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Mr. Mark E. Detterman, PG, CEG
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Subject:
First Quarter and Second Quarter 2016
Semi-Annual Groundwater Monitoring Report,
Dilution Attenuation Factor (DAF) update, and Closure Request
Former BP Station No. 11126
1700 Powell Street, Emeryville, California
Regulatory Site No: RO0000066

ENVIRONMENT

Date:
August 26, 2016

Contact:
Hollis Phillips

Phone:
415.432.6903

Email:
hollis.phillips@arcadis.com

Our ref:
GP09BPNA.C044.N0000

Dear Mr. Detterman:

Arcadis U.S., Inc. (Arcadis) has prepared this First Quarter and Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, DAF update, and Closure Request on behalf of Atlantic Richfield Company (ARCO), a BP affiliated company, for the former ARCO service station listed below.

BP-ARCO Facility No.	ACEH Site No.	Location
11126	RO0000066	1700 Powell Street Emeryville, California

I declare, to the best of my knowledge at the present time, that the information and/or recommendations contained in the attached document are true and correct. If you have any questions or comments regarding the contents of this report, please contact Hollis Phillips by telephone (415.432.6903), or by e-mail (hollis.phillips@arcadis.com).

Sincerely,
Arcadis U.S. Inc.

Prepared by:

Jamey Peterson
Project Environmental Scientist

Approved by:

Hollis E. Phillips, P.G. (No. 6887)
Project Manager/Principal Geologist

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Dear Mr. Detterman:

Arcadis U.S., Inc. (Arcadis) has prepared this report to document the results of groundwater monitoring and sampling performed at the Former BP Station No. 11126 located in Emeryville, Alameda County, California (the Site; Figure 1), summarize the dilution attenuation factor analyses and request site closure.

1 SUMMARY

A summary of the work performed at the Site is provided below.

Work Performed – January to August, 2016

- Prepared and submitted the *Third Quarter and Fourth Quarter 2015 Semi-Annual Groundwater Monitoring Report*, dated February 12, 2016, to Alameda County Environmental Health (ACEH).
- Conducted groundwater sampling for the First Quarter 2016 for MW-12 on March 24, 2016.
- Conducted groundwater monitoring and sampling for the Second Quarter 2016 on June 28, 2016.

- Submit this *First Quarter and Second Quarter 2016 Semi-Annual Groundwater Monitoring Report*, contained herein.
- Perform a Dilution Attenuation Factor (DAF) analysis, contained herein.
- Evaluate the site to see if it is a candidate for closure under the State Water Resources Control Board (SWRCB) Low Threat Closure (LTC) Policy (SWRCB 2012).

2 BACKGROUND

The Site is an active 76-branded gasoline station. A site historical summary is included as Attachment 1. Available records indicate that the three underground storage tanks (USTs) currently present at the Site were installed in the late 1980s. Site features include a station building and two dispenser islands with three dispensers each, for a total of six dispensers. The majority of the Site surface is paved with concrete and asphalt.

Land use in the area of the Site is largely commercial. The Site is bound by Powell Street to the south and Christie Avenue to the east. The Site is approximately 350 feet east of Interstate 80/580. A Denny's restaurant is located adjacent to the west of the Site.

3 GROUNDWATER MONITORING AND SAMPLING ACTIVITIES

Routine groundwater monitoring associated with the Site is conducted on a semi-annual frequency during the second and fourth quarters of each year. A First Quarter 2016 sampling event was performed for MW-12 on March 24, 2016 to fulfill a year of quarterly sampling during the well's first year of use. Second Quarter 2016 groundwater monitoring was conducted on June 28, 2016. Both the First and Second Quarter 2016 events were performed by Blaine Tech Services, Inc. (Blaine Tech).

Groundwater monitoring-well construction details are summarized in Table 1. Current and historical groundwater monitoring and analytical data are summarized in Table 2, and Second Quarter 2016 data is graphically presented on Figures 3 and 4. A rose diagram illustrating groundwater flow direction is provided as Figure 5. Concentration contour maps used for the DAF analysis for DRO, GRO, Benzene, and MTBE are presented on Figures 6 through 9, respectively. The groundwater sampling data package and laboratory analytical reports for the First and Second Quarter 2016 sampling events are included in Attachments 2 and 3, respectively.

Blaine Tech personnel measured depth to groundwater in MW-1 through MW-12 prior to sampling. Groundwater samples collected on March 24, 2016 (1Q16 event) from monitoring well MW-12 and June 28, 2016 (2Q16 event) from monitoring wells MW-1 through MW-12, were consistent with the current monitoring schedule. Samples were submitted to TestAmerica Laboratories, Inc. (TA), of Pleasanton, California, a California Department of Public Health certified analytical laboratory.

Groundwater samples collected from MW-1 through MW-12 were tested for the following constituents as directed by ACEH in their letter dated June 30, 2014:

- Polycyclic aromatic hydrocarbons (PAHs) by United States Environmental Protection Agency (USEPA) Method 8260B; and
- Total petroleum hydrocarbons as DRO (C_{12}-C_{22}) using USEPA Test Method 8015B with Silica Gel Cleanup.

Groundwater samples collected from MW-1 through MW-9 and MW-12 were additionally tested for the following constituents:

- Total petroleum hydrocarbons as gasoline range organics (GRO; C_6-C_{12}) using USEPA Method 8260B Modified; and
- Fuel additives Methyl tert-butyl ether (MTBE), tertiary butyl alcohol (TBA) and tertiary amyl methyl ether (TAME) using USEPA Method 8260B.

Groundwater samples collected from MW-1, MW-2, MW-5, MW-7, MW-9, and MW-12 were additionally tested for the following constituents:

- Benzene, toluene, ethylbenzene and xylenes (BTEX compounds) using USEPA Method 8260B.
- Groundwater samples collected from MW-2 and MW-12 were additionally tested for constituents:
- Di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), 1,2-Dichloroethane (1,2-DCA), and 1,2-Dibromoethane (EDB) using USEPA Method 8260B.

4 GROUNDWATER SAMPLING RESULTS

Groundwater flow direction during both the First Quarter and Second Quarter 2016 monitoring events were to the south-southwest. The groundwater gradient during the Second Quarter 2016 event was at approximate of 0.014 feet of vertical drop per foot of horizontal distance (ft/ft) on June 28, 2016. Historical data indicate the groundwater flow direction is predominately toward the southwest as shown on Figure 5.

4.1 First Quarter 2016 Sampling Results

Sampling activities were limited to MW-12 during the First Quarter 2016 sampling event on March 24, 2016. The following is a summary of the results:

- GRO was detected at a concentration of 79 µg/L.
- DRO was detected at a concentration of 60 µg/L.
- MTBE was detected at a concentration of 0.91 µg/L.
- TBA was detected at a concentration of 32 µg/L.
- Naphthalene was detected at a concentration of 0.19 µg/L.
- Detected PAHs included Fluorene (0.13 µg/L) and Phenanthrene (0.20 µg/L). All other PAH constituents were not detected above respective laboratory reporting limits.
- All other tested constituents, including BTEX, were not detected above respective laboratory reporting limits.

4.2 Second Quarter 2016 Sampling Results

Sampling activities were completed at all groundwater monitoring wells (MW-1 through MW-12) during the Second Quarter 2016 sampling event on June 28, 2016. The following is a summary of the results:

- GRO was detected in 5 of the 10 groundwater monitoring well samples with concentrations ranging from 71 µg/L (MW-1) to 7,100 µg/L (MW-2). GRO concentrations were below laboratory reporting limits at 5 of the 10 wells.
- DRO was detected in 6 of the 12 groundwater monitoring well samples with concentrations ranging from 69 µg/L (MW-7) to 1,800 µg/L (MW-9). DRO concentrations were below laboratory reporting limits at the other 6 wells.
- Benzene was detected in 3 of the 6 groundwater monitoring well samples with concentrations ranging from 1.6 µg/L (MW-5) to 2,500 µg/L (MW-2). Benzene concentrations were below laboratory reporting limits at the other 3 wells.
- Toluene was detected in 2 out of the 6 groundwater monitoring well samples with concentrations of 6.5 µg/L at MW-9 and 25 µg/L at MW-2. Toluene concentrations were below laboratory reporting limits at 4 of the 6 wells.
- Ethylbenzene was detected in the groundwater monitoring well sample collected from MW-2 with a concentration of 64 µg/L. Ethylbenzene concentrations were below laboratory reporting limits in the other 5 wells.
- Xylenes were detected in 3 of the 6 groundwater monitoring well samples with concentrations ranging from 2.7 µg/L (MW-5) to 89 µg/L (MW-2). Xylene concentrations were below laboratory reporting limits in 3 out of the 6 wells.

- MTBE was detected in 9 out of the 10 groundwater monitoring well samples with concentrations ranging from 0.64 µg/L (MW-8) to 1,200 µg/L (MW-2). The MTBE concentration was below the laboratory reporting limit in 1 well.
- TBA was detected in all 10 groundwater monitoring well samples, with concentrations ranging from 30 µg/L (MW-6) to 16,000 µg/L (MW-4).
- TAME was not detected in 2 of the 10 groundwater monitoring well samples with concentrations of 7.0 µg/L in MW-9 and 48 µg/L in MW-2. TAME was below the laboratory reporting limit in 8 out of the 10 wells.
- DIPE, ETBE, 1,2-DCA, and EDB were not detected in the groundwater monitoring well samples collected from MW-2 and MW-12.
- Concentrations of PAHs were largely not detected above their respective laboratory reporting limits in groundwater samples collected from MW-1 through MW-12. Table 3 presents the groundwater sample analytical data for individual PAH results.

5 DILUTION ATTENUATION FACTOR ANALYSIS

This analysis was prepared at the request of ACEH in a letter dated June 3, 2016 (ACEH 2016a). The purpose of this DAF analysis is to determine the potential concentrations of site constituents in groundwater that may be discharged to the San Francisco Bay via storm drain utility trenches.

A DAF analysis was previously submitted in the *Groundwater Monitoring Well Installation Report* dated August 24, 2015 (Arcadis 2015b). The DAF analysis presented in 2015 indicted the estimated discharge concentrations of constituents of potential concern (COPCs) into San Francisco Bay were less than the associated San Francisco Bay Regional Water Quality Control Board (SF-RWQCB) Environmental Screening Levels (ESLs) protective of drinking water resources and estuary habitats. These results concluded that potential transport of contaminated groundwater through utility backfill was unlikely and does not pose a significant impact to the San Francisco Bay. An update to the DAF is provided below.

5.1 DAF Calculation and Discharge Concentration Estimation

The DAF calculation is based on the assumption that soils used for utility backfills are more permeable than the surrounding native soils and create a high conductivity conduit for contaminated groundwater to a surface discharge point. Additionally, this calculation assumes that the entire plume width intercepts the utility, that no groundwater inflow or outflow occurs between the downgradient edge of the plume and the discharge point, and that contaminated groundwater flowing within the utility backfill is diluted by clean water from upstream and cross-stream of the utility. The locations of subsurface utilities at and in the vicinity of the Site were identified during a utility survey conducted on November 20, 2014 (Arcadis

2015a) as well as adapted from a utility map provided by the City of Emeryville Department of Public Works (Mark Thomas & Company 2009).

The DAF is assumed to be directly proportional to the distance between the downgradient edge of the plume and the discharge point in increments of plume width. For example, if the plume width intersected by a utility is 100 feet and the distance between the downgradient edge of the plume and the surface discharge point is 1,000 feet, the DAF is therefore equal to 10. The product of the DAF and the average plume concentration along its intersection with the utility corridor gives an estimate for the concentration of site constituents which may be discharged to the San Francisco Bay.

Site COPCs were identified from the groundwater analytical results from the November 2014 site investigation and the June 2016 groundwater sampling event. The COPCs were identified based on exceedances to SF-RWQCB ESLs and were used to create contour maps of these plumes in relation to located storm drain utilities. If a constituent was not sampled for at a location in either of these events, then the most recent sample results were utilized for the constituent and sample location pair. Identified site COPCs include:

- DRO
- GRO
- Benzene
- MTBE

The measurement of total plume width, as well the average COPC concentration in groundwater were taken from the contour map created for each identified COPC. The point of surface discharge for stormwater drain utilities at this Site as indicated on the *Creek and Watershed Map of Oakland and Berkeley*, occurs south-west of the intersection of Powell Street and W. Frontage Road (Sowers 2009). Measurements from the downgradient edge of each COPC plume to the surface discharge point were taken in Google Earth. SF-RWQCB ESLs protective of drinking water resources and aquatic habitats were used as the applicable screening levels for the COPCs listed above (SF-RWQCB 2016 [Groundwater Tier 1 ESLs]; [Table GW-2 Final Aquatic Habitat Goals]).

5.2 DRO DAF Results

The average DRO concentration in groundwater at the intersection with located storm drain utilities along Powell Street is approximately 24 µg/L. The plume width is conservatively estimated at 112 feet, and the distance between the downgradient edge of the plume and the intersection with San Francisco Bay is

estimated at 1,065 feet. The DAF is therefore calculated to be 9.5, giving an approximate discharge concentration of 2.5 µg/L. This value is less than the drinking water ESL of 100 µg/L and the aquatic habitat ESL of 640 µg/L. DRO sample results are presented on Figure 6.

5.3 GRO DAF Results

The average concentration of GRO in groundwater along the intersection with located storm drain utilities is approximately 205 µg/L. With an approximate plume width of 90 feet, and an estimated distance between the downgradient edge of the plume and the intersection with San Francisco Bay of 1,118 feet. The DAF is calculated to be approximately 12. The discharge concentration for GRO is therefore calculated to be 17 µg/L, which is below the drinking water ESL of 100 µg/L, and the aquatic habitat ESL of 440 µg/L. GRO sample results are presented in Figure 7.

5.4 Benzene DAF Results

The average concentration of benzene in groundwater in the intersection with located storm drain utilities is approximately 1.0 µg/L. The total plume width is approximately 50 feet, and with a distance of 1,104 feet estimated between the downgradient edge of the plume and the intersection with San Francisco Bay, the DAF is calculated to be 22. Using the given DAF, the discharge concentration is estimated to be 0.04 µg/L which is less than the drinking water ESL of 1 µg/L and the aquatic habitat ESL of 46 µg/L. Benzene sample results are presented in Figure 8.

5.5 MTBE DAF Results

The average concentration of MTBE in groundwater along the intersection with located storm drain utilities along Powell St. is approximately 5.0 µg/L. The plume is estimated to be 186 feet wide, and the distance between the downgradient edge of the plume and the intersection with San Francisco Bay is approximately 1,012 feet, giving a DAF of 5.4. The estimated discharge concentration for MTBE is therefore 0.92 µg/L, which is below the drinking water ESL of 5 µg/L and the aquatic habitat ESL of 8,000 µg/L. MTBE sample results are presented in Figure 9.

5.6 DAF Conclusions

DAF analysis was conducted for the dissolved-phase DRO, GRO, benzene, and MTBE plumes associated with groundwater beneath the Site. According to the analysis presented above, the estimated constituent concentration in groundwater discharged to San Francisco Bay via storm drain utility trenches are the following:

- DRO = 2.5 µg/L;

- GRO = 17 µg/L;
- Benzene = 0.04 µg/L; and
- MTBE = 0.92 µg/L.

As with the previous DAF analysis, all of these estimated concentrations are less than the associated aquatic habitat ESLs, indicating that potential transport of contaminated groundwater through utility backfill would not pose a significant impact to the San Francisco Bay. Additionally, all estimated discharge concentrations are less than their associated Tier 1 groundwater ESLs.

6 LINEAR REGRESSION ANALYSIS

Arcadis evaluated the stability of dissolved petroleum hydrocarbon constituents in groundwater by conducting statistical analyses and comparing the results to groundwater concentration trend charts. The objective of these analyses is to determine if statistically significant concentration trends exist for site COPCs and to calculate approximate dates to achieve water quality objectives (WQOs). SF-RWQCB Tier 1 groundwater ESLs (SF-RWQCB 2016) were used as the WQOs evaluated in the linear regression analyses.

This linear regression is an update to the results presented in the *Data Gaps Investigation Work Plan* dated August 12, 2014 (Arcadis 2014). Updates include consideration of groundwater monitoring data collected since the June 30, 2014 sampling event (which was the final data set used in the 2014 linear regression analysis) and the use of current SF-RWQCB Tier 1 ESLs (SF-RWQCB 2016) as WQOs. The previous WQOs were SF-RWQCB 2013 ESLs protective of a drinking water resource.

Concentration trends for GRO, DRO, BTEX, and MTBE were evaluated for 9 of the 12 monitoring wells (MW-1 through MW-9) using linear regression analyses to determine if they are statistically significant. COPC concentration trends were evaluated on monitoring well-constituent combinations that have exceeded groundwater WQOs since 2010, contained sufficient data (greater than six data points), and have had less than 50 percent of the results below laboratory detection limits. Trends were not evaluated for monitoring wells MW-10, MW-11, and MW-12 as these three locations did not meet the required criteria for linear regression analysis. MW-10 and MW-11 have predominantly not contained COPC concentrations above laboratory reporting limits throughout their monitoring histories. Insufficient data are available for MW-12 to run a linear regression test as this location has had only four monitoring events since being installed in June 2015.

A total of 26 monitoring well-constituent combinations had sufficient data to run linear regression analyses. The data collected across the Site indicate statistically significant decreasing groundwater

concentration trends for the majority of COPCs. Results of the regression trend analyses are presented in Attachment 4 and are summarized below:

DRO: Five monitoring locations (MW-3, MW-4, MW-6, MW-7 and MW-8) met the criteria described above for statistical analysis of the DRO concentration trend. Results of the linear regression analysis indicate decreasing trends for DRO concentrations in wells MW-3, MW-4, and MW-8 with significantly decreasing trends at MW-3 and MW-8. No trend was observed in groundwater DRO concentrations at MW-6 and MW-7. DRO concentrations at MW-3, MW-4, and MW-7 were below the DRO WQO of 100 µg/L during the most recent groundwater monitoring event (June 2016). Overall, the results from the statistical analyses demonstrate that DRO concentrations are stable at all well locations. In addition, half of the evaluated wells have already achieved the DRO screening level. These data suggest that natural attenuation is contributing to overall plume stability.

GRO: Five monitoring locations (MW-1, MW-2, MW-5, MW-8, and MW-9) met the criteria described above for statistical analysis of the GRO concentration trend. Results of the linear regression analysis indicate statistically significant decreasing GRO concentration trends at all monitoring wells that were evaluated. The remaining 7 of the potential 12 GRO and monitoring well pairs did not meet the screening method criteria for a linear regression analysis. The results from the statistical analyses demonstrate that GRO concentrations are stable or decreasing at all well locations, and evaluated wells have estimated dates to achieve the WQO between 2016 and 2048. These data suggest that natural attenuation is contributing to overall plume reduction.

Benzene: Four monitoring locations (MW-1, MW-2, MW-5, and MW-9) met the criteria described above for statistical analysis of the benzene concentration trends. Results of the linear regression analysis indicate statistically significant decreasing trends for benzene for all monitoring wells that were evaluated. The remaining 8 of the potential 12 benzene and monitoring well pairs did not meet the screening method criteria for a linear regression analysis. The results from the statistical analyses demonstrate benzene concentrations in groundwater beneath the Site are decreasing, and evaluated wells have estimated dates to achieve the WQO between 2018 and 2049. These data suggest that natural attenuation is contributing to overall plume reduction.

Toluene: Linear regression analysis was not performed for this constituent because it did not fit the screening method criteria stated above for any of the 12 site monitoring wells.

Ethylbenzene: Three monitoring locations (MW-1, MW-2, and MW-9) met the criteria described above for statistical analysis of the ethylbenzene concentration trends. Results of the linear regression analysis indicate statistically significant decreasing trends for ethylbenzene in for all monitoring wells that were evaluated. The remaining 9 of the potential 12 ethylbenzene and monitoring well pairs did not meet the screening method criteria for a linear regression analysis. The results from the statistical analyses demonstrate that natural attenuation is contributing to a shrinking dissolved-phase ethylbenzene plume, and the ethylbenzene WQO has either been met at all monitoring locations or will be achieved by 2019.

Total Xylenes: One monitoring location (MW-2) met the criteria described above for statistical analysis of the xylenes concentration trend. According to linear regression trend analysis, a statistically significant decreasing groundwater concentration trend for xylenes is demonstrated at MW-2, and is projected to reach the screening level by 2017. The remaining 11 of the potential 12 xylene and monitoring well pairs did not meet the screening method criteria for a linear regression analysis.

MTBE: Seven monitoring locations (MW-1, MW-2, MW-4, MW-5, MW-7, MW-8, and MW-9) met the criteria described above for statistical analysis of the MTBE concentration trends. Results of the linear regression analysis indicate statistically significant decreasing trends for MTBE at all monitoring wells that were evaluated with the exception of MW-5. The groundwater MTBE concentrations at MW-5 indicate a decreasing trend albeit not statistically significant. However, the groundwater MTBE concentrations at MW-5 have generally been slightly above or below the WQO of 5 µg/L since February 2008. The remaining 5 of the potential 12 MTBE and monitoring well pairs did not meet the screening method criteria for a linear regression analysis. Overall, the results from the statistical analyses demonstrate that natural attenuation is contributing to a stable or shrinking dissolved-phase MTBE plume, and the MTBE WQO has either already been achieved, or will be met at all well locations by 2029.

Overall, significant attenuation of the groundwater impacts is observed at the Site. Concentrations of DRO, GRO, BTEX, and MTBE concentrations in two (MW-10 and MW-11) of the 12 groundwater monitoring wells have been below reporting limits and/or their respective WQOs for the majority of their entire monitoring histories. Trends could not be evaluated at MW-12 due to its recent installation date (June 25, 2016) and limited data set (4 sampling events). However, concentrations of COPCs in groundwater samples collected from MW-12 thus far have been stable with the majority of COPCs below laboratory reporting limits or WQOs. The remaining nine monitoring wells show either declining or stable trends for all COPCs, with predicted times to reach the cleanup goals between 1 and 33 years. The linear regression analysis is presented in Attachment 4.

7 LTC POLICY EVALUATION

A review of the Site's LTC Policy Checklist (ACEH 2016b) and Path to Closure (ACEH 2016c) indicates that the Site is a candidate for closure under the SWRCB LTC Policy with the completion of the recent DAF evaluation. Assessment of site conditions to the LTC Policy Checklist and Path to Closure is provided in the following section. Printouts of Site's current LTC Policy Checklist and Path to Closure from Geotracker are respectively presented in Attachment 5 and Attachment 6.

7.1 LTC Policy Checklist

The impediments to closure according to the Site's LTC Policy Checklist are limited to the following:

Media-Specific Criteria: Groundwater

The Site's full LTC Policy Checklist is presented in Attachment 5.

7.2 Path to Closure

The Site's Path to Closure (Attachment 6) lists 8 impediments to the Site's eligibility for LTC. Of these impediments, 7 of the 8 are no longer an impediment according to the ACEH as they have been addressed by completed action or conditions changed (ACEH 2016c).

The last remaining impediment (listed as *Impediment No. 6*) and associated activities to be completed in order to allow the Site to become eligible for LTC are listed below. Resolution to the impediment is provided below as well.

7.2.1 Impediment 6 - Media-Specific Criteria: Groundwater: The contaminant plume that exceeds water quality objectives is NOT stable or decreasing in areal extent, and does NOT meet all of the additional characteristics of one of the five classes of sites

Step to Resolve Impediment 6 – Step 1: *Site characterization (Dilution-Attenuation Analysis) (4 months) Closure requirements along path to closure (6 months)*.

Completed Resolution to Impediment 6 – Step 1: As stated above in Section 5, the DAF evaluation has been completed and estimated discharge concentrations of site related COPCs are expected be significantly below SF-RWQCB Final Aquatic Habitat Goals and Tier 1 groundwater ESLs. Therefore, Impediment 6 – Step 1 is considered resolved as the DAF results demonstrate no impact to San Francisco Bay from site related COPCs.

Impediment 6 – Step 1 is further considered resolved as groundwater sample results since the installation of upgradient monitoring well MW-12 in June 2015 are favorable to delineating the areal extent of the dissolved-phase COPC groundwater plumes associated with the Site. MW-12 was installed in the northeast corner of the Site and upgradient of source features such as USTs and fuel dispenser islands as determined by the Site's predominantly southwest groundwater flow direction. Groundwater sample results from MW-12 have provided delineation of constituent plumes beneath the Site. To determine the classification of groundwater impacts, the length of the plume exceeding SF-RWQCB Tier 1 groundwater ESLs for COPCs was measured from the most recent isoconcentration maps included on Figures 6 through 9:

- DRO (100 µg/L): N/S section = 210 feet; E-NE/W-SW section = 160 feet;
- GRO (100 µg/L): N/S section = 210 feet; E/W section = 80 feet;
- Benzene (1 µg/L): N/S section = 170 feet; E/W section = 85 feet;
- MTBE (5 µg/L): N/S section = 290 feet; E/W section = 175 feet.

Analytical results from the past 4 quarters of groundwater sampling at the Site indicated that groundwater concentrations of site COPCs above SF-RWQCB Tier 1 groundwater ESLs are delineated. Furthermore, results of the linear regression analysis (Attachment 4) demonstrate that COPCs plumes are either shrinking or are stable.

8 SUMMARY AND DISCUSSION

The quarterly sampling program at MW-12 has concluded with completion of the Second Quarter 2016 groundwater monitoring event. Groundwater monitoring and sampling has been completed at MW-12 for a full hydrological cycle since well installation on June 25, 2015. Groundwater monitoring and sampling was conducted at MW-12 on July 10, 2015 (3Q15), December 8, 2015 (4Q15), March 24, 2016 (1Q16), and June 28, 2016 (2Q16).

Groundwater level gauging results at MW-12 are generally consistent with the rest of the Site's monitoring well network with a limited variation between the seasonal high and low water table. Analytical testing results of groundwater samples collected from MW-12 have also been generally consistent throughout the quarterly sampling program. Concentrations of GRO and DRO have consistently been near laboratory reporting limits, either at concentrations slightly above respective laboratory reporting limits or not detected. BTEX constituents have never been detected above respective laboratory reporting limits in samples collected from MW-12. Concentrations of MTBE have been detected above respective laboratory reporting limits during each sampling event at MW-12 (Table 2). Naphthalene has only been detected at trace concentrations during each sampling event that it has been tested for (Table 3). These results indicate that groundwater seasonal high and low levels do not significantly influence the observed constituent concentrations at MW-12.

The groundwater sample results at MW-12 have also provided delineation of several dissolved-phase COPC plumes associated with the Site. The GRO, DRO, and BTEX plumes are delineated in the upgradient direction according to the groundwater sample results. Although the MTBE dissolved-phase plume has not fully been delineated by MW-12 to concentrations below the SF-RWQCB Tier 1 groundwater ESL, assessment of the extent of this constituent can be evaluated based on the observed concentrations in groundwater samples collected from MW-12 and in nearby wells.

MTBE has generally been detected near the SF-RWQCB Tier 1 groundwater ESL of 5 µg/L in all samples collected from MW-12 with concentrations ranging from 0.91 µg/L to 12 µg/L (Table 2). The MTBE sample results from MW-12 are lower than the observed concentrations at MW-2, which is located downgradient of MW-12 and in the immediate area to former source features such as the USTs and fuel dispenser islands. MTBE concentrations at MW-2 have historically been detected at orders of magnitude higher then observed at MW-12, indicating degradation of MTBE in the upgradient direction. Since June 2011, groundwater samples collected from MW-8, located crossgradient of MW-12, have either not been detected above laboratory reporting limits or have been detected at concentrations below the SF-RWQCB

Tier 1 groundwater ESL. These results indicate that the lateral extent of MTBE in the northeast portion of the Site is limited and that the MTBE dissolved-phase plume with concentrations above the SF-RWQCB Tier 1 groundwater ESL of 5 µg/L likely terminates slightly upgradient of MW-12. MTBE concentrations are relatively stable in the northeast and upgradient portion of the Site and are not expected to significantly extend away from the current groundwater monitoring well network.

Results of the updated DAF analysis indicate that potential transport of contaminated groundwater from the Site through the stormwater drain utility corridor is not likely and furthermore not expected to pose an impact to downstream outfall into San Francisco Bay as the estimated discharge concentrations of COPCs, including GRO, DRO, benzene, and MTBE, are less than the associated SF-RWQCB Final Aquatic Habitat Goals and Tier 1 groundwater ESLs.

Concentration trends for site COPCs were evaluated for the 12 groundwater monitoring wells using linear regression analyses to determine if they are statistically significant. The results of the trend analyses indicated a total of 21 statistically significant trends (81% of all trends evaluated), based on a 95% confidence level. All 21 statistically significant trends are in the downward direction. Stable concentration trends are observed at monitoring well-constituent combinations that are currently not demonstrating significantly decreasing trends. No statistically significant increasing COPC concentration trends were observed at monitoring well locations evaluated. These results suggest that natural attenuation is occurring at the Site and COPC-dissolved phase groundwater plumes are decreasing or stable. WQOs for site COPCs have either already been achieved in site groundwater monitoring wells or will be met within a reasonable time frame at evaluated well locations, with dates to reach respective WQOs ranging from 2017 to 2049.

9 RECOMMENDATIONS

Arcadis considers that there are no longer any data gaps relating to the offsite migration of Site COPCs or to the areal extent of the dissolved phase COPC groundwater plumes associated with the Site. All requirements relating to the Groundwater-Media Specific criteria of the SWRCB LTC Policy appear to be fulfilled and all stated impediments to LTC on the Site's Path to Closure have been resolved. As a result, the Site is a candidate for closure as a low-risk fuel site as described in the SWRCB LTC Policy (SWRCB 2012). Arcadis recommends that a status of no further action be received and the Site be granted regulatory closure. Removal of all perceived impediments to LTC is recommended from the Site's LTC Policy Checklist (ACEH 2016b) and Path to Closure (ACEH 2016c). Arcadis additionally requests suspension of groundwater monitoring and sampling during regulatory case closure review. A work plan

for groundwater monitoring well destruction and decommissioning will be prepared following the case closure evaluation process and upon site closure approval.

If you have any questions or comments regarding the contents of this report, please contact Hollis Phillips by telephone (415.432.6903), or by e-mail (hollis.phillips@arcadis.com).

Sincerely,

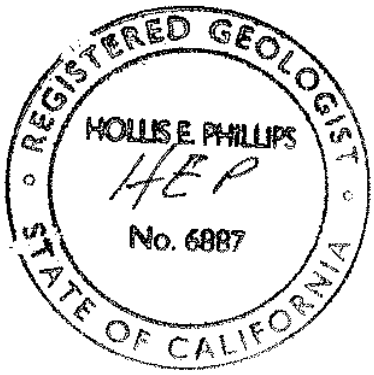
Arcadis U.S., Inc.

Prepared by:

Jamey Peterson
Project Environmental Scientist

Approved by:

Hollis E. Phillips, P.G.
Project Manager/Principal Geologist



Copies:
GeoTracker and ACEH FTP site uploads

Enclosures:

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1 Previous Investigations and Site History Summary

2 Groundwater Sampling Data Packages

3 Certified Laboratory Analytical Report

4 Linear Regression Analysis

5 ACEH Low Threat Closure Checklist – June 2016

6 ACEH Path to Closure – June 2016

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TABLES

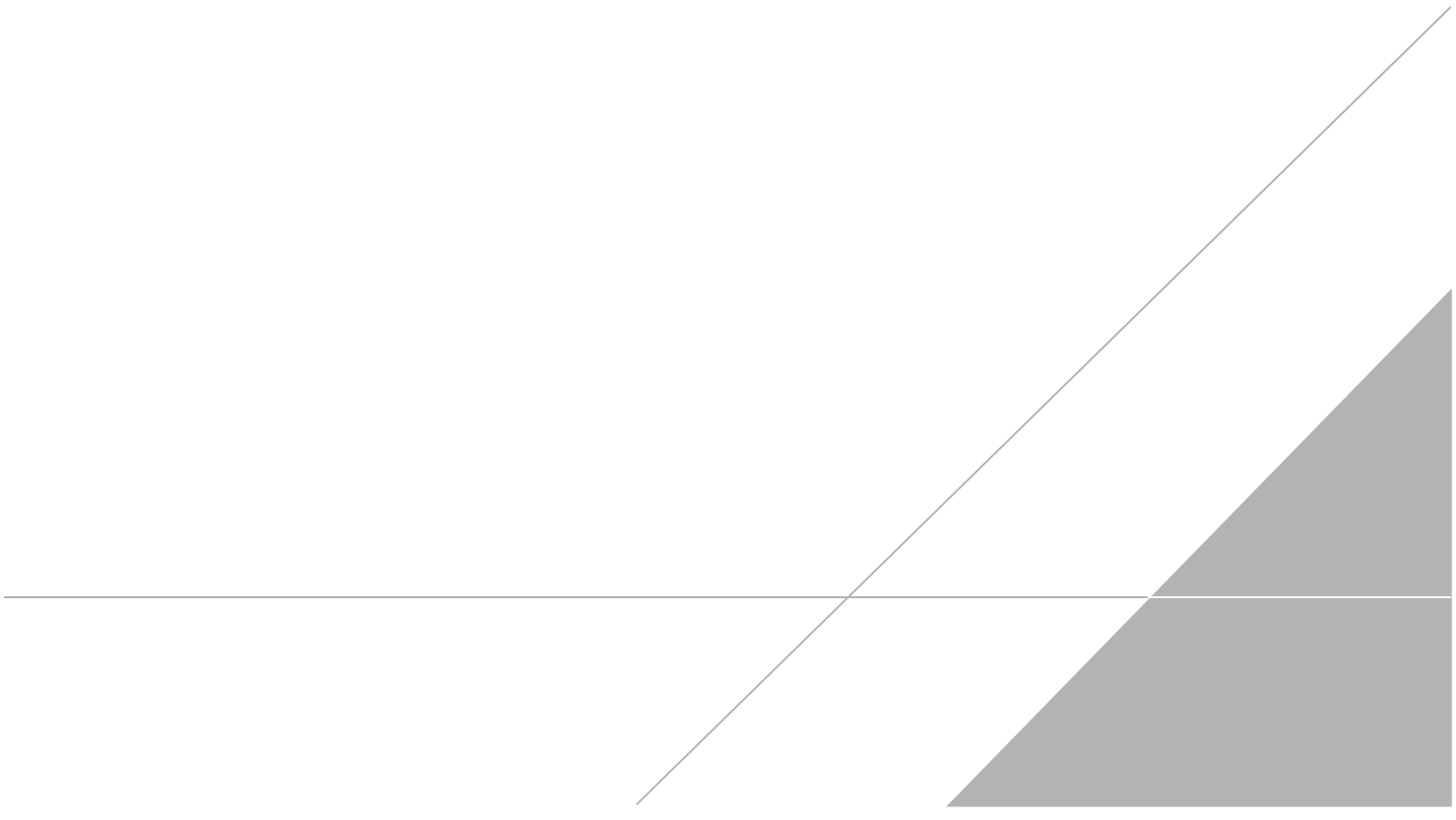

Table 1
Well Construction Details
Former BP Station No. 11126
1700 Powell Street
Emeryville, California

Well I.D.	Drill Date	Well		Screen		Screen Length (feet)	Comments
		Depth (feet bgs)	Diameter (inches)	Top (feet bgs)	Bottom (feet bgs)		
Groundwater Monitoring Wells							
MW-1	10/20/1992	12	2	4	12	8	
MW-2	10/20/1992	12	2	5	12	7	
MW-3	10/20/1992	12	2	5	12	7	
MW-4	10/20/1992	12	2	5	12	7	
MW-5	9/2/1993	13.5	2	3.5	13.5	10	
MW-6	9/3/1993	14	2	4	14	10	
MW-7	9/3/1993	14	2	4	14	10	
MW-8	9/3/1993	14	2	4	14	10	
MW-9	9/3/1993	14	4	4	14	10	
MW-10	4/15/2005	20	2	7	17	10	
MW-11	4/15/2005	24	2	7	17	10	
MW-12	6/25/2015	14	2	4	14	10	

Notes:

Well casing and screens constructed with polyvinyl chloride (PVC) piping

bgs = Below ground surface

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
CPT-01	1/6/2011		--	--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	14	63	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	
CPT-02	1/6/2011		--	--	--	--	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	
GP-5	11/24/2014		--	--	--	--	2,400	460	2.1	1.8	1.2	3.1	11	<20	<0.50	<0.50	<0.50	<0.50	5.1	--	--	
GP-6	11/24/2014		--	--	--	--	600	10,000	<0.50	<0.50	<0.50	1.6	9.8	<20	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
MW-1	11/4/1992		7.76	4.96	--	2.80	5,300	--	1,100	480	<0.5	1,500	--	--	--	--	--	--	--	--	--	
MW-1	10/12/1993		7.76	5.26	--	2.50	3,600	--	970	71	100	550	6,111	--	--	--	--	--	--	--	--	
MW-1	2/15/1994		7.76	4.98	--	2.78	17,000	--	4,200	510	360	1,600	5,495	--	--	--	--	--	--	--	3.90	
MW-1	5/11/1994		7.76	4.55	--	3.21	5,500	--	2,900	37	56	64	705	--	--	--	--	--	--	--	8	
MW-1	8/1/1994	Dup	7.76	5.51	--	2.25	16,000	--	3,600	750	510	2,800	9,800	--	--	--	--	--	--	--	--	(Dup)
MW-1	8/1/1994		7.76	5.51	--	2.25	15,000	--	3,600	740	510	2,800	9,718	--	--	--	--	--	--	--	2.90	
MW-1	10/18/1994	Dup	7.76	5.11	--	2.65	16,000	--	1,900	64	170	950	--	--	--	--	--	--	--	--	--	(Dup)
MW-1	10/18/1994		7.76	5.11	--	2.65	16,000	--	1,800	61	160	890	15,668	--	--	--	--	--	--	--	2.90	
MW-1	1/13/1995	Dup	7.76	--	--	--	590	--	88	0.7	<0.5	55	--	--	--	--	--	--	--	--	--	(Dup)(DUP)
MW-1	4/13/1995		7.76	3.84	--	3.92	9,300	--	4,000	300	200	950	--	--	--	--	--	--	--	--	7.70	
MW-1	7/11/1995		7.76	3.60	--	4.16	15,000	--	2,200	84	<25	2,500	--	--	--	--	--	--	--	--	8.80	
MW-1	11/2/1995		7.76	4.58	--	3.18	19,000	--	920	<100	<100	430	52,000	--	--	--	--	--	--	--	7.30	
MW-1	2/5/1996		7.76	4.43	--	3.33	4,600	--	1,400	330	54	247	8,700	--	--	--	--	--	--	--	3.20	
MW-1	4/24/1996		7.76	4.00	--	3.76	2,000	--	510	33	61	228	4,500	--	--	--	--	--	--	--	7.50	
MW-1	7/15/1996		7.76	4.30	--	3.46	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	7/16/1996	Dup	7.76	--	--	--	12,000	--	2,800	160	390	1,610	63,000	--	--	--	--	--	--	--	--	(Dup)
MW-1	7/16/1996		7.76	--	--	--	12,000	--	2,800	170	390	1,630	64,000	--	--	--	--	--	--	--	7.90	
MW-1	7/30/1996		7.76	4.64	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	8/12/1996		7.76	--	--	--	11,000	--	2,500	160	<10	1,740	440,000	--	--	--	--	--	--	--	7	
MW-1	11/4/1996		7.76	5.98	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	11/5/1996		7.76	--	--	--	53,000	--	1,300	43	100	349	42,000	--	--	--	--	--	--	--	6.60	
MW-1	5/17/1997		7.76	4.65	--	3.11	52,000	--	1,958	55	305	1,216	140,198	--	--	--	--	--	--	--	5.70	
MW-1	8/11/1997		7.76	4.90	--	2.86	25,000	--	540	6.7	<5.0	57	360,000	--	--	--	--	--	--	--	7.90	
MW-1	11/17/1997		7.76	6.12	--	1.64	93,000	--	1,200	31	180	40	400,000	--	--	--	--	--	--	--	7.60	
MW-1	1/29/1998		7.76	4.90	--	2.86	4,800	--	320	24	52	20	<50	--	--	--	--	--	--	--	6.60	
MW-1	6/22/1998		7.76	4.62	--	3.14	63,000	--	180	<5.0	15	69	57,000	--	--	--	--	--	--	--	6	
MW-1	12/30/1998		7.76	5.41	--	2.35	22,000	--	2,500	24	120	400	15,000	--	--	--	--	--	--	--	--	
MW-1	3/9/1999		7.76	3.40	--	4.36	16,000	--	2,000	84	290	510	13,000	--	--	--	--	--	--	--	--	
MW-1	6/23/1999		7.76	4.60	--	3.16	9,600	--	4,500	21	160	260	24,000	--	--	--	--	--	--	--	--	
MW-1	9/23/1999		7.76	4.21	--	3.55	3,800	--	1,600	32	150	240	7,100	--	--	--	--	--	--	--	--	
MW-1	12/28/1999		7.76	4.10	--	3.66	3,400	--	<2,200	17	53	130	5,500	--	--	--	--	--	--	--	--	
MW-1	3/22/2000		7.76	5.51	--	2.25	6,400	--	1,100	45	190	330	4,900	--	--	--	--	--	--	--	--	
MW-1	5/26/2000		7.76	4.79	--	2.97	110,000	--	700	44	140	250	320,000	--	--	--	--	--	--	--	--	
MW-1	9/6/2000		7.76	5.19	--	2.57	5,600	--	1,000	13	57	90	19,000	--	--	--	--	--	--	--	--	
MW-1	9/15/2000		7.76	5.73	--	2.03	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	12/11/2000		7.76	5.82	--	1.94	5,500	--	1,160	47	155	292	3,900	--	--	--	--	--	--	--	--	
MW-1	3/29/2001		7.76	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-1	6/27/2001		7.76	5.49	--	2.27	6,100	--	1,200	13	17	78	1,780	--	--	--	--	--	--	--	--	
MW-1	9/19/2001		7.76	6.19	--	1.57	1,800	--	102	<12.5	<12.5	<37.5	1,090	--	--	--	--	--	--	--	--	
MW-1	12/28/2001		7.76	5.27	--	2.49	4,000	--	540	12	20	65	1,120	--	--	--	--	--	--	--	--	
MW-1	3/12/2002		7.76	5.68	--	2.08	3,700	--	491	8.4	12	27	1,020	--	--	--	--	--	--	--	--	
MW-1	6/13/2002		7.76	5.54	--	2.22	1,900	--	255	<12.5	<12.5	<25	6,490	--	--	--	--	--	--	--	--	
MW-1	9/6/2002		7.76	5.56	--	2.20	1,100	--	170	5.1	2.2	20	550	--	--	--	--	--	--	--	--	
MW-1	12/13/2002		7.76	5.45	--	2.31	2,700	--	610	10	18	67	470	--	--	--	--	--	--	--	--	
MW-1	2/19/2003		7.76	3.00	--	4.76	1,500	--	180	<5.0	<5.0	15	610	--	--	--	--	--	--	--	--	
MW-1	6/6/2003		7.76	5.52	--	2.24	4,600	--	620	<25	<25	55	1,400	<1,000	--	<25	<25	--	<25	<5,000	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-1	8/7/2003		7.76	5.55	--	2.21	2,000	--	290	<5.0	<5.0	15	920	560	<5.0	<5.0	<5.0	<5.0	12	<1,000	--	
MW-1	11/20/2003		7.76	5.41	--	2.35	2,800	--	420	11	11	53	250	<200	--	<5.0	<5.0	--	<5.0	1,800	--	
MW-1	4/28/2004		7.76	5.33	--	2.43	1,600	--	100	5.3	<5.0	8.8	200	950	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	
MW-1	8/26/2004		7.76	4.03	--	3.73	1,700	--	220	7.2	15	35	180	320	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-1	12/1/2004		7.76	3.93	--	3.83	2,100	--	380	8	34	76	170	300	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	
MW-1	2/2/2005		7.76	3.61	--	4.15	1,100	--	150	3	12	14	160	6,700	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-1	4/25/2005		10.16	3.75	--	6.41	930	--	140	3.6	5.3	11	200	5,000	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-1	9/30/2005		10.16	3.54	--	6.62	4,600	--	1,000	15	78	150	250	1,200	<5.0	13	<5.0	<5.0	<5.0	<500	--	
MW-1	12/28/2005		10.16	3.26	--	6.90	1,500	--	200	5.7	32	58	140	1,800	<5.0	<10	<5.0	--	<5.0	<1,000	--	
MW-1	3/23/2006		10.16	3.40	--	6.76	580	--	42	<5.0	10	20	40	2,800	<5.0	<10	<5.0	<5.0	<5.0	<1,000	--	
MW-1	6/5/2006		10.16	2.97	--	7.19	900	--	230	2.5	28	71	160	1,900	<2.5	<5.0	<2.5	<2.5	<2.5	<500	--	
MW-1	9/19/2006		10.16	3.67	--	6.49	1,600	--	240	3.4	11	23	180	1,000	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-1	12/1/2006		10.16	3.64	--	6.52	1,400	--	86	4.3	7	19	150	930	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-1	3/1/2007		10.16	3.55	--	6.61	4,200	--	340	7	34	46	160	510	<2.0	<4.0	<2.0	<2.0	2	<1,000	--	
MW-1	6/1/2007		10.16	3.53	--	6.63	2,100	--	200	3.4	34	59	140	1,500	<2.0	<4.0	<2.0	<2.0	2.2	<1,000	--	
MW-1	9/13/2007		10.16	4.88	--	5.28	540	--	74	2.4	5.4	10	59	1,300	<2.0	<4.0	<2.0	<2.0	<2.0	1,100	--	
MW-1	11/21/2007		10.16	3.70	--	6.46	1,800	--	67	6.2	3.5	12	200	1,300	<2.0	<4.0	<2.0	<2.0	2.7	<1,000	--	
MW-1	2/29/2008		10.16	3.49	--	6.67	970	--	100	1.9	37	32	25	1,200	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-1	5/23/2008		10.16	4.26	--	5.90	1,300	--	170	3.5	15	26	120	1,800	<0.5	<1.0	<0.5	<0.5	1.4	<250	--	
MW-1	9/26/2008		10.16	4.29	--	5.87	1,800	--	26	6.1	<1.0	10	120	1,400	<1.0	<1.0	<1.0	<1.0	1.9	<250	--	
MW-1	12/23/2008		10.16	3.79	--	6.37	1,600	--	14	6.1	1.2	9.7	75	940	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-1	3/9/2009		10.16	3.29	--	6.87	2,100	--	200	5.6	16	29	88	1,300	<1.0	<1.0	<1.0	<1.0	1.7	<250	--	
MW-1	5/28/2009		10.16	4.02	--	6.14	880	--	64	1.5	3.4	9.4	48	1,800	<1.0	<1.0	<1.0	<1.0	1.3	<250	0.46	
MW-1	12/10/2009		10.16	3.92	--	6.24	1,300	--	46	6.9	2.6	10	65	560	<0.50	<0.50	<0.50	<0.50	1.1	<100	0.47	
MW-1	6/29/2010		10.16	3.60	--	6.56	530	--	18	1.3	<0.50	4.3	<0.50	2,000	<0.50	<0.50	<0.50	<0.50	1.2	<100	0.53	(P)
MW-1	12/30/2010		10.16	3.55	--	6.61	1,000	--	19	3.2	1.4	8.2	46	1,900	<0.50	<0.50	<0.50	<0.50	1.0	<250	0.57	(P)
MW-1	6/29/2011		10.16	3.58	--	6.58	60	--	<0.50	<0.50	<0.50	<1.0	3.9	840	--	--	--	--	<0.50	--	0.40	(P)
MW-1	1/30/2012		10.16	3.82	--	6.34	1,100	--	42	4.5	0.90	7.2	64	900	--	--	--	--	1.3	--	0.66	(P)
MW-1	6/27/2012		10.16	3.79	--	6.37	420	--	15	0.74	<0.50	3.1	18	1,400	--	--	--	--	0.83	--	1.62	(P)
MW-1	12/7/2012		10.16	3.30	--	6.86	700	--	6.3	2.3	<0.50	4.8	32	1,400	--	--	--	--	0.81	--	1.64	
MW-1	6/6/2013		10.16	3.73	--	6.43	240	--	11	6.7	14	9.8	6.9	170	--	--	--	--	<0.50	--	1.09	
MW-1	12/13/2013		10.16	3.88	--	6.28	680	--	23	3.2	3.4	9.9	36	1,500	--	--	--	--	1.7	--	2.90	
MW-1	6/30/2014		10.16	3.77	--	6.39	160	--	7.8	0.58	<0.50	<1.0	4.2	970	--	--	--	--	<0.50	--	0.23	
MW-1	12/16/2014		10.16	0.00	--	10.16	<50	790	<0.50	<0.50	<0.50	<1.0	<0.50	<20	--	--	--	--	<0.50	--	7.18	(Well full of water.)
MW-1	6/18/2015		10.24	4.32	--	5.92	210 J5J3	600	<20	<5	<1	<60	3.99	593	--	--	--	--	<1.00	--	0.18	
MW-1	12/8/2015		10.24	4.45	--	5.79	580	--	31	<0.50	2.5	1.2	3.7	650	--	--	--	--	<0.50	--	2.10	
MW-1	12/16/2015		10.24	4.25	--	5.99	--	210	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	3/24/2016		10.24	3.95	--	6.29	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-1	6/28/2016		10.24	4.65	--	5.59	71	<52	<0.50	<0.50	<0.50	<1.0	2.0	300	--	--	--	--	<0.50	--	0.27	
MW-2	11/4/1992	Dup	8.56	5.88	--	2.68	12,000	--	3,200	980	<0.5	1,900	--	--	--	--	--	--	--	--	--	(Dup)
MW-2	11/4/1992		8.56	5.88	--	2.68	12,000	--	3,900	1,300	<0.5	2,300	--	--	--	--	--	--	--	--	--	
MW-2	10/12/1993		8.56	6.29	--	2.27	4,500	--	3,400	180	230	940	442	--	--	--	--	--	--	--	--	
MW-2	2/15/1994	Dup	8.56	--	--	--	2,000	--	430	270	28	390	127	--	--	--	--	--	--	--	4	(Dup)
MW-2	2/15/1994		8.56	--	--	--	1,800	--	290	160	14	250	--	--	--	--	--	--	--	--	--	
MW-2	5/11/1994	Dup	8.56	5.17	--	3.39	15,000	--	5,600	1,500	470	2,000	740	--	--	--	--	--	--	--	--	(Dup)
MW-2	5/11/1994		8.56	5.17	--	3.39	14,000	--	3,900	1,200	440	1,900	953	--	--	--	--	--	--	--	8.90	
MW-2	8/1/1994		8.56	5.43	--	3.13	8,200	--	3,000	420	230	680	1,676	--	--	--	--	--	--	--	2.60	
MW-2	10/18/1994		8.56	5.71	--	2.85	9,000	--	2,000	140	150	420	2,417	--	--	--	--	--	--	--	7.20	
MW-2	1/13/1995		8.56	4.67	--	3.89	7,900	--	2,200	42	<5.0	770	--	--	--	--	--	--	--	--	6.80	
MW-2	4/13/1995	Dup	8.56	4.37	--	4.19	25,000	--	6,500	1,500	110	5,300	--	--	--	--	--	--	--	--	--	(Dup)
MW-2	4/13/1995		8.56	4.37	--	4.19	33,000	--	8,000	2,500	1,100	6,600	--	--	--	--	--	--	--	--	7.50	
MW-2	7/11/1995	Dup	8.56	4.51	--	4.05	28,000	--	6,800	1,000	900	4,900	--	--	--	--	--	--	--	--	--	(Dup)
MW-2	7/11/1995		8.56	4.51	--	4.05	19,000	--	3,300	99	7.5	4,600	--	--	--	--	--	--	--	--	7.80	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-2	11/2/1995	Dup	8.56	5.55	--	3.01	22,000	--	4,000	1,200	600	2,700	19,000	--	--	--	--	--	--	--	--	(Dup)
MW-2	11/2/1995		8.56	5.55	--	3.01	20,000	--	3,800	1,200	570	2,700	15,000	--	--	--	--	--	--	--	7.30	
MW-2	2/5/1996	Dup	8.56	5.10	--	3.46	910	--	290	180	19	137	93	--	--	--	--	--	--	--	--	(Dup)
MW-2	2/5/1996		8.56	5.10	--	3.46	1,200	--	320	220	26	187	99	--	--	--	--	--	--	--	2.20	
MW-2	4/24/1996	Dup	8.56	--	--	--	<500	--	70	22	<10	61	<50	--	--	--	--	--	--	--	7	(Dup)
MW-2	4/24/1996		8.56	--	--	--	<500	--	100	30	<10	71	<100	--	--	--	--	--	--	--	--	
MW-2	7/15/1996		8.56	5.40	--	3.16	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	7/16/1996		8.56	--	--	--	12,000	--	3,300	1,400	250	2,610	1,400	--	--	--	--	--	--	--	7.80	
MW-2	7/30/1996		8.56	5.44	--	3.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/4/1996		8.56	7.06	--	1.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	11/5/1996	Dup	8.56	--	--	--	9,200	--	1,300	170	<25	2,240	1,100	--	--	--	--	--	--	--	--	(Dup)
MW-2	11/5/1996		8.56	--	--	--	7,200	--	1,400	230	38	2,110	1,100	--	--	--	--	--	--	--	7.40	
MW-2	5/17/1997		8.56	5.77	--	2.79	570	--	42	<5.0	5	60	210	--	--	--	--	--	--	--	6.90	
MW-2	8/11/1997		8.56	5.71	--	2.85	6,300	--	1,800	130	86	397	2,400	--	--	--	--	--	--	--	8.50	
MW-2	11/17/1997		8.56	6.91	--	1.65	2,400	--	220	30	33	259	130	--	--	--	--	--	--	--	7.90	
MW-2	1/29/1998		8.56	4.61	--	3.95	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	6.20	
MW-2	6/22/1998		8.56	4.80	--	3.76	4,200	--	640	150	120	650	560	--	--	--	--	--	--	--	5.40	
MW-2	12/30/1998		8.56	5.21	--	3.35	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/23/1999		8.56	5.30	--	3.26	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/23/1999		8.56	4.75	--	3.81	3,800	--	760	19	210	960	910	--	--	--	--	--	--	--	--	
MW-2	12/28/1999		8.56	4.51	--	4.05	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/22/2000		8.56	4.21	--	4.35	2,500	--	780	17	44	270	2,800	--	--	--	--	--	--	--	--	
MW-2	5/26/2000		8.56	4.66	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	9/6/2000		8.56	4.71	--	3.85	3,700	--	1,200	5.5	12	170	12,000	--	--	--	--	--	--	--	--	
MW-2	9/15/2000		8.56	4.74	--	3.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	12/11/2000		8.56	4.79	--	3.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/29/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	6/27/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	9/19/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	12/28/2001		8.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-2	3/12/2002		8.56	4.25	--	4.31	26,000	--	1,160	4.4	61	171	37,300	--	--	--	--	--	--	--	--	
MW-2	6/13/2002		8.56	4.94	--	3.62	18,000	--	578	<50	<50	<100	84,600	--	--	--	--	--	--	--	--	
MW-2	9/6/2002		8.56	5.23	--	3.33	26,000	--	440	<50	<50	<50	45,000	--	--	--	--	--	--	--	--	
MW-2	12/13/2002		8.56	4.94	--	3.62	69,000	--	1,200	<500	<500	<500	98,000	--	--	--	--	--	--	--	--	
MW-2	2/19/2003		8.56	4.14	--	4.42	78,000	--	1,100	<500	<500	<500	81,000	--	--	--	--	--	--	--	--	
MW-2	6/6/2003		8.56	4.66	--	3.90	120,000	--	1,100	<1,000	<1,000	<1,000	72,000	<40,000	--	<1,000	<1,000	--	1,300	<200,000	--	
MW-2	8/7/2003		8.56	4.90	(Sheen)	3.66	71,000	--	590	<500	<500	<500	83,000	45,000	<500	<500	<500	<500	1,300	<100,000	--	
MW-2	11/20/2003		8.56	4.59	--	3.97	22,000	--	720	<100	<100	<100	18,000	48,000	--	<100	<100	--	200	<20,000	--	
MW-2	4/28/2004		8.56	4.37	--	4.19	<25,000	--	690	<250	<250	<250	31,000	59,000	<250	<250	<250	<250	<250	<50,000	--	
MW-2	8/26/2004		8.56	4.59	--	3.97	140,000	--	8,200	18,000	4,200	19,000	11,000	<10,000	<250	<250	<250	<250	320	<50,000	--	
MW-2	12/1/2004		8.56	4.79	--	3.77	98,000	--	8,400	13,000	4,600	21,000	10,000	<4,000	<100	<100	<100	<100	230	<20,000	--	
MW-2	2/2/2005		8.56	4.27	(Sheen)	4.29	92,000	--	6,600	9,900	4,400	18,000	10,000	4,000	<100	<100	<100	<100	260	<20,000	--	
MW-2	4/25/2005		11.39	4.00	--	7.39	80,000	--	6,700	4,900	4,400	17,000	8,200	3,700	<50	<50	<50	<50	220	<10,000	--	
MW-2	9/30/2005		11.39	4.86	--	6.53	98,000	--	7,700	7,400	4,700	20,000	16,000	4,700	<50	<50	<50	<50	270	<5,000	--	
MW-2	12/28/2005		11.39	4.28	--	7.11	210,000	--	15,000	21,000	7,300	31,000	22,000	6,300	<100	<200	<100	--	410	<20,000	--	
MW-2	3/23/2006		11.39	3.60	--	7.79	79,000	--	9,100	12,000	4,300	17,000	13,000	5,800	<100	<200	<100	<100	290	<20,000	--	
MW-2	6/5/2006		11.39	4.28	(Sheen)	7.11	79,000	--	9,700	8,700	4,900	20,000	8,000	3,300	<50	<100	<50	<50	280	<10,000	--	
MW-2	9/19/2006		11.39	4.61	--	6.78	68,000	--	12,000	9,300	4,100	14,000	16,000	4,800	<50	<100	<50	<50	370	<25,000	--	
MW-2	12/1/2006		11.39	4.55	--	6.84	61,000	--	15,000	6,900	4,400	17,000	10,000	3,900	<50	<100	<50	<50	270	<25,000	--	
MW-2	3/1/2007		11.39	4.14	--	7.25	80,000	--	9,300	5,500	4,100	15,000	8,300	2,700	<50	<100	<50	<50	210	<25,000	--	
MW-2	6/1/2007		11.39	4.34	--	7.05	120,000	--	12,000	6,400	4,200	11,000	17,000	4,900	<100	260	<100	<100	310	<50,000	--	
MW-2	9/13/2007		11.39	5.35	--	6.04	<5,000	--	770	<50	140	<100	2,300	42,000	<50	<100	<50	<50	50	<25,000	--	
MW-2	11/21/2007		11.39	5.19	--	6.20	27,000	--	4,500	220	1,600	2,800	5,200	5,000	<50	<100	<50	<50	160	<25,000	--	
MW-2	2/29/2008		11.39	4.41	--	6.98	44,000	--	6,100	320	3,800	6,600	4,900	2,500	<50	<100	<50	<50	120	<25,000	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-2	5/23/2008		11.39	5.25	--	6.14	13,000	--	1,700	<50	300	210	2,500	29,000	<50	140	<50	<50	60	<25,000	--	
MW-2	9/26/2008		11.39	5.81	--	5.58	4,800	--	220	12	20	42	960	77,000	<1.0	<1.0	2.8	<1.0	42	<250	--	
MW-2	12/23/2008		11.39	5.50	--	5.89	5,700	--	950	19	170	70	1,800	57,000	<2.0	<2.0	2.4	<2.0	51	<500	--	
MW-2	3/9/2009		11.39	4.35	--	7.04	25,000	--	3,200	73	2,800	2,200	2,200	21,000	<20	<20	<20	<20	82	<5,000	--	
MW-2	5/28/2009		11.39	4.90	--	6.49	55,000	--	4,700	740	3,800	8,100	2,800	2,000	<10	<10	<10	<10	110	<2,500	0.27	
MW-2	12/10/2009		11.39	5.29	--	6.10	2,200	--	250	7.3	13	14	360	44,000	<0.50	0.52	1.4	<0.50	8.7	<100	0.65	
MW-2	6/29/2010		11.39	5.03	--	6.36	5,300	--	800	<25	250	300	770	31,000	<25	<25	<25	<25	<25	<5,000	0.60	(P, odor)
MW-2	12/30/2010		11.39	4.22	--	7.17	19,000	--	3,500	58	2,000	1,000	1,700	4,700	<25	<25	<25	<25	56	<12,000	--	(P)
MW-2	6/29/2011		11.39	4.51	--	6.88	12,000	--	3,200	41	920	150	2,100	2,400	<25	<25	<25	<25	77	--	0.41	(P)
MW-2	1/30/2012		11.39	4.93	--	6.46	13,000	--	3,000	45	640	370	1,700	1,900	<20	<20	<20	<20	60	--	0.63	(P)
MW-2	6/27/2012		11.39	4.72	--	6.67	23,000	--	3,900	110	2,300	2,000	2,600	2,900	<20	<20	<20	<20	95	--	1.24	(P)
MW-2	12/7/2012		11.39	4.11	--	7.28	10,000	--	2,600	31	350	72	1,300	3,400	<10	<10	<10	<10	51	--	1.03	
MW-2	6/6/2013		11.39	4.95	--	6.44	20,000	--	6,100	86	670	1,200	2,000	2,600	<10	<10	<10	<10	96	--	1.04	
MW-2	12/13/2013		11.39	5.29	--	6.10	<10,000	--	200	<100	<100	<200	140	32,000	<100	<100	<100	<100	<100	--	3.12	
MW-2	6/30/2014		11.39	4.95	--	6.44	<10,000	--	1,800	<100	140	<200	700	25,000	<100	<100	<100	<100	<100	--	0.57	
MW-2	12/16/2014		11.39	4.27	--	7.12	8,100	1,000	1,400	<25	100	<50	640	12,000	<25	<25	<25	<25	<25	--	0.65	
MW-2	6/18/2015		11.42	5.22	--	6.20	5,600	2,000	909	12.9 J	8.49	15.4	372	15,500	<5.00	<5.00	<5.00	<5.00	<5.00	<500	6.39	
MW-2	12/8/2015		11.42	5.99	--	5.43	2,900	--	340	<25	<25	<50	360	43,000	<25	<25	<25	<25	<25	--	2.23	
MW-2	12/16/2015		11.42	5.68	--	5.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	3/24/2016		11.42	4.64	--	6.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-2	6/28/2016		11.42	5.42	--	6.00	7,100	970	2,500	25	64	89	1,200	11,000	<25	<25	<25	<25	48	--	0.15	
MW-3	11/4/1992		8.25	6.38	--	1.87	200	690	1.6	<0.5	<0.5	1.1	--	--	--	--	--	--	--	--	--	
MW-3	10/12/1993	Dup	8.25	--	--	--	270	2,100	5	0.7	<0.5	2.6	96	--	--	--	--	--	--	--	--	(Dup)
MW-3	10/12/1993		8.25	--	--	--	150	--	5.6	0.6	<0.5	1.6	--	--	--	--	--	--	--	--	--	
MW-3	2/15/1994		8.25	6.60	--	1.65	140	2.3	5.7	<0.5	<0.5	<0.5	30	--	--	--	--	--	--	--	3.90	
MW-3	5/11/1994		8.25	5.86	--	2.39	190	2,500	2.7	1.9	<0.5	1.9	51	--	--	--	--	--	--	--	9.20	
MW-3	8/1/1994		8.25	6.13	--	2.12	120	1,300	1.3	<0.5	0.5	1.1	18	--	--	--	--	--	--	--	2.90	
MW-3	10/18/1994		8.25	6.39	--	1.86	100	2,200	2.3	<0.5	<0.5	<0.5	21	--	--	--	--	--	--	--	3.60	
MW-3	1/13/1995		8.25	5.47	--	2.78	<50	970	0.8	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7.70	
MW-3	4/13/1995		8.25	5.17	--	3.08	530	<500	8.7	1.9	<0.5	3.9	--	--	--	--	--	--	--	--	8.40	
MW-3	7/11/1995		8.25	5.37	--	2.88	78	2,100	0.57	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	8.30	
MW-3	11/2/1995		8.25	6.29	--	1.96	250	2,000	0.73	<0.5	<0.5	1.8	270	--	--	--	--	--	--	--	8.30	
MW-3	2/5/1996		8.25	5.80	--	2.45	<50	1,600	<0.5	<1.0	<1.0	2.7	11	--	--	--	--	--	--	--	3.50	
MW-3	4/24/1996		8.25	5.69	--	2.56	<50	2,800	<5.0	<10	<10	<10	150	--	--	--	--	--	--	--	8.60	
MW-3	7/15/1996		8.25	6.18	--	2.07	<250	3,700	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--	7.70	
MW-3	7/30/1996		8.25	6.04	--	2.21	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/4/1996		8.25	7.84	--	0.41	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	11/5/1996		8.25	--	--	--	90	890	<0.5	<1.0	<1.0	<1.0	30	--	--	--	--	--	--	--	6.80	
MW-3	5/17/1997		8.25	6.49	--	1.76	<50	2,100	<0.5	<1.0	<1.0	<1.0	52	--	--	--	--	--	--	--	6.30	
MW-3	8/11/1997		8.25	6.15	--	2.10	490	1,900	<2.5	<5.0	<5.0	<5.0	170	--	--	--	--	--	--	--	7.40	
MW-3	11/17/1997		8.25	7.15	--	1.10	120	2,500	<0.5	<1.0	<1.0	<1.0	46	--	--	--	--	--	--	--	7	
MW-3	1/29/1998		8.25	5.10	--	3.15	270	1,700	0.53	<1.0	<1.0	<1.0	330	--	--	--	--	--	--	--	6.40	
MW-3	6/22/1998		8.25	5.50	--	2.75	200	2,200	<0.5	<1.0	<1.0	<1.0	130	--	--	--	--	--	--	--	5.50	
MW-3	12/30/1998		8.25	6.68	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/9/1999		8.25	5.53	--	2.72	60	840	<1.0	<1.0	<1.0	<1.0	19	--	--	--	--	--	--	--	--	
MW-3	6/23/1999		8.25	6.60	--	1.65	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/23/1999		8.25	6.17	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/28/1999		8.25	6.00	--	2.25	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/22/2000		8.25	4.77	--	3.48	690	<58	4.2	3.1	0.81	2.7	2,900	--	--	--	--	--	--	--	--	
MW-3	5/26/2000		8.25	5.28	--	2.97	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	9/15/2000		8.25	5.58	--	2.67	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	12/11/2000		8.25	11.74	--	-3.49	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	3/29/2001		8.25	5.04	--	3.21	650	<50	<2.5	<2.5	<2.5	<7.5	680	--	--	--	--	--	--	--	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-3	6/27/2001		8.25	5.62	--	2.63	460	690	<2.5	<2.5	<2.5	<7.5	560	--	--	--	--	--	--	--	--	
MW-3	9/19/2001		8.25	5.80	--	2.45	<500	520	<5.0	<5.0	<5.0	<15	464	--	--	--	--	--	--	--	--	
MW-3	12/28/2001		8.25	4.85	--	3.40	180	550	<0.5	<0.5	<0.5	<1.0	180	--	--	--	--	--	--	--	--	
MW-3	3/12/2002		8.25	4.39	--	3.86	410	1,300	<2.5	<2.5	<2.5	<5.0	443	--	--	--	--	--	--	--	--	
MW-3	6/13/2002		8.25	5.38	--	2.87	<250	2,600	<2.5	<2.5	<2.5	<5.0	395	--	--	--	--	--	--	--	--	
MW-3	9/6/2002		8.25	5.68	--	2.57	<200	--	<2.0	<2.0	<2.0	<2.0	650	--	--	--	--	--	--	--	--	
MW-3	12/13/2002		8.25	5.37	--	2.88	<50	980	<0.5	<0.5	<0.5	<0.5	60	--	--	--	--	--	--	--	--	
MW-3	2/19/2003		8.25	4.80	--	3.45	<1,000	380	<10	<10	<10	<10	120	--	--	--	--	--	--	--	--	
MW-3	6/6/2003		8.25	5.13	--	3.12	<500	620	<5.0	<5.0	<5.0	<5.0	180	<200	--	<5.0	<5.0	--	16	<1,000	--	
MW-3	8/7/2003		8.25	5.43	--	2.82	<500	820(N)	5.7	<5.0	<5.0	<5.0	290	<200	<5.0	<5.0	<5.0	<5.0	20	<1,000	--	
MW-3	11/20/2003		8.25	4.72	--	3.53	<50	1,200(N)	<0.5	<0.5	<0.5	<0.5	17	<20	--	<0.5	<0.5	--	1.4	<100	--	
MW-3	4/28/2004		8.25	4.87	--	3.38	<100	240(N)	<1.0	<1.0	<1.0	<1.0	87	<40	<1.0	<1.0	<1.0	<1.0	3.9	<200	--	
MW-3	8/26/2004		8.25	5.42	--	2.83	56	250(N)	<0.5	<0.5	<0.5	<0.5	34	260	<0.5	<0.5	<0.5	<0.5	2	<100	--	
MW-3	12/1/2004		8.25	5.69	--	2.56	<100	690	<1.0	<1.0	<1.0	<1.0	7.4	610	<1.0	<1.0	<1.0	<1.0	<1.0	<200	--	
MW-3	2/2/2005		8.25	4.72	--	3.53	<100	730	<1.0	<1.0	<1.0	<1.0	20	<40	<1.0	<1.0	<1.0	<1.0	1.1	<200	--	
MW-3	4/25/2005		10.73	4.75	--	5.98	<250	520	<2.5	<2.5	<2.5	<2.5	220	160	<2.5	<2.5	<2.5	<2.5	10	<500	--	
MW-3	9/30/2005		10.73	5.30	--	5.43	<50	300(N)	<0.5	<0.5	<0.5	<1.0	8.2	270	<0.5	<0.5	<0.5	<0.5	0.68	<50	--	
MW-3	12/28/2005		10.73	4.41	--	6.32	<50	100	<0.5	<0.5	<0.5	<1.0	0.66	<5.0	<0.5	<1.0	<0.5	--	<0.5	<100	--	
MW-3	3/23/2006		10.73	4.43	--	6.30	<50	260	<0.5	<0.5	<0.5	<1.0	13	130	<0.5	<1.0	<0.5	<0.5	0.63	<100	--	
MW-3	6/5/2006		10.73	4.95	--	5.78	61	340	0.69	1.4	0.85	3.6	29	510	<0.5	<1.0	<0.5	<0.5	1.6	<100	--	
MW-3	9/19/2006		10.73	5.19	--	5.54	<50	330	<0.5	<0.5	<0.5	<1.0	4.1	420	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-3	12/1/2006		10.73	5.37	--	5.36	<50	130	<0.5	<0.5	<0.5	<1.0	2	250	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-3	3/1/2007		10.73	4.62	--	6.11	<50	120	<0.5	<0.5	<0.5	<1.0	3.8	77	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-3	6/1/2007		10.73	5.53	--	5.20	<50	350	<0.5	<0.5	<0.5	<1.0	3.7	320	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-3	9/13/2007		10.73	6.17	--	4.56	<250	1,200	<2.5	<2.5	<2.5	<5.0	2.6	2,000	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-3	11/21/2007		10.73	6.16	--	4.57	<250	1,600	<2.5	<2.5	<2.5	<5.0	3.4	2,600	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-3	2/29/2008		10.73	5.38	--	5.35	<50	350	<0.5	<0.5	<0.5	<1.0	0.9	540	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-3	5/23/2008		10.73	6.07	--	4.66	<500	1,100	<5.0	<5.0	<5.0	<10	<5.0	3,200	<5.0	<10	<5.0	<5.0	<5.0	<2,500	--	
MW-3	9/26/2008		10.73	6.46	--	4.27	120	3,000	<1.0	<1.0	<1.0	<1.0	4.8	6,900	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-3	12/23/2008		10.73	6.36	--	4.37	87	2,800	<1.0	<1.0	<1.0	<1.0	4.9	8,200	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-3	3/9/2009		10.73	5.31	--	5.42	<50	900	<1.0	<1.0	<1.0	<1.0	<1.0	55	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-3	5/28/2009		10.73	5.77	--	4.96	<50	1,600	<1.0	<1.0	<1.0	<1.0	2.1	580	<1.0	<1.0	<1.0	<1.0	<1.0	<250	0.19	
MW-3	12/10/2009		10.73	5.67	--	5.06	<50	--	<0.50	<0.50	<0.50	<1.0	0.86	270	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.72	
MW-3	12/18/2009		--	--	--	--	--	450	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/29/2010		10.73	5.85	--	4.88	<50	2,700	<0.50	<0.50	<0.50	<1.0	1.9	2,900	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.52	(P)
MW-3	12/30/2010		10.73	4.33	--	6.40	<50	520	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	--	(P)
MW-3	6/29/2011		10.73	5.00	--	5.73	<50	250	--	--	--	--	0.73	73	--	--	--	--	<0.50	--	0.45	(P)
MW-3	1/30/2012		10.73	5.22	--	5.51	<50	160	--	--	--	--	<0.50	65	--	--	--	--	<0.50	--	1.21	(P)
MW-3	6/27/2012		10.73	5.19	--	5.54	<50	270	--	--	--	--	1.6	250	--	--	--	--	<0.50	--	1.14	(P)
MW-3	12/7/2012		10.73	4.65	--	6.08	<50	110	--	--	--	--	<0.50	20	--	--	--	--	<0.50	--	1.10	
MW-3	6/6/2013		10.73	5.51	--	5.22	<50	300	--	--	--	--	1.9	540	--	--	--	--	<0.50	--	1.38	
MW-3	12/13/2013		10.73	5.77	--	4.96	<50	<49	--	--	--	--	0.54	680	--	--	--	--	<0.50	--	1.92	
MW-3	6/30/2014		10.73	5.56	--	5.17	<50	<47	--	--	--	--	1.5	1,900	--	--	--	--	<0.50	--	1.09	
MW-3	12/16/2014		10.73	4.30	--	6.43	<50	<50	--	--	--	--	<0.50	48	--	--	--	--	<0.50	--	0.79	
MW-3	6/18/2015		10.76	5.62	--	5.14	89 J	710	--	--	--	--	1.74	1,180	--	--	--	--	<1.00	--	0.48	
MW-3	12/8/2015		10.76	5.94	--	4.82	<50	--	--	--	--	--	1.6	6,200	--	--	--	--	<0.50	--	2.27	
MW-3	12/16/2015		10.76	5.56	--	5.20	--	<51	--	--	--	--	--	--	--	--	--	--	--	--	2.38	
MW-3	3/24/2016		10.76	4.72	--	6.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-3	6/28/2016		10.76	5.50	--	5.26	<50	<51	--	--	--	--	0.81	98	--	--	--	--	<0.50	--	0.31	
MW-4	11/4/1992		8.12	6.66	--	1.46	340	--	4.5	<0.5	4.3	<0.5	--	--	--	--	--	--	--	--	--	
MW-4	10/12/1993		8.12	6.87	--	1.25	160	--	5.8	1.4	0.8	2.7	261	--	--	--	--	--	--	--	--	
MW-4	2/15/1994		8.12	6.61	--	1.51	110	--	4.4	0.7	<0.5	2.5	118	--	--	--	--	--	--	--	4.30	
MW-4	5/11/1994		8.12	5.89	--	2.23	120	--	0.5	0.8	<0.5	<0.5	137	--	--	--	--	--	--	--	9.30	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-4	8/1/1994		8.12	6.87	--	1.25	140	--	0.7	2	5.2	15	138	--	--	--	--	--	--	--	3.30	
MW-4	10/18/1994		8.12	6.62	--	1.50	140	--	3.5	<0.5	0.5	<0.5	197	--	--	--	--	--	--	--	3	
MW-4	1/13/1995		8.12	7.27	--	0.85	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7.90	
MW-4	4/13/1995		8.12	6.51	--	1.61	73	--	1.2	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	9.90	
MW-4	7/11/1995		8.12	6.21	--	1.91	82	--	0.57	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7.20	
MW-4	11/2/1995		8.12	6.78	--	1.34	71	--	1.4	0.96	0.99	2.8	140	--	--	--	--	--	--	--	8.60	
MW-4	2/5/1996		8.12	6.41	--	1.71	<50	--	<5.0	<10	<10	<10	200	--	--	--	--	--	--	--	4.40	
MW-4	4/24/1996		8.12	6.18	--	1.94	<250	--	<2.5	<5.0	<5.0	<5.0	510	--	--	--	--	--	--	--	8.30	
MW-4	7/15/1996		8.12	6.63	--	1.49	<50	--	5.7	<1.0	<1.0	<1.0	550	--	--	--	--	--	--	--	7.40	
MW-4	7/30/1996		8.12	6.34	--	1.78	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/4/1996		8.12	8.27	--	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/5/1996		8.12	--	--	--	460	--	<2.5	11	<5.0	<5.0	620	--	--	--	--	--	--	--	7.30	
MW-4	5/17/1997		8.12	7.00	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	8/11/1997		8.12	6.81	--	1.31	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	11/17/1997		8.12	9.19	--	-1.07	840	--	<0.5	<1.0	<1.0	<1.0	880	--	--	--	--	--	--	--	7.30	
MW-4	1/29/1998		8.12	7.94	--	0.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	6/22/1998		8.12	7.49	--	0.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/30/1998		8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/9/1999		8.12	7.70	--	0.42	1,200	--	<1.0	<1.0	<1.0	<1.0	2,000	--	--	--	--	--	--	--	--	
MW-4	6/23/1999		8.12	8.81	--	-0.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/23/1999		8.12	8.32	--	-0.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/28/1999		8.12	8.21	--	-0.09	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/22/2000		8.12	6.74	--	1.38	910	--	<0.5	<0.5	0.54	1.7	3,800	--	--	--	--	--	--	--	--	
MW-4	5/26/2000		8.12	5.13	--	2.99	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	9/15/2000		8.12	8.20	--	-0.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	12/11/2000		8.12	8.31	--	-0.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	3/29/2001		8.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-4	6/27/2001		8.12	7.57	--	0.55	2,800	--	19	<2.5	<2.5	<7.5	4,220	--	--	--	--	--	--	--	--	
MW-4	9/19/2001		8.12	7.87	--	0.25	2,500	--	<5.0	<5.0	<5.0	<15	3,340	--	--	--	--	--	--	--	--	
MW-4	12/28/2001		8.12	7.80	--	0.32	4,400	--	<5.0	<5.0	<5.0	<10	5,330	--	--	--	--	--	--	--	--	
MW-4	3/12/2002		8.12	4.53	--	3.59	6,400	--	72	<5.0	<5.0	<10	8,440	--	--	--	--	--	--	--	--	
MW-4	6/13/2002		8.12	6.21	--	1.91	1,800	--	7.5	<5.0	5	13	6,870	--	--	--	--	--	--	--	--	
MW-4	9/6/2002		8.12	7.78	--	0.34	<2,000	--	<20	<20	<20	<20	9,600	--	--	--	--	--	--	--	--	
MW-4	12/13/2002		8.12	7.87	--	0.25	5,600	--	<50	<50	<50	<50	8,600	--	--	--	--	--	--	--	--	
MW-4	2/19/2003		8.12	4.84	--	3.28	<10,000	--	<100	<100	<100	<100	8,000	--	--	--	--	--	--	--	--	
MW-4	6/6/2003		8.12	7.98	--	0.14	13,000	--	<50	<50	<50	<50	6,800	2,500	--	<50	<50	--	190	<10,000	--	
MW-4	8/7/2003		8.12	7.24	--	0.88	6,200	--	<50	<50	<50	<50	6,600	2,400	<50	<50	<50	<50	160	<10,000	--	
MW-4	11/20/2003		8.12	7.02	--	1.10	10,000	--	<100	<100	<100	<100	11,000	<4,000	--	<100	<100	--	310	<20,000	--	
MW-4	4/28/2004		8.12	4.81	--	3.31	<25,000	--	<250	<250	<250	<250	3,600	15,000	<250	<250	<250	<250	<250	<50,000	--	
MW-4	8/26/2004		8.12	5.65	--	2.47	<2,500	--	<25	<25	<25	<25	1,800	16,000	<25	<25	<25	<25	60	--	--	
MW-4	12/1/2004		8.12	7.34	--	0.78	1,100	--	<10	<10	<10	<10	450	19,000	<10	<10	<10	<10	10	<2,000	--	
MW-4	2/2/2005		8.12	7.61	--	0.51	1,000	--	<5.0	<5.0	<5.0	<5.0	410	19,000	<5.0	<5.0	<5.0	<5.0	10	<1,000	--	
MW-4	4/25/2005		10.58	7.25	--	3.33	720	--	8	5.3	<5.0	16	170	18,000	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	
MW-4	9/30/2005		10.58	7.72	--	2.86	<2,500	--	63	58	46	140	110	30,000	<25	<25	<25	<25	<25	<2,500	--	
MW-4	12/28/2005		10.58	7.48	--	3.10	<2,500	--	<25	<25	<25	<50	34	27,000	<25	<50	<25	--	<25	<5,000	--	
MW-4	3/23/2006		10.58	4.42	--	6.16	<2,500	--	<25	<25	<25	<50	120	34,000	<25	<50	<25	<25	<25	<5,000	--	
MW-4	6/5/2006		10.58	4.97	--	5.61	<5,000	--	<50	<50	<50	<100	<50	34,000	<50	<100	<50	<50	<50	<10,000	--	
MW-4	9/19/2006		10.58	5.45	--	5.13	<5,000	--	<50	<50	<50	<100	110	27,000	<50	<100	<50	<50	<50	<25,000	--	
MW-4	12/1/2006		10.58	5.14	--	5.44	<5,000	--	<50	<50	<50	<100	68	31,000	<50	<100	<50	<50	<50	<25,000	--	
MW-4	3/1/2007		10.58	7.60	--	2.98	<5,000	--	<50	<50	<50	<100	<50	31,000	<50	<100	<50	<50	<50	<25,000	--	
MW-4	6/1/2007		10.58	5.21	--	5.37	2,700	--	<25	<25	<25	<50	31	32,000	<25	<50	<25	<25	<25	<13,000	--	
MW-4	9/13/2007		10.58	6.45	--	4.13	<2,500	--	<25	<25	<25	<50	<25	10,000	<25	<50	<25	<25	<25	<13,000	--	
MW-4	11/21/2007		10.58	5.68	--	4.90	<2,500	--	<25	<25	<25	<50	<25	38,000	<25	<50	<25	<25	<25	<13,000	--	
MW-4	2/29/2008		10.58	6.44	--	4.14	<5,000	--	<50	<50	<50	<100	<50	32,000	<50	<100	<50	<50	<50	<25,000	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-4	5/23/2008		10.58	6.01	--	4.57	<5,000	--	<50	<50	<50	<100	<50	42,000	<50	<100	<50	<50	<50	<25,000	--	
MW-4	9/26/2008		10.58	7.37	--	3.21	370	--	<1.0	<1.0	<1.0	<1.0	14	39,000	<1.0	<1.0	2.8	<1.0	<1.0	<250	--	
MW-4	12/23/2008		10.58	6.04	--	4.54	270	--	<1.0	<1.0	<1.0	<1.0	15	37,000	<1.0	<1.0	3.2	<1.0	<1.0	<250	--	
MW-4	3/9/2009		10.58	5.30	--	5.28	140	--	<1.0	<1.0	<1.0	<1.0	18	27,000	<1.0	<1.0	3.5	<1.0	<1.0	<250	--	
MW-4	5/28/2009		10.58	7.06	--	3.52	330	--	<1.0	<1.0	<1.0	<1.0	21	36,000	<1.0	<1.0	2.9	<1.0	1.1	<250	0.41	
MW-4	12/10/2009		10.58	6.24	--	4.34	660	--	<0.50	<0.50	<0.50	<1.0	10	39,000	<0.50	<0.50	2.7	<0.50	<0.50	<100	0.49	
MW-4	6/29/2010		10.58	6.57	--	4.01	<500	--	<5.0	<5.0	<5.0	<10	7.3	38,000	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	(P, well purged dry)
MW-4	12/30/2010		10.58	7.32	--	3.26	<500	--	<5.0	<5.0	<5.0	<10	11	31,000	<5.0	<5.0	<5.0	<5.0	<5.0	<2,500	--	(P, well purged dry)
MW-4	6/29/2011		10.58	6.43	--	4.15	<500	610	--	--	--	--	11	30,000	--	--	--	--	<5.0	--	0.45	(P)
MW-4	1/30/2012		10.58	6.72	--	3.86	72	530	--	--	--	--	11	23,000	--	--	--	--	0.50	--	0.55	(P)
MW-4	6/29/2012		10.58	5.50	--	5.08	<500	480	--	--	--	--	9.3	28,000	--	--	--	--	<5.0	--	1.21	(P)
MW-4	12/7/2012		10.58	7.05	--	3.53	<500	330	--	--	--	--	8.7	18,000	--	--	--	--	<0.50	--	1.37	
MW-4	6/6/2013		10.58	6.53	--	4.05	<500	600	--	--	--	--	6.7	26,000	--	--	--	--	<5.0	--	1.30	
MW-4	12/13/2013		10.58	7.15	--	3.43	<500	<49	--	--	--	--	7.2	19,000	--	--	--	--	<5.0	--	3.07	
MW-4	6/30/2014		10.58	5.85	--	4.73	<500	800	--	--	--	--	5.5	24,000	--	--	--	--	<5.0	--	0.22	
MW-4	12/16/2014		10.58	4.61	--	5.97	<1,000	<51	--	--	--	--	<10	18,000	--	--	--	--	<10	--	2.05	
MW-4	6/18/2015		10.62	5.77	--	4.85	120	1,700	--	--	--	--	6.03	13,900	--	--	--	--	<1.00	--	0.74	
MW-4	12/8/2015		10.62	5.65	--	4.97	<1,000	--	--	--	--	--	<10	20,000	--	--	--	--	<10	--	2.20	
MW-4	12/16/2015		10.62	5.54	--	5.08	--	<50	--	--	--	--	--	--	--	--	--	--	--	--	2.08	
MW-4	3/24/2016		10.62	4.64	--	5.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-4	6/28/2016		10.62	7.54	--	3.08	<1,000	<52	--	--	--	--	<10	16,000	--	--	--	--	<10	--	0.33	
MW-5	10/12/1993		7.69	6.01	--	1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	10/13/1993		7.69	--	--	--	2,300	--	160	10	<0.5	26	--	--	--	--	--	--	--	--	--	
MW-5	2/15/1994		7.69	5.74	--	1.95	5,100	--	710	16	33	35	153	--	--	--	--	--	--	--	4	
MW-5	5/11/1994		7.69	5.28	--	2.41	11,000	--	1,100	39	110	57	165	--	--	--	--	--	--	--	8	
MW-5	8/1/1994		7.69	5.84	--	1.85	9,000	--	730	35	61	41	196	--	--	--	--	--	--	--	2.60	
MW-5	10/18/1994		7.69	6.01	--	1.68	7,800	--	330	30	27	27	559	--	--	--	--	--	--	--	5.60	
MW-5	1/13/1995		7.69	4.74	--	2.95	<500	--	290	6	<5.0	18	--	--	--	--	--	--	--	--	6.80	
MW-5	4/13/1995		7.69	5.50	--	2.19	9,100	--	400	15	52	27	--	--	--	--	--	--	--	--	7.40	
MW-5	7/11/1995		7.69	5.75	--	1.94	7,300	--	390	13	28	23	--	--	--	--	--	--	--	--	7.20	
MW-5	11/3/1995		7.69	6.65	--	1.04	7,200	--	270	15	38	23	200	--	--	--	--	--	--	--	8.40	
MW-5	2/5/1996		7.69	4.83	--	2.86	4,600	--	370	15	53	28	<50	--	--	--	--	--	--	--	1.90	
MW-5	4/24/1996		7.69	6.09	--	1.60	3,000	--	180	<10	32	14	<100	--	--	--	--	--	--	--	8.10	
MW-5	7/15/1996		7.69	6.57	--	1.12	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	7/16/1996		7.69	--	--	--	<50	--	190	<10	31	16	<100	--	--	--	--	--	--	--	8.30	
MW-5	7/30/1996		7.69	5.61	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	8/12/1996		7.69	--	--	--	2,000	--	150	12	25	18	<50	--	--	--	--	--	--	--	7.60	
MW-5	11/4/1996		7.69	8.25	--	-0.56	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	11/5/1996		7.69	--	--	--	5,200	--	42	5.5	13	<5.0	1,700	--	--	--	--	--	--	--	7.40	
MW-5	5/17/1997		7.69	6.95	--	0.74	80	--	0.56	<1.0	<1.0	<1.0	46	--	--	--	--	--	--	--	6.70	
MW-5	8/11/1997		7.69	6.72	--	0.97	2,700	--	20	12	6.7	9.7	1,900	--	--	--	--	--	--	--	8.50	
MW-5	11/17/1997		7.69	9.49	--	-1.80	8,400	--	25	12	8.7	5.4	13,000	--	--	--	--	--	--	--	7.90	
MW-5	1/29/1998		7.69	7.88	--	-0.19	110,000	--	2,500	110	180	589	180,000	--	--	--	--	--	--	--	6.80	
MW-5	6/22/1998		7.69	7.40	--	0.29	4,400	--	47	10	29	21	47	--	--	--	--	--	--	--	6.60	
MW-5	12/30/1998		7.69	6.13	--	1.56	6,000	--	18	9.1	22	16	63	--	--	--	--	--	--	--	--	
MW-5	3/9/1999		7.69	4.79	--	2.90	4,600	--	8.8	5.5	12	11	24	--	--	--	--	--	--	--	--	
MW-5	6/23/1999		7.69	5.95	--	1.74	3,400	--	1,500	8.9	54	87	7,500	--	--	--	--	--	--	--	--	
MW-5	9/23/1999		7.69	5.43	--	2.26	2,600	--	510	14	140	650	580	--	--	--	--	--	--	--	--	
MW-5	12/28/1999		7.69	5.30	--	2.39	3,500	--	900	18	57	140	4,800	--	--	--	--	--	--	--	--	
MW-5	3/22/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	5/26/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/6/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/15/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-5	12/11/2000		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	3/29/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	6/27/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	9/19/2001		7.69	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-5	12/28/2001		7.69	4.65	--	3.04	4,600	--	20	25	16	57	72	--	--	--	--	--	--	--	--	
MW-5	3/12/2002		7.69	5.35	--	2.34	5,100	--	45	14	22	39	32	--	--	--	--	--	--	--	--	
MW-5	6/13/2002		7.69	5.34	--	2.35	2,900	--	32	<12.5	<12.5	<25	616	--	--	--	--	--	--	--	--	
MW-5	9/6/2002		7.69	5.46	--	2.23	3,400	--	23	5.5	<5.0	11	230	--	--	--	--	--	--	--	--	
MW-5	12/13/2002		7.69	5.47	--	2.22	2,500	--	12	9.3	4.6	8.8	110	--	--	--	--	--	--	--	--	
MW-5	2/19/2003		7.69	5.29	--	2.40	2,800	--	11	5.4	9.7	12	6.4	--	--	--	--	--	--	--	--	
MW-5	6/6/2003		7.69	5.30	--	2.39	3,200	--	9.1	<5.0	7.6	9.3	<5.0	<200	--	<5.0	<5.0	--	<5.0	<1,000	--	
MW-5	8/7/2003		7.69	5.33	--	2.36	2,200	--	7.3	<5.0	<5.0	9.1	18	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	
MW-5	11/20/2003		7.69	5.39	--	2.30	3,500	--	12	5.4	6.4	12	12	<100	--	<2.5	<2.5	--	<2.5	<500	--	
MW-5	4/28/2004		7.69	5.53	--	2.16	5,700	--	7.8	4.2	5.2	11	11	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-5	8/26/2004		7.69	5.42	--	2.27	2,400	--	23	4	3.6	11	74	<100	<2.5	<2.5	<2.5	<2.5	<2.5	--	--	
MW-5	12/1/2004		7.69	5.38	--	2.31	4,300	--	11	<5.0	5.5	15	<5.0	<200	<5.0	<5.0	<5.0	<5.0	<5.0	<1,000	--	
MW-5	2/2/2005		7.69	5.48	--	2.21	4,000	--	8.4	4.8	4	10	11	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-5	4/25/2005		10.18	5.52	--	4.66	5,200	--	7.6	4	4.3	9.9	12	<100	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-5	9/30/2005		10.18	5.04	--	5.14	4,100	--	5.3	2.7	2.1	8	16	27	<1.0	<1.0	<1.0	<1.0	<1.0	<100	--	
MW-5	12/28/2005		10.18	4.85	--	5.33	7,700	--	7.7	3.3	2.9	7.1	3.8	<20	<2.0	14	<2.0	--	<2.0	<400	--	
MW-5	3/23/2006		10.18	5.07	--	5.11	5,700	--	11	3.3	2.4	8.1	8.6	37	<2.0	<4.0	<2.0	<2.0	<2.0	<400	--	
MW-5	6/5/2006		10.18	5.39	(Sheen)	4.79	5,900	--	36	5	3.7	15	11	90	<2.5	<5.0	<2.5	<2.5	<2.5	<500	--	
MW-5	9/19/2006		10.18	4.75	--	5.43	4,600	--	6.7	<2.5	<2.5	<5.0	12	53	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-5	12/1/2006		10.18	5.29	--	4.89	4,400	--	5	<2.5	<2.5	5.8	14	<25	<2.5	<5.0	<2.5	<2.5	2.7	<1,300	--	
MW-5	3/1/2007		10.18	5.01	--	5.17	6,400	--	6.2	3	<2.5	8.7	<2.5	<25	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-5	6/1/2007		10.18	5.34	--	4.84	7,000	--	3.4	<2.5	<2.5	6.6	11	40	<2.5	32	<2.5	5.8	<2.5	<1,300	--	
MW-5	9/13/2007		10.18	5.11	--	5.07	7,000	--	3.8	<2.5	<2.5	<5.0	8.5	<25	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-5	11/21/2007		10.18	5.34	--	4.84	4,700	--	<2.5	<2.5	<2.5	<5.0	11	310	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-5	2/29/2008		10.18	5.33	--	4.85	5,100	--	1.9	1.8	0.93	4.2	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-5	5/23/2008		10.18	5.38	--	4.80	4,600	--	<2.5	<2.5	<2.5	<5.0	3.9	<25	<2.5	<5.0	<2.5	<2.5	<2.5	<1,200	--	
MW-5	9/26/2008		10.18	5.26	--	4.92	3,400	--	1.5	<1.0	<1.0	2.2	2.8	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-5	12/23/2008		10.18	5.04	--	5.14	3,300	--	2.7	1.1	<1.0	3.4	1	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-5	3/9/2009		10.18	4.79	--	5.39	4,300	--	1.9	1.8	<1.0	4	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-5	5/28/2009		10.18	5.21	--	4.97	4,400	--	<1.0	<1.0	<1.0	1.8	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	2.15	
MW-5	12/10/2009		10.18	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	6/29/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	12/30/2010		--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA, need traffic control)
MW-5	6/29/2011		10.18	5.38	--	4.80	3,300	--	1.7	0.60	<0.50	2.4	1.9	<4.0	--	--	--	--	<0.50	--	0.46	(P)
MW-5	1/30/2012		10.18	5.24	--	4.94	3,200	--	2.4	1.1	<0.50	3.6	2.1	17	--	--	--	--	<0.50	--	1.09	(P)
MW-5	6/27/2012		10.18	5.39	--	4.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	1.52	(P, smpld 6/29/12)
MW-5	6/29/2012		--	--	--	--	3,000	--	1.5	<0.50	<0.50	3.5	2.0	<4.0	--	--	--	--	<0.50	--	--	
MW-5	12/7/2012		10.18	5.11	--	5.07	3,200	--	2.9	0.79	0.89	2.9	6.2	89	--	--	--	--	<0.50	--	1.26	
MW-5	6/6/2013		10.18	5.47	--	4.71	3,800	--	2.1	0.67	<0.50	3.2	3.7	41	--	--	--	--	<0.50	--	1.06	
MW-5	12/13/2013		10.18	5.47	--	4.71	3,300	600	3.3	1.0	0.79	4.1	9.5	410	--	--	--	--	<0.50	--	2.87	
MW-5	6/30/2014		10.18	5.49	--	4.69	2,800	340	2.5	0.67	<0.50	3.9	5.2	160	--	--	--	--	<0.50	--	0.23	
MW-5	12/16/2014		10.18	4.05	--	6.13	2,500	410	2.5	<0.50	<0.50	3.2	3.6	200	--	--	--	--	<0.50	--	0.31	
MW-5	6/18/2015		10.20	5.45		4.75	2,400	1,100	1.76	<5.00	<1.00	2.94 (J)	6.98	523	--	--	--	--	<1.00	--	0.24	(Tagged, sampled out of
MW-5	12/8/2015		10.20	5.53	--	4.67	2,200	--	1.9	0.80	<0.50	3.6	11	720	--	--	--	--	<0.50	--	2.96	
MW-5	12/16/2015		10.20	5.03	--	5.17	--	1,100	--	--	--	--	--	--	--	--	--	--	--	--	4.64	
MW-5	3/24/2016		10.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-5	6/28/2016		10.20	5.61	--	4.59	2,100	750	1.6	<0.50	<0.50	2.7	5.9	620	--	--	--	--	<0.50	--	0.35	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-6	10/12/1993		8.52	6.59	--	1.93	63	--	<0.5	<0.5	<0.5	<0.5	44	--	--	--	--	--	--	--	--	
MW-6	2/15/1994		8.52	6.31	--	2.21	68	--	<0.5	<0.5	<0.5	<0.5	38	--	--	--	--	--	--	--	3.10	
MW-6	5/11/1994		8.52	6.15	--	2.37	68	--	<0.5	<0.5	<0.5	<0.5	49	--	--	--	--	--	--	--	8.70	
MW-6	8/1/1994		8.52	6.46	--	2.06	91	--	<0.5	<0.5	<0.5	0.6	60	--	--	--	--	--	--	--	2.40	
MW-6	10/18/1994		8.52	6.72	--	1.80	<50	--	<0.5	<0.5	<0.5	<0.5	85	--	--	--	--	--	--	--	6	
MW-6	1/13/1995		8.52	5.95	--	2.57	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7	
MW-6	4/13/1995		8.52	5.44	--	3.08	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	8.50	
MW-6	7/11/1995		8.52	5.68	--	2.84	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	8.40	
MW-6	11/2/1995		8.52	6.57	--	1.95	<50	--	<0.5	<0.5	<0.5	<1.0	35	--	--	--	--	--	--	--	8.30	
MW-6	2/5/1996		8.52	6.27	--	2.25	<50	--	<5.0	<10	<10	<10	<100	--	--	--	--	--	--	--	2.20	
MW-6	4/24/1996		8.52	5.95	--	2.57	<250	--	<2.5	<5.0	<5.0	<5.0	62	--	--	--	--	--	--	--	8	
MW-6	7/15/1996		8.52	6.39	--	2.13	<250	--	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--	8	
MW-6	7/30/1996		8.52	6.44	--	2.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/4/1996		8.52	8.05	--	0.47	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/5/1996		8.52	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.30	
MW-6	5/17/1997		8.52	6.75	--	1.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	8/11/1997		8.52	6.48	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	11/17/1997		8.52	9.27	--	-0.75	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.70	
MW-6	1/29/1998		8.52	7.98	--	0.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/22/1998		8.52	7.68	--	0.84	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/30/1998		8.52	6.98	--	1.54	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/9/1999		8.52	5.90	--	2.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/23/1999		8.52	6.93	--	1.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/23/1999		8.52	6.45	--	2.07	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/28/1999		8.52	6.33	--	2.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/22/2000		8.52	5.15	--	3.37	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	5/26/2000		8.52	5.72	--	2.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	9/15/2000		8.52	6.02	--	2.50	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	12/11/2000		8.52	6.20	--	2.32	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/29/2001		8.52	5.34	--	3.18	750	--	<2.5	2.9	<2.5	12	820	--	--	--	--	--	--	--	--	
MW-6	6/27/2001		8.52	6.00	--	2.52	760	--	33	<2.5	<2.5	<7.5	968	--	--	--	--	--	--	--	--	
MW-6	9/19/2001		8.52	6.22	--	2.30	<500	--	<5.0	<5.0	<5.0	<15	879	--	--	--	--	--	--	--	--	
MW-6	12/28/2001		8.52	4.71	--	3.81	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NS)
MW-6	3/12/2002		8.52	4.96	--	3.56	<500	--	<5.0	<5.0	<5.0	<10	244	--	--	--	--	--	--	--	--	
MW-6	6/13/2002		8.52	5.78	--	2.74	<250	--	<2.5	<2.5	<2.5	<5.0	413	--	--	--	--	--	--	--	--	
MW-6	9/6/2002		8.52	6.14	--	2.38	130	--	<0.5	<0.5	<0.5	<0.5	240	--	--	--	--	--	--	--	--	
MW-6	12/13/2002		8.52	6.05	--	2.47	140	--	<1.0	<1.0	<1.0	<1.0	200	--	--	--	--	--	--	--	--	
MW-6	2/19/2003		8.52	5.40	--	3.12	<500	--	<5.0	<5.0	<5.0	<5.0	150	--	--	--	--	--	--	--	--	
MW-6	6/6/2003		8.52	5.54	--	2.98	1,100	--	<5.0	<5.0	<5.0	<5.0	140	<200	--	<5.0	<5.0	--	21	<1,000	--	
MW-6	8/7/2003		8.52	5.94	--	2.58	<500	--	<5.0	<5.0	<5.0	<5.0	160	<200	<5.0	<5.0	<5.0	<5.0	20	<1,000	--	
MW-6	11/20/2003		8.52	5.85	--	2.67	95	--	<0.5	<0.5	<0.5	<0.5	74	<20	--	<0.5	<0.5	--	12	<100	--	
MW-6	4/28/2004		8.52	5.45	--	3.07	<250	--	<2.5	<2.5	<2.5	<2.5	120	<100	<2.5	<2.5	<2.5	<2.5	12	<500	--	
MW-6	8/26/2004		8.52	6.06	--	2.46	<250	--	<2.5	<2.5	<2.5	<2.5	110	<100	<2.5	<2.5	<2.5	<2.5	12	<500	--	
MW-6	12/1/2004		8.52	6.19	--	2.33	<250	--	<2.5	<2.5	<2.5	<2.5	86	<100	<2.5	<2.5	<2.5	<2.5	11	<500	--	
MW-6	2/2/2005		8.52	5.20	--	3.32	55	--	<0.5	<0.5	<0.5	<0.5	41	32	<0.5	<0.5	<0.5	<0.5	6.2	<100	--	
MW-6	4/25/2005		11.01	5.22	--	5.79	64	--	<0.5	<0.5	<0.5	<0.5	50	45	<0.5	<0.5	<0.5	<0.5	6	<100	--	
MW-6	9/30/2005		11.01	5.93	--	5.08	200(N)	--	<2.0	<2.0	<2.0	<4.0	51	280	<2.0	<2.0	<2.0	<2.0	4.4	<200	--	
MW-6	12/28/2005		11.01	5.49	--	5.52	<50	--	<0.5	<0.5	<0.5	<1.0	16	160	<0.5	<1.0	<0.5	--	2	<100	--	
MW-6	3/23/2006		11.01	4.59	--	6.42	<50	--	<0.5	<0.5	<0.5	<1.0	5.6	35	<0.5	<1.0	<0.5	<0.5	0.91	<100	--	
MW-6	6/5/2006		11.01	5.38	--	5.63	<50	--	<0.5	0.54	<0.5	<1.0	14	110	<0.5	<1.0	<0.5	<0.5	1.5	<100	--	
MW-6	9/19/2006		11.01	5.93	--	5.08	<50	--	<0.5	<0.5	<0.5	<1.0	8.8	190	<0.5	<1.0	<0.5	<0.5	1.4	<250	--	
MW-6	12/1/2006		11.01	6.28	--	4.73	<50	--	<0.5	<0.5	<0.5	<1.0	5.9	98	<0.5	<1.0	<0.5	<0.5	0.94	<250	--	
MW-6	3/1/2007		11.01	5.72	--	5.29	<50	--	<0.5	<0.5	<0.5	<1.0	6	96	<0.5	<1.0	<0.5	<0.5	0.68	<250	--	

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Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-6	6/1/2007		11.01	6.22	--	4.79	<50	--	<0.5	<0.5	<0.5	<1.0	7.4	160	<0.5	<1.0	<0.5	<0.5	0.77	<250	--	
MW-6	9/13/2007		11.01	6.57	--	4.44	63	--	<0.5	<0.5	<0.5	<1.0	6.7	120	<0.5	<1.0	<0.5	<0.5	0.87	<250	--	
MW-6	11/21/2007		11.01	6.67	--	4.34	<50	--	<0.5	<0.5	<0.5	<1.0	8.4	210	<0.5	<1.0	<0.5	<0.5	1	<250	--	
MW-6	2/29/2008		11.01	5.80	--	5.21	<50	--	<0.5	<0.5	<0.5	<1.0	7.1	46	<0.5	<1.0	<0.5	<0.5	0.92	<250	--	
MW-6	5/23/2008		11.01	6.53	--	4.48	<50	--	<0.5	<0.5	<0.5	<1.0	8.4	53	<0.5	<1.0	<0.5	<0.5	0.95	<250	--	
MW-6	9/26/2008		11.01	6.86	--	4.15	<50	--	<1.0	<1.0	<1.0	<1.0	5.1	56	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-6	12/23/2008		11.01	6.90	--	4.11	<50	--	<1.0	<1.0	<1.0	<1.0	5.3	54	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-6	3/9/2009		11.01	6.00	--	5.01	<50	--	<1.0	<1.0	<1.0	<1.0	3.5	62	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-6	5/28/2009		11.01	6.19	--	4.82	<50	--	<1.0	<1.0	<1.0	<1.0	6.6	55	<1.0	<1.0	<1.0	<1.0	<1.0	<250	2.77	
MW-6	12/10/2009		11.01	6.15	--	4.86	<50	--	<0.50	<0.50	<0.50	<1.0	2.0	40	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.60	
MW-6	6/29/2010		11.01	6.18	--	4.83	<50	--	<0.50	<0.50	<0.50	<1.0	2.7	49	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.57	(P)
MW-6	12/30/2010		11.01	5.34	--	5.67	<50	--	<0.50	<0.50	<0.50	<1.0	2.2	44	<0.50	<0.50	<0.50	<0.50	<0.50	<250	0.41	(P)
MW-6	6/29/2011		11.01	5.53	--	5.48	<50	2,100	--	--	--	--	3.6	37	--	--	--	--	<0.50	--	0.03	(P)
MW-6	1/30/2012		11.01	5.89	--	5.12	<50	710	--	--	--	--	4.0	110	--	--	--	--	<0.50	--	0.61	(P)
MW-6	6/27/2012		11.01	5.68	--	5.33	<50	1,200	--	--	--	--	2.2	49	--	--	--	--	0.52	--	0.94	(P)
MW-6	12/7/2012		11.01	5.35	--	5.66	<50	610	--	--	--	--	2.4	300	--	--	--	--	<0.50	--	1.20	
MW-6	6/6/2013		11.01	5.99	--	5.02	160	3,900	--	--	--	--	3.8	150	--	--	--	--	<0.50	--	1.26	
MW-6	12/13/2013		11.01	6.36	--	4.65	<50	140	--	--	--	--	4.4	160	--	--	--	--	<0.50	--	2.76	
MW-6	6/30/2014		11.01	5.94	--	5.07	<50	300	--	--	--	--	2.4	57	--	--	--	--	<0.50	--	0.18	
MW-6	12/16/2014		11.01	5.22	--	5.79	<50	510	--	--	--	--	<0.50	<20	--	--	--	--	<0.50	--	1.76	(Drained well box)
MW-6	6/18/2015		11.04	5.99	--	5.05	38 (J)	7,400	--	--	--	--	1.30	30.3	--	--	--	--	<1.00	--	2.18	
MW-6	12/8/2015		11.04	6.36	--	4.68	<50	2,000	--	--	--	--	0.74	<20	--	--	--	--	<0.50	--	1.99	
MW-6	12/16/2015		11.04	6.09	--	4.95	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	3/24/2016		11.04	5.12	--	5.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-6	6/28/2016		11.04	5.89	--	5.15	<50	1,800	--	--	--	--	1.6	30	--	--	--	--	<0.50	--	0.17	
MW-7	10/12/1993		7.61	6.14	--	1.47	<50	--	<0.5	<0.5	<0.5	0.7	<5.0	--	--	--	--	--	--	--	--	
MW-7	2/15/1994		7.61	5.88	--	1.73	78	--	<0.5	<0.5	<0.5	0.6	<5.0	--	--	--	--	--	--	--	4	
MW-7	5/11/1994		7.61	5.76	--	1.85	70	--	<0.5	<0.5	<0.5	0.9	12	--	--	--	--	--	--	--	9.10	
MW-7	8/1/1994		7.61	5.97	--	1.64	77	--	<0.5	<0.5	<0.5	0.5	182	--	--	--	--	--	--	--	2.50	
MW-7	10/18/1994		7.61	6.24	--	1.37	<50	--	<0.5	<0.5	<0.5	<0.5	52	--	--	--	--	--	--	--	6.30	
MW-7	1/13/1995		7.61	5.39	--	2.22	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	8.20	
MW-7	4/13/1995		7.61	5.17	--	2.44	63	--	<0.5	<0.5	<0.5	1.4	--	--	--	--	--	--	--	--	8.40	
MW-7	7/11/1995		7.61	5.25	--	2.36	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	7.90	
MW-7	11/2/1995		7.61	6.19	--	1.42	<50	--	<0.5	<0.5	<0.5	<1.0	55	--	--	--	--	--	--	--	8	
MW-7	2/5/1996		7.61	5.69	--	1.92	<50	--	<0.5	<1.0	<1.0	<1.0	40	--	--	--	--	--	--	--	1.90	
MW-7	4/24/1996		7.61	5.59	--	2.02	<250	--	<2.5	<5.0	<5.0	<5.0	53	--	--	--	--	--	--	--	8.20	
MW-7	7/15/1996		7.61	6.07	--	1.54	<250	--	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--	7.80	
MW-7	7/30/1996		7.61	6.04	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/4/1996		7.61	7.76	--	-0.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/5/1996		7.61	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.80	
MW-7	5/17/1997		7.61	6.42	--	1.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	8/11/1997		7.61	6.06	--	1.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	11/17/1997		7.61	9.07	--	-1.46	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.10	
MW-7	1/29/1998		7.61	7.44	--	0.17	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/22/1998		7.61	7.39	--	0.22	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/30/1998		7.61	5.51	--	2.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/9/1999		7.61	5.57	--	2.04	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/23/1999		7.61	6.69	--	0.92	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/23/1999		7.61	6.23	--	1.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/28/1999		7.61	6.08	--	1.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/22/2000		7.61	4.88	--	2.73	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	5/26/2000		7.61	5.42	--	2.19	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	9/15/2000		7.61	5.79	--	1.82	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-7	12/11/2000		7.61	5.93	--	1.68	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	3/29/2001		7.61	5.24	--	2.37	600	--	<2.5	<2.5	<2.5	<7.5	636	--	--	--	--	--	--	--	--	
MW-7	6/27/2001		7.61	5.69	--	1.92	590	--	<2.5	<2.5	<2.5	<7.5	739	--	--	--	--	--	--	--	--	
MW-7	9/19/2001		7.61	5.89	--	1.72	560	--	<5.0	<5.0	<5.0	<15	1,190	--	--	--	--	--	--	--	--	
MW-7	12/28/2001		7.61	4.53	--	3.08	910	--	23	<2.5	<2.5	<5.0	856	--	--	--	--	--	--	--	--	
MW-7	3/12/2002		7.61	4.71	--	2.90	620	--	<2.5	<2.5	<2.5	<5.0	675	--	--	--	--	--	--	--	--	
MW-7	6/13/2002		7.61	5.21	--	2.40	860	--	<2.5	<2.5	<2.5	<5.0	1,470	--	--	--	--	--	--	--	--	
MW-7	9/6/2002		7.61	5.77	--	1.84	350	--	<2.5	<2.5	<2.5	<2.5	690	--	--	--	--	--	--	--	--	
MW-7	12/13/2002		7.61	5.65	--	1.96	1,300	--	<10	<10	<10	<10	1,800	--	--	--	--	--	--	--	--	
MW-7	2/19/2003		7.61	5.07	--	2.54	1,700	--	<10	<10	<10	<10	1,600	--	--	--	--	--	--	--	--	
MW-7	6/6/2003		7.61	5.27	--	2.34	1,000	--	<5.0	<5.0	<5.0	<5.0	510	<200	--	<5.0	<5.0	--	41	<1,000	--	
MW-7	8/7/2003		7.61	5.52	--	2.09	510	--	<5.0	<5.0	<5.0	<5.0	520	<200	<5.0	<5.0	<5.0	<5.0	43	<1,000	--	
MW-7	11/20/2003		7.61	5.79	--	1.82	330	--	<2.5	<2.5	<2.5	<2.5	270	1,300	--	<2.5	<2.5	--	8.9	<500	--	
MW-7	4/28/2004		7.61	5.20	--	2.41	<250	--	<2.5	<2.5	<2.5	<2.5	71	880	<2.5	<2.5	<2.5	<2.5	3.5	<500	--	
MW-7	8/26/2004		7.61	5.65	--	1.96	450	--	<2.5	<2.5	<2.5	2.8	150	4,800	<0.5	<2.5	<2.5	<0.5	7.8	<500	--	
MW-7	12/1/2004		7.61	5.79	--	1.82	100	--	<1.0	<1.0	<1.0	<1.0	25	1,400	<1.0	<1.0	<1.0	<1.0	1.1	<200	--	
MW-7	2/2/2005		7.61	4.92	--	2.69	81	--	<0.5	<0.5	<0.5	<0.5	31	830	<0.5	<0.5	<0.5	<0.5	1.8	<100	--	
MW-7	4/25/2005		10.11	4.88	--	5.23	67	--	<0.5	<0.5	<0.5	0.64	41	520	<0.5	<0.5	<0.5	<0.5	2.1	<100	--	
MW-7	9/30/2005		10.11	5.62	--	4.49	58(N)	--	<0.5	<0.5	<0.5	<1.0	18	450	<0.5	<0.5	<0.5	<0.5	1.5	<50	--	
MW-7	12/28/2005		10.11	4.93	--	5.18	<500	--	<5.0	<5.0	<5.0	<10	7.4	1,600	<5.0	<10	<5.0	--	<5.0	<1,000	--	
MW-7	3/23/2006		10.11	4.63	--	5.48	71	--	<0.5	<0.5	<0.5	<1.0	25	340	<0.5	<1.0	<0.5	<0.5	1.7	<100	--	
MW-7	6/5/2006		10.11	5.08	--	5.03	57	--	<0.5	<0.5	<0.5	<1.0	14	200	<0.5	<1.0	<0.5	<0.5	1.2	<100	--	
MW-7	9/19/2006		10.11	5.60	--	4.51	<50	--	<0.5	<0.5	<0.5	<1.0	14	280	<0.5	<1.0	<0.5	<0.5	1.6	<250	--	
MW-7	12/1/2006		10.11	6.00	--	4.11	<250	--	<2.5	<2.5	<2.5	<5.0	6.7	1,400	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-7	3/1/2007		10.11	5.69	--	4.42	<250	--	<2.5	<2.5	<2.5	<5.0	4	1,000	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-7	6/1/2007		10.11	5.97	--	4.14	120	--	<0.5	<0.5	<0.5	<1.0	7.5	600	<0.5	<1.0	<0.5	<0.5	0.59	<250	--	
MW-7	9/13/2007		10.11	6.31	--	3.80	<50	--	<0.5	<0.5	<0.5	<1.0	10	260	<0.5	<1.0	<0.5	<0.5	0.8	<250	--	
MW-7	11/21/2007		10.11	6.39	--	3.72	55	--	<0.5	<0.5	<0.5	<1.0	8.4	1,500	<0.5	<1.0	<0.5	<0.5	0.87	<250	--	
MW-7	2/29/2008		10.11	5.78	--	4.33	<50	--	<0.5	<0.5	<0.5	<1.0	6.2	960	<0.5	<1.0	<0.5	<0.5	0.73	<250	--	
MW-7	5/23/2008		10.11	6.27	--	3.84	53	--	<0.5	<0.5	<0.5	<1.0	9.6	300	<0.5	<1.0	<0.5	<0.5	0.96	<250	--	
MW-7	9/26/2008		10.11	6.52	--	3.59	<50	--	<1.0	<1.0	<1.0	<1.0	7.5	800	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-7	12/23/2008		10.11	6.40	--	3.71	59	--	<1.0	<1.0	<1.0	<1.0	5.7	3,500	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-7	3/9/2009		10.11	5.65	--	4.46	<50	--	<1.0	<1.0	<1.0	<1.0	4.4	1,300	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-7	5/28/2009		10.11	5.91	--	4.20	<50	--	<1.0	<1.0	<1.0	<1.0	5.7	110	<1.0	<1.0	<1.0	<1.0	<1.0	<250	1.77	
MW-7	12/10/2009		10.11	5.88	(Sheen)	4.23	62	--	<0.50	<0.50	<0.50	<1.0	6.5	1,200	<0.50	<0.50	<0.50	<0.50	0.56	<100	0.56	
MW-7	6/29/2010		10.11	5.48	--	4.63	<50	--	<0.50	<0.50	<0.50	<1.0	3.0	2,000	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.63	(P)
MW-7	12/30/2010		10.11	4.80	--	5.31	<50	--	<0.50	<0.50	<0.50	<1.0	5.6	3,900	<0.50	<0.50	<0.50	<0.50	0.58	<250	0.65	(P)
MW-7	6/29/2011		10.11	5.18	--	4.93	<500	--	<5.0	<5.0	<5.0	<10	<5.0	2,200	--	--	--	--	<5.0	--	0.47	(P)
MW-7	1/30/2012		10.11	5.29	--	4.82	<50	--	<0.50	<0.50	<0.50	<1.0	4.0	2,700	--	--	--	--	<0.50	--	0.69	(P)
MW-7	6/27/2012		10.11	5.19	--	4.92	<50	--	<0.50	<0.50	<0.50	<1.0	2.7	1,400	--	--	--	--	0.56	--	1.23	(P)
MW-7	12/7/2012		10.11	4.78	--	5.33	<50	--	<0.50	<0.50	<0.50	<1.0	3.0	2,600	--	--	--	--	<0.50	--	1.21	
MW-7	6/6/2013		10.11	5.43	--	4.68	<50	--	<0.50	<0.50	<0.50	<1.0	2.8	1,600	--	--	--	--	<0.50	--	1.23	
MW-7	6/14/2013		--	--	--	--	--	570	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	12/13/2013		10.11	5.84	--	4.27	<50	<51	<0.50	<0.50	<0.50	<1.0	4.4	3,100	--	--	--	--	<0.50	--	2.75	
MW-7	6/30/2014		10.11	5.42	--	4.69	<250	130	<2.5	<2.5	<2.5	<5.0	2.7	2,300	--	--	--	--	<2.5	--	0.23	
MW-7	12/16/2014		10.11	5.71	--	4.40	<100	140	<1.0	<1.0	<1.0	<2.0	3.5	2,800	--	--	--	--	<1.0	--	0.47	
MW-7	6/18/2015		10.13	4.94		5.19	85 (J)	2,900	<1.00	<5.00	<1.00	<3.00	2.19	1,890	--	--	--	--	<1.00	--	0.13	
MW-7	12/8/2015		10.13	5.76	--	4.37	<100	--	<1.0	<1.0	<1.0	<2.0	1.8	2,400	--	--	--	--	<1.0	--	2.15	
MW-7	12/16/2015		10.13	5.26	--	4.87	--	690	--	--	--	--	--	--	--	--	--	--	--	--	3.62	
MW-7	3/24/2016		10.13	4.30	--	5.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-7	6/28/2016		10.13	5.46	--	4.67	<100	69	<1.0	<1.0	<1.0	<2.0	2.4	1,900	--	--	--	--	<1.0	--	0.15	
MW-8	10/12/1993		8.60	5.86	--	2.74	<50	--	<0.5	<0.5	<0.5	<0.5	11	--	--	--	--	--	--	--	--	
MW-8	2/15/1994		8.60	5.50	--	3.10	380	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	3.30	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-8	5/11/1994		8.60	5.09	--	3.51	330	--	<0.5	1.2	<0.5	1.9	<5.0	--	--	--	--	--	--	--	8.50	
MW-8	8/1/1994		8.60	5.20	--	3.40	260	--	<0.5	1.2	2.9	5.8	<5.0	--	--	--	--	--	--	--	2.30	
MW-8	10/18/1994		8.60	5.70	--	2.90	82	--	<0.5	<0.5	<0.5	<0.5	<5.0	--	--	--	--	--	--	--	6.40	
MW-8	1/13/1995		8.60	4.96	--	3.64	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	6.90	
MW-8	4/13/1995		8.60	5.40	--	3.20	270	--	<0.5	<0.5	<0.5	4.4	--	--	--	--	--	--	--	--	8.40	
MW-8	7/11/1995		8.60	6.01	--	2.59	320	--	<0.5	<0.5	<0.5	3.5	--	--	--	--	--	--	--	--	8	
MW-8	11/2/1995		8.60	6.81	--	1.79	100	--	<0.5	<0.5	<0.5	<1.0	<5.0	--	--	--	--	--	--	--	8.70	
MW-8	2/5/1996		8.60	6.12	--	2.48	<50	--	<5.0	<10	<10	<10	<100	--	--	--	--	--	--	--	1.50	
MW-8	4/24/1996		8.60	6.23	--	2.37	<50	--	<5.0	<10	<10	<10	<100	--	--	--	--	--	--	--	8.70	
MW-8	7/15/1996		8.60	6.70	--	1.90	<250	--	<2.5	<5.0	<5.0	<5.0	<50	--	--	--	--	--	--	--	8.40	
MW-8	7/30/1996		8.60	6.64	--	1.96	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/4/1996		8.60	8.36	--	0.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/5/1996		8.60	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.20	
MW-8	5/17/1997		8.60	7.03	--	1.57	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	8/11/1997		8.60	6.05	--	2.55	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	11/17/1997		8.60	9.14	--	-0.54	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	7.70	
MW-8	1/29/1998		8.60	7.90	--	0.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/22/1998		8.60	7.72	--	0.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/30/1998		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	3/9/1999		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	6/23/1999		8.60	4.70	--	3.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/23/1999		8.60	4.22	--	4.38	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/28/1999		8.60	4.12	--	4.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/22/2000		8.60	4.71	--	3.89	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	5/26/2000		8.60	4.98	--	3.62	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	9/15/2000		8.60	4.62	--	3.98	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	12/11/2000		8.60	4.77	--	3.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/29/2001		8.60	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-8	6/27/2001		8.60	5.11	--	3.49	570	--	<2.5	<2.5	2.6	<7.5	3.4	--	--	--	--	--	--	--	--	
MW-8	9/19/2001		8.60	5.00	--	3.60	<500	--	<5.0	<5.0	<5.0	<15	<5.0	--	--	--	--	--	--	--	--	
MW-8	12/28/2001		8.60	4.15	--	4.45	440	--	<0.5	<0.5	0.98	<1.0	6.3	--	--	--	--	--	--	--	--	
MW-8	3/12/2002		8.60	4.35	--	4.25	330	--	<2.5	<2.5	<2.5	<5.0	8.7	--	--	--	--	--	--	--	--	
MW-8	6/13/2002		8.60	5.09	--	3.51	<500	--	<5.0	<5.0	<5.0	<10	16	--	--	--	--	--	--	--	--	
MW-8	9/6/2002		8.60	5.18	--	3.42	98	--	<0.5	<0.5	<0.5	<0.5	76	--	--	--	--	--	--	--	--	
MW-8	12/13/2002		8.60	4.84	--	3.76	120	--	<0.5	<0.5	0.94	0.52	140	--	--	--	--	--	--	--	--	
MW-8	2/19/2003		8.60	4.45	--	4.15	<2,500	--	<25	<25	<25	<25	800	--	--	--	--	--	--	--	--	
MW-8	6/6/2003		8.60	5.00	--	3.60	<50,000	--	<500	<500	<500	<500	17,000	<20,000	--	<500	<500	--	<500	<100,000	--	
MW-8	8/7/2003		8.60	4.84	--	3.76	<2,500	--	<25	<25	<25	<25	2,400	<1,000	<25	<25	<25	<25	44	<5,000	--	
MW-8	11/20/2003		8.60	4.48	--	4.12	<2,500	--	<25	<25	<25	<25	1,400	4,100	--	<25	<25	--	<25	<5,000	--	
MW-8	4/28/2004		8.60	9.66	--	-1.06	730	--	<2.5	<2.5	<2.5	<2.5	170	42,000	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-8	8/26/2004		8.60	4.73	--	3.87	<2,500	--	<25	<25	<25	<25	170	47,000	<25	<25	<25	<25	<25	--	--	
MW-8	12/1/2004		8.60	4.80	--	3.80	<250	--	<2.5	<2.5	<2.5	<2.5	36	9,700	<2.5	<2.5	<2.5	<2.5	<2.5	<500	--	
MW-8	2/2/2005		8.60	4.50	--	4.10	810	--	<0.5	<0.5	<0.5	<0.5	41	<20	<0.5	<0.5	0.72	<0.5	0.64	<100	--	
MW-8	4/25/2005		11.08	4.99	--	6.09	1,400	--	<12	<12	<12	<12	32	45,000	<12	<12	<12	<12	<12	<2,500	--	
MW-8	9/30/2005		11.08	4.89	--	6.19	840	--	<5.0	<5.0	<5.0	<10	17	8,500	<5.0	<5.0	<5.0	<5.0	<5.0	<500	--	
MW-8	12/28/2005		11.08	4.81	--	6.27	<250	--	<2.5	<2.5	<2.5	<5.0	17	7,400	<2.5	<5.0	<2.5	--	<2.5	<500	--	
MW-8	3/23/2006		11.08	4.22	--	6.86	660	--	<2.5	<2.5	<2.5	<5.0	21	11,000	<2.5	<5.0	<2.5	<2.5	<2.5	<500	--	
MW-8	6/5/2006		11.08	4.63	--	6.45	<2,500	--	<25	<25	<25	<50	30	34,000	<25	<50	<25	<25	<25	<5,000	--	
MW-8	9/19/2006		11.08	4.82	--	6.26	<500	--	<5.0	<5.0	<5.0	<10	17	7,500	<5.0	<10	<5.0	<5.0	<5.0	<2,500	--	
MW-8	12/1/2006		11.08	4.83	--	6.25	350	--	<2.5	<2.5	<2.5	<5.0	16	1,900	<2.5	<5.0	<2.5	<2.5	<2.5	<1,300	--	
MW-8	3/1/2007		11.08	4.43	--	6.65	<500	--	<5.0	<5.0	<5.0	<10	20	6,200	<5.0	<10	<5.0	<5.0	<5.0	<2,500	--	
MW-8	6/1/2007		11.08	4.74	--	6.34	<500	--	<5.0	<5.0	<5.0	<10	8.7	3,700	<5.0	<10	<5.0	<5.0	<5.0	<2,500	--	
MW-8	9/13/2007		11.08	5.25	--	5.83	230	--	<0.5	<0.5	<0.5	<1.0	9.4	630	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-8	11/21/2007		11.08	5.13	--	5.95	350	--	<0.5	<0.5	<0.5	<1.0	8.7	360	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

ARCADIS Design & Consultancy for natural and built assets

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-8	2/29/2008		11.08	4.75	--	6.33	<1,000	--	<10	<10	<10	<20	16	7,500	<10	<20	<10	<10	<10	<5,000	--	
MW-8	5/23/2008		11.08	5.01	--	6.07	<1,000	--	<10	<10	<10	<20	15	4,800	<10	<20	<10	<10	<10	<5,000	--	
MW-8	9/26/2008		11.08	5.43	--	5.65	190	--	<1.0	<1.0	<1.0	<1.0	14	1,800	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-8	12/23/2008		11.08	5.25	--	5.83	270	--	<1.0	<1.0	<1.0	<1.0	10	770	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-8	3/9/2009		11.08	4.36	--	6.72	210	--	<1.0	<1.0	<1.0	<1.0	15	3,300	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-8	5/28/2009		11.08	4.98	--	6.10	270	--	<1.0	<1.0	<1.0	<1.0	6.5	710	<1.0	<1.0	<1.0	<1.0	<1.0	<250	2.14	
MW-8	12/10/2009		11.08	5.06	--	6.02	90	--	<0.50	<0.50	<0.50	<1.0	9.0	960	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.47	
MW-8	6/29/2010		11.08	4.71	--	6.37	170	--	<0.50	<0.50	<0.50	<1.0	10	1,700	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.38	(P)
MW-8	12/30/2010		11.08	4.37	--	6.71	190	--	<0.50	<0.50	<0.50	<1.0	6.6	1,500	<0.50	<0.50	<0.50	<0.50	<0.50	<250	0.52	(P)
MW-8	6/29/2011		11.08	4.57	--	6.51	140	1,000	--	--	--	--	4.7	2,000	--	--	--	--	<0.50	--	0.62	(P)
MW-8	1/30/2012		11.08	4.63	--	6.45	240	1,500	--	--	--	--	3.8	250	--	--	--	--	<0.50	--	1.52	(P)
MW-8	6/27/2012		11.08	4.49	--	6.59	300	1,100	--	--	--	--	2.2	270	--	--	--	--	<0.50	--	1.09	(P)
MW-8	12/7/2012		11.08	3.99	--	7.09	210	800	--	--	--	--	1.2	31	--	--	--	--	<0.50	--	1.37	
MW-8	6/6/2013		11.08	4.43	--	6.65	200	830	--	--	--	--	0.50	5.7	--	--	--	--	<0.50	--	1.09	
MW-8	12/13/2013		11.08	4.42	--	6.66	270	100	--	--	--	--	<0.50	<10	--	--	--	--	<0.50	--	2.86	
MW-8	6/30/2014		11.08	4.18	--	6.90	150	<55	--	--	--	--	<0.50	<20	--	--	--	--	<0.50	--	0.20	
MW-8	12/16/2014		11.08	2.05	--	9.03	110	73	--	--	--	--	<0.50	24	--	--	--	--	<0.50	--	0.41	(Temporarily INA)
MW-8	6/18/2015		11.10	5.06		6.04	240	1,200	--	--	--	--	0.398 (J)	113	--	--	--	--	<1.00	--	0.13	
MW-8	12/8/2015		11.10	5.69	--	5.41	130	140	--	--	--	--	1.1	870	--	--	--	--	<0.50	--	2.03	
MW-8	12/16/2015		11.10	5.27	--	5.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	3/24/2016		11.10	4.58	--	6.52	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-8	6/28/2016		11.10	5.32	--	5.78	73	110	--	--	--	--	0.64	220	--	--	--	--	<0.50	--	0.12	
MW-9	10/12/1993		8.08	5.66	0.08	2.48	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/15/1994		8.08	5.32	0.05	2.80	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/11/1994		8.08	5.57	--	2.51	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	8/1/1994		8.08	6.25	--	1.83	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	10/18/1994		8.08	5.59	0.13	2.59	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	1/13/1995		8.08	4.42	0.14	3.77	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/13/1995		8.08	4.06	0.11	4.10	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/11/1995		8.08	4.21	0.08	3.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/2/1995		8.08	5.22	0.05	2.90	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	2/5/1996		8.08	4.76	0.01	3.33	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	4/24/1996		8.08	4.62	0.09	3.53	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/15/1996		8.08	5.11	0.04	3.00	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	7/30/1996		8.08	5.15	--	2.93	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	11/4/1996		8.08	6.75	0.01	1.34	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	5/17/1997	Dup	8.08	5.42	--	2.66	97,000	--	16,000	8,200	2,300	17,300	39,000	--	--	--	--	--	--	--	--	(Dup)
MW-9	5/17/1997		8.08	5.42	--	2.66	97,000	--	16,000	7,700	2,300	18,400	40,000	--	--	--	--	--	--	--	7	
MW-9	8/11/1997	Dup	8.08	5.37	--	2.71	100,000	--	14,000	360	3,200	5,790	27,000	--	--	--	--	--	--	--	--	(Dup)
MW-9	8/11/1997		8.08	5.37	--	2.71	71,000	--	12,000	340	2,100	4,300	26,000	--	--	--	--	--	--	--	9.10	
MW-9	11/17/1997	Dup	8.08	5.62	(SHEEN)	2.46	100,000	--	24,000	5,300	3,500	19,300	35,000	--	--	--	--	--	--	--	--	(Dup)(Sheen)
MW-9	11/17/1997		8.08	5.62	(Sheen)	2.46	100,000	--	22,000	4,800	3,100	17,900	32,000	--	--	--	--	--	--	--	8.30	
MW-9	1/29/1998	Dup	8.08	4.07	(SHEEN)	4.01	250,000	--	20,000	20,000	3,100	18,400	110,000	--	--	--	--	--	--	--	--	(Dup)(Sheen)
MW-9	1/29/1998		8.08	4.07	(Sheen)	4.01	250,000	--	20,000	21,000	3,100	18,500	110,000	--	--	--	--	--	--	--	6.60	
MW-9	6/22/1998	Dup	8.08	4.28	--	3.80	290,000	--	20,000	17,000	3,800	21,200	110,000	--	--	--	--	--	--	--	--	(Dup)
MW-9	6/22/1998		8.08	4.28	--	3.80	280,000	--	21,000	18,000	3,800	21,200	110,000	--	--	--	--	--	--	--	5.80	
MW-9	12/30/1998		8.08	4.95	--	3.13	150,000	--	10,000	3,800	2,000	9,600	86,000	--	--	--	--	--	--	--	--	
MW-9	3/9/1999		8.08	3.95	--	4.13	82,000	--	6,800	570	1,400	4,700	100,000	--	--	--	--	--	--	--	--	
MW-9	6/23/1999		8.08	5.12	--	2.96	41,000	--	11,000	820	2,300	5,200	92,000	--	--	--	--	--	--	--	--	
MW-9	9/23/1999		8.08	4.74	--	3.34	57,000	--	12,000	5,400	1,900	9,500	89,000	--	--	--	--	--	--	--	--	
MW-9	12/28/1999		8.08	4.58	--	3.50	46,000	--	15,000	490	2,500	3,500	100,000	--	--	--	--	--	--	--	--	
MW-9	3/22/2000		8.08	3.90	--	4.18	86,000	--	18,000	1,800	2,300	6,800	120,000	--	--	--	--	--	--	--	--	
MW-9	5/26/2000		8.08	4.15	--	3.93	82,000	--	17,000	680	1,800	3,800	100,000	--	--	--	--	--	--	--	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-9	9/6/2000		8.08	4.47	--	3.61	100,000	--	19,000	280	2,400	6,400	84,000	--	--	--	--	--	--	--	--	
MW-9	9/15/2000		8.08	4.34	--	3.74	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/11/2000		8.08	4.41	--	3.67	110,000	--	14,400	768	2,610	6,670	123,000	--	--	--	--	--	--	--	--	
MW-9	3/29/2001		8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(INA)
MW-9	6/26/2001		8.08	5.03	0.13	3.15	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	9/19/2001		8.08	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	12/28/2001		8.08	3.73	--	4.35	110,000	--	15,000	1,500	2,280	5,530	60,900	--	--	--	--	--	--	--	--	
MW-9	3/12/2002		8.08	4.93	--	3.15	88,000	--	12,500	2,600	2,800	8,950	44,000	--	--	--	--	--	--	--	--	
MW-9	6/13/2002		8.08	4.13	--	3.95	59,000	--	9,870	161	2,560	5,560	35,600	--	--	--	--	--	--	--	--	
MW-9	9/6/2002		8.08	4.39	--	3.69	47,000	--	10,000	<100	2,100	4,600	31,000	--	--	--	--	--	--	--	--	
MW-9	12/13/2002		8.08	3.97	--	4.11	57,000	--	11,000	1,000	2,300	5,800	28,000	--	--	--	--	--	--	--	--	
MW-9	2/19/2003		8.08	3.25	--	4.83	76,000	--	10,000	2,100	3,000	8,900	11,000	--	--	--	--	--	--	--	--	
MW-9	6/6/2003		8.08	3.94	--	4.14	66,000	--	9,000	<500	2,500	4,400	17,000	<20,000	--	<500	<500	--	<500	<100,000	--	
MW-9	8/7/2003		8.08	3.92	(Sheen)	4.16	53,000	--	7,600	<250	2,600	4,700	17,000	<10,000	<250	<250	<250	<250	350	<50,000	--	
MW-9	11/20/2003		8.08	4.89	--	3.19	40,000	--	6,800	<250	860	1,100	16,000	12,000	--	<250	<250	--	<250	<50,000	--	
MW-9	4/28/2004		8.08	3.19	(Sheen)	4.89	47,000	--	5,600	690	2,300	6,800	8,500	<5,000	<120	<120	<120	<120	170	<25,000	--	
MW-9	8/26/2004		8.08	3.61	--	4.47	35,000	--	3,700	500	1,300	5,300	6,500	2,600	<50	<50	<50	<50	140	--	--	
MW-9	12/1/2004		8.08	3.99	--	4.09	36,000	--	3,500	<250	1,200	4,300	8,300	<10,000	<250	<250	<250	<250	<250	<50,000	--	
MW-9	2/2/2005		8.08	3.71	(Sheen)	4.37	21,000	--	1,800	130	670	2,000	3,600	5,600	<50	<50	<50	<50	88	<10,000	--	
MW-9	4/25/2005		10.55	3.31	(Sheen)	7.24	5,900	--	190	<5.0	120	77	540	1,400	<5.0	<5.0	<5.0	<5.0	14	<1,000	--	
MW-9	9/30/2005		10.55	4.02	--	6.53	26,000	--	2,400	360	1,600	4,200	2,400	520	<20	<20	<20	<20	61	<2,000	--	
MW-9	12/28/2005		10.55	2.99	--	7.56	14,000	--	1,400	22	350	450	2,200	1,800	<10	<20	<10	--	49	<2,000	--	
MW-9	3/23/2006		10.55	2.50	--	8.05	4,100	--	250	<10	130	110	330	2,400	<10	<20	<10	<10	<10	<2,000	--	
MW-9	6/5/2006		10.55	3.34	--	7.21	8,200	--	2,200	79	500	1,200	1,800	1,100	<13	<25	<13	<13	75	<2,500	--	
MW-9	9/19/2006		10.55	4.06	--	6.49	9,000	--	2,600	15	440	370	3,100	3,900	<13	<25	<13	<13	100	<6,300	--	
MW-9	12/1/2006		10.55	3.88	--	6.67	5,400	--	1,600	15	310	140	1,400	2,400	<13	<25	<13	<13	46	<6,300	--	
MW-9	3/1/2007		10.55	2.79	--	7.76	6,300	--	250	<13	270	75	240	580	<13	<25	<13	<13	<13	<6,300	--	
MW-9	6/1/2007		10.55	3.53	--	7.02	6,500	--	980	16	250	95	1,800	2,300	<13	<25	<13	<13	50	<6,300	--	
MW-9	9/13/2007		10.55	4.78	--	5.77	4,500	--	170	14	79	27	640	7,300	<13	<25	<13	<13	28	<6,300	--	
MW-9	11/21/2007		10.55	4.41	--	6.14	4,600	--	790	<13	97	34	2,000	3,500	<13	<25	<13	<13	42	<6,300	--	
MW-9	2/29/2008		10.55	3.41	--	7.14	6,800	--	700	19	250	98	1,100	2,400	<13	<25	<13	<13	35	<6,300	--	
MW-9	5/23/2008		10.55	4.53	--	6.02	5,300	--	390	22	130	68	1,200	6,800	<12	<25	<12	<12	33	<6,200	--	
MW-9	9/26/2008		10.55	5.07	--	5.48	10,000	--	94	11	26	35	280	12,000	<1.0	<1.0	<1.0	<1.0	6.2	<250	--	
MW-9	12/23/2008		10.55	4.04	--	6.51	2,600	--	420	7.9	110	84	870	1,000	<1.0	<1.0	<1.0	<1.0	23	<250	--	
MW-9	3/9/2009		10.55	3.45	--	7.10	3,400	--	45	2.2	51	18	180	610	<1.0	<1.0	<1.0	<1.0	4	<250	--	
MW-9	5/28/2009		10.55	4.17	--	6.38	4,400	--	420	14	270	170	720	840	<1.0	<1.0	<1.0	<1.0	21	<250	0.94	
MW-9	12/10/2009		10.55	4.11	(Sheen)	6.44	4,400	--	240	7.9	17	19	780	4,200	<2.5	<2.5	<2.5	<2.5	15	<500	--	
MW-9	6/29/2010		10.55	4.30	--	6.25	4,200	--	680	15	110	130	1,200	4,200	<10	<10	<10	<10	30	<2,000	0.37	(P)
MW-9	12/30/2010		10.55	2.79	--	7.76	420	--	6.7	<0.50	2.1	2.0	13	22	<0.50	<0.50	<0.50	<0.50	<0.50	<250	0.79	(P)
MW-9	6/29/2011		10.55	3.72	--	6.83	4,700	--	600	13	370	120	900	960	--	--	--	--	29	--	0.48	(P)
MW-9	1/30/2012		10.55	4.09	--	6.46	2,300	--	210	5.1	10	20	630	1,600	--	--	--	--	20	--	0.75	(P)
MW-9	6/27/2012		10.55	3.51	--	7.04	810	--	78	<2.5	4.6	7.9	130	160	--	--	--	--	4.9	--	1.43	(P)
MW-9	12/7/2012		10.55	3.38	--	7.17	2,000	--	130	5.1	6.1	11	250	340	--	--	--	--	9.6	--	1.04	
MW-9	6/6/2013		10.55	4.30	--	6.25	3,400	--	480	14	8.9	15	680	2,200	--	--	--	--	33	--	1.12	
MW-9	12/13/2013		10.55	4.60	--	5.95	1,600	--	110	6.4	4.2	<5.0	220	2,500	--	--	--	--	7.7	--	2.91	
MW-9	6/30/2014		10.55	4.25	--	6.30	2,500	--	170	12	4.0	10	370	3,800	--	--	--	--	13	--	0.47	
MW-9	12/16/2014		10.55	3.05	--	7.50	850	150	11	<2.5	<2.5	<5.0	110	640	--	--	--	--	3.7	--	1.30	
MW-9	6/18/2015		10.59	4.50		6.09	2,300	1,700	1.63	7.08	0.479 (J)	5.29	152	3,810	--	--	--	--	4.47	--	0.45	
MW-9	12/8/2015		10.59	5.24	--	5.35	1,400	590	17	4.7	<2.5	<5.0	94	8,600	--	--	--	--	<2.5	--	2.42	
MW-9	12/16/2015		10.59	4.57	--	6.02	--	--	--	--	--	--	--	--	--	--	--	--	--	--	4.32	
MW-9	3/24/2016		10.59	3.87	--	6.72	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-9	6/28/2016		10.59	4.70	--	5.89	1,800	820	56	6.5	<2.5	8.4	180	4,200	--	--	--	--	7.0	--	0.14	
MW-10	4/25/2005		12.53	8.37	--	4.16	<50	--	<0.5	<0.5	<0.5	<0.5	1.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<100	--	

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-10	9/30/2005		12.53	8.41	--	4.12	<50	--	<0.5	<0.5	<0.5	<1.0	1.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	
MW-10	12/28/2005		12.53	7.78	--	4.75	<50	--	<0.5	<0.5	<0.5	<1.0	0.78	<5.0	<0.5	<1.0	<0.5	--	<0.5	<100	--	
MW-10	3/23/2006		12.53	7.77	--	4.76	<50	--	<0.5	<0.5	<0.5	<1.0	0.67	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<100	--	
MW-10	6/5/2006		12.53	8.38	--	4.15	<50	--	<0.5	<0.5	<0.5	<1.0	1.8	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<100	--	
MW-10	9/19/2006		12.53	7.99	--	4.54	<50	--	<0.5	<0.5	<0.5	<1.0	0.59	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	12/1/2006		12.53	5.47	--	7.06	<50	--	<0.5	<0.5	<0.5	<1.0	0.89	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	3/1/2007		12.53	7.92	--	4.61	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	6/1/2007		12.53	8.55	--	3.98	<50	--	<0.5	<0.5	<0.5	<1.0	1.2	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	9/13/2007		12.53	8.71	--	3.82	<50	--	<0.5	<0.5	<0.5	<1.0	0.94	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	11/21/2007		12.53	8.84	--	3.69	<50	--	<0.5	<0.5	<0.5	<1.0	2.2	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	2/29/2008		12.53	8.20	--	4.33	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	5/23/2008		12.53	8.49	--	4.04	<50	--	<0.5	<0.5	<0.5	<1.0	2.2	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-10	9/26/2008		12.53	9.91	--	2.62	<50	--	<1.0	<1.0	<1.0	<1.0	3	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-10	12/23/2008		12.53	8.60	--	3.93	<50	--	<1.0	<1.0	<1.0	<1.0	2.7	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-10	3/9/2009		12.53	7.68	--	4.85	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	6.2	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-10	5/28/2009		12.53	8.71	--	3.82	<50	--	<1.0	<1.0	<1.0	<1.0	1.3	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	2.76	
MW-10	12/10/2009		12.53	8.35	--	4.18	<50	--	<0.50	<0.50	<0.50	<1.0	1.5	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.81	
MW-10	6/29/2010		12.53	8.43	--	4.10	<50	--	<0.50	<0.50	<0.50	<1.0	1.6	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1	(P)
MW-10	12/30/2010		12.53	6.62	--	5.91	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	1.26	(P)
MW-10	6/29/2011		12.53	7.16	--	5.37	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.49	(P)
MW-10	1/30/2012		12.53	7.33	--	5.20	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/27/2012		12.53	7.70	--	4.83	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.14	(P)
MW-10	12/7/2012		12.53	6.29	--	6.24	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-10	6/6/2013		12.53	7.65	--	4.88	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.34	
MW-10	12/13/2013		12.53	8.10	--	4.43	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-10	6/30/2014		12.53	7.87	--	4.66	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.17	
MW-10	12/16/2014		12.53	5.79	--	6.74	--	<50	--	--	--	--	--	--	--	--	--	--	--	--	0.99	
MW-10	6/18/2015		12.56	7.70	--	4.86	--	1,400	--	--	--	--	--	--	--	--	--	--	--	--	0.49	
MW-10	12/8/2015		12.56	8.01	--	4.55	--	180	--	--	--	--	--	--	--	--	--	--	--	--	1.97	
MW-10	12/16/2015		12.56	7.86	--	4.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	3/24/2016		12.56	6.68	--	5.88	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-10	6/28/2016		12.56	7.94	--	4.62	--	<50	--	--	--	--	--	--	--	--	--	--	--	--	0.32	
MW-11	4/25/2005		14.55	9.29	--	5.26	<50	--	<0.5	<0.5	<0.5	<0.5	<0.5	<20	<0.5	<0.5	<0.5	<0.5	<0.5	<100	--	
MW-11	9/30/2005		14.55	10.23	--	4.32	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<0.5	<0.5	<0.5	<0.5	<50	--	
MW-11	12/28/2005		14.55	9.09	--	5.46	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	--	<0.5	<100	--	
MW-11	3/23/2006		14.55	8.75	--	5.80	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<100	--	
MW-11	6/5/2006		14.55	9.47	--	5.08	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<100	--	
MW-11	9/19/2006		14.55	10.16	--	4.39	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	12/1/2006		14.55	10.46	--	4.09	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	3/1/2007		14.55	9.62	--	4.93	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	6/1/2007		14.55	9.97	--	4.58	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	9/13/2007		14.55	10.42	--	4.13	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	11/21/2007		14.55	10.64	--	3.91	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	2/29/2008		14.55	9.76	--	4.79	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	5/23/2008		14.55	10.51	--	4.04	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	<5.0	<0.5	<1.0	<0.5	<0.5	<0.5	<250	--	
MW-11	9/26/2008		14.55	10.51	--	4.04	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-11	12/23/2008		14.55	10.74	--	3.81	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-11	3/9/2009		14.55	9.50	--	5.05	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	--	
MW-11	5/28/2009		14.55	10.40	--	4.15	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	<5.0	<1.0	<1.0	<1.0	<1.0	<1.0	<250	3.06	
MW-11	12/10/2009		14.55	10.41	--	4.14	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<100	1.03	
MW-11	6/29/2010		14.55	10.19	--	4.36	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<100	0.47	(P)
MW-11	12/30/2010		14.55	9.22	--	5.33	<50	--	<0.50	<0.50	<0.50	<1.0	<0.50	<4.0	<0.50	<0.50	<0.50	<0.50	<0.50	<250	0.63	(P)
MW-11	6/29/2011		14.55	9.40	--	5.15	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	0.75	(P)

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes
MW-11	1/30/2012		14.55	9.49	--	5.06	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	6/27/2012		14.55	9.70	--	4.85	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.13	(P)
MW-11	12/7/2012		14.55	8.85	--	5.70	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-11	6/6/2013		14.55	10.03	--	4.52	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.62	
MW-11	12/13/2013		14.55	10.25	--	4.30	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	(NSP)
MW-11	6/30/2014		14.55	10.12	--	4.43	--	--	--	--	--	--	<0.50	--	--	--	--	--	--	--	1.45	
MW-11	12/16/2014		14.55	8.80	--	5.75	--	<51	--	--	--	--	--	--	--	--	--	--	--	--	0.83	
MW-11	6/18/2015		14.57	10.02	--	4.55	--	110	--	--	--	--	--	--	--	--	--	--	--	--	0.73	
MW-11	12/8/2015		14.57	10.24	--	4.33	--	<50	--	--	--	--	--	--	--	--	--	--	--	--	2.08	
MW-11	12/16/2015		14.57	9.94	--	4.63	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	3/24/2016		14.57	8.78	--	5.79	--	--	--	--	--	--	--	--	--	--	--	--	--	--	--	
MW-11	6/28/2016		14.57	9.91	--	4.66	--	<51	--	--	--	--	--	--	--	--	--	--	--	--	0.38	
MW-12 ESC	7/10/2015		10.95	4.99	--	5.96	<32.0	180	<1.0	<5.0	<1.0	<3.0	9.57	119	--	--	--	--	<1.0	--	0.19	Sample tested by ESC
MW-12 TA	7/10/2015		10.95	4.99	--	5.96	<50	<50	<0.50	<0.50	<0.50	<1.0	7.6	290	<0.50	<0.50	<0.50	<0.50	<0.50	<500	0.19	Sample tested by TA
MW-12	12/8/2015		10.95	5.09	--	5.86	60	--	<0.50	<0.50	<0.50	<1.0	5.4	250	<0.50	<0.50	<0.50	<0.50	<0.50	--	1.69	
MW-12	12/16/2015		10.95	4.88	--	6.07	--	51	--	--	--	--	--	--	--	--	--	--	--	--	3.58	
MW-12	3/24/2016		10.95	4.31	--	6.64	79	60	<0.50	<0.50	<0.50	<1.0	0.91	32	<0.50	<0.50	<0.50	<0.50	<0.50	--	0.74	
MW-12	6/28/2016		10.95	5.65	--	5.30	<50	<51	<0.50	<0.50	<0.50	<1.0	12	250	<0.50	<0.50	<0.50	<0.50	<0.50	--	1.12	
WC-01	12/4/2014		--	--	--	--	200	64	4.7	1.2	7.0	1.5	2.3	<20	<0.50	<0.50	<0.50	<0.50	<0.50	--	--	
QC-2	11/5/1992		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	10/12/1993		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	2/15/1994		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	5/11/1994		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	8/1/1994		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	10/18/1994		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--	--	--	
QC-2	1/13/1995		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	
QC-2	4/13/1995		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	
QC-2	7/11/1995		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	--	--	--	--	--	--	--	--	--	
QC-2	11/2/1995		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<5.0	--	--	--	--	--	--	--	--	
QC-2	2/5/1996		--	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	
QC-2	4/24/1996		--	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	
QC-2	7/16/1996		--	--	--	--	<50	--	<0.5	<1.0	<1.0	<1.0	<10	--	--	--	--	--	--	--	--	
QCTB	9/30/2005		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	12/28/2005		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	3/23/2006		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	6/5/2006		--	--	--	--	50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	9/19/2006		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	12/1/2006		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	3/1/2007		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	6/1/2007		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	9/13/2007		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	11/21/2007		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	2/29/2008		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	5/23/2008		--	--	--	--	<50	--	<0.5	<0.5	<0.5	<1.0	<0.5	--	--	--	--	--	--	--	--	
QCTB	9/26/2008		--	--	--	--	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	
QCTB	12/23/2008		--	--	--	--	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	
QCTB	3/9/2009		--	--	--	--	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	
QCTB	5/28/2009		--	--	--	--	<50	--	<1.0	<1.0	<1.0	<1.0	<1.0	--	--	--	--	--	--	--	--	

Notes:

Table 2
Summary of Groundwater Monitoring Data: Relative Water Elevations and Laboratory Analyses
Former BP Station No. 11126
1700 Powell Street
Emeryville, CA 94608

Well ID	Date	Type	TOC (ft msl)	DTW (ft)	Measured LNAPL Thickness (ft)	GW Elev (ft msl)	GRO (µg/L)	DRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)	MTBE (µg/L)	TBA (µg/L)	1,2-DCA (µg/L)	DIPE (µg/L)	ETBE (µg/L)	EDB (µg/L)	TAME (µg/L)	Ethanol (µg/L)	DO (mg/L)	Notes

ft = Feet
ft bTOC = Feet below top of casing
ft msl = Feet relative to mean sea level
TOC = Top of casing (surveyed)
DTW = Depth to water
LNAPL = Light non-aqueous phase liquid
GW Elev = Calculated groundwater elevation = TOC - Depth to Water + 0.75*(Measured SPH Thickness); assuming a specific gravity of 0.75 for SPH when present.
SPH = Separate-phase hydrocarbons
GRO = Gasoline range organics
DRO = Diesel range organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes, total
MTBE = Methyl tert-butyl ether
TBA = Tert-butyl alcohol
1,2-DCA = 1,2-Dichloroethane
DIPE = Diisopropyl ether
ETBE = Ethyl tert-butyl ether
EDB = Ethylene dibromide
TAME = Tert-amyl methyl ether
DO = Dissolved Oxygen
VOC = Volatile organic compound
mg/L = Milligrams per liter
µg/L = Micrograms per liter
< = Analyte was not detected above the specified method detection limit
-- = Not measured or analyzed
DUP = Duplicate sample
INA = Well inaccessible; not sampled
NS = Well not sampled
NSP = Well not sampled in accordance with groundwater sampling schedule.
P/NP = Well purged/not purged prior to sampling
J = EPA estimated value below the lowest calibration point
J5J3 = The sample matrix interfered with the ability to make any accurate determination, the associated batch QC was outside the established quality control range
ESC = ESC Lab Sciences
TA= Test America Lab

1. Post-May 2005 TOC and groundwater elevations surveyed relative to an established benchmark with an elevation of 8.11 feet above mean sea level. Wells were resurveyed to the North American Vertical Datum of 1988 (NAVD '88) in May 2005.
2. Wells resurveyed on July 1, 2015 with respect to NAVD '88 by Muir Consulting.
3. Beginning in the first quarter 2003, GRO and VOCs analyzed by EPA Method 8260B.
4. The data within this table collected prior to December 2009 was provided to Arcadis U.S., Inc. by Atlantic Richfield Company and their previous consultants. Arcadis U.S., Inc. has not verified the accuracy of this information.
5. Samples from the June 18, 2015 sampling event were tested by ESC Laboratories. Data was found to be inconsistent with data from previous years (as analyzed by Test America Inc.).
The ESC data from June 2015 is considered questionable and Test America will be used for all future analyses.

Table 3
Groundwater Analytical Data for Polycyclic Aromatic Hydrocarbons
Former BP Station No. 11126
1700 Powell Street
Emeryville, California

Sample Location	Date	Acenaphthene	Acenaphthylene	Anthracene	Benzo[a]anthracene	Benzo[a]pyrene	Benzo[b]fluoranthene	Benzo[g,h,i]perylene
Groundwater Samples (results in µg/L)								
MW-1	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.088	<0.05	<0.05	0.012 J	<0.05	0.0085 J	0.0066 J
	12/8/2015	<0.10*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-2	12/16/2014	0.31	0.15	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.44	0.13	0.056	<0.05	<0.05	<0.05	<0.05
	12/8/2015	0.20*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	0.20	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-3	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.011 J	<0.05	<0.05	<0.05
	12/8/2015	<0.10*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-4	12/16/2014	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	6/18/2015	0.073	<0.05	0.024 J	<0.05	<0.05	<0.05	<0.05
	12/8/2015	<0.10*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-5	12/16/2014	0.56	0.11	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	1.9	0.23	0.17	0.017 J	<0.05	<0.05	<0.05
	12/8/2015	0.57*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	0.74	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-6	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	12/8/2015	<0.20	<0.20	<0.20	<0.20	<0.20	0.21	<0.20
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-7	12/16/2014	0.16	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.083	<0.05	0.015 J	0.022 J	0.012 J	<0.05	0.012 J
	12/8/2015	<0.10*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-8	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.043 J	<0.05	0.023 J	<0.05	<0.05	<0.05	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-9	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.26	0.067	0.039 J	0.0084 J	<0.05	<0.05	0.0056 J
	12/8/2015	0.16	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	0.17	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-10	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.3	<0.05	0.039 J	0.016 J	<0.05	<0.05	<0.05
	12/8/2015	0.19	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	0.20	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-11	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	0.043 J	<0.05	<0.05	0.011 J	<0.05	<0.05	<0.05
	12/8/15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-12 ESC	7/10/15	0.166	0.227	0.0985	0.0199 BJ	0.0122 J	0.0126 J	0.0115 J
MW-12 TA	7/10/15	0.18	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-12	12/8/15	<0.10*	<0.10*	<0.10	<0.10	<0.10	<0.10	<0.10
	3/24/16	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097	<0.097
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10

Notes:
B= the same analyte is found in the associated blank
-- = not analyzed
PAHs were analyzed in soil by USEPA Method 8270C SIM.
PAHs = polycyclic aromatic hydrocarbons
< = Analyte was not detected above the specified method reporting limit.
J= EPA estimated value below the lowest calibration point
µg/L = micrograms per liter
ESC= ESC Lab Sciences
TA= Test America Lab
* = RPD of the LCS and LCSD exceeds the control limits

Table 3
Groundwater Analytical Data for Polycyclic Aromatic Hydrocarbons
Former BP Station No. 11126
1700 Powell Street
Emeryville, California

Sample Location	Date	Benzo[k]fluoranthene	Chrysene	Dibenz(a,h)anthracene	Fluoranthene	Fluorene	Indeno[1,2,3-cd]pyrene
Groundwater Samples (results in µg/L)							
MW-1	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.02 J	0.027 J	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-2	12/16/2014	<0.10	<0.10	<0.10	<0.10	0.15	<0.10
	6/18/2015	<0.05	<0.05	<0.05	<0.05	0.27	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	0.11*	<0.10
	6/28/2016	<0.11	<0.11	<0.11	<0.11	0.12	<0.11
MW-3	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-4	12/16/2014	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
	6/18/2015	<0.05	<0.05	<0.05	0.044 J	<0.05	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-5	12/16/2014	<0.10	<0.10	<0.10	<0.10	0.28	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.19	1	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	0.33*	<0.10
	6/28/2016	<0.10	<0.10	<0.10	0.13	0.41	<0.10
MW-6	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.039 J	<0.05	<0.05
	12/8/2015	<0.20	<0.20	<0.20	0.25	<0.20	<0.20
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-7	12/16/2014	<0.10	<0.10	<0.10	0.13	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.025 J	0.019 J	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10*	<0.10
	6/28/2016	<0.11	<0.11	<0.11	<0.11	<0.11	<0.11
MW-8	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.03 J	0.025 J	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-9	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.025 J	0.15	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-10	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	0.026 J	<0.05	<0.05
	12/8/2015	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-11	12/16/2014	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/18/2015	<0.05	<0.05	<0.05	<0.05	<0.05	<0.05
	12/8/15	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
	6/28/2016	<0.10	<0.10	<0.10	<0.10	<0.10	<0.10
MW-12 ESC	7/10/15	<0.0500	0.0204 J	<0.0500	0.146	0.392	<0.0500
MW-12 TA	7/10/15	<0.11	<0.11	<0.11	<0.11	0.27	<0.11
MW-12	12/8/15	<0.10	<0.10	<0.10	<0.10	0.10*	<0.10
	3/24/16	<0.097	<0.097	<0.097	<0.097	0.13	<0.097
	6/28/2016	<0.10	<0.10	<0.10	<0.10	0.13	<0.10

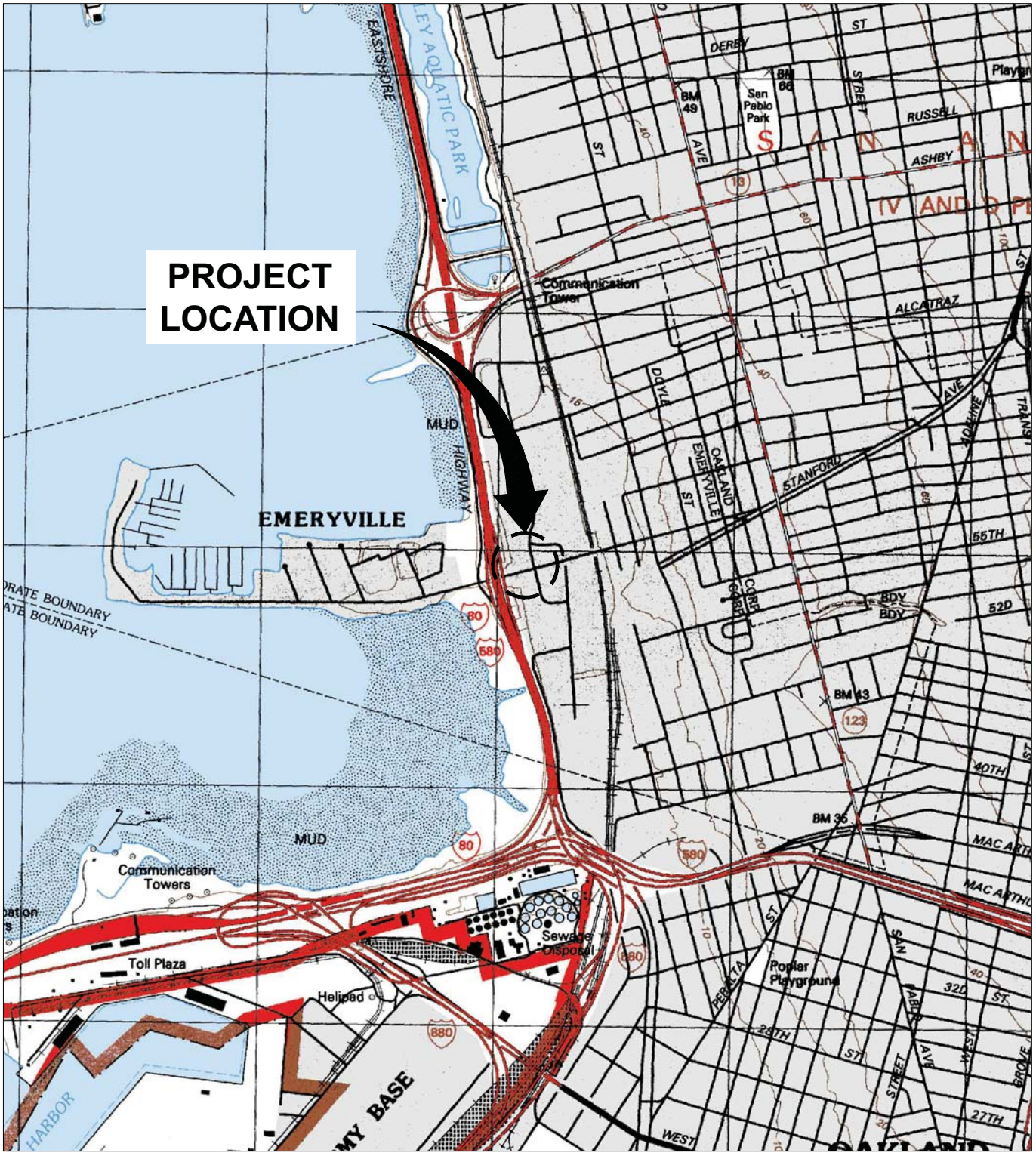
B= the same analyte is found in the associated blank
-- = not analyzed
PAHs were analyzed in soil by USEPA Method 8270C SIM.
PAH = polycyclic aromatic hydrocarbon
< = Analyte was not detected above the specified method reporting limit.
J= EPA estimated value below the lowest calibration point
µg/L = micrograms per liter
ESC= ESC Lab Sciences
TA= Test America Lab
* = RPD of the LCS and LCSD exceeds the control limits

Table 3
Groundwater Analytical Data for Polycyclic Aromatic Hydrocarbons
Former BP Station No. 11126
1700 Powell Street
Emeryville, California

Sample Location	Date	Naphthalene	Phenanthrene	Pyrene	1-METHYLNAPHTHALENE	2-METHYLNAPHTHALENE	2-CHLORONAPHTHALENE
Groundwater Samples (results in µg/L)							
MW-1	12/16/2014	<0.10	<0.10	0.10	--	--	--
	6/18/2015	0.31	0.028 J	0.038 J	2.1	1.7	<0.25
	12/8/2015	<0.10	<0.10	<0.10	--	--	--
	6/28/2016	<0.10	<0.10	<0.10			
MW-2	12/16/2014	22	0.11	<0.10	--	--	--
	6/18/2015	4.1	0.17	<0.25	76	62	<0.25
	12/8/2015	1.3	<0.10	<0.10	--	--	--
	6/28/2016	12	<0.11	<0.11			
MW-3	12/16/2014	<0.10	<0.10	<0.10	--	--	--
	6/18/2015	<0.25	0.01 J	0.016 J	0.024 J	0.015 J	<0.25
	12/8/2015	<0.10	<0.10	<0.10	--	--	--
	6/28/2016	<0.10	<0.10	<0.10			
MW-4	12/16/2014	<0.11	<0.11	<0.11	--	--	--
	6/18/2015	0.076 J	0.071	0.071	0.015 J	<0.25	<0.25
	12/8/2015	<0.10	<0.10	<0.10	--	--	--
	6/28/2016	<0.11	<0.11	<0.11			
MW-5	12/16/2014	0.43	0.30	<0.10	--	--	--
	6/18/2015	<0.25	1.1	0.16	56	0.15 J	<0.25
	12/8/2015	0.44	0.35	<0.10	--	--	--
	6/28/2016	1.0	0.49	<0.10			
MW-6	12/16/2014	<0.10	<0.10	0.11	--	--	--
	6/18/2015	0.034 J	0.087	0.037 J	<0.25	<0.25	<0.25
	12/8/2015	<0.51	<0.20	0.42	--	--	--
	6/28/2016	<0.11	<0.11	0.14			
MW-7	12/16/2014	<0.10	0.18	0.16	--	--	--
	6/18/2015	0.031 J	0.055	0.071	0.034 J	0.012 J	<0.25
	12/8/2015	<0.10	<0.10	0.18	--	--	--
	6/28/2016	<0.11	<0.11	<0.11			
MW-8	12/16/2014	<0.10	<0.10	<0.10	--	--	--
	6/18/2015	<0.25	0.057	0.05 J	<0.25	<0.25	<0.25
	12/8/2015	0.38	<0.10	<0.10	--	--	--
	6/28/2016	0.52	<0.10	<0.10			
MW-9	12/16/2014	0.10	<0.10	<0.10	--	--	--
	6/18/2015	2	0.14	0.036 J	40	1.7	<0.25
	12/8/2015	0.74 B	<0.10	<0.10	--	--	--
	6/28/2016	2.4	0.11	<0.10			
MW-10	12/16/2014	<0.10	<0.10	<0.10	--	--	--
	6/18/2015	<0.25	0.023 J	0.054	*<0.25*	*<0.25*	<0.25
	12/8/2015	<0.10	<0.10	0.11	--	--	--
	6/28/2016	<0.10	<0.10	<0.10			
MW-11	12/16/2014	<0.10	<0.10	<0.10	--	--	--
	6/18/2015	<0.25	<0.25	0.013 J	<0.25	<0.25	<0.25
	12/8/15	<0.10	<0.10	<0.10	--	--	--
	6/28/2016	<0.10	<0.10	<0.10			
MW-12 ESC	7/10/15	0.238	0.821	0.13	0.432	0.091	<0.00650
MW-12 TA	7/10/15	0.23	0.61	<0.11	--	--	--
MW-12	12/8/15	0.19	0.23	<0.10	--	--	--
	3/24/16	0.19	0.20	<0.097	<0.097	<0.097	<0.097
	6/28/2016	0.11	0.26	<0.10			

B= the same analyte is found in the associated blank
-- = not analyzed
PAHs were analyzed in soil by USEPA Method 8270C SIM.
PAH = polycyclic aromatic hydrocarbon
< = Analyte was not detected above the specified method reporting limit.
J= EPA estimated value below the lowest calibration point
µg/L = micrograms per liter
ESC= ESC Lab Sciences
TA= Test America Lab
* = RPD of the LCS and LCSD exceeds the control limits

FIGURES



REFERENCE: BASE MAP USGS 7.5. MIN. TOPO. QUAD., OAKLAND WEST, CALIFORNIA

0 2000' 4000'

Approximate Scale: 1 in. = 200

FORMER BP STATION #11126
1700 POWELL STREET
EMERYVILLE, CALIFORNIA

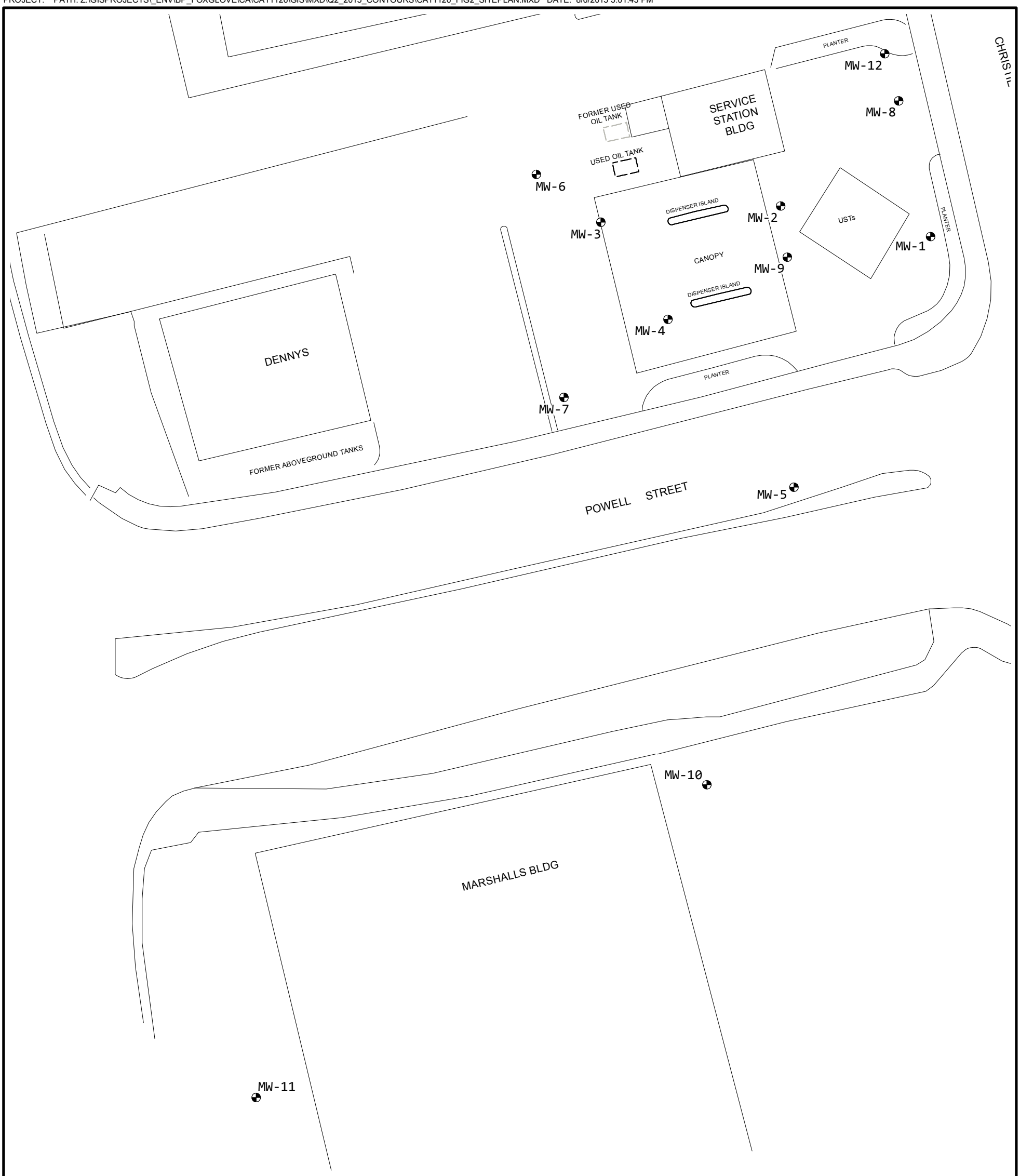
SITE VICINITY MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 1

CITY: PETALUMA, CA DIV/GROUP: ENV TEAM 2A
C:\Users\jharris\Desktop\ENV\CADGP09BPNAC044DWGGP09BPNAC044-N01.dwg LAYOU 1 SAVE 7/8/2012 1:34 ACADVE 18.1S (LMS TEC PAGESETU SETUP1 PLOTSTYLETABLE ARCADIS.CTB PLOTTE 7/8/2012 1:34 B HARRIS, JESSIC
XREFS: IMAGES: PROJECTNAME: ---
Oakland West.j

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\Q2_2015_CONTOURS\CA11126_FIG2_SITEPLAN.MXD DATE: 8/6/2015 3:01:43 PM



LEGEND:

- MONITORING WELL LOCATIONS

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED
3. MONITORING WELL AND SITE FEATURES REPOSITIONED BASED ON LAT/LONG SURVEY NAD 83 BY MUIR CONSULTING, INC, 07/01/2015. MAP PROJECTION IN CALIFORNIA STATE PLANE III, NAD 83, FEET.

0 40 80

SCALE IN FEET

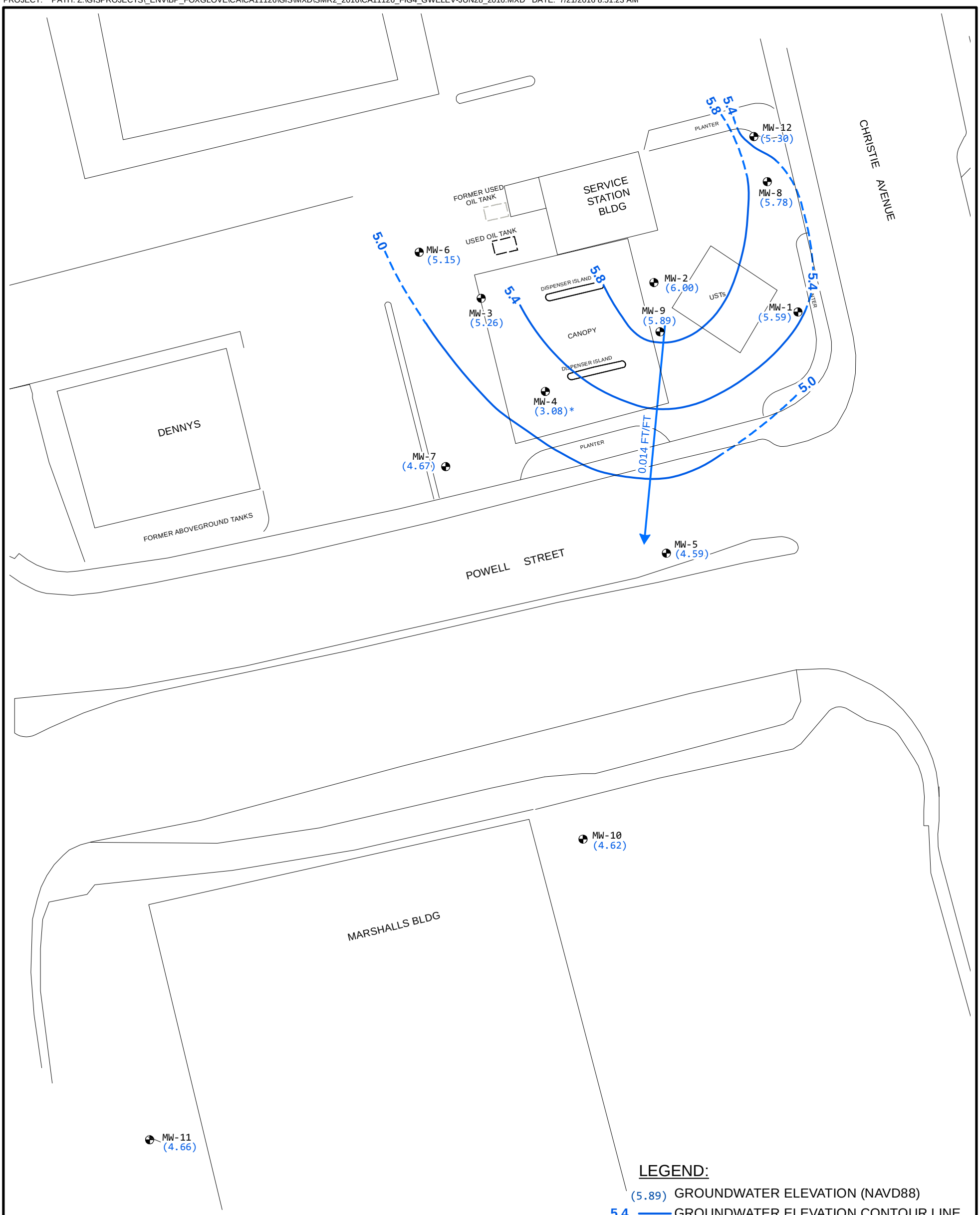
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

SITE PLAN

ARCADIS Design & Consultancy for natural and built assets

FIGURE
2

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG4_GWELEV-JUN28_2016.MXD DATE: 7/21/2016 8:51:23 AM



LEGEND:

(5.89) GROUNDWATER ELEVATION (NAVD88)

5.4 GROUNDWATER ELEVATION CONTOUR LINE (DASHED WHERE INFERRED)

0.014 FT/FT GROUNDWATER FLOW DIRECTION (FEET PER FOOT)

* DATA NOT USED IN CONTOURING

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED
3. MONITORING WELL AND SITE FEATURES REPOSITIONED BASED ON LAT/LONG SURVEY NAD 83 BY MUIR CONSULTING, INC, 07/01/2015. MAP PROJECTION IN CALIFORNIA STATE PLANE III, NAD 83, FEET.

0 40 80

SCALE IN FEET

FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

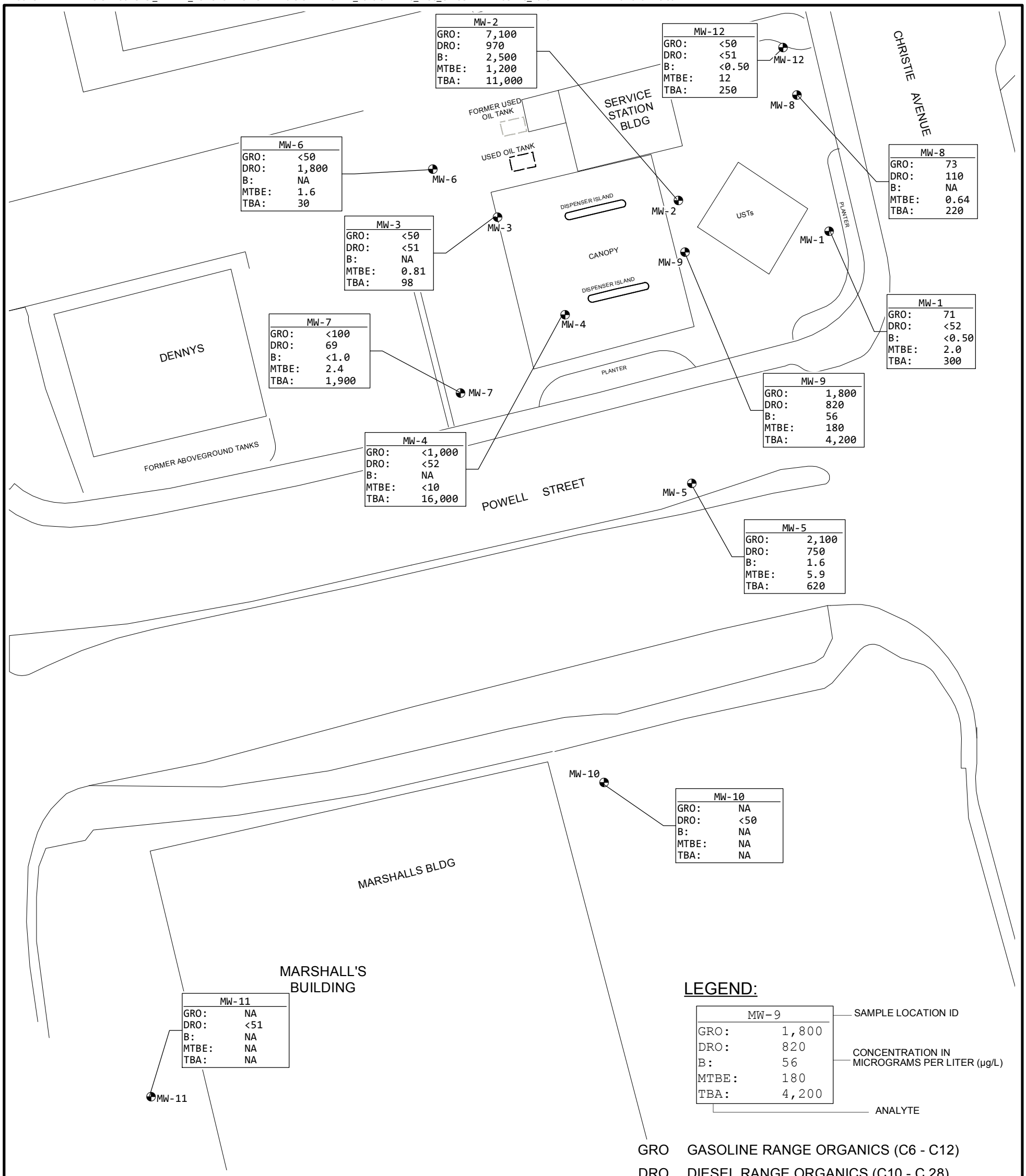
FIRST QUARTER AND SECOND QUARTER 2016 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

GROUNDWATER ELEVATION CONTOUR MAP JUNE 28, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 3

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG6_GWSUMMARY-JUN28_2016.MXD DATE: 7/19/2016 2:28:05 PM



LEGEND:

MW-9
GRO: 1,800
DRO: 820
B: 56
MTBE: 180
TBA: 4,200

SAMPLE LOCATION ID

CONCENTRATION IN MICROGRAMS PER LITER (µg/L)

ANALYTE

GRO	GASOLINE RANGE ORGANICS (C6 - C12)
DRO	DIESEL RANGE ORGANICS (C10 - C 28)
B	BENZENE
MTBE	METHYL TERT-BUTYL ETHER
TBA	TERT-BUTYL ALCOHOL
<	NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
NA	NOT ANALYZED
NS	NOT SAMPLED

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES
2. SITE DIMENSIONS AND FACILITY LOCATIONS NOT VERIFIED
3. MONITORING WELL AND SITE FEATURES REPOSITIONED BASED ON LAT/LONG SURVEY NAD 83 BY MUIR CONSULTING, INC, 07/01/2015. MAP PROJECTION IN CALIFORNIA STATE PLANE III, NAD 83, FEET.

0 40 80
SCALE IN FEET

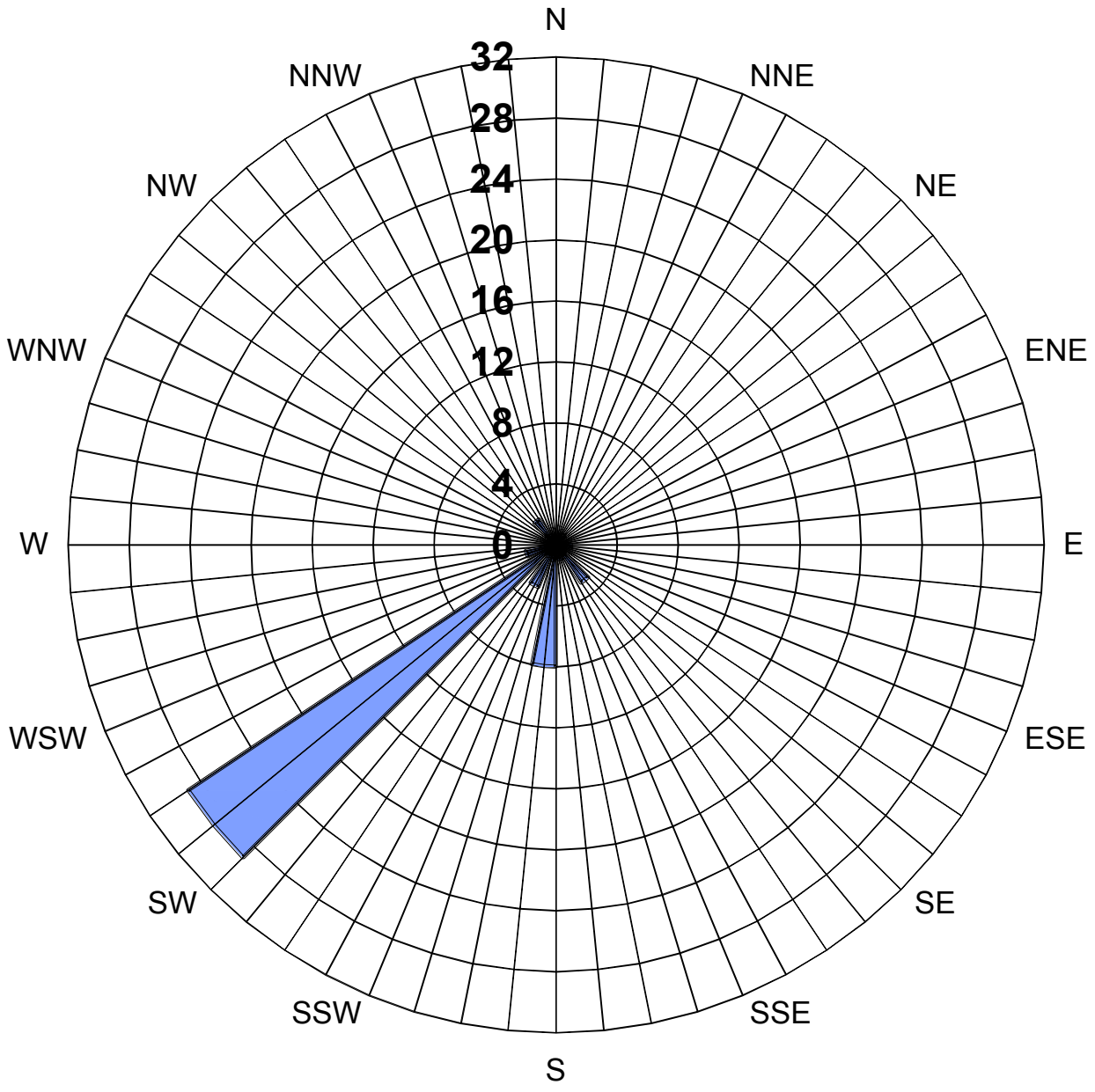
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

FIRST QUARTER AND SECOND QUARTER 2016 SEMI-ANNUAL GROUNDWATER MONITORING REPORT

GROUNDWATER HYDROCARBON CONCENTRATION MAP JUNE 28, 2016

ARCADIS Design & Consultancy for natural and built assets

FIGURE 4



LEGEND

CONCENTRIC CIRCLES REPRESENT 47 MONITORING EVENTS CONDUCTED BETWEEN THE FIRST QUARTER 2001 AND THE SECOND QUARTER 2016.

GROUNDWATER FLOW DIRECTION

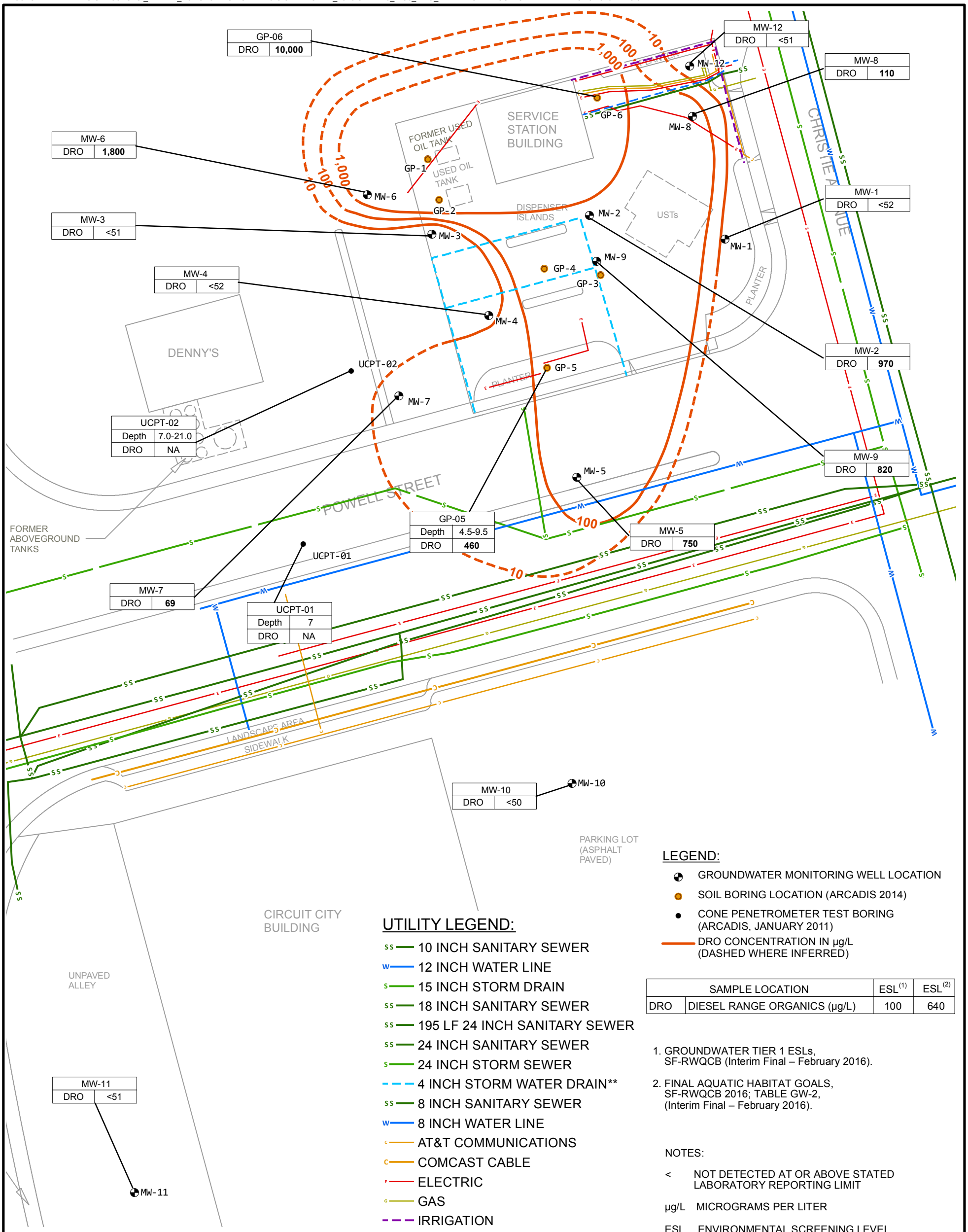
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA
FIRST AND SECOND QUARTER 2016
SEMI-ANNUAL GROUNDWATER MONITORING REPORT

GROUNDWATER FLOW DIRECTION ROSE DIAGRAM

ARCADIS Design & Consultancy for natural and built assets

FIGURE
5

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG6_DRO_ANALYTICALRESULTS.MXD DATE: 8/18/2016 11:43:51 AM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION (ARCADIS 2014)
- CONE PENETROMETER TEST BORING (ARCADIS, JANUARY 2011)
- DRO CONCENTRATION IN µg/L (DASHED WHERE INFERRED)

UTILITY LEGEND:

- SS — 10 INCH SANITARY SEWER
- W — 12 INCH WATER LINE
- S — 15 INCH STORM DRAIN
- SS — 18 INCH SANITARY SEWER
- SS — 195 LF 24 INCH SANITARY SEWER
- SS — 24 INCH SANITARY SEWER
- S — 24 INCH STORM SEWER
- 4 INCH STORM WATER DRAIN**
- SS — 8 INCH SANITARY SEWER
- W — 8 INCH WATER LINE
- C — AT&T COMMUNICATIONS
- C — COMCAST CABLE
- E — ELECTRIC
- G — GAS
- IRRIGATION
- WATER LINE

SAMPLE LOCATION		ESL(1)	ESL(2)
DRO	DIESEL RANGE ORGANICS (µg/L)	100	640

1. GROUNDWATER TIER 1 ESLs, SF-RWQCB (Interim Final – February 2016).
2. FINAL AQUATIC HABITAT GOALS, SF-RWQCB 2016; TABLE GW-2, (Interim Final – February 2016).

NOTES:

< NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT

µg/L MICROGRAMS PER LITER

ESL ENVIRONMENTAL SCREENING LEVEL

Depth SCREENED INTERVAL FROM WHERE GRAB GROUNDWATER SAMPLES WERE COLLECTED IN FEET BELOW GROUND SURFACE

NA NOT ANALYZED

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES.
2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GRAB GROUNDWATER SAMPLES COLLECTED ON NOVEMBER 24, 2014 FROM GP-05 AND GP-06, AND ON JANUARY 6, 2011 FROM UPCT-01 AND UPCT-02.
4. GROUNDWATER SAMPLES COLLECTED ON JUNE 28, 2016 FROM MW-1 THROUGH MW-12.
5. **BOLD** VALUES INDICATE CONCENTRATIONS DETECTED ABOVE ESL.
6. ONSITE UTILITIES AND LATERALS IDENTIFIED DURING SUBSURFACE UTILITY LOCATION ACTIVITIES ON NOVEMBER 20, 2014.
7. OFFSITE UTILITIES ADAPTED FROM UTILITY MAP PROVIDED BY THE CITY OF EMERYVILLE DEPARTMENT OF PUBLIC WORKS.

0 40 80

SCALE IN FEET

FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

DRO CONCENTRATION CONTOUR MAP

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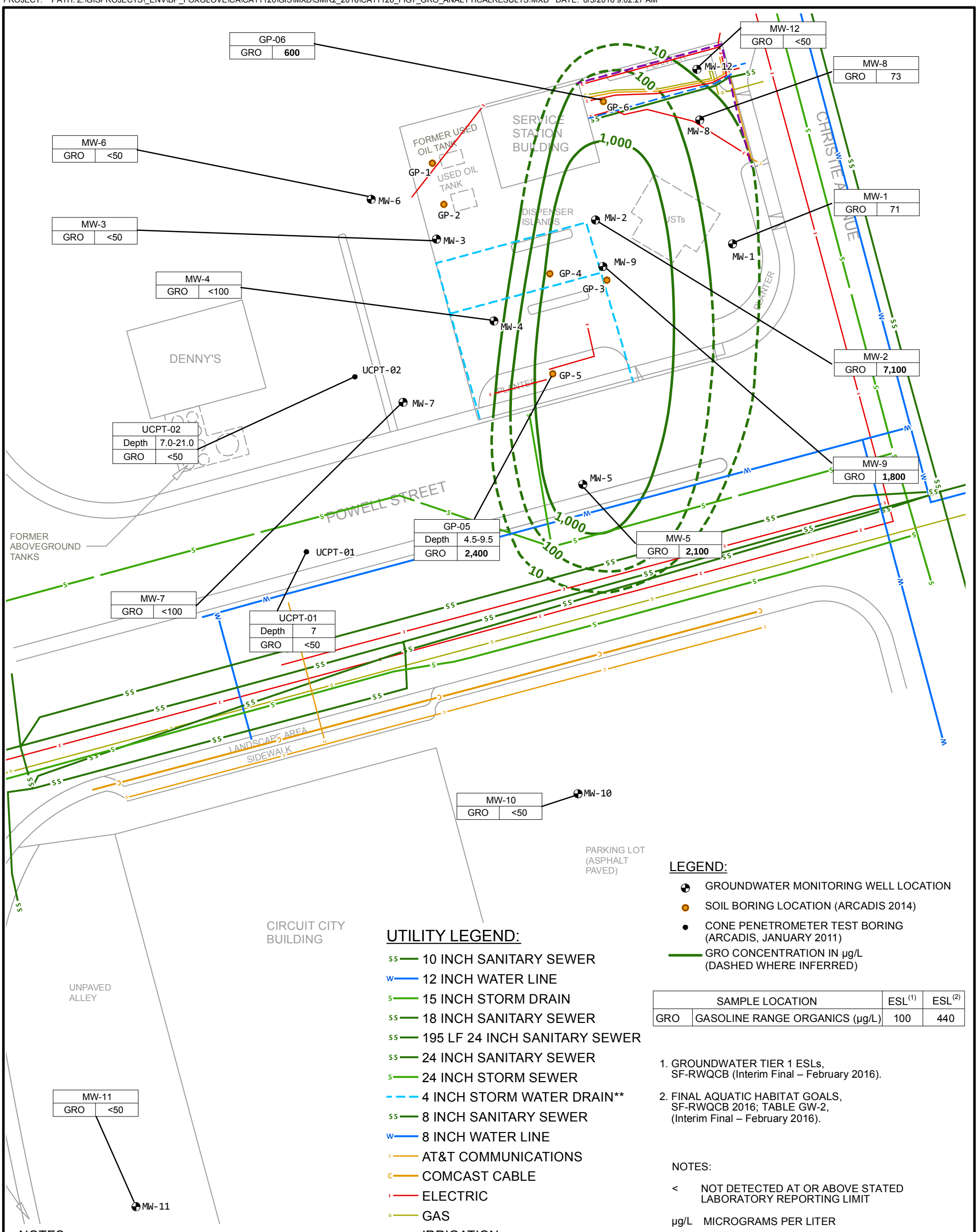
FIGURE 6

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG7_GRO_ANALYTICALRESULTS.MXD DATE: 8/3/2016 9:02:27 AM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION (ARCADIS 2014)
- CONE PENETROMETER TEST BORING (ARCADIS, JANUARY 2011)
- GRO CONCENTRATION IN µg/L (DASHED WHERE INFERRED)

UTILITY LEGEND:

- SS — 10 INCH SANITARY SEWER
- W — 12 INCH WATER LINE
- S — 15 INCH STORM DRAIN
- SS — 18 INCH SANITARY SEWER
- SS — 195 LF 24 INCH SANITARY SEWER
- SS — 24 INCH SANITARY SEWER
- S — 24 INCH STORM SEWER
- 4 INCH STORM WATER DRAIN**
- SS — 8 INCH SANITARY SEWER
- W — 8 INCH WATER LINE
- C — AT&T COMMUNICATIONS
- C — COMCAST CABLE
- E — ELECTRIC
- G — GAS
- IRRIGATION
- WATER LINE

SAMPLE LOCATION		ESL(1)	ESL(2)
GRO	GASOLINE RANGE ORGANICS (µg/L)	100	440

1. GROUNDWATER TIER 1 ESLs, SF-RWQCB (Interim Final – February 2016).
2. FINAL AQUATIC HABITAT GOALS, SF-RWQCB 2016; TABLE GW-2, (Interim Final – February 2016).

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES.
2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GRAB GROUNDWATER SAMPLES COLLECTED ON NOVEMBER 24, 2014 FROM GP-05 AND GP-06, AND ON JANUARY 6, 2011 FROM UPCT-01 AND UPCT-02.
4. GROUNDWATER SAMPLES COLLECTED ON JUNE 28, 2016 FROM MW-1 THROUGH MW-12.
5. GRO RESULTS FOR MW-10 AND MW-11 FROM SAMPLES COLLECTED ON DECEMBER 30, 2010.
6. **BOLD** VALUES INDICATE CONCENTRATIONS DETECTED ABOVE ESL.
7. ONSITE UTILITIES AND LATERALS IDENTIFIED DURING SUBSURFACE UTILITY LOCATION ACTIVITIES ON NOVEMBER 20, 2014.
8. OFFSITE UTILITIES ADAPTED FROM UTILITY MAP PROVIDED BY THE CITY OF EMERYVILLE DEPARTMENT OF PUBLIC WORKS.

NOTES:

< NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT

µg/L MICROGRAMS PER LITER

ESL ENVIRONMENTAL SCREENING LEVEL

Depth SCREENED INTERVAL FROM WHERE GRAB GROUNDWATER SAMPLES WERE COLLECTED IN FEET BELOW GROUND SURFACE

NA NOT ANALYZED

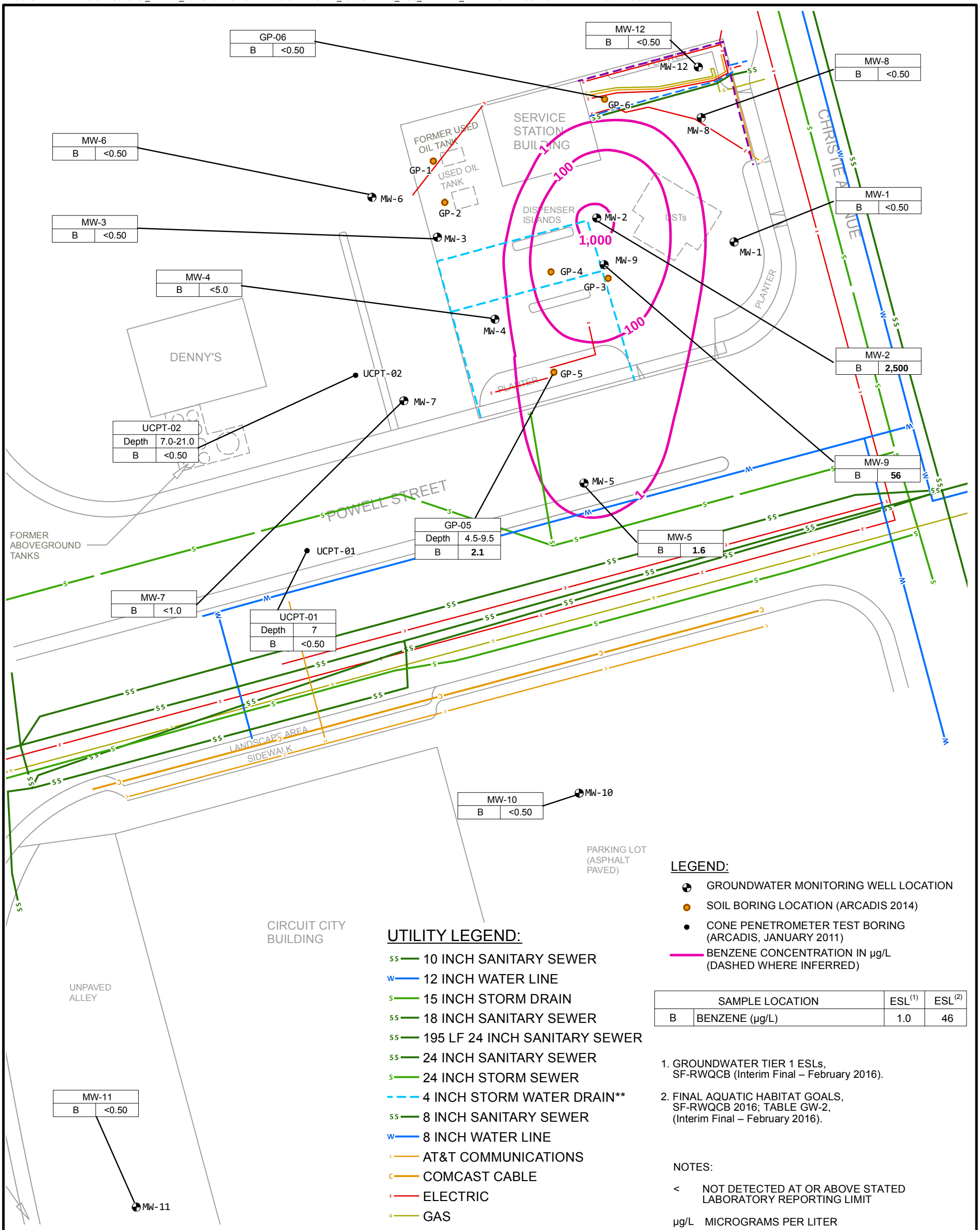
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

GRO CONCENTRATION CONTOUR MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE 7

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG8_BENZENE_ANALYTICALRESULTS.MXD DATE: 8/3/2016 9:05:41 AM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION (ARCADIS 2014)
- CONE PENETROMETER TEST BORING (ARCADIS, JANUARY 2011)
- BENZENE CONCENTRATION IN µg/L (DASHED WHERE INFERRED)

UTILITY LEGEND:

- SS — 10 INCH SANITARY SEWER
- W — 12 INCH WATER LINE
- S — 15 INCH STORM DRAIN
- SS — 18 INCH SANITARY SEWER
- SS — 195 LF 24 INCH SANITARY SEWER
- SS — 24 INCH SANITARY SEWER
- S — 24 INCH STORM SEWER
- 4 INCH STORM WATER DRAIN**
- SS — 8 INCH SANITARY SEWER
- W — 8 INCH WATER LINE
- AT&T COMMUNICATIONS
- COMCAST CABLE
- ELECTRIC
- GAS
- IRRIGATION
- WATER LINE

SAMPLE LOCATION		ESL(1)	ESL(2)
B	BENZENE (µg/L)	1.0	46

1. GROUNDWATER TIER 1 ESLs, SF-RWQCB (Interim Final – February 2016).
2. FINAL AQUATIC HABITAT GOALS, SF-RWQCB 2016; TABLE GW-2, (Interim Final – February 2016).

NOTES:

< NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT

µg/L MICROGRAMS PER LITER

ESL ENVIRONMENTAL SCREENING LEVEL

Depth SCREENED INTERVAL FROM WHERE GRAB GROUNDWATER SAMPLES WERE COLLECTED IN FEET BELOW GROUND SURFACE

NA NOT ANALYZED

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES.
2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GRAB GROUNDWATER SAMPLES COLLECTED ON NOVEMBER 24, 2014 FROM GP-05 AND GP-06, AND ON JANUARY 6, 2011 FROM UPCT-01 AND UPCT-02.
4. GROUNDWATER SAMPLES COLLECTED ON JUNE 28, 2016 FROM MW-1 THROUGH MW-12.
5. BENZENE RESULTS FOR MW-3, MW-4, MW-6, MW-8, MW-10, AND MW-11 FROM SAMPLES COLLECTED ON DECEMBER 30, 2010.
6. **BOLD** VALUES INDICATE CONCENTRATIONS DETECTED ABOVE ESL.
7. ONSITE UTILITIES AND LATERALS IDENTIFIED DURING SUBSURFACE UTILITY LOCATION ACTIVITIES ON NOVEMBER 20, 2014.
8. OFFSITE UTILITIES ADAPTED FROM UTILITY MAP PROVIDED BY THE CITY OF EMERYVILLE DEPARTMENT OF PUBLIC WORKS.

0 40 80
SCALE IN FEET

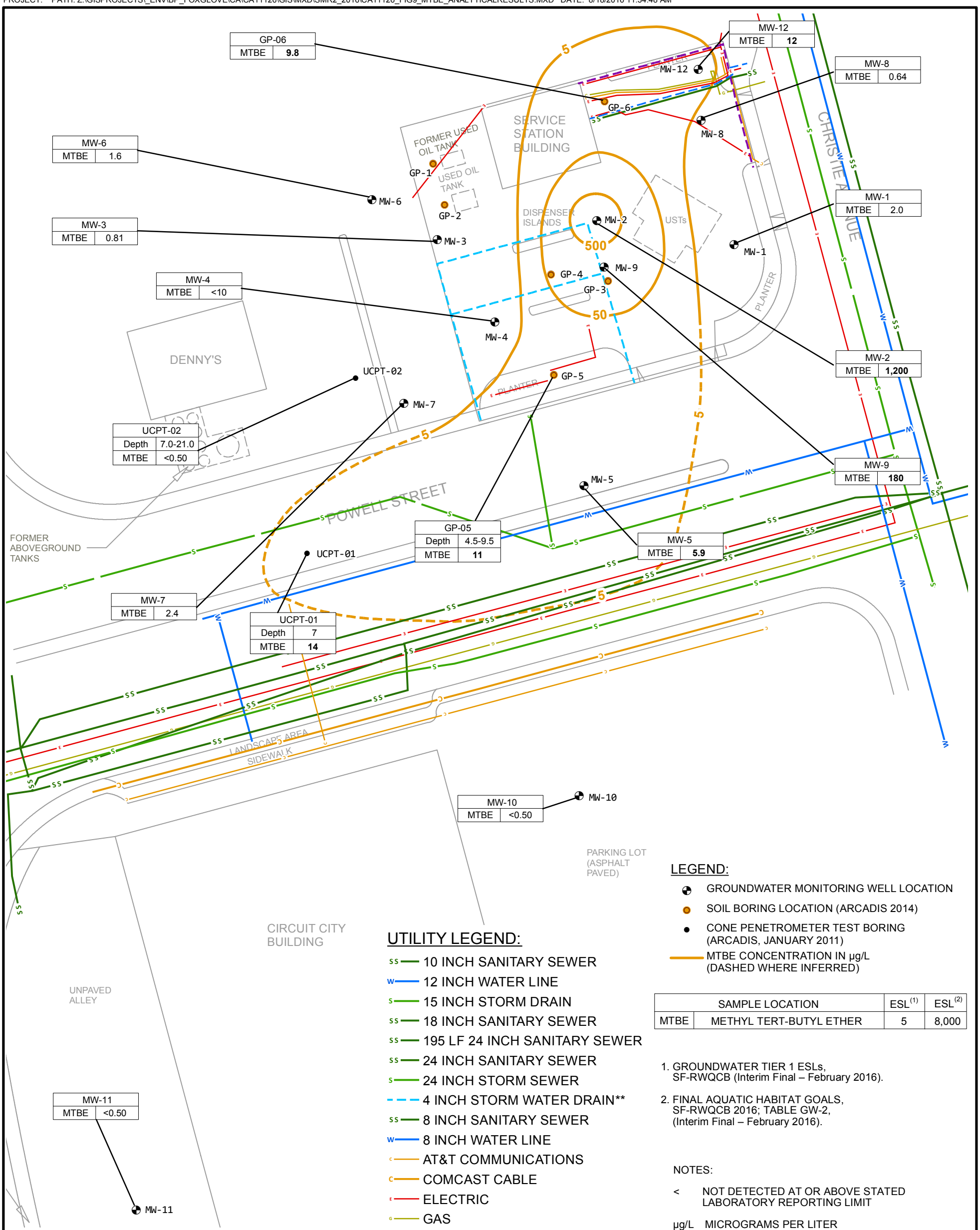
FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

BENZENE CONCENTRATION CONTOUR MAP

ARCADIS Design & Consultancy for natural and built assets

FIGURE
8

CITY: SAN FRANCISCO DIV/GROUP: ENV/IM DB: KGPETERS LD: PIC: PM: TM:
PROJECT: PATH: Z:\GISPROJECTS_ENV\BP_FOXGLOVE\CA\CA11126\GIS\MXD\SMR2_2016\CA11126_FIG9_MTBE_ANALYTICALRESULTS.MXD DATE: 8/18/2016 11:34:48 AM



LEGEND:

- GROUNDWATER MONITORING WELL LOCATION
- SOIL BORING LOCATION (ARCADIS 2014)
- CONE PENETROMETER TEST BORING (ARCADIS, JANUARY 2011)
- MTBE CONCENTRATION IN µg/L (DASHED WHERE INFERRED)

SAMPLE LOCATION		ESL(1)	ESL(2)
MTBE	METHYL TERT-BUTYL ETHER	5	8,000

1. GROUNDWATER TIER 1 ESLs, SF-RWQCB (Interim Final – February 2016).
2. FINAL AQUATIC HABITAT GOALS, SF-RWQCB 2016; TABLE GW-2, (Interim Final – February 2016).

UTILITY LEGEND:

- 10 INCH SANITARY SEWER
- 12 INCH WATER LINE
- 15 INCH STORM DRAIN
- 18 INCH SANITARY SEWER
- 195 LF 24 INCH SANITARY SEWER
- 24 INCH SANITARY SEWER
- 24 INCH STORM SEWER
- 4 INCH STORM WATER DRAIN**
- 8 INCH SANITARY SEWER
- 8 INCH WATER LINE
- AT&T COMMUNICATIONS
- COMCAST CABLE
- ELECTRIC
- GAS
- IRRIGATION
- WATER LINE

NOTES:

- < NOT DETECTED AT OR ABOVE STATED LABORATORY REPORTING LIMIT
- µg/L MICROGRAMS PER LITER
- ESL ENVIRONMENTAL SCREENING LEVEL
- Depth SCREENED INTERVAL FROM WHERE GRAB GROUNDWATER SAMPLES WERE COLLECTED IN FEET BELOW GROUND SURFACE
- NA NOT ANALYZED

NOTES:

1. SITE MAP ADAPTED FROM STANTEC FIGURES.
2. SITE FEATURES AND LOCATIONS ARE APPROXIMATE.
3. GRAB GROUNDWATER SAMPLES COLLECTED ON NOVEMBER 24, 2014 FROM GP-05 AND GP-06, AND ON JANUARY 6, 2011 FROM UPCT-01 AND UPCT-02.
4. GROUNDWATER SAMPLES COLLECTED ON JUNE 28, 2016 FROM MW-1 THROUGH MW-12.
5. MTBE RESULTS FOR MW-10 AND MW-11 FROM SAMPLES COLLECTED ON JUNE 30, 2014.
6. **BOLD** VALUES INDICATE CONCENTRATIONS DETECTED ABOVE ESL.
7. ONSITE UTILITIES AND LATERALS IDENTIFIED DURING SUBSURFACE UTILITY LOCATION ACTIVITIES ON NOVEMBER 20, 2014.
8. OFFSITE UTILITIES ADAPTED FROM UTILITY MAP PROVIDED BY THE CITY OF EMERYVILLE DEPARTMENT OF PUBLIC WORKS.

0 40 80
SCALE IN FEET

FORMER BP STATION #11126
1700 POWELL STREET, EMERYVILLE, CALIFORNIA

MTBE CONCENTRATION CONTOUR MAP

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FIGURE 9

ATTACHMENT 1

Previous Investigations and Site History Summary

Site Description

Former BP service station No. 11126 (the Site) is located at 1700 Powell Street in Emeryville. The property is identified as APN 49-1494-4-10. Land use in this area is largely commercial. The Site is approximately 350 feet east of Interstate 80/580.

The Site is currently in use as a 76-branded service station. BP acquired the gasoline retail outlet from Mobil Oil Corporation in 1989. In 1994, BP transferred the gasoline retail outlet to Tosco Corporation (Tosco, now ConocoPhillips). The Site surface structures consist of a station building located in the northwestern portion of the Site, two dispenser islands in the southwestern portion of the Site, a concrete slab and canopy. Three underground gasoline storage tanks (USTs; one 6,000-gallon UST, one 10,000 gallon UST, and one 12,000-gallon UST) are located east of the dispenser islands. Historical documents indicate that these USTs were installed in the late 1980s (SECOR 2007). The majority of the Site surface is paved with concrete and asphalt.

The area surrounding the Site was historically used for industrial purposes before being developed into commercial and retail shopping centers. Surrounding land use is largely commercial: a Denny's restaurant is located west of the Site; a shopping plaza is located south of the Site, a bank and offices are located to the north, and a furniture store is located to the east.

The topography of the surrounding area slopes gently to the west, toward San Francisco Bay. The Site is situated at an approximate elevation of 8 feet above mean sea level.

Previous Site Investigations and Cleanup Activities

A soil gas survey was conducted on April 10, 1989, by Target Environmental Services, Inc. on behalf of Mobil Oil Corporation prior to the transfer of ownership of the property to BP. Soil gas samples were collected from 19 sampling points at an approximate depth of 4 feet below ground surface (ft bgs) across the site (locations were not provided in historic documents). Results indicated that gasoline may have entered the site subsurface at the pump islands, UST complex, or along the product supply lines. Total volatile hydrocarbons were detected in soil vapor using a flame-ionization detector (FID) at concentrations up to 932,000 micrograms per liter (µg/L), with the highest detections in the vicinity of the pump islands and east of the USTs (TES 1989; SECOR 2007).

On April 24, 1989, one 550-gallon waste oil UST was removed from the site, and was replaced with a suspected 1,000-gallon waste oil UST (the actual size is not

documented) in a separate excavation. Soil samples collected from beneath the removed waste oil UST and sidewalls excavation contained detectable concentrations of total oil and grease (TOG), total petroleum hydrocarbons as diesel (TPHd), and total petroleum hydrocarbons as gasoline (TPHg). Additional soil samples were collected from the sidewalls of the new waste oil UST excavation (NWO-1 through NWO-4), located approximately 20 feet (ft) south of the former waste oil tank. All analytes were below laboratory reporting limits with the exception of TPHd and TOG which were both detected at NWO-4. TPHd was detected at 370 parts per million and TOG was detected at 10,000 ppm.

The UST pit also contained detectable concentrations of TOG and TPHd (Alisto 1994). An Underground Storage Tank Unauthorized Release (Leak) / Contamination Site Report dated May 2, 1989 documenting the past occurrence of a release of unknown quantity was subsequently submitted to Alameda County Environmental Health Department, Hazardous Materials Division (EMCON 1994; SECOR 2007).

In October 1992, Alisto performed a preliminary site assessment to investigate the extent of petroleum hydrocarbon impacts beneath the site. Eight soil borings (B-1 through B-3, B-4A, B-4B, B-4, B-5A, and B-5) were advanced to depths ranging from 4 ft to 20 ft bgs. Auger refusal was encountered during the drilling of borings B-1, B-4A, B-4B, and B-5A, and borings B-2 through B-5 were converted to monitoring wells MW-1 through MW-4, respectively. Soil samples collected up to a depth of 5.5 ft bgs from the borings advanced in the immediate vicinity of the USTs and dispenser islands contained detectable concentrations of TPHg and benzene.

Groundwater samples collected from the wells in November 1992 also contained detectable concentrations of TPHd, TPHg and benzene (SECOR 2007).

In September 1993, Alisto installed five additional groundwater monitoring wells: MW- 5 through MW-7 off-site and MW-8 and MW-9) on-site. Soil samples collected from approximately 4.5 ft bgs from borings MW-5 and MW-9 contained detectable concentrations of TPHg and benzene, toluene, ethylbenzene, and xylenes (BTEX). Well MW-9, which is located in the area of the product dispensers contained separate phase hydrocarbons (SPH) at an initial thickness of 0.08 ft. A product recovery canister was subsequently installed to assist in the removal of SPH from beneath the site (SECOR 2007).

In October 1994, EMCON conducted a supplementary site assessment to establish baseline subsurface conditions prior to the purchase of the site by

Tosco Corporation (Tosco, now ConocoPhillips [CP]) from BP. Three soil borings (THP-1, TB-2 and THP-3, and also respectively referred to as TB-1, TB-2 and TB-3) were advanced onsite using cone penetrometer testing (CPT) equipment. Refusal was encountered in TB-2 and TPH-3 at 10 ft and 4.5 ft bgs, respectively. Soil samples collected during this investigation contained detectable concentrations of TPHd, TPHg, TOG and benzene. HydropunchTM groundwater samples collected during this investigation contained detectable concentrations of TPHg, TOG, 1,2-dichloroethane (1,2-DCA,), and 1,2-dichlorethene (1,2-DCE) (EMCON 1994). EMCON personnel returned to the site on December 5, 1994 to inspect the fuel dispensers for the presence of spill containment boxes, and for indications of leakage (EMCON 1994). Grab soil samples collected from beneath the fuel dispensers (TD-1, TD-2, TD-3 and TD-4) also contained detectable concentrations of TPHg and TPHd (SECOR 2007).

In 1999, SECOR observed the removal of one 550-gallon, fiberglass, waste oil UST, along with a clarifier and two hoists (Hoist No. 1 and Hoist No. 2) from the former service bays as part of site remodeling activities on April 28, 1999 (SECOR 1999). The waste oil UST and Hoist No. 2, were removed from two separate excavations, and the clarifier and Hoist No. 1 were removed from one excavation. One soil sample collected from the waste oil UST excavation contained detectable concentrations of TPHd, TPHg, benzene, and total petroleum hydrocarbons as motor oil (TPHo). A grab groundwater sample collected from 7.5 ft bgs from the waste oil UST excavation contained detectable concentrations of TPHd, TPHo, benzene, and methyl tertiary butyl ether (MTBE). Soil samples collected from beneath the former clarifier (4 ft bgs), former Hoist No. 1 (8 ft bgs), and the former Hoist No. 2 (8 ft bgs) also contained detectable concentrations of TPHg, TPHd, TPHo, benzene, and lead. MTBE was not detected in soil samples collected from the excavations (SECOR 2007).

Based on the previous detections of petroleum hydrocarbons in soil in the clarifier and hoist areas, over-excavation was conducted on May 7, 1999 (SECOR 1999). Soil samples collected from the clarifier excavation at 5 ft bgs, and the hoist excavations at 5 ft bgs contained detectable concentrations of TPHg, TPHd, TPHo, and lead. Over-excavation confirmation soil samples were not analyzed for the presence of BTEX and other metals. A composite sample collected from the pea gravel was also analyzed for the presence of petroleum hydrocarbons; based on the relatively minor levels of TPHd and TPHo and relatively low to non-detectable levels of BTEX, and non-detectable concentrations of MTBE, the excavated pea gravel was used as backfill for the waste oil UST excavation. Approximately 17.41 tons of soil were removed from the site as a result of the initial excavation and over-excavation activities (SECOR 2007).

On March 28 and 30, 2001, Gettler-Ryan Incorporated (GRI) oversaw the removal and replacement of product lines, dispensers, and the station canopy (SECOR, 2001). During the removal of the product lines, petroleum hydrocarbon-stained soil and odors were observed within the excavated trench. The entire length of the former product line trench was subsequently over-excavated an additional 1.5 ft to 3.5 ft bgs prior to sampling, resulting in the removal of approximately 150 cubic yards (yd3) of soil from beneath the site. The former trenches were backfilled with clean, imported backfill as it was discovered that the former trenches were not suitable for re-use due to insufficient grading. An additional 100 yd3 of soil were excavated to accommodate the new product lines. A total of 13 confirmation soil samples were collected from product line, dispenser and trench excavations by SECOR from the initial excavation and following over-excavation of soil. TPHg and TPHd were detected in the 13 samples at concentrations up to 5,300 milligrams per kilogram (mg/Kg) and 630 mg/Kg in the initial excavation soil samples, respectively. The highest concentrations of petroleum hydrocarbons were detected in a 3.5-foot soil sample from a former product line location near well MW-9. MTBE was detected in 12 of the 13 samples up to 8.4 mg/Kg. A total of 400 yd3 of soil were removed from the site, and approximately 15,000 gallons of groundwater were removed from beneath the site during the dewatering of the UST excavation (SECOR 2007).

In June 2005, URS supervised the installation of two off-site, down-gradient groundwater monitoring wells (MW-10 and MW-11) at the Powell Street Plaza property, located south of the site (URS 2005). Soil samples from both of the borings at depths of 7 ft bgs (MW-10), and 18 and 23.5 ft bgs (MW-11) did not contain petroleum hydrocarbons or fuel oxygenates at or above laboratory method reporting limits (MRLs). With the exception of a concentration of MTBE collected at 7 ft bgs in well MW-10 (1.5 µg/L), petroleum hydrocarbons and fuel oxygenates were not detected in groundwater from the wells. The direction of groundwater flow was toward the southwest at a calculated hydraulic gradient of 0.02 foot per foot (ft/ft). URS concluded that the off-site, lateral extent of dissolved impacts had been delineated during this investigation.

SECOR prepared a Remedial Action Plan (RAP), dated March 30, 2007, to perform source area remediation at the Site. Based on their feasibility analysis and review of previous site assessment and remedial activities, SECOR recommended that oxygen injections be implemented at the Site (SECOR 2007). However, no testing was conducted.

On June 1, 2009, Stantec Consulting Corporation (Stantec) submitted the Work Plan (WP) for Additional Assessment and Extension Request to ACEH, proposing

the installation of one off-site monitoring well and three on-site soil borings to 6 ft bgs. The ACEH directive, issued on July 10, 2009 in response to this WP, indicated that:

- One monitoring well was likely not sufficient to provide off-site plume characterization as there were potentially two hydraulic gradient directions;
- Soil borings should be advanced beyond 6 ft bgs to evaluate residual source contamination because historical groundwater levels had ranged between 4 and 10 ft bgs; and
- A preferential pathway study should be conducted.

On August 2, 2010, Arcadis submitted the Work Plan Addendum for Additional Assessment (the WP Addendum) based on the original Stantec WP and the ACEH directive. In the WP Addendum, Arcadis proposed to: (1) conduct CPT with laser induced fluorescence [LIF] to evaluate both off-site groundwater and on-site soil; and (2) perform a preferential pathway study to assess the probability of on-site contaminants migrating off-site via potential conduits. Arcadis completed the proposed soil and groundwater investigation field activities in January 2011, as documented in the Soil and Water Investigation Report (Arcadis 2011) and briefly summarized below:

- Five CPTs (CPT-01 through CPT-06 both on- and off-site) were advanced to approximately 25 ft bgs to collect lithologic data (Figure 3). The CPT logs were consistent with historical boring logs for nearby monitoring wells;
- Four LIF profiles were collected with the CPT rods to identify poly-aromatic hydrocarbons (PAHs), and free phase and residual non-aqueous phase liquid (NAPL) in the subsurface. Based on the LIF results NAPL is not present at the Site;
- A total of three Hydropunch grab groundwater samples were collected from off-site borings UCPT-1 and UCPT-2. Samples were collected at 7 ft bgs from both borings, and at 21 ft bgs from UCPT-2 only. MTBE and TBA were detected at UCPT-1 at concentrations of 14 µg/L and 63 µg/L, respectively. No analytes were detected at UCPT-2 at concentrations above the laboratory reporting limits.; and
- A total of five soil samples were collected from three borings (UCPT-3 at 7 ft bgs, UCPT-4 at 7.5 and 12.5 ft bgs, and UCPT-5 at 11.5 and 14.5 ft bgs) based on the CPT lithology and UVOST results. Concentrations of MTBE and TBA were detected in four samples; TPHg and ethylbenzene

were detected in three samples; and benzene and total xylenes were detected in two samples.

The investigation results indicated no to low impacts of off-site groundwater contamination, and very low levels of soil contamination on-site.

On August 23, 2011, Arcadis conducted slug-out tests at on-site monitoring wells MW-2, MW-4, and MW-9. A total of 4.5 gallons of groundwater were removed from MW-2, 4 gallons were removed from MW-4, and 18 gallons were removed from MW-9 over the course of two tests in each well; and depth-to-water was monitored and recorded at each well until water levels returned to near static conditions. Results of the slug-out tests indicate projected injection rates of generally less than one gallon per minute (gpm) in all tested monitoring wells and less than approximately 0.1 gpm at MW-9 (Arcadis 2011b).

Arcadis submitted a Low Threat Closure Policy Checklist and Site Conceptual Model to Alameda County Environmental Health on July 3, 2013 to assess potential data gaps to be addressed prior to closure.

A Site Investigation Summary Report was submitted on January 23, 2015 (Arcadis 2015a). Soil borings were completed at six locations (GP-1 through GP-6) on November 24 and 25, 2014. A preferential pathway study of utility lines was conducted on November 20, 2014. The Site Investigation Summary Report recommended a new groundwater monitoring well be installed in the northeast corner of the site to define the upgradient extent of the dissolved-phase petroleum hydrocarbon plume in groundwater.

The groundwater monitoring well MW-12 was installed on June 25, 2015 by Cascade Drilling L.P. of Richmond, California and sampled on July 20, 2015. Based on the results, the Groundwater Monitoring Well Installation Report dated August 24, 2015 recommended further monitoring of DRO due to inconsistent groundwater data to more completely assess the extent of DRO in groundwater beneath the site. Groundwater monitoring and sampling data at the newly installed well will be used to assess the lateral extent of the dissolved-phase contaminant plume associated with the Site (Arcadis 2015b).

References

Alisto Engineering Group, 1994, Supplemental Site Investigation Report. April 8.

Arcadis U.S., Inc., 2011a. Soil and Water Investigation Report, 76 (Former BP) Service Station No. 11126. February 11.

Arcadis U.S., Inc., 2011b. Feasibility Study and Corrective Action Plan, Former BP Station No. 11126. October 14.

Arcadis U.S., Inc., 2013. ACEH Low Threat Closure Policy Checklist and Site Conceptual Model, Former BP Station No. 11126. July 3.

Arcadis U.S. Inc. 2015a. Site Investigation Summary Report. Former BP Station No. 11126. January 23.

Arcadis U.S. Inc. 2015b. Groundwater Monitoring Well Installation Report. Former BP Station No. 11126. August 24.

EMCON Environmental, Inc. (EMCON), 1994, Baseline Assessment Report. December 27.

SECOR International, Inc. (SECOR), 1999, Removal of Waste Oil UST, Hoists No. 1 & No. 2 and Clarifier. June 29.

SECOR International, Inc., 2001. Removal and Replacement of Product Lines, Dispensers and Canopy. May 4.

SECOR International Inc., 2007. Remedial Action Plan; 76 (Former BP) Service Station No. 11126, 1700 Powell Street, Emeryville, California. March 30.

Target Environmental Services, Inc. (TES), 1989. Soil Gas Survey. April.

ATTACHMENT 2

Groundwater Sampling Data Package

WELL GAUGING DATA

Project # 160324-C62 Date 3/24/16 Client ARCADIS

Site 1700 Powell St, Emeryville

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	1428	2					3.95	11.47		
MW-2	1446	2					4.64	12.02		
MW-3	1412	2					4.72	11.60		
MW-4	1422	2					4.64	10.96		
MW-6	1415	2					5.12	11.61		
MW-7	1419	2					4.30	13.40		
MW-8	1440	2					4.58	13.90		
MW-9	1432	4					3.87	13.96		
MW-10	1405	2					6.68	17.11		
MW-11	1402	2					8.78	16.87		
MW-12	1408	2					4.31	13.78		

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160324-CK2	Station # : 1126
Sampler: CK	Start Date: 3/24/16
Well I.D.: MW-12	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 13.78	Depth to Water: 4.31
Depth to Free Product: —	Thickness of Free Product (feet): —
Referenced to: (PVC) Grade	DO Meter: YSI PRO PLUS

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
(New Tubing)

Instruments Used:

Myron L Ultrameter — (HACH Turbidimeter)
Durham Geoslope Indicator — (YSI 556 Flow-Thru Cell)
(GeoTech Interface Probe) — YSI 550 DO Meter
MMC Interface Probe — Other: ___

Flow Rate: 100 mL/MIN

Pump Depth: 9.05'

(1505) Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1509	19.9	7.97	1189	6	1.04	-162.1	300	4.34
1511	19.8	7.88	1129	5	0.91	-162.0	600	4.37
1514	20.0	7.83	1121	4	0.80	-159.0	900	4.40
1517	19.9	7.76	1108	5	0.73	-162.0	1200	4.44
1520	19.9	7.74	1107	5	0.74	-162.7	1500	4.47
1523	19.9	7.73	1104	4	0.74	-163.1	1800	4.50
	* DEDICATE NEW TUBING IN WELL AFTER SAMPLE							

Did well dewater? Yes (No) — Amount actually evacuated: 1900

Sampling Time: 1525 — Sampling Date: 3/24/16

Sample I.D.: MW-12 — Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D (Other: SEE COC)

Equipment Blank I.D.: TRIP FB-11126 @ -032416 Time 1400 — Duplicate I.D.:

WELLHEAD INSPECTION CHECKLIST

Client ARCADIS Date 3/24/16

Site Address 1700 POWELL ST. EMERYVILLE

Job Number 160324-CH2 Technician CH

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)	Repair Order Submitted
MW-1		X				X		
MW-2						X		
MW-3						X		
MW-4						X		
MW-5	TRAFFIC	DO	NOT	ACCESS				
MW-6						X		
MW-7		X				X		
MW-8						X		
MW-9						X		
MW-10						X		
MW-11						X		
MW-12	X				NL	X (CW)		

NOTES: (CA) ~~MW-12 - 1/3 BOLTS~~ MW-8 3/3 BOLTS BROKEN IN TABS

MW-1 - 2/2 BOLTS MW-2 - 3/3 BOLTS 2/3 TABS BROKEN

MW-3 2/3 BOLTS STRIPPED MW-6 2/2 TABS STRIPPED

MW-7 - 2/3 BOLTS 3/3 TABS STRIPPED, CAP BROKEN

MW-4 - 3/3 BOLTS MW-9 - 1/3 BOLTS MW-11 2/2 TABS STRIPPED

MW-10 - 2/2 BOLTS

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME 1700 Powell St, Emeryville				PROJECT NUMBER 160324-Ck2			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI PRO PLUS	14A102847	3/24/16 0620	3900 µs Conduct.	3896	4		CK
↓	↓	↓	D/O 100% ORP 240.0	99.7 % 240.9	4	17°C	CK
↓	↓	↓	pH 7.00 10.00 4.00	7.03 10.02 4.00	4		CK

WELL GAUGING DATA

Project # 160628-CP1 Date 6/28/16 Client Arcadis

Site 1700 Powell St. Emeryville CA

Well ID	Time	Well Size (in.)	Sheen / Odor	Depth to Immiscible Liquid (ft.)	Thickness of Immiscible Liquid (ft.)	Volume of Immiscibles Removed (ml)	Depth to water (ft.)	Depth to well bottom (ft.)	Survey Point: TOB or TOC	Notes
MW-1	0724	2					4.65	11.42		
MW-2	0735	2					5.42	12.09		
MW-3	0751	2					5.50	11.68		
MW-4	0755	2					7.54	11.05		
MW-5	1035	2					5.61	12.43		
MW-6	0744	2					5.89	11.82		
MW-7	0739	2					5.46	13.47		
MW-8	0725	2					5.32	13.81		
MW-9	0732	4					4.70	14.01		
MW-10	0700	2					7.94	17.18		
MW-11	0650	2					9.91	16.90		
MW-12	0723	2					5.65	13.85		

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 1126
Sampler: Colin Rowland	Start Date: 6/28/16
Well I.D.: MW-1	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 11.42	Depth to Water: ~~4.85~~ CR 4.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: ___

Purge Method:

(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:

Dedicated Tubing
(New Tubing)

Instruments Used:

Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH Turbidimeter
(YSI 556 Flow-Thru Cell)
YSI 550 DO Meter
Other: ___

Flow Rate: 100 mL/min

Pump Depth: 8

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1125	22.3	7.12	775	10	0.42	57.7	300	4.68
1128	22.6	7.08	745	5	0.36	-19.4	600	4.73
1131	22.4	7.07	739	4	0.31	-62.5	900	4.75
1134	22.2	7.08	736	3	0.30	-78.5	1200	4.80
1137	21.8	7.07	734	3	0.27	-82.6	1500	4.81
1140	21.8	7.07	733	3	0.27	-85.9	1800	4.83
1143	21.7	7.07	736	3	0.27	-87.6	2100	4.84

Did well dewater? Yes (No)	Amount actually evacuated: 2100
Sampling Time: 1146	Sampling Date: 6/28/16
Sample I.D.: MW-1	Laboratory: Test America
Analyzed for: TPH-G BTEX MTBE TPH-D	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628.GP1	Station # : 1126
Sampler: GP	Start Date: 6/28/16
Well I.D.: MW-2	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 12.09	Depth to Water: 5.42
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method: Peristaltic; Bladder Pump; Electric Submersible

Sampling Method: Dedicated Tubing; New Tubing

Instruments Used: Myron L Ultrameter; HACH Turbidimeter; Durham Geoslope Indicator; YSI 556 Flow-Thru Cell; GeoTech Interface Probe; YSI 550 DO Meter; MMC Interface Probe; Other: ___

Flow Rate: ___

Pump Depth: 9'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1334	23.1	6.64	2072	15	0.34	-159.2	600	5.49
1337	23.2	6.64	2059	15	0.30	-161.1	1200	5.52
1340	22.8	6.67	2061	16	0.19	-174.3	1800	5.56
1343	23.4	6.69	2067	14	0.16	-178.9	2400	5.60
1346	23.7	6.70	2071	19	0.15	-183.1	3000	5.64

Did well dewater? Yes (No)	Amount actually evacuated:
Sampling Time: 1347	Sampling Date: 6/28/16
Sample I.D.: MW-2	Laboratory: Test America
Analyzed for: (TPH-G) BTEX MTBE (TPH-D)	Other: See COC
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-EP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-3	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 11.68	Depth to Water: 5.50
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: ___

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
(Myron L Ultrameter) HACH Turbidimeter
Durham Geoslope Indicator (YSI 556 Flow-Thru Cell)
GeoTech Interface Probe (YSI 550 DO Meter)
MMC Interface Probe Other: ___

Flow Rate: 200 mL/min

Pump Depth: 8.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
0950	20.4	6.92	1499	40	0.44	-188.9	600	5.55
0953	20.4	0.92	1479	25	0.41	-192.7	1200	5.55
0956	20.3	6.92	1473	29	0.37	-195.1	1800	5.55
0959	20.5	6.90	1468	39	0.34	-199.8	2400	5.55
1002	20.4	6.90	1471	41	0.31	-200.5	3000	5.55

Did well dewater? Yes (No) Amount actually evacuated: 3.0L

Sampling Time: 1003 Sampling Date: 6/28/16

Sample I.D.: MW-3 Laboratory: Test America

Analyzed for: (TPH-G) BTEX MTBE (TPH-D) Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: Colin Rowland	Start Date: 6/28/16
Well I.D.: MW-4	Well Diameter: (2) 3 4 6 8
Total Well Depth: 10.92	Depth to Water: 5.99
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method: (Peristaltic) Bladder Pump Electric Submersible

Sampling Method: Dedicated Tubing (New Tubing)

Instruments Used: Myron L Ultrameter, HACH Turbidimeter, Durham Geoslope Indicator, (YSI 556 Flow-Thru Cell), GeoTech Interface Probe, YSI 550 DO Meter, MMC Interface Probe, Other:

Flow Rate: 100 mL/min

Pump Depth: 9

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1226	20.3	7.10	2237	10	0.51	-42.0	300	6.50
1229	20.3	7.13	2260	10	0.30	-100.0	600	6.71
1232	20.4	7.15	2272	10	0.28	-117.3	900	6.90
1235	20.3	7.16	2280	11	0.30	-129.2	1200	7.31
1238	20.4	7.17	2283	11	0.31	-131.5	1500	7.22
1241	20.4	7.17	2285	11	0.33	-134.1	1800	7.30

Did well dewater? Yes (No) Amount actually evacuated: 1800

Sampling Time: 1244 Sampling Date: 6/28/16

Sample I.D.: MW-4 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-5	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 12.43	Depth to Water: 5.61
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
(Myron L Ultrameter) HACH Turbidimeter
Durham Geoslope Indicator (YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
MMC Interface Probe
YSI 550 DO Meter
Other: _____

Flow Rate: 200 mL/min

Pump Depth: _____

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1038	24.2	6.73	1729	39	0.51	-164.1	600	5.70
1041	24.7	6.72	1750	15	0.46	-171.2	1200	5.70
1044	24.6	6.72	1762	11	0.41	-175.0	1800	5.70
1047	24.4	6.72	1763	9	0.38	-176.5	2400	5.70
1050	24.6	6.72	1762	7	0.35	-177.2	3000	5.70

Did well dewater? Yes (No) Amount actually evacuated: 3.0L

Sampling Time: 1051 Sampling Date: 6/28/16

Sample I.D.: MW-5 Laboratory: Test America

Analyzed for: (TPH-G) BTEX MTBE (TPH-D) Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-6	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 11.82	Depth to Water: 5.89
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
Durham Geoslope Indicator
(YSI 556 Flow Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: ___

Flow Rate: ___

Pump Depth: 8.5

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1109	23.7	6.54	1319	98	0.34	-169.2	600	5.95
1112	23.6	6.52	1327	93	0.27	-176.0	1200	5.95
1115	23.9	6.53	1351	78	0.20	-180.6	1800	5.99
1118	23.6	6.57	1449	75	0.18	-182.9	2400	6.01
1121	23.7	6.59	1466	70	0.17	-185.4	3000	6.04

Did well dewater? Yes (No) Amount actually evacuated: 3.0

Sampling Time: 1122 Sampling Date: 6/28/16

Sample I.D.: MW-6 Laboratory: Test America

Analyzed for: (TPH-G) BTEX MTBE (TPH-D) Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-7	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 13.47	Depth to Water: 5.46
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter: _____

Purge Method:
Peristaltic
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
Durham Geoslope Indicator
(YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: _____

Flow Rate: 200 mL/min

Pump Depth: 9.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1152	24.7	7.11	4943	32	0.32	-178.0	600	5.57
1155	24.9	7.12	5191	29	0.23	-192.1	1200	5.61
1158	25.1	7.12	4956	25	0.19	-197.7	1800	5.64
1201	25.0	7.11	4904	20	0.16	-200.9	2400	5.67
1204	24.9	7.11	4931	17	0.15	-202.7	3000	5.71

Did well dewater? Yes (No)
Amount actually evacuated: 3.0L

Sampling Time: 1205
Sampling Date: 6/28/16

Sample I.D.: MW-7
Laboratory: Test America

Analyzed for: (TPH-G) BTEX MTBE (TPH-D)
Other: See COC

Equipment Blank I.D.: @ Time
Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-8	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 13.81	Depth to Water: 5.32
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
Durham Geoslope Indicator
YSI 556 Flow-Thru Cell
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: ___

Flow Rate: 200 mL/min

Pump Depth: 9.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1303	25.8	6.79	1046	10	0.22	-151.9	600	5.50
1306	25.9	6.78	1005	11	0.16	-164.0	1200	5.54
1309	25.9	6.76	997	12	0.14	-168.7	1800	5.60
1312	26.2	6.76	990	15	0.13	-172.2	2400	5.64
1315	26.4	6.76	984	17	0.12	-173.5	3000	5.70

Did well dewater? Yes (No)

Amount actually evacuated: 3.0L

Sampling Time: 1316

Sampling Date: 6/28/16

Sample I.D.: MW-8

Laboratory: Test America

Analyzed for: (TPH-G) BTEX MTBE (TPH-D)

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-9	Well Diameter: 2 3 (4) 6 8 ___
Total Well Depth: 14.01	Depth to Water: 4.70
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
(Myron L Ultrameter) HACH Turbidimeter
Durham Geoslope Indicator (YSI 556 Flow-Thru Cell)
(GeoTech Interface Probe) YSI 550 DO Meter
MMC Interface Probe Other: ___

Flow Rate: 200 mL/min

Pump Depth: 9'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
1230	22.1	6.80	1409	21	0.35	-164.1	600	4.75
1233	22.5	6.77	1420	13	0.22	-175.2	1200	4.75
1236	22.5	6.76	1416	10	0.16	-179.0	1800	4.77
1239	22.5	6.77	1418	7	0.15	-179.5	2400	4.81
1242	22.6	6.77	1422	7	0.14	-179.8	3000	4.83

Did well dewater? Yes (No)	Amount actually evacuated: 3.0C
Sampling Time: 1243	Sampling Date: 6/28/16
Sample I.D.: MW-9	Laboratory: Test America
Analyzed for: (TPH-G) BTEX MTBE (TPH-D)	Other:
Equipment Blank I.D.: @ Time	Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-10	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 17.18	Depth to Water: 7.94
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
Durham Geoslope Indicator
(YSI 556 Flow-Thru Cell)
GeoTech Interface Probe
YSI 550 DO Meter
MMC Interface Probe
Other: ___

Flow Rate: 200

Pump Depth: 12.5'

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
0907	20.9	6.88	2750	13	0.51	-173.6	600	7.95
0910	20.7	6.90	2766	10	0.42	-179.7	1200	7.95
0913	21.0	6.91	2769	7	0.37	-182.1	1800	7.95
0916	20.9	6.91	2774	6	0.33	-185.4	2400	7.95
0919	20.9	6.90	2777	6	0.32	-187.1	3000	7.95

Did well dewater? Yes (No) Amount actually evacuated: 3.0L

Sampling Time: 0920 Sampling Date: 6/28/16

Sample I.D.: MW-10 Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE (TPH-D) Other: See COC

Equipment Blank I.D.: @ Time Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628	Station # : 11126
Sampler: CP	Start Date: 6/28/16
Well I.D.: MW-11	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 10.90	Depth to Water: 9.91
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
Dedicated Tubing
(New Tubing)

Instruments Used:
Myron L Ultrameter
(HACH Turbidimeter)
Durham Geoslope Indicator
(YSI 556 Flow-Thru Cell)
(GeoTech Interface Probe)
YSI 550 DO Meter
MMC Interface Probe
Other: ___

Flow Rate: 200 mL/min

Pump Depth: 13.5

Time	Temp. (°C or °F)	pH	Cond. (mS or µS)	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or mL)	Depth to Water
0833	19.7	7.54	1207	29	0.64	-156.1	600	9.93
0836	19.9	7.48	1217	19	0.55	-164.2	1200	9.93
0839	19.6	7.45	1226	15	0.48	-170.8	1800	9.93
0842	20.2	7.44	1218	12	0.40	-176.5	2400	9.93
0845	20.3	7.43	1211	10	0.38	-178.3	3000	9.93

Did well dewater? Yes (No)

Amount actually evacuated: 7.0C

Sampling Time: 0846

Sampling Date: 6/28/16

Sample I.D.: MW-11

Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE (TPH-D)

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.:

BP ARCO LOW FLOW WELL MONITORING DATA SHEET

Project #: 160628-CP1	Station # : 1126
Sampler: Colin Rowland	Start Date: 6/28/16
Well I.D.: MW-12	Well Diameter: (2) 3 4 6 8 ___
Total Well Depth: 13.85	Depth to Water: 5.65
Depth to Free Product:	Thickness of Free Product (feet):
Referenced to: (PVC) Grade	DO Meter:

Purge Method:
(Peristaltic)
Bladder Pump
Electric Submersible

Sampling Method:
(Dedicated Tubing)
New Tubing

Instruments Used:
Myron L Ultrameter
Durham Geoslope Indicator
GeoTech Interface Probe
MMC Interface Probe
HACH ~~Turbidimeter~~
(YSI 556 Flow-Thru Cell)
YSI 550 DO Meter
Other: _____

Flow Rate: 200 mL/min

Pump Depth: 9'

Time	Temp. (°C or °F)	pH	Cond. (mS or (µS))	Turbidity (NTUs)	D.O. (mg/L)	ORP (mV)	Water Removed (gals. or (mL))	Depth to Water
1012	22.1	6.65	1695	71	2.69	157.5	600	6.10
1015	22.2	6.66	1674	72	2.59	127.9	1200	6.12
1018	22.2	6.68	1672	68	2.56	73.3	1800	6.18
1021	22.1	6.68	1678	62	2.27	47.1	2400	6.25
1024	22.2	6.70	1673	65	1.76	14.4	3000	6.33
1027	22.1	6.69	1845	68	1.54	6.0	3600	6.41
1030	21.8	6.73	1911	71	1.19	-4.9	4200	6.49
1033	21.8	6.74	1931	74	1.17	-5.8	4500	6.56
1036	21.8	6.75	1936	77	1.12	-9.2	4800	6.60
~~1037~~ CR								

Did well dewater? Yes (No)

Amount actually evacuated: 4800 mL

Sampling Time: 1039

Sampling Date: 6/28/16

Sample I.D.: MW-12

Laboratory: Test America

Analyzed for: TPH-G BTEX MTBE TPH-D

Other: See COC

Equipment Blank I.D.: @ Time

Duplicate I.D.: ~~See COC~~ CR

WELLHEAD INSPECTION CHECKLIST

Date 6/28/16 Client Avcadis

Site Address 1700 Powell St: Emeryville CA

Job Number 160628-CP1 Technician CP/CR

Well ID	Well Inspected - No Corrective Action Required	Water Bailed From Wellbox	Wellbox Components Cleaned	Cap Replaced	Debris Removed From Wellbox	Lock Replaced	Other Action Taken (explain below)	Well Not Inspected (explain below)
MW-1	X							
MW-2							3/3 Bolts missing	
MW-3							3/3 Bolts missing	
MW-4	X							
MW-5							2/2 Bolts missing	
MW-6							3/3 Bolts missing	
MW-7							2/2 Bolts missing	
MW-8							2/2 Bolts missing	
MW-9							3/3 Bolts missing	
MW-10	X							
MW-11	X							
MW-12	X							

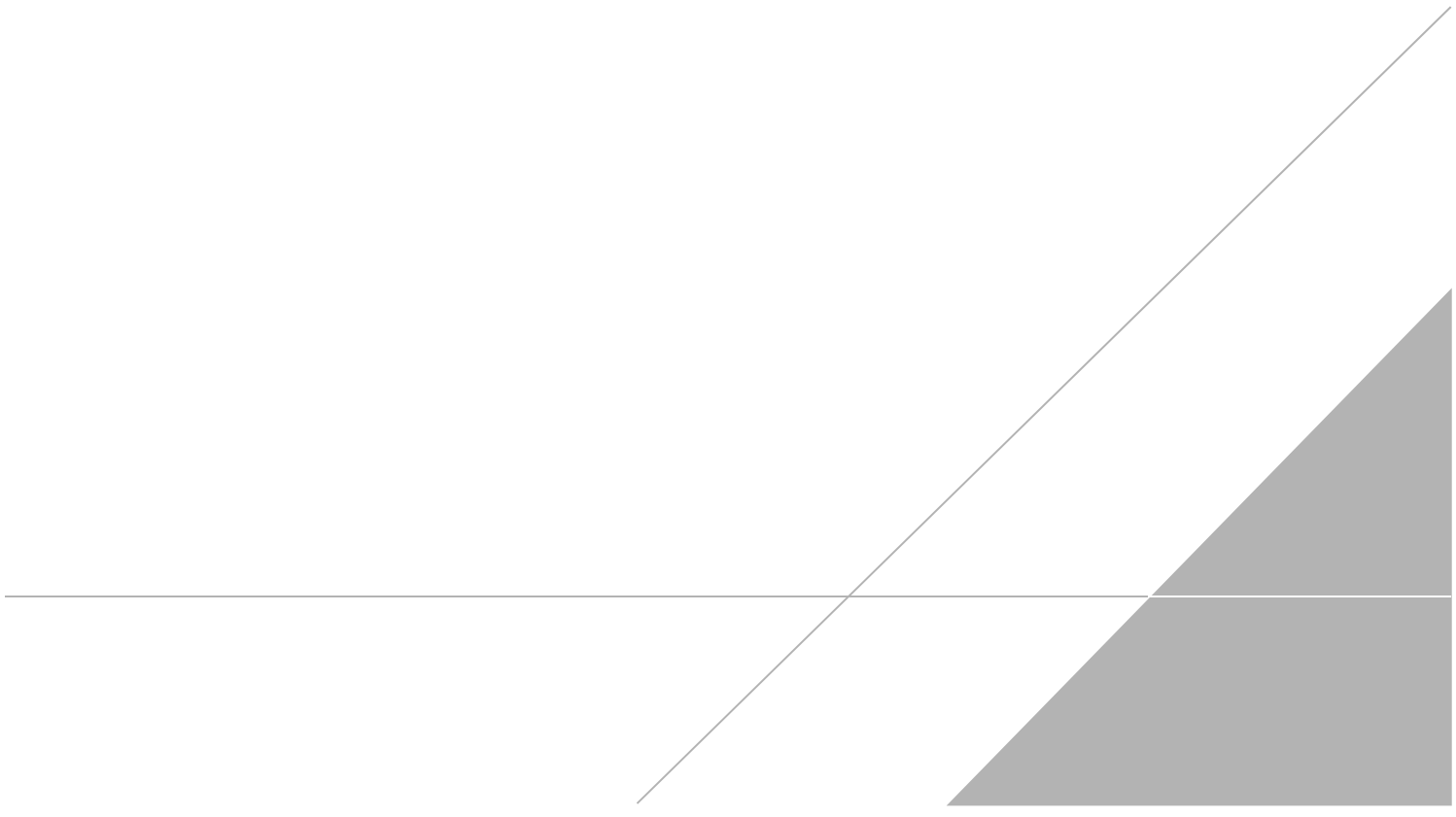
NOTES:

TEST EQUIPMENT CALIBRATION LOG

PROJECT NAME				PROJECT NUMBER			
EQUIPMENT NAME	EQUIPMENT NUMBER	DATE/TIME OF TEST	STANDARDS USED	EQUIPMENT READING	CALIBRATED TO: OR WITHIN 10%:	TEMP.	INITIALS
YSI Pro Plus	14F101212	6/28/16 0900	pH 7, 10, 4 Cond ORP	pH 7, 10, 4 3900, 232	yes	24.3	CR
YSI pro	14E100 345	6/28/16 0950	pH 4.0 7.0 10.0	4.0 7.0 10.0	/ / /	24.7	CR
			Conduct 3400	3920	/	24.0	CR
			ORP 232.0	231.1	/	24.9	CR
			DO 100%	99.1	/	23.9	CR

ATTACHMENT 3

Certified Laboratory Analytical Report



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

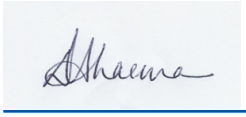
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-71156-1
Client Project/Site: BP #11126, Emeryville

For:
ARCADIS U.S., Inc.
100 Montgomery Street
Suite 300
San Francisco, California 94104

Attn: Hollis Phillips



Authorized for release by:
4/5/2016 5:53:13 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

Table of Contents

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-71156-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-71156-1

Comments
No additional comments.

Receipt
The samples were received on 3/25/2016 1:15 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperature of the cooler at receipt was 1.1º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Client Sample ID: MW-12

Lab Sample ID: 720-71156-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.91		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	79		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	32		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	0.19		0.097		ug/L	1		8270C SIM	Total/NA
Fluorene	0.13		0.097		ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.20		0.097		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	60		48		ug/L	1		8015B	Silica Gel Cleanup

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-12
Date Collected: 03/24/16 15:25
Date Received: 03/25/16 13:15

Lab Sample ID: 720-71156-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**0.91**		0.50		ug/L			04/04/16 17:10	1
Benzene	ND		0.50		ug/L			04/01/16 16:35	1
EDB	ND		0.50		ug/L			04/01/16 16:35	1
1,2-DCA	ND		0.50		ug/L			04/01/16 16:35	1
Ethylbenzene	ND		0.50		ug/L			04/01/16 16:35	1
Toluene	ND		0.50		ug/L			04/01/16 16:35	1
Xylenes, Total	ND		1.0		ug/L			04/01/16 16:35	1
Gasoline Range Organics (GRO) -C6-C12	**79**		50		ug/L			04/04/16 17:10	1
TBA	**32**		20		ug/L			04/04/16 17:10	1
DIPE	ND		0.50		ug/L			04/01/16 16:35	1
TAME	ND		0.50		ug/L			04/01/16 16:35	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/01/16 16:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*04/01/16 16:35*	*1*
4-Bromofluorobenzene	*85*		*67 - 130*		*04/04/16 17:10*	*1*
1,2-Dichloroethane-d4 (Surr)	*129*		*72 - 130*		*04/01/16 16:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*		*04/04/16 17:10*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*04/01/16 16:35*	*1*
Toluene-d8 (Surr)	*92*		*70 - 130*		*04/04/16 17:10*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.19**		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Acenaphthene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Acenaphthylene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Fluorene	**0.13**		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Phenanthrene	**0.20**		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Anthracene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Benzo[a]anthracene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Chrysene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Benzo[a]pyrene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Benzo[b]fluoranthene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Benzo[k]fluoranthene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Benzo[g,h,i]perylene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Indeno[1,2,3-cd]pyrene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Fluoranthene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Pyrene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1
Dibenz(a,h)anthracene	ND		0.097		ug/L		03/31/16 08:38	03/31/16 19:56	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*29 - 120*	*03/31/16 08:38*	*03/31/16 19:56*	*1*
Terphenyl-d14	*65*		*45 - 120*	*03/31/16 08:38*	*03/31/16 19:56*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**60**		48		ug/L		03/31/16 19:08	04/01/16 16:27	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*03/31/16 19:08*	*04/01/16 16:27*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Client Sample ID: MW-12
Date Collected: 03/24/16 15:25
Date Received: 03/25/16 13:15

Lab Sample ID: 720-71156-2
Matrix: Water

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup (Continued)

Surrogate	%Recovery	Qualifier	Limits	Prepared	Analyzed	Dil Fac
p-Terphenyl	92		31 - 150	03/31/16 19:08	04/01/16 16:27	1

Surrogate Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-71156-2	MW-12	91	129	94
720-71156-2	MW-12	85	93	92
LCS 720-199768/6	Lab Control Sample	90	90	94
LCS 720-199768/8	Lab Control Sample	87	94	92
LCS 720-199879/6	Lab Control Sample	85	85	91
LCS 720-199879/8	Lab Control Sample	85	90	91
LCSD 720-199768/7	Lab Control Sample Dup	89	92	92
LCSD 720-199768/9	Lab Control Sample Dup	85	93	91
LCSD 720-199879/7	Lab Control Sample Dup	88	92	92
LCSD 720-199879/9	Lab Control Sample Dup	89	93	90
MB 720-199768/5	Method Blank	82	95	93
MB 720-199879/5	Method Blank	84	92	90

Surrogate Legend

BFB = 4-Bromofluorobenzene
12DCE = 1,2-Dichloroethane-d4 (Surr)
TOL = Toluene-d8 (Surr)

Method: 8270C SIM - PAHs by GCMS (SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		FBP	TPH
Lab Sample ID	Client Sample ID	(29-120)	(45-120)
720-71156-2	MW-12	60	65
LCS 720-199679/2-A	Lab Control Sample	68	87
MB 720-199679/1-A	Method Blank	65	93

Surrogate Legend

FBP = 2-Fluorobiphenyl
TPH = Terphenyl-d14

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)	
		NDA1	PTP1
Lab Sample ID	Client Sample ID	(0-5)	(31-150)
720-71156-2	MW-12	0	92
LCS 720-199743/2-A	Lab Control Sample		91
MB 720-199743/1-A	Method Blank	0	93

Surrogate Legend

NDA = Capric Acid (Surr)
PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-199768/5
Matrix: Water
Analysis Batch: 199768

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			04/01/16 08:59	1
Benzene	ND		0.50		ug/L			04/01/16 08:59	1
EDB	ND		0.50		ug/L			04/01/16 08:59	1
1,2-DCA	ND		0.50		ug/L			04/01/16 08:59	1
Ethylbenzene	ND		0.50		ug/L			04/01/16 08:59	1
Toluene	ND		0.50		ug/L			04/01/16 08:59	1
Xylenes, Total	ND		1.0		ug/L			04/01/16 08:59	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			04/01/16 08:59	1
TBA	ND		20		ug/L			04/01/16 08:59	1
DIPE	ND		0.50		ug/L			04/01/16 08:59	1
TAME	ND		0.50		ug/L			04/01/16 08:59	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/01/16 08:59	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*82*		*67 - 130*		*04/01/16 08:59*	*1*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 130*		*04/01/16 08:59*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*04/01/16 08:59*	*1*

Lab Sample ID: LCS 720-199768/6
Matrix: Water
Analysis Batch: 199768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
MTBE			25.0	22.4		ug/L		90	62 - 130		
Benzene			25.0	23.8		ug/L		95	79 - 130		
EDB			25.0	25.0		ug/L		100	70 - 130		
1,2-DCA			25.0	22.9		ug/L		92	61 - 132		
Ethylbenzene			25.0	24.0		ug/L		96	80 - 120		
Toluene			25.0	23.8		ug/L		95	78 - 120		
m-Xylene & p-Xylene			25.0	24.2		ug/L		97	70 - 142		
o-Xylene			25.0	23.5		ug/L		94	70 - 130		
TBA			250	269		ug/L		108	70 - 130		
DIPE			25.0	26.2		ug/L		105	69 - 134		
TAME			25.0	23.1		ug/L		93	79 - 130		
Ethyl t-butyl ether			25.0	23.8		ug/L		95	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*90*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-199768/8
Matrix: Water
Analysis Batch: 199768

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	496		ug/L		99	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*87*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*94*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 720-199768/7
Matrix: Water
Analysis Batch: 199768

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	22.1		ug/L		88	62 - 130	1	20
Benzene			25.0	24.2		ug/L		97	79 - 130	2	20
EDB			25.0	24.1		ug/L		97	70 - 130	3	20
1,2-DCA			25.0	22.8		ug/L		91	61 - 132	1	20
Ethylbenzene			25.0	24.3		ug/L		97	80 - 120	1	20
Toluene			25.0	24.0		ug/L		96	78 - 120	1	20
m-Xylene & p-Xylene			25.0	24.3		ug/L		97	70 - 142	1	20
o-Xylene			25.0	23.7		ug/L		95	70 - 130	1	20
TBA			250	268		ug/L		107	70 - 130	1	20
DIPE			25.0	25.9		ug/L		104	69 - 134	1	20
TAME			25.0	22.4		ug/L		90	79 - 130	3	20
Ethyl t-butyl ether			25.0	23.2		ug/L		93	70 - 130	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 720-199768/9
Matrix: Water
Analysis Batch: 199768

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	495		ug/L		99	58 - 120	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*85*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-199879/5
Matrix: Water
Analysis Batch: 199879

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			04/04/16 10:49	1
Benzene	ND		0.50		ug/L			04/04/16 10:49	1
EDB	ND		0.50		ug/L			04/04/16 10:49	1
1,2-DCA	ND		0.50		ug/L			04/04/16 10:49	1
Ethylbenzene	ND		0.50		ug/L			04/04/16 10:49	1
Toluene	ND		0.50		ug/L			04/04/16 10:49	1
Xylenes, Total	ND		1.0		ug/L			04/04/16 10:49	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			04/04/16 10:49	1
TBA	ND		20		ug/L			04/04/16 10:49	1
DIPE	ND		0.50		ug/L			04/04/16 10:49	1
TAME	ND		0.50		ug/L			04/04/16 10:49	1
Ethyl t-butyl ether	ND		0.50		ug/L			04/04/16 10:49	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*84*		*67 - 130*		*04/04/16 10:49*	*1*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*		*04/04/16 10:49*	*1*
Toluene-d8 (Surr)	*90*		*70 - 130*		*04/04/16 10:49*	*1*

Lab Sample ID: LCS 720-199879/6
Matrix: Water
Analysis Batch: 199879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	19.7		ug/L		79	62 - 130
Benzene	25.0	21.8		ug/L		87	79 - 130
EDB	25.0	22.5		ug/L		90	70 - 130
1,2-DCA	25.0	20.5		ug/L		82	61 - 132
Ethylbenzene	25.0	22.0		ug/L		88	80 - 120
Toluene	25.0	21.8		ug/L		87	78 - 120
m-Xylene & p-Xylene	25.0	22.3		ug/L		89	70 - 142
o-Xylene	25.0	21.3		ug/L		85	70 - 130
TBA	250	245		ug/L		98	70 - 130
DIPE	25.0	23.1		ug/L		92	69 - 134
TAME	25.0	19.8		ug/L		79	79 - 130
Ethyl t-butyl ether	25.0	20.8		ug/L		83	70 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*85*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*85*		*72 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-199879/8
Matrix: Water
Analysis Batch: 199879

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	475		ug/L		95	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*85*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*90*		*72 - 130*
Toluene-d8 (Surr)	*91*		*70 - 130*

Lab Sample ID: LCSD 720-199879/7
Matrix: Water
Analysis Batch: 199879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	20.8		ug/L		83	62 - 130	5	20
Benzene			25.0	22.0		ug/L		88	79 - 130	1	20
EDB			25.0	23.0		ug/L		92	70 - 130	2	20
1,2-DCA			25.0	21.1		ug/L		84	61 - 132	3	20
Ethylbenzene			25.0	21.7		ug/L		87	80 - 120	1	20
Toluene			25.0	21.6		ug/L		86	78 - 120	1	20
m-Xylene & p-Xylene			25.0	21.9		ug/L		88	70 - 142	2	20
o-Xylene			25.0	21.3		ug/L		85	70 - 130	0	20
TBA			250	239		ug/L		96	70 - 130	2	20
DIPE			25.0	23.7		ug/L		95	69 - 134	2	20
TAME			25.0	21.4		ug/L		86	79 - 130	8	20
Ethyl t-butyl ether			25.0	21.8		ug/L		87	70 - 130	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*88*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*92*		*72 - 130*
Toluene-d8 (Surr)	*92*		*70 - 130*

Lab Sample ID: LCSD 720-199879/9
Matrix: Water
Analysis Batch: 199879

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	471		ug/L		94	58 - 120	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*89*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*93*		*72 - 130*
Toluene-d8 (Surr)	*90*		*70 - 130*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-199679/1-A
Matrix: Water
Analysis Batch: 199682

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 199679

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Acenaphthene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Acenaphthylene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Fluorene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Phenanthrene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Anthracene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Benzo[a]anthracene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Chrysene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Benzo[a]pyrene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Benzo[b]fluoranthene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Benzo[k]fluoranthene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Fluoranthene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Pyrene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		03/31/16 08:38	03/31/16 15:36	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*65*		*29 - 120*	*03/31/16 08:38*	*03/31/16 15:36*	*1*
Terphenyl-d14	*93*		*45 - 120*	*03/31/16 08:38*	*03/31/16 15:36*	*1*

Lab Sample ID: LCS 720-199679/2-A
Matrix: Water
Analysis Batch: 199682

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 199679

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	6.73		ug/L		67	19 - 120
Acenaphthene	10.0	6.04		ug/L		60	24 - 120
Acenaphthylene	10.0	7.04		ug/L		70	24 - 120
Fluorene	10.0	6.56		ug/L		66	27 - 120
Phenanthrene	10.0	7.38		ug/L		74	31 - 120
Anthracene	10.0	7.49		ug/L		75	44 - 120
Benzo[a]anthracene	10.0	7.90		ug/L		79	48 - 120
Chrysene	10.0	7.50		ug/L		75	47 - 120
Benzo[a]pyrene	10.0	7.56		ug/L		76	43 - 120
Benzo[b]fluoranthene	10.0	7.73		ug/L		77	42 - 120
Benzo[k]fluoranthene	10.0	7.09		ug/L		71	42 - 120
Benzo[g,h,i]perylene	10.0	7.05		ug/L		71	35 - 120
Indeno[1,2,3-cd]pyrene	10.0	6.92		ug/L		69	36 - 120
Fluoranthene	10.0	7.78		ug/L		78	43 - 120
Pyrene	10.0	8.35		ug/L		84	47 - 120
Dibenz(a,h)anthracene	10.0	6.94		ug/L		69	33 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*68*		*29 - 120*
Terphenyl-d14	*87*		*45 - 120*

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-199743/1-A
Matrix: Water
Analysis Batch: 199780

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 199743

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		03/31/16 19:08	04/01/16 17:25	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0*		*0 - 5*	*03/31/16 19:08*	*04/01/16 17:25*	*1*
p-Terphenyl	*93*		*31 - 150*	*03/31/16 19:08*	*04/01/16 17:25*	*1*

Lab Sample ID: LCS 720-199743/2-A
Matrix: Water
Analysis Batch: 199780

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 199743

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1400		ug/L		56	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*91*		*31 - 150*

GC/MS VOA

Analysis Batch: 199768

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199768/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199768/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199768/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199768/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-199768/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 199879

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199879/6	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-199879/8	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199879/7	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-199879/9	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-199879/5	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS Semi VOA

Prep Batch: 199679

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Total/NA	Water	3510C	
LCS 720-199679/2-A	Lab Control Sample	Total/NA	Water	3510C	
MB 720-199679/1-A	Method Blank	Total/NA	Water	3510C	

Analysis Batch: 199682

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Total/NA	Water	8270C SIM	199679
LCS 720-199679/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	199679
MB 720-199679/1-A	Method Blank	Total/NA	Water	8270C SIM	199679

GC Semi VOA

Prep Batch: 199743

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Silica Gel Cleanup	Water	3510C SGC	
LCS 720-199743/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
MB 720-199743/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 199780

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-71156-2	MW-12	Silica Gel Cleanup	Water	8015B	199743

GC Semi VOA (Continued)

Analysis Batch: 199780 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-199743/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	199743
MB 720-199743/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	199743

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Client Sample ID: MW-12
Date Collected: 03/24/16 15:25
Date Received: 03/25/16 13:15

Lab Sample ID: 720-71156-2
Matrix: Water

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	199768	04/01/16 16:35	LPL	TAL PLS
Total/NA	Analysis	8260B/CA_LUFTMS		1	199879	04/04/16 17:10	LPL	TAL PLS
Total/NA	Prep	3510C			199679	03/31/16 08:38	BSY	TAL PLS
Total/NA	Analysis	8270C SIM		1	199682	03/31/16 19:56	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			199743	03/31/16 19:08	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	199780	04/01/16 16:27	JXL	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-17

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-71156-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-71156-2	MW-12	Water	03/24/16 15:25	03/25/16 13:15

720-71156

Chain of Custody Record

my # 1607528

ARCADIS
Infrastructure · Water · Environment · Buildings

ARCADIS Project Name: CA 11126 **Req Due Date (mm/dd/yy):** Standard TAT **Rush TAT:** Yes ___ No x

Lab Work Order Number:

4/5/2016

Lab Name.	Test America	Facility Address:	1700 Powell St.,	Consultant/Contractor.	Blaine Tech Services, Inc
Lab Address:	1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code:	Emeryville, CA	Blaine Tech Project No:	ARCADIS/BP-11126
Lab PM:	Dimple Sharma	Lead Regulatory Agency:	Alameda County Env Health Svcs	Consultant/Contractor Address:	1680 Rogers Ave., San Jose, CA 95112
Lab Phone:	925 484.1919	California Global ID No.:	T0600100208	Consultant/Contractor PM	Michael Ninokata
Lab Shipping Accnt:		ARCADIS Project No:	GP09BPNA.C044	Phone:	408.573 0555x202
Lab Bottle Order No:		ARCADIS PM/ Phone.	Jamey Peterson	Email EDD To:	jamey.peterson@arcadis.com
Other Info:		Email	jamey.peterson@arcadis.com	Invoice To	ARCADIS X Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	Matrix:	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO 8260B	BTEX by 8260B	MTBE, TBA, TAME by 8260B	(5) Oxygenates 8260E	1,2-DCA, EDB 8260B	DRO w/SGC 8015M	Naphthalene 8270	PAH's 8270			Report Type & QC Level / Comments
	TB-11126-032416-2016	3/24/16	1400		x			2				x		x	x		x	x						ON HOLD
	MW-12	3/24/16	1525		x			7	x			x		x	x		x	x	x	x	x			

Standard x
Full Data Package ___

Comments
Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

720-71156 Chain of Custody

	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Name: Corey Kilpatrick						
Sampler's Company: Blaine Tech Services	CK / BTS	3/24/16	1740	/ BTS (S.C.)	3/24/16	1740
Shipment Method: Pick up Ship Date:	/ BTS (Sample Custodian)	3/25/16	0955		3/25/16	0955
Shipment Tracking No.		3/25/16	BTS		3/25/16	1315

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: (Yes) / No | Cooler Temp on Receipt: _____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ARCADIS COC Rev. 06282012

1.1 °C

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-71156-1

Login Number: 71156

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

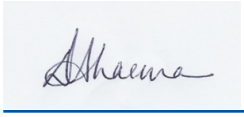
ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica Pleasanton
1220 Quarry Lane
Pleasanton, CA 94566
Tel: (925)484-1919

TestAmerica Job ID: 720-73181-1
Client Project/Site: BP #11126, Emeryville

For:
ARCADIS U.S., Inc.
100 Montgomery Street
Suite 300
San Francisco, California 94104

Attn: Hollis Phillips



Authorized for release by:
7/7/2016 3:33:08 PM

Dimple Sharma, Senior Project Manager
(925)484-1919
dimple.sharma@testamericainc.com

Table of Contents

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Qualifiers

GC/MS Semi VOA

Qualifier	Qualifier Description
X	Surrogate is outside control limits

Glossary

Abbreviation	These commonly used abbreviations may or may not be present in this report.
¤	Listed under the "D" column to designate that the result is reported on a dry weight basis
%R	Percent Recovery
CFL	Contains Free Liquid
CNF	Contains no Free Liquid
DER	Duplicate error ratio (normalized absolute difference)
Dil Fac	Dilution Factor
DL, RA, RE, IN	Indicates a Dilution, Re-analysis, Re-extraction, or additional Initial metals/anion analysis of the sample
DLC	Decision level concentration
MDA	Minimum detectable activity
EDL	Estimated Detection Limit
MDC	Minimum detectable concentration
MDL	Method Detection Limit
ML	Minimum Level (Dioxin)
NC	Not Calculated
ND	Not detected at the reporting limit (or MDL or EDL if shown)
PQL	Practical Quantitation Limit
QC	Quality Control
RER	Relative error ratio
RL	Reporting Limit or Requested Limit (Radiochemistry)
RPD	Relative Percent Difference, a measure of the relative difference between two points
TEF	Toxicity Equivalent Factor (Dioxin)
TEQ	Toxicity Equivalent Quotient (Dioxin)

Job ID: 720-73181-1

Laboratory: TestAmerica Pleasanton

Narrative

Job Narrative
720-73181-1

Comments
No additional comments.

Receipt
The samples were received on 6/30/2016 5:44 PM; the samples arrived in good condition, properly preserved and, where required, on ice. The temperatures of the 6 coolers at receipt time were 2.3º C, 2.3º C, 3.2º C, 3.4º C, 3.5º C and 3.7º C.

GC/MS VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

GC/MS Semi VOA
Method 8270C SIM: Surrogate recovery for the following samples was outside control limits: MW-2 (720-73181-2) and MW-6 (720-73181-6). Evidence of matrix interference is present; therefore, re-extraction and/or re-analysis was not performed.

No additional analytical or quality issues were noted, other than those described above or in the Definitions/Glossary page.

GC Semi VOA
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Organic Prep
No analytical or quality issues were noted, other than those described in the Definitions/Glossary page.

Detection Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-1 — Lab Sample ID: 720-73181-1

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.0		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	71		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	300		20		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-2 — Lab Sample ID: 720-73181-2

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1200		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Benzene	2500		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Ethylbenzene	64		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Toluene	25		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	89		50		ug/L	50		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	7100		2500		ug/L	50		8260B/CA_LUFT MS	Total/NA
TBA	11000		1000		ug/L	50		8260B/CA_LUFT MS	Total/NA
TAME	48		25		ug/L	50		8260B/CA_LUFT MS	Total/NA
Naphthalene	12		0.11		ug/L	1		8270C SIM	Total/NA
Acenaphthene	0.20		0.11		ug/L	1		8270C SIM	Total/NA
Fluorene	0.12		0.11		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	970		52		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-3 — Lab Sample ID: 720-73181-3

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.81		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	98		20		ug/L	1		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-4 — Lab Sample ID: 720-73181-4

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
TBA	16000		400		ug/L	20		8260B/CA_LUFT MS	Total/NA

Client Sample ID: MW-5 — Lab Sample ID: 720-73181-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	5.9		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Benzene	1.6		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	2.7		1.0		ug/L	1		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-5 (Continued) — Lab Sample ID: 720-73181-5

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Gasoline Range Organics (GRO) -C6-C12	2100		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	620		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	1.0		0.10		ug/L	1		8270C SIM	Total/NA
Acenaphthene	0.74		0.10		ug/L	1		8270C SIM	Total/NA
Fluorene	0.41		0.10		ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.49		0.10		ug/L	1		8270C SIM	Total/NA
Fluoranthene	0.13		0.10		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	750		51		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-6 — Lab Sample ID: 720-73181-6

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	1.6		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	30		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
Pyrene	0.14		0.11		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	1800		54		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-7 — Lab Sample ID: 720-73181-7

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	2.4		1.0		ug/L	2		8260B/CA_LUFT MS	Total/NA
TBA	1900		40		ug/L	2		8260B/CA_LUFT MS	Total/NA
Diesel Range Organics [C10-C28]	69		50		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-8 — Lab Sample ID: 720-73181-8

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	0.64		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	73		50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	220		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	0.52		0.10		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	110		50		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-9 — Lab Sample ID: 720-73181-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	180		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Benzene	56		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-9 (Continued) — Lab Sample ID: 720-73181-9

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Toluene	6.5		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Xylenes, Total	8.4		5.0		ug/L	5		8260B/CA_LUFT MS	Total/NA
Gasoline Range Organics (GRO) -C6-C12	1800		250		ug/L	5		8260B/CA_LUFT MS	Total/NA
TBA	4200		100		ug/L	5		8260B/CA_LUFT MS	Total/NA
TAME	7.0		2.5		ug/L	5		8260B/CA_LUFT MS	Total/NA
Naphthalene	2.4		0.10		ug/L	1		8270C SIM	Total/NA
Acenaphthene	0.17		0.10		ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.11		0.10		ug/L	1		8270C SIM	Total/NA
Diesel Range Organics [C10-C28]	820		50		ug/L	1		8015B	Silica Gel Cleanup

Client Sample ID: MW-10 — Lab Sample ID: 720-73181-10

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
Acenaphthene	0.20		0.10		ug/L	1		8270C SIM	Total/NA

Client Sample ID: MW-11 — Lab Sample ID: 720-73181-11

No Detections.

Client Sample ID: MW-12 — Lab Sample ID: 720-73181-12

Analyte	Result	Qualifier	RL	MDL	Unit	Dil Fac	D	Method	Prep Type
MTBE	12		0.50		ug/L	1		8260B/CA_LUFT MS	Total/NA
TBA	250		20		ug/L	1		8260B/CA_LUFT MS	Total/NA
Naphthalene	0.11		0.10		ug/L	1		8270C SIM	Total/NA
Fluorene	0.13		0.10		ug/L	1		8270C SIM	Total/NA
Phenanthrene	0.26		0.10		ug/L	1		8270C SIM	Total/NA

This Detection Summary does not include radiochemical test results.

Client Sample ID: MW-1
Date Collected: 06/28/16 11:46
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-1
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**2.0**		0.50		ug/L			07/02/16 13:44	1
Benzene	ND		0.50		ug/L			07/02/16 13:44	1
Ethylbenzene	ND		0.50		ug/L			07/02/16 13:44	1
Toluene	ND		0.50		ug/L			07/02/16 13:44	1
Xylenes, Total	ND		1.0		ug/L			07/02/16 13:44	1
Gasoline Range Organics (GRO) -C6-C12	**71**		50		ug/L			07/02/16 13:44	1
TBA	**300**		20		ug/L			07/02/16 13:44	1
TAME	ND		0.50		ug/L			07/02/16 13:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/02/16 13:44*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*		*07/02/16 13:44*	*1*
Toluene-d8 (Surr)	*96*		*70 - 130*		*07/02/16 13:44*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 21:20	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*52*		*29 - 120*	*07/01/16 12:35*	*07/01/16 21:20*	*1*
Terphenyl-d14	*55*		*45 - 120*	*07/01/16 12:35*	*07/01/16 21:20*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		07/05/16 10:39	07/06/16 15:23	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*07/05/16 10:39*	*07/06/16 15:23*	*1*
p-Terphenyl	*88*		*31 - 150*	*07/05/16 10:39*	*07/06/16 15:23*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-2
Date Collected: 06/28/16 13:47
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-2
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**1200**		25		ug/L			07/02/16 20:38	50
Benzene	**2500**		25		ug/L			07/02/16 20:38	50
EDB	ND		25		ug/L			07/02/16 20:38	50
1,2-DCA	ND		25		ug/L			07/02/16 20:38	50
Ethylbenzene	**64**		25		ug/L			07/02/16 20:38	50
Toluene	**25**		25		ug/L			07/02/16 20:38	50
Xylenes, Total	**89**		50		ug/L			07/02/16 20:38	50
Gasoline Range Organics (GRO) -C6-C12	**7100**		2500		ug/L			07/02/16 20:38	50
TBA	**11000**		1000		ug/L			07/02/16 20:38	50
DIPE	ND		25		ug/L			07/02/16 20:38	50
TAME	**48**		25		ug/L			07/02/16 20:38	50
Ethyl t-butyl ether	ND		25		ug/L			07/02/16 20:38	50

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/02/16 20:38*	*50*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*07/02/16 20:38*	*50*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/02/16 20:38*	*50*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**12**		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Acenaphthene	**0.20**		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Acenaphthylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Fluorene	**0.12**		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Phenanthrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Benzo[a]anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Chrysene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Benzo[a]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Benzo[b]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Benzo[k]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 21:44	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*46*		*29 - 120*	*07/01/16 12:35*	*07/01/16 21:44*	*1*
Terphenyl-d14	*31*	*X*	*45 - 120*	*07/01/16 12:35*	*07/01/16 21:44*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**970**		52		ug/L		07/05/16 10:39	07/06/16 18:03	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*07/05/16 10:39*	*07/06/16 18:03*	*1*
p-Terphenyl	*82*		*31 - 150*	*07/05/16 10:39*	*07/06/16 18:03*	*1*

Client Sample ID: MW-3
Date Collected: 06/28/16 10:03
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-3
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	0.81		0.50		ug/L			07/06/16 12:36	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/06/16 12:36	1
TBA	98		20		ug/L			07/06/16 12:36	1
TAME	ND		0.50		ug/L			07/06/16 12:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/06/16 12:36*	*1*
1,2-Dichloroethane-d4 (Surr)	*101*		*72 - 130*		*07/06/16 12:36*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*07/06/16 12:36*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:08	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*40*		*29 - 120*	*07/01/16 12:35*	*07/01/16 22:08*	*1*
Terphenyl-d14	*54*		*45 - 120*	*07/01/16 12:35*	*07/01/16 22:08*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		07/05/16 10:39	07/06/16 16:22	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.008*		*0 - 5*	*07/05/16 10:39*	*07/06/16 16:22*	*1*
p-Terphenyl	*73*		*31 - 150*	*07/05/16 10:39*	*07/06/16 16:22*	*1*

Client Sample ID: MW-4
Date Collected: 06/28/16 12:44
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-4
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		10		ug/L			07/02/16 14:40	20
Gasoline Range Organics (GRO) -C6-C12	ND		1000		ug/L			07/02/16 14:40	20
TBA	16000		400		ug/L			07/02/16 14:40	20
TAME	ND		10		ug/L			07/02/16 14:40	20

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*89*		*67 - 130*		*07/02/16 14:40*	*20*
1,2-Dichloroethane-d4 (Surr)	*103*		*72 - 130*		*07/02/16 14:40*	*20*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/02/16 14:40*	*20*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Acenaphthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Acenaphthylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Fluorene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Phenanthrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Benzo[a]anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Chrysene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Benzo[a]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Benzo[b]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Benzo[k]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 22:31	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*55*		*29 - 120*	*07/01/16 12:35*	*07/01/16 22:31*	*1*
Terphenyl-d14	*57*		*45 - 120*	*07/01/16 12:35*	*07/01/16 22:31*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		52		ug/L		07/05/16 10:39	07/06/16 17:14	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*07/05/16 10:39*	*07/06/16 17:14*	*1*
p-Terphenyl	*89*		*31 - 150*	*07/05/16 10:39*	*07/06/16 17:14*	*1*

Client Sample ID: MW-5
Date Collected: 06/28/16 10:51
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-5
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**5.9**		0.50		ug/L			07/02/16 17:53	1
Benzene	**1.6**		0.50		ug/L			07/02/16 17:53	1
Ethylbenzene	ND		0.50		ug/L			07/02/16 17:53	1
Toluene	ND		0.50		ug/L			07/02/16 17:53	1
Xylenes, Total	**2.7**		1.0		ug/L			07/02/16 17:53	1
Gasoline Range Organics (GRO) -C6-C12	**2100**		50		ug/L			07/02/16 17:53	1
TBA	**620**		20		ug/L			07/02/16 17:53	1
TAME	ND		0.50		ug/L			07/02/16 17:53	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*96*		*67 - 130*		*07/02/16 17:53*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*		*07/02/16 17:53*	*1*
Toluene-d8 (Surr)	*99*		*70 - 130*		*07/02/16 17:53*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**1.0**		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Acenaphthene	**0.74**		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Fluorene	**0.41**		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Phenanthrene	**0.49**		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Fluoranthene	**0.13**		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 22:55	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*63*		*29 - 120*	*07/01/16 12:35*	*07/01/16 22:55*	*1*
Terphenyl-d14	*63*		*45 - 120*	*07/01/16 12:35*	*07/01/16 22:55*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**750**		51		ug/L		07/05/16 10:39	07/06/16 17:39	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.2*		*0 - 5*	*07/05/16 10:39*	*07/06/16 17:39*	*1*
p-Terphenyl	*84*		*31 - 150*	*07/05/16 10:39*	*07/06/16 17:39*	*1*

Client Sample ID: MW-6
Date Collected: 06/28/16 11:22
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-6
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**1.6**		0.50		ug/L			07/06/16 01:42	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/06/16 01:42	1
TBA	**30**		20		ug/L			07/06/16 01:42	1
TAME	ND		0.50		ug/L			07/06/16 01:42	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*67 - 130*		*07/06/16 01:42*	*1*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*		*07/06/16 01:42*	*1*
Toluene-d8 (Surr)	*93*		*70 - 130*		*07/06/16 01:42*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Acenaphthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Acenaphthylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Fluorene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Phenanthrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Benzo[a]anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Chrysene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Benzo[a]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Benzo[b]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Benzo[k]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Pyrene	**0.14**		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:19	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*37*		*29 - 120*	*07/01/16 12:35*	*07/01/16 23:19*	*1*
Terphenyl-d14	*31*	*X*	*45 - 120*	*07/01/16 12:35*	*07/01/16 23:19*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**1800**		54		ug/L		07/05/16 10:39	07/06/16 18:36	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.05*		*0 - 5*	*07/05/16 10:39*	*07/06/16 18:36*	*1*
p-Terphenyl	*86*		*31 - 150*	*07/05/16 10:39*	*07/06/16 18:36*	*1*

Client Sample ID: MW-7
Date Collected: 06/28/16 12:05
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-7
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**2.4**		1.0		ug/L			07/06/16 02:10	2
Benzene	ND		1.0		ug/L			07/06/16 02:10	2
Ethylbenzene	ND		1.0		ug/L			07/06/16 02:10	2
Toluene	ND		1.0		ug/L			07/06/16 02:10	2
Xylenes, Total	ND		2.0		ug/L			07/06/16 02:10	2
Gasoline Range Organics (GRO) -C6-C12	ND		100		ug/L			07/06/16 02:10	2
TBA	**1900**		40		ug/L			07/06/16 02:10	2
TAME	ND		1.0		ug/L			07/06/16 02:10	2

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/06/16 02:10*	*2*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*		*07/06/16 02:10*	*2*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/06/16 02:10*	*2*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Acenaphthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Acenaphthylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Fluorene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Phenanthrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Benzo[a]anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Chrysene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Benzo[a]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Benzo[b]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Benzo[k]fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Benzo[g,h,i]perylene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Indeno[1,2,3-cd]pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Fluoranthene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Pyrene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1
Dibenz(a,h)anthracene	ND		0.11		ug/L		07/01/16 12:35	07/01/16 23:43	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*54*		*29 - 120*	*07/01/16 12:35*	*07/01/16 23:43*	*1*
Terphenyl-d14	*57*		*45 - 120*	*07/01/16 12:35*	*07/01/16 23:43*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**69**		50		ug/L		07/05/16 10:39	07/06/16 14:48	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.003*		*0 - 5*	*07/05/16 10:39*	*07/06/16 14:48*	*1*
p-Terphenyl	*91*		*31 - 150*	*07/05/16 10:39*	*07/06/16 14:48*	*1*

Client Sample ID: MW-8
Date Collected: 06/28/16 13:16
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-8
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**0.64**		0.50		ug/L			07/06/16 02:38	1
Gasoline Range Organics (GRO) -C6-C12	**73**		50		ug/L			07/06/16 02:38	1
TBA	**220**		20		ug/L			07/06/16 02:38	1
TAME	ND		0.50		ug/L			07/06/16 02:38	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*07/06/16 02:38*	*1*
1,2-Dichloroethane-d4 (Surr)	*104*		*72 - 130*		*07/06/16 02:38*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*07/06/16 02:38*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.52**		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:07	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*60*		*29 - 120*	*07/01/16 12:35*	*07/02/16 00:07*	*1*
Terphenyl-d14	*45*		*45 - 120*	*07/01/16 12:35*	*07/02/16 00:07*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**110**		50		ug/L		07/05/16 10:39	07/06/16 15:13	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*07/05/16 10:39*	*07/06/16 15:13*	*1*
p-Terphenyl	*94*		*31 - 150*	*07/05/16 10:39*	*07/06/16 15:13*	*1*

Client Sample ID: MW-9

Date Collected: 06/28/16 12:43
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-9

Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**180**		2.5		ug/L			07/06/16 13:04	5
Benzene	**56**		2.5		ug/L			07/06/16 13:04	5
Ethylbenzene	ND		2.5		ug/L			07/06/16 13:04	5
Toluene	**6.5**		2.5		ug/L			07/06/16 13:04	5
Xylenes, Total	**8.4**		5.0		ug/L			07/06/16 13:04	5
Gasoline Range Organics (GRO) -C6-C12	**1800**		250		ug/L			07/06/16 13:04	5
TBA	**4200**		100		ug/L			07/06/16 13:04	5
TAME	**7.0**		2.5		ug/L			07/06/16 13:04	5

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*07/06/16 13:04*	*5*
1,2-Dichloroethane-d4 (Surr)	*102*		*72 - 130*		*07/06/16 13:04*	*5*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/06/16 13:04*	*5*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**2.4**		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Acenaphthene	**0.17**		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Phenanthrene	**0.11**		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:30	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*58*		*29 - 120*	*07/01/16 12:35*	*07/02/16 00:30*	*1*
Terphenyl-d14	*58*		*45 - 120*	*07/01/16 12:35*	*07/02/16 00:30*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	**820**		50		ug/L		07/05/16 10:39	07/06/16 15:37	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.1*		*0 - 5*	*07/05/16 10:39*	*07/06/16 15:37*	*1*
p-Terphenyl	*96*		*31 - 150*	*07/05/16 10:39*	*07/06/16 15:37*	*1*

Client Sample ID: MW-10
Date Collected: 06/28/16 09:20
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-10
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Acenaphthene	0.20		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 00:54	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*61*		*29 - 120*	*07/01/16 12:35*	*07/02/16 00:54*	*1*
Terphenyl-d14	*47*		*45 - 120*	*07/01/16 12:35*	*07/02/16 00:54*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		07/05/16 10:39	07/06/16 16:01	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.002*		*0 - 5*	*07/05/16 10:39*	*07/06/16 16:01*	*1*
p-Terphenyl	*88*		*31 - 150*	*07/05/16 10:39*	*07/06/16 16:01*	*1*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-11
Date Collected: 06/28/16 08:46
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-11
Matrix: Water

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:18	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*64*		*29 - 120*	*07/01/16 12:35*	*07/02/16 01:18*	*1*
Terphenyl-d14	*59*		*45 - 120*	*07/01/16 12:35*	*07/02/16 01:18*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		07/05/16 10:39	07/06/16 16:26	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*07/05/16 10:39*	*07/06/16 16:26*	*1*
p-Terphenyl	*96*		*31 - 150*	*07/05/16 10:39*	*07/06/16 16:26*	*1*

Client Sample ID: MW-12
Date Collected: 06/28/16 10:39
Date Received: 06/30/16 17:44

Lab Sample ID: 720-73181-12
Matrix: Water

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	**12**		0.50		ug/L			07/02/16 15:35	1
Benzene	ND		0.50		ug/L			07/02/16 15:35	1
EDB	ND		0.50		ug/L			07/02/16 15:35	1
1,2-DCA	ND		0.50		ug/L			07/02/16 15:35	1
Ethylbenzene	ND		0.50		ug/L			07/02/16 15:35	1
Toluene	ND		0.50		ug/L			07/02/16 15:35	1
Xylenes, Total	ND		1.0		ug/L			07/02/16 15:35	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/02/16 15:35	1
TBA	**250**		20		ug/L			07/02/16 15:35	1
DIPE	ND		0.50		ug/L			07/02/16 15:35	1
TAME	ND		0.50		ug/L			07/02/16 15:35	1
Ethyl t-butyl ether	ND		0.50		ug/L			07/02/16 15:35	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*93*		*67 - 130*		*07/02/16 15:35*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*07/02/16 15:35*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*07/02/16 15:35*	*1*

Method: 8270C SIM - PAHs by GCMS (SIM)

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	**0.11**		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Fluorene	**0.13**		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Phenanthrene	**0.26**		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/02/16 01:41	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*66*		*29 - 120*	*07/01/16 12:35*	*07/02/16 01:41*	*1*
Terphenyl-d14	*57*		*45 - 120*	*07/01/16 12:35*	*07/02/16 01:41*	*1*

Method: 8015B - Diesel Range Organics (DRO) (GC) - Silica Gel Cleanup

Analyte	Result	Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		51		ug/L		07/05/16 10:39	07/06/16 16:50	1

Surrogate	*%Recovery*	*Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.004*		*0 - 5*	*07/05/16 10:39*	*07/06/16 16:50*	*1*
p-Terphenyl	*97*		*31 - 150*	*07/05/16 10:39*	*07/06/16 16:50*	*1*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)		
		BFB	12DCE	TOL
Lab Sample ID	Client Sample ID	(67-130)	(72-130)	(70-130)
720-73181-1	MW-1	91	104	96
720-73181-2	MW-2	91	101	95
720-73181-3	MW-3	91	101	94
720-73181-4	MW-4	89	103	95
720-73181-5	MW-5	96	98	99
720-73181-6	MW-6	90	98	93
720-73181-7	MW-7	91	102	95
720-73181-8	MW-8	93	104	94
720-73181-9	MW-9	93	102	95
720-73181-12	MW-12	93	99	94
LCS 720-205362/5	Lab Control Sample	93	95	97
LCS 720-205362/7	Lab Control Sample	92	98	95
LCS 720-205438/5	Lab Control Sample	93	96	95
LCS 720-205438/7	Lab Control Sample	92	98	95
LCS 720-205450/5	Lab Control Sample	93	96	95
LCS 720-205450/7	Lab Control Sample	93	99	95
LCSD 720-205362/6	Lab Control Sample Dup	94	98	96
LCSD 720-205362/8	Lab Control Sample Dup	92	98	95
LCSD 720-205438/6	Lab Control Sample Dup	94	97	95
LCSD 720-205438/8	Lab Control Sample Dup	92	99	96
LCSD 720-205450/6	Lab Control Sample Dup	92	97	96
LCSD 720-205450/8	Lab Control Sample Dup	92	96	94
MB 720-205362/4	Method Blank	91	100	95
MB 720-205438/4	Method Blank	90	99	94
MB 720-205450/4	Method Blank	91	100	95

Surrogate Legend

BFB = 4-Bromofluorobenzene

12DCE = 1,2-Dichloroethane-d4 (Surr)

TOL = Toluene-d8 (Surr)

Method: 8270C SIM - PAHs by GCMS (SIM)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)	
		FBP	TPH
Lab Sample ID	Client Sample ID	(29-120)	(45-120)
720-73181-1	MW-1	52	55
720-73181-2	MW-2	46	31 X
720-73181-3	MW-3	40	54
720-73181-4	MW-4	55	57
720-73181-5	MW-5	63	63
720-73181-6	MW-6	37	31 X
720-73181-7	MW-7	54	57
720-73181-8	MW-8	60	45
720-73181-9	MW-9	58	58
720-73181-10	MW-10	61	47
720-73181-11	MW-11	64	59
720-73181-12	MW-12	66	57

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Matrix: Water **Prep Type: Total/NA**

		Percent Surrogate Recovery (Acceptance Limits)											
		FBP	TPH										
Lab Sample ID	Client Sample ID	(29-120)	(45-120)										
LCS 720-205316/2-A	Lab Control Sample	52	67										
LCSD 720-205316/3-A	Lab Control Sample Dup	59	66										
MB 720-205316/1-A	Method Blank	53	70										

Surrogate Legend

FBP = 2-Fluorobiphenyl

TPH = Terphenyl-d14

Method: 8015B - Diesel Range Organics (DRO) (GC)

Matrix: Water **Prep Type: Silica Gel Cleanup**

		Percent Surrogate Recovery (Acceptance Limits)											
		NDA1	PTP1										
Lab Sample ID	Client Sample ID	(0-5)	(31-150)										
720-73181-1	MW-1	0.01	88										
720-73181-2	MW-2	0.1	82										
720-73181-3	MW-3	0.008	73										
720-73181-4	MW-4	0.004	89										
720-73181-5	MW-5	0.2	84										
720-73181-6	MW-6	0.05	86										
720-73181-7	MW-7	0.003	91										
720-73181-8	MW-8	0.1	94										
720-73181-9	MW-9	0.1	96										
720-73181-10	MW-10	0.002	88										
720-73181-11	MW-11	0.004	96										
720-73181-12	MW-12	0.004	97										
LCS 720-205400/2-A	Lab Control Sample		103										
LCSD 720-205400/3-A	Lab Control Sample Dup		105										
MB 720-205400/1-A	Method Blank	0.01	79										

Surrogate Legend

NDA = Capric Acid (Surr)

PTP = p-Terphenyl

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS

Lab Sample ID: MB 720-205362/4
Matrix: Water
Analysis Batch: 205362

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			07/02/16 10:30	1
Benzene	ND		0.50		ug/L			07/02/16 10:30	1
EDB	ND		0.50		ug/L			07/02/16 10:30	1
1,2-DCA	ND		0.50		ug/L			07/02/16 10:30	1
Ethylbenzene	ND		0.50		ug/L			07/02/16 10:30	1
Toluene	ND		0.50		ug/L			07/02/16 10:30	1
Xylenes, Total	ND		1.0		ug/L			07/02/16 10:30	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/02/16 10:30	1
TBA	ND		20		ug/L			07/02/16 10:30	1
DIPE	ND		0.50		ug/L			07/02/16 10:30	1
TAME	ND		0.50		ug/L			07/02/16 10:30	1
Ethyl t-butyl ether	ND		0.50		ug/L			07/02/16 10:30	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/02/16 10:30*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*		*07/02/16 10:30*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/02/16 10:30*	*1*

Lab Sample ID: LCS 720-205362/5
Matrix: Water
Analysis Batch: 205362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
MTBE			25.0	25.5		ug/L		102	62 - 130		
Benzene			25.0	24.5		ug/L		98	79 - 130		
EDB			25.0	27.0		ug/L		108	70 - 130		
1,2-DCA			25.0	24.7		ug/L		99	61 - 132		
Ethylbenzene			25.0	23.6		ug/L		94	80 - 120		
Toluene			25.0	23.4		ug/L		93	78 - 120		
m-Xylene & p-Xylene			25.0	23.7		ug/L		95	70 - 142		
o-Xylene			25.0	23.7		ug/L		95	70 - 130		
TBA			250	233		ug/L		93	70 - 130		
DIPE			25.0	26.7		ug/L		107	69 - 134		
TAME			25.0	28.2		ug/L		113	79 - 130		
Ethyl t-butyl ether			25.0	26.5		ug/L		106	70 - 130		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*95*		*72 - 130*
Toluene-d8 (Surr)	*97*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-205362/7
Matrix: Water
Analysis Batch: 205362

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Gasoline Range Organics (GRO) -C6-C12			500	461		ug/L		92	58 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 720-205362/6
Matrix: Water
Analysis Batch: 205362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	26.5		ug/L		106	62 - 130	4	20
Benzene			25.0	24.6		ug/L		98	79 - 130	0	20
EDB			25.0	27.8		ug/L		111	70 - 130	3	20
1,2-DCA			25.0	25.2		ug/L		101	61 - 132	2	20
Ethylbenzene			25.0	23.3		ug/L		93	80 - 120	2	20
Toluene			25.0	23.0		ug/L		92	78 - 120	1	20
m-Xylene & p-Xylene			25.0	23.3		ug/L		93	70 - 142	2	20
o-Xylene			25.0	23.4		ug/L		94	70 - 130	1	20
TBA			250	231		ug/L		92	70 - 130	1	20
DIPE			25.0	26.8		ug/L		107	69 - 134	0	20
TAME			25.0	28.9		ug/L		116	79 - 130	2	20
Ethyl t-butyl ether			25.0	27.1		ug/L		108	70 - 130	2	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: LCSD 720-205362/8
Matrix: Water
Analysis Batch: 205362

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	482		ug/L		96	58 - 120	4	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: MB 720-205438/4
Matrix: Water
Analysis Batch: 205438

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			07/05/16 18:48	1
Benzene	ND		0.50		ug/L			07/05/16 18:48	1
Ethylbenzene	ND		0.50		ug/L			07/05/16 18:48	1
Toluene	ND		0.50		ug/L			07/05/16 18:48	1
Xylenes, Total	ND		1.0		ug/L			07/05/16 18:48	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/05/16 18:48	1
TBA	ND		20		ug/L			07/05/16 18:48	1
TAME	ND		0.50		ug/L			07/05/16 18:48	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*90*		*67 - 130*		*07/05/16 18:48*	*1*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*		*07/05/16 18:48*	*1*
Toluene-d8 (Surr)	*94*		*70 - 130*		*07/05/16 18:48*	*1*

Lab Sample ID: LCS 720-205438/5
Matrix: Water
Analysis Batch: 205438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	25.0		ug/L		100	62 - 130
Benzene	25.0	23.8		ug/L		95	79 - 130
Ethylbenzene	25.0	23.5		ug/L		94	80 - 120
Toluene	25.0	23.2		ug/L		93	78 - 120
TBA	250	231		ug/L		92	70 - 130
TAME	25.0	26.5		ug/L		106	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCS 720-205438/7
Matrix: Water
Analysis Batch: 205438

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	446		ug/L		89	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*98*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-205438/6
Matrix: Water
Analysis Batch: 205438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE			25.0	25.1		ug/L		101	62 - 130	1	20
Benzene			25.0	23.8		ug/L		95	79 - 130	0	20
Ethylbenzene			25.0	23.8		ug/L		95	80 - 120	1	20
Toluene			25.0	23.4		ug/L		94	78 - 120	1	20
TBA			250	236		ug/L		95	70 - 130	2	20
TAME			25.0	26.6		ug/L		106	79 - 130	0	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*94*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 720-205438/8
Matrix: Water
Analysis Batch: 205438

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12			500	460		ug/L		92	58 - 120	3	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Lab Sample ID: MB 720-205450/4
Matrix: Water
Analysis Batch: 205450

Client Sample ID: Method Blank
Prep Type: Total/NA

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
MTBE	ND		0.50		ug/L			07/06/16 08:55	1
Benzene	ND		0.50		ug/L			07/06/16 08:55	1
Ethylbenzene	ND		0.50		ug/L			07/06/16 08:55	1
Toluene	ND		0.50		ug/L			07/06/16 08:55	1
Xylenes, Total	ND		1.0		ug/L			07/06/16 08:55	1
Gasoline Range Organics (GRO) -C6-C12	ND		50		ug/L			07/06/16 08:55	1
TBA	ND		20		ug/L			07/06/16 08:55	1
TAME	ND		0.50		ug/L			07/06/16 08:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
4-Bromofluorobenzene	*91*		*67 - 130*		*07/06/16 08:55*	*1*
1,2-Dichloroethane-d4 (Surr)	*100*		*72 - 130*		*07/06/16 08:55*	*1*
Toluene-d8 (Surr)	*95*		*70 - 130*		*07/06/16 08:55*	*1*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCS 720-205450/5
Matrix: Water
Analysis Batch: 205450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
MTBE	25.0	24.6		ug/L		98	62 - 130
Benzene	25.0	23.7		ug/L		95	79 - 130
Ethylbenzene	25.0	23.6		ug/L		94	80 - 120
Toluene	25.0	23.1		ug/L		92	78 - 120
m-Xylene & p-Xylene	25.0	23.6		ug/L		94	70 - 142
o-Xylene	25.0	23.5		ug/L		94	70 - 130
TBA	250	235		ug/L		94	70 - 130
TAME	25.0	27.3		ug/L		109	79 - 130

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCS 720-205450/7
Matrix: Water
Analysis Batch: 205450

Client Sample ID: Lab Control Sample
Prep Type: Total/NA

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Gasoline Range Organics (GRO) -C6-C12	500	523		ug/L		105	58 - 120

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
4-Bromofluorobenzene	*93*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*99*		*72 - 130*
Toluene-d8 (Surr)	*95*		*70 - 130*

Lab Sample ID: LCSD 720-205450/6
Matrix: Water
Analysis Batch: 205450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
MTBE	25.0	25.2		ug/L		101	62 - 130	2	20
Benzene	25.0	23.6		ug/L		94	79 - 130	1	20
Ethylbenzene	25.0	23.2		ug/L		93	80 - 120	2	20
Toluene	25.0	23.0		ug/L		92	78 - 120	1	20
m-Xylene & p-Xylene	25.0	23.2		ug/L		93	70 - 142	2	20
o-Xylene	25.0	23.2		ug/L		93	70 - 130	1	20
TBA	250	232		ug/L		93	70 - 130	1	20
TAME	25.0	27.7		ug/L		111	79 - 130	1	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*97*		*72 - 130*
Toluene-d8 (Surr)	*96*		*70 - 130*

Method: 8260B/CA_LUFTMS - 8260B / CA LUFT MS (Continued)

Lab Sample ID: LCSD 720-205450/8
Matrix: Water
Analysis Batch: 205450

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Gasoline Range Organics (GRO) -C6-C12	500	500		ug/L		100	58 - 120	5	20

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
4-Bromofluorobenzene	*92*		*67 - 130*
1,2-Dichloroethane-d4 (Surr)	*96*		*72 - 130*
Toluene-d8 (Surr)	*94*		*70 - 130*

Method: 8270C SIM - PAHs by GCMS (SIM)

Lab Sample ID: MB 720-205316/1-A
Matrix: Water
Analysis Batch: 205304

Client Sample ID: Method Blank
Prep Type: Total/NA
Prep Batch: 205316

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Naphthalene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Acenaphthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Acenaphthylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Fluorene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Phenanthrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Benzo[a]anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Chrysene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Benzo[a]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Benzo[b]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Benzo[k]fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Benzo[g,h,i]perylene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Indeno[1,2,3-cd]pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Fluoranthene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Pyrene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1
Dibenz(a,h)anthracene	ND		0.10		ug/L		07/01/16 12:35	07/01/16 20:56	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
2-Fluorobiphenyl	*53*		*29 - 120*	*07/01/16 12:35*	*07/01/16 20:56*	*1*
Terphenyl-d14	*70*		*45 - 120*	*07/01/16 12:35*	*07/01/16 20:56*	*1*

Lab Sample ID: LCS 720-205316/2-A
Matrix: Water
Analysis Batch: 205304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 205316

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Naphthalene	10.0	5.29		ug/L		53	19 - 120
Acenaphthene	10.0	5.08		ug/L		51	24 - 120
Acenaphthylene	10.0	5.86		ug/L		59	24 - 120
Fluorene	10.0	5.58		ug/L		56	27 - 120
Phenanthrene	10.0	6.45		ug/L		65	31 - 120
Anthracene	10.0	7.08		ug/L		71	44 - 120

Method: 8270C SIM - PAHs by GCMS (SIM) (Continued)

Lab Sample ID: LCS 720-205316/2-A
Matrix: Water
Analysis Batch: 205304

Client Sample ID: Lab Control Sample
Prep Type: Total/NA
Prep Batch: 205316

Analyte			Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits		
Benzo[a]anthracene			10.0	7.67		ug/L		77	48 - 120		
Chrysene			10.0	7.53		ug/L		75	47 - 120		
Benzo[a]pyrene			10.0	7.01		ug/L		70	43 - 120		
Benzo[b]fluoranthene			10.0	6.60		ug/L		66	42 - 120		
Benzo[k]fluoranthene			10.0	6.59		ug/L		66	42 - 120		
Benzo[g,h,i]perylene			10.0	6.65		ug/L		66	35 - 120		
Indeno[1,2,3-cd]pyrene			10.0	6.68		ug/L		67	36 - 120		
Fluoranthene			10.0	7.69		ug/L		77	43 - 120		
Pyrene			10.0	6.93		ug/L		69	47 - 120		
Dibenz(a,h)anthracene			10.0	6.50		ug/L		65	33 - 120		

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
2-Fluorobiphenyl	*52*		*29 - 120*
Terphenyl-d14	*67*		*45 - 120*

Lab Sample ID: LCSD 720-205316/3-A
Matrix: Water
Analysis Batch: 205304

Client Sample ID: Lab Control Sample Dup
Prep Type: Total/NA
Prep Batch: 205316

Analyte			Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Naphthalene			10.0	5.71		ug/L		57	19 - 120	8	35
Acenaphthene			10.0	5.29		ug/L		53	24 - 120	4	35
Acenaphthylene			10.0	6.04		ug/L		60	24 - 120	3	35
Fluorene			10.0	5.77		ug/L		58	27 - 120	3	35
Phenanthrene			10.0	6.69		ug/L		67	31 - 120	4	35
Anthracene			10.0	7.38		ug/L		74	44 - 120	4	35
Benzo[a]anthracene			10.0	7.52		ug/L		75	48 - 120	2	35
Chrysene			10.0	7.27		ug/L		73	47 - 120	4	35
Benzo[a]pyrene			10.0	6.65		ug/L		66	43 - 120	5	35
Benzo[b]fluoranthene			10.0	6.54		ug/L		65	42 - 120	1	35
Benzo[k]fluoranthene			10.0	6.07		ug/L		61	42 - 120	8	35
Benzo[g,h,i]perylene			10.0	5.96		ug/L		60	35 - 120	11	35
Indeno[1,2,3-cd]pyrene			10.0	6.08		ug/L		61	36 - 120	9	35
Fluoranthene			10.0	7.81		ug/L		78	43 - 120	2	35
Pyrene			10.0	6.95		ug/L		69	47 - 120	0	35
Dibenz(a,h)anthracene			10.0	5.84		ug/L		58	33 - 120	11	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
2-Fluorobiphenyl	*59*		*29 - 120*
Terphenyl-d14	*66*		*45 - 120*

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Method: 8015B - Diesel Range Organics (DRO) (GC)

Lab Sample ID: MB 720-205400/1-A
Matrix: Water
Analysis Batch: 205451

Client Sample ID: Method Blank
Prep Type: Silica Gel Cleanup
Prep Batch: 205400

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Diesel Range Organics [C10-C28]	ND		50		ug/L		07/05/16 10:39	07/06/16 13:55	1

Surrogate	*MB %Recovery*	*MB Qualifier*	*Limits*	*Prepared*	*Analyzed*	*Dil Fac*
Capric Acid (Surr)	*0.01*		*0 - 5*	*07/05/16 10:39*	*07/06/16 13:55*	*1*
p-Terphenyl	*79*		*31 - 150*	*07/05/16 10:39*	*07/06/16 13:55*	*1*

Lab Sample ID: LCS 720-205400/2-A
Matrix: Water
Analysis Batch: 205451

Client Sample ID: Lab Control Sample
Prep Type: Silica Gel Cleanup
Prep Batch: 205400

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Diesel Range Organics [C10-C28]	2500	1380		ug/L		55	32 - 119

Surrogate	*LCS %Recovery*	*LCS Qualifier*	*Limits*
p-Terphenyl	*103*		*31 - 150*

Lab Sample ID: LCSD 720-205400/3-A
Matrix: Water
Analysis Batch: 205451

Client Sample ID: Lab Control Sample Dup
Prep Type: Silica Gel Cleanup
Prep Batch: 205400

Analyte	Spike Added	LCSD Result	LCSD Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Diesel Range Organics [C10-C28]	2500	1320		ug/L		53	32 - 119	5	35

Surrogate	*LCSD %Recovery*	*LCSD Qualifier*	*Limits*
p-Terphenyl	*105*		*31 - 150*

GC/MS VOA

Analysis Batch: 205362

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-1	MW-1	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-2	MW-2	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-4	MW-4	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-5	MW-5	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-12	MW-12	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205362/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205362/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205362/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205362/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-205362/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 205438

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-6	MW-6	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-7	MW-7	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-8	MW-8	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205438/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205438/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205438/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205438/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-205438/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

Analysis Batch: 205450

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-3	MW-3	Total/NA	Water	8260B/CA_LUFT MS	
720-73181-9	MW-9	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205450/5	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCS 720-205450/7	Lab Control Sample	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205450/6	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
LCSD 720-205450/8	Lab Control Sample Dup	Total/NA	Water	8260B/CA_LUFT MS	
MB 720-205450/4	Method Blank	Total/NA	Water	8260B/CA_LUFT MS	

GC/MS Semi VOA

Analysis Batch: 205304

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-1	MW-1	Total/NA	Water	8270C SIM	205316
720-73181-2	MW-2	Total/NA	Water	8270C SIM	205316
720-73181-3	MW-3	Total/NA	Water	8270C SIM	205316
720-73181-4	MW-4	Total/NA	Water	8270C SIM	205316
720-73181-5	MW-5	Total/NA	Water	8270C SIM	205316
720-73181-6	MW-6	Total/NA	Water	8270C SIM	205316
720-73181-7	MW-7	Total/NA	Water	8270C SIM	205316
720-73181-8	MW-8	Total/NA	Water	8270C SIM	205316
720-73181-9	MW-9	Total/NA	Water	8270C SIM	205316
720-73181-10	MW-10	Total/NA	Water	8270C SIM	205316
720-73181-11	MW-11	Total/NA	Water	8270C SIM	205316
720-73181-12	MW-12	Total/NA	Water	8270C SIM	205316
LCS 720-205316/2-A	Lab Control Sample	Total/NA	Water	8270C SIM	205316
LCSD 720-205316/3-A	Lab Control Sample Dup	Total/NA	Water	8270C SIM	205316
MB 720-205316/1-A	Method Blank	Total/NA	Water	8270C SIM	205316

Prep Batch: 205316

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-1	MW-1	Total/NA	Water	3510C	
720-73181-2	MW-2	Total/NA	Water	3510C	
720-73181-3	MW-3	Total/NA	Water	3510C	
720-73181-4	MW-4	Total/NA	Water	3510C	
720-73181-5	MW-5	Total/NA	Water	3510C	
720-73181-6	MW-6	Total/NA	Water	3510C	
720-73181-7	MW-7	Total/NA	Water	3510C	
720-73181-8	MW-8	Total/NA	Water	3510C	
720-73181-9	MW-9	Total/NA	Water	3510C	
720-73181-10	MW-10	Total/NA	Water	3510C	
720-73181-11	MW-11	Total/NA	Water	3510C	
720-73181-12	MW-12	Total/NA	Water	3510C	
LCS 720-205316/2-A	Lab Control Sample	Total/NA	Water	3510C	
LCSD 720-205316/3-A	Lab Control Sample Dup	Total/NA	Water	3510C	
MB 720-205316/1-A	Method Blank	Total/NA	Water	3510C	

GC Semi VOA

Prep Batch: 205400

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-1	MW-1	Silica Gel Cleanup	Water	3510C SGC	
720-73181-2	MW-2	Silica Gel Cleanup	Water	3510C SGC	
720-73181-3	MW-3	Silica Gel Cleanup	Water	3510C SGC	
720-73181-4	MW-4	Silica Gel Cleanup	Water	3510C SGC	
720-73181-5	MW-5	Silica Gel Cleanup	Water	3510C SGC	
720-73181-6	MW-6	Silica Gel Cleanup	Water	3510C SGC	
720-73181-7	MW-7	Silica Gel Cleanup	Water	3510C SGC	
720-73181-8	MW-8	Silica Gel Cleanup	Water	3510C SGC	
720-73181-9	MW-9	Silica Gel Cleanup	Water	3510C SGC	
720-73181-10	MW-10	Silica Gel Cleanup	Water	3510C SGC	
720-73181-11	MW-11	Silica Gel Cleanup	Water	3510C SGC	
720-73181-12	MW-12	Silica Gel Cleanup	Water	3510C SGC	

GC Semi VOA (Continued)

Prep Batch: 205400 (Continued)

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
LCS 720-205400/2-A	Lab Control Sample	Silica Gel Cleanup	Water	3510C SGC	
LCSD 720-205400/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	3510C SGC	
MB 720-205400/1-A	Method Blank	Silica Gel Cleanup	Water	3510C SGC	

Analysis Batch: 205451

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-1	MW-1	Silica Gel Cleanup	Water	8015B	205400
720-73181-3	MW-3	Silica Gel Cleanup	Water	8015B	205400
LCS 720-205400/2-A	Lab Control Sample	Silica Gel Cleanup	Water	8015B	205400
LCSD 720-205400/3-A	Lab Control Sample Dup	Silica Gel Cleanup	Water	8015B	205400
MB 720-205400/1-A	Method Blank	Silica Gel Cleanup	Water	8015B	205400

Analysis Batch: 205453

Lab Sample ID	Client Sample ID	Prep Type	Matrix	Method	Prep Batch
720-73181-2	MW-2	Silica Gel Cleanup	Water	8015B	205400
720-73181-4	MW-4	Silica Gel Cleanup	Water	8015B	205400
720-73181-5	MW-5	Silica Gel Cleanup	Water	8015B	205400
720-73181-6	MW-6	Silica Gel Cleanup	Water	8015B	205400
720-73181-7	MW-7	Silica Gel Cleanup	Water	8015B	205400
720-73181-8	MW-8	Silica Gel Cleanup	Water	8015B	205400
720-73181-9	MW-9	Silica Gel Cleanup	Water	8015B	205400
720-73181-10	MW-10	Silica Gel Cleanup	Water	8015B	205400
720-73181-11	MW-11	Silica Gel Cleanup	Water	8015B	205400
720-73181-12	MW-12	Silica Gel Cleanup	Water	8015B	205400

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-1

Lab Sample ID: 720-73181-1

Date Collected: 06/28/16 11:46
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205362	07/02/16 13:44	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 21:20	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205451	07/06/16 15:23	DCH	TAL PLS

Client Sample ID: MW-2

Lab Sample ID: 720-73181-2

Date Collected: 06/28/16 13:47
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		50	205362	07/02/16 20:38	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 21:44	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 18:03	DCH	TAL PLS

Client Sample ID: MW-3

Lab Sample ID: 720-73181-3

Date Collected: 06/28/16 10:03
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205450	07/06/16 12:36	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 22:08	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205451	07/06/16 16:22	DCH	TAL PLS

Client Sample ID: MW-4

Lab Sample ID: 720-73181-4

Date Collected: 06/28/16 12:44
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		20	205362	07/02/16 14:40	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 22:31	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 17:14	DCH	TAL PLS

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-5

Lab Sample ID: 720-73181-5

Date Collected: 06/28/16 10:51
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205362	07/02/16 17:53	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 22:55	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 17:39	DCH	TAL PLS

Client Sample ID: MW-6

Lab Sample ID: 720-73181-6

Date Collected: 06/28/16 11:22
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205438	07/06/16 01:42	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 23:19	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 18:36	DCH	TAL PLS

Client Sample ID: MW-7

Lab Sample ID: 720-73181-7

Date Collected: 06/28/16 12:05
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		2	205438	07/06/16 02:10	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/01/16 23:43	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 14:48	DCH	TAL PLS

Client Sample ID: MW-8

Lab Sample ID: 720-73181-8

Date Collected: 06/28/16 13:16
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205438	07/06/16 02:38	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/02/16 00:07	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 15:13	DCH	TAL PLS

Lab Chronicle

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Client Sample ID: MW-9

Lab Sample ID: 720-73181-9

Date Collected: 06/28/16 12:43
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		5	205450	07/06/16 13:04	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/02/16 00:30	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 15:37	DCH	TAL PLS

Client Sample ID: MW-10

Lab Sample ID: 720-73181-10

Date Collected: 06/28/16 09:20
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/02/16 00:54	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 16:01	DCH	TAL PLS

Client Sample ID: MW-11

Lab Sample ID: 720-73181-11

Date Collected: 06/28/16 08:46
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/02/16 01:18	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 16:26	DCH	TAL PLS

Client Sample ID: MW-12

Lab Sample ID: 720-73181-12

Date Collected: 06/28/16 10:39
Matrix: Water
Date Received: 06/30/16 17:44

Prep Type	Batch Type	Batch Method	Run	Dilution Factor	Batch Number	Prepared or Analyzed	Analyst	Lab
Total/NA	Analysis	8260B/CA_LUFTMS		1	205362	07/02/16 15:35	LPL	TAL PLS
Total/NA	Prep	3510C			205316	07/01/16 12:35	NDU	TAL PLS
Total/NA	Analysis	8270C SIM		1	205304	07/02/16 01:41	MQL	TAL PLS
Silica Gel Cleanup	Prep	3510C SGC			205400	07/05/16 10:39	NDU	TAL PLS
Silica Gel Cleanup	Analysis	8015B		1	205453	07/06/16 16:50	DCH	TAL PLS

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Certification Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Laboratory: TestAmerica Pleasanton

All certifications held by this laboratory are listed. Not all certifications are applicable to this report.

Authority	Program	EPA Region	Certification ID	Expiration Date
California	State Program	9	2496	01-31-18

Method Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Method	Method Description	Protocol	Laboratory
8260B/CA_LUFTMS	8260B / CA LUFT MS	SW846	TAL PLS
8270C SIM	PAHs by GCMS (SIM)	SW846	TAL PLS
8015B	Diesel Range Organics (DRO) (GC)	SW846	TAL PLS

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL PLS = TestAmerica Pleasanton, 1220 Quarry Lane, Pleasanton, CA 94566, TEL (925)484-1919

Sample Summary

Client: ARCADIS U.S., Inc.
Project/Site: BP #11126, Emeryville

TestAmerica Job ID: 720-73181-1

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
720-73181-1	MW-1	Water	06/28/16 11:46	06/30/16 17:44
720-73181-2	MW-2	Water	06/28/16 13:47	06/30/16 17:44
720-73181-3	MW-3	Water	06/28/16 10:03	06/30/16 17:44
720-73181-4	MW-4	Water	06/28/16 12:44	06/30/16 17:44
720-73181-5	MW-5	Water	06/28/16 10:51	06/30/16 17:44
720-73181-6	MW-6	Water	06/28/16 11:22	06/30/16 17:44
720-73181-7	MW-7	Water	06/28/16 12:05	06/30/16 17:44
720-73181-8	MW-8	Water	06/28/16 13:16	06/30/16 17:44
720-73181-9	MW-9	Water	06/28/16 12:43	06/30/16 17:44
720-73181-10	MW-10	Water	06/28/16 09:20	06/30/16 17:44
720-73181-11	MW-11	Water	06/28/16 08:46	06/30/16 17:44
720-73181-12	MW-12	Water	06/28/16 10:39	06/30/16 17:44

720-73181

164638

ARCADIS Chain of Custody Record

ARCADIS Design & Consultancy for natural and built assets

ARCADIS Project Name: CA 11126

Req Due Date (mm/dd/yy): Standard TAT **Rush TAT:** Yes ___ No x

Lab Work Order Number:

7/7/2016

Lab Name: Test America	Facility Address: 1700 Powell St ,	Consultant/Contractor: Blaine Tech Services, Inc.	
Lab Address: 1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code: Emeryville, CA	Blaine Tech Project No: ARCADIS/BP-11126	
Lab PM: Dimple Sharma	Lead Regulatory Agency: Alameda County Env Health Svcs	Consultant/Contractor Address: 1680 Rogers Ave , San Jose, CA 95112	
Lab Phone: 925.484.1919	California Global ID No.: T0600100208	Consultant/Contractor PM: Michael Ninokata	
Lab Shipping Accnt:	ARCADIS Project No: GP09BPNA.C044	Phone: 408.573.0555x202	
Lab Bottle Order No:	ARCADIS PM/ Phone: Jamey Peterson	Email EDD To: jamey.peterson@arcadis.com	
O 720-73181 Chain of Custody	Email: jamey.peterson@arcadis.com	Invoice To: ARCADIS X Contractor ___	

Report Type & QC Level: Standard x; Full Data Package ___

Lab No.	Sample Description	Date	Time	Soil / Solid	Water / Liquid	Air / Vapor		Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol		GRO 8260B	BTEX by 8260B	MTBE, TBA, TAME by 8260B	(5) Oxygenates 8260B	1,2-DCA, EDB 8260B	DRO w/SGC 8015M	Naphthalene 8270	PAH's 8270		Comments
	MW-1	6/28/16	1146		W			7	X			X			X	X	X		~~X~~ CR	X	X	X		
	MW-2	↓	1347		W			7	X			X			X	X	X	X	X	X	X	X		
	MW-3		1003		W			7	X			X			X	~~X~~ CR	X		~~X~~ CR	X	X	X		
	MW-4		1244		W			7	X			X			X	~~X~~ CR	X		~~X~~ CR	X	X	X		
	MW-5		1051		W			7	X			X			X	X	X		~~X~~ CR	X	X	X		
	MW-6		1122		W			7	X			X			X	~~X~~ CR	X		~~X~~ CR	X	X	X		
	MW-7		1205		W			7	X			X			X	X	X		~~X~~ CR	X	X	X		
	MW-8		1316		W			7	X			X			X	~~X~~ CR	X		~~X~~ CR	X	X	X		
	MW-9		1243		W			7	X			X			X	X	X		~~X~~ CR	X	X	X		
	MW-10	↓	0920		W			4	X											X	X	X		

Comments: 3.7, 2.3, 3.2, 3.5, 2.3, 3.4

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description

Sampler's Name: Craig Petey / Colin Rowland

Sampler's Company: Blaine Tech

Shipment Method: Ship Date:

Shipment Tracking No.

Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
[signature]	6/28/16	1542	[signature]	6/28/16	1545
[signature]	6/28/16	1730	[signature] (sample custodian)	6/28/16	173
[signature]	6-30-16	1515	[signature]	6.30.	1515
[signature]	6-30-16	1744	[signature]	6/30/16	1744

Special Instructions:

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt ______ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ARCADIS COC Rev. 06282012

169638

ARCADIS Design & Consultancy for natural and built assets

Chain of Custody Record

7/7/2016

ARCADIS Project Name: CA 11126 | Req Due Date (mm/dd/yy): Standard TAT | Rush TAT: Yes ___ No x

Lab Work Order Number:

Lab Name:	Test America	Facility Address:	1700 Powell St.,	Consultant/Contractor:	Blaine Tech Services, Inc.
Lab Address:	1220 Quarry Lane, Pleasanton, CA, 94566	City, State, ZIP Code:	Emeryville, CA	Blaine Tech Project No:	ARCADIS/BP-11126
Lab PM:	Dimple Sharma	Lead Regulatory Agency:	Alameda County Env Health Svcs	Consultant/Contractor Address:	1680 Rogers Ave., San Jose, CA 95112
Lab Phone:	925.484 1919	California Global ID No.:	T0600100208	Consultant/Contractor PM	Michael Ninokata
Lab Shipping Accnt:		ARCADIS Project No:	GP09BPNA.C044	Phone:	408 573.0555x202
Lab Bottle Order No:		ARCADIS PM/ Phone:	Jamey Peterson	Email EDD To:	jamey.peterson@arcadis.com
Other Info:		Email:	jamey.peterson@arcadis.com	Invoice To:	ARCADIS X Contractor ___

Lab No.	Sample Description	Date	Time	Matrix: Soil / Solid	Matrix: Water / Liquid	Matrix: Air / Vapor	No. Containers / Preservative: Total Number of Containers	Unpreserved	H_2SO_4	HNO_3	HCl	Methanol	Requested Analyses: GRO 8260B	BTEX by 8260B	MTBE, TBA, TAME by 8260B	(6) Oxygenates 8260B	1,2-DCA, EDB 8260B	DRO w/SGC 8015M	Naphthalene 8270	PAH's 8270	Comments
	MW-11	6/28/16	0846		W		4	X					X	X				X	X	X	
	MW-12	1	1039		W		7	X			X		X	X		X	X	X	X	X	
	Trip Blank	↓	0645																		on Hold

Report Type & QC Level: Standard x; Full Data Package ___

Note: If sample not collected, indicate "No Sample" in comments and single-strike out and initial any preprinted sample description.

Sampler's Name:	Craig Peters / Colin Dowland	Relinquished By / Affiliation	Date	Time	Accepted By / Affiliation	Date	Time
Sampler's Company:	Blaine Tech		6/28/16	1545		6/28/16	1545
Shipment Method:	Ship Date:		6/28/16	1730		6/28/16	1730
Shipment Tracking No:			6-30-16	1515		6-30-16	0917

Special Instructions: 6-30-16 1249 6/30/16 1714

THIS LINE - LAB USE ONLY: Custody Seals In Place: Yes / No | Temp Blank: Yes / No | Cooler Temp on Receipt: ____ °F/C | Trip Blank: Yes / No | MS/MSD Sample Submitted: Yes / No

ARCADIS COC Rev. 06282012

Login Sample Receipt Checklist

Client: ARCADIS U.S., Inc.

Job Number: 720-73181-1

Login Number: 73181

List Source: TestAmerica Pleasanton

List Number: 1

Creator: Arauz, Dennis

Question	Answer	Comment
Radioactivity wasn't checked or is </= background as measured by a survey meter.	N/A	
The cooler's custody seal, if present, is intact.	N/A	
Sample custody seals, if present, are intact.	N/A	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the containers received and the COC.	True	
Samples are received within Holding Time (excluding tests with immediate HTs)	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
Containers requiring zero headspace have no headspace or bubble is <6mm (1/4").	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

ATTACHMENT 4

Linear Regression Analysis

MEMO

To:
Hollis E. Phillips

Copies:
File

Arcadis U.S., Inc.
6041 Wallace Road Extension
Suite 300
Wexford
Pennsylvania 15090
Tel 724 742 9180
Fax 724 742 9189

From:
Mimi Sarkar

Date:
August 25, 2016

Arcadis Project No.:
GP09BPNA.C044.N0000

Subject:
Natural Attenuation Evaluation Memorandum
Former BP Facility No. CA-11126
Emeryville, California

This Natural Attenuation Evaluation Memorandum (memorandum) evaluates plume stability and natural attenuation of petroleum hydrocarbons in groundwater at the former BP facility CA-11126, located at 1700 Powell Street, Emeryville, California (site). Natural attenuation is the reliance on natural physical, chemical, and/or biological processes to achieve site-specific remediation objectives (United States Environmental Protection Agency [USEPA] 1999). Stable or decreasing trends in the concentrations of hydrocarbon constituents represent the primary line of evidence for natural attenuation of petroleum hydrocarbons in groundwater and overall plume stability.

To verify that the dissolved-phase plume is stable or shrinking, Arcadis U.S., Inc. (Arcadis) evaluated trends in groundwater total petroleum hydrocarbons in the diesel range organics (TPH-DRO), total petroleum hydrocarbons in the gasoline range organics (TPH-GRO), benzene, toluene, ethylbenzene, total xylenes (collectively BTEX) and methyl tertiary-butyl ether (MTBE) concentrations through time at monitoring wells located throughout the plume. This memorandum discusses the results of these analyses.

Groundwater Hydrocarbon Constituent Concentration Trends

To evaluate dissolved-phase TPH-DRO, TPH-GRO, BTEX and MTBE concentration trends at the site, Arcadis performed linear regression analysis using available historical groundwater monitoring data. The analyses were conducted for monitoring locations where concentrations have exceeded the applicable screening levels for TPH-DRO (100 micrograms per liter [µg/L]), TPH-GRO (100 µg/L), benzene (1 µg/L), toluene (150 µg/L), ethylbenzene (13 µg/L), total xylenes (20 µg/L) and MTBE (5 µg/L). San Francisco Bay Regional Water Quality Control Board [SF-RWQCB] environmental screening levels [ESLs] used as the

applicable screening levels for the constituents listed above (*SF-RWQCB Tier 1 groundwater ESLs*; SF-RWQCB 2016).

Trends were not evaluated at monitoring locations where:

- Concentrations have not exceeded the screening levels since 2010
- Insufficient data are available (less than six data points)
- Greater than 50 percent of the results are below detection

Groundwater analytical data are available at the site as early as 1992; however, trend analyses were performed for groundwater analytical data collected since December 2004 after cessation of active remediation activities, to represent natural attenuation conditions at the site. With exception to monitoring wells MW-10 and MW-11, trend analyses were performed on at least one of the analytes listed above. It should be noted that toluene concentrations have been below the screening level of 150 µg/L across the site since 2010.

Linear regression analyses using natural log normalized concentration data were conducted to evaluate trend direction and to estimate attenuation rates for the locations with significant decreasing concentration trends (USEPA 2002). The p-value of the correlation provides a measure of the significance of the slope, or the correlation between the x and y variables. Correlations were accepted as significant at the 95 percent confidence level, indicated by a p-value of 0.05 or less. The trend direction was defined as decreasing if the slope of the trend line was negative, and increasing if the slope of the trend line was positive. The R2 value is a measure of how well the linear regression fits the site data; R2 values closer to zero indicate weak model fits, while R2 values closer to one indicate stronger model fits. Results with R2 values less than 0.1, indicating substantial variability in the data, were defined as having no apparent trend. Where non-detect results were included in linear regression analyses, the reporting limit was substituted.

The linear regression analyses were conducted in Microsoft® Excel following USEPA (2002, 2009) guidance. Results of the analyses are summarized in Table 1 and discussed below.

Total Petroleum Hydrocarbons – Diesel Range Organics

Five monitoring locations (MW-3, MW-4, MW-6, MW-7 and MW-8) met the criteria described above for statistical analysis of the TPH-DRO concentration trend. Results from the linear regression analyses indicated statistically significant decreasing concentration trends for TPH-DRO in groundwater at MW-3 and MW-6, with projected dates to reach the screening level for TPH-DRO (100 µg/L) by 2017 and 2016 respectively. Monitoring well MW-4 showed decreasing trend for TPH-DRO, however the trend was not statistically significant. No trend was observed in groundwater TPH-DRO concentrations at MW-6 and MW-7. Notably, groundwater TPH-DRO concentrations at locations MW-3 and MW-4 were at or below the screening level during the two most recent monitoring events (December 2015 and June 2016).

Overall, the results from the statistical analyses demonstrate that TPH-DRO concentrations are stable at all well locations. In addition, half of the evaluated wells have already achieved the TPH-DRO screening level. These data suggest that natural attenuation is contributing to overall plume stability.

Total Petroleum Hydrocarbons – Gasoline Range Organics

Five monitoring locations (MW-1, MW-2, MW-5, MW-8, and MW-9) met the criteria described above for statistical analysis of the TPH-GRO concentration trend. Based on the results of linear regression analyses, all five monitoring wells exhibit statistically significant decreasing trends in TPH-GRO

concentrations. It should be noted that TPH-GRO concentrations at MW-8 were non-detect with elevated reporting limits from 2004 through May 2008. For this reason, an additional trend analysis was performed for data since September 2008 at MW-8. Although the results of this additional trend analysis indicated no statistically significant trend, the TPH-GRO concentrations in groundwater at MW-8 are stable. The projected dates to reach the screening level for TPH-GRO (100 µg/L) at monitoring locations MW-1, MW-2, MW-5, and MW-9 are 2018, 2030, 2048, and 2027 respectively.

The results from the statistical analyses demonstrate that TPH-GRO concentrations are stable or decreasing at all well locations, and evaluated wells have estimated dates to achieve the TPH-GRO screening level within reasonable time frames. Although the time frame to achieve the TPH-GRO screening level at well MW-5 is longer than for the remaining evaluated wells, concentrations are decreasing. These data suggest that natural attenuation is contributing to overall plume reduction.

Benzene

Four monitoring locations (MW-1, MW-2, MW-5, and MW-9) met the criteria described above for statistical analysis of the benzene concentration trends. As shown in Table 1, statistically significant decreasing groundwater benzene concentration trends are demonstrated at all four monitoring wells. The projected dates to reach the benzene screening level (1 µg/L) at MW-1, MW-2, MW-5, and MW-9 are 2018, 2049, 2018, and 2024, respectively. Although the time frame to achieve the benzene screening level at well MW-2 is longer than for the remaining evaluated wells, this well is located well within the site boundaries directly adjacent to the UST pit area and near the location that yielded that highest petroleum hydrocarbon concentrations in soil during field activities performed in March 2001.

The results from the statistical analyses demonstrate benzene concentrations in groundwater beneath the site are decreasing, and wells have reasonable estimated time frames for achieving the benzene screening level. These data suggest that natural attenuation is contributing to overall plume reduction.

Ethylbenzene

Three monitoring locations (MW-1, MW-2 and MW-9) met the criteria described above for statistical analysis of the ethylbenzene concentration trends. As per the results of linear regression analyses, statistically significant decreasing groundwater ethylbenzene concentration trends are demonstrated at all three monitoring wells. The measured ethylbenzene concentrations in groundwater at MW-1 and MW-9 have been generally below the ethylbenzene screening level (13 µg/L) since March 2009 (except during June 2013 monitoring event), and June 2011 respectively. Monitoring location MW-2 yielded a groundwater ethylbenzene concentration below the screening level during June 2015.

The results from the statistical analyses demonstrate that natural attenuation is contributing to a shrinking dissolved-phase ethylbenzene plume, and ethylbenzene screening levels have been met at all monitoring locations.

Total Xylenes

One monitoring location (MW-2) met the criteria described above for statistical analysis of the xylenes concentration trend. According to linear regression trend analysis, a statistically significant decreasing groundwater concentration trend for xylenes is demonstrated at MW-2, and is projected to reach the screening level by 2017. The concentration of xylenes in groundwater at MW-2 were below the screening level during June 2015. The result from the statistical analysis at monitoring location MW-2 demonstrates that natural attenuation is contributing to a shrinking dissolved-phase total xylenes plume, and total xylenes screening levels will be achieved by next year.

Methyl Tert-Butyl Ether

Seven monitoring locations (MW-1, MW-2, MW-4, MW-5, MW-7, MW-8, and MW-9) met the criteria described above for statistical analysis of the MTBE concentration trends. Based on the results of linear regression analyses, statistically significant decreasing groundwater MTBE concentration trends are demonstrated at monitoring wells MW-1, MW-2, MW-4, MW-7, MW-8, and MW-9. Groundwater MTBE concentrations at locations MW-7 and MW-8 have been at or below the MTBE screening level (5 µg/L) since June 2011. Groundwater MTBE concentrations at monitoring well MW-1 have been at or below the screening level since June 2014. Additionally, MTBE concentrations at monitoring well MW-4 are not far from the screening level, with concentrations at or below 10 µg/L since June 2012. The projected date to reach the MTBE screening level at the two remaining monitoring locations with decreasing concentration trends (MW-2, and MW-9) are 2029, and 2028, respectively. The groundwater MTBE concentrations at monitoring location MW-5 indicate a decreasing trend (negative trend line slope), albeit not statistically significant. However, the groundwater MTBE concentrations at MW-5 have been generally below the screening level during several monitoring events since February 2008.

Overall, the results from the statistical analyses demonstrate that natural attenuation is contributing to a stable or shrinking dissolved-phase MTBE plume, and the MTBE screening level has either already been achieved, or will be met within a reasonable time frame at evaluated well locations.

Conclusions

Linear regression analyses of TPH-DRO, TPH-GRO, BTEX, and MTBE concentration trends at monitoring locations generally demonstrate that natural attenuation is contributing to an overall stable or shrinking dissolved-phase plume at the site. The decreasing concentrations trends at monitoring wells were mostly statistically significant indicating shrinking plume, except TPH-DRO concentrations at monitoring wells MW-4, MW-6 and MW-7 and MTBE concentrations at MW-5. The plumes of TPH-DRO and MTBE at these wells therefore were observed to be stable.

Attachment

Table 1 Summary of Statistical Analysis of Groundwater Analytical Data

References

California Environmental Protection Agency. 2013. Environmental Screening Levels, December 2013.

San Francisco Bay Regional Water Quality Control Board (SF-RWQCB). 2016. Environmental Screening Levels Workbook (Interim Final). February 22.

United States Environmental Protection Agency. 1999. Use of Monitored Natural Attenuation at Superfund, RCRA Corrective Action, and Underground Storage Tank Sites. United States Environmental Protection Agency Office of Solid Waste and Emergency Response Directive 9200.4-17P.

United States Environmental Protection Agency. 2002. Calculation and Use of First-Order Rate Constants for Monitored Natural Attenuation Studies. EPA/540/S-02/500.

United States Environmental Protection Agency. 2009. Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities. Office of Resource Conservation and Recovery. Unified Guidance. EPA 530-R-09-007.

Table 1
Summary of Statistical Analysis of Groundwater Analytical Data
Former BP Facility #11126
1700 Powell Street, Emeryville, California

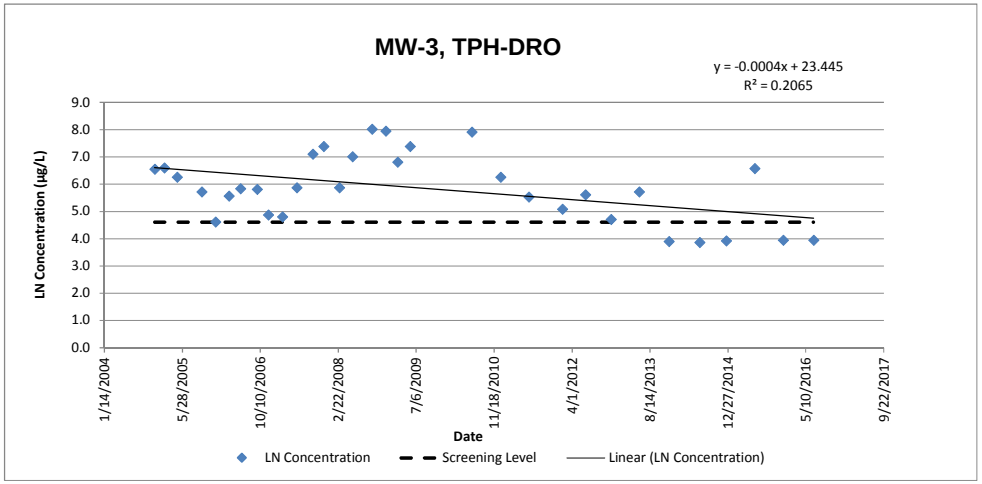
Constituent	Well	Cleanup Goal/Screening Level/Remediation goal (µg/L)[1]	Data Range						Linear Regression Analysis						Notes
			Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Concentration Measured Most Recently (µg/L)	% of Data Above Laboratory Reporting Limit	Start Date	End Date	Coefficient of Determination, R-squared[2]	p-value of Correlation (Significance of Slope)	Attenuation Half-life (days)	Trend Direction	Significance of Trend[3]	Projected Year to Screening Level	
TPH-DRO	MW-3	100	*47*	3,000	*51*	84	12/1/2004	6/28/2016	0.21	<0.01	1,577	Decreasing	Significant	2017	BSL since 12/2013 with one exceedance (6/2015)
TPH-DRO	MW-4	100	*49*	1,700	*52*	64	6/29/2011	6/28/2016	0.23	0.13	NA	Decreasing	NS	NA	
TPH-DRO	MW-6	100	140	7,400	1,800	100	6/29/2011	6/28/2016	0.02	0.66	NA	No Trend	NS	NA	
TPH-DRO	MW-7	100	*51*	2,900	69	86	6/14/2013	6/28/2016	<0.01	0.83	NA	No Trend	NS	NA	
TPH-DRO	MW-8	100	*55*	1,500	110	91	6/29/2011	6/28/2016	0.41	0.03	497	Decreasing	Significant	2016	
TPH-GRO	MW-1	100	50	4,600	71	97	12/1/2004	6/28/2016	0.51	<0.01	1,110	Decreasing	Significant	2018	
TPH-GRO	MW-2	100	2,200	210,000	*7,100*	91	12/1/2004	6/28/2016	0.51	<0.01	991	Decreasing	Significant	2030	
TPH-GRO	MW-5	100	2,100	7,700	2,100	100	12/28/2005	6/28/2016	0.80	<0.01	2,634	Decreasing	Significant	2048	
TPH-GRO	MW-8	100	73	2,500	73	76	12/1/2004	6/28/2016	0.47	<0.01	1,594	Decreasing	Significant	2016	
TPH-GRO	MW-8	100	73	300	73	100	9/26/2008	6/28/2016	0.14	0.12	NA	Decreasing	NS	NA	Since 2008
TPH-GRO	MW-9	100	420	36,000	1,800	100	12/1/2004	6/28/2016	0.59	<0.01	1,185	Decreasing	Significant	2027	
Benzene	MW-1	1	*0.5*	1,000	0.5	88	12/1/2004	6/28/2016	0.59	<0.01	612	Decreasing	Significant	2018	BSL Most recent 6/2016
Benzene	MW-2	1	200	15,000	2,500	100	12/1/2004	6/28/2016	0.31	<0.01	1,267	Decreasing	Significant	2049	
Benzene	MW-5	1	*1*	36	1.6	90	12/1/2004	6/28/2016	0.42	<0.01	1,814	Decreasing	Significant	2018	
Benzene	MW-9	1	1.6	3,500	56	100	12/1/2004	6/28/2016	0.51	<0.01	682	Decreasing	Significant	2024	
Ethylbenzene	MW-1	13	1	78	1	76	12/1/2004	6/28/2016	0.52	<0.01	758	Decreasing	Significant	2006	BSL since 12/2013
Ethylbenzene	MW-2	13	8	7,300	64	94	12/1/2004	6/28/2016	0.49	<0.01	621	Decreasing	Significant	2019	
Ethylbenzene	MW-9	13	0.5	1,600	2.5	91	12/1/2004	6/28/2016	0.79	<0.01	452	Decreasing	Significant	2012	BSL since 01/2012
Xylenes	MW-2	20	14	31,000	*89*	85	12/1/2004	6/28/2016	0.56	<0.01	467	Decreasing	Significant	2017	
MTBE	MW-1	5	*0.5*	250	2.0	94	12/1/2004	6/28/2016	0.63	<0.01	628	Decreasing	Significant	2014	BSL in 06/2014
MTBE	MW-2	5	140	22,000	1,200	100	12/1/2004	6/28/2016	0.68	<0.01	813	Decreasing	Significant	2029	
MTBE	MW-4	5	5.5	450	10.0	73	12/1/2004	6/28/2016	0.72	<0.01	857	Decreasing	Significant	2015	5.5 µg/L in 06/2014
MTBE	MW-5	5	*0.5*	16	5.9	83	12/1/2004	6/28/2016	0.02	0.44	NA	No Trend	NS	NA	3.6 µg/L in 12/2014
MTBE	MW-7	5	1.8	41	2.4	97	12/1/2004	6/28/2016	0.74	<0.01	1,271	Decreasing	Significant	2010	BSL since 06/2011
MTBE	MW-8	5	*0.4*	41	*0.6*	91	12/1/2004	6/28/2016	0.89	<0.01	640	Decreasing	Significant	2010	BSL since 06/2011
MTBE	MW-9	5	13	8,300	180	100	12/1/2004	6/28/2016	0.44	<0.01	1,021	Decreasing	Significant	2028	

Notes, Abbreviations and Assumptions:
µg/L = micrograms per liter
NS = not significant
NA = not applicable due to increasing trend or non-significant trend
BSL = below screening level
SL = screening level
MTBE = methyl tert-butyl ether
TPH-DRO = total petroleum hydrocarbons as diesel
TPH-GRO = total petroleum hydrocarbons as gasoline

[1] San Francisco Bay Regional Water Quality Control Board [SF-RWQCB] environmental screening levels [ESLs]
[2] Linear regression analysis with R^2 values <0.1 and no statistically significant trend were defined as having no apparent trend (No Trend)
[3] Statistically significant trend defined as having p-value ≤ 0.05
Data in italics ND taken at reporting limit/reported value
Data is underlined Qualified data converted to reported value

Sample Information
Sample Location **MW-3**
Constituent TPH-DRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**690**	6.54
2/2/2005	**730**	6.59
4/25/2005	**520**	6.25
9/30/2005	**300**	5.70
12/28/2005	**100**	4.61
3/23/2006	**260**	5.56
6/5/2006	**340**	5.83
9/19/2006	**330**	5.80
12/1/2006	**130**	4.87
3/1/2007	**120**	4.79
6/1/2007	**350**	5.86
9/13/2007	**1,200**	7.09
11/21/2007	**1,600**	7.38
2/29/2008	**350**	5.86
5/23/2008	**1,100**	7.00
9/26/2008	**3,000**	8.01
12/23/2008	**2,800**	7.94
3/9/2009	**900**	6.80
5/28/2009	**1,600**	7.38
6/29/2010	**2,700**	7.90
12/30/2010	**520**	6.25
6/29/2011	**250**	5.52
1/30/2012	**160**	5.08
6/27/2012	**270**	5.60
12/7/2012	**110**	4.70
6/6/2013	**300**	5.70
12/13/2013	49	3.89
6/30/2014	47	3.85
12/16/2014	50	3.91
6/18/2015	**710**	6.57
12/16/2015	51	3.93
6/28/2016	51	3.93



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	32
# of nondetects	5
% of data as detects	84

Results		
Coefficient of Determination (R^2) =	0.2065	
p-Value =	8.98E-03	
Attenuation Rate in Groundwater (K) =	0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0001	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.58E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	23.445
Slope	-0.0004
Date to Screening Level	5/23/2017

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-DRO = total petroleum hydrocarbons as diesel

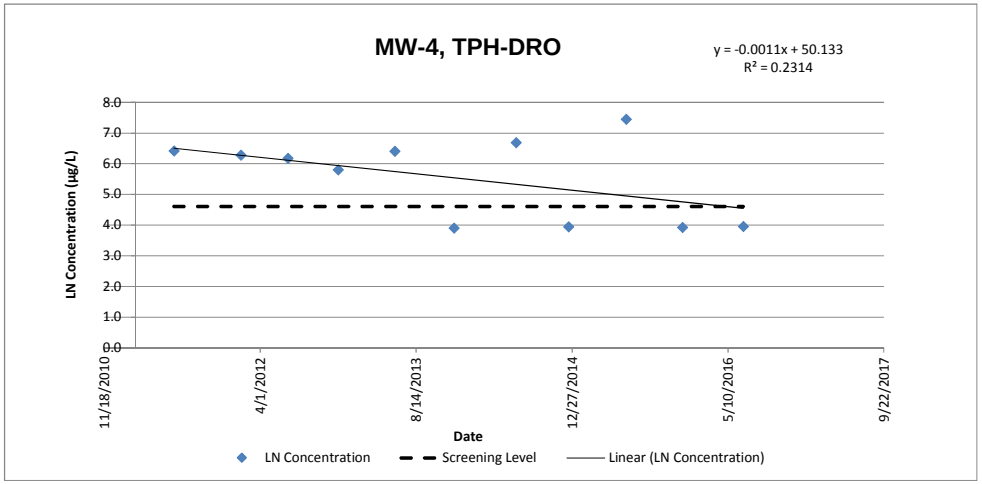
Attachment 4 - Table 1
Summary of Statistical Analysis of Groundwater Analytical Data
Former BP Facility #11126
1700 Powell Street, Emeryville, California

Constituent	Well	Cleanup Goal/Screening Level/Remediation goal (µg/L)[1]	Data Range						Linear Regression Analysis						Notes
			Minimum Concentration (µg/L)	Maximum Concentration (µg/L)	Concentration Measured Most Recently (µg/L)	% of Data Above Laboratory Reporting Limit	Start Date	End Date	Coefficient of Determination, R-squared[2]	p-value of Correlation (Significance of Slope)	Attenuation Half-life (days)	Trend Direction	Significance of Trend[3]	Projected Year to Screening Level	
TPH-DRO	MW-3	100	*47*	3,000	*51*	84	12/1/2004	6/28/2016	0.21	<0.01	1,577	Decreasing	Significant	2017	BSL since 12/2013 with one exceedance (6/2015)
TPH-DRO	MW-4	100	*49*	1,700	*52*	64	6/29/2011	6/28/2016	0.23	0.13	NA	Decreasing	NS	NA	
TPH-DRO	MW-6	100	140	7,400	1,800	100	6/29/2011	6/28/2016	0.02	0.66	NA	No Trend	NS	NA	
TPH-DRO	MW-7	100	*51*	2,900	69	86	6/14/2013	6/28/2016	<0.01	0.83	NA	No Trend	NS	NA	
TPH-DRO	MW-8	100	*55*	1,500	110	91	6/29/2011	6/28/2016	0.41	0.03	497	Decreasing	Significant	2016	
TPH-GRO	MW-1	100	50	4,600	71	97	12/1/2004	6/28/2016	0.51	<0.01	1,110	Decreasing	Significant	2018	
TPH-GRO	MW-2	100	2,200	210,000	*7,100*	91	12/1/2004	6/28/2016	0.51	<0.01	991	Decreasing	Significant	2030	
TPH-GRO	MW-5	100	2,100	7,700	2,100	100	12/28/2005	6/28/2016	0.80	<0.01	2,634	Decreasing	Significant	2048	
TPH-GRO	MW-8	100	73	2,500	73	76	12/1/2004	6/28/2016	0.47	<0.01	1,594	Decreasing	Significant	2016	
TPH-GRO	MW-8	100	73	300	73	100	9/26/2008	6/28/2016	0.14	0.12	NA	Decreasing	NS	NA	Since 2008
TPH-GRO	MW-9	100	420	36,000	1,800	100	12/1/2004	6/28/2016	0.59	<0.01	1,185	Decreasing	Significant	2027	
Benzene	MW-1	1	*0.5*	1,000	0.5	88	12/1/2004	6/28/2016	0.59	<0.01	612	Decreasing	Significant	2018	BSL Most recent 6/2016
Benzene	MW-2	1	200	15,000	2,500	100	12/1/2004	6/28/2016	0.31	<0.01	1,267	Decreasing	Significant	2049	
Benzene	MW-5	1	*1*	36	1.6	90	12/1/2004	6/28/2016	0.42	<0.01	1,814	Decreasing	Significant	2018	
Benzene	MW-9	1	1.6	3,500	56	100	12/1/2004	6/28/2016	0.51	<0.01	682	Decreasing	Significant	2024	
Ethylbenzene	MW-1	13	1	78	1	76	12/1/2004	6/28/2016	0.52	<0.01	758	Decreasing	Significant	2006	BSL since 12/2013
Ethylbenzene	MW-2	13	8	7,300	64	94	12/1/2004	6/28/2016	0.49	<0.01	621	Decreasing	Significant	2019	
Ethylbenzene	MW-9	13	0.5	1,600	2.5	91	12/1/2004	6/28/2016	0.79	<0.01	452	Decreasing	Significant	2012	BSL since 01/2012
Xylenes	MW-2	20	14	31,000	*89*	85	12/1/2004	6/28/2016	0.56	<0.01	467	Decreasing	Significant	2017	
MTBE	MW-1	5	*0.5*	250	2.0	94	12/1/2004	6/28/2016	0.63	<0.01	628	Decreasing	Significant	2014	BSL in 06/2014
MTBE	MW-2	5	140	22,000	1,200	100	12/1/2004	6/28/2016	0.68	<0.01	813	Decreasing	Significant	2029	
MTBE	MW-4	5	5.5	450	10.0	73	12/1/2004	6/28/2016	0.72	<0.01	857	Decreasing	Significant	2015	5.5 µg/L in 06/2014
MTBE	MW-5	5	*0.5*	16	5.9	83	12/1/2004	6/28/2016	0.02	0.44	NA	No Trend	NS	NA	3.6 µg/L in 12/2014
MTBE	MW-7	5	1.8	41	2.4	97	12/1/2004	6/28/2016	0.74	<0.01	1,271	Decreasing	Significant	2010	BSL since 06/2011
MTBE	MW-8	5	*0.4*	41	*0.6*	91	12/1/2004	6/28/2016	0.89	<0.01	640	Decreasing	Significant	2010	BSL since 06/2011
MTBE	MW-9	5	13	8,300	180	100	12/1/2004	6/28/2016	0.44	<0.01	1,021	Decreasing	Significant	2028	

Notes, Abbreviations and Assumptions:
µg/L = micrograms per liter
NS = not significant
NA = not applicable due to increasing trend or non-significant trend
BSL = below screening level
SL = screening level
MTBE = methyl tert-butyl ether
TPH-DRO = total petroleum hydrocarbons as diesel
TPH-GRO = total petroleum hydrocarbons as gasoline
[1] San Francisco Bay Regional Water Quality Control Board [SF-RWQCB] environmental screening levels [ESLs]
[2] Linear regression analysis with R^2 values <0.1 and no statistically significant trend were defined as having no apparent trend (No Trend)
[3] Statistically significant trend defined as having p-value ≤ 0.05
Data in italics ND taken at reporting limit/reported value
Data is underlined Qualified data converted to reported value

Sample Information
Sample Location **MW-4**
Constituent TPH-DRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/29/2011	**610**	6.41
1/30/2012	**530**	6.27
6/29/2012	**480**	6.17
12/7/2012	**330**	5.80
6/6/2013	**600**	6.40
12/13/2013	49	3.89
6/30/2014	**800**	6.68
12/16/2014	51	3.93
6/18/2015	**1,700**	7.44
12/16/2015	50	3.91
6/28/2016	52	3.95



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	11
# of nondetects	4
% of data as detects	64

Less than 75% data above reporting limits.

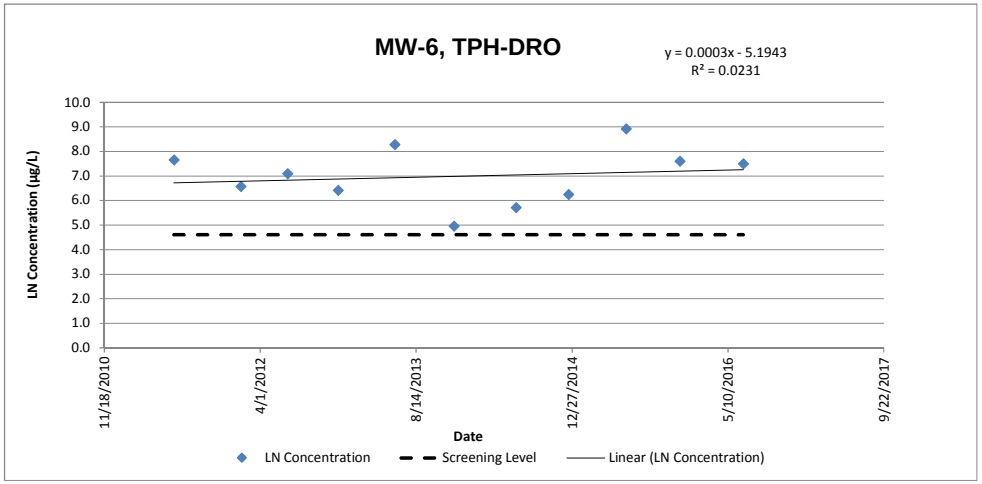
Results		
Coefficient of Determination (R^2) =	0.2314	
p-Value =	1.34E-01	
Attenuation Rate in Groundwater (K) =	0.0011	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	50.133
Slope	-0.0011
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-DRO = total petroleum hydrocarbons as diesel

Sample Information
Sample Location **MW-6**
Constituent TPH-DRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/29/2011	**2,100**	7.65
1/30/2012	**710**	6.57
6/27/2012	**1,200**	7.09
12/7/2012	**610**	6.41
6/6/2013	**3,900**	8.27
12/13/2013	**140**	4.94
6/30/2014	**300**	5.70
12/16/2014	**510**	6.23
6/18/2015	**7,400**	8.91
12/8/2015	**2,000**	7.60
6/28/2016	**1,800**	7.50



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	11
# of nondetects	0
% of data as detects	100

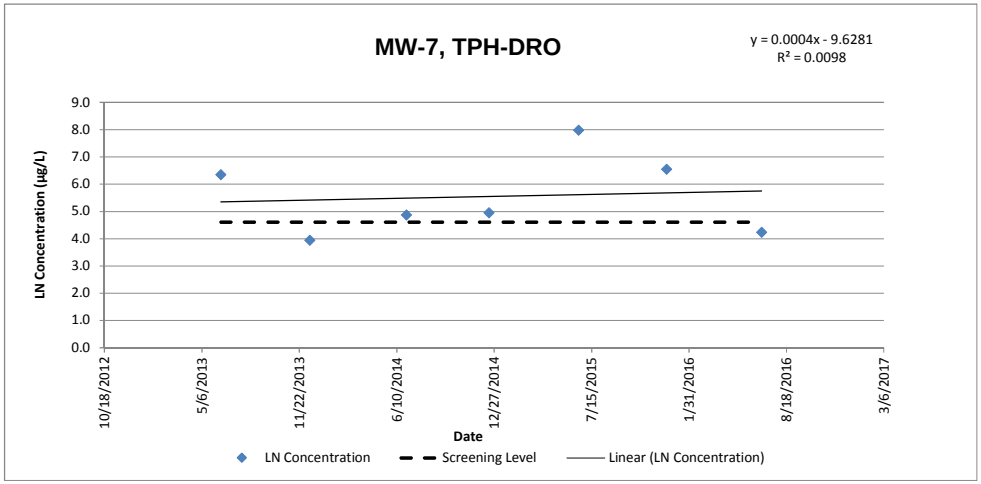
Results		
Coefficient of Determination (R^2) =	0.0231	
p-Value =	6.55E-01	
Attenuation Rate in Groundwater (K) =	-0.0003	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0017	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	-5.194
Slope	0.0003
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-DRO = total petroleum hydrocarbons as diesel

Sample Information
Sample Location **MW-7**
Constituent TPH-DRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/14/2013	**570**	6.35
12/13/2013	51	3.93
6/30/2014	**130**	4.87
12/16/2014	**140**	4.94
6/18/2015	**2,900**	7.97
12/16/2015	**690**	6.54
6/28/2016	69	4.23



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	7
# of nondetects	1
% of data as detects	86

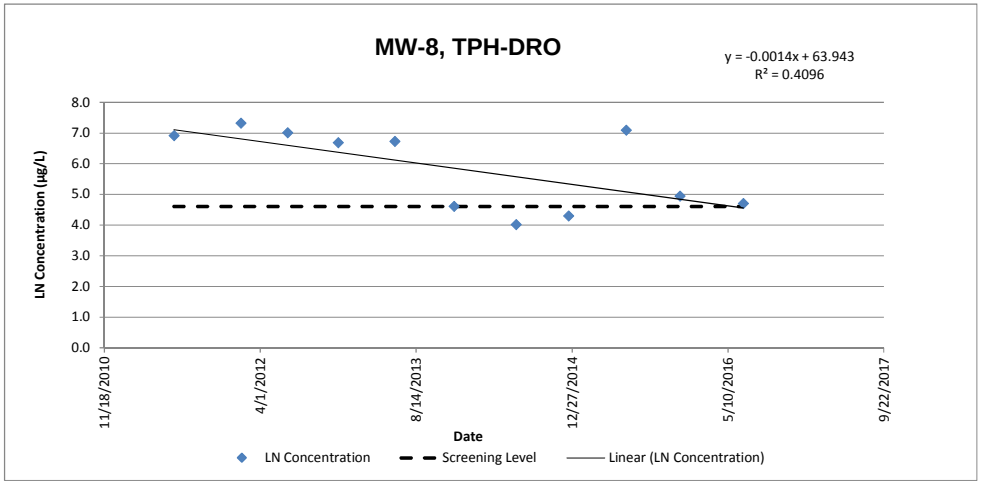
Results		
Coefficient of Determination (R^2) =	0.0098	
p-Value =	8.33E-01	
Attenuation Rate in Groundwater (K) =	-0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0045	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	-9.628
Slope	0.0004
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-DRO = total petroleum hydrocarbons as diesel

Sample Information
Sample Location **MW-8**
Constituent TPH-DRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
6/29/2011	**1,000**	6.91
1/30/2012	**1,500**	7.31
6/27/2012	**1,100**	7.00
12/7/2012	**800**	6.68
6/6/2013	**830**	6.72
12/13/2013	**100**	4.61
6/30/2014	55	4.01
12/16/2014	73	4.29
6/18/2015	**1,200**	7.09
12/8/2015	**140**	4.94
6/28/2016	**110**	4.70



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	11
# of nondetects	1
% of data as detects	91

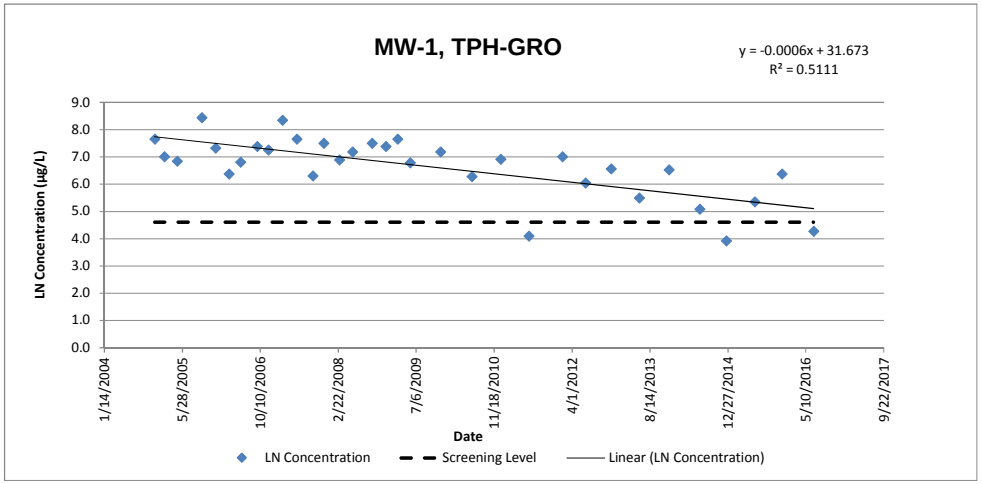
Results		
Coefficient of Determination (R^2) =	0.4096	
p-Value =	3.39E-02	
Attenuation Rate in Groundwater (K) =	0.0014	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0001	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	4.97E+02	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	63.943
Slope	-0.0014
Date to Screening Level	5/26/2016

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-DRO = total petroleum hydrocarbons as diesel

Sample Information
Sample Location **MW-1**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**2100**	7.65
2/2/2005	**1100**	7.00
4/25/2005	**930**	6.84
9/30/2005	**4600**	8.43
12/28/2005	**1500**	7.31
3/23/2006	**580**	6.36
6/5/2006	**900**	6.80
9/19/2006	**1600**	7.38
12/1/2006	**1400**	7.24
3/1/2007	**4200**	8.34
6/1/2007	**2100**	7.65
9/13/2007	**540**	6.29
11/21/2007	**1800**	7.50
2/29/2008	**970**	6.88
5/23/2008	**1300**	7.17
9/26/2008	**1800**	7.50
12/23/2008	**1600**	7.38
3/9/2009	**2100**	7.65
5/28/2009	**880**	6.78
12/10/2009	**1300**	7.17
6/29/2010	**530**	6.27
12/30/2010	**1000**	6.91
6/29/2011	**60**	4.09
1/30/2012	**1100**	7.00
6/27/2012	**420**	6.04
12/7/2012	**700**	6.55
6/6/2013	**240**	5.48
12/13/2013	**680**	6.52
6/30/2014	**160**	5.08
12/16/2014	50	3.91
6/18/2015	**210**	5.35
12/8/2015	**580**	6.36
6/28/2016	71	4.26



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	1
% of data as detects	97

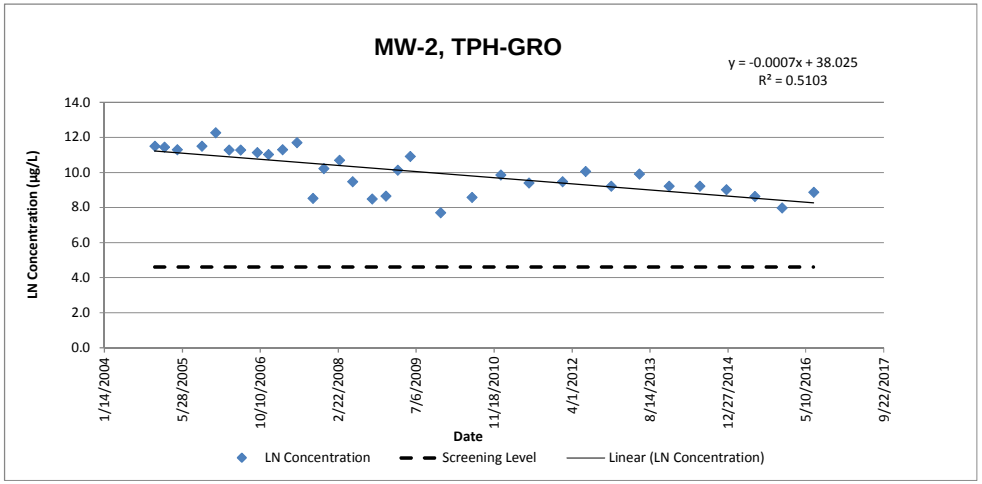
Results		
Coefficient of Determination (R^2) =	0.5111	
p-Value =	2.95E-06	
Attenuation Rate in Groundwater (K) =	0.0006	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.11E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	31.673
Slope	-0.0006
Date to Screening Level	9/1/2018

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-2**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**98000**	11.49
2/2/2005	**92000**	11.43
4/25/2005	**80000**	11.29
9/30/2005	**98000**	11.49
12/28/2005	**210000**	12.25
3/23/2006	**79000**	11.28
6/5/2006	**79000**	11.28
9/19/2006	**68000**	11.13
12/1/2006	**61000**	11.02
3/1/2007	**80000**	11.29
6/1/2007	**120000**	11.70
9/13/2007	**5000**	8.52
11/21/2007	**27000**	10.20
2/29/2008	**44000**	10.69
5/23/2008	**13000**	9.47
9/26/2008	**4800**	8.48
12/23/2008	**5700**	8.65
3/9/2009	**25000**	10.13
5/28/2009	**55000**	10.92
12/10/2009	**2200**	7.70
6/29/2010	**5300**	8.58
12/30/2010	**19000**	9.85
6/29/2011	**12000**	9.39
1/30/2012	**13000**	9.47
6/27/2012	**23000**	10.04
12/7/2012	**10000**	9.21
6/6/2013	**20000**	9.90
12/13/2013	**10000**	9.21
6/30/2014	**10,000**	9.21
12/16/2014	**8100**	9.00
6/18/2015	**5600**	8.63
12/8/2015	**2900**	7.97
6/28/2016	**7100**	8.87



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	3
% of data as detects	91

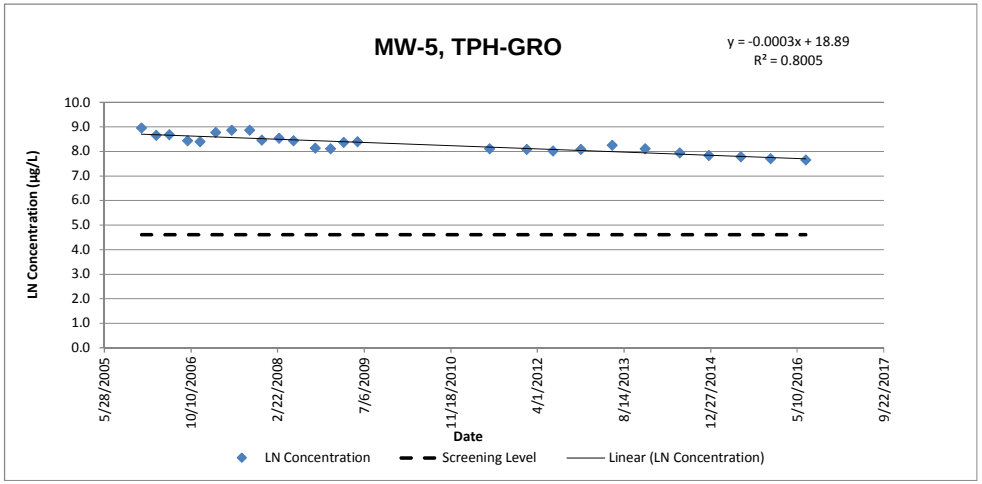
Results		
Coefficient of Determination (R^2) =	0.5103	
p-Value =	3.03E-06	
Attenuation Rate in Groundwater (K) =	0.0007	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	9.91E+02	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	38.025
Slope	-0.0007
Date to Screening Level	10/30/2030

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-5**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/28/2005	**7700**	8.95
3/23/2006	**5700**	8.65
6/5/2006	**5900**	8.68
9/19/2006	**4600**	8.43
12/1/2006	**4400**	8.39
3/1/2007	**6400**	8.76
6/1/2007	**7000**	8.85
9/13/2007	**7000**	8.85
11/21/2007	**4700**	8.46
2/29/2008	**5100**	8.54
5/23/2008	**4600**	8.43
9/26/2008	**3400**	8.13
12/23/2008	**3300**	8.10
3/9/2009	**4300**	8.37
5/28/2009	**4400**	8.39
6/29/2011	**3300**	8.10
1/30/2012	**3200**	8.07
6/29/2012	**3000**	8.01
12/7/2012	**3200**	8.07
6/6/2013	**3800**	8.24
12/13/2013	**3300**	8.10
6/30/2014	**2,800**	7.94
12/16/2014	**2500**	7.82
6/18/2015	**2400**	7.78
12/8/2015	**2200**	7.70
6/28/2016	**2100**	7.65



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	26
# of nondetects	0
% of data as detects	100

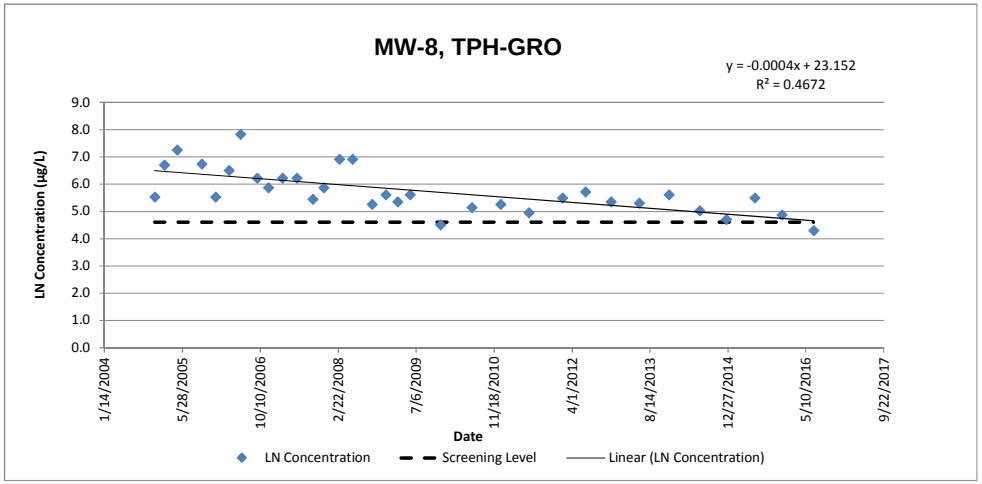
Results		
Coefficient of Determination (R^2) =	0.8005	
p-Value =	7.12E-10	
Attenuation Rate in Groundwater (K) =	0.0003	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0002	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	2.63E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	18.890
Slope	-0.0003
Date to Screening Level	9/1/2048

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = Total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-8**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**250**	5.52
2/2/2005	**810**	6.70
4/25/2005	**1400**	7.24
9/30/2005	**840**	6.73
12/28/2005	**250**	5.52
3/23/2006	**660**	6.49
6/5/2006	**2500**	7.82
9/19/2006	**500**	6.21
12/1/2006	**350**	5.86
3/1/2007	**500**	6.21
6/1/2007	**500**	6.21
9/13/2007	**230**	5.44
11/21/2007	**350**	5.86
2/29/2008	**1000**	6.91
5/23/2008	**1000**	6.91
9/26/2008	**190**	5.25
12/23/2008	**270**	5.60
3/9/2009	**210**	5.35
5/28/2009	**270**	5.60
12/10/2009	90	4.50
6/29/2010	**170**	5.14
12/30/2010	**190**	5.25
6/29/2011	**140**	4.94
1/30/2012	**240**	5.48
6/27/2012	**300**	5.70
12/7/2012	**210**	5.35
6/6/2013	**200**	5.30
12/13/2013	**270**	5.60
6/30/2014	**150**	5.01
12/16/2014	**110**	4.70
6/18/2015	**240**	5.48
12/8/2015	**130**	4.87
6/28/2016	73	4.29



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	8
% of data as detects	76

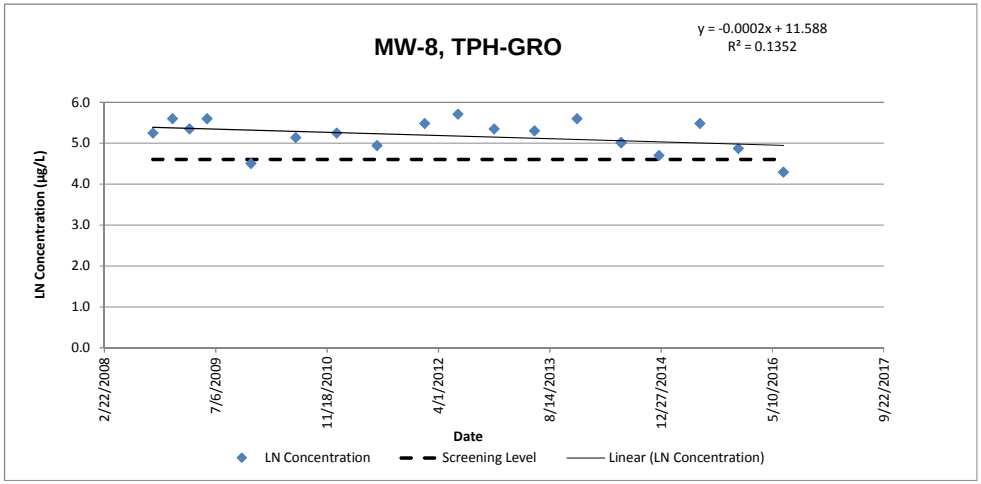
Results		
Coefficient of Determination (R^2) =	0.4672	
p-Value =	1.16E-05	
Attenuation Rate in Groundwater (K) =	0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0003	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.59E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	23.152
Slope	-0.0004
Date to Screening Level	10/25/2016

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-8**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
9/26/2008	**190**	5.25
12/23/2008	**270**	5.60
3/9/2009	**210**	5.35
5/28/2009	**270**	5.60
12/10/2009	90	4.50
6/29/2010	**170**	5.14
12/30/2010	**190**	5.25
6/29/2011	**140**	4.94
1/30/2012	**240**	5.48
6/27/2012	**300**	5.70
12/7/2012	**210**	5.35
6/6/2013	**200**	5.30
12/13/2013	**270**	5.60
6/30/2014	**150**	5.01
6/30/2014	**150**	5.01
12/16/2014	**110**	4.70
6/18/2015	**240**	5.48
12/8/2015	**130**	4.87
6/28/2016	73	4.29



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	19
# of nondetects	0
% of data as detects	100

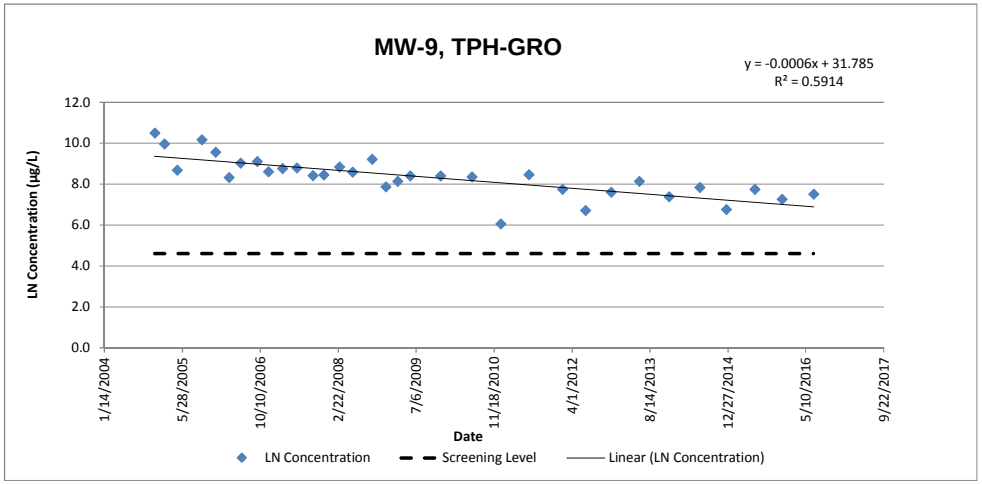
Results		
Coefficient of Determination (R^2) =	0.1352	
p-Value =	1.21E-01	
Attenuation Rate in Groundwater (K) =	0.0002	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0000	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	11.588
Slope	-0.0002
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-9**
Constituent TPH-GRO

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**36,000**	10.49
2/2/2005	**21,000**	9.95
4/25/2005	**5,900**	8.68
9/30/2005	**26,000**	10.17
12/28/2005	**14,000**	9.55
3/23/2006	**4,100**	8.32
6/5/2006	**8,200**	9.01
9/19/2006	**9,000**	9.10
12/1/2006	**5,400**	8.59
3/1/2007	**6,300**	8.75
6/1/2007	**6,500**	8.78
9/13/2007	**4,500**	8.41
11/21/2007	**4,600**	8.43
2/29/2008	**6,800**	8.82
5/23/2008	**5,300**	8.58
9/26/2008	**10,000**	9.21
12/23/2008	**2,600**	7.86
3/9/2009	**3,400**	8.13
5/28/2009	**4,400**	8.39
12/10/2009	**4,400**	8.39
6/29/2010	**4,200**	8.34
12/30/2010	**420**	6.04
6/29/2011	**4,700**	8.46
1/30/2012	**2,300**	7.74
6/27/2012	**810**	6.70
12/7/2012	**2,000**	7.60
6/6/2013	**3,400**	8.13
12/13/2013	**1,600**	7.38
6/30/2014	**2,500**	7.82
12/16/2014	**850**	6.75
6/18/2015	**2,300**	7.74
12/8/2015	**1,400**	7.24
6/28/2016	**1,800**	7.50



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	0
% of data as detects	100

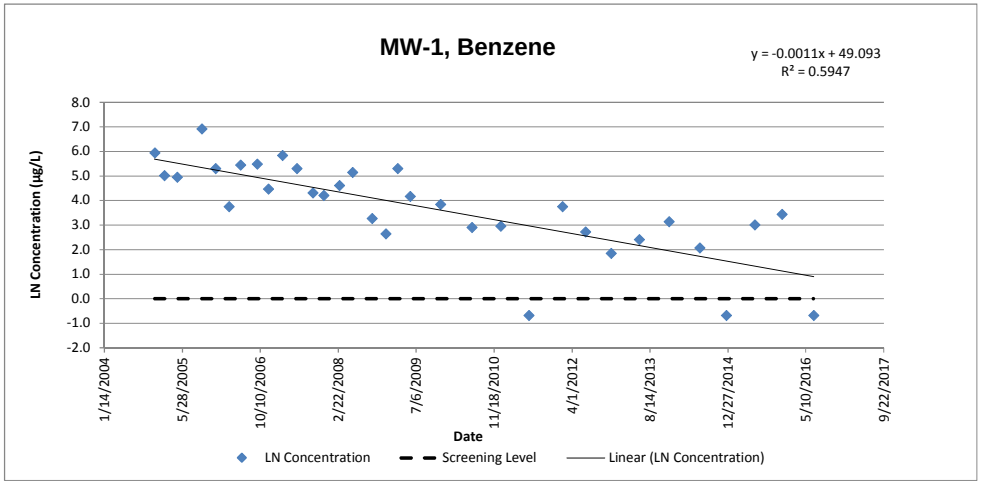
Results		
Coefficient of Determination (R^2) =	0.5914	
p-Value =	1.71E-07	
Attenuation Rate in Groundwater (K) =	0.0006	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.18E+03	days

Date Screening Level Reached	
Screening Level	100
LN Screening Level	4.6
Intercept	31.785
Slope	-0.0006
Date to Screening Level	3/14/2027

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
TPH-GRO = total petroleum hydrocarbons as gasoline

Sample Information
Sample Location **MW-1**
Constituent Benzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**380**	5.94
2/2/2005	**150**	5.01
4/25/2005	**140**	4.94
9/30/2005	**1,000**	6.91
12/28/2005	**200**	5.30
3/23/2006	**42**	3.74
6/5/2006	**230**	5.44
9/19/2006	**240**	5.48
12/1/2006	**86**	4.45
3/1/2007	**340**	5.83
6/1/2007	**200**	5.30
9/13/2007	**74**	4.30
11/21/2007	**67**	4.20
2/29/2008	**100**	4.61
5/23/2008	**170**	5.14
9/26/2008	**26**	3.26
12/23/2008	**14**	2.64
3/9/2009	**200**	5.30
5/28/2009	**64**	4.16
12/10/2009	**46**	3.83
6/29/2010	**18**	2.89
12/30/2010	**19**	2.94
6/29/2011	0.5	-0.69
1/30/2012	**42**	3.74
6/27/2012	**15**	2.71
12/7/2012	**6.3**	1.84
6/6/2013	**11**	2.40
12/13/2013	**23**	3.14
6/30/2014	**7.8**	2.05
12/16/2014	0.5	-0.69
6/18/2015	**20**	3.00
12/8/2015	**31**	3.43
6/28/2016	0.5	-0.69



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	4
% of data as detects	88

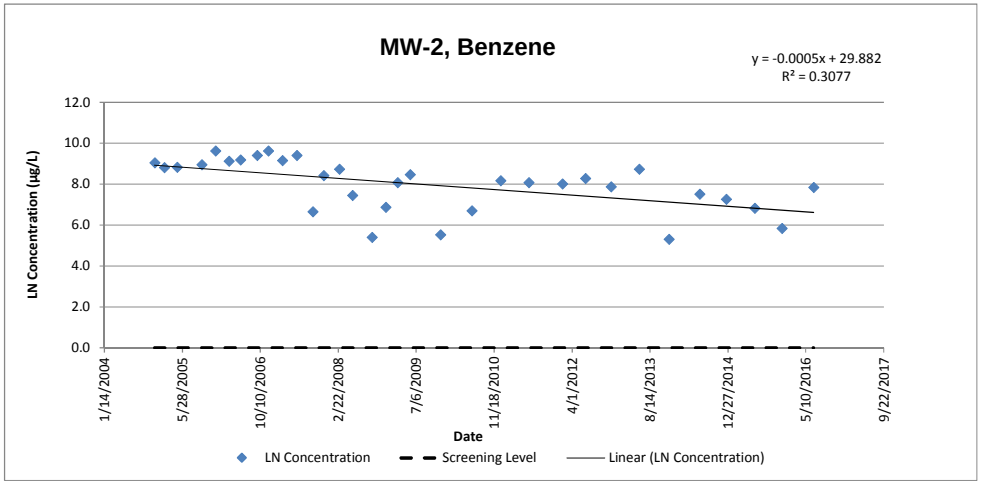
Results		
Coefficient of Determination (R^2) =	0.5947	
p-Value =	1.51E-07	
Attenuation Rate in Groundwater (K) =	0.0011	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0008	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	6.12E+02	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	49.093
Slope	-0.0011
Date to Screening Level	8/31/2018

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-2**
Constituent Benzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**8,400**	9.04
2/2/2005	**6,600**	8.79
4/25/2005	**6,700**	8.81
9/30/2005	**7,700**	8.95
12/28/2005	**15,000**	9.62
3/23/2006	**9,100**	9.12
6/5/2006	**9,700**	9.18
9/19/2006	**12,000**	9.39
12/1/2006	**15,000**	9.62
3/1/2007	**9,300**	9.14
6/1/2007	**12,000**	9.39
9/13/2007	**770**	6.65
11/21/2007	**4,500**	8.41
2/29/2008	**6,100**	8.72
5/23/2008	**1,700**	7.44
9/26/2008	**220**	5.39
12/23/2008	**950**	6.86
3/9/2009	**3,200**	8.07
5/28/2009	**4,700**	8.46
12/10/2009	**250**	5.52
6/29/2010	**800**	6.68
12/30/2010	**3,500**	8.16
6/29/2011	**3,200**	8.07
1/30/2012	**3,000**	8.01
6/27/2012	**3,900**	8.27
12/7/2012	**2,600**	7.86
6/6/2013	**6,100**	8.72
12/13/2013	**200**	5.30
6/30/2014	**1,800**	7.50
12/16/2014	**1,400**	7.24
6/18/2015	**909**	6.81
12/8/2015	**340**	5.83
6/28/2016	**2,500**	7.82



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	0
% of data as detects	100

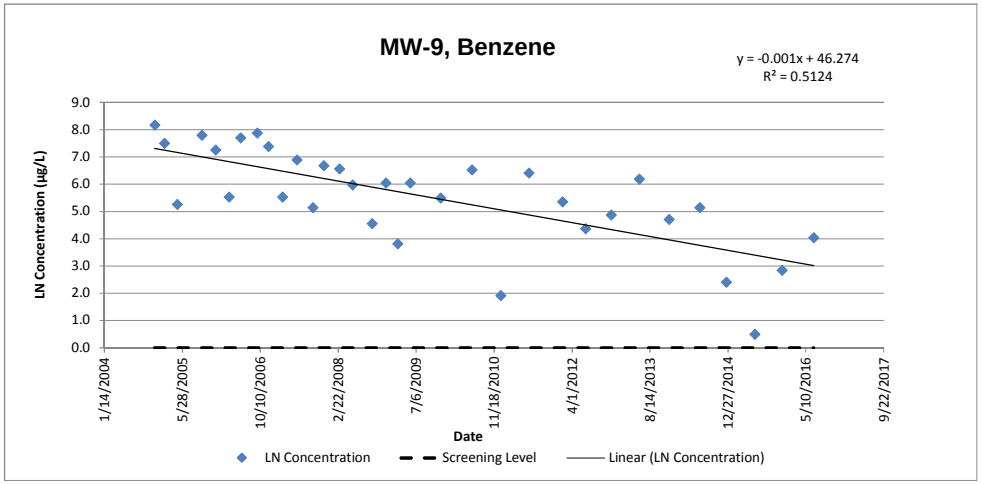
Results		
Coefficient of Determination (R^2) =	0.3077	
p-Value =	8.07E-04	
Attenuation Rate in Groundwater (K) =	0.0005	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0002	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.27E+03	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	29.882
Slope	-0.0005
Date to Screening Level	8/14/2049

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-9**
Constituent Benzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**3,500**	8.16
2/2/2005	**1,800**	7.50
4/25/2005	**190**	5.25
9/30/2005	**2,400**	7.78
12/28/2005	**1,400**	7.24
3/23/2006	**250**	5.52
6/5/2006	**2,200**	7.70
9/19/2006	**2,600**	7.86
12/1/2006	**1,600**	7.38
3/1/2007	**250**	5.52
6/1/2007	**980**	6.89
9/13/2007	**170**	5.14
11/21/2007	**790**	6.67
2/29/2008	**700**	6.55
5/23/2008	**390**	5.97
9/26/2008	**94**	4.54
12/23/2008	**420**	6.04
3/9/2009	**45**	3.81
5/28/2009	**420**	6.04
12/10/2009	**240**	5.48
6/29/2010	**680**	6.52
12/30/2010	**6.7**	1.90
6/29/2011	**600**	6.40
1/30/2012	**210**	5.35
6/27/2012	**78**	4.36
12/7/2012	**130**	4.87
6/6/2013	**480**	6.17
12/13/2013	**110**	4.70
6/30/2014	**170**	5.14
12/16/2014	**11**	2.40
6/18/2015	**1.63**	0.49
12/8/2015	**17**	2.83
6/28/2016	**56**	4.03



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	0
% of data as detects	100

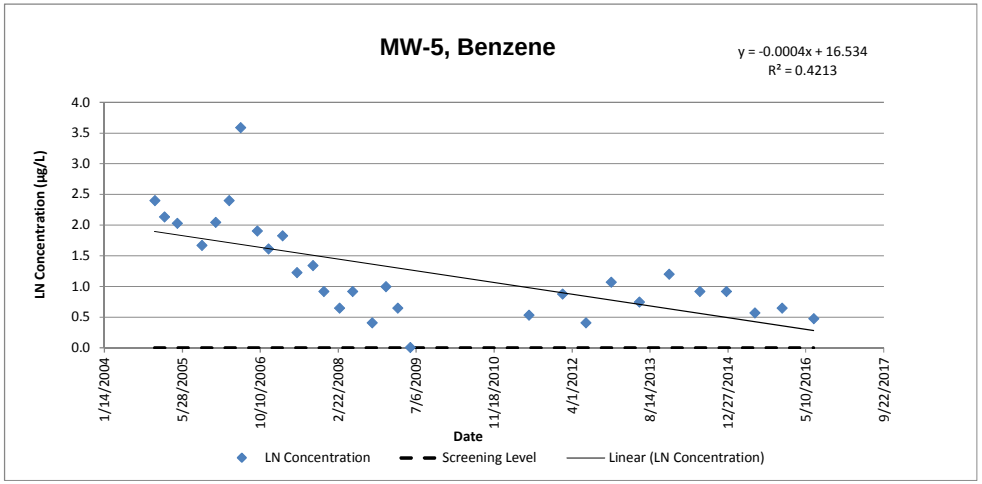
Results		
Coefficient of Determination (R^2) =	0.5124	
p-Value =	2.82E-06	
Attenuation Rate in Groundwater (K) =	0.0010	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0007	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	6.82E+02	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	46.274
Slope	-0.0010
Date to Screening Level	8/10/2024

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-5**
Constituent Benzene

Data		
Sample Date	Concentration (ug/L)	LN Concentration
12/1/2004	**11**	2.40
2/2/2005	**8.4**	2.13
4/25/2005	**7.6**	2.03
9/30/2005	**5.3**	1.67
12/28/2005	**7.7**	2.04
3/23/2006	**11**	2.40
6/5/2006	**36**	3.58
9/19/2006	**6.7**	1.90
12/1/2006	**5**	1.61
3/1/2007	**6.2**	1.82
6/1/2007	**3.4**	1.22
9/13/2007	**3.8**	1.34
11/21/2007	**2.5**	0.92
2/29/2008	**1.9**	0.64
5/23/2008	**2.5**	0.92
9/26/2008	**1.5**	0.41
12/23/2008	**2.7**	0.99
3/9/2009	**1.9**	0.64
5/28/2009	1	0.00
6/29/2011	**1.7**	0.53
1/30/2012	**2.4**	0.88
6/29/2012	**1.5**	0.41
12/7/2012	**2.9**	1.06
6/6/2013	**2.1**	0.74
12/13/2013	**3.3**	1.19
6/30/2014	**2.5**	0.92
12/16/2014	**2.5**	0.92
6/18/2015	**1.76**	0.57
12/8/2015	**1.9**	0.64
6/28/2016	**1.6**	0.47



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	30
# of nondetects	3
% of data as detects	90

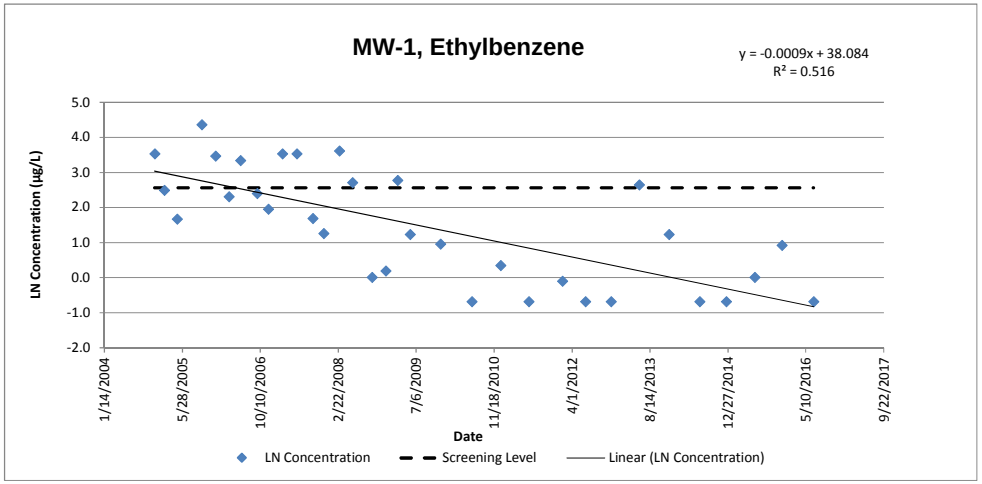
Results		
Coefficient of Determination (R^2) =	0.4213	
p-Value =	1.04E-04	
Attenuation Rate in Groundwater (K) =	0.0004	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0002	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.81E+03	days

Date Screening Level Reached	
Screening Level	1
LN Screening Level	0.0
Intercept	16.534
Slope	-0.0004
Date to Screening Level	7/3/2018

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-1**
Constituent Ethylbenzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**34**	3.53
2/2/2005	12	2.48
4/25/2005	5	1.67
9/30/2005	**78**	4.36
12/28/2005	**32**	3.47
3/23/2006	10	2.30
6/5/2006	**28**	3.33
9/19/2006	11	2.40
12/1/2006	7	1.95
3/1/2007	**34**	3.53
6/1/2007	**34**	3.53
9/13/2007	5	1.69
11/21/2007	4	1.25
2/29/2008	**37**	3.61
5/23/2008	**15**	2.71
9/26/2008	1.0	0.00
12/23/2008	1.2	0.18
3/9/2009	**16**	2.77
5/28/2009	3.4	1.22
12/10/2009	2.6	0.96
6/29/2010	0.5	-0.69
12/30/2010	1.4	0.34
6/29/2011	0.5	-0.69
1/30/2012	0.9	-0.11
6/27/2012	0.5	-0.69
12/7/2012	0.5	-0.69
6/6/2013	**14**	2.64
12/13/2013	3.4	1.22
6/30/2014	0.5	-0.69
12/16/2014	0.5	-0.69
6/18/2015	1.0	0.00
12/8/2015	2.5	0.92
6/28/2016	0.5	-0.69



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	8
% of data as detects	76

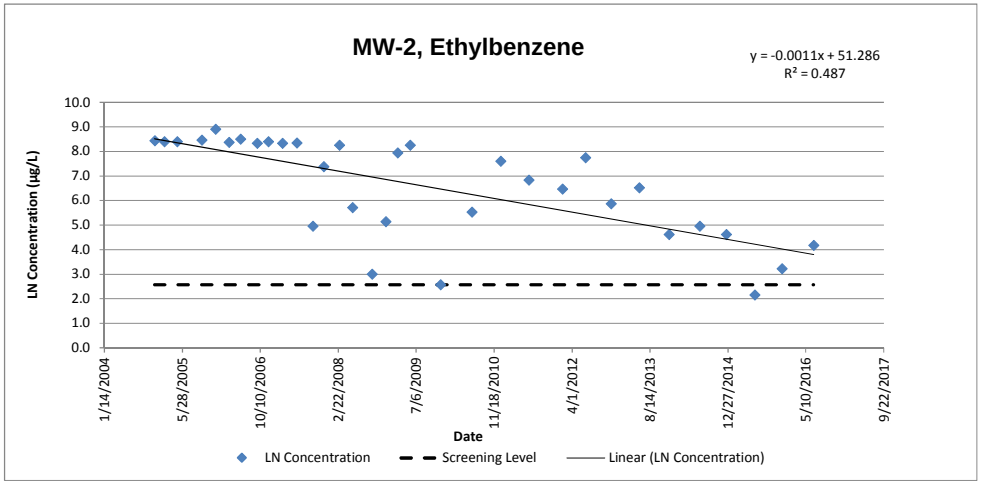
Results		
Coefficient of Determination (R^2) =	0.5160	
p-Value =	2.51E-06	
Attenuation Rate in Groundwater (K) =	0.0009	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0006	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	7.58E+02	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	38.084
Slope	-0.0009
Date to Screening Level	5/2/2006

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-2**
Constituent Ethylbenzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**4,600**	8.43
2/2/2005	**4,400**	8.39
4/25/2005	**4,400**	8.39
9/30/2005	**4,700**	8.46
12/28/2005	**7,300**	8.90
3/23/2006	**4,300**	8.37
6/5/2006	**4,900**	8.50
9/19/2006	**4,100**	8.32
12/1/2006	**4,400**	8.39
3/1/2007	**4,100**	8.32
6/1/2007	**4,200**	8.34
9/13/2007	**140**	4.94
11/21/2007	**1,600**	7.38
2/29/2008	**3,800**	8.24
5/23/2008	**300**	5.70
9/26/2008	**20**	3.00
12/23/2008	**170**	5.14
3/9/2009	**2,800**	7.94
5/28/2009	**3,800**	8.24
12/10/2009	**13**	2.56
6/29/2010	**250**	5.52
12/30/2010	**2,000**	7.60
6/29/2011	**920**	6.82
1/30/2012	**640**	6.46
6/27/2012	**2,300**	7.74
12/7/2012	**350**	5.86
6/6/2013	**670**	6.51
12/13/2013	**100**	4.61
6/30/2014	**140**	4.94
12/16/2014	**100**	4.61
6/18/2015	8.49	2.14
12/8/2015	**25**	3.22
6/28/2016	**64**	4.16



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	2
% of data as detects	94

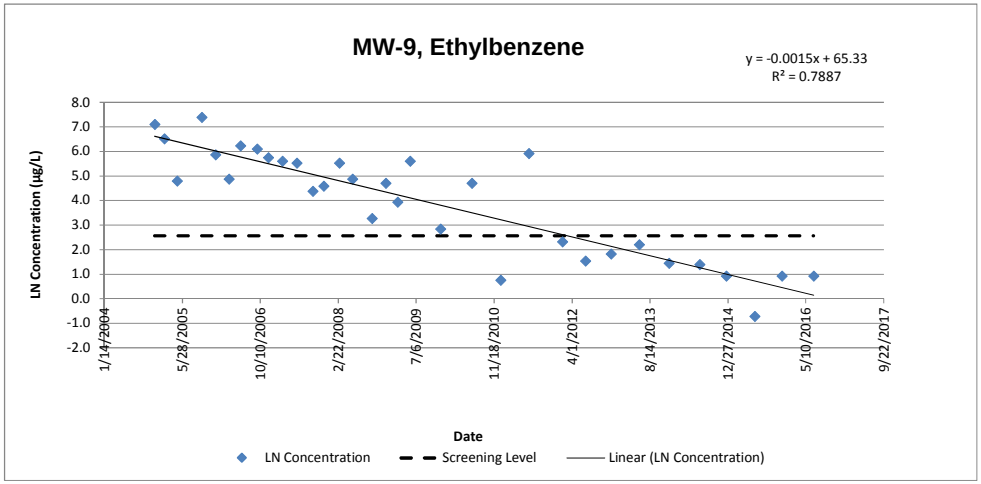
Results		
Coefficient of Determination (R^2) =	0.4870	
p-Value =	6.35E-06	
Attenuation Rate in Groundwater (K) =	0.0011	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0007	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	6.21E+02	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	51.286
Slope	-0.0011
Date to Screening Level	7/8/2019

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-9**
Constituent Ethylbenzene

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**1,200**	7.09
2/2/2005	**670**	6.51
4/25/2005	**120**	4.79
9/30/2005	**1,600**	7.38
12/28/2005	**350**	5.86
3/23/2006	**130**	4.87
6/5/2006	**500**	6.21
9/19/2006	**440**	6.09
12/1/2006	**310**	5.74
3/1/2007	**270**	5.60
6/1/2007	**250**	5.52
9/13/2007	**79**	4.37
11/21/2007	**97**	4.57
2/29/2008	**250**	5.52
5/23/2008	**130**	4.87
9/26/2008	**26**	3.26
12/23/2008	**110**	4.70
3/9/2009	**51**	3.93
5/28/2009	**270**	5.60
12/10/2009	**17**	2.83
6/29/2010	**110**	4.70
12/30/2010	2.1	0.74
6/29/2011	**370**	5.91
1/30/2012	10	2.30
6/27/2012	4.6	1.53
12/7/2012	6.1	1.81
6/6/2013	8.9	2.19
12/13/2013	4.2	1.44
6/30/2014	4	1.39
12/16/2014	2.5	0.92
6/18/2015	0.479	-0.74
12/8/2015	2.5	0.92
6/28/2016	2.5	0.92



Notes:

	ND taken at reporting limit/reported value
	Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	3
% of data as detects	91

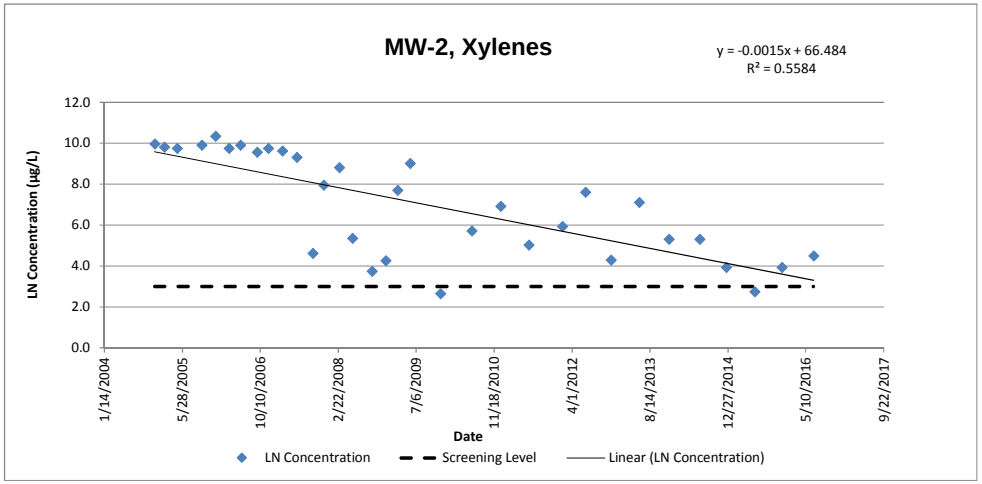
Results		
Coefficient of Determination (R^2) =	0.7887	
p-Value =	5.45E-12	
Attenuation Rate in Groundwater (K) =	0.0015	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0012	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	4.52E+02	days

Date Screening Level Reached	
Screening Level	13
LN Screening Level	2.6
Intercept	65.330
Slope	-0.0015
Date to Screening Level	2/28/2012

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-2**
Constituent Xylenes

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**21,000**	9.95
2/2/2005	**18,000**	9.80
4/25/2005	**17,000**	9.74
9/30/2005	**20,000**	9.90
12/28/2005	**31,000**	10.34
3/23/2006	**17,000**	9.74
6/5/2006	**20,000**	9.90
9/19/2006	**14,000**	9.55
12/1/2006	**17,000**	9.74
3/1/2007	**15,000**	9.62
6/1/2007	**11,000**	9.31
9/13/2007	**100**	4.61
11/21/2007	**2,800**	7.94
2/29/2008	**6,600**	8.79
5/23/2008	**210**	5.35
9/26/2008	**42**	3.74
12/23/2008	**70**	4.25
3/9/2009	**2,200**	7.70
5/28/2009	**8,100**	9.00
12/10/2009	14	2.64
6/29/2010	**300**	5.70
12/30/2010	**1,000**	6.91
6/29/2011	**150**	5.01
1/30/2012	**370**	5.91
6/27/2012	**2,000**	7.60
12/7/2012	**72**	4.28
6/6/2013	**1,200**	7.09
12/13/2013	**200**	5.30
6/30/2014	**200**	5.30
12/16/2014	**50**	3.91
6/18/2015	15.4	2.73
12/8/2015	**50**	3.91
6/28/2016	**89**	4.49



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	5
% of data as detects	85

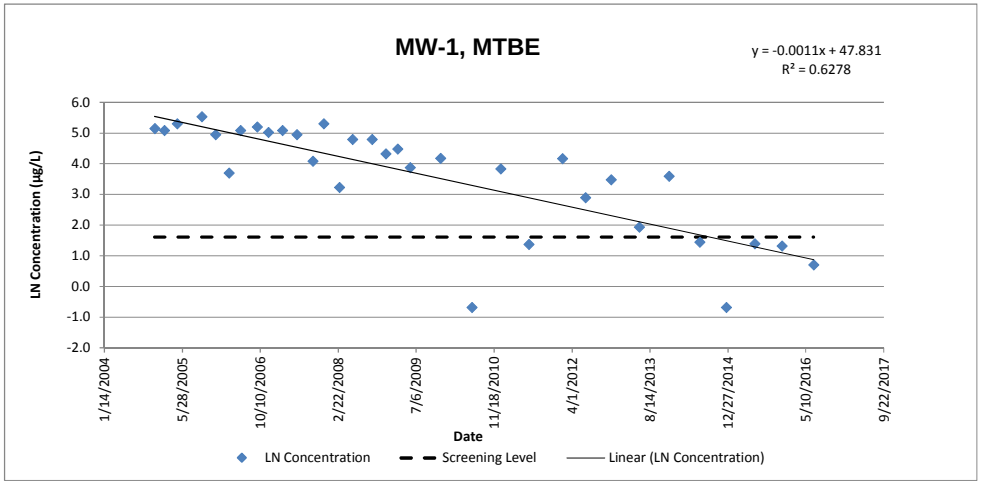
Results		
Coefficient of Determination (R^2) =	0.5584	
p-Value =	5.85E-07	
Attenuation Rate in Groundwater (K) =	0.0015	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0010	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	4.67E+02	days

Date Screening Level Reached	
Screening Level	20
LN Screening Level	3.0
Intercept	66.484
Slope	-0.0015
Date to Screening Level	1/20/2017

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm

Sample Information
Sample Location **MW-1**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**170**	5.14
2/2/2005	**160**	5.08
4/25/2005	**200**	5.30
9/30/2005	**250**	5.52
12/28/2005	**140**	4.94
3/23/2006	**40**	3.69
6/5/2006	**160**	5.08
9/19/2006	**180**	5.19
12/1/2006	**150**	5.01
3/1/2007	**160**	5.08
6/1/2007	**140**	4.94
9/13/2007	**59**	4.08
11/21/2007	**200**	5.30
2/29/2008	**25**	3.22
5/23/2008	**120**	4.79
9/26/2008	**120**	4.79
12/23/2008	**75**	4.32
3/9/2009	**88**	4.48
5/28/2009	**48**	3.87
12/10/2009	**65**	4.17
6/29/2010	0.5	-0.69
12/30/2010	**46**	3.83
6/29/2011	3.9	1.36
1/30/2012	**64**	4.16
6/27/2012	**18**	2.89
12/7/2012	**32**	3.47
6/6/2013	6.9	1.93
12/13/2013	**36**	3.58
6/30/2014	4.2	1.44
12/16/2014	0.5	-0.69
6/18/2015	3.99	1.38
12/8/2015	3.7	1.31
6/28/2016	2	0.69



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	2
% of data as detects	94

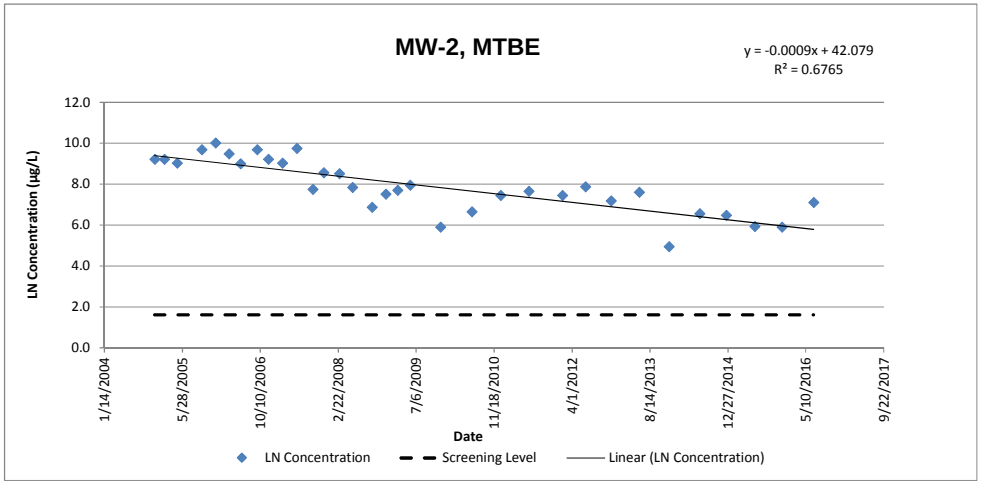
Results		
Coefficient of Determination (R^2) =	0.6278	
p-Value =	3.92E-08	
Attenuation Rate in Groundwater (K) =	0.0011	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0008	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	6.28E+02	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	47.831
Slope	-0.0011
Date to Screening Level	9/1/2014

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-2**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**10,000**	9.21
2/2/2005	**10,000**	9.21
4/25/2005	**8,200**	9.01
9/30/2005	**16,000**	9.68
12/28/2005	**22,000**	10.00
3/23/2006	**13,000**	9.47
6/5/2006	**8,000**	8.99
9/19/2006	**16,000**	9.68
12/1/2006	**10,000**	9.21
3/1/2007	**8,300**	9.02
6/1/2007	**17,000**	9.74
9/13/2007	**2,300**	7.74
11/21/2007	**5,200**	8.56
2/29/2008	**4,900**	8.50
5/23/2008	**2,500**	7.82
9/26/2008	**960**	6.87
12/23/2008	**1,800**	7.50
3/9/2009	**2,200**	7.70
5/28/2009	**2,800**	7.94
12/10/2009	**360**	5.89
6/29/2010	**770**	6.65
12/30/2010	**1,700**	7.44
6/29/2011	**2,100**	7.65
1/30/2012	**1,700**	7.44
6/27/2012	**2,600**	7.86
12/7/2012	**1,300**	7.17
6/6/2013	**2,000**	7.60
12/13/2013	**140**	4.94
6/30/2014	**700**	6.55
12/16/2014	**640**	6.46
6/18/2015	**372**	5.92
12/8/2015	**360**	5.89
6/28/2016	**1,200**	7.09



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	0
% of data as detects	100

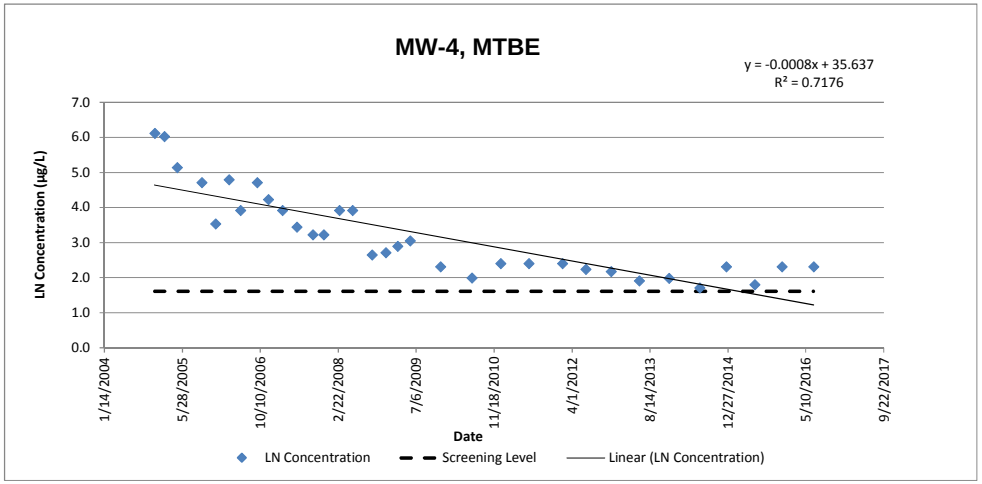
Results		
Coefficient of Determination (R^2) =	0.6765	
p-Value =	4.31E-09	
Attenuation Rate in Groundwater (K) =	0.0009	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0006	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	8.13E+02	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	42.079
Slope	-0.0009
Date to Screening Level	11/26/2029

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-4**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**450**	6.11
2/2/2005	**410**	6.02
4/25/2005	**170**	5.14
9/30/2005	**110**	4.70
12/28/2005	**34**	3.53
3/23/2006	**120**	4.79
6/5/2006	**50**	3.91
9/19/2006	**110**	4.70
12/1/2006	**68**	4.22
3/1/2007	**50**	3.91
6/1/2007	**31**	3.43
9/13/2007	**25**	3.22
11/21/2007	**25**	3.22
2/29/2008	**50**	3.91
5/23/2008	**50**	3.91
9/26/2008	**14**	2.64
12/23/2008	**15**	2.71
3/9/2009	**18**	2.89
5/28/2009	**21**	3.04
12/10/2009	**10**	2.30
6/29/2010	**7.3**	1.99
12/30/2010	**11**	2.40
6/29/2011	**11**	2.40
1/30/2012	**11**	2.40
6/29/2012	**9.3**	2.23
12/7/2012	**8.7**	2.16
6/6/2013	**6.7**	1.90
12/13/2013	**7.2**	1.97
6/30/2014	**5.5**	1.70
12/16/2014	**10**	2.30
6/18/2015	**6.03**	1.80
12/8/2015	**10**	2.30
6/28/2016	**10**	2.30



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	9
% of data as detects	73

Less than 75% data above reporting limits.

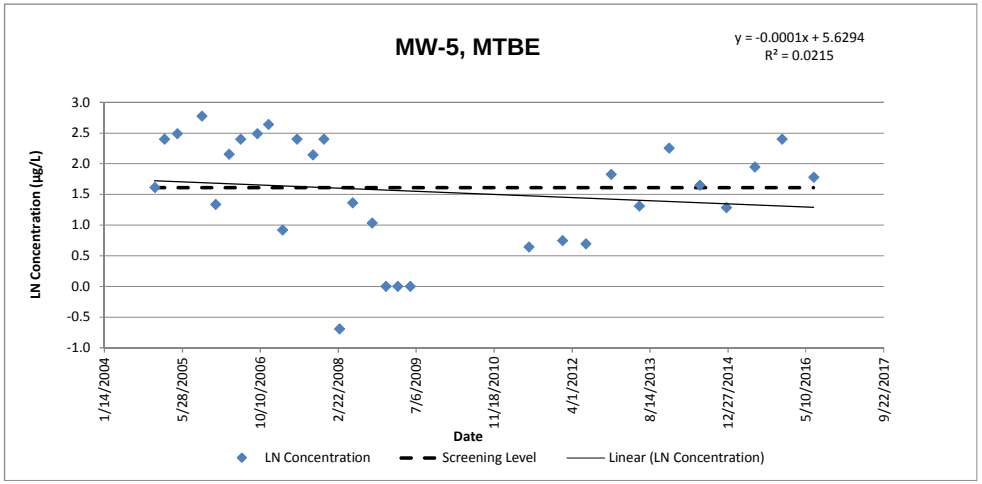
Results		
Coefficient of Determination (R^2) =	0.7176	
p-Value =	5.11E-10	
Attenuation Rate in Groundwater (K) =	0.0008	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0006	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	8.57E+02	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	35.637
Slope	-0.0008
Date to Screening Level	3/8/2015

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-5**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	5	1.61
2/2/2005	**11**	2.40
4/25/2005	**12**	2.48
9/30/2005	**16**	2.77
12/28/2005	**3.8**	1.34
3/23/2006	**8.6**	2.15
6/5/2006	**11**	2.40
9/19/2006	**12**	2.48
12/1/2006	**14**	2.64
3/1/2007	2.5	0.92
6/1/2007	**11**	2.40
9/13/2007	**8.5**	2.14
11/21/2007	**11**	2.40
2/29/2008	0.5	-0.69
5/23/2008	3.9	1.36
9/26/2008	2.8	1.03
12/23/2008	1	0.00
3/9/2009	1	0.00
5/28/2009	1	0.00
6/29/2011	1.9	0.64
1/30/2012	2.1	0.74
6/29/2012	2	0.69
12/7/2012	**6.2**	1.82
6/6/2013	3.7	1.31
12/13/2013	**9.5**	2.25
6/30/2014	**5.2**	1.65
12/16/2014	3.6	1.28
6/18/2015	**6.98**	1.94
12/8/2015	**11**	2.40
6/28/2016	**5.9**	1.77



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	30
# of nondetects	5
% of data as detects	83

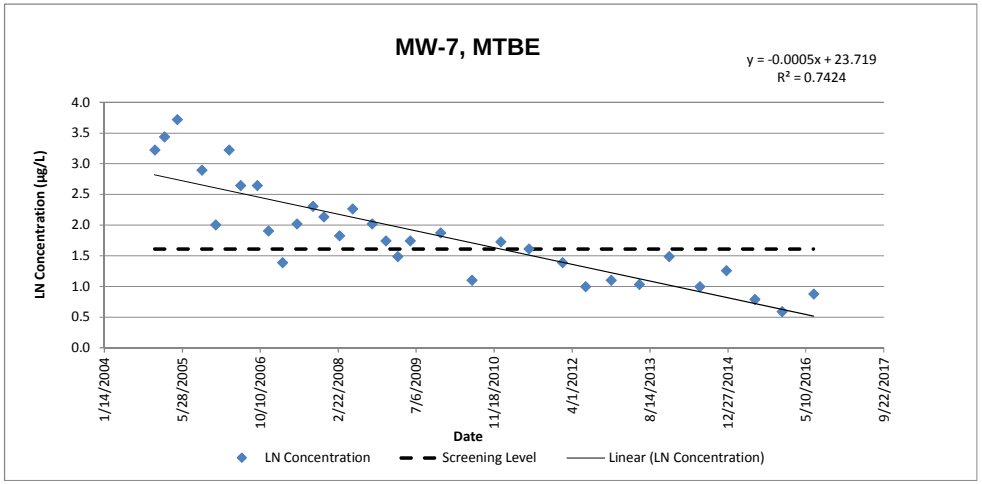
Results		
Coefficient of Determination (R^2) =	0.0215	
p-Value =	4.40E-01	
Attenuation Rate in Groundwater (K) =	0.0001	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	-0.0002	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	NA	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	5.629
Slope	-0.0001
Date to Screening Level	NA

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-7**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**25**	3.22
2/2/2005	**31**	3.43
4/25/2005	**41**	3.71
9/30/2005	**18**	2.89
12/28/2005	**7.4**	2.00
3/23/2006	**25**	3.22
6/5/2006	**14**	2.64
9/19/2006	**14**	2.64
12/1/2006	**6.7**	1.90
3/1/2007	4	1.39
6/1/2007	**7.5**	2.01
9/13/2007	**10**	2.30
11/21/2007	**8.4**	2.13
2/29/2008	**6.2**	1.82
5/23/2008	**9.6**	2.26
9/26/2008	**7.5**	2.01
12/23/2008	**5.7**	1.74
3/9/2009	4.4	1.48
5/28/2009	**5.7**	1.74
12/10/2009	**6.5**	1.87
6/29/2010	3	1.10
12/30/2010	**5.6**	1.72
6/29/2011	5	1.61
1/30/2012	4	1.39
6/27/2012	2.7	0.99
12/7/2012	3	1.10
6/6/2013	2.8	1.03
12/13/2013	4.4	1.48
6/30/2014	2.7	0.99
12/16/2014	3.5	1.25
6/18/2015	2.19	0.78
12/8/2015	1.8	0.59
6/28/2016	2.4	0.88



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	1
% of data as detects	97

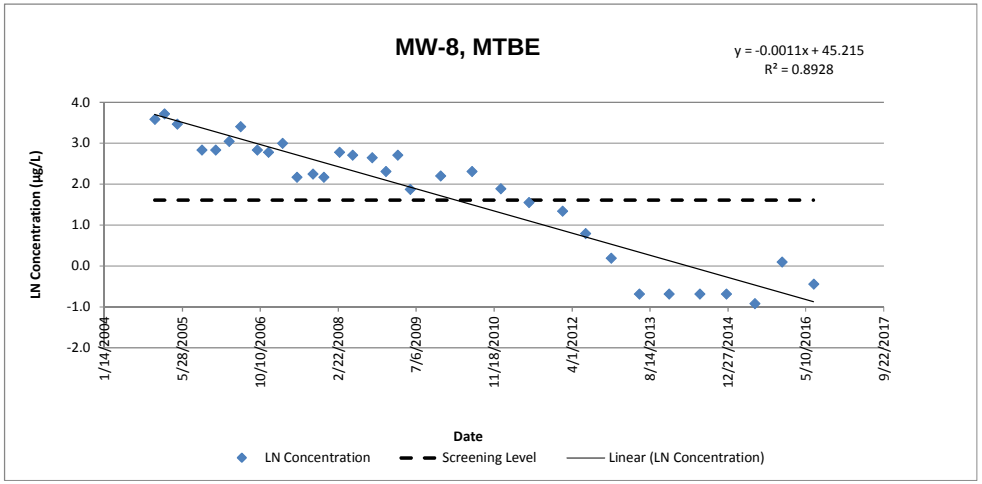
Results		
Coefficient of Determination (R^2) =	0.7424	
p-Value =	1.21E-10	
Attenuation Rate in Groundwater (K) =	0.0005	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.27E+03	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	23.719
Slope	-0.0005
Date to Screening Level	12/29/2010

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-8**
Constituent MTBE

Data		
Sample Date	Concentration (ug/L)	LN Concentration
12/1/2004	**36**	3.58
2/2/2005	**41**	3.71
4/25/2005	**32**	3.47
9/30/2005	**17**	2.83
12/28/2005	**17**	2.83
3/23/2006	**21**	3.04
6/5/2006	**30**	3.40
9/19/2006	**17**	2.83
12/1/2006	**16**	2.77
3/1/2007	**20**	3.00
6/1/2007	**8.7**	2.16
9/13/2007	**9.4**	2.24
11/21/2007	**8.7**	2.16
2/29/2008	**16**	2.77
5/23/2008	**15**	2.71
9/26/2008	**14**	2.64
12/23/2008	**10**	2.30
3/9/2009	**15**	2.71
5/28/2009	**6.5**	1.87
12/10/2009	**9**	2.20
6/29/2010	**10**	2.30
12/30/2010	**6.6**	1.89
6/29/2011	4.7	1.55
1/30/2012	3.8	1.34
6/27/2012	2.2	0.79
12/7/2012	1.2	0.18
6/6/2013	0.5	-0.69
12/13/2013	0.5	-0.69
6/30/2014	0.5	-0.69
12/16/2014	0.5	-0.69
6/18/2015	0.398	-0.92
12/8/2015	1.1	0.10
6/28/2016	0.64	-0.45



Notes:
ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	3
% of data as detects	91

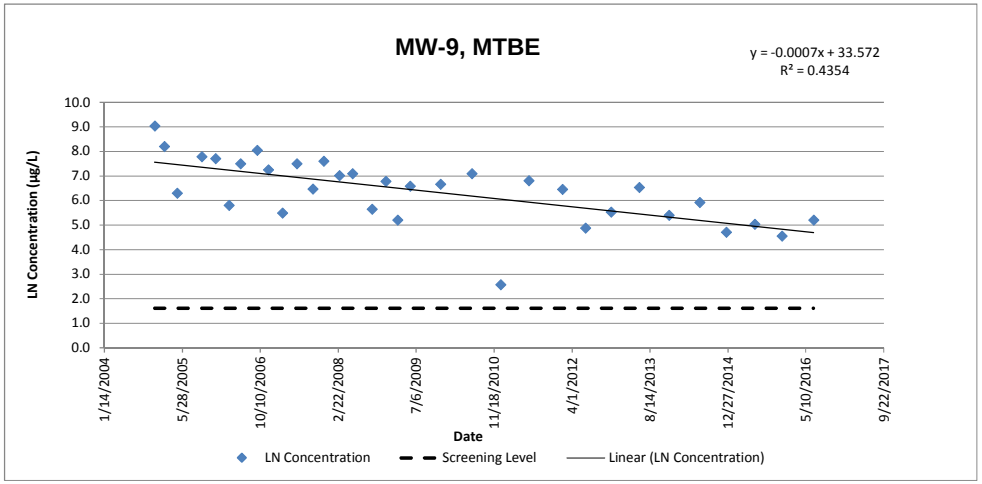
Results		
Coefficient of Determination (R^2) =	0.8928	
p-Value =	1.38E-16	
Attenuation Rate in Groundwater (K) =	0.0011	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0009	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	6.40E+02	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	45.215
Slope	-0.0011
Date to Screening Level	3/18/2010

Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Sample Information
Sample Location **MW-9**
Constituent MTBE

Data		
Sample Date	Concentration	LN Concentration
	(ug/L)	
12/1/2004	**8,300**	9.02
2/2/2005	**3,600**	8.19
4/25/2005	**540**	6.29
9/30/2005	**2,400**	7.78
12/28/2005	**2,200**	7.70
3/23/2006	**330**	5.80
6/5/2006	**1,800**	7.50
9/19/2006	**3,100**	8.04
12/1/2006	**1,400**	7.24
3/1/2007	**240**	5.48
6/1/2007	**1,800**	7.50
9/13/2007	**640**	6.46
11/21/2007	**2,000**	7.60
2/29/2008	**1,100**	7.00
5/23/2008	**1,200**	7.09
9/26/2008	**280**	5.63
12/23/2008	**870**	6.77
3/9/2009	**180**	5.19
5/28/2009	**720**	6.58
12/10/2009	**780**	6.66
6/29/2010	**1,200**	7.09
12/30/2010	**13**	2.56
6/29/2011	**900**	6.80
1/30/2012	**630**	6.45
6/27/2012	**130**	4.87
12/7/2012	**250**	5.52
6/6/2013	**680**	6.52
12/13/2013	**220**	5.39
6/30/2014	**370**	5.91
12/16/2014	**110**	4.70
6/18/2015	**152**	5.02
12/8/2015	**94**	4.54
6/28/2016	**180**	5.19



Notes:

ND taken at reporting limit/reported value
Qualified data converted to reported value

Data quality	
Total # of data points used in regression	33
# of nondetects	0
% of data as detects	100

Results		
Coefficient of Determination (R^2) =	0.4354	
p-Value =	2.95E-05	
Attenuation Rate in Groundwater (K) =	0.0007	$days^{-1}$
Attenuation Rate in Groundwater at 90% confidence (K) =	0.0004	$days^{-1}$
Chemical Half Life in Groundwater ($t_{1/2}$) =	1.02E+03	days

Date Screening Level Reached	
Screening Level	5
LN Screening Level	1.6
Intercept	33.572
Slope	-0.0007
Date to Screening Level	12/7/2028

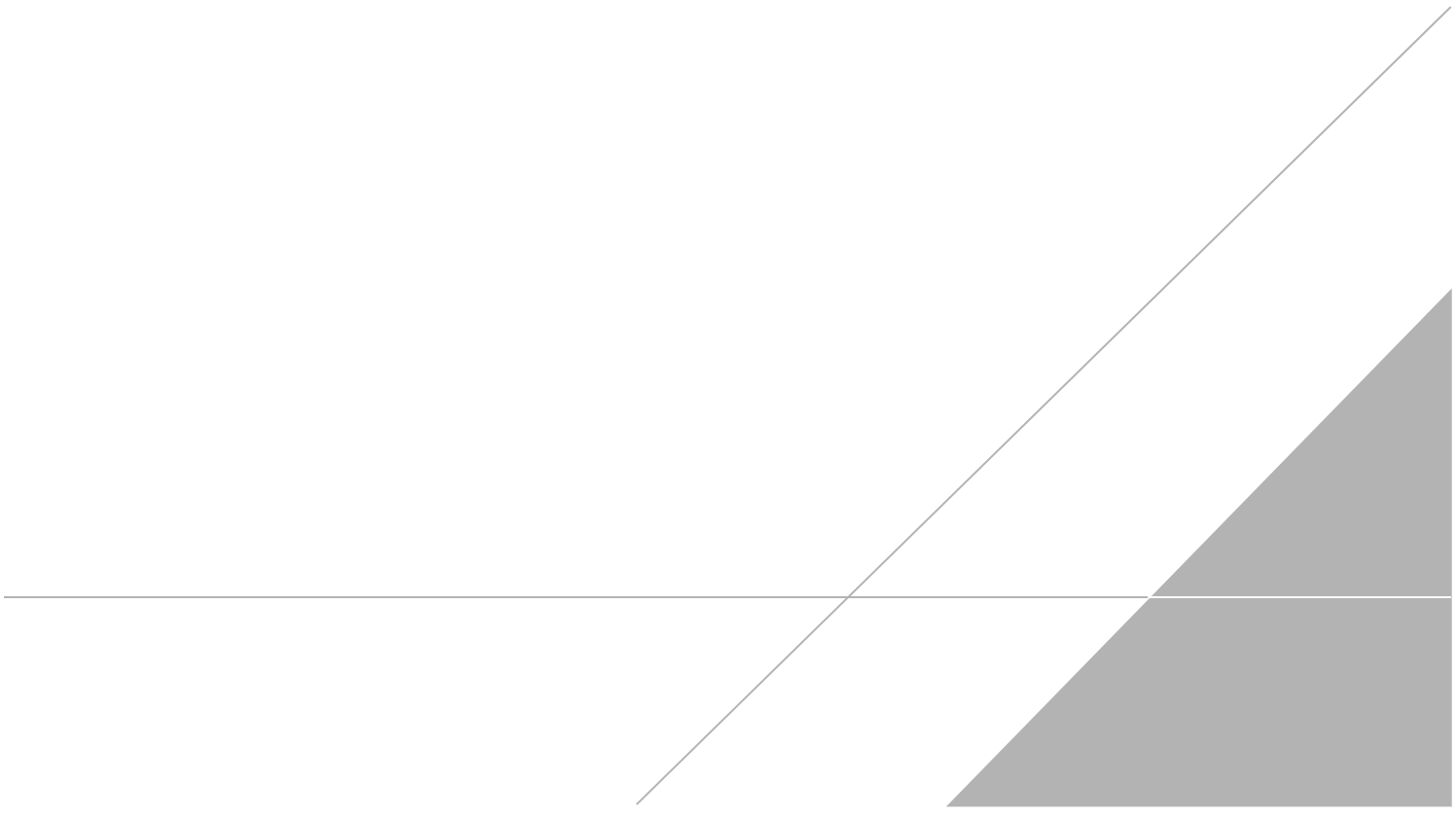
Abbreviations and Notes
ug/l = micrograms per liter
LN = Natural Logarithm
MTBE = methyl tert-butyl ether

Constituent	Screening Levels (µg/L)
TPH-DRO	100
TPH-GRO	100
Benzene	1
Ethylbenzene	13
Xylene	20
MTBE	5

Note:
San Francisco Bay Regional Water Quality Control Board [SF-RWQCB] environmental screening levels [ESLs]
http://www.waterboards.ca.gov/rwqcb2/water_issues/programs/esl.shtml

ATTACHMENT 5

ACEH Low Threat Closure Checklist – June 2016



STATE WATER RESOURCES CONTROL BOARD
GEOTRACKER

BP #11126 (T0600100208) - (MAP)

SIGN UP FOR EMAIL ALERTS

1700 POWELL
EMERYVILLE, CA 94608
ALAMEDA COUNTY
LUST CLEANUP SITE
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000066*
CASEWORKER: *MARK DETTERMAN*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0222*
CASEWORKER: *Regional Water Board*
CUF Claim #: 16514
CUF Priority Assigned: D
CUF Amount Paid:

LTCP CHECKLIST AS OF 6/3/2016

VIEW PATH TO CLOSURE PLAN | BACK TO CASE SUMMARY

General Criteria - *The site satisfies the policy general criteria*	**YES**
a. Is the unauthorized release located within the service area of a public water system? **Name of Water System : EBMUD**	**YES**
b. The unauthorized release consists only of petroleum (info).	**YES**
c. The unauthorized ("primary") release from the UST system has been stopped.	**YES**
d. Free product has been removed to the maximum extent practicable (info).	**YES**
e. A conceptual site model that assesses the nature, extent, and mobility of the release has been developed (info).	**YES**
f. Secondary source has been removed to the extent practicable (info).	**YES**
g. Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.	**YES**
h. Does a nuisance exist, as defined by Water Code section 13050.	**NO**

1. Media-Specific Criteria: Groundwater - *The contaminant plume that exceeds water quality objectives is stable or decreasing in areal extent, and meets all of the additional characteristics of one of the five classes of sites listed below.*	**NO**
EXEMPTION - Soil Only Case (Release has not Affected Groundwater - Info)	**NO**
Does the site meet any of the Groundwater specific criteria scenarios?	**NO**

ADDITIONAL QUESTIONS - The following conditions exist that do not meet the policy criteria:
Plume Length (That Exceeds Water Quality Objectives) :
- Unknown

2. Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air - *The site is considered low-threat for the vapor-intrusion-to-air pathway if site-specific conditions satisfy items 2a, 2b, or 2c*	**YES**
EXEMPTION - Active Commercial Petroleum Fueling Facility	**YES**

3. Media Specific Criteria: Direct Contact and Outdoor Air Exposure - *The site is considered low-threat for direct contact and outdoor air exposure if it meets 1, 2, or 3 below.*	**YES**
EXEMPTION - The upper 10 feet of soil is free of petroleum contamination	**NO**
Does the site meet any of the Direct Contact and Outdoor Air Exposure criteria scenarios?	**YES**
3.1 - Maximum concentrations of petroleum constituents in soil are less than or equal to those listed in the following table (LINK) for the specified depth below ground surface.	YES

Additional Information	
Should this case be closed in spite of NOT meeting policy criteria?	NO

ATTACHMENT 6

ACEH Path to Closure – June 2016

STATE WATER RESOURCES CONTROL BOARD
CA.GOV GEOTRACKER

BP #11126 (T0600100208) - (MAP)

SIGN UP FOR EMAIL ALERTS

1700 POWELL
EMERYVILLE, CA 94608
ALAMEDA COUNTY
LUST CLEANUP SITE
PRINTABLE CASE SUMMARY / CSM REPORT

CLEANUP OVERSIGHT AGENCIES
ALAMEDA COUNTY LOP *(LEAD)* - *CASE #: RO0000066*
CASEWORKER: *MARK DETTERMAN*
SAN FRANCISCO BAY RWQCB (REGION 2) - *CASE #: 01-0222*
CASEWORKER: *Regional Water Board*
CUF Claim #: 16514
CUF Priority Assigned: D
CUF Amount Paid:

PATH TO CLOSURE PLAN FY 12/13 AS OF 6/3/2016

BACK TO LTCP CHECKLIST

IMPEDIMENT 1:

General Criteria C: The unauthorized ("primary") release from the UST system has NOT been stopped

Step to Resolve Impediment 1 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
9/1/2017	6/23/2014

IMPEDIMENT 2:

General Criteria D: Free product has NOT been removed to the maximum extent practicable

Step to Resolve Impediment 2 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
9/1/2017	6/23/2014

IMPEDIMENT 3:

General Criteria E: A conceptual site model that assesses the nature, extent, and mobility of the release has NOT been developed

Step to Resolve Impediment 3 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
9/1/2017	6/23/2014

IMPEDIMENT 4:

General Criteria F: Secondary source has NOT been removed to the extent practicable

Step to Resolve Impediment 4 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
9/1/2017	6/23/2014

IMPEDIMENT 5:

General Criteria H: A nuisance exists, as defined by Water Code section 13050.

Step to Resolve Impediment 5 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
9/1/2017	6/23/2014

IMPEDIMENT 6:

Media-Specific Criteria: Groundwater: The contaminant plume that exceeds water quality objectives is NOT stable or decreasing in areal extent, and does NOT meet all of the additional characteristics of one of the five classes of sites.

Conditions that do not meet the policy criteria:
- Plume Length (That Exceeds Water Quality Objectives): Unknown

Step to Resolve Impediment 6 - Step 1:
Site characterization (Dilution-Attenuation Analysis) (4 months) Closure requirements along path to closure (6 months)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
4/1/2017	

IMPEDIMENT 7:

Media Specific Criteria: Petroleum Vapor Intrusion to Indoor Air: The site is NOT considered low-threat for the vapor-intrusion-to-air pathway and site-specific conditions do NOT satisfy items 2a, 2b, or 2c .

Step to Resolve Impediment 7 - Step 1:
No longer an impediment (Impediment addressed by completed action or conditions changed)

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
3/1/2017	10/1/2014

IMPEDIMENT 8:

Media Specific Criteria: Direct Contact and Outdoor Air Exposure: The site is NOT considered low-threat for direct contact and outdoor air exposure as it does NOT meet 1, 2, or 3.

Step to Resolve Impediment 8 - Step 1:
No longer an impediment.

COMPLETION DATE	
PROJECTED DATE	ACTUAL DATE
3/1/2017	4/30/2015

REQUIREMENTS ALONG PATH TO CLOSURE

DATE IDENTIFIED FOR CLOSURE	CLOSURE INITIATED BY	RP NOTIFICATION DATE	PUBLIC PARTICIPATION COMPLETION DATE	WELL DESTRUCTION LETTER DATE	WELL DESTRUCTION DATE	WASTE DISPOSAL DATE	LAND USE RESTRICTION DATE	SITE CLOSURE DATE

STATE WATER RESOURCES CONTROL BOARD

GEOTRACKER ESI

UPLOADING A GEO_REPORT FILE

SUCCESS

Your GEO_REPORT file has been successfully submitted!

Submittal Type:	**GEO_REPORT**
Report Title:	**First Quarter and Second Quarter 2016 Semi-Annual Groundwater Monitoring Report, Dilution Attenuation Factor (DAF) update, and Closure Request 082616**
Report Type:	**Request for Closure**
Report Date:	**8/26/2016**
Facility Global ID:	**T0600100208**
Facility Name:	**BP #11126**
File Name:	**CA 11126 160826 BP - 1Q2Q16 GWMR,DAF,Closure Request.pdf**
Organization Name:	**ARCADIS**
Username:	**ARCADISBP**
IP Address:	**199.19.248.53**
Submittal Date/Time:	**8/26/2016 2:59:49 PM**
Confirmation Number:	**6515806734**