" | | | | Volume/ft. | | radius ² * 0.163 | | |
| Total Depth (TD): 8.40 | | | | Depth to Product: | | | | |
| Depth to Water (DTW): 6.09 | | | | Product Thickness: | | | | |
| Water Column Height: 2.31 | | | | 1 Casing Volume: 0.36 | | gallons | | |
| Reference Point: TOC | | | | 3 Casing Volumes: 1.08 | | gallons | | |
| Purging Device: Disposable Bailer , Check Valve Tubing, 3" PVC Bailer, Whal Pump | | | | | | | | |
| Sampling Device: Disposable Bailer , Check Valve Tubing | | | | | | | | |
| Time | Temp (°C) | pH | Cond (µs) | NTU | DO(mg/L) | ORP (mV) | Vol(gal) | DTW |
| 1:35 | | | | | | | .3 | |
| | | DeWaterer | | | | | 0.6 | |
| | | | | | | | 0.2 | |
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Comments: YSI 550A DO meter pre purge DO = **0.69** mg/l
 post purge DO = mg/l

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|---|--------------------------|
| Sample ID: VH-3 | Sample Time: 9:15 |
| Laboratory: McCampbell Analytical, INC. | Sample Date: 02/27/08 |
| Containers/Preservative: Voa/HCl | |
| Analyzed for: 8015, 8021 | |
| Sampler Name: Sanjiv Gill | Signature: |

APPENDIX B

Laboratory Analytical Results



McC Campbell Analytical, Inc.

"When Quality Counts"

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

| | | |
|---|---|---------------------------------|
| Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 | Client Project ID: #1001.001; Dublin Car Wash | Date Sampled: 02/26/08-02/27/08 |
| | Client Contact: Bob Clark-Riddell | Date Received: 02/27/08 |
| | Client P.O.: | Date Reported: 03/04/08 |
| | | Date Completed: 03/04/08 |

WorkOrder: 0802626

March 04, 2008

Dear Bob:

Enclosed within are:

- 1) The results of the **15** analyzed samples from your project: **#1001.001; Dublin Car Wash,**
- 2) A QC report for the above samples,
- 3) A copy of the chain of custody, and
- 4) An invoice for analytical services.

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

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

McC Campbell Analytical Laboratories for your analytical needs.

Best regards,

Angela Rydelius
Laboratory Manager
McC Campbell Analytical, Inc.

0802626

McCAMPBELL ANALYTICAL, INC.

110 2ND AVENUE SOUTH #D7
PACHECO, CA 94553-5560

Website: www.mccampbell.com Email: main@mccampbell.com
Telephone: (925) 798-1620 Fax: (925) 798-1622

CHAIN OF CUSTODY RECORD

TURN AROUND TIME
RUSH 24 HR 48 HR 72 HR 5 DAY
EDF Required? Yes No

Report To: Bob Clark-Riddell Bill To: Pangea Environmental
Company: Pangea Environmental Services Inc.
1710 Franklin Street Suite 200
Oakland, CA 94612 E-Mail: bcr@pangeaenv.com
Tele: 510-836-3702 Fax: 510-836-3709
Project #: 1001-001 Project Name: Dublin Car Wash
Project Location: 7420 Dublin Blvd, Dublin, CA
Sampler Signature: Muskan Environmental Sampling

| Analysis Request | | Other | Comments |
|--|--|-------|--|
| MTBE / BTEX & TPH as Gas (602 / 8021 + 8015) | | | Filter Samples for Metals analysis: Yes / No |
| MTBE / BTEX ONLY (EPA 602 / 8021) | | | |
| TPH as Diesel (8015) | | | |
| Total Petroleum Oil & Grease (1664 / 5520 E/B&F) | | | |
| Total Petroleum Hydrocarbons (418.1) | | | |
| EPA 502.2 / 601 / 8010 / 8021 (HVOCs) | | | |
| EPA 505 / 605 / 8081 (CI Pesticides) | | | |
| EPA 608 / 8082 PCB's ONLY; Aroclors / Congeners | | | |
| EPA 507 / 8141 (NP Pesticides) | | | |
| EPA 515 / 8151 (Acidic CI Herbicides) | | | |
| EPA 524.3 / 624 / 8260 (VOCs) | | | |
| Fuel Additives (MTBE, ETBE, TAME, DIFE, TBA, 1,2 - DCA, 1,2 - EDB, ethanol) by 8260B | | | |
| If Mtbe is detected by 8021 confirm by 8260B | | | |

| SAMPLE ID (Field Point Name) | LOCATION | SAMPLING | | # Containers | Type Containers | MATRIX | | | | | METHOD PRESERVED | | | | | | | |
|---------------------------------|----------|----------|-------|--------------|-----------------|--------|------|-----|--------|-------|------------------|-----|------------------|-------|--|--|--|--|
| | | Date | Time | | | Water | Soil | Air | Sludge | Other | ICE | HCL | HNO ₃ | Other | | | | |
| MW-1 | | 2-26-08 | 10:40 | 3 | VOC | X | | | | | X | X | | | | | | |
| MW-2 | | 2-26-08 | 12:40 | | | | | | | | | | | | | | | |
| MW-3A | | 2-27-08 | 8:50 | | | | | | | | | | | | | | | |
| MW-4 | | 2-26-08 | 9:45 | | | | | | | | | | | | | | | |
| MW-5 | | 2-26-08 | 10:10 | | | | | | | | | | | | | | | |
| MW-6A | | 2-27-08 | 8:30 | | | | | | | | | | | | | | | |
| MW-6B | | 2-27-08 | 8:00 | | | | | | | | | | | | | | | |
| MW-7AA | | 2-27-08 | 7:35 | | | | | | | | | | | | | | | |
| MW-7A | | 2-27-08 | 6:55 | | | | | | | | | | | | | | | |
| MW-7B | | 2-27-08 | 6:15 | | | | | | | | | | | | | | | |
| MW-8A | | 2-26-08 | 11:40 | | | | | | | | | | | | | | | |
| MW-9A | | 2-26-08 | 11:10 | | | | | | | | | | | | | | | |
| MW-10A | | 2-26-08 | 12:10 | | | | | | | | | | | | | | | |
| VW-2 | | 2-27-08 | 9:00 | | | | | | | | | | | | | | | |
| VW-3 | | 2-27-08 | 9:15 | X | X | X | | | | | X | X | | X | | | | |

Relinquished By: *[Signature]* Date: 2/27/08 Time: 1040 Received By: *[Signature]*
Relinquished By: _____ Date: _____ Time: _____ Received By: _____

ICE# 7.0
GOOD CONDITION APPROPRIATE CONTAINERS
HEAD SPACE ABSENT PRESERVED IN LAB
DECHLORINATED IN LAB
PRESERVATION VOAS O&G METALS OTHER

McC Campbell Analytical, Inc.



1534 Willow Pass Rd
Pittsburg, CA 94565-1701
(925) 252-9262

CHAIN-OF-CUSTODY RECORD

WorkOrder: 0802626

ClientCode: PEO

WriteOn
 EDF
 Excel
 Fax
 Email
 HardCopy
 ThirdParty
 J-flag

| | | | | | |
|------------|----------------------------------|---|----------|----------------------------------|---------------------------|
| Report to: | Bob Clark-Riddell | Email: bcr@pangeaenv.com | Bill to: | Bob Clark-Riddell | Requested TAT: 5 days |
| | Pangea Environmental Svcs., Inc. | TEL: (510) 836-3700 FAX: (510) 836-3709 | | Pangea Environmental Svcs., Inc. | Date Received: 02/27/2008 |
| | 1710 Franklin Street, Ste. 200 | PO: | | 1710 Franklin Street, Ste. 200 | Date Printed: 02/27/2008 |
| | Oakland, CA 94612 | ProjectNo: #1001.001; Dublin Car Wash | | Oakland, CA 94612 | |

| 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 | |
| 0802626-001 | MW-1 | Water | 2/26/2008 10:40 | <input type="checkbox"/> | A | A | | | | | | | | | | | |
| 0802626-002 | MW-2 | Water | 2/26/2008 12:40 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-003 | MW-3A | Water | 2/27/2008 8:50 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-004 | MW-4 | Water | 2/26/2008 9:45 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-005 | MW-5 | Water | 2/26/2008 10:10 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-006 | MW-6A | Water | 2/27/2008 8:30 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-007 | MW-6B | Water | 2/27/2008 8:00 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-008 | MW-7AA | Water | 2/27/2008 7:35 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-009 | MW-7A | Water | 2/27/2008 6:55 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-010 | MW-7B | Water | 2/27/2008 6:15 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-011 | MW-8A | Water | 2/26/2008 11:40 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-012 | MW-9A | Water | 2/26/2008 11:10 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-013 | MW-10A | Water | 2/26/2008 12:10 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-014 | VW-2 | Water | 2/27/2008 9:00 | <input type="checkbox"/> | A | | | | | | | | | | | | |
| 0802626-015 | VW-3 | Water | 2/27/2008 9:15 | <input type="checkbox"/> | A | | | | | | | | | | | | |

Test Legend:

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

Prepared by: Maria Venegas

Comments:

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



Sample Receipt Checklist

Client Name: **Pangea Environmental Svcs., Inc.**

Date and Time Received: **02/27/08 10:44:26 AM**

Project Name: **#1001.001; Dublin Car Wash**

Checklist completed and reviewed by: **Maria Venegas**

WorkOrder N°: **0802626** 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: 7°C NA
- Water - VOA vials have zero headspace / no bubbles? Yes No No VOA vials submitted
- Sample labels checked for correct preservation? Yes No
- TTLC Metal - pH acceptable upon receipt (pH<2)? Yes No NA

Client contacted:

Date contacted:

Contacted by:

Comments:



McC Campbell Analytical, Inc.

"When Quality Counts"

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

| | | |
|---|---|-----------------------------------|
| Pangea Environmental Svcs., Inc. 1710 Franklin Street, Ste. 200 Oakland, CA 94612 | Client Project ID: #1001.001; Dublin Car Wash | Date Sampled: 02/26/08-02/27/08 |
| | | Date Received: 02/27/08 |
| | Client Contact: Bob Clark-Riddell | Date Extracted: 02/28/08-03/01/08 |
| | Client P.O.: | Date Analyzed 02/28/08-03/01/08 |

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

Extraction method SW5030B

Analytical methods SW8021B/8015Cm

Work Order: 0802626

| Lab ID | Client ID | Matrix | TPH(g) | MTBE | Benzene | Toluene | Ethylbenzene | Xylenes | DF | % SS |
|--------|-----------|--------|---------|--------|---------|---------|--------------|---------|----|------|
| 001A | MW-1 | W | ND | 7.0 | ND | ND | ND | ND | 1 | 91 |
| 002A | MW-2 | W | ND | 590 | ND | ND | ND | ND | 1 | 90 |
| 003A | MW-3A | W | 7200,a | 1800 | 550 | 32 | 440 | 690 | 10 | 107 |
| 004A | MW-4 | W | ND | ND | ND | ND | ND | ND | 1 | 91 |
| 005A | MW-5 | W | ND | ND | ND | ND | ND | ND | 1 | 90 |
| 006A | MW-6A | W | 6800,a | 330 | 740 | 130 | 290 | 600 | 10 | 107 |
| 007A | MW-6B | W | ND | ND | ND | ND | ND | ND | 1 | 90 |
| 008A | MW-7AA | W | 5400,a | 15,000 | 970 | 7.2 | 320 | 100 | 10 | 98 |
| 009A | MW-7A | W | 1300,a | 410 | 150 | 1.8 | 59 | 99 | 1 | 102 |
| 010A | MW-7B | W | ND | ND | ND | ND | ND | ND | 1 | 91 |
| 011A | MW-8A | W | ND | 38 | ND | ND | ND | ND | 1 | 90 |
| 012A | MW-9A | W | 120,b,m | 9.5 | ND | 1.2 | ND | ND | 1 | 92 |
| 013A | MW-10A | W | ND | ND | ND | ND | ND | ND | 1 | 91 |
| 014A | VW-2 | W | ND | 21 | ND | ND | ND | ND | 1 | 107 |
| 015A | VW-3 | W | 5600,a | ND<90 | 270 | 4.5 | 68 | 130 | 5 | 107 |
| | | | | | | | | | | |

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.

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



QC SUMMARY REPORT FOR SW8021B/8015Cm

W.O. Sample Matrix: Water

QC Matrix: Water

WorkOrder: 0802626

| Analyte | EPA Method SW8021B/8015Cm | | Extraction SW5030B | | | BatchID: 34004 | | | Spiked Sample ID: 0802622-002A | | | |
|------------------------|---------------------------|--------|--------------------|--------|--------|----------------|--------|----------|--------------------------------|-----|----------|-----|
| | Sample | Spiked | MS | MSD | MS-MSD | LCS | LCSD | LCS-LCSD | Acceptance Criteria (%) | | | |
| | µg/L | µg/L | % Rec. | % Rec. | % RPD | % Rec. | % Rec. | % RPD | MS / MSD | RPD | LCS/LCSD | RPD |
| TPH(btex) [£] | ND | 60 | 92.2 | 93.2 | 1.07 | 115 | 109 | 4.86 | 70 - 130 | 30 | 70 - 130 | 30 |
| MTBE | ND | 10 | 74.6 | 75.9 | 1.25 | 95.6 | 94.4 | 1.27 | 70 - 130 | 30 | 70 - 130 | 30 |
| Benzene | ND | 10 | 101 | 101 | 0 | 106 | 106 | 0 | 70 - 130 | 30 | 70 - 130 | 30 |
| Toluene | ND | 10 | 113 | 112 | 0.451 | 116 | 115 | 0.679 | 70 - 130 | 30 | 70 - 130 | 30 |
| Ethylbenzene | ND | 10 | 109 | 108 | 0.581 | 112 | 110 | 1.87 | 70 - 130 | 30 | 70 - 130 | 30 |
| Xylenes | ND | 30 | 119 | 116 | 2.35 | 120 | 118 | 1.45 | 70 - 130 | 30 | 70 - 130 | 30 |
| %SS: | 99 | 10 | 100 | 95 | 4.90 | 97 | 96 | 1.30 | 70 - 130 | 30 | 70 - 130 | 30 |

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

BATCH 34004 SUMMARY

| Lab ID | Date Sampled | Date Extracted | Date Analyzed | Lab ID | Date Sampled | Date Extracted | Date Analyzed |
|--------------|-------------------|----------------|-------------------|--------------|-------------------|----------------|------------------|
| 0802626-001A | 02/26/08 10:40 AM | 02/28/08 | 02/28/08 2:56 PM | 0802626-002A | 02/26/08 12:40 PM | 02/28/08 | 02/28/08 3:29 PM |
| 0802626-002A | 02/26/08 12:40 PM | 02/29/08 | 02/29/08 7:09 PM | 0802626-003A | 02/27/08 8:50 AM | 03/01/08 | 03/01/08 8:38 AM |
| 0802626-004A | 02/26/08 9:45 AM | 02/29/08 | 02/29/08 2:00 AM | 0802626-005A | 02/26/08 10:10 AM | 02/29/08 | 02/29/08 2:34 AM |
| 0802626-006A | 02/27/08 8:30 AM | 02/29/08 | 02/29/08 11:39 PM | 0802626-007A | 02/27/08 8:00 AM | 02/29/08 | 02/29/08 3:07 AM |
| 0802626-008A | 02/27/08 7:35 AM | 02/29/08 | 02/29/08 3:40 AM | 0802626-008A | 02/27/08 7:35 AM | 02/29/08 | 02/29/08 8:16 PM |
| 0802626-009A | 02/27/08 6:55 AM | 02/29/08 | 02/29/08 4:13 AM | 0802626-009A | 02/27/08 6:55 AM | 02/29/08 | 02/29/08 8:49 PM |
| 0802626-010A | 02/27/08 6:15 AM | 02/29/08 | 02/29/08 6:59 AM | 0802626-011A | 02/26/08 11:40 AM | 02/29/08 | 02/29/08 7:32 AM |
| 0802626-012A | 02/26/08 11:10 AM | 02/29/08 | 02/29/08 8:05 AM | 0802626-013A | 02/26/08 12:10 PM | 02/29/08 | 02/29/08 8:39 AM |
| 0802626-014A | 02/27/08 9:00 AM | 02/29/08 | 02/29/08 8:26 PM | 0802626-015A | 02/27/08 9:15 AM | 03/01/08 | 03/01/08 8:05 AM |

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

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

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

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

cluttered chromatogram; sample peak coelutes with surrogate peak.