ConocoPhillips
76 Broadway
Sacramento, California 95818

July 30, 2010

Ms. Barbara Jakub
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Assessment Report, Site Conceptual Model Update, and Additional Assessment Workplan**
76 Station no. 5781
3535 Pierson Street
Oakland, CA

Dear Ms. Jakub,

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

If you have any questions or need additional information, please contact me at (916) 558-7612.

Sincerely,

Bill Borgh

Bill Borgh
Site Manager – Risk Management and Remediation

Attachment

July 30, 2010

Ms. Barbara Jakub
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502

RE: **ASSESSMENT REPORT,**
SITE CONCEPTUAL MODEL UPDATE, AND
ADDITIONAL ASSESSMENT WORKPLAN
76 Service Station NO. 5781
3535 Pierson Street
Oakland, California

DELTA

Dear Ms. Jakub,

On behalf of ConocoPhillips Company (COP), Delta consultants (Delta) has prepared and is submitting this *Assessment Report, Site Conceptual Model Update, and Additional Assessment Workplan* for 76 service station No. 5781 in Oakland, California. This report has been prepared in response to a Alameda County Environmental Health (ACEH) letter dated May 21, 2010.

Please Contact Jan Wagoner at (916) 503-1275 if you have any questions or comments.

Sincerely,

DELTA CONSULTANTS

Jan Wagoner
Senior Project Manager

Enclosure:

Cc: Bill Borgh – COP (electronic copy only)
Mr. Keith Matthews, Oakland Fire Department

a member of: Inogen Environmental Alliance

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ASSESSMENT REPORT,
SITE CONCEPTUAL MODEL UPDATE, AND
ADDITIONAL ASSESSMENT WORKPLAN

76 SERVICE STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

July 30, 2010

Prepared for:

ConocoPhillips Company
76 Broadway
Sacramento, CA 95818

The material and data in this report were prepared under the supervision and direction of the undersigned.

DELTA CONSULTANTS

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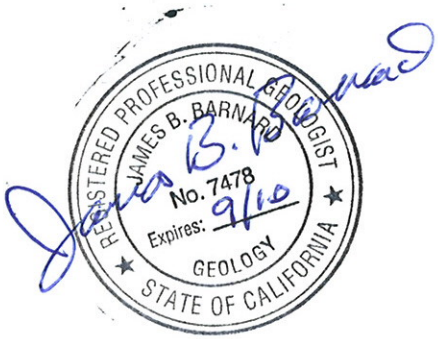

1.0 INTRODUCTION

Delta Consultants, Inc. (Delta), on behalf of ConocoPhillips (COP) has prepared this *Assessment Report, Site Conceptual Model Update, and Additional Assessment Workplan* for 76 Service Station No. 5781, located at 3535 Pierson Street in Oakland, California (site) (**Figure 1**). This report provides a summary of current and historical assessment and a discussion regarding current and future distribution of petroleum hydrocarbons reported in soil and groundwater beneath the site. The activities presented in this report are in response to an Alameda County Environmental Health (ACEH) letter dated May 21, 2010 (Appendix A).

The key elements of this report are:

- Site background and regional hydrogeologic setting
- Previous assessment activities
- Current storm drain and soil and groundwater assessment summary
- Site Conceptual Model – including
  - Nature and extent of the petroleum hydrocarbon source(s)
  - Contaminant fate and transport characteristics
  - Potential exposure pathways
  - Potential receptors
  - Identification of data gaps and recommendations
- Additional Assessment Workplan

2.0 SITE BACKGROUND

2.1 SITE LOCATION

The site (Alameda County Assessor's Parcel No. 48A-7070-70-1) is located on a triangular shaped property formed by the intersection of Pierson Street and Highway 580 freeway off-ramp in Oakland, California.

2.2 SITE DESCRIPTION

The subject site is an active gasoline service station located on the northwest corner of Pierson Street and MacArthur Boulevard in Oakland, California. Current ownership is Mr. Delong Liu. Station facilities currently include two gasoline underground storage tanks (USTs), a 550-gallon waste oil UST, three dispenser islands under canopies, and a service station building. The product dispensers utilize a balanced vapor recovery system. Site improvements and current monitoring wells are presented on Figure 2.

Historical data indicates that the site has been a service station since 1947. Renovation of the site first occurred in 1967, when the size of the site expanded to its current configuration.

The site is bounded to the west by a church property, to the north by a Highway 580 off-ramp, to the east by MacArthur Boulevard, and to south by Pierson Street. The site is located in a primarily residential area, at an elevation of approximately 150 feet above mean sea level (MSL). The site is located in a small valley with a surface slope to the east. Regional topography slopes to the west-southwest towards San Francisco Bay, located approximately 3 miles to the west.

2.3 REGIONAL GEOLOGIC SETTING

The site is located near the base of the Berkeley Hills. Gettler-Ryan Inc., in their report dated July 14, 2003, provided the following description of the regional geologic setting;

Based on review of regional geologic maps, the site is underlain by undivided Quaternary deposits and is closely adjacent to a mapped geologic contact with the upper member of the Quaternary San Antonio Formation. In addition, the site is situated approximately 1,200 to 2,800 feet southwest of mapped splays of the active Hayward Fault Zone.

2.4 REGIONAL HYDROGEOLOGIC SETTING

The site is located at the eastern edge of the East Bay Plain Groundwater Subbasin (DWR Bulletin 118). The subbasin consists of a narrow area approximately 25 miles long and 2 to 7 miles wide along the eastern shore of San Francisco Bay. The East Bay Plain subbasin aquifer system consists of unconsolidated sediments of Quaternary age. Numerous creeks cross the subbasin capturing runoff from foothills east of the Hayward fault. The groundwater flow direction is east to west, generally reflecting the local topography. Flow direction and velocity are influenced by buried stream channels that are typically oriented in an east-west direction (RWQCB, June 1999). The total depth of domestic wells within the subbasin reportedly ranges from 32 to 525 feet with an average of 206 feet. Total depth of municipal and irrigation wells range from 29 to 630 feet with an average of 191 feet (DWR Bulletin 118). The California Department of Water Resources GeoTracker database, prior to removal of well information, indicated the presence of four active water wells nearby the site. The four active wells are reported to be located in East Bay Regional Park District land, located approximately 2,193 feet northeast of the site.

2.5 HYDROGEOLOGIC CONDITIONS

The site is underlain by fine-grained silt and clay. Historical boring logs are presented in Appendix B. The fine-grained soil contains scattered deposits of

clayey sand and silty sand. The coarsest deposits were encountered in boring MW-2 located north of the fuel USTs. Boring MW-2 encountered two layers of silty gravel and gravel from 7 to 12 feet bgs and from 17.5 to 20.5 feet bgs. A site map with cross sections is shown as Figure **3**. Geologic cross-sections A-A' through E-E' are shown as Figures 4 through 8.

During onsite activities, groundwater at the site has been encountered in borings between 15 and 33 feet bgs. Other site borings drilled to similar depths were dry upon completion.

During second quarter 2010 sampling activities on June 16, 2010, depth to groundwater ranged from 11.13 feet below top of casing (TOC) in well MW-4, to 17.85 feet below TOC in well MW-A. Groundwater flow direction based on the three existing wells (MW-A, MW-4, and MW-5) was northwest at a calculated hydraulic gradient of 0.1 feet per foot (ft/ft). This groundwater flow and gradient is suspect when compared to the topography in the vicinity of the site. This discrepancy may be related to different screen intervals for MW-4 and MW-5 (10-20 feet bgs and 15-25 feet bgs, respectively) when compared to previous well MW-A (25-45 feet bgs).

Groundwater flow direction and gradient beneath the site has not been assessed at this time. Perched zones of groundwater atop impermeable clayey soil materials may exist across the site, as indicated by the sporadic encountering of groundwater at depths of approximately 33 feet bgs (MW-A, EB-1, EB-2, SB-1, and SB-5). Groundwater may also be confined or semi-confined as indicated by conditions in well MW-A.

3.0 PREVIOUS ASSESSMENT

Historical sampling locations are shown on Figure 9. Historical soil analytical results are presented on Table 1. Historical grab groundwater analytical results are presented on Table 2. Historical groundwater monitoring and sampling results are included as Appendix C.

Historical and current soil analytical results exceeding Environmental Screening Levels (ESLs) are shown on Figure 10. Historical and current grab groundwater analytical results are shown on attached Figure 11.

3.1 REMOVAL OF FORMER USTS (1989)

Two 10,000-gallon fuel USTs, one 280-gallon waste oil UST, and associated product piping were removed in December 1989. No holes or cracks were observed in the gasoline USTs. The waste oil UST contained one hole of approximately 1.25 square inches in size. A total of seven soil samples were collected from the fuel UST cavity (A1, A2, B1, SW1, and SW2) and the

associated product piping (P1 and P2). One soil sample (WO1) was collected from beneath the waste oil UST.

Total petroleum hydrocarbon as gasoline (TPHg) was reported in sidewall samples from the UST pit at a depth of 10.5 feet below ground surface (bgs) at 15 milligrams per kilogram (mg/kg) and 46 mg/kg. Benzene was reported in one of the two samples at 0.65 mg/kg. TPHg was reported in two of three soil samples from the base of the excavation (12.5 feet bgs) at 3.5 mg/kg and 5.8 mg/kg. Benzene was reported in one of three samples at 0.10 mg/kg. TPHg and benzene were below laboratory reporting limits in the two soil samples from beneath the product piping.

The soil sample from beneath the waste oil tank contained 8,300 mg/kg total petroleum hydrocarbons as diesel (TPHd), 48,000 mg/kg total oil and grease (TOG), 670 mg/kg TPHg, and 5.4 mg/kg benzene. The sample also contained 10 parts per billion (ppb) 1,2-dichlorobenzene, 77 ppb tetrachloroethene, and 15 ppb 1,1,1-trichloroethane. The sample contained 8.3 mg/kg chromium, 340 mg/kg lead, and 70 mg/kg zinc.

3.2 WASTE OIL UST PIT OVER-EXCAVATION (1990)

In February 1990, the waste oil UST pit was over-excavated to 16 feet bgs and 35 feet to the east, 10 feet to the west, 15 feet to the south, and 2 feet to the north. Soil samples were collected from the base of the deepened excavation (W01-16) along with four sidewall samples (SWA through SWD). TOG was reported in samples SWA (adjacent to the site building) at 17,000 mg/kg, sample SWB at 4,100 mg/kg, and in sample SWD at 6,400 mg/kg. TOG was detected in sample WO-16 at 910 mg/kg. The highest concentrations of TPHd, TPHg, and benzene were reported in sample SWA at 1,400 mg/kg, 220 mg/kg, and 2.3 mg/kg, respectively. Further excavation was terminated due to the presence of underground sewer and gas lines to the south and west and the site building to the north side.

3.3 SOIL BORINGS (1990)

Three soil borings (MW-1 through MW-3) were drilled to collect soil samples in April 1990. Boring MW-1 was located adjacent to the former waste oil UST. Borings MW-2 and MW-3 were located adjacent to the gasoline USTs in the eastern portion of the site. Borings were drilled to depths of 50 feet, 39.5 feet, and 40 feet bgs, respectively. The borings had been intended to be converted to groundwater monitoring wells, however groundwater was not encountered and as a result, the boreholes were backfilled with grout. TPHd, TPHg, benzene, toluene, total xylenes, and ethylbenzene (BTEX compounds) were all below the laboratory's indicated reporting limits.

In July 1990, two additional borings (EB1 and EB2) were drilled in the area of the former waste oil UST. Borings were drilled to depths of 34.5 feet and 38 feet bgs. Groundwater was encountered at depths of 33.5 and 36.7 feet bgs. Water samples were collected from each boring. TPHd and TOG were below the laboratory's indicated reporting limits in all soil samples collected. TPHg and benzene were reported in only one sample at concentrations of 1.2 mg/kg and 0.009 mg/kg, respectively. 1,1,1-trichloroethane was reported in the 28.5-foot sample of boring EB1.

The groundwater sample from boring EB1 contained 6.7 micrograms per liter (µg/L) TPHd. TPHg and benzene were below laboratory reporting limits. TPHg and TPHd were below the laboratory's indicated reporting limits in the sample from EB2. The sample contained 0.61 µg/L benzene. TOG was below the laboratory's indicated reporting limits in both samples.

3.4 MONITORING WELL INSTALLATION (1990)

On December 11, 1990, one two-inch diameter monitoring well (MW-A) was installed approximately 15 feet south of the former waste oil UST. Groundwater was first encountered at a depth of approximately 33 feet bgs. The well was installed to a depth of 45 feet bgs and screened from 25 feet to 45 feet bgs. Depth to groundwater in the well on December 13, 1990 was 24 feet bgs and 19.40 feet on December 18, 1990. A groundwater sample collected on December 18, 1990 contained 73 µg/L TPHd. TPHg , TOG, and BTEX compounds were below the laboratory's indicated reporting limits.

3.5 BASELINE SITE ASSESSMENT (2003)

A baseline site assessment was performed in October 2003 as part of property transfer. Five borings (SB-1 through SB-5) were drilled adjacent to the site dispensers, fuel USTs, and new waste oil UST. Borings SB-1 through SB-3 were drilled to depths of 44 feet, 54 feet, and 54 feet bgs, respectively. Borings SB-4 and SB-5 were drilled to depths of 24 feet and 29 feet, respectively. Total purgeable petroleum hydrocarbons (TPPH) was only reported in one soil sample (SB-3 @ 45') at 1,100 mg/kg. Boring SB-2 was located adjacent to the southern dispenser island. Benzene and fuel oxygenates were below the laboratory's indicated reporting limits in all soil samples.

Groundwater samples were collected from borings SB-1, SB-4, and SB-5. TPPH, BTEX compounds, and fuel oxygenates were below the laboratory reporting limits in the samples from borings SB-1 and SB-4. The groundwater sample from boring SB-5 located adjacent to the waste oil UST was analyzed for lead and TOG. Lead was reported at 0.18 milligrams per liter (mg/L). TOG was below the laboratory reporting limit.

3.6 REMOVAL OF WASTE OIL UST (2008)

The second generation waste oil tank (WOT) was removed in April 2008. A total of four soil samples were collected from the WOT cavity (WO1 – WO4). One base sample was collected from beneath the WOT at a depth of 9.0 feet bgs, and three sidewall samples were collected at a depth of either 6.5 or 7.0 feet bg. A fourth sidewall sample, from the southeast wall of the pit, was unable to be collected due to proximity of the station building. A composite soil sample (Composite) was also collected from materials stockpiled during removal and sampling activities.

No petroleum hydrocarbons (including TPHd) or fuel oxygenates, total oil and grease, VOCs, SVOCs, or PCBs were reported in any of the four soil samples, or the composite sample. Samples were also analyzed for CAM 17 metals, and each of the five samples contained arsenic at a concentration above the RWQCB ESL of 1.5 mg/kg (commercial). Concentrations ranged from 3.2 mg/kg to 6.2 mg/kg, and appear to represent background conditions at the site. All other reported CAM 17 metal concentrations were below the commercial ESLs set by the RWQCB.

No over-excavation activities were conducted, the WOT was not replaced, and the stockpiled materials were backfilled into the remaining cavity following receipt of laboratory results.

3.7 SOIL BORINGS (2010)

On March 11th and 12th, 2010, Delta oversaw the advancement of three soil borings in the vicinity of former waste oil underground storage tanks near the west corner of the station building (SB-7, SWC-2, SWD-2), and one soil boring to the east of the site's current fuel USTs (SB-6).

TPHg was present at 2,500 µg/L in a grab groundwater sample collected from boring SB-6 indicating residual TPHg in the area southeast of the USTs.

TOG was present in soils samples collected at 10 feet bgs in samples collected from borings SWC-2 and SWD-2 near the former waste oil USTs at concentrations of 7,700 µg/L and 870 µg/L, respectively. However, samples collected from these borings at 15 ft bgs in these two borings were at or below the laboratory's indicated reporting limits. Also, groundwater samples collected from borings SB-7 and SWC-2 reported TOG levels below laboratory indicated reporting limits. The only other petroleum hydrocarbon reported in groundwater above the laboratory's indicated reporting limits was TPHd in borings SWC-2 and SB-7 at 200 µg/L and 65 µg/l, respectively. This indicates that petroleum hydrocarbons are not migrating vertically in soil or laterally in groundwater and no additional assessment is needed in the vicinity of the former waste oil USTs.

4.0 CURRENT ASSESSMENT

4.1 STORM DRAIN ASSESSMENT

On February 16th, 2010, during utility locating activities prior to the March 2010 assessment activities detailed above (section 3.7), Delta and subcontractor personnel identified a hydrocarbon odor emanating from a storm drain manhole, now identified as Manhole #2 (MH-2), southwest of the fuel USTs in the sidewalk along Pierson Street. On March 5th, an Unauthorized Release Report (URR) was submitted by ConocoPhillips to the Alameda County Department of Environmental Health (ACEH). Highest reported Photo-Ionization Detector (PID) readings from MH-2 were recorded at 500 ppm on February 22nd, 2010.

On March 11th through 12th, 2010 Delta oversaw the advancement of four soil borings: SWC-2, SWD-2, SB-6 and SB-7. Details of the investigation were submitted to ACEH in the May 7th, 2010 *Additional Assessment Report, Monitoring Well Installation Work Plan and Storm Sewer Repair Comments.*

On April 8th, 2010, a portion of the sidewall of MH-2 was observed to be leaking liquid into the manhole. On April 28, 2010 Innovative Construction Solutions (ICS) placed a permanent patch on the portion of the storm drain manhole that had been identified to be seeping water into the storm drain. Mr. Mike Fahey of the Oakland Fire Department and representatives from Delta and ConocoPhillips were on-site to observe this repair. Details of this repair were reported in previously noted May 7, 2010 report. Follow-up inspections of the manhole repair indicated the repair was intact and no further water was seeping into the storm drain manhole.

4.1.1 Storm Drain Air Monitoring

As stated above, a PID reading of 500 ppm at MH-2 was recorded in February 2010. This prompted Delta, with the cooperation of the City of Oakland Fire Department, to initiate an air monitoring program in the surrounding storm drain system.

Air monitoring locations have been identified as Drain Inlet #1 (DI-1), MH-2, Manhole #3 (MH-3), Drain Inlet #4 (DI-4), Drain Inlet #5 (DI-4), Drain Inlet #6 (DI-6), and Manhole #7 (MH-7). These locations were initially monitored on March 17th, 2010. Following the repair work to the sidewall in MH-2, the locations were monitored on June 24th, July 13th, and July 26th, 2010. Air was monitored at 2 foot intervals from the surface to total depth of each location, using a PID meter in conjunction with a Lower Explosive Limit (LEL) meter. Locations of the air monitoring points are shown on Figure 2. Air monitoring results are on a table presented in Appendix D..

The most recent air monitoring, performed on July 26th, 2010, reported all PID and LEL readings below the reporting limits of the meters (1 ppm for PID and 1 % LEL).

4.2 ADDITIONAL SOIL BORING AND MONITORING WELL INSTALLATION

Under concurrence granted in a letter from ACEH dated May 21, 2010, Gregg Drilling and Testing, Inc. (Gregg) under oversight from Delta, advanced one soil boring (SB-8) and installed two groundwater monitoring wells (MW-4 and MW-5) southwest of the UST pit at the site. The purpose of these activities was to evaluate subsurface geology and the lateral extent of petroleum hydrocarbon concentrations in the soil and groundwater to the east/southeast of the existing UST pit.

Locations of soil boring and monitoring wells advanced and installed during the June 2010 assessment activities are included on Figure 12. Soil analytical results and groundwater analytical results from the June 2010 assessment activities are presented on Tables 3 and 4, respectively.

4.2.1 Pre-Field Activities

Prior to field activities, Delta produced a Site Health and Safety Plan, which was reviewed daily by field personnel. Prior to drilling, Delta marked all proposed boring locations and contacted Underground Service Alert (USA) to request the locating and marking of all underground utilities at, or adjacent to, the proposed boring locations. Delta also employed a private utility locator (Cruz Brothers) to identify possible private underground utilities in vicinity of the proposed boring locations. Additionally, prior to drilling, all boring locations were cleared, utilizing air-vacuum technologies to depths of 5 feet bgs. The purpose of air-knife clearance was to ensure that no underground utilities were encountered during drilling. Drilling permits for the proposed boring locations were obtained from the Alameda County Public Works Agency (ACPWA), and are included in Appendix E.

4.2.2 Soil Boring Advancement

The soil boring was located just east of the UST tank pit, midway between the southern and northern property boundaries. The boring was advanced to a total depth of 24 feet bgs. Continuous soil samples were collected using a two-inch diameter dual-tube direct push rod equipped with 4-foot, 1.5-inch diameter acetate sampling liners. Soil samples were logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds at five foot intervals using a pre-calibrated PID. Observed groundwater levels, collected soil PID

readings, soil descriptions, and field observations were recorded on the boring logs. The soil boring log for boring SB-8 is presented in Appendix F.

At total depth, the drilling rods were retracted and a temporary polyvinyl chloride (PVC) well casing with a 10 foot screened interval was inserted into the borehole from 24 feet to 14 feet bgs. First encountered groundwater was at a depth of 15 feet bgs. Grab groundwater samples were collected.

Following sample collection, the borehole was backfilled with neat cement grout through a tremie pipe to approximately 20 feet bgs and then backfilled with additional neat cement grout introduced directly into the borehole to approximately one foot bgs. The remainder of the borehole was backfilled with concrete and dyed at the surface to match the existing surface conditions. Backfilling activities were conducted under the oversight of Ms. Victoria Hamlin, ESA, of the ACEH.

4.2.2.1 Soil and Groundwater Sampling

Soil samples were collected and submitted for analysis from 5 foot intervals from just below air-knife clearance to total depth.

Soil and groundwater samples collected were analysis for TPHg, and TPHd by EPA Method 8015M, BTEX, 8 fuel oxygenates [methyl tert butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol], and methanol by EPA method 8260B. Samples selected for laboratory analysis were placed in proper containers, properly labeled and placed on ice pending transportation to a California-certified laboratory and accompanied by appropriate chain-of-custody documentation during transportation to the laboratory. Laboratory reports are included in Appendix G.

4.2.3 Monitoring Well Installation

On June 3rd and June 4th, 2010, Gregg, under oversight from Delta, advanced two soil borings which were converted into monitoring wells MW-4 and MW-5. As with the soil boring SB-8, continuous soil samples were collected using a two-inch diameter, dual-tube direct push rod, equipped with 4-foot, 1.5-inch diameter acetate sampling liners. Soil samples were logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds at five foot intervals using a pre calibrated PID. Observed groundwater levels, collected soil PID readings, soil descriptions, and field observations were recorded on the boring logs. Boring logs and well construction details for monitoring wells MW-4 and MW-5 are presented in Appendix F.

Borings MW-4 and MW-5 were advanced to depths of 25 and 20 feet bgs respectively, and were completed as monitoring wells with 10 foot screened intervals. MW-4 was screened from 15 to 25 feet bgs while MW-5 was screened from 10 to 20 feet bgs. Monitoring wells were constructed using 4-inch schedule 40 polyvinyl chloride (PVC) with 0.010-inch slot size. The annular space was backfilled with RMC Lonestar #2/16 sand, from total depth to 2 feet above top of the screened interval. The holes were sealed with 2 feet of bentonite hydrated in place, with neat cement grout to approximately 1 foot below the surface. The wells were completed with a COP approved traffic-rated well box set in concrete dyed to match the surrounding surface conditions.

4.2.3.1 Soil Sampling

Soil samples were collected from 5 foot intervals (from just below air-knife clearance, to total depth), and were submitted for analysis of TPHg and TPHd, by EPA Method 8015M, BTEX, 8 fuel oxygenates [methyl tert butyl ether (MTBE), di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA), ethylene dibromide (EDB), and ethanol], and methanol by EPA method 8260B. Samples selected for laboratory analysis were placed in proper containers, properly labeled and placed on ice pending transportation to a California-certified laboratory and accompanied by appropriate chain-of-custody documentation during transportation to the laboratory. Laboratory reports are included in Appendix G.

4.2.3.2 Monitoring Well Development and Sampling

Monitoring wells MW-4 and MW-5 were developed on June 9, 2010, a minimum of 72 hours after completion of the well installations. Approximately three well volumes (estimated 24 gallons) were purged from well MW-4, before the well went dry. Depth to water in MW-4 was 11.6 feet bgs, and the depth to the bottom of the well was measured to be 24.8 feet bgs. Ten well volumes (approximately 54 gallons) were purged from MW-5. Depth to water in MW-5 was 11.9 feet bgs, and the bottom of the well was measured to be 19.9 feet bgs. Well MW-5 did not pump dry during well development activities.

Groundwater was sampled from wells MW-4 and MW-5 on June 16, 2010 by TRC as part of the regularly scheduled Second Quarter 2010 monitoring and sampling program. Analytical results from this event are included as Appendix F.

4.2.3.3 Survey of Monitoring Wells

A survey of the two newly installed monitoring wells, as well as the one existing on-site well (MW-A) was performed on June 9, 2010 by Morrow Surveying. The survey data was successfully submitted to the State of California water Resources Control Board GeoTracker ESI database .

4.2.3.4 Handling of Generated Waste

Drill cuttings and wastewater generated during boring advancement and sampling activities were placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and stored on-site. These waste materials are pending transportation to and disposed of at a ConocoPhillips-approved facility.

4.2.3.5 Monitoring and Sampling Activities

Prior to the second quarter 2010, one groundwater monitoring well, MW-A, existed onsite. The well was sampled annually (beginning in December 1990) for TPHd, TPHg, BTEX compound, and methyl tert butyl ether (MTBE). In February 2003, groundwater samples were also analyzed for ethanol, ethylene dibromide, 1,2-dichloroethane, TOG, bromo-dichloromethane, bromoform, bromomethane, and carbon tetrachloride; and additionally, beginning in February 2004 through March 2009, MW-A was additionally analyzed for chlorobenzene, chloroethane, chloroform, chloromethane, dibromochloromethane, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, dichloro-difluoromethane, 1,1-dichloroethane, 1,1-dichloroethene, cis-1,2-dichloroethene, trans-1,2-dichloroethene, and 1,2-dichloropropane. During the first quarter 2010 sampling event, MW-A was only analyzed for TPHd.

Additionally, a grab groundwater sample was collected from MW-4 on June 24th, 2010. Analytical results are included in Table 4

With the addition of MW-4 and MW-5 during the June 2010 assessment activities, a total of three wells now comprise the groundwater monitoring network. Beginning in the second quarter 2010 event, all wells will follow a quarterly sampling schedule until further notice.

5.0 SITE CONCEPTUAL MODEL UPDATE

5.1 PREFERENTIAL PATHWAYS

According to the most recent quarterly monitoring report (June, 2010), depth to groundwater is 11.13 feet below TOC in MW-4, 11.95 feet below TOC in MW-5, and 17.85 feet below TOC in MW-A. Depth to water in MW-A

historically ranges from approximately 12 feet below TOC to approximately 20 feet below TOC.

According to the utility survey performed in June 2010, with the exception of MH-2 and a section of storm drain line between MH-2 and DI#5, all of the storm drain and sewer lines on and adjacent to the site are at depths between approximately 3 feet bgs to approximately 10 feet bgs (above the historically observed groundwater levels) at the site. MH-2 measures approximately 13.5 feet deep. The storm drain line is approximately 12 feet bgs as it exits MH-2, and approximately 13 feet bgs at DI-5; potentially below the intersection with groundwater at the site.

This section of storm drain line between MH-2 and DI-5 is the only currently identified underground utility providing a potential preferential pathway at the site for groundwater migration. Locations and depths of these utilities are included on Figure 2.

During the utility survey performed in June 2010, no sewer line was identified in the sewer easement, noted on the site plan included as Figure 2, in the eastern portion of the service station property. An inspection performed of the sewer manhole located in Pierson Street did not identify an inlet emanating from the station property. A survey using ground penetrating radar (GPR) was also performed on the site, including the area identified as the sewer easement in the eastern portion of the station property. No anomalies were noted during the GPR survey to indicate any subsurface sewer line in this area. Also, a review of City of Oakland utility figures show this possible sewer line with a "dashed" line while other sewer lines identified during the June survey are shown as "solid" lines. Delta cannot speculate the origination of the sewer easement shown on various figures, but reports that no evidence of the sewer line was found during utility survey activities.

A sewer line was identified in the sewer easement noted in the western portion of the service station property and is shown on Figure 2.

Underground utility maps provided by the city of Oakland for the site and the immediate vicinity are presented as Appendix H.

5.2 SOIL MIGRATION PATHWAYS

Soils beneath the site area are generally fine-grained and do not provide pathways for rapid spread of contaminants. Soil analytical data indicates that migration of petroleum hydrocarbons from the former waste oil UST has been limited due to surrounding clay soil. The mass of soil containing residual petroleum hydrocarbons appears limited. In recent borings, (as of March 2010), TPHg has been below laboratory reporting limits except for 99

mg/kg at 24 feet bgs in MW-5, and 2.1 mg/kg and 2.4 mg/kg in SB-8 at 6 and 15 feet bgs, respectively. TPHd has also been below laboratory reporting limits except for 73 mg/kg at 24 feet bgs in MW-5. BTEX and MTBE have been near or below laboratory reporting limits in all recent borings as well, with the exception of 53 mg/kg MTBE at 24 feet bgs in MW-5.

The primary constituent that has shown recent concentrations is TOG. Boring SWC-2 contained 7,700 mg/kg TOG at 10 feet bgs and SWD-2 contained 870 mg/kg TOG at 10 feet bgs.

5.3 HYDROGEOLOGIC PATHWAYS

Migration of dissolved contaminants through generally fine grained soil appears to be limited. Following the June 2010 installation of groundwater monitoring wells MW-4 and MW-5, initial groundwater flow direction and gradient was established; yet appears suspect when compared to the topography in the vicinity of the site. This discrepancy may be related to different screen intervals for MW-4 and MW-5 (15-25 feet bgs and 10-20 feet bgs, respectively) when compared to previous well MW-A (25-45 feet bgs).

5.4 CONTAMINANT MIGRATION MODEL – POTENTIAL FATE AND TRANSPORT

It appears that a release occurred at some undetermined time from the former waste oil USTs removed in 1990 and possibly from the former or current gasoline USTs. Additionally, undocumented releases potentially could have occurred during fuel transfer operations either at the dispenser islands or the USTs. Based on current water depths measured in wells MW-4 and MW-5, the bottom of the UST pit could potentially intersect groundwater beneath the site. Once constituents entered the groundwater, they were dissolved and began migrating with the groundwater.

Differences in groundwater conditions observed in well MW-4 and MW-5 would indicate varied groundwater conditions in the eastern portion of the site. Groundwater flow in the area of MW-4 appears limited due to the slow recharge and the well pumping dry during development and sampling activities while groundwater conditions observed in well MW-5 would indicate higher permeability due to more rapid well recovery and the well not pumping dry during development.

During the advancement of MW-A, the capillary fringe of saturated soils was observed at a depth of approximately 30 feet bgs. At this time it is unclear if groundwater in well MW-A reported at approximately 12-18 feet bgs is confined or semi-confined groundwater from approximately 33 feet bgs or shallower water in an area of low permeability.

Results from the March and June 2010 assessment activities indicate petroleum hydrocarbons in groundwater beneath the site have not been assessed. Additional assessment is proposed surrounding the current USTs and dispenser islands. Additional assessment is also proposed in the vicinity of the storm drain line along the southern portion of the property between the USTs and DI#5 along Pierson Street, which at this time is a potential migration pathway for shallow groundwater at the site.

Results from this additional assessment will be used to provide additional data to evaluate potential contaminant fate and transport in the vicinity of the site.

5.5 CONCENTRATION TRENDS

Historically, petroleum hydrocarbons were only sporadically reported in groundwater of monitoring well MW-A. In June 2010, two additional wells, MW-4 and MW-5, were installed and incorporated into the second quarter 2010 sampling event.

Analytical groundwater results from the Second Quarter 2010 event are discussed below. All wells (MW-A, MW-4 and MW-5) were analyzed for TPHd, TPHg, and Methanol by Method 8015 as well as BTEX and Fuel Oxygenates including MTBE, Ethanol, EDB, and 1,2-DCA by Method 8260B.

TPHd: TPHd was reported in one well (MW-5) at a concentration of 3,000 µg/L. During the previous annual sampling of well MW-A (03/23/10) TPHd was below the laboratory's indicated reporting limit.

TPHg: TPHg was reported in two wells MW-4 and MW-5 at concentrations of 58 µg/L and 29,000 µg/L, respectively. During the previous annual sampling event of well MW-A (03/23/10), TPHg was not analyzed, however the constituent had historically been below laboratory indicated reporting limits in well MW-A since the first quarter of 2002.

Benzene: Benzene was reported in one well MW-5 at a concentration of 580 µg/L. During the previous annual sampling event of well MW-A (03/23/10), Benzene was not analyzed, however the constituent had historically been below laboratory indicated reporting limits in well MW-A since the first quarter of 2002.

MTBE: MTBE was reported in one well MW-4 at a concentration of 5.4 µg/L. During the previous annual sampling event of well MW-A (03/23/10) MTBE was not analyzed, however the constituent had historically been below the laboratory's indicated reporting limits in well MW-A since the first quarter of 2002, with the exception of 0.54 µg/L, reported during the first quarter of 2006.

Historic groundwater monitoring data is contained in Appendix C.

5.6 SITE REMEDIATION

In February 1990, the waste oil UST pit was over-excavated to 16 feet bgs and 35 feet to the east, 10 feet to the west, 15 feet to the south, and 2 feet to the north. Approximately 50 cubic yards of impacted soil were removed. Further soil excavation could not be performed due to underground utilities and the site building.

5.7 POTENTIAL SENSITIVE RECEPTORS

The following sections evaluate the various potential impacts to sensitive receptors from petroleum hydrocarbons detected in soil and groundwater.

5.7.1 Environmental Screening Levels

Historical soil and grab groundwater analytical results are included as Table 1 and Table 2.

The RWQCB has published Environmental Screening Levels (ESLs) for chemicals commonly found in soil and groundwater at sites where releases of chemicals have occurred. The RWQCB notes "The ESLs are considered to be conservative." The tables below compare site specific soil and groundwater concentrations for TPHg, TPHd, benzene, and tetrachloroethene (PCE) with ESLs for various potential sensitive receptors. The ESL tables for various sensitive receptors as found in the November 2007 publication are referenced.

	ESL Table	TPHg (mg/kg)	TPHd (mg/kg)	Benzene (mg/kg)	PCE (mg/kg)
Maximum Concentration Detected in Soil Sample		**220 (SWA @9')**	**1,400 (SWA @ 9')**	**2.3 (SWA @9')**	**160 (SWA @ 9')**
Groundwater Protection (shallow soils <3 meters)*	A	83	83	0.044	0.34
Groundwater Protection (deep soils >3 meters)*	C	83	83	0.044	0.70
Direct Exposure - Residential	K-1	110	110	0.12	0.34
Direct Exposure - Commercial	K-2	450	150	0.27	0.85
Direct Exposure - Construction/Trench Workers	K-3	4,200	150	12	22

* Ingestion. Groundwater considered a current or potential source of drinking water.

	ESL Table	TPHg (µg/L)	TPHd (µg/L	Benzene (µg/L)	MTBE (µg/L)
Concentration Groundwater; MW-A, MW-4, and MW-5		**29,000**	**3,000**	**580**	**5.4**
Potential Vapor Intrusion - Residential	E-1	NA	NA	540	24,000
Potential Vapor Intrusion - Commercial	E-1	NA	NA	1,800	80,000
California Maximum Contaminant Level (MCL)	F-3	210*	210*	1.0	13

* No MCL; determined as non-carcinogenic effects

The maximum soil concentrations for TPHg, TPHd, benzene, and PCE exceed the ESLs for leaching to groundwater considered as a current or potential source of drinking water and for direct exposure. The site is underlain by silt and clay that may impede contaminant leaching to groundwater.

Since March 2010, TPHg and TPHd in collected groundwater samples have been below ESL levels, except for 3,000 µg/L TPHd in MW-5, 29,000 µg/L TPHg in MW-5, and 2,500 µg/L TPHg in SB-6. During this time, benzene in collected groundwater samples has been below ESL levels in all borings and wells except SB-6 (160 µg/L) and MW-5 (580 µg/L). MTBE in collected groundwater samples has been below ESL levels in all borings and wells except SB-8 (53 µg/L).

The maximum groundwater concentrations for TPHg, TPHd, and benzene reported in well MW-5 and SB-6 exceed the ESLs for California MCL. The maximum groundwater concentrations for benzene also exceed the ELS for Potential Vapor Intrusion for both residential and commercial standards. The maximum MTBE concentration reported in SB-8 exceeds the ESL for California MCL.

Metals were detected in soil sample W01 from the initial base of the waste oil UST excavation (6 feet bgs). The following metals were detected: chromium at 8.3 mg/kg, lead at 340 mg/kg, and zinc at 70 mg/kg. The corresponding ESLs for soils at a depth of less than 10 feet overlying useable groundwater and residential land use are 750 mg/kg for chromium III, 8 mg/kg for chromium VI, 200 mg/kg for lead, and 600 mg/kg for zinc. The ESL is exceeded for lead, however, the excavation was later deepened to 16 feet bgs. Migration of residual lead would be limited by the clay soil underlying the area.

5.7.2 Indoor Air Inhalation from Impacted Soil

ESLs have not been established for protection of indoor air from impacted soil. The RWQCB recommends direct measurement of soil gas concentrations

in soil. Impacted soil exceeding the TPHd and TPHg ESLs for indoor soil vapor inhalation may remain under the western portion of the site building. The upward migration of any petroleum hydrocarbons remaining in soil will be limited due to the silt/clay nature of site soils. Delta proposes to evaluate the potential for vapor intrusion after the additional assessment activities proposed later in this report are completed and current identified data gaps have been eliminated.

5.7.3 Impact to Drinking Water Supply Wells

The California Department of Water Resources GeoTracker database indicates the presence of four active water wells nearby the site. The four active wells are reported to be located in East Bay Regional Park District land, located approximately 2,193 feet northeast of the site.

5.8 CONCLUSIONS

Site soils are generally fine-grained consisting of silt and clay. Deposits of silty sand and silty gravel are scattered within the finer grained soil. It appears that the shallow groundwater encountered on-site represents a perched zone, or possibly confined conditions. Groundwater was typically first encountered in some site borings at a depth of approximately 33 feet bgs. Stabilized levels in the single monitoring well have risen from a depth of approximately 20 feet below top of casing initially to approximately 13 feet below TOC in March 2008. The well screen has been drowned since installation by at least 5 feet.

A release of chemicals from the site waste oil UST appears to have occurred prior to 1990. The UST was removed in December 1989. Soils in the excavation sidewalls contained TPHd (1,400 mg/kg), TOG (17,000 mg/kg), PCE (160 mg/kg), and 1,1,1-TCA (5.8 mg/kg). Approximately 50 cubic yards were removed from the excavation. A confirmation soil sample from the base of the excavation contained only 74 mg/kg TPHd, 910 mg/kg TOG. PCE and 1,1,1-TCA were not detected in the sample. Further soil excavation in the area of former waste oil UST could not be performed due to underground utilities to the south and the site building to the north.

A comparison of TPHg, TPHd, benzene, and PCE concentrations in site soil in 1990 indicates that a limited amount of soil in 1990 exceeded the RWQCB ESLs for groundwater protection and direct contact. Soil with TPHg, TPHd, benzene, and PCE may exist under the western portion of the site building. Current soil concentrations are unknown.

An area of residual impacted soil appears to exist in the immediate area beyond the excavation limits for the former waste oil UST. Impact to groundwater in the area of the former waste oil UST has been minimal.

Groundwater samples from well MW-A, located within approximately 25 feet of the former waste oil UST, have only contained TPHd at concentrations generally below 100 µg/L. TPHg, BTEX compounds, fuel oxygenates, and volatile organic compounds have consistently been below the laboratory detection limit.

A release of petroleum hydrocarbons from the second generation fuel USTs appears to have occurred since installation in 1990, and prior to 2003. A soil sample collected in October 2003 from boring SB3, located immediately adjacent and east of the fuel USTs, contained 1,100 mg/kg of TPHg at a depth of 15 feet bgs. The extent of impacted soil in this area is undefined. Groundwater was not encountered in boring SB3. A grab groundwater sample collected in 2003 from boring SB5, located adjacent to the second generation WOT, contained 180 µg/L TOG.

No soil impacts were observed during removal of the second generation WOT in April 2008.

The Site Conceptual Model dated November 20, 2008 proposed confirmation sampling, by advancing a total of four boreholes that would: (1) evaluate the mass of residual impacted soils in vicinity of the former waste oil tank/over excavation limits, (2) evaluate the detection of total oil and grease (TOG) in groundwater from boring SB-5, and (3) evaluate the detection of TPHg in soil boring SB-3. Without agency response, Delta then submitted the September 24, 2009 Workplan for Additional Assessment, in order to obtain confirmation samples before making a formal Case Closure Request.

In March 2010 additional assessment confirmed that residual petroleum hydrocarbon concentrations remain on-site. TPHg was reported at 2,500 µg/L in a grab groundwater sample collected from boring SB-6 (near recently installed monitoring well MW-5) indicating the presence of petroleum hydrocarbons in the area southeast of the USTs. TOG was reported in soil samples collected at 10 feet bgs in borings SWC-2 and SWD-2 near the former waste oil USTs at concentrations of 7,700 µg/L and 870 µg/L, respectively. It was noted that samples collected from these borings at 15 feet were at or below the laboratory indicated reporting limits. Also, groundwater samples collected from borings SB-7 and SWC-2 reported TOG levels below laboratory indicated reporting limits.

The identification of petroleum hydrocarbon odors emanating from a storm drain manhole along Pierson Street, combined with the need to further assess the area southwest of the gasoline USTs led to the June 2010 field activities, which included the installation of groundwater monitoring wells MW-4 and MW-5, and advancement of soil boring SB-8. A utility survey was performed to identify the location and depth of utilities in the vicinity of the service station.

June 2010 assessment, and subsequent groundwater monitoring events report residual petroleum hydrocarbons remain at 29,000 µg/L TPHg, 580 µg/L benzene, and 3,000 µg/L TPHd in monitoring well MW-5.

The addition of the two groundwater monitoring wells also allows for the first established gradient and flow direction for the site. Continued M&S events, and the potential installation of additional monitoring wells, will allow for the development of a Groundwater Flow (Rose) Diagram and will also allow for the interpretation of historical groundwater flow across the site.

5.9 RECOMMENDATIONS

Based on the above detailed assessment and conclusions, Delta feels that there is a data gap in groundwater flow direction and gradient. This is based on the differing screened intervals of MW-4 and MW-5 as compared with MW-A, which provide a steep gradient and flow direction perpendicular to surface contour.

Also, based on the reported petroleum hydrocarbon concentrations in boring SB-6 and well MW-5, additional assessment is recommended along the northern, western and southern boundaries of the gasoline USTs and dispenser islands to assess the potential for petroleum hydrocarbon migration from these possible petroleum hydrocarbon sources.

Delta recommends the installation of three additional shallow groundwater monitoring wells surrounding the tank pit and dispenser islands as well as an additional groundwater monitoring well in the vicinity of DI-5. These wells will provide greater assessment of potential hydrocarbons in these areas and allow for more data to determine groundwater flow direction and gradient in the 11-25 feet zone beneath the site. The locations of these proposed wells are included in Figure 13.

Delta has also identified a data gap in the evaluation of potential vapor intrusion from impacted soil in along the southern end of the station building and between the pump islands and the station building. Delta proposes to evaluate the potential for vapor intrusion once the proposed additional assessment activities are performed. Once these activities have concluded, Delta can use the data collected to better assess the potential for vapor intrusion in this area.

Delta also recommends continued air monitoring of the storm drain system surrounding the site on a periodic basis until further notice.

6.0 ADDITIONAL ASSESSMENT WORKPLAN – MONITORING WELL INSTALLATION

6.1 PERMITTING, UTILITY NOTIFICATION, AND BOREHOLE CLEARANCE

Before commencing field activities Delta will prepare a Health and Safety Plan in accordance with state and federal requirements for use during on-site assessment activities. Drilling permits will be obtained for the groundwater monitoring wells from ACPWA. Prior to drilling, Delta will review available as-built drawings, notify Underground Service Alert (USA) and contract a private utility locator as required to clear the proposed drilling locations for underground utilities. Prior to drilling, air or water vacuum clearance will be completed to 5 feet bgs to minimize potential impact to underground utilities.

6.2 PROPOSED SCOPE OF WORK

Delta proposes to advance four monitoring wells using a truck mounted drill rig equipped with 8-inch hollow stem augers adjacent to the existing UST pit in the southeast corner of the station property. The borings, MW-6, MW-7, MW-8, and MW-9 will be advanced to depth of approximately 20 feet bgs, and completed as monitoring wells screened from 10 to 20 feet bgs, though these parameters may be adjusted based on field observations.

The monitoring wells will be constructed using 2-inch schedule 40 polyvinyl chloride (PVC) with 0.010-inch slot size. The annular space will be backfilled with RMC Lonestar #2/16 sand, or equivalent, from total depth to 1 feet above top of the screened interval (approximately 20 feet bgs to approximately 9 feet bgs). The holes will be sealed with 2 feet of bentonite placed from approximately 9 feet bgs to approximately 7 feet bgs and hydrated in place, with neat cement grout from approximately 7 feet bgs to approximately 1 foot below the surface. The wells will be completed with a COP approved traffic-rated well box set in concrete dyed to match the surrounding surface conditions. Proposed specifications may vary slightly based on field observations. A well construction diagram is included as Figure 6.

6.3 SOIL SAMPLING

Soils encountered in the boring will classified in accordance with the Unified Soil Classification System (USCS). Soil samples will be collected at 5-foot intervals from just below air-vacuum clearance to total depth (at approximately 5 feet, 10 feet, 15 feet, and 20 feet bgs), using a split-spoon sampler loaded with 2-inch stainless steel or brass liners. Samples will be pre-screened for hydrocarbons using a pre-calibrated Photo-Ionization Detector (PID). Collected soil samples will be capped with Teflon sheeting

and tight-fitting plastic end caps, labeled with an identification number, and placed on ice pending delivery to a California-certified analytical laboratory along with proper chain of custody documentation.

Samples exhibiting the highest PID readings will be selected for laboratory analysis for the following analytes: TPHg and TPHd by EPA Method 8015M, BTEX, MTBE, DIPE, ETBE, TAME, TBA, EDB, EDC and Ethanol by EPA Method 8260B.

6.4 WELL DEVELOPMENT, MONITORING, AND SAMPLING

The proposed wells will be developed a minimum of 72 hours after construction. A minimum of 10 casing volumes of groundwater will be removed from the monitoring wells during development.

Subsequent to installation and development of the monitoring wells, they will be incorporated into the existing monitoring and sampling program for this site, and will be monitored and sampled quarterly for at least one hydro-geologic cycle. Initial monitoring and sampling will be done a minimum of 48 hours after development.

Groundwater samples will be analyzed for TPHg by EPA Method 8015M, BTEX, MTBE, DIPE, ETBE, TAME, TBA, EDB, EDC and Ethanol by EPA Method 8260B, and TPHd with silica gel cleanup and Methanol by EPA Method 8015M.

6.5 WELL HEAD SURVEY

Following completion of the new monitoring wells, a California licensed surveyor will survey the northing and easting of the three on-site monitoring wells using positioning datum NAD83. The monitoring well elevations will be surveyed relative to elevation datum NAVD88. A global positioning system (GPS) will also be used to survey in the latitude and longitude of the wells to be uploaded into California's GeoTracker database system. The survey of the well locations will be to sub-meter accuracy.

DISPOSAL OF DRILL CUTTINGS AND WASTEWATER

Drill cuttings and any wastewater generated during field activities will be placed into properly labeled 55-gallon Department of Transportation (DOT)-approved steel drums and stored on the service station site. Representative samples of the drill cuttings and wastewater will be collected and submitted to a California-certified laboratory where they will be analyzed for TPHg and TPHd by EPA Method 8015M, BTEX and MTBE by EPA Test Method 8260B. Soil cuttings will also be analyzed for total California Title-22 (CAM 17) metals. Pending laboratory analytical results, the drummed drill cuttings and wastewater will be profiled, transported, and disposed at a COP-approved

facility. If available at the time of report submittal, a copy of the waste disposal manifest(s) will be included in the investigation report.

6.6 REPORT

Delta will prepare and submit a report summarizing the additional site characterization findings once all field activities have been completed and all laboratory results have been received. The report will contain a description of the activities performed, and will include a site plan showing the boring locations, copies of the boring logs, laboratory analytical reports, waste manifests, and recommendations for future activities at the site.

7.0 LIMITATIONS

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report were performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no express or implied warranty as to the contents of this report.

Consultant: **DELTA CONSULTANTS**

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FIGURES

Figure 1 – Site Locator
Figure 2 – Site Map with Current Site Configuration and Monitoring Wells
Figure 3 – Site Map with Cross Sections
Figure 4 – Geologic Cross Section A-A'
Figure 5 – Geologic Cross Section B-B'
Figure 6 – Geologic Cross Section C-C'
Figure 7 – Geologic Cross Section D-D'
Figure 8 – Geologic Cross Section E-E'
Figure 9 – Site Map with Historical Sampling Locations
Figure 10 – Site Map with Historical and Current Soil Analytical Results Exceeding ESLs
Figure 11 – Site Map with Historical and Current Groundwater Analytical Results Exceeding ESLs
Figure 12 – Current Assessment Sampling Locations
Figure 13 – Site Map with Proposed Monitoring Well Locations

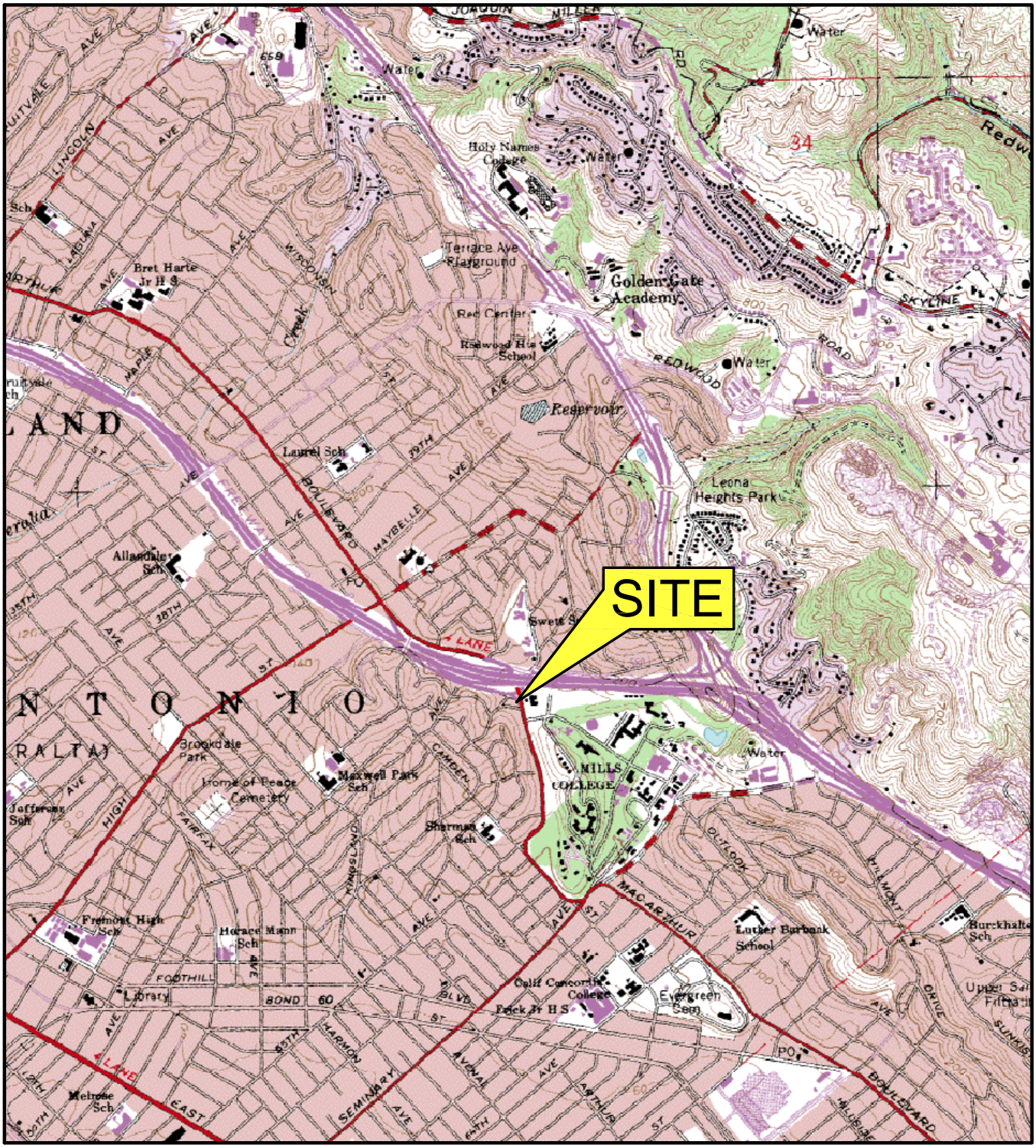
TABLES

Table 1 – Historical Soil Analytical Results
Table 2 – Historical Grab Groundwater Analytical Results
Table 3 – Current Soil Analytical Results
Table 4 – Current Groundwater Analytical Results

APPENDICES

Appendix A – ACEH Letter Dated May 21, 2010
Appendix B – Historical Boring Logs
Appendix C – Historical Groundwater Monitoring and Sampling Results
Appendix D – Air Monitoring Results
Appendix E – ACPWA Drilling Permits
Appendix F – Current Boring Logs
Appendix G – Certified Laboratory Analytical Reports
Appendix H – City of Oakland Utility Maps

FIGURES



OAKLAND EAST QUADRANGLE
CALIFORNIA
7.5 MINUTE SERIES (TOPOGRAPHIC)

QUADRANGLE LOCATION

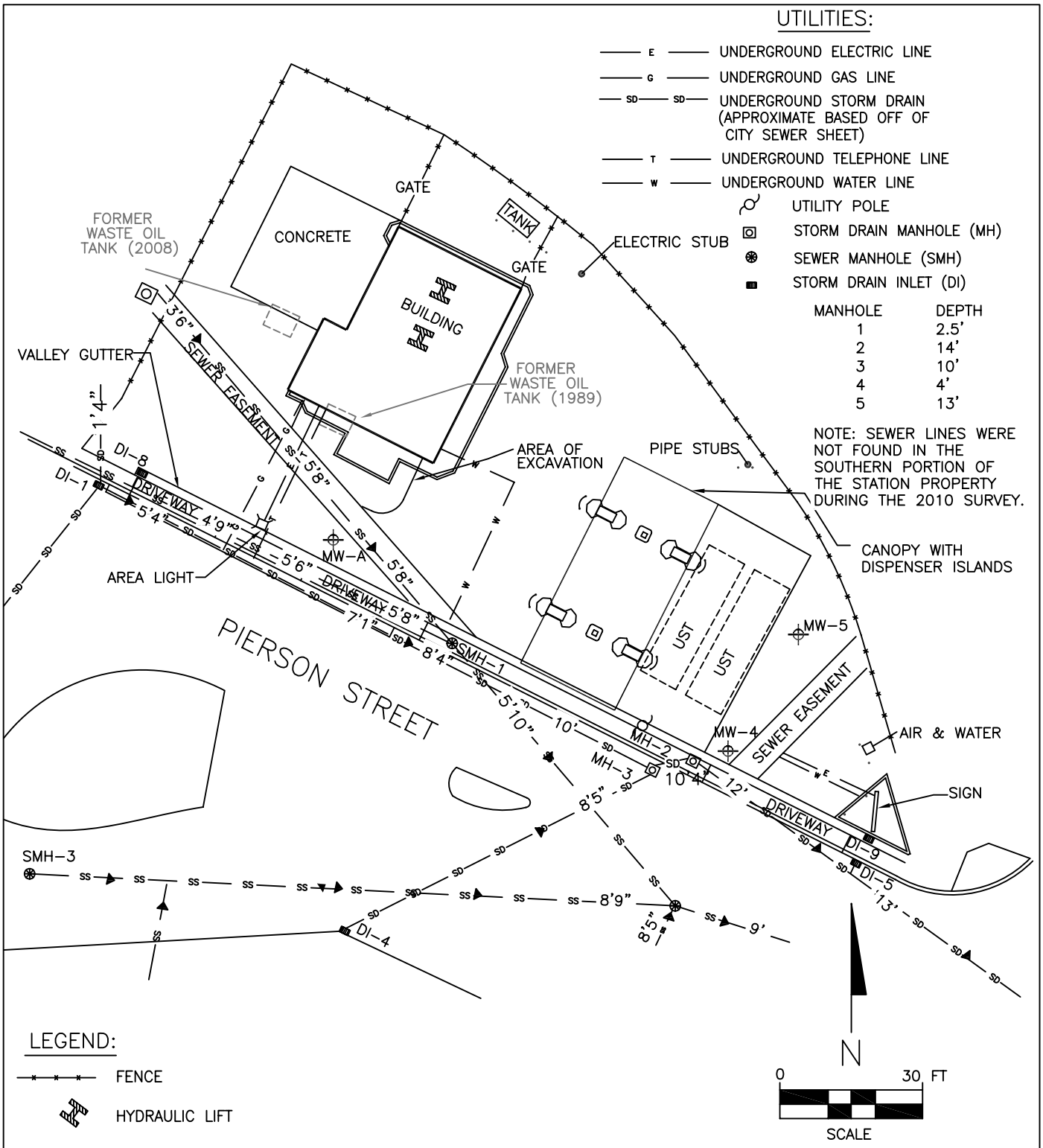
North

0 2000

SCALE IN FEET

FIGURE 1
SITE LOCATION MAP
CONOCOPHILLIPS SITE NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY	
C105781	DB	DD	
DATE	REVIEWED BY	FILE NAME	
11/18/08		5781-SL	DELTA



SITE MAP ADAPTED FROM A MORROW SURVEY DATED 07/10.

FIGURE 2
SITE MAP WITH CURRENT SITE CONFIGURATION AND MONITORING WELLS
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C105781	CM	JH
DATE	REVIEWED BY	FILE NAME
07/15/10	JW	5781-SiteS

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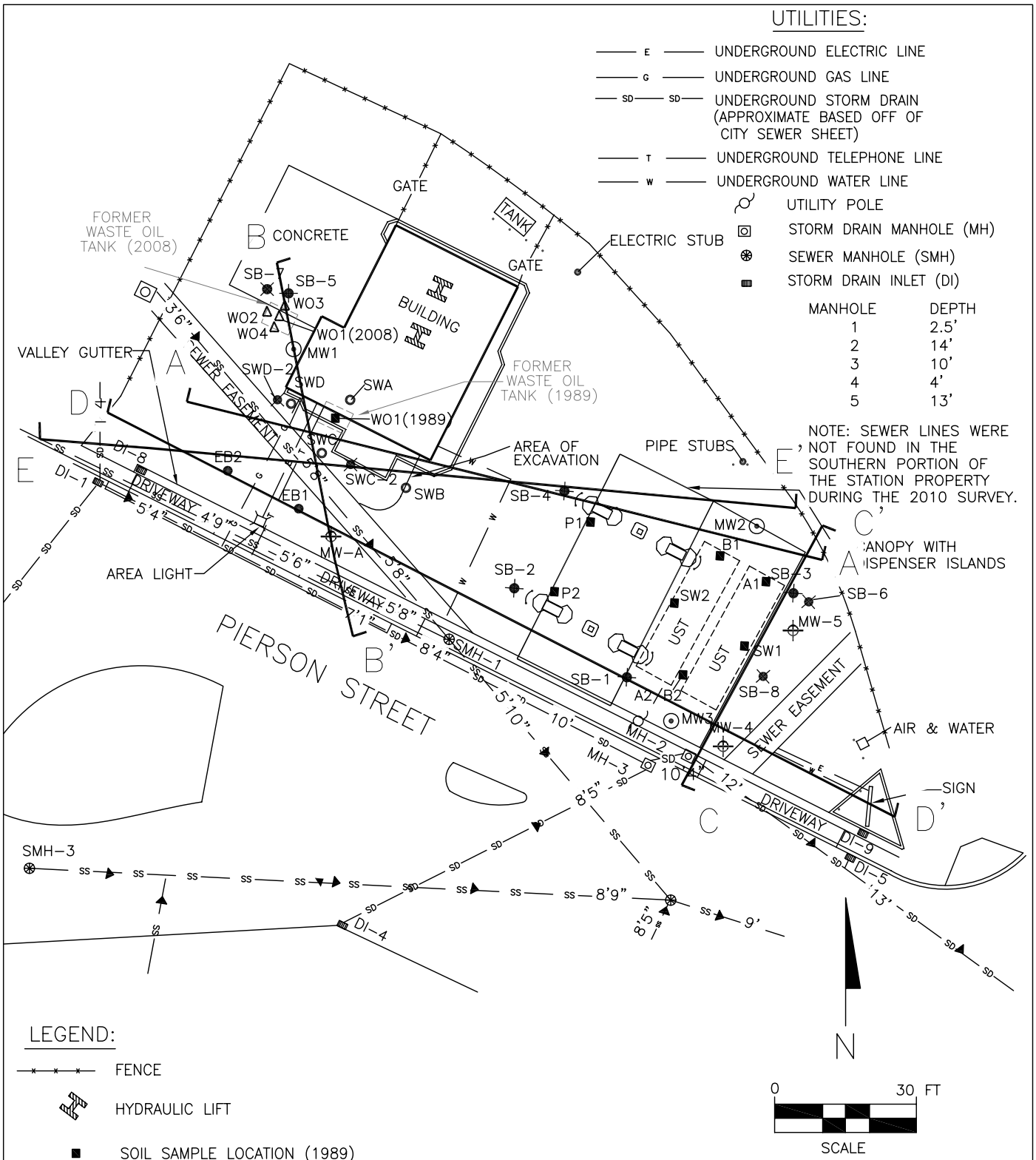


FIGURE 3
SITE MAP WITH CROSS SECTIONS

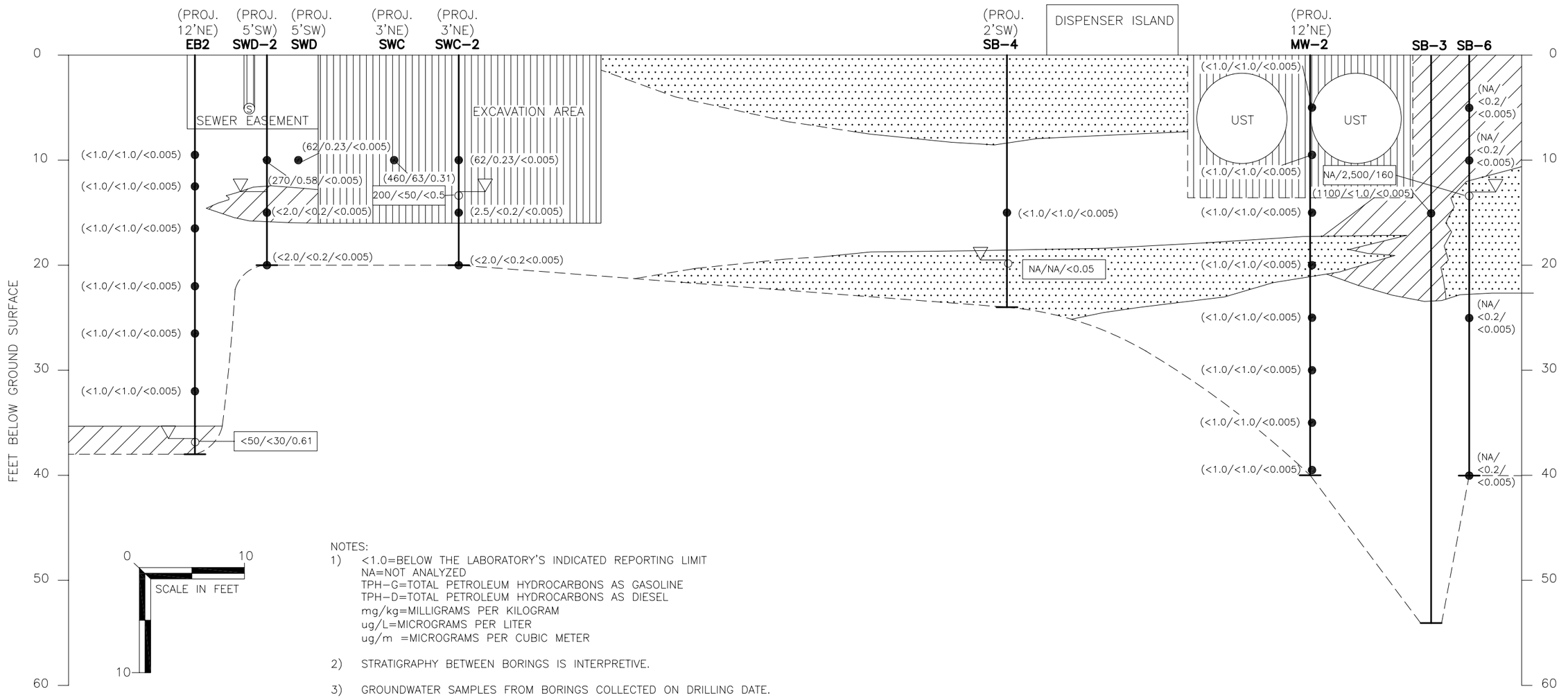
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
C105781	CM	JH
DATE	REVIEWED BY	FILE NAME
07/29/10	JW	5781-SiteS

DELTA®

NORTHWEST A

SOUTHEAST A'

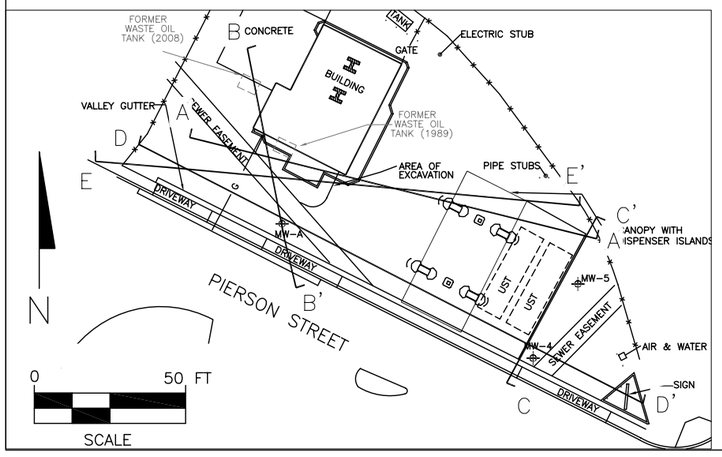


NOTES:

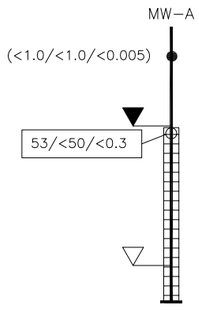
1) <1.0=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
NA=NOT ANALYZED
TPH–G=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH–D=TOTAL PETROLEUM HYDROCARBONS AS DIESEL
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER
ug/m =MICROGRAMS PER CUBIC METER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS COLLECTED ON DRILLING DATE.



LEGEND



MW–A BORING/MONITORING WELL NAME

(<1.0/<1.0/<0.005) SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH–D, TPH–G, BENZENE (mg/kg)

DEPTH TO STATIC GROUNDWATER

53/<50/<0.3 GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH–D, TPH–G, BENZENE (ug/L) (SAMPLED ON 3/27/09)

WELL SCREEN

DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING

LOW PERMEABILITY (CLAY, SILT)

MEDIUM PERMEABILITY (SAND, GRAVEL W/ CLAY, SILT)

HIGH PERMEABILITY

ARTIFICIAL FILL

APPROXIMATE STRATIGRAPHIC BOUNDARY

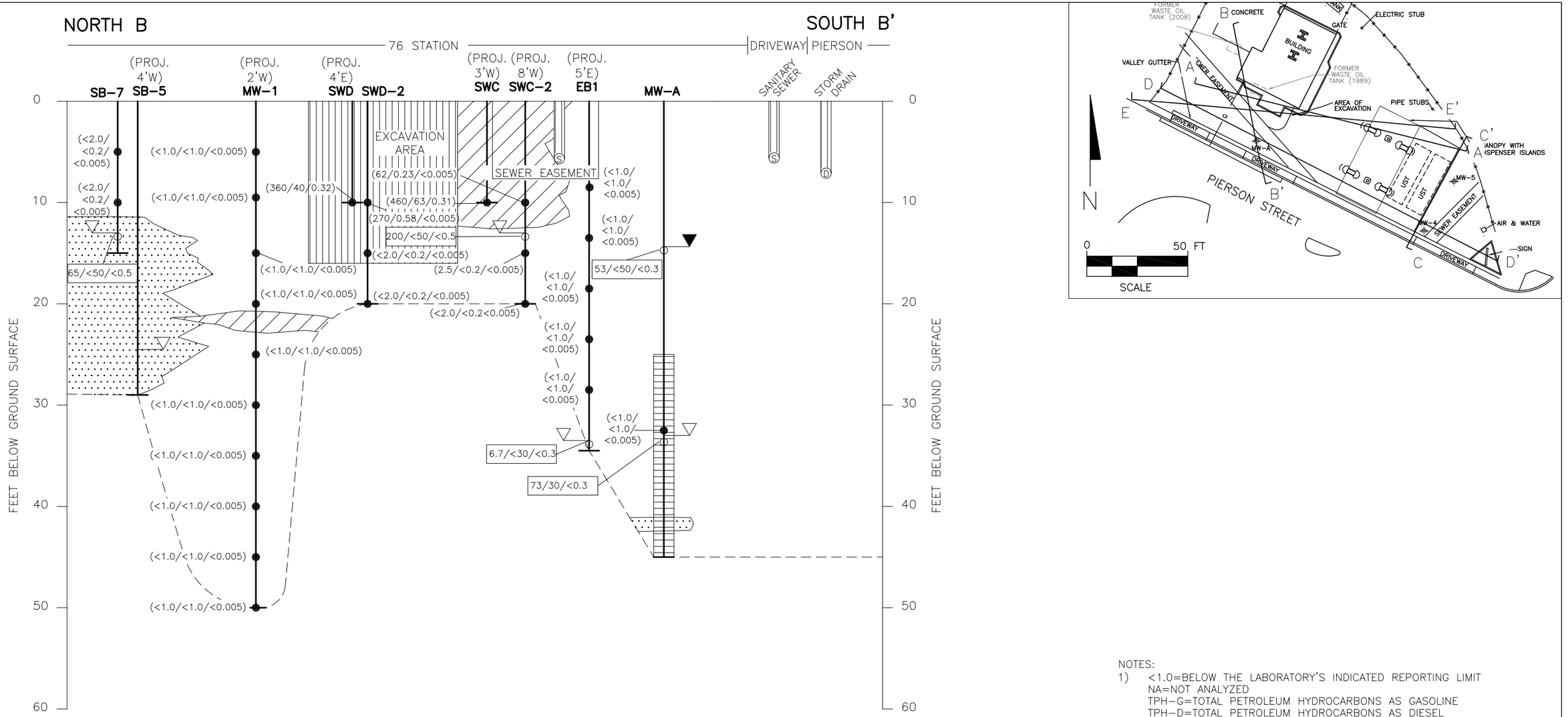
(S) SANITARY SEWER LINE (~5 ft bgs)

FIGURE 4
GEOLOGIC CROSS SECTON A–A'

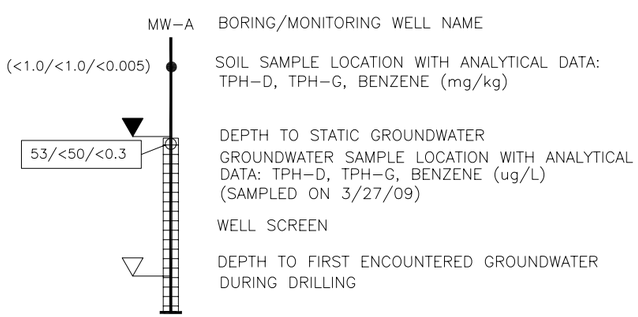
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

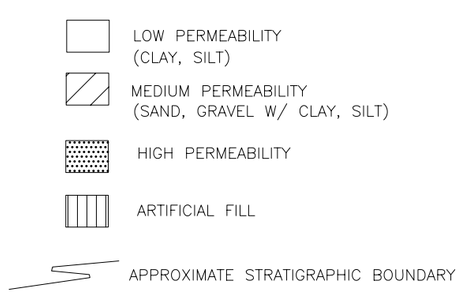
PROJECT NO.	PREPARED BY	DRAWN BY
C105781	CM	JH
DATE	REVIEWED BY	FILE NAME
07/29/10	JW	5781–SiteS

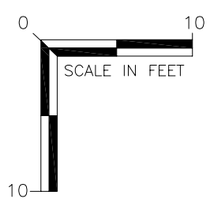
DELTA®



LEGEND







(D) STORM DRAIN (7.1 ft bgs)

(S) SANITARY SEWER LINE (5.58 ft bgs)

NOTES:

1) <1.0=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
NA=NOT ANALYZED
TPH-G=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH-D=TOTAL PETROLEUM HYDROCARBONS AS DIESEL
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER
ug/m =MICROGRAMS PER CUBIC METER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS COLLECTED ON DRILLING DATE.

FIGURE 5
GEOLOGIC CROSS SECTION B-B'

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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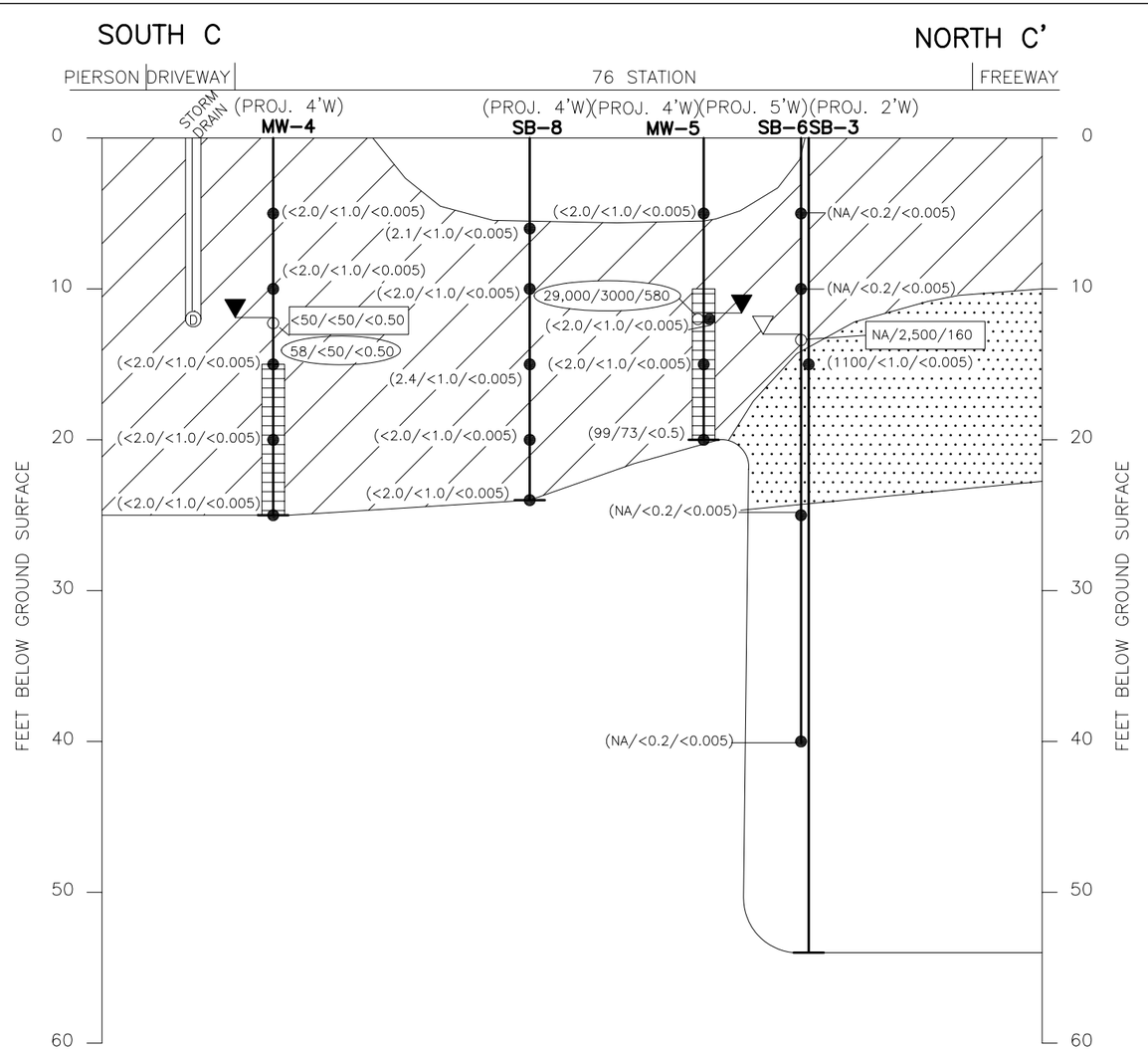

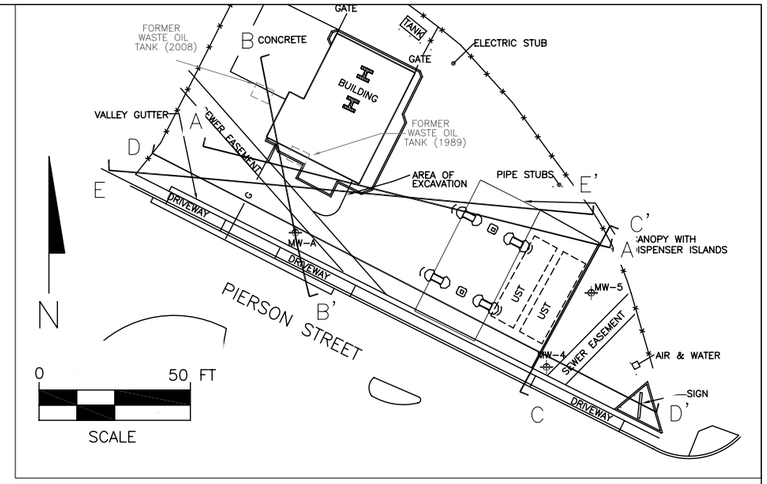

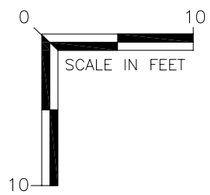

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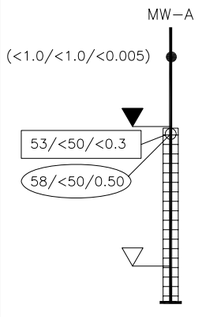

- MW-A — BORING/MONITORING WELL NAME
- (<1.0/<1.0/<0.005) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (mg/kg)
- DEPTH TO STATIC GROUNDWATER
- GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (ug/L)
  - RECTANGLE-(SAMPLED ON 6/24/10) (NON-PURGED SAMPLE)
  - OVAL-(SAMPLED ON 6/6/10) (PURGED SAMPLE)
- WELL SCREEN
- DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING
- LOW PERMEABILITY (CLAY, SILT)
- MEDIUM PERMEABILITY (SAND, GRAVEL W/ CLAY, SILT)
- HIGH PERMEABILITY
- ARTIFICIAL FILL
- APPROXIMATE STRATIGRAPHIC BOUNDARY
- (D) STORM DRAIN (12 ft bgs)

NOTES:

1) <1.0=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
   NA=NOT ANALYZED
   TPH-G=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
   TPH-D=TOTAL PETROLEUM HYDROCARBONS AS DIESEL
   mg/kg=MILLIGRAMS PER KILOGRAM
   ug/L=MICROGRAMS PER LITER
   ug/m =MICROGRAMS PER CUBIC METER
2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.
3) GROUNDWATER SAMPLES FROM BORINGS COLLECTED ON DRILLING DATE.

FIGURE 6
GEOLOGIC CROSS SECTION C-C'

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

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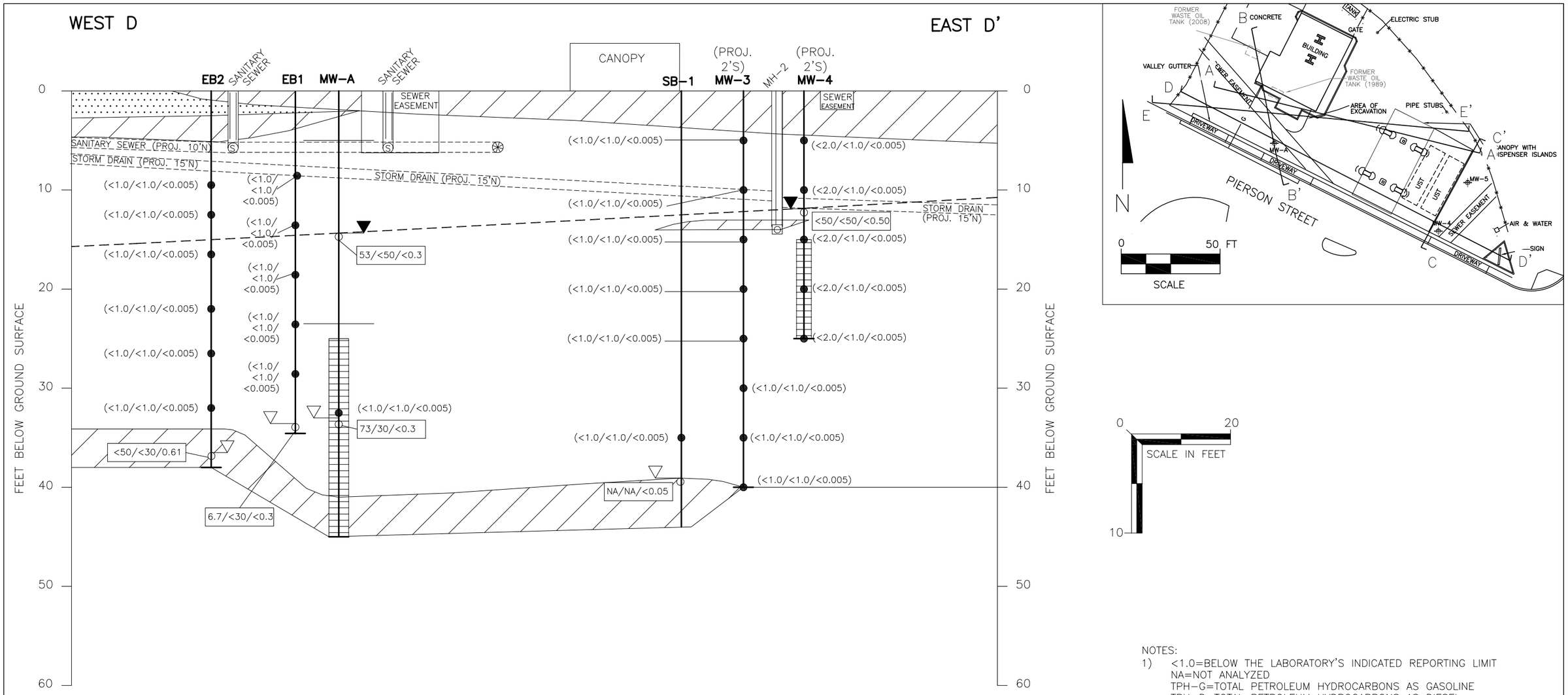


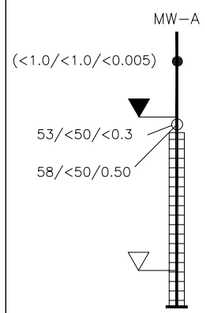
NOTES:

1) <1.0=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
   NA=NOT ANALYZED
   TPH-G=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
   TPH-D=TOTAL PETROLEUM HYDROCARBONS AS DIESEL
   mg/kg=MILLIGRAMS PER KILOGRAM
   ug/L=MICROGRAMS PER LITER
   ug/m =MICROGRAMS PER CUBIC METER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS COLLECTED ON DRILLING DATE.

LEGEND



- MW-A — BORING/MONITORING WELL NAME
- (<1.0/<1.0/<0.005) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (mg/kg)
- DEPTH TO STATIC GROUNDWATER
- 53/<50/<0.3 — GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (ug/L)
- 58/<50/0.50 — RECTANGLE-(SAMPLED ON 6/24/10) (NON-PURGED SAMPLE)
- OVAL-(SAMPLED ON 6/6/10) (PURGED SAMPLE)
- WELL SCREEN
- DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING

- LOW PERMEABILITY (CLAY, SILT)
- MEDIUM PERMEABILITY (SAND, GRAVEL W/ CLAY, SILT)
- HIGH PERMEABILITY
- ARTIFICIAL FILL
- APPROXIMATE STRATIGRAPHIC BOUNDARY

- GROUNDWATER ELEVATION LINE (JUNE 2010)
- PROJECTED UTILITY LINE
- (S) SANITARY SEWER LINE (5.75 ft bgs)
- STORM DRAIN (PROEJCT 10 ft N)
- SEWER MANHOLE (PROJECT 10 ft N)

FIGURE 7
GEOLOGIC CROSS SECTON D-D'

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

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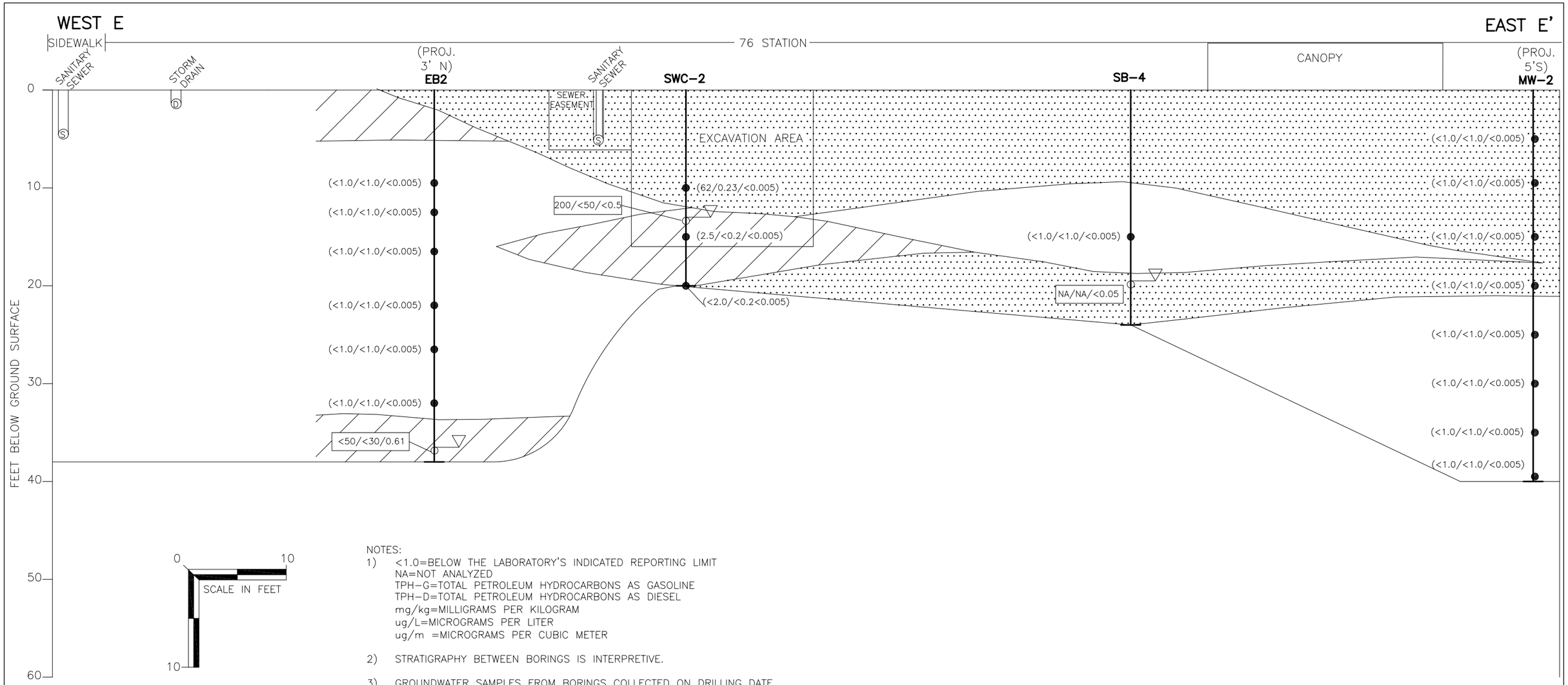


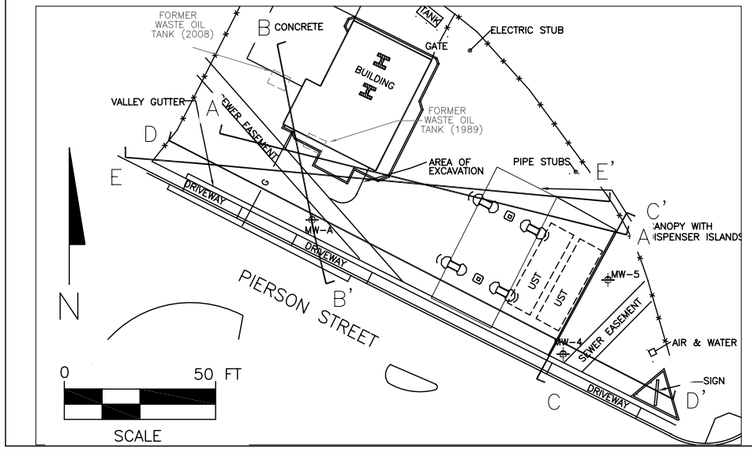
0 10
SCALE IN FEET

NOTES:

1) <1.0=BELOW THE LABORATORY'S INDICATED REPORTING LIMIT
NA=NOT ANALYZED
TPH-G=TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
TPH-D=TOTAL PETROLEUM HYDROCARBONS AS DIESEL
mg/kg=MILLIGRAMS PER KILOGRAM
ug/L=MICROGRAMS PER LITER
ug/m =MICROGRAMS PER CUBIC METER

2) STRATIGRAPHY BETWEEN BORINGS IS INTERPRETIVE.

3) GROUNDWATER SAMPLES FROM BORINGS COLLECTED ON DRILLING DATE.



LEGEND

MW-A — BORING/MONITORING WELL NAME

(<1.0/<1.0/<0.005) — SOIL SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (mg/kg)

53/<50/<0.3 — DEPTH TO STATIC GROUNDWATER
GROUNDWATER SAMPLE LOCATION WITH ANALYTICAL DATA: TPH-D, TPH-G, BENZENE (ug/L) (SAMPLED ON 3/27/09)

WELL SCREEN

DEPTH TO FIRST ENCOUNTERED GROUNDWATER DURING DRILLING

LOW PERMEABILITY (CLAY, SILT)

MEDIUM PERMEABILITY (SAND, GRAVEL W/ CLAY, SILT)

HIGH PERMEABILITY

ARTIFICIAL FILL

APPROXIMATE STRATIGRAPHIC BOUNDARY

Ⓢ SANITARY SEWER LINE (4.5 ft bgs)

Ⓓ STORM DRAIN LINE (1.3 ft bgs)

FIGURE 8
GEOLOGIC CROSS SECTON E-E'

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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DATE	REVIEWED BY	FILE NAME
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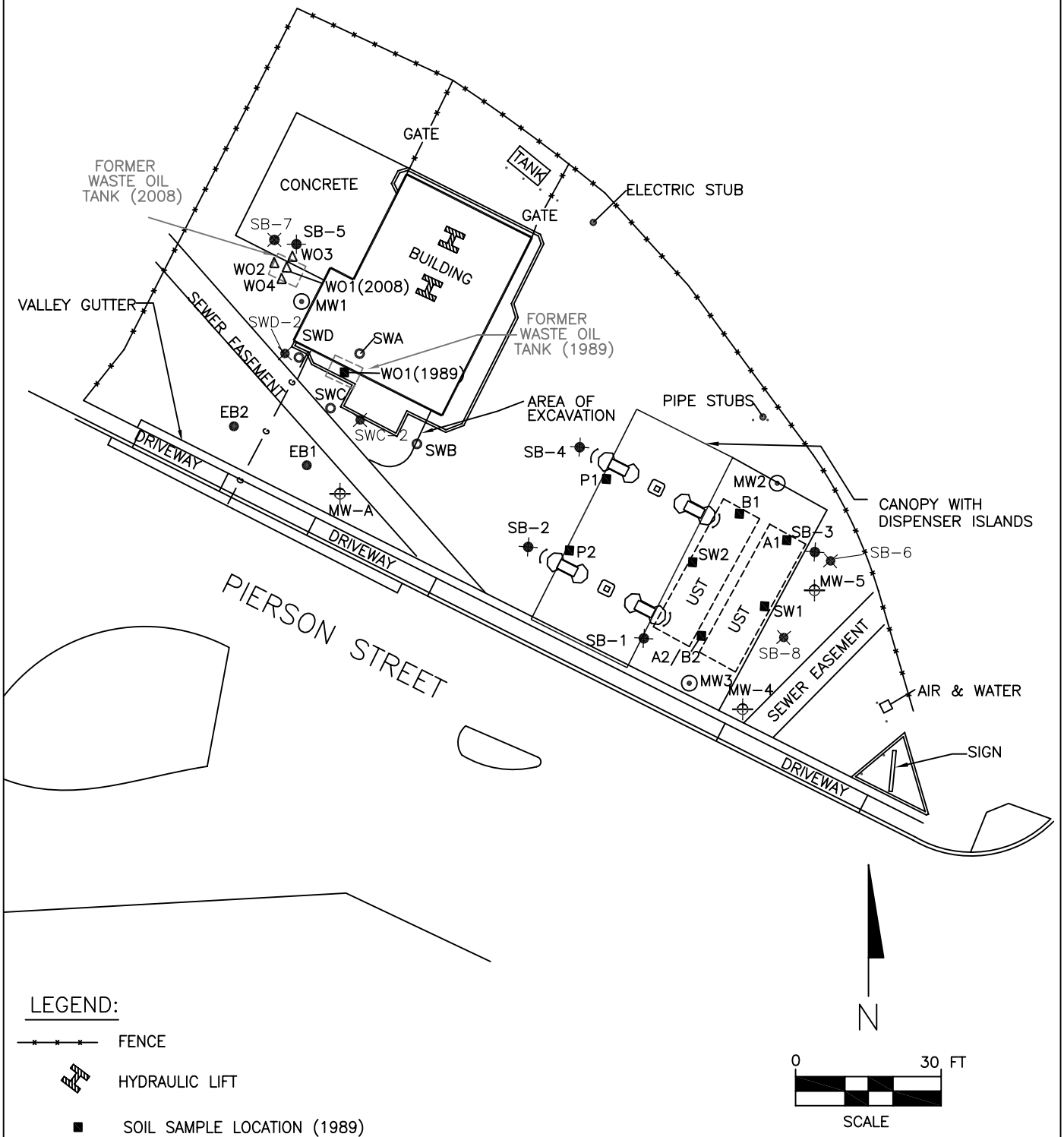

LEGEND:

- FENCE
- HYDRAULIC LIFT
- SOIL SAMPLE LOCATION (1989)
- SOIL SAMPLE LOCATION (FEBRUARY 1990)
- EXPLORATORY BORING (APRIL 1990) (NOT CONVERTED TO MONITORING WELL)
- EXPLORATORY BORING (JULY 1990)
- SOIL BORING (OCTOBER 2003)
- SOIL SAMPLE LOCATION (2008)
- SOIL BORING (MARCH/JUNE 2010)
- CURRENT MONITORING WELL

FIGURE 9
SITE MAP WITH HISTORICAL SAMPLING LOCATIONS

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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DATE	REVIEWED BY	FILE NAME
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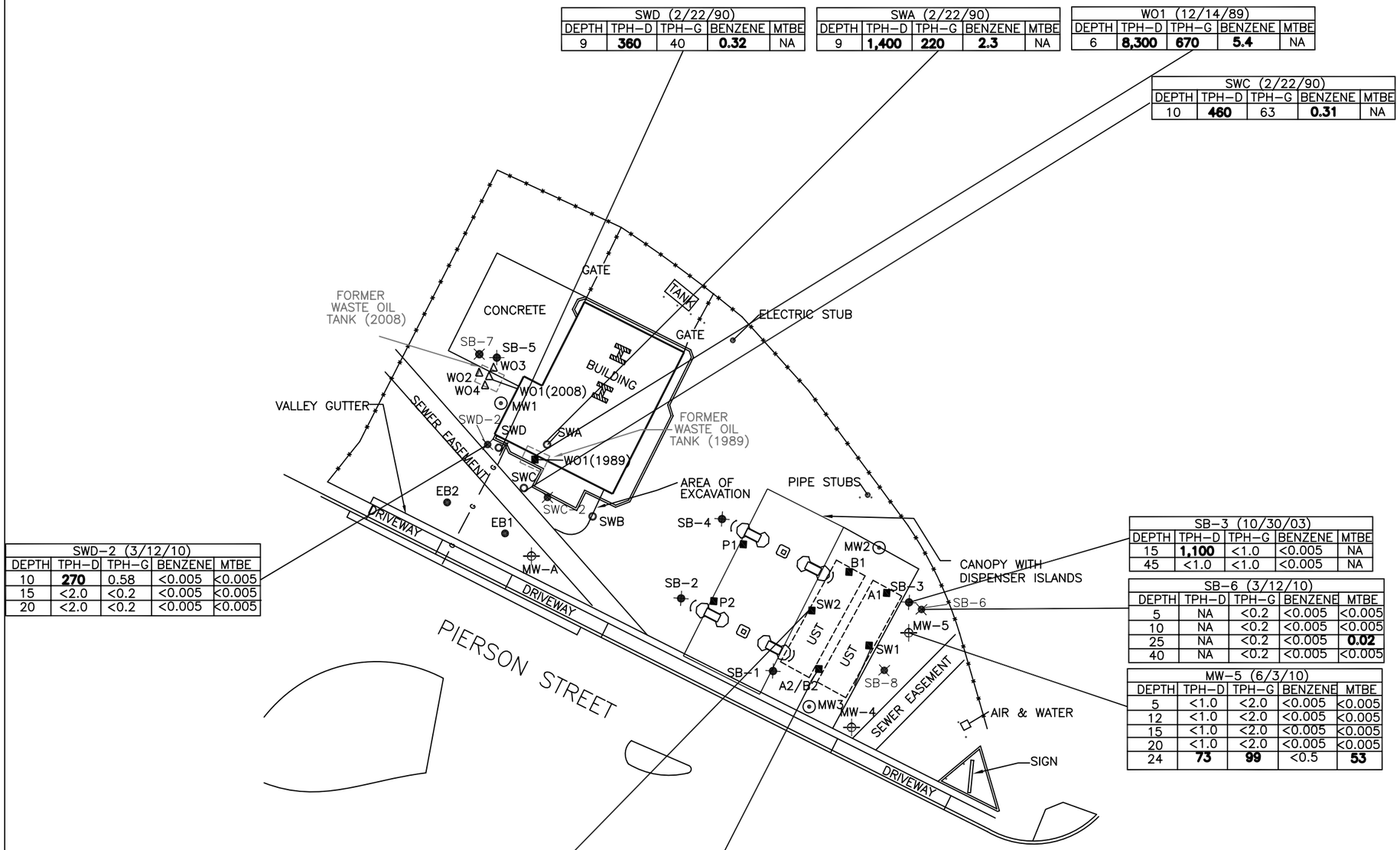

SWD (2/22/90)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
9	**360**	40	**0.32**	NA

SWA (2/22/90)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
9	**1,400**	**220**	**2.3**	NA

WO1 (12/14/89)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
6	**8,300**	**670**	**5.4**	NA

SWC (2/22/90)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
10	**460**	63	**0.31**	NA

SWD-2 (3/12/10)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
10	**270**	0.58	<0.005	<0.005
15	<2.0	<0.2	<0.005	<0.005
20	<2.0	<0.2	<0.005	<0.005

SB-3 (10/30/03)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
15	**1,100**	<1.0	<0.005	NA
45	<1.0	<1.0	<0.005	NA

SB-6 (3/12/10)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
5	NA	<0.2	<0.005	<0.005
10	NA	<0.2	<0.005	<0.005
25	NA	<0.2	<0.005	**0.02**
40	NA	<0.2	<0.005	<0.005

MW-5 (6/3/10)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
5	<1.0	<2.0	<0.005	<0.005
12	<1.0	<2.0	<0.005	<0.005
15	<1.0	<2.0	<0.005	<0.005
20	<1.0	<2.0	<0.005	<0.005
24	**73**	**99**	<0.5	**53**

A2/B2 (12/14/89)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
5'	NA	5.8	**0.1**	NA

SW2 (12/14/89)				
DEPTH	TPH-D	TPH-G	BENZENE	MTBE
10.5	NA	46	**0.65**	NA

LEGEND:

- FENCE
- HYDRAULIC LIFT
- SOIL SAMPLE LOCATION (1989)
- SOIL SAMPLE LOCATION (FEBRUARY 1990)
- EXPLORATORY BORING (APRIL 1990) (NOT CONVERTED TO MONITORING WELL)
- EXPLORATORY BORING (JULY 1990)
- SOIL BORING (OCTOBER 2003)
- SOIL SAMPLE LOCATION (2008)
- SOIL BORING (MARCH/JUNE 2010)
- CURRENT MONITORING WELL

NOTES:
TPH-D = TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE = METHYL TERTIARY BUTYL ETHER
NA = NOT ANALYZED
<1.0 = LESS THAN LABORATORY INDICATED REPORTING LIMIT
MW (DATE) = INDICATES SAMPLE NAME AND DATE SAMPLED

(1) DEPTHS IN FEET BELOW GROUND SURFACE.
(2) CONCENTRATIONS IN MILLIGRAMS PE KILOGRAM (mg/kg).
(3) BOLDINDICATES CONCENTRATIONS ARE ABOVE ENVIRONMENTAL SCREENING LEVELS (TPH=83 mg/kg, BENZENE=0.044 mg/kg, MTBE=0.023 mg/kg).

N

0 30 FT

SCALE

FIGURE 10
SITE MAP WITH HISTORICAL AND CURRENT SOIL ANALYTICAL RESULTS EXCEEDING ESLS
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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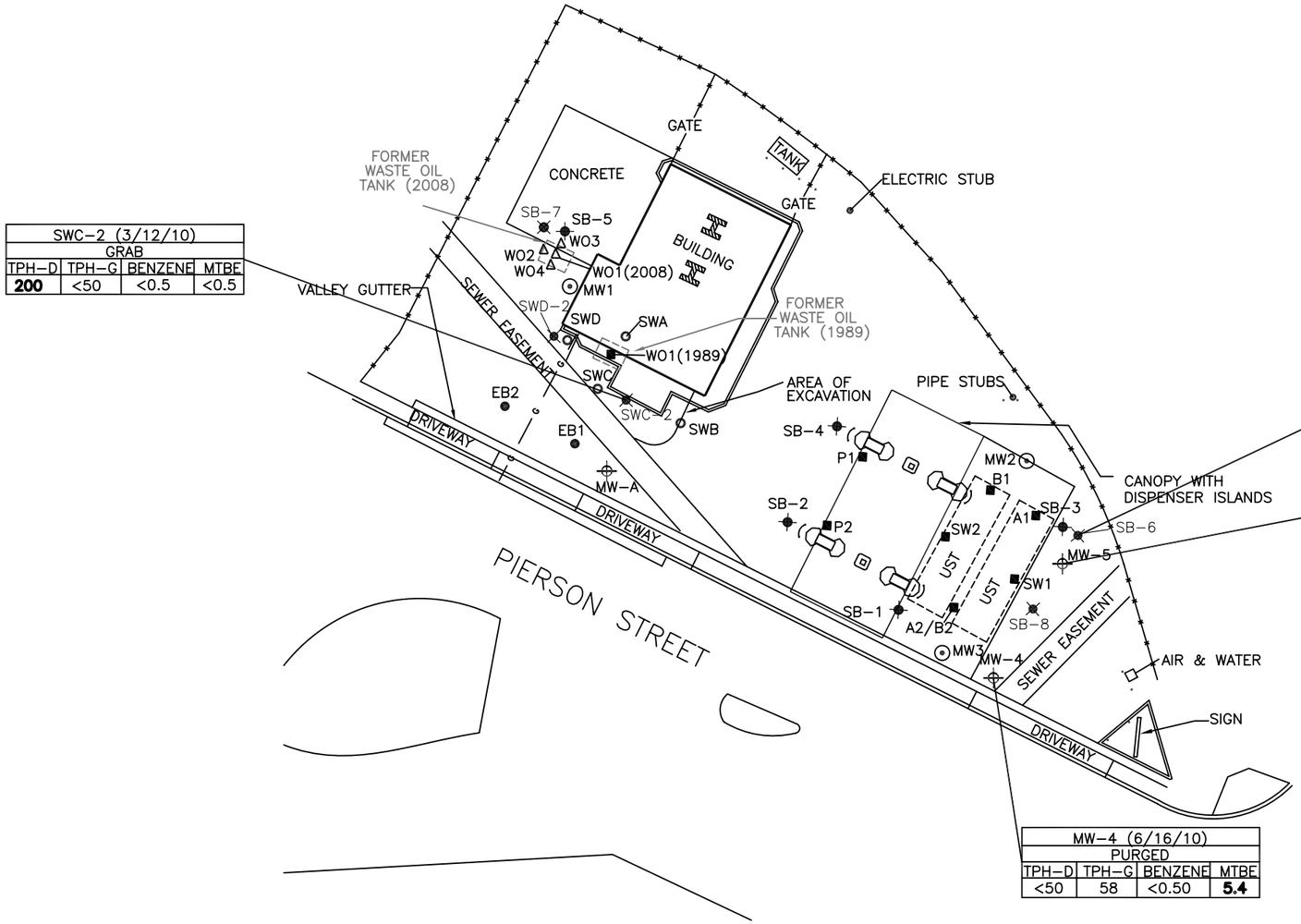

SWC-2 (3/12/10)			
GRAB			
TPH-D	TPH-G	BENZENE	MTBE
200	<50	<0.5	<0.5

SB-6 (3/12/10)			
GRAB			
TPH-D	TPH-G	BENZENE	MTBE
NA	**2,500**	**160**	<2.5

MW-5 (6/16/10)			
PURGED			
TPH-D	TPH-G	BENZENE	MTBE
3,000	**29,000**	**580**	<50.0

MW-4 (6/16/10)			
PURGED			
TPH-D	TPH-G	BENZENE	MTBE
<50	58	<0.50	**5.4**

LEGEND:

- FENCE
- HYDRAULIC LIFT
- SOIL SAMPLE LOCATION (1989)
- SOIL SAMPLE LOCATION (FEBRUARY 1990)
- EXPLORATORY BORING (APRIL 1990) (NOT CONVERTED TO MONITORING WELL)
- EXPLORATORY BORING (JULY 1990)
- SOIL BORING (OCTOBER 2003)
- SOIL SAMPLE LOCATION (2008)
- SOIL BORING (MARCH/JUNE 2010)
- CURRENT MONITORING WELL

NOTES:
TPH-D = TOTAL PETROLEUM HYDROCARBONS AS DIESEL
TPH-G = TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
MTBE = METHYL TERTIARY BUTYL ETHER
NA = NOT ANALYZED
<1.0 = LESS THAN LABORATORY INDICATED REPORTING LIMIT
MW (DATE) = INDICATES SAMPLE NAME AND DATE SAMPLED

(1) DEPTHS IN FEET BELOW GROUND SURFACE.
(2) CONCENTRATIONS IN MICROGRAMS PER LITER (ug/L).
(3) BOLD INDICATES CONCENTRATIONS ARE ABOVE ENVIRONMENTAL SCREENING LEVELS (TPH=100 ug/L, BENZENE=1 ug/L, MTBE=1 ug/L).

N

0 30 FT

SCALE

FIGURE 11
SITE MAP WITH CURRENT AND HISTORICAL GROUNDWATER ANALYTICAL RESULTS EXCEEDING ESLS
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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DATE	REVIEWED BY	FILE NAME
07/29/10	JW	5781-SiteS

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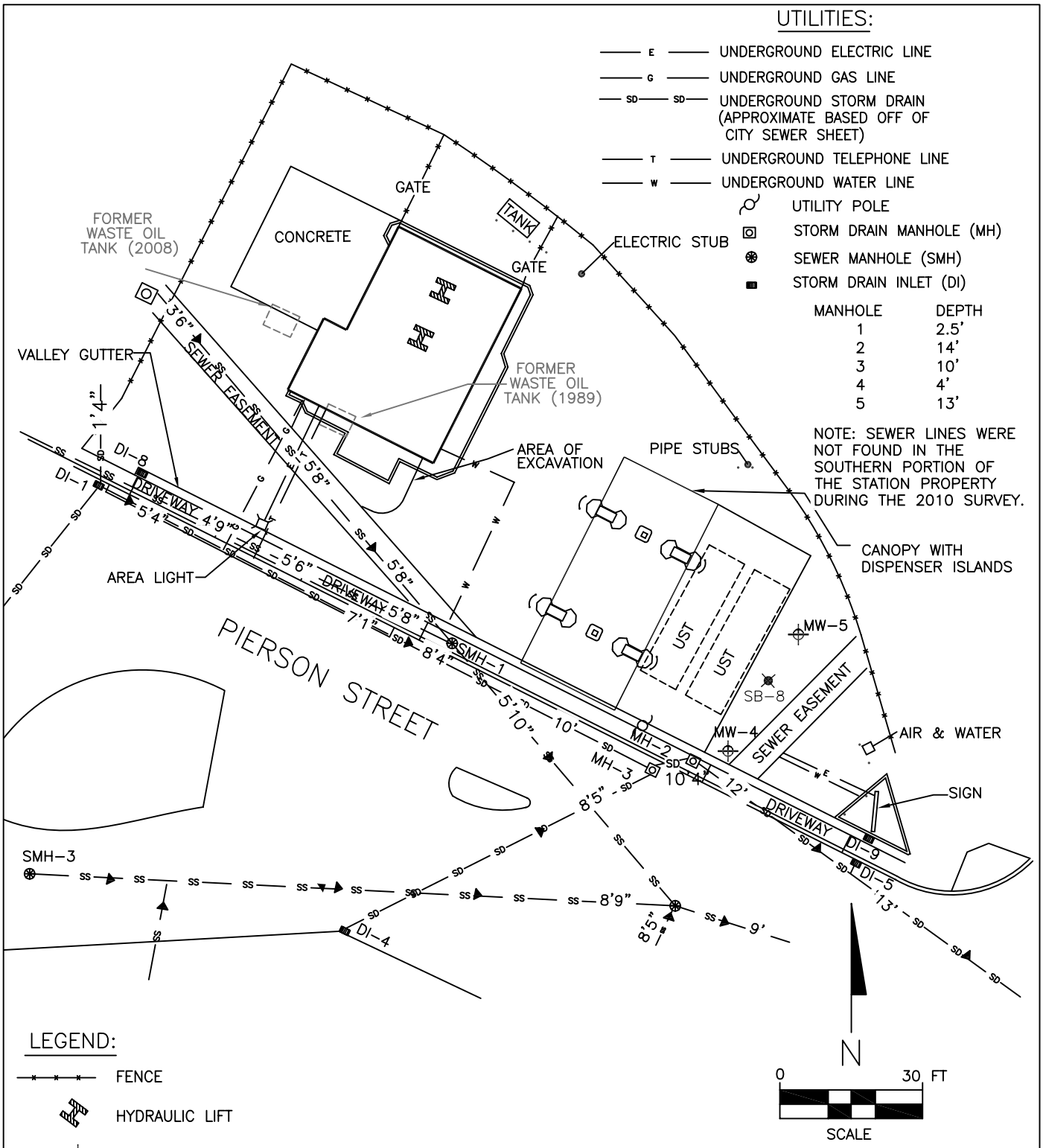

SITE MAP ADAPTED FROM A MORROW SURVEY DATED 07/10.

FIGURE 12
CURRENT ASSESSMENT SAMPLING LOCATIONS

CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

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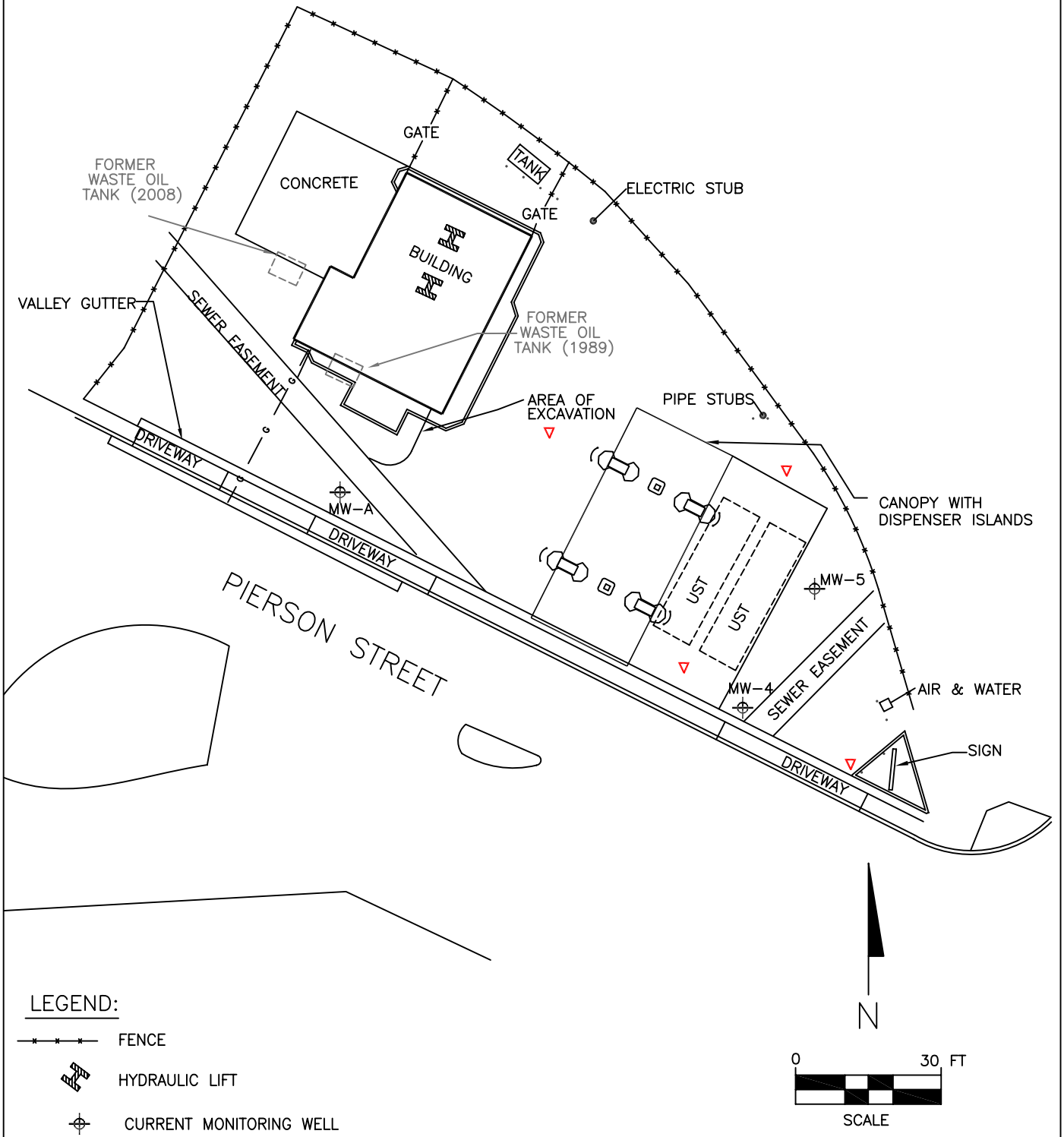

LEGEND:

- FENCE
- HYDRAULIC LIFT
- CURRENT MONITORING WELL
- PROPOSED MONITORING WELL LOCATION

FIGURE 13
SITE MAP WITH PROPOSED MONITORING WELL LOCATIONS
CONOCOPHILLIPS STATION NO. 5781
3535 PIERSON STREET
OAKLAND, CALIFORNIA

PROJECT NO.	PREPARED BY	DRAWN BY
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TABLES

TABLE 1
HISTORICAL SOIL ANALYTICAL DATA

ConocoPhillips Station No. 5781
3535 Pierson Street, Oakland, CA

Sample ID	Date	Sample Depth (feet)	TPH-D (mg/kg)	TPH-G (mg/kg)	TOG (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Oxygenates (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	ETHANOL (mg/kg)	OTHER (mg/kg)
UST and Product Piping Samples															
A1	12/14/1989	12.5	NA	**3.5**	NA	<0.05	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
B1	12/14/1989	12.5	NA	<1.0	NA	<0.05	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
A2/B2	12/14/1989	12.5	NA	**5.8**	NA	**0.1**	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
SW1	12/14/1989	10.5	NA	**15**	NA	<0.05	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
SW2	12/14/1989	10.5	NA	**46**	NA	**0.65**	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
P1	12/14/1989	5.5	NA	<1.0	NA	<0.05	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
P2	12/14/1989	6	NA	<1.0	NA	<0.05	<0.1	<0.1	<0.1	NA	NA	NA	NA	NA	
WO1	*12/14/1989*	*6*	***8,300***	***670***	***48,000***	***5.4***	***15***	***2.3***	***17***		*NA*	*NA*	*NA*	*NA*	***(Overexcavated) 1,2-DCB (10), PCE (77), 1,1,1-TCA (15), Cr (8.3), Pb (340), Zn (70)***
Over-Excavation Samples															
WO (16)	2/22/1990	16	**74**	**15**	**910**	**0.06**	<0.10	**0.10**	**2**	NA	NA	NA	NA	NA	**(Post Overexcavation) All HVOCs below detection limit**
SWA	2/22/1990	9	**1,400**	**220**	**17,000**	**2.3**	**2.1**	**7.3**	**23**	NA	NA	NA	NA	NA	**PCE (160)**
SWB	2/22/1990	10	<1	**2**	<50	<0.05	<0.10	<0.10	**0.1**	NA	NA	NA	NA	NA	**PCE (56); 1,1,-TCA (5.8)**
SWC	2/22/1990	10	**460**	**63**	**4,100**	**0.31**	**0.33**	**1.3**	**2.2**	NA	NA	NA	NA	NA	**PCE (56)**
SWD	2/22/1990	10	**360**	**40**	**6,400**	**0.32**	<0.10	**0.49**	**4**	NA	NA	NA	NA	NA	**PCE (40), 1,1,1-TCA (5.8)**
Northwest Waste Oil Tank Pit															
WO1	4/23/2008	9	NA	<0.25	NA	<0.005	<0.005	<0.005	<0.0099	<0.005	See Note	<0.005	<0.005	<1.2	All Oxys below reportring limits
WO2	4/23/2008	7	NA	<0.24	NA	<.0048	<0.0048	<0.0048	<0.0096	<0.0048	See Note	<0.0048	<0.0048	<1.2	All Oxys below reportring limits
WO3	4/23/2008	6.5	NA	<0.24	NA	<.0048	<0.0048	<0.0048	<.0095	<0.0048	See Note	<0.0048	<0.0048	<1.2	All Oxys below reportring limits
WO4	4/23/2008	6.5	NA	<0.24	NA	<.0048	<0.0048	<0.0048	<.0096	<0.0048	See Note	<0.0048	<0.0048	<1.2	All Oxys below reportring limits
Soil Borings															
MW1	4/9/1990	5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	9.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	15	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	20	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	25	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	30	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	35	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	40	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	45	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW1	4/9/1990	50	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
MW2	4/9/1990	5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	9.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	15	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	20	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	25	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	30	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	35	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW2	4/9/1990	39.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	10	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	15	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	20	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	25	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	30	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	35	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW3	4/10/1990	40	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	

TABLE 1
HISTORICAL SOIL ANALYTICAL DATA

ConocoPhillips Station No. 5781
3535 Pierson Street, Oakland, CA

Sample ID	Date	Sample Depth (feet)	TPH-D (mg/kg)	TPH-G (mg/kg)	TOG (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Oxygenates (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	ETHANOL (mg/kg)	OTHER (mg/kg)
EB1	7/5/1990	8.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB1	7/5/1990	13.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB1	7/5/1990	18.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB1	7/5/1990	23.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB1	7/5/1990	28.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**1,1,1-TCA (6.2)**
EB2	7/6/1990	9.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB2	7/6/1990	12.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB2	7/6/1990	16.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB2	7/6/1990	22	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB2	7/6/1990	26.5	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
EB2	7/6/1990	32.0	<1.0	<1.0	ND	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	
MW-A	12/11/1990	32.5	<1.0	<1.0	**36**	<0.005	<0.005	<0.005	<0.005	NA	NA	NA	NA	NA	**All HVOCs below detection limit**
SB-1	10/30/2003	35.0	<1.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	ND	<0.005	<0.005	<0.1	
SB-2	10/30/2003	15.0	<1.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	ND	<0.005	<0.005	<0.1	
SB-2	10/30/2003	50.0	<1.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	ND	<0.005	<0.005	<0.1	
SB-3	10/30/2003	15.0	**1,100**	<1.0	NA	<0.005	<0.005	**16**	**50**	NA	ND	<0.005	<0.005	<0.1	
SB-3	10/30/2003	45.0	<1.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	ND	<0.005	<0.005	<0.1	
SB-4	10/30/2003	15.0	<1.0	<1.0	NA	<0.005	<0.005	<0.005	<0.005	NA	ND	<0.005	<0.005	<0.1	
SB-5	10/30/2003	20.0	NA	NA	<5.0	NA	NA	NA	NA	NA	NA	NA	NA	NA	
SWC-2	3/12/10	10.0	62	0.23	**7700**	<0.005	<0.005	<0.005	0.025	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SWC-2	3/12/10	15.0	2.5	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SWC-2	3/12/10	20.0	<2.0	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SWD-2	3/12/10	10.0	270	0.58	**870**	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SWD-2	3/12/10	15.0	<2.0	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SWD-2	3/12/10	20.0	<2.0	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SB-6	3/12/10	5.0	NA	<0.2	NA	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	<0.005	<0.005	<1	All Oxy's below reporting limit
SB-6	3/12/10	10.0	NA	<0.2	NA	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	<0.005	<0.005	<1	All Oxy's below reporting limit
SB-6	3/12/10	25.0	NA	<0.2	NA	<0.005	<0.005	<0.005	<0.01	**0.02**	See Note	<0.005	<0.005	<1	All Oxy's, with exception of MTBE below reporting limit
SB-6	3/12/10	40.0	NA	<0.2	NA	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	<0.005	<0.005	<1	All Oxy's below reporting limit
SB-7	3/12/10	5.0	<2.0	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
SB-7	3/12/10	10.0	<2.0	<0.2	<50	<0.005	<0.005	<0.005	<0.01	<0.005	See Note	NA	NA	NA	All Oxy's below reporting limit
MW-4@5'	6/4/2010	5.0	<1.0	<2.0	NA	<0.010	<0.010	<0.010	<0.020	<0.010	See Note	<0.010	<0.010	<2.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW4@10'	6/4/2010	10.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-4@15'	6/4/2010	15.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	**0.0051**	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-4@20'	6/4/2010	20.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-4@25'	6/4/2010	25.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.

TABLE 1
HISTORICAL SOIL ANALYTICAL DATA

ConocoPhillips Station No. 5781
3535 Pierson Street, Oakland, CA

Sample ID	Date	Sample Depth (feet)	TPH-D (mg/kg)	TPH-G (mg/kg)	TOG (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	Ethyl-Benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	Oxygenates (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	ETHANOL (mg/kg)	OTHER (mg/kg)
MW-5@5'	6/3/2010	5.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW5@12'	6/3/2010	12.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-5@15'	6/3/2010	15.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-5@20'	6/3/2010	20.0	<1.0	<2.0	NA	<0.050	<0.050	<0.050	<0.10	<0.050	See Note	<0.050	<0.050	<10	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
MW-5@24'	6/3/2010	24.0	**73**	**99**	NA	<0.50	<0.50	<0.50	<1.0	**53**	See Note	**0.50**	0<0.50	<250	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
SB-8@6'	6/3/2010	6.0	<1.0	**2.1**	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
SB-8@10'	6/3/2010	10.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
SB-8@15'	6/3/2010	15.0	<1.0	**2.4**	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
SB-8@20'	6/3/2010	20.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.
SB-8@24'	6/3/2010	24.0	<1.0	<2.0	NA	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	See Note	<0.0050	<0.0050	<1.0	TBA; ETBE; TAME; DIPE all below reporting limit. Methanol also below reporting limit.

TPH-G= Total petroleum hydrocarbons as Gasoline Range Organics-C6-C12
TPH-D = Total petroleum hydrocarbons as Diesel Range Organics
TOG= Total oil and grease
BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = Methyl tertiary butyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
1,2,4 = 1,2,4- Trimethylbenzene
DIPE = Di-isopropyl ether by EPA Method 8260B
TAME = Tertiary amyl methyl ether by EPA Method 8260B
1,2-DCA = 1,2-dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = Ethylene dibromide (also known as 1,2-dibromoethane) by EPA Method 8260B
1,1 DCB = 1,1-dichlorobromide
PCE= tetrachloroethene
1,1,1-TCE= 1,1,1-trichloroethene
HVOCs= Halogenated volatile organic compounds by EPA Method 8010

NA = Not analyzed
ND = Not detected (detection limit not given)

TABLE 2
HISTORICAL GRAB GROUNDWATER ANALYTICAL DATA

ConocoPhillips Station No. 5781
3535 Pierson Street, Oakland, California

Sample ID	Date	TPPH (µg/L)	TPH-D (µg/L)	TPH-G (µg/L)	TOG (µg/L)	BENZENE (µg/L)	TOLUENE (µg/L)	Ethyl-Benzene (µg/L)	Total Xylenes (µg/L)	MTBE (µg/L)	TBA (µg/L)	ETBE (µg/L)	TAME (µg/L)	DIPE (µg/L)	1,2-DCA (µg/L)	EDB (µg/L)	ETHANOL (µg/L)	METHANOL (µg/L)
EB1	7/6/90	NA	**6.7**	<30	ND	<0.3	**1.5**	<0.3	**1.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA
EB2	7/6/90	NA	<50	<30	ND	**0.61**	**1.5**	<0.3	**1.0**	NA	NA	NA	NA	NA	NA	NA	NA	NA
MW-A	12/18/90	NA	**73**	<30	ND	<0.3	<0.3	<0.3	<0.3	NA	NA	NA	NA	NA	NA	NA	NA	NA
SB-1	10/30/03	<50	NA	NA	NA	<0.05	<0.05	<0.05	<1.0	<2	<100	<2	<2	<2	<2	<2	<500	NA
SB-4	10/30/03	<50	NA	NA	NA	<0.05	<0.05	<0.05	<1.0	<2	<100	<2	<2	<2	<2	<2	<500	NA
SB-5	10/30/03	<50	NA	NA	**180**	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SWC-2	3/12/10	NA	**200**	<50	<5	<0.5	<0.5	<0.5	<1.0	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
SB-6	3/12/10	NA	NA	**2,500**	NA	**160**	**310**	**110**	**690**	<2.5	<50	<2.5	<2.5	<2.5	<2.5	<2.5	<1200	NA
SB-7	3/12/10	NA	**65**	<50	<5	<0.5	<0.5	<0.5	<0.5	<0.5	NA	NA	NA	NA	NA	NA	NA	NA
SB-8	6/3/10	NA	**99**	**73**	NA	<0.50	<0.050	<0.050	<1.0	**53**	<10	<0.50	<0.50	<0.50	**0.5**	<0.50	<250	<100
MW-4	6/24/10	NA	<50	<50	NA	<0.50	<0.50	<0.50	<1.0	**4.7**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100

TPPH = Total purgeable petroleum hydrocarbons
TPH-D = Total petroleum hydrocarbons as Diesel Range Organics
TPH-G= Total petroleum hydrocarbons as Gasoline Range Organics-C6-C12
TOG = Total oil and grease by method 1664
BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = Methyl tertiary butyl ether by EPA Method 8260B
TBA = Tertiary butyl alcohol by EPA Method 8260B
DIPE = Di-isopropyl ether by EPA Method 8260B
TAME = Tertiary amyl methyl ether by EPA Method 8260B
1,2-DCA = 1,2-dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = Ethylene dibromide (also known as 1,2-dibromoethane) by EPA Method 8260B
Ethanol analyzed by EPA Method 8260B

ug/l = micrograms per liter
ND = not detected above the laboratory detection limit
NA = not applicable / not analyzed
Bold = detected compound concentration

EPA = Environmental Protection Agency

TABLE 3
CURRENT SOIL ANALYTICAL RESULTS
ConocoPhillips Station No. 5781
Oakland, California

Sample ID	Date	Time	Sample Depth (feet)	TPH-G (mg/kg)	TPH-D (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	Methanol (mg/kg)
Soil																		
MW-4@5'	6/4/10	12:28	5	<1.0	<2.0	<0.010	<0.010	<0.010	<0.020	<0.010	<0.10	<0.010	<0.010	<0.010	<0.010	<0.010	<2.0	<0.51
MW-4@10'	6/4/10	12:32	10	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.49
MW-4@15'	6/4/10	12:39	15	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	**0.0051**	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
MW-4@20'	6/4/10	12:44	20	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.49
MW-4@25'	6/4/10	12:53	25	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
MW-5@5'	6/3/10	11:55	5	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
MW-5@12'	6/3/10	12:01	12	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
MW-5@15'	6/3/10	12:03	15	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.51
MW-5@20'	6/3/10	12:08	20	<1.0	<2.0	<0.050	<0.050	<0.050	<0.10	<0.050	<0.50	<0.050	<0.050	<0.050	<0.050	<0.050	<10	<0.51
SB-8@24'	6/3/10	4:10	24	**73**	**99**	<0.50	<0.50	<0.50	<1.0	**53**	<10	<0.50	<0.50	<0.50	**0.50**	<0.50	<250	<0.50
SB-8@6'	6/3/10	3:48	6	<1.0	**2.1**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.51
SB-8@10'	6/3/10	3:50	10	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.48
SB-8@15'	6/3/10	3:56	15	<1.0	**2.4**	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
SB-8@20'	6/3/10	4:00	20	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.50
SB-8@24'	6/3/10	4:03	24	<1.0	<2.0	<0.0050	<0.0050	<0.0050	<0.010	<0.0050	<0.050	<0.0050	<0.0050	<0.0050	<0.0050	<0.0050	<1.0	<0.49

TPPH = total purgeable petroleum hydrocarbons by EPA Method 8260B
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency

TABLE 4
CURRENT GROUNDWATER SAMPLE ANALYTICAL DATA
ConocoPhillips Station No. 5781
Oakland, California

Sample Location	Date	TPH-D (mg/kg)	TPH-G (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Ethanol (mg/kg)	Methanol (mg/kg)
Groundwater																
MW-4*	6/24/10	<50	<50	<0.50	<0.50	<0.50	<1.0	**4.7**	<10	<0.50	<0.50	<.50	<0.50	<0.50	<250	<100
MW-4**	6/16/10	<50	**58**	<0.50	**9.7**	**1**	**16**	**5.4**	<10	<0.50	<0.50	<0.50	<0.50	<0.50	<250	<100
MW-5**	6/16/10	**3000**	**29000**	**580**	**6800**	**850**	**7200**	<50	<25000	<50	<50	<50	<50	<50	<50	<100
SB-8*	6/3/10	**99**	**73**	**<0.50**	**<0.050**	**<0.050**	**<1.0**	**53**	<10	<0.50	<0.50	<0.50	**0.50**	<0.50	<250	<100

TPPH = total purgeable petroleum hydrocarbons by EPA Method 8260B
BTEX = benzene, toluene, ethylbenzene, total xylenes by EPA Method 8260B
MTBE = methyl tertiary butyl ether by EPA Method 8260B
TBA = tertiary butyl alcohol by EPA Method 8260B
ETBE = ethyl tertiary butyl ether by EPA Method 8260B
TAME = tertiary amyl methyl ether by EPA Method 8260B
DIPE = di-isopropyl ether by EPA Method 8260B
* Grab Groundwater Sample

1,2-DCA = 1,2-Dichloroethane (also known as ethylene dichloride) by EPA Method 8260B
EDB = ethylene dibromide (also known as 1,2-Dibromoethane) by EPA method 8260B
Ethanol was analyzed by EPA Method 8260B
mg/kg = milligrams per kilogram
ND = not detected above the laboratory detection limit
Bold = detected compound concentration
EPA = US Environmental Protection Agency
** Purge Groundwater Sample

APPENDIX A

ACEH Letter Dated May 21, 2010

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Agency Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

May 21, 2010

Terry Grayson (sent via e-mail to Terry.L.Grayson@contractor.conocophillips.com)
ConocoPhillips
76 Broadway
Sacramento, CA 95818

United Brothers Enterprise, Inc.
3535 Pierson St.
Oakland, CA 94619

Subject: ADDITIONAL ASSESSMENT REPORT, MONITORING WELL INSTALLATION WORK PLAN FOR Fuel Leak Case No. RO0000253 and GeoTracker Global ID T0600101467, Unocal #5781, 3535 Pierson St., Oakland, CA 94619

Dear Mr. Grayson. etal:

Thank you for the recently submitted document entitled, *Additional Assessment Report, Monitoring Well Installation Work Plan and Storm Sewer Repair Comments*, dated May 7, 2010, which was prepared by Delta Consultants for the subject site. Alameda County Environmental Health (ACEH) staff has reviewed the case file including the above-mentioned report/work plan for the above-referenced site. The investigation report/work plan was submitted to ACEH to detail the investigation that occurred on March 10, 2010 and to address contamination present in the storm drain as reported by Delta in their URF dated March 5, 2010 and per the subsequent neighborhood reports of petroleum hydrocarbon odors in the area in April 2010.

ACEH is not opposed to the well installation. However, the site has not been adequately characterized and installing monitoring wells is premature considering the available site data. Therefore ACEH requests that you address the following technical comments and send us the technical documents requested below.

TECHNICAL COMMENTS

1. **Contaminant Source Area Characterization** – ConocoPhillips has proposed installation of two monitoring wells. As mentioned above, ACEH is not opposed to the well installation. However, ACEH requests that you prepare a scope of work to characterize the source area by performing an expedited site assessment using methods such as CPT, MIP or other continuous logging method to evaluate the extent of petroleum hydrocarbons both on- and off-site. We request that borings be advanced along transect(s). Once the source area has been adequately defined, appropriate locations for the monitoring wells can be determined.

2. **Site Conceptual Model** – At this juncture, it may be advantageous to develop a site conceptual model (SCM), which synthesizes all the analytical data and evaluates all potential exposure pathways and potential receptors that may exist at the site, including identifying or developing site cleanup objectives and goals. At a minimum, the SCM should include:

   a) Local and regional plan view maps that illustrate the location of sources (former facilities, piping, tanks, etc.) extent of contamination, direction and rate of groundwater flow, potential preferential pathways, and locations of receptors;
   b) Geologic cross section maps that illustrate subsurface features, man-made conduits, and lateral and vertical extent of contamination;
   c) Summary tables of chemical concentrations in different media (i.e. soil, groundwater, and soil vapor); and
   d) Well logs, boring logs, and well survey maps;
   e) Discussion of likely contaminant fate and transport.

   If data gaps (i.e. potential contaminant volatilization to indoor air or contaminant migration along preferential pathways, etc.) are identified in the SCM, please include a proposed scope of work to address those data gaps in the work plan due by the date specified below. Please note that the work plan must address all data gaps identified in the SCM.

   As part of your SCM, please complete a preferential pathway evaluation. There are two sewer easements on your map but there is no indication of whether a sewer line exists from your map and the depth of the sewer or if any other utilities are present. The purpose of the preferential pathway study is to locate potential migration pathways and conduits and determine the probability of the NAPL and/or plume encountering preferential pathways and conduits that could spread contamination. We request that you perform a preferential pathway study that details the potential migration pathways and potential conduits (wells, utilities, pipelines, etc.) for vertical and lateral migration that may be present in the vicinity of the site.

   Discuss your analysis and interpretation of the results of the preferential pathway study and report your results in the work plan requested below. The results of your study shall contain all information required by California Code of Regulations, Title 23, Division 3, Chapter 16, §2654(b).

   An evaluation of all utility lines and trenches (including sewers, storm drains, pipelines, trench backfill, etc.) within and near the site and plume area(s) is required as part of your study. Please include maps and add the utility locations to the previously submitted cross-sections illustrating the location and depth of all utility lines and trenches within and near the site as part of your study.

TECHNICAL REPORT REQUEST

Please submit technical reports to ACEH (Attention: Barbara Jakub), according to the following schedule:

- **June 30, 2010 –** SCM with preferential pathway evaluation and work plan to address data gaps.

Thank you for your cooperation. Should you have any questions or concerns regarding this correspondence or your case, please call me at (510) 639-1287 or send me an electronic mail message at barbara.jakub@acgov.org.

Sincerely,

Barbara J. Jakub, P.G.
Hazardous Materials Specialist

Enclosures: Responsible Party(ies) Legal Requirements/Obligations
ACEH Electronic Report Upload (ftp) Instructions

cc: Jan Wagoner, Delta Consultants, 11050 White Rock Road, suite 110, Rancho Cordova, CA 95670 (Sent via e-mail to: JWagoner@deltaenv.com)
Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032 (*Sent via E-mail to: lgriffin@oaklandnet.com*)
Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Barbara Jakub, ACEH (*Sent via E-mail to: barbara.jakub@acgov.org*)
GeoTracker
File

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) GeoTracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the GeoTracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in GeoTracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml.

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**. (Please do not submit reports as attachments to electronic mail.)
- It is **preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document**. Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted**.
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses**, and the **Case Numbers (RO# available in Geotracker) you will be posting for**.

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B
Historical Boring Logs

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** D.L.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/9/90
Boring No. MW1	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		A. C. Pavement. Sand and Gravel
			CL/ CH	Clay with silt, 5-10% sand, soft, moist, olive brown.
2/2/3	NOT ENCOUNTERED DURING DRILLING	5	ML/ MH	Clayey silt, 30% clay, 5-10% coarse-grained sand, soft to firm, moist, very dark grayish brown.
5/7/8		10	CL/ CH	Clay, 5-10% sand, trace silt, stiff, moist, dark brown.
				Clay, as above, except with gravel to 1/2" diameter, 10-15% sand.
12/16/21				Clay, 5-10% sand, very stiff, slightly moist, dark brown, minor organic material
8/16/20		15		
				Clay, as above, trace to 5% silt, dark yellowish brown.
10/17/22				
7/14/22		20		

BORING LOG

Project No. KEI-P89-1204	Boring & Casing Diameter 9" 2"	Logged By D.L.
Project Name Unocal Oakland - Pierson	Well Head Elevation N/A	Date Drilled 4/9/90
Boring No. MW1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
			CL/CH	Clay, trace silt, dark yellowish brown.
			GC	Clayey gravel, 5-10% sand, gravel to 3/8" diameter, dense, moist, dark yellowish brown.
10/16/21				
			CL/CH	Clay, trace silt and sand, stiff, moist, olive brown, trace organic matter.
9/12/18		25		
9/12/19				
				Clay, as above, trace to 5% sand, trace silt, olive brown to dark brown
12/16/21		30		
				Clay with silt, 15-20% silt, 5% sand, stiff, moist, dark yellowish brown.
7/11/18				
7/14/16		35		
				Silty clay, 5-10% sand, stiff to very stiff, slightly moist, dark yellowish brown.
9/12/17				
9/15/23		40		

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** D.L.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/9/90
Boring No. MW1	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
			CL/ CH	Silty clay, as above.
9/16/26				Sandy clay, 10-15% silt, 30% sand, sand is coarse to fine grained, very stiff, slightly moist, dark yellowish brown.
8/11/16		45		
				Clay, with silt, trace sand, very stiff, slightly moist, dark brown, stiffness increasing with depth.
12/16/18				
11/18/32		50		
		55		
		60		TOTAL DEPTH: 50'

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** D.L.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/10/90
Boring No. MW2	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		A. C. Pavement and base rock.
			SC	Clayey sand, 20-30% clay, 10-20% silt, sand is coarse-to fine-grained, medium dense, moist, yellowish brown to dark yellowish brown.
2/2/4	NOT ENCOUNTERED DURING DRILLING	5	CL/ CH	Sandy clay, 5-10% silt, firm, moist, strong brown, pocketed with clayey sand and other soil, possible fill.
			GC	Clayey gravel with sand, gravel 1 1/2" to 4" diameter, gap graded, 10-15% sand, medium dense, moist, dark yellowish brown.
5/2/2		10	GM	Silty gravel with sand, trace clay, 15% silt, loose, moist, dark yellowish brown, voids in sample. base of fill?
2/2/5			MH	Clayey silt, 10-15% coarse sand, firm, moist, black.
3/4/9		15	CL/ CH	Sandy clay, 5-10% gravel to 1/2" diameter, stiff, moist, dark olive gray, very dark grayish brown below 15.5 feet.
			GW-GM	Well graded gravel with silt and sand, trace to 5% clay, medium dense, moist, dakr yellowish brown.
5/7/10		20	GP	Poorly graded gravel below 19.5 feet. Clay below 20.3 feet - See page 2.

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** D.L.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/10/90
Boring No. MW2	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
			CL/ CH	Silty clay to clay with silt, 5-15% sand, very stiff, moist, dark yellowish brown to olive brown.
7/10/18		25		Clay, trace silt and sand, very stiff, moist, olive brown, trace organic matter.
9/16/23		30		Sandy clay, 5-10% gravel to 1/2" diameter, hard, moist, dark yellowish brown.
			CL/ CH	
9/13/19		35		Sandy clay, trace gravel, less sand than above, moist, dark yellowish brown.
8/12/14		40		TOTAL DEPTH: 40'

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** W.W.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/10/90
Boring No. MW3	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
	NOT ENCOUNTERED DURING DRILLING	0		A. C. Pavement Clay, sand and gravel fill.
			SC	Clayey sand, yellowish brown to olive brown, loose to very loose, moist.
2/2/3		5	CL/ CH	Silty clay, soft to firm, moist, yellowish brown.
2/2/2		10	MH	Clayey silt, 5-10% sand, trace to 5% gravel, soft to firm, moist, black.
			SC	Clayey sand, trace gravel to 1/4" diameter, medium dense, moist, dark yellowish brown.
4/8/13		15	CL/ CH	Sandy clay, 30-35% sand, very stiff, moist, dark yellowish brown.
				Trace of gravel to 5/8" diameter at 19 feet. Clay, trace sand and silt, stiff, moist, olive brown.
		20		

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** W.W.
Project Name Unocal Oakland - Pierson	**Well Head Elevation** N/A	**Date Drilled** 4/10/90
Boring No. MW3	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
4/7/12		25	CL/ CH	Clay and silty clay, dark yellowish brown, very stiff, moist.
8/10/12		30		Clay, trace silt, very stiff, moist, olive brown, homogeneous.
9/12/17		35		Clay, trace of fine well rounded gravel and trace of silt, moist, olive brown, very stiff.
10/17/23		40		Sandy clay, trace to 5% fine gravel, trace to 5% sand, hard, moist, olive brown. TOTAL DEPTH: 40'

BORING LOG

Project No.	Boring Diameter	Logged By
KEI-P89-1204	9"	W.W.
Project Name Unocal Oakland - 3535 Pierson	**Well Head Elevation** N/A	**Date Drilled** 7/5/90
Boring No. EB1	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		A.C. Pavement over sand and gravel base.
			CL/CH	Clay with silt, 5-10% sand, 10% fine gravel to 3/8" dia., firm, moist, olive brown.
			ML/MH	Clayey silt, 30% clay, 10% coarse-grained sand, trace to 5% fine gravel to 3/8" dia., moist, olive gray.
3/5/6		5		Clayey silt, trace fine gravel, 5% sand, moist, brown.
				Clay, trace silt and sand, trace organic matter, moist, stiff, orang-ish brown.
			CL/CH	Clay, 10-15% sand, trace silt, trace to 5% gravel to 1/2" dia., moist, stiff, dark brown.
5/6/8		10		
				Clay, minor organic material, slightly moist, very stiff, dark yellowish brown.
8/13/18		15		
				Clay, as above, with light gray mot-tling.
9/12/17		20		

BORING LOG

Project No. KEI-P89-1204	Boring Diameter 9"	Logged By W.W.
Project Name Unocal Oakland - 3535 Pierson	Well Head Elevation N/A	Date Drilled 7/5/90
Boring No. EB1	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
7/13/18		25	CL/ CH	Clay, minor organic material, trace fine-grained sand, trace silt, slightly moist, very stiff to hard, light orangish brown with light gray, mottling.
8/15/21		30		
9/18/36	▼	35		Clay with silt, 15-20% silt, 5-15% sand, trace organic matter, hard, very moist to wet, dark yellowish brown.
		40		TOTAL DEPTH: 34.5'

BORING LOG

Project No.	Boring Diameter	Logged By
KEI-P89-1204	9"	W.W.
Project Name Unocal Oakland - 3535 Pierson	**Well Head Elevation** N/A	**Date Drilled** 7/6/90
Boring No. EB2	**Drilling Method** Hollow-stem Auger	**Drilling Company** EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		A.C. Pavement over sand and gravel.
			GC	Clayey gravel 15% silt, 10% sand, gravel to 1/2" dia., moist, medium dense, olive brown.
4/4/5		5	CL	Sandy clay with gravel, 15% sand, gravel to 1/4" dia., trace organic matter, moist to wet, firm, dark yellowish brown.
				Clay, 10% silt, 10% coarse-grained sand, trace fine gravel to 1/4" dia., moist, firm to stiff, olive brown.
4/5/8		10	CL/ CH	Clay, trace rootlets, stiff, slightly moist, dark yellowish brown with trace light gray mottling.
7/14/18		15		Clay, as above, trace to 5% silt, hard, slightly moist, dark yellowish brown with light gray mottling.
8/15/19		20		Clay, as above, trace to 15% silt, moist, hard, yellowish brown with light gray mottling.

BORING LOG

Project No. KEI-P89-1204	Boring Diameter 9"	Logged By W.W.
Project Name Unocal Oakland - 3535 Pierson	Well Head Elevation N/A	Date Drilled 7/6/90
Boring No. EB2	Drilling Method Hollow-stem Auger	Drilling Company EGI

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
8/12/22			CL/ CH	Clay, trace organic matter, trace silt hard, moist, dark yellowish brown with light gray mottling, slight orangish brown, mottling.
7/8/12		25		Clay with silt, trace to 5% organic matter, moist, very stiff, beige with light gray mottling.
8/14/20		30	ML/ MH	Clayey silt with fine-grained sand, up to 20% sand, hard, moist, light olive brown, trace light gray mottling.
13/15/28	▼	35	SC	Clayey sand with silt, silt to 15%, very moist to wet, dense, light olive brown to beige.
		40		TOTAL DEPTH: 38'

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** W.W. DRB
Project Name Unocal 3535 Pierson St. Oakl	**Well Head Elevation** N/A	**Date Drilled** 12/11/90
Boring No. MWA	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
		0		Asphalt pavement over sand and gravel.
			CL/ CH	Clay with gravel, gravel to 2-1/2" diameter, 5% sand, moist, yellowish brown. Base of fill.
			ML/ MH	Clayey silt, trace sand, trace fine gravel to 3/8" diameter, moist, firm to stiff, olive brown to olive gray.
4/4/6		5	CL/ CH	Clay, with silt, fine- to medium-grained sand, moist, stiff, brown.
4/9/15		10		Clay, trace subangular gravel to 3/8" diameter, trace sand, moist, very stiff, olive brown.
7/13/21		15		Silty clay, trace organic matter, moist, hard, dark yellowish brown.
9/15		20	CL/ CH to ML/ MH	Silty clay to clayey silt, trace organic matter, moist, hard, light yellowish brown.

BORING LOG

Project No. KEI-P89-1204	**Boring & Casing Diameter** 9" 2"	**Logged By** W.W.
Project Name Unocal 3535 Pierson St. Oakl	**Well Head Elevation** N/A	**Date Drilled** 12/11/90
Boring No. MWA	**Drilling Method** Hollow-stem Auger	**Drilling Company** Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Strati-graphy USCS	Description
/27			CL/ CH to ML/ MH	Silty clay to clayey silt, trace organic matter, moist, hard, light yellowish brown.
			ML/ MH	
		25		
11/18/29				Silt, with clay, trace organic matter, very moist, hard, light yellowish brown.
		30		
6/12/20				Silt with clay, trace organic matter, moist, very stiff to hard, light olive brown mottled with light yellowish brown.
11/24/28	▼			Free water encountered at 33'.
		35		
15/25/38				Silt, with clay, trace organic matter, trace fine- to medium-grained sand, moist to very moist, hard, light yellowish brown mottled with yellowish brown.
9/		40		

BORING LOG

Project No. KEI-P89-1204	Boring & Casing Diameter 9" 2"	Logged By W.W.
Project Name Unocal 3535 Pierson St. Oakl	Well Head Elevation N/A	Date Drilled 12/11/90
Boring No. MWA	Drilling Method Hollow-stem Auger	Drilling Company Woodward Drilling Co.

Penetration blows/6"	G. W. level	Depth (feet) Samples	Stratigraphy USCS	Description
18/26			ML	Silt with clay, as above.
			SW	Sand, well graded, trace silt, saturated, dense, yellowish brown.
15/24/30			ML/MH	Silt with clay, trace organic matter, moist, hard, brown mottled with light yellowish brown.
		45		
		50		
		55		
		60		TOTAL DEPTH: 45'

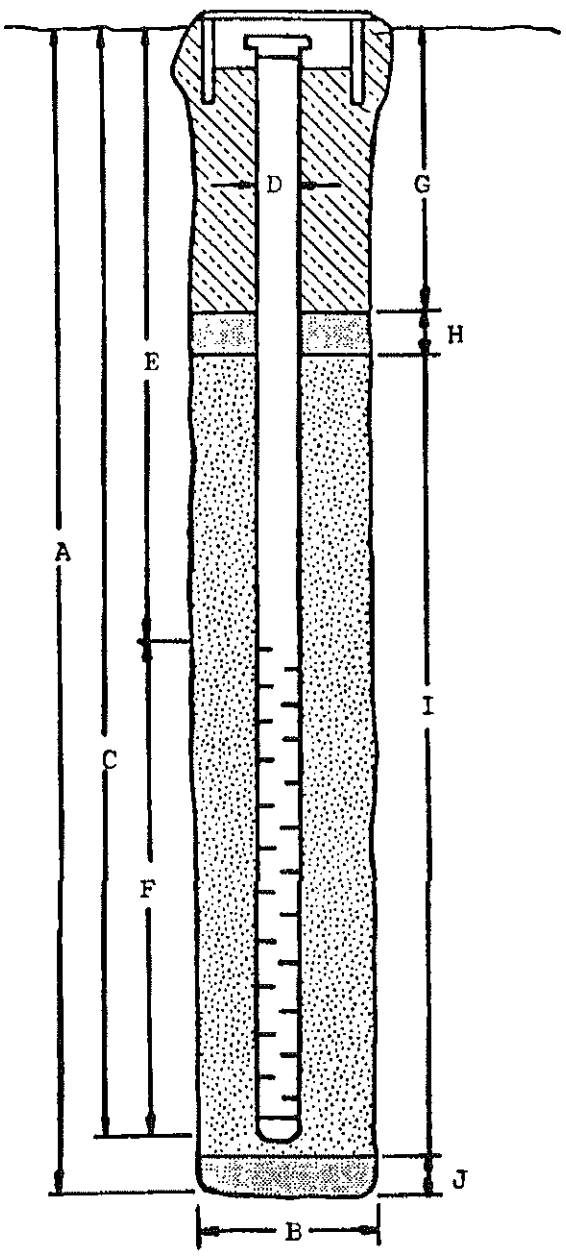
WELL COMPLETION DIAGRAM

PROJECT NAME: Unocal 3535 Pierson St. Oakland BORING/WELL NO. MWA

PROJECT NUMBER: KEI-P89-1204

WELL PERMIT NO.:

Flush-mounted Well Cover



A. Total Depth: 45'

B. Boring Diameter*: 9"

Drilling Method: Hollow Stem Auger

C. Casing Length: 45'

Material: Schedule 40 PVC

D. Casing Diameter: OD = 2.375" ID = 2.067"

E. Depth to Perforations: 25'

F. Perforated Length: 20'

Perforation Type: Machined Slot

Perforation Size: 0.010"

G. Surface Seal: 21'

Seal Material: Concrete

H. Seal: 2'

Seal Material: Bentonite

I. Gravel Pack: 22'

Pack Material: RMC Lonestar Sand

Size: #2/16

J. Bottom Seal: None

Seal Material: N/A

*Boring diameter can vary from 8-1/4" to 9" depending on bit wear.

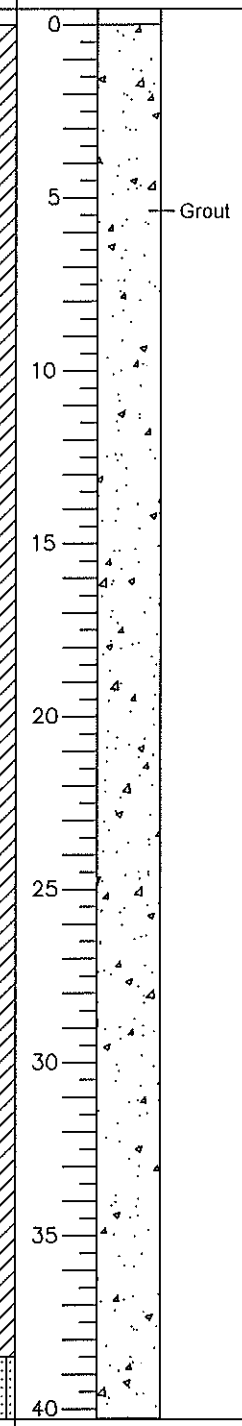
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/30/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 44.0 feet
DEPTH TO WATER: 39.0 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand augered to 5'. CLAY (CL): Very dark gray (10YR 3/1), 90 % clay, 10% gravel, soft, damp.		
0	7 7 13	1.0/ 1.5		5			
0	17 20 22	1.5/ 1.5		10			
0	20 22 27	1.5/ 1.5		15	- @ 14': color change to brownish yellow (10YR 5/8), 90 % clay, 10% sand, trace gravel, soft, damp.		
0	21 23 20	1.5/ 1.5		20	- @ 20': no sand.	CL	
0	21 23 25	1.0/ 1.5		25			
0	24 25 27	1.5/ 1.5		30			
0	23 26 24	1.5/ 1.5		35	- @ 34': increased sand.		
0	20 18 22	1.0/ 1.5		40	SILTY SAND (SM): Yellowish brown (10YR 6/8), 10 % silt, 10 % clay, 80% sand, dense, wet.	SM	

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

SB-1

PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/30/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 44.0 feet
DEPTH TO WATER: 39.0 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY	BORING BACKFILL DETAIL
				40	SAND (SM) (continued).	SM		Grout
				45				
				50				
				55				
				60				
				65				
				70				
				75				
				80				

TRC

LOG OF EXPLORATORY BORING

SB-1
PAGE 2 OF 2

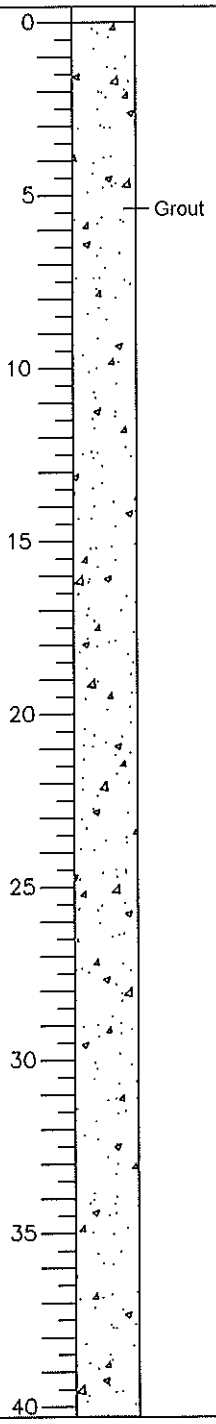
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/30/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 54.0 feet
DEPTH TO WATER: Not applicable

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand augered to 5'. CLAY (CL): Brownish yellow (10YR 5/4) with black mottles, 95% clay, 5% gravel, soft, damp.		
0	8 11 13	1.5/ 1.5		5		CL	
0	12 12 18	1.5/ 1.5		10	- @ 9': color change to black (10YR 2/1), 95 % clay, 5% sand, very soft.		
0	16 17 25	1.5/ 1.5		15			
0	14 14 19	1.5/ 1.5		20	GRAVELLY SAND (SW): Brownish yellow (10YR 5/6), 10 % clay, 60% sand, 30% gravel, soft, damp.	SW	
0	21 20 26	1.5/ 1.5		25			
0	22 24 26	1.5/ 1.5		30	CLAY WITH SAND (CL): Yellowish brown (10YR 4/4), 80 % clay, 15% sand, 5% gravel, soft, damp.	CL	
0	21 21 28	1.0/ 1.5		35			
0	23 27 22	0.5/ 1.5		40	SILTY SAND (SM): Yellowish brown (10YR 6/3), 20 % silt, 10% clay, 70% sand, hard, damp.	SM	

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

SB-2

PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/30/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 54.0 feet
DEPTH TO WATER: Not applicable

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY	BORING BACKFILL DETAIL
				40	SAND (SM) (continued).	SM		40 Grout
0	25 22 27	1.5/ 1.5		45				45
0	19 23 27	1.0/ 1.5		50	SILTY SAND WITH GRAVEL (SM): Yellowish brown (10YR 5/6), 20% silt, 5% clay, 60% sand, 15% gravel, hard, damp.			50
				55				55
				60				60
				65				65
				70				70
				75				75
				80				80

TRC

LOG OF EXPLORATORY BORING

SB-2

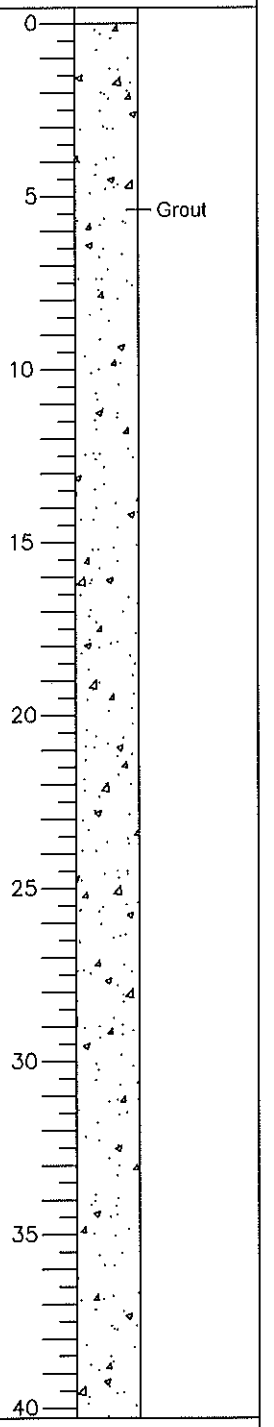
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/31/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 54.0 feet
DEPTH TO WATER: Not applicable

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand augered to 5'. SILTY SAND (SM): Yellowish brown (10YR 5/4), 20 % silt, 70 % sand, 10% gravel, soft, dry.		
0	10 12 16	1.0/ 1.5		5		SM	
0	7 11 16	1.5/ 1.5		10			
1.7	13 15 15	1.0/ 1.5		15	SANDY GRAVEL WITH SILT (GM): Greenish gray (GLEY1 4/5G), 20% silt, 30% sand, 50% gravel, soft, moist.	GM	
0	11 14 16	0.5/ 1.5		20	SILTY SAND WITH GRAVEL (SM): Greenish gray (GLEY1 4/5G), 20% silt, 60% sand, 20% gravel, soft, damp.	SM	
0	14 16 27	1.5/ 1.5		25	SILT (ML): Yellowish brown (10YR 5/4), 90 % silt, 10% clay, hard, damp.		
0	12 12 15	1.5/ 1.5		30	SANDY SILT (ML): Yellowish brown (10YR 5/6), 60 % silt, 30% sand, 10% gravel, hard, damp.	ML	
0	15 16 19	1.5/ 1.5		35	SILT WITH SAND (ML): Yellowish brown (10YR 5/4), 80 % silt, 20% sand.		
0	16 17 20	1.5/ 1.5		40			

BORING BACKFILL DETAIL



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LOG OF EXPLORATORY BORING

SB-3

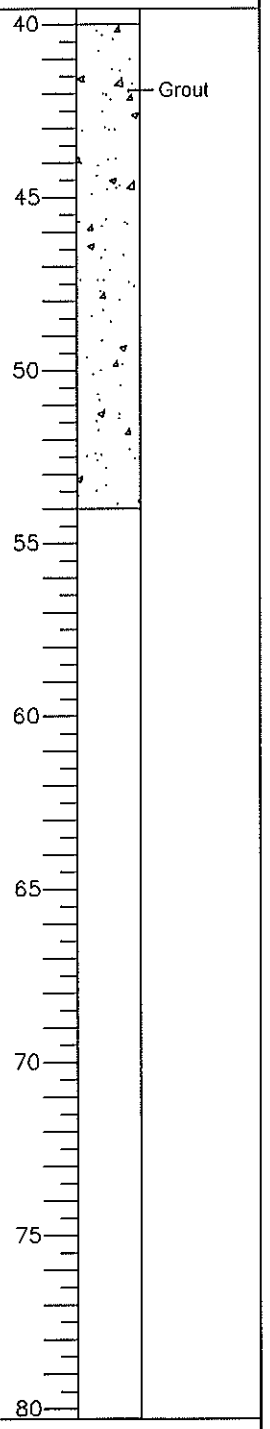
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/31/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 54.0 feet
DEPTH TO WATER: Not applicable

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				40	SILT WITH SAND (ML) (continued).		
0	20 14 23	1.5/ 1.5		45		ML	
0	17 19 22	1.5/ 1.5		50	SILT (ML): Yellowish brown (10YR 6/4), 100 % silt.		
				55			
				60			
				65			
				70			
				75			
				80			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

SB-3
PAGE 2 OF 2

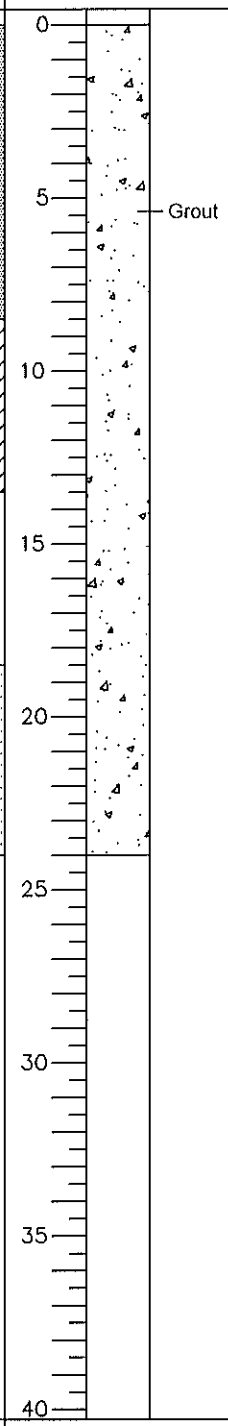
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/31/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 24.0 feet
DEPTH TO WATER: 19.5 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand augered to 5'.		
0	12 12 15	1.0/ 1.5		5	SAND (SP): Yellowish brown (10YR 5/6), 90 % sand, 10% gravel, soft, damp.	SP	
0	5 4 9	1.0/ 1.5		10	CLAY (CL): Black (10YR 2/1), 90 % clay, 10% sand, soft, moist.	CL	
0	14 16 19	1.5/ 1.5		15	SILT WITH CLAY (ML): Yellowish brown (10YR 4/3), 70 % silt, 20% clay, 10% gravel, soft, moist.	ML	
0	14 16 21	1.0/ 1.5		20	SAND WITH GRAVEL (SW): Yellowish brown (10YR 4/4), 10% silt, 50% sand, 40% gravel, soft, moist.	SW	
				25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

SB-4
PAGE 1 OF 1

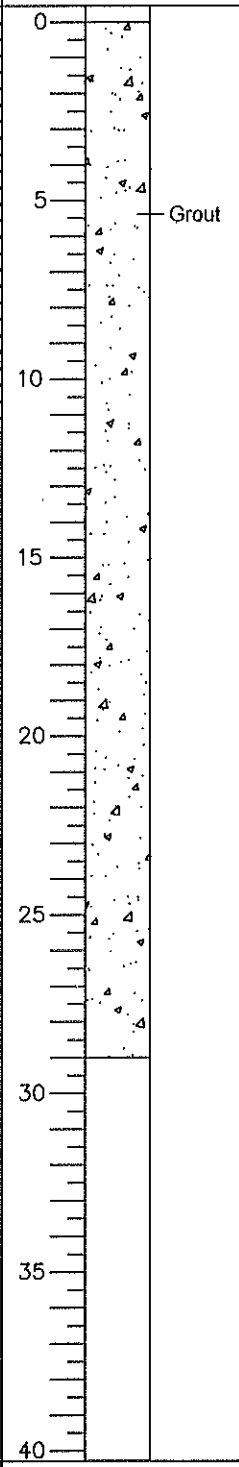
PROJECT NO.: 42-0102-01
CLIENT: ConocoPhillips
LOCATION: 76 Service Station #5781
3535 Pierson Street, Oakland, California

DATE DRILLED: 10/31/03
LOGGED BY: P. Kelleher
APPROVED BY: B.A. Moed, RG
DRILLING CO.: Cascade Drilling

DRILLING METHOD: 8-inch Hollow-Stem Auger
SAMPLER TYPE: 2-inch Split Spoon
TOTAL DEPTH: 29.0 feet
DEPTH TO WATER: 24.6 feet

PID/FID (ppm)	BLOWS PER 6 INCHES	RECOVERY	SAMPLE	DEPTH (feet below grade)	DESCRIPTION	USCS	LITHOLOGY
				0	Hand augered to 5'.		
0	11 11 13	1.5/ 1.5		5	CLAY (CL): Very dark gray (10YR 2/1), 90 % clay, 10% gravel, soft, damp.	CL	
0	13 14 17	1.5/ 1.5		10	- @ 9': color change to dark gray (10YR 4/1), 95 % clay, 5% gravel.		
0	12 16 17	1.5/ 1.5		15	SAND (SP): Yellowish brown (10YR 5/6), 10 % silt, 90% sand, soft, moist.	SP	
0	15 15 19	1.5/ 1.5		20			
0	14 16 19	0.5/ 1.5		25			
				30			
				35			
				40			

BORING BACKFILL DETAIL



TRC

LOG OF EXPLORATORY BORING

SB-5
PAGE 1 OF 1

Delta

Consultants

Project No: c105781031	Client: ConocoPhillips	Well/ Boring ID: SB-6	
Logged By: Nadine Periat	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 2	
Driller: Gregg Drilling and Testing	Date Drilled: March 12, 2010	Location Map	
Drilling Method: Hollow Stem Auger	Hole Diameter: 6"	See Site Map	
Sampling Method: Split Spoon	Hole Depth: 40 feet		
Casing Type: NA	Well Diameter: NA	▽ :First encountered water	
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
					1			SC	**Clayey Sand,** tan, 15-20% clay, low plasticity, sand is medium to coarse
					2				
					3				
					4				As above with fractured granitic cobbles approximately 4" in diameter. Red oxidation present in fracture planes.
				Air Knife to 5 feet	5				
		Moist	0.6	1 2 3	6			SC	**Clayey Sand with Gravel**, tan, 15-20% clay, 15-20% gravel, low plasticity. Sand is well graded, gravel is angular and medium sized, loose.
					7				
					8				
				3	9				
		Moist	0.9	2 2	10			SC	**Clayey Sand**, tan, 35% clay, low plasticity, sand is well graded, very loose.
					11				
					12				
	▽				13				
		Wet	1.3	9 5 5	14			GP	**Poorly Graded Gravel**, tan/green, no plasticity, <5% fines. Rock fragments are green quartzite, approximately 3 inches in diameter, loose. Rocks stuck in sampler, poor recovery.
					15				
					16				
					17				
					18				
				1 2 4	19				No Recovery, loose density
					20				
					21				
					22				

Delta
Consultants

Project No: c105781031	Client: ConocoPhillips	Well/ Boring ID: SB-6	
Logged By: Nadine Periat	Location: 3535 Pierson Street, Oakland, CA	Page 2 of 2	
Driller: Gregg Drilling and Testing	Date Drilled: March 12, 2010	Location Map: See Site Map	
Drilling Method: Hollow Stem Auger	Hole Diameter: 6"		
Sampling Method: Split Spoon	Hole Depth: 40 feet		
Casing Type: NA	Well Diameter: NA		
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
					23				
				7	24				**Sandy Lean Clay**, tan, 30% well graded sand,
		Wet	1.6	8					low plasticity, very tough, some gray root holes with
				17	25				roots, very stiff
									.
					26				
					27				
					28				
				9	29				**Lean Clay with Sand**, tan, 20% fine sand, low
		Wet	0.9	12					plasticity, trace black organic matter in ~1mm
				18	30				spheres, very stiff.
					31				
					32				
					33				
				11	34				As above, trace fine gravel
		Wet	0.9	13					
				16	35				
					36				
					37				
					38				
				8	39				**Lean Clay,** tan, 10% fine sand, trace fine gravel,
		Wet	2.1	10					low plasticity, very stiff.
				10	40				
									Bottom of Boring at 40 Feet
					41				
					42				
					43				
					44				

Delta

Consultants

Project No: c105781031	Client: ConocoPhillips	Well/ Boring ID: SB-7	
Logged By: Nadine Periat	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1	
Driller: Gregg Drilling and Testing	Date Drilled: March 12, 2010	Location Map	
Drilling Method: Hollow Stem Auger	Hole Diameter: 6"	See Site Map	
Sampling Method: Split Spoon	Hole Depth: 15 feet	▽ : First encountered water	
Casing Type: NA	Well Diameter: NA		
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
				Air Knife to 5 feet	1			CL	**Sandy Lean Clay,** mottled tan and orange, low plasticity, 45% fine to medium sand.
					2				
					3				
					4				
		Moist	0.4		5				As above
					6			CL	**Lean Clay with sand,** brown, 20-25% fine to coarse sand, medium plasticity.
					7				
					8				
					9			CL	**Lean Clay,** gray, 10-15% well graded sand, low plasticity, inch long chunks of fractured quartzite.
		Moist	0.5		10				
					11				
					12				
	▽				13				
		Wet	0.4		14			SP-SC	**Poorly Graded Sand with Clay,** tan, no plasticity, sand is medium.
					15				**Bottom of boring at 15 feet**
					16				
					17				
					18				
					19				
					20				
					21				
					22				

Delta

Consultants

Project No: c105781031	Client: ConocoPhillips	Well/ Boring ID:SWC-2	
Logged By: Nadine Periat	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1	
Driller: Gregg Drilling and Testing	Date Drilled: March 12, 2010	Location Map	
Drilling Method: Hollow Stem Auger	Hole Diameter: 6"	See Site Map	
Sampling Method: Split Spoon	Hole Depth: 20 feet	▽ : First encountered water	
Casing Type: NA	Well Diameter: NA		
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Moist		Air Knife/ Hand Auger to 10 feet	1			SC	**Clayey Sand with Gravel**, brown, 15-20% clay, 50% well graded sand, 30% fine to medium gravel, No plasticity, gravel is subrounded. Suspected artificial fill.
					2				
					3				
					4				
					5				
					6				
					7				
					8				
		Wet			9				
					10				
					11				As above
		Wet	0.5		12				
	▽				13				
					14			CL	**Lean Clay with Sand and Gravel,** mottled brown/tan, 20% well graded sand, 15% fine gravel, low plasticity.
		Wet	0.4		15				
					16				
					17				
					18				
					19				As above, fracture planes present when clay core is broken open. Black oxidation on fracture planes.
		Wet	0.1		20				
					21				
					22				

Delta

Consultants

Project No: c105781031	Client: ConocoPhillips	Well/ Boring ID:SWD-2	
Logged By: Nadine Periat	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1	
Driller: Gregg Drilling and Testing	Date Drilled: March 12, 2010	Location Map	
Drilling Method: Hollow Stem Auger	Hole Diameter: 6"	See Site Map	
Sampling Method: Split Spoon	Hole Depth: 20 feet	▽ : First encountered water	
Casing Type: NA	Well Diameter: NA		
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
				Air Knife/ Hand Auger to 10 feet	1			CL	**Lean Clay,** tan, 15% fine sand, low plasticity.
		Moist			2				
					3				
					4				
					5				
					6				
		Wet	17.7		7				As above, dark brown, 10-15% fine sand, medium plasticity, trace gravel, soil is saturated
					8				
					9				As above, light tan, not saturated, no gravel.
		Moist			10				
					11		↕		As above, trace fine gravel, gray root holes.
		Moist	2.4		12				
	▽				13				
				9	14		↕	SC	**Clayey Sand**, tan, 20-25% clay, slight plasticity,
		Damp	0.2	12 17	15				very five sand, flecks of black organic material, veins of orange oxidation.
					16				
					17				
					18				
				8	19		↕		As above, 35% clay, sand is well graded,
		Damp	0.1	12 16	20				low plasticity
					21				
					22				

APPENDIX C

Historical Groundwater Monitoring and Sampling Results

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

December 1990 Through June 2010

76 Station 5781

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-D (µg/l)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-4			**(Screen Interval in feet: 15-25)**											
6/16/2010	153.48	11.13	0.00	142.35	--	ND<50	58	ND<0.50	9.7	1.3	16	--	5.4	
MW-5			**(Screen Interval in feet: 10-20)**											
6/16/2010	153.66	11.95	0.00	141.71	--	3000	29000	580	6800	850	7200	--	ND<50	
MW-A			**(Screen Interval in feet: --)**											
12/18/1990	--	--	--	--	--	73	ND	ND	ND	ND	ND	--	--	
5/3/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
8/7/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
11/8/1991	--	--	--	--	--	ND	ND	ND	ND	ND	ND	--	--	
2/6/1992	151.80	19.88	0.00	131.92	--	ND	ND	ND	ND	ND	ND	--	--	
8/4/1992	151.80	18.95	0.00	132.85	0.93	ND	ND	ND	ND	ND	0.51	--	--	
2/10/1993	151.80	17.71	0.00	134.09	1.24	ND	ND	ND	ND	ND	ND	--	--	
2/10/1994	151.80	15.25	0.00	136.55	2.46	ND	ND	ND	0.52	ND	0.92	--	--	
2/9/1995	151.80	15.68	0.00	136.12	-0.43	ND	ND	ND	ND	ND	ND	--	--	
2/6/1996	151.80	12.52	0.00	139.28	3.16	120	ND	ND	ND	ND	2.1	--	--	
2/5/1997	151.80	13.01	0.00	138.79	-0.49	61	ND	ND	ND	ND	ND	--	ND	
2/2/1998	151.80	11.91	0.00	139.89	1.10	ND	ND	ND	ND	ND	ND	--	ND	
2/22/1999	151.80	11.24	0.00	140.56	0.67	ND	ND	ND	ND	ND	ND	--	ND	
2/26/2000	151.80	12.16	0.00	139.64	-0.92	ND	ND	ND	1.01	ND	ND	--	ND	
3/7/2001	151.80	11.91	0.00	139.89	0.25	131	ND	ND	ND	ND	ND	ND	ND	
2/22/2002	151.80	14.08	0.00	137.72	-2.17	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	
2/22/2003	151.80	14.41	0.00	137.39	-0.33	93	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<2.0	ND<2.0	
2/3/2004	151.80	14.32	0.00	137.48	0.09	60	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<2.0	

Table 2

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

December 1990 Through June 2010

76 Station 5781

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-D (µg/l)	TPH-G 8015 (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
MW-A continued														
2/18/2005	151.80	14.21	0.00	137.59	0.11	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	
3/29/2006	151.80	12.72	0.00	139.08	1.49	ND<200	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	0.54	
3/28/2007	151.80	13.98	0.00	137.82	-1.26	92	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/22/2008	151.80	12.68	0.00	139.12	1.30	ND<50	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/27/2009	151.80	14.35	0.00	137.45	-1.67	53	ND<50	ND<0.30	ND<0.30	ND<0.30	ND<0.60	ND<1.0	ND<0.50	
3/23/2010	151.80	19.55	0.00	132.25	-5.20	ND<58	--	--	--	--	--	--	--	
6/16/2010	154.79	17.85	0.00	136.94	4.69	ND<50	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	

Table 2 a
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 5781

Date Sampled	TPH-G (GC/MS) (µg/l)	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene-dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	Methanol (µg/l)	Total Oil and Grease (mg/l)	TRPH (mg/l)	Bromo-dichloro-methane (µg/l)
MW-4												
6/16/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--
MW-5												
6/16/2010	--	ND<1000	ND<25000	ND<50	ND<50	ND<50	ND<50	ND<50	ND<100	--	--	--
MW-A												
2/6/1996		--	--	--	--	--	--	--	--	--	--	--
2/5/1997		--	--	--	--	--	--	--	--	--	--	--
3/7/2001		ND	ND	ND	ND	ND	ND	ND	--	--	--	--
2/22/2003	--	ND<100	ND<500	ND<2.0	ND<2.0	ND<2.0	ND<2.0	ND<2.0	--	--	--	--
2/3/2004	--	ND<100	ND<500	ND<2.0	ND<0.50	ND<2.0	ND<2.0	ND<2.0	--	--	ND<1.0	ND<0.50
2/18/2005	--	ND<5.0	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<2.0	--	ND<0.50
3/29/2006	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--	ND<0.50
3/28/2007	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	--	ND<0.50
3/22/2008	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	--	ND<0.50
3/27/2009	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<5.0	--	ND<0.50
6/16/2010	--	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<100	--	--	--

Table 2 b
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 5781

Date Sampled	Bromo-form (µg/l)	Bromo-methane (µg/l)	Carbon Tetra-chloride (µg/l)	Chloro-benzene (µg/l)	Chloro-ethane (µg/l)	2-Chloroethyl vinyl ether (µg/l)	Chloroform (µg/l)	Chloro-methane (µg/l)	Dibromo-chloro-methane (µg/l)	1,2-Dichloro-benzene (µg/l)	1,3-Dichloro-benzene (µg/l)	1,4-Dichloro-benzene (µg/l)
MW-A												
2/3/2004	ND<2.0	ND<1.0	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<2.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50
2/18/2005	ND<2.0	ND<1.0	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/29/2006	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/28/2007	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/22/2008	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/27/2009	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

Table 2 c
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 5781

Date Sampled	Dichloro-difluoro-methane (µg/l)	1,1-DCA (µg/l)	1,1-DCE (µg/l)	cis-1,2-DCE (µg/l)	trans-1,2-DCE (µg/l)	1,2-Dichloro-propane (µg/l)	cis-1,3-Dichloro-propene (µg/l)	trans-1,3-Dichloro-propene (µg/l)	Methylene chloride (µg/l)	1,1,2,2-Tetrachloro-ethane (µg/l)	Tetrachloro-ethene (PCE) (µg/l)	Trichloro-trifluoro-ethane (µg/l)
MW-A												
2/3/2004	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50
2/18/2005	ND<1.0	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	ND<0.50	ND<0.50	ND<0.50
3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50
3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50
3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50
3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50	ND<0.50	ND<0.50

Table 2 d
ADDITIONAL HISTORIC ANALYTICAL RESULTS
76 Station 5781

Date Sampled	1,1,1-Trichloro-ethane (µg/l)	1,1,2-Trichloro-ethane (µg/l)	Trichloro-ethene (TCE) (µg/l)	Trichloro-fluoro-methane (µg/l)	Vinyl chloride (µg/l)
MW-A					
2/3/2004	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
2/18/2005	ND<0.50	ND<0.50	ND<0.50	ND<1.0	ND<0.50
3/29/2006	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/28/2007	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/22/2008	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
3/27/2009	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50

APPENDIX D
Air Monitoring Results

Storm Drain PID Summary

SS# 5781 - 3535 Pierson Street, Oakland, CA

	Date	Time	Sample Point	Depth Below Surface	PID Reading (PPM)	LEL Reading (%LEL)
Manhole #2	2/22/2010		MH-2	Surface	500	0
	3/11/2010	12:45	MH-2	Surface	150	0
	3/17/2010	12:14	MH-2	Surface	85	0
	3/17/2010	12:17	MH-2	2	73.5	0
	3/17/2010	12:19	MH-2	4	170	0
	3/17/2010	12:21	MH-2	6	173	0
	3/17/2010	12:24	MH-2	8	165	0
	3/17/2010	12:26	MH-2	10	165	0
	3/17/2010	12:28	MH-2	12	187	0
	5/5/2010	--	MH-2	Surface	120-150	--
	5/12/2010	--	MH-2	Surface	18	--
	6/3/2010	9:12	MH-2	Surface	25.2	--
	6/9/2010	Morning	MH-2	Surface	21	--
	6/9/2010	Afternoon	MH-2	Surface	6.6	--
	6/9/2010	Afternoon	MH-2	5	6.1	--
	6/24/2010	Morning	MH-2	Surface	0	--
	6/24/2010	Morning	MH-2	2	0	--
	6/24/2010	Morning	MH-2	4	0	--
	6/24/2010	Morning	MH-2	6	0	--
	6/24/2010	Morning	MH-2	8	0	--
	6/24/2010	Morning	MH-2	10	0	--
	6/24/2010	Morning	MH-2	12	0	--
	7/13/2010	Morning	MH-2	Surface	0	0
	7/13/2010	Morning	MH-2	2	0	0
	7/13/2010	Morning	MH-2	4	2	0
	7/13/2010	Morning	MH-2	6	2	0
	7/13/2010	Morning	MH-2	8	2	0
	7/13/2010	Morning	MH-2	10	0	0
	7/13/2010	Morning	MH-2	12	2	0
	7/13/2010	Morning	MH-2	13	0	0
	7/26/2010	**9:00**	**MH-2**	**Surface**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**2**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**4**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**6**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**8**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**10**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**12**	**0**	**0**
	7/26/2010	**9:00**	**MH-2**	**13**	**0**	**0**

	Date	Time	Sample Point	Depth Below Surface	PID Reading (PPM)	LEL Reading (%LEL)
Manhole #3	3/11/2010	12:47	MH-3	Surface	82.1	--
	3/17/2010	12:39	MH-3	Surface	92.5	0
	3/17/2010	12:43	MH-3	2	135	0
	3/17/2010	12:45	MH-3	4	242	0
	3/17/2010	12:47	MH-3	6	240	0
	3/17/2010	12:49	MH-3	8	220	0
	3/17/2010	12:51	MH-3	10	282	0
	5/12/2010	--	MH-3	Below MH	16.9	--
	6/3/2010	9:15	MH-3	Surface	0	--
	6/24/2010	Morning	MH-3	Surface	0	--
	6/24/2010	Morning	MH-3	2	0	--
	6/24/2010	Morning	MH-3	4	0	--
	6/24/2010	Morning	MH-3	6	0	--
	6/24/2010	Morning	MH-3	8	0	--
	6/24/2010	Morning	MH-3	10	0	--
	7/13/2010	Morning	MH-3		Unable to sample - car parked over manhole	Unable to sample - car parked over manhole
	7/13/2010	**Morning**	**MH-3**		**Unable to sample - car parked over manhole**	**Unable to sample - car parked over manhole**

Manhole #7	7/13/2010	Morning	MH-7	Surface	0	0
	7/13/2010	Morning	MH-7	1.5	0	0
	7/26/2010	**9:30**	**MH-7**	**Surface**	**0**	**0**
	7/26/2010	**9:30**	**MH-7**	**1.5**	**0**	**0**

Drain Inlet #1	3/11/2010	12:43	DI-1	Surface	84.3	--
	3/17/2010	1:24	DI-1	Surface	15	0
	3/17/2010	1:27	DI-1	1	175	0
	3/17/2010	1:30	DI-1	2.5	146	0
	6/3/2010	10:46	DI-1	Surface	22.6	--
	6/4/2010	12:12	DI-1	Surface	88.1	--
	6/9/2010	Morning	DI-1	Surface	4.5	--
	6/24/2010	Morning	DI-1	Surface	0	--
	6/24/2010	Morning	DI-1	2	0	--
	7/13/2010	Morning	DI-1	Surface	2	0
	7/13/2010	Morning	DI-1	2	6	0
	7/26/2010	**8:55**	**DI-1**	**Surface**	**0**	**0**
	7/26/2010	**8:55**	**DI-1**	**2**	**0**	**0**

	Date	Time	Sample Point	Depth Below Surface	PID Reading (PPM)	LEL Reading (%LEL)
Drain Inlet #4	3/11/2010	12:51	DI-4	Surface	258	--
	3/17/2010	1:14	DI-4	Surface	38.5	0
	3/17/2010	1:16	DI-4	2	43.6	0
	3/17/2010	1:18	DI-4	4	50	0
	5/12/2010	--	DI-4	Surface	36.9	--
	6/4/2010	--	DI-4	Surface	1.1	--
	6/9/2010	Morning	DI-4	Surface	3.9	--
	6/24/2010	Morning	DI-4	Surface	0	--
	6/24/2010	Morning	DI-4	2	0	--
	6/24/2010	Morning	DI-4	4	0	--
	7/13/2010	Morning	DI-4	Surface	3	0
	7/13/2010	Morning	DI-4	2	2	0
	7/13/2010	Morning	DI-4	4	2	0
	7/26/2010	**9:10**	**DI-4**	**Surface**	**0**	**0**
	7/26/2010	**9:10**	**DI-4**	**2**	**0**	**0**
	7/26/2010	**9:10**	**DI-4**	**4**	**0**	**0**

Drain Inlet #5	3/11/2010	12:51	DI-5	Surface	11	--
	3/17/2010	12:57	DI-5	Surface	118	0
	3/17/2010	12:59	DI-5	2	199	0
	3/17/2010	1:02	DI-5	4	95	0
	3/17/2010	1:04	DI-5	6	95	0
	3/17/2010	1:06	DI-5	8	134	0
	3/17/2010	1:18	DI-5	10	104	0
	3/17/2010	1:10	DI-5	12	224	0
	5/12/2010	--	DI-5	Surface	0	--
	6/3/2010	9:07	DI-5	Surface	0.1	--
	6/9/2010	Morning	DI-5	Surface	0	--
	6/9/2010	Afternoon	DI-5	5	1.9	--
	6/24/2010	Morning	DI-5	Surface	0	--
	6/24/2010	Morning	DI-5	2	0	--
	6/24/2010	Morning	DI-5	4	0	--
	6/24/2010	Morning	DI-5	6	0	--
	6/24/2010	Morning	DI-5	8	0	--
	6/24/2010	Morning	DI-5	10	0	--
	6/24/2010	Morning	DI-5	12	0	--
	7/13/2010	Morning	DI-5	Surface	0	0
	7/13/2010	Morning	DI-5	2	0	0
	7/13/2010	Morning	DI-5	4	0	0
	7/13/2010	Morning	DI-5	6	0	0
	7/13/2010	Morning	DI-5	8	0	0
	7/13/2010	Morning	DI-5	10	0	0
	7/13/2010	Morning	DI-5	12	0	0
	7/26/2010	**9:05**	**DI-5**	**Surface**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**2**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**4**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**6**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**8**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**10**	**0**	**0**
	7/26/2010	**9:05**	**DI-5**	**12**	**0**	**0**

	Date	Time	Sample Point	Depth Below Surface	PID Reading (PPM)	LEL Reading (%LEL)
Drain Inlet #6	7/13/2010	Morning	DI-6	Surface	0	0
	7/13/2010	Morning	DI-6	2	0	0
	7/13/2010	Morning	DI-6	3	0	0
	7/26/2010	**9:20**	**DI-6**	**Surface**	**0**	**0**
	7/26/2010	**9:20**	**DI-6**	**2**	**0**	**0**
	7/26/2010	**9:20**	**DI-6**	**3.5**	**0**	**0**

Manhole MH-2 repaired on April 28, 2010

Precipitation As Reported by Accuweather.com for Oakland, CA

5/9/2010	Trace
5/10/2010	0.14
5/17/2010	0.11
5/18/2010	0.06
5/19/2010	Trace
5/24/2010	Trace
5/25/2010	0.29
5/26/2010	0.03
5/27/2010	0.53
5/31/2010	Trace
6/24/2010	Trace
6/25/2010	Trace
7/9/2010	Trace

APPENDIX E
ACPWA Drilling Permits

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 05/19/2010 By jamesy

Permit Numbers: W2010-0351 to W2010-0352
Permits Valid from 06/03/2010 to 06/08/2010

Application Id: 1274291500488 **City of Project Site:** Oakland
Site Location: 3535 Pierson St, Oakland, CA, 94619 (76 Service Station #5781)
Project Start Date: 06/03/2010 **Completion Date:** 06/08/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant:	Delta - Jan Wagoner 11050 White Rock Rd, Ste 110, Rancho Cordova, CA 95670	**Phone:** 916-503-1275
Property Owner:	United Bros. Enterprises 3535 Pierson St., Oakland, CA 94619	**Phone:** 510-533-2439
Client:	Conoco Phillips c/o Terry Grayson 76 Broadway, Sacramento, CA 95818	**Phone:** 916-558-7666

Total Due: $794.00
Receipt Number: WR2010-0176 **Total Amount Paid:** $794.00
Payer Name : Delta Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Well Construction-Monitoring-Monitoring - 2 Wells
Driller: Gregg Drilling - Lic #: 57932633 - Method: hstem **Work Total: $794.00**

Specifications

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2010-0351	05/19/2010	09/01/2010	MW4	8.00 in.	4.00 in.	5.00 ft	25.00 ft
W2010-0352	05/19/2010	09/01/2010	MW5	8.00 in.	4.00 in.	5.00 ft	25.00 ft

Specific Work Permit Conditions

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

2. Permittee, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.

3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755

(Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

5. Applicant shall submit the copies of the approved encroachment permit to this office within 60 days.

6. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

7. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

8. Minimum surface seal thickness is two inches of cement grout placed by tremie

9. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

10. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

Alameda County Public Works Agency - Water Resources Well Permit

399 Elmhurst Street
Hayward, CA 94544-1395
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 06/02/2010 By jamesy

Permit Numbers: W2010-0362
Permits Valid from 06/03/2010 to 06/08/2010

Application Id: 1274911304097 **City of Project Site:** Oakland
Site Location: 3535 Pierson St, Oakland, CA
(76 Service Station #5781)
Project Start Date: 06/03/2010 **Completion Date:** 06/08/2010
Assigned Inspector: Contact Vicky Hamlin at (510) 670-5443 or vickyh@acpwa.org

Applicant: Delta - Jan Wagoner **Phone:** 916-503-1275
11050 White Rock Rd., Ste 110, Rancho Cordova, CA 95670
Property Owner: United Bros. Enterprises **Phone:** 510-533-2439
3535 Pierson St, Oakland, CA 94619
Client: Conoco Phillips, Terry Grayson **Phone:** 916-558-7666
76 Broadway, Sacramento, CA 95818

Total Due: $265.00
Receipt Number: WR2010-0181 **Total Amount Paid:** $265.00
Payer Name : Delta Paid By: CHECK **PAID IN FULL**

Works Requesting Permits:

Borehole(s) for Investigation-Environmental/Monitorinig Study - 1 Boreholes
Driller: Gregg - Lic #: 7932633 - Method: other **Work Total: $265.00**

Specifications

Permit Number	Issued Dt	Expire Dt	# Boreholes	Hole Diam	Max Depth
W2010-0362	06/02/2010	09/01/2010	1	6.00 in.	25.00 ft

Specific Work Permit Conditions

1. Backfill bore hole by tremie with cement grout or cement grout/sand mixture. Upper two-three feet replaced in kind or with compacted cuttings. All cuttings remaining or unused shall be containerized and hauled off site. The containers shall be clearly labeled to the ownership of the container and labeled hazardous or non-hazardous.

2. Boreholes shall not be left open for a period of more than 24 hours. All boreholes left open more than 24 hours will need approval from Alameda County Public Works Agency, Water Resources Section. All boreholes shall be backfilled according to permit destruction requirements and all concrete material and asphalt material shall be to Caltrans Spec or County/City Codes. No borehole(s) shall be left in a manner to act as a conduit at any time.

3. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.

4. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

5. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of $500.00.

6. Prior to any drilling activities onto any public right-of-ways, it shall be the applicants responsibilities to contact and coordinate a Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits required for that City or to the County and follow all City or County Ordinances. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County a Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.

7. Permit is valid only for the purpose specified herein. No changes in construction procedures, as described on this permit application. Boreholes shall not be converted to monitoring wells, without a permit application process.

APPENDIX F
Current Boring Logs

Delta
Consultants

Project No: c105781051	Client: ConocoPhillips	Well/ Boring ID: SB-8	
Logged By: Caitlin Morgan	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1	
Driller: Gregg Drilling and Testing	Date Drilled: June 3, 2010	Location Map	
Drilling Method: Directpush	Hole Diameter:	See Site Map	
Sampling Method: Geoprobe	Hole Depth:	▽ : First encountered water	
Casing Type: NA	Well Diameter: NA		
Slot Size:NA	Well Depth: NA		
Gravel Pack: NA	Casing Stickup: NA		
Elevation	Northing	Easting	

Boring Completion / Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement				Air Knife to 5 feet	1			CL	**Lean Clay,** dark brown to brown, some sands.
					2				
					3				
					4				
					5				
		Moist	0						As above.
					6			CL	**Lean Clay with sand,** light brown, 20-25% fine to coarse sand, medium plasticity.
					7				As above, with increased clay at the 7 foot depth.
					8				
		Moist						CL	**Lean Clay with sand**, 35-40% fine to coarse sand.
					9				**Lean Clay with sand and gravel,** dark brown with orange and tan smearing.
		Moist	0.1	SB-8 @ 10 3:50	10				
					11				
					12				As above with increasing moisture at 12 feet bgs and increasing clay at 13 feet bgs.
					13				
					14				As above with sandy gravels.
		Wet	0	SB-8 @ 15 3:56	15				**Lean clay with sand,** gray with tan mottling, slight odor.
					16				
					17				As above, clay became increasingly firm.
					18				
					19				
					20				Same as above.
					21				
					22				

Delta
Consultants

Project No: c105781051
Logged By: Caitlin Morgan
Driller: **Gregg Drilling**
Drilling Method: Directpush
Sampling Method: Geoprobe
Casing Type: NA
Slot Size: NA
Gravel Pack: NA

Client: **ConocoPhillips**
Location: 3535 Pierson Street, Oakland, CA

Hole Diameter:
Hole Depth:
First Water Depth: NA
Static Water Depth: NA
Well Depth: NA

Boring No: SB-8
Date Drilled: 06/03/10
Page **2** of 2

▽ = First Water
▼ = Static Groundwater

Elevation | Northing | Easting

Boring Completion: Backfill	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample: Recovery	Sample: Analyzed	Soil Type	LITHOLOGY / DESCRIPTION
Neat Cement					23				**Lean clay with sand,** gray with tan mottling, very firm.
		Moist	0	SB-8 @ 24 4:03	24		▼		Boring terminated at 24 feet bgs.
					25				
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta

Consultants

Project No: C105781051	Client: ConocoPhillips	Well/ Boring ID: MW-4
Logged By: Caitlin Morgan	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1
Driller: Gregg Drilling and Testing	Date Drilled: June 4, 2010	Location Map: See Site Map
Drilling Method: Geoprobe	Hole Diameter: 8"	▽ : First encountered water
Sampling Method: Direct push	Hole Depth: 25 feet	
Casing Type: 4"	Well Diameter: 4"	
Slot Size:0.010	Well Depth: NA	
Gravel Pack: #30 mesh	Casing Stickup: NA	
Elevation	Northing	Easting

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
					Air Knife to 5 feet	1				Six inches of asphalt removed. *Variance approved to place well within 5' of water and electrical utility as well as storm sewer drain. Original location uncovered a 3.5' X 9" diameter concrete beam, the location was cleared at a greater width to allow for full clearance around the area of the beam.*
						2				
						3				
						4				Clayey sand (tan) in the first 3 feet, Clay (brown with olive green mottling; some angular to sub angular gravel present, as well as small brick.
Grout				1.3	MW-4 @ 5 12:28	5				Same as above in the 3 to 5 foot depths.
						6				
						7				**Clayey sand;** brown and black, medium to firm; moist, no odor.
						8				
						9				
				5	MW-4 @ 10 12:32	10				
						11				As above. More gravel. At 12.5' bgs becomes black clay with sand, medium firm to soft.
Bentnite						12				
						13				As above, with increased clay and firmness.
						14				
				2.4	MW-4 @ 15 12:39	15				**Clayey sand with gravel**; brown to tan; moist.
						16				
						17				As above with increased sands; red and orange mottling. Sands have increased coarseness.
Sand						18				
						19				
				1.9	MW-4 @ 20 12:44	20				**Clayey Sand;** back, moist- very moist.
						21				
						22				

Delta
Consultants

Project No: c105781051
Logged By: Caitlin Morgan
Driller: Gregg Drilling and Testing
Drilling Method: geoprobe
Sampling Method: direct push
Casing Type:
Slot Size:
Gravel Pack:

Client: **ConocoPhillips**
Location: **3535 Pierson Street, Oakla**
Hole Diameter:
Hole Depth:
Well Diameter:
Well Depth:
First Water Depth:

Well No: MW-4
Date Drilled:
Page **2** of **2**

▽ = First Water
▼ = Static Groundwater

Elevation	Northing	Easting

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Sample Identification	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
Sand					23				As above.
		Moist	1.7	MW-4 @ 25 12:53	25				**Boring terminated at 25 feet bgs. No groundwater encountered.**
					26				
					27				
					28				
					29				
					30				
					31				
					32				
					33				
					34				
					35				
					36				
					37				
					38				
					39				
					40				
					41				
					42				
					43				
					44				

Delta

Consultants

Project No: c105781051	Client: ConocoPhillips	Well/ Boring ID: MW-5	
Logged By: Alan Buehler	Location: 3535 Pierson Street, Oakland, CA	Page 1 of 1	
Driller: Gregg Drilling and Testing	Date Drilled: June 4, 2010	Location Map	
Drilling Method: Geoprobe	Hole Diameter: 8"	See Site Map	
Sampling Method: Direct Push	Hole Depth: 25 feet	▽ : First encountered water	
Casing Type: 4"	Well Diameter: 4"		
Slot Size: 0.010	Well Depth: NA		
Gravel Pack: #30 Mesh	Casing Stickup: NA		
Elevation	Northing	Easting	

Well Completion: Backfill	Well Completion: Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery	Sample: Interval	Soil Type	LITHOLOGY / DESCRIPTION
Grout					Air Knife to 5 feet	1				**Clay**; dark brown to brown;some silt and gravel present, with trace roots at approximately 4.5' bgs.
						2				
						3				
						4				
				1.9	MW-5 @ 5 11:55	5				
Bentonite						6				**Sandy clay**; brown; 15% sand, damp, no odor.
						7				
						8				Same as above.
Sand						9				
						10				
						11				Same as above, increased moisture.
				1.0	MW-5 @ 12 12:01	12				
						13				
						14				**Sandy clay**; brown; moist; slight odor.
				4.5	MW-5 @ 15 12:03	15				
		▽				16				**Sandy clay,** brown, 40% sand, saturated, no odor.
						17				
						18				
						19				
						20				Clay; black; damp; no odor.
				3.1	MW-5 @ 20 12:08					**Boring terminated at 20 feet bgs.**
						21				
						22				

APPENDIX G

Certified Laboratory Analytical Reports

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 06/25/2010

Jan Wagoner

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

RE: 5781
BC Work Order: 1007798
Invoice ID: B082508

Enclosed are the results of analyses for samples received by the laboratory on 6/8/2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS: RUSH

CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips SAP Project Number:

ConocoPhillips Requisition / Line Number:

DATE: ______ PAGE: ____ of ____

SAMPLING COMPANY:	Delta Consultants
Valid Value ID:	
CONOCOPHILLIPS SITE NUMBER	SS# 5781
GLOBAL ID NO.:	
ADDRESS:	11050 White Rock Road #110, Rancho Cordova, CA 95670
SITE ADDRESS (Street and City):	900 Highway 1, Bodega Bay, CA
CONOCOPHILLIPS SITE MANAGER:	Terry Grayson
PROJECT CONTACT (Hardcopy or PDF Report to):	Jan Wagoner
TELEPHONE:	(916) 503-1275
FAX:	(916) 638-8385
E-MAIL:	jwagoner@deltaenv.com
EDF DELIVERABLE TO (RP or Designee):	Jan Wagoner (Delta)
PHONE NO.:	916-503-1275
E-MAIL:	jwagoner@deltaenv.com
LAB USE ONLY	10-07798
SAMPLER NAME(S) (Print):	Caitlin Morgan
CONSULTANT PROJECT NUMBER	C105697201

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

**5 Day turn around time

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

H2O 8260B BTEX/Oxys - VOAs with blue caps

H2O 8260B Methanol - VOAs with gray caps

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015M - TPHg, TPHd	8260B - BTEX, 8 Oxys	8260B - Methanol	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
1	MW-4@5	6/4/10	12:28p	soil	1	X	X	X	Various Preservatives Not Field Filtered
2	MW-4@10	6/4/10	12:32p	soil	1	X	X	X	Various Preservatives Not Field Filtered
3	MW-4@15	6/4/10	12:38p	soil	1	X	X	X	Various Preservatives Not Field Filtered
4	MW-4@20	6/4/10	12:44p	soil	1	X	X	X	Various Preservatives Not Field Filtered
5	MW-4@25	6/4/10	12:53p	soil	1	X	X	X	Various Preservatives Not Field Filtered
6	Comp A	6/4/10	1:58p	soil	1	X	X	X	
7	SB-8	6/3/10	4:10p	H2O	10	X	X	X	

TEMPERATURE ON RECEIPT C°

CHK BY / DISTRIBUTION / SUB-OUT ☐

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature]	B Grammel	6/8/10	1020
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

5/18/03 Revision

ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop
INVOICE REMITTANCE ADDRESS: **RUSH**
CONOCOPHILLIPS
Attn: Dee Hutchinson
3611 South Harbor, Suite 200
Santa Ana, CA. 92704

ConocoPhillips SAP Project Number:
ConocoPhillips Requisition / Line Number:
DATE:
PAGE: ___ of ___

SAMPLING COMPANY: Delta Consultants	Valid Value ID:
ADDRESS: 11050 White Rock Road #110, Rancho Cordova, CA 95670	
PROJECT CONTACT (Hardcopy or PDF Report to): Jan Wagoner	
TELEPHONE: (916) 503-1275	FAX: (916) 638-8385
E-MAIL: jwagoner@deltaenv.com	
SAMPLER NAME(s) (Print): Caitlin Morgan	CONSULTANT PROJECT NUMBER: C105697201
CONOCOPHILLIPS SITE NUMBER: SS# 5781	GLOBAL ID NO.:
SITE ADDRESS (Street and City): 900 Highway 1, Bodega Bay, CA	CONOCOPHILLIPS SITE MANAGER: Terry Grayson
EDF DELIVERABLE TO (RP or Designee): Jan Wagoner (Delta)	PHONE NO: 916-503-1275
E-MAIL: jwagoner@deltaenv.com	LAB USE ONLY: 10-0798

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

**8 Day turn around time

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

8260B BTEX/Oxys - VOAs with blue caps

8260B Methanol - VOAs with gray caps

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015M - TPHg, TPHd	8260B - BTEX, 8 Oxys	8260B - Methanol	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
8	MW-5@5	6/3/10	11:55a	soil	1	X	X	X	Various Preservatives Not Field Filtered
9	MW-5@12	6/3/10	12:01p	soil	1	X	X	X	Various Preservatives Not Field Filtered
10	MW-5@15	6/3/10	12:03p	soil	1	X	X	X	Various Preservatives Not Field Filtered
11	MW-5@20	6/3/10	12:08p	soil	1	X	X	X	Various Preservatives Not Field Filtered
12	SB-8@5	6/3/10	3:48p	soil	1	X	X	X	Various Preservatives Not Field Filtered
13	SB-8@10	6/3/10	3:50p	soil	1	X	X	X	
14	SB-8@15	6/3/10	3:56p	soil	1	X	X	X	
15	SB-8@20	6/3/10	4:00p	soil	1	X	X	X	
16	SB-8@24	6/3/10	4:03p	soil	1	X	X	X	

TEMPERATURE ON RECEIPT C°

Relinquished by: (Signature)	Received by: (Signature) BC Hammel	Date: 6/8/10	Time: 1020
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:

8/19/03 Revision

Chain of Custody and Cooler Receipt Form for 1007798 Page 3 of 4

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 of 2

Submission #: 10-07798

SHIPPING INFORMATION
Federal Express ☒ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☒ Comments:

All samples received? Yes ☒ No ☐ All samples containers intact? Yes ☒ No ☐ Description(s) match COC? Yes ☒ No ☐

COC Received ☒ YES ☐ NO

Emissivity: .95 Container: QtAM Thermometer ID: #177

Temperature: A 3.7 °C / C 3.7 °C

Date/Time 4/8/10 1020

Analyst Init BLT

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL							A			
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504							B3			
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M							C			
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE PLASTIC	A	A	A	A	A			A	A	A
~~PCB VIAL~~ Brass Sleeve						A				
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: QAM Date/Time: 4/8/10 1055

A = Actual / C = Corrected

[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Chain of Custody and Cooler Receipt Form for 1007798 Page 4 of 4

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 2 of 2

Submission #: 10-07798

SHIPPING INFORMATION
Federal Express ☑ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☐ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☐ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ | Containers ☐ Intact? Yes ☐ No ☐ | None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: .95 Container: QUART Thermometer ID: #177

Temperature: A 3.7 °C / C 3.7 °C

Date/Time 4/8/10 1020

Analyst Init BLT

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL, 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE plastic	A	A	A	A	A	A				
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: UAM Date/Time: 4/8/10 1058 [H:\DOCS\WP60\LAB_DOCS\FORMS\SAMREC2.WPD]
A = Actual / C = Corrected

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1007798-01	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 12:28
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4@5	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-4
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-02	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 12:32
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4@10	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-4
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-03	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 12:39
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4@15	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-4
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-04	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 12:44
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4@20	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-4
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1007798-05	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 12:53
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-4@25	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-4
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-06	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/04/2010 13:58
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	Comp A	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): Comp A
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-07	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 16:10
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8	**Sample Matrix:** Water
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: W
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-08	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 11:55
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5@5	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-5
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1007798-09	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 12:01
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5@12	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-5
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-10	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 12:03
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5@15	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-5
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-11	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 12:08
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	MW-5@20	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): MW-5
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-12	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 15:48
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@6	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
1007798-13	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 15:50
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@10	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-14	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 15:56
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@15	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-15	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 16:00
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@20	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:
1007798-16	**COC Number:**	---	**Receive Date:** 06/08/2010 10:20
	Project Number:	5781	**Sampling Date:** 06/03/2010 16:03
	Sampling Location:	---	**Sample Depth:** ---
	Sampling Point:	SB-8@24	**Sample Matrix:** Solids
	Sampled By:	DECR	Delivery Work Order:
			Global ID:
			Location ID (FieldPoint): SB-8
			Matrix: SO
			Sample QC Type (SACode): CS
			Cooler ID:

Delta Environmental Consultants, Inc.
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Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-01 | **Client Sample Name:** 5781, MW-4@5, 6/4/2010 12:28:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.51	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	74.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05,S09	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/22/10 23:37	MWB	GC-12	5.128	BTF1790

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-01 | **Client Sample Name:** 5781, MW-4@5, 6/4/2010 12:28:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
1,2-Dibromoethane	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
Ethylbenzene	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
Methyl t-butyl ether	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
Toluene	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
Total Xylenes	ND	mg/kg	0.020	EPA-8260	ND	A10,Z1a	1
t-Amyl Methyl ether	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
t-Butyl alcohol	ND	mg/kg	0.10	EPA-8260	ND	A10,Z1a	1
Diisopropyl ether	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
Ethanol	ND	mg/kg	2.0	EPA-8260	ND	A10,Z1a	1
Ethyl t-butyl ether	ND	mg/kg	0.010	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.1	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	103	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/14/10	06/14/10 10:50	ZZZ	MS-V2	2	BTF0917

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-01 | **Client Sample Name:** 5781, MW-4@5, 6/4/2010 12:28:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	81.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 17:11	JJH	GC-V8	1	BTF1029

Delta Environmental Consultants, Inc.
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Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-01 | **Client Sample Name:** 5781, MW-4@5, 6/4/2010 12:28:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	88.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 09:04	MWB	GC-5	0.990	BTF1337

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-02 | **Client Sample Name:** 5781, MW-4@10, 6/4/2010 12:32:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.49	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	62.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/22/10 23:58	MWB	GC-12	4.878	BTF1790

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-02 | **Client Sample Name:** 5781, MW-4@10, 6/4/2010 12:32:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.8	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.6	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 00:15	ZZZ	MS-V2	1	BTF0917

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-02 | **Client Sample Name:** 5781, MW-4@10, 6/4/2010 12:32:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	93.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 16:08	JJH	GC-V8	1	BTF1029

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-02 | **Client Sample Name:** 5781, MW-4@10, 6/4/2010 12:32:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	79.4	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 09:18	MWB	GC-5	0.993	BTF1337

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-03 | **Client Sample Name:** 5781, MW-4@15, 6/4/2010 12:39:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	74.5	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 00:21	MWB	GC-12	5.025	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-03 | **Client Sample Name:** 5781, MW-4@15, 6/4/2010 12:39:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	**0.0051**	**mg/kg**	**0.0050**	**EPA-8260**	**ND**		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.8	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 00:41	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-03 | **Client Sample Name:** 5781, MW-4@15, 6/4/2010 12:39:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 19:44	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-03 | **Client Sample Name:** 5781, MW-4@15, 6/4/2010 12:39:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	88.4	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 09:32	MWB	GC-5	0.993	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-04 | **Client Sample Name:** 5781, MW-4@20, 6/4/2010 12:44:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.49	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	68.5	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 00:42	MWB	GC-12	4.854	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-04 | **Client Sample Name:** 5781, MW-4@20, 6/4/2010 12:44:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.3	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.4	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 01:06	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-04 | **Client Sample Name:** 5781, MW-4@20, 6/4/2010 12:44:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.0	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 20:14	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-04 | **Client Sample Name:** 5781, MW-4@20, 6/4/2010 12:44:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	79.7	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 09:46	MWB	GC-5	0.997	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-05 | **Client Sample Name:** 5781, MW-4@25, 6/4/2010 12:53:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	70.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 01:05	MWB	GC-12	4.975	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-05 | **Client Sample Name:** 5781, MW-4@25, 6/4/2010 12:53:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.1	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	92.1	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 01:32	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-05 | **Client Sample Name:** 5781, MW-4@25, 6/4/2010 12:53:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	92.5	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 20:45	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-05 | **Client Sample Name:** 5781, MW-4@25, 6/4/2010 12:53:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	86.0	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 10:00	MWB	GC-5	0.950	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-06 | **Client Sample Name:** 5781, Comp A, 6/4/2010 1:58:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.48	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	70.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 01:26	MWB	GC-12	4.785	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-06 | **Client Sample Name:** 5781, Comp A, 6/4/2010 1:58:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	107	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.0	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	81.5	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 01:58	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-06 | **Client Sample Name:** 5781, Comp A, 6/4/2010 1:58:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	79.2	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 21:15	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-06 | **Client Sample Name:** 5781, Comp A, 6/4/2010 1:58:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	87.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 10:14	MWB	GC-5	0.997	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-07 | **Client Sample Name:** 5781, SB-8, 6/3/2010 4:10:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	106	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/17/10	06/18/10 00:20	MWB	GC-12	1	BTF1325

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-07 | **Client Sample Name:** 5781, SB-8, 6/3/2010 4:10:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND	Z1	1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND	Z1	1
1,2-Dichloroethane	**0.50**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Methyl t-butyl ether	**53**	**ug/L**	**0.50**	**EPA-8260**	**ND**	**Z1**	1
Toluene	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND	Z1	1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND	Z1	1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
Ethanol	ND	ug/L	250	EPA-8260	ND	Z1	1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND	Z1	1
1,2-Dichloroethane-d4 (Surrogate)	105	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	97.0	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.0	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/14/10	06/14/10 12:40	KEA	MS-V10	1	BTF0938

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-07 | **Client Sample Name:** 5781, SB-8, 6/3/2010 4:10:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**73**	**ug/L**	**50**	**Luft**	**ND**	**A91**	1
a,a,a-Trifluorotoluene (FID Surrogate)	82.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/16/10 11:01	jjh	GC-V4	1	BTF0895

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-07 | **Client Sample Name:** 5781, SB-8, 6/3/2010 4:10:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**99**	**ug/L**	**50**	**Luft/TPHd**	**ND**		1
Tetracosane (Surrogate)	77.6	%	28 - 139 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/16/10 17:43	MWB	GC-5	1	BTF1197

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-08 | **Client Sample Name:** 5781, MW-5@5, 6/3/2010 11:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	68.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 02:53	MWB	GC-12	4.975	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-08 | **Client Sample Name:** 5781, MW-5@5, 6/3/2010 11:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	103	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.4	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	92.7	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 02:23	ZZZ	MS-V2	1	BTF0917

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-08 | **Client Sample Name:** 5781, MW-5@5, 6/3/2010 11:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	87.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 21:46	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-08 | **Client Sample Name:** 5781, MW-5@5, 6/3/2010 11:55:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	88.9	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 10:56	MWB	GC-5	0.947	BTF1337

Delta Environmental Consultants, Inc.
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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-09 | **Client Sample Name:** 5781, MW-5@12, 6/3/2010 12:01:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	63.5	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 03:14	MWB	GC-12	4.950	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-09 | **Client Sample Name:** 5781, MW-5@12, 6/3/2010 12:01:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.8	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	98.5	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 02:49	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-09 | **Client Sample Name:** 5781, MW-5@12, 6/3/2010 12:01:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	89.0	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 22:17	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-09 | **Client Sample Name:** 5781, MW-5@12, 6/3/2010 12:01:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	89.0	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 11:10	MWB	GC-5	0.960	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-10 | **Client Sample Name:** 5781, MW-5@15, 6/3/2010 12:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.51	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	86.0	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 03:35	MWB	GC-12	5.102	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-10 | **Client Sample Name:** 5781, MW-5@15, 6/3/2010 12:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	102	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	100	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	95.7	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 03:15	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-10 | **Client Sample Name:** 5781, MW-5@15, 6/3/2010 12:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	94.0	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 16:38	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-10 | **Client Sample Name:** 5781, MW-5@15, 6/3/2010 12:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	80.9	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 11:23	MWB	GC-5	0.984	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-11 | **Client Sample Name:** 5781, MW-5@20, 6/3/2010 12:08:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.51	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	85.7	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 03:56	MWB	GC-12	5.076	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-11 | **Client Sample Name:** 5781, MW-5@20, 6/3/2010 12:08:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
1,2-Dibromoethane	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
Ethylbenzene	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
Methyl t-butyl ether	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
Toluene	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
Total Xylenes	ND	mg/kg	0.10	EPA-8260	ND	A10,Z1a	1
t-Amyl Methyl ether	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
t-Butyl alcohol	ND	mg/kg	0.50	EPA-8260	ND	A10,Z1a	1
Diisopropyl ether	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
Ethanol	ND	mg/kg	10	EPA-8260	ND	A10,Z1a	1
Ethyl t-butyl ether	ND	mg/kg	0.050	EPA-8260	ND	A10,Z1a	1
1,2-Dichloroethane-d4 (Surrogate)	101	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.3	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.4	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/14/10	06/14/10 13:49	ZZZ	MS-V2	10	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-11 | **Client Sample Name:** 5781, MW-5@20, 6/3/2010 12:08:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	85.0	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 23:18	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-11 | **Client Sample Name:** 5781, MW-5@20, 6/3/2010 12:08:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	88.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 11:37	MWB	GC-5	0.974	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-12 | **Client Sample Name:** 5781, SB-8@6, 6/3/2010 3:48:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.51	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	73.3	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 04:17	MWB	GC-12	5.102	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-12 | **Client Sample Name:** 5781, SB-8@6, 6/3/2010 3:48:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	109	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.2	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	93.6	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 04:07	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-12 | **Client Sample Name:** 5781, SB-8@6, 6/3/2010 3:48:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	85.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/14/10 23:49	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-12 | **Client Sample Name:** 5781, SB-8@6, 6/3/2010 3:48:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**2.1**	**mg/kg**	**2.0**	**Luft/TPHd**	**ND**		1
Tetracosane (Surrogate)	98.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 12:32	MWB	GC-5	0.938	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-13 | **Client Sample Name:** 5781, SB-8@10, 6/3/2010 3:50:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.48	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	61.6	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 04:38	MWB	GC-12	4.831	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-13 | **Client Sample Name:** 5781, SB-8@10, 6/3/2010 3:50:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	106	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	98.7	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.4	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 04:33	ZZZ	MS-V2	1	BTF0917

Delta Environmental Consultants, Inc.
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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-13 | **Client Sample Name:** 5781, SB-8@10, 6/3/2010 3:50:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	90.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 01:51	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-13 | **Client Sample Name:** 5781, SB-8@10, 6/3/2010 3:50:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	91.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 12:18	MWB	GC-5	0.990	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-14 | **Client Sample Name:** 5781, SB-8@15, 6/3/2010 3:56:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	67.6	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 04:59	MWB	GC-12	5	BTF1790

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Reported: 06/25/2010 14:31
Project: 5781
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Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-14 | **Client Sample Name:** 5781, SB-8@15, 6/3/2010 3:56:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	108	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.3	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.4	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 04:58	ZZZ	MS-V2	1	BTF0917

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Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-14 | **Client Sample Name:** 5781, SB-8@15, 6/3/2010 3:56:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	79.5	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 02:22	JJH	GC-V8	1	BTF1029

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Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-14 | **Client Sample Name:** 5781, SB-8@15, 6/3/2010 3:56:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**2.4**	**mg/kg**	**2.0**	**Luft/TPHd**	**ND**		1
Tetracosane (Surrogate)	95.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 12:46	MWB	GC-5	0.997	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-15 | **Client Sample Name:** 5781, SB-8@20, 6/3/2010 4:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.50	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	73.9	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 05:19	MWB	GC-12	4.950	BTF1790

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Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-15 | **Client Sample Name:** 5781, SB-8@20, 6/3/2010 4:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	97.1	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 05:24	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-15 | **Client Sample Name:** 5781, SB-8@20, 6/3/2010 4:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	88.5	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 02:53	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
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Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-15 | **Client Sample Name:** 5781, SB-8@20, 6/3/2010 4:00:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	70.1	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 11:51	MWB	GC-5	0.977	BTF1337

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1007798-16 | **Client Sample Name:** 5781, SB-8@24, 6/3/2010 4:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	mg/kg	0.49	EPA-8015B	ND	S05	1
2-Chloroacrylonitrile (Surrogate)	83.4	%	60 - 140 (LCL - UCL)	EPA-8015B		S05	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 05:40	MWB	GC-12	4.902	BTF1790

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Project: 5781
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Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1007798-16 | **Client Sample Name:** 5781, SB-8@24, 6/3/2010 4:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dibromoethane	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethylbenzene	ND	mg/kg	0.0050	EPA-8260	ND		1
Methyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Toluene	ND	mg/kg	0.0050	EPA-8260	ND		1
Total Xylenes	ND	mg/kg	0.010	EPA-8260	ND		1
t-Amyl Methyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
t-Butyl alcohol	ND	mg/kg	0.050	EPA-8260	ND		1
Diisopropyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
Ethanol	ND	mg/kg	1.0	EPA-8260	ND		1
Ethyl t-butyl ether	ND	mg/kg	0.0050	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	105	%	70 - 121 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	99.4	%	81 - 117 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	99.5	%	74 - 121 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/13/10	06/14/10 05:50	ZZZ	MS-V2	1	BTF0917

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Reported: 06/25/2010 14:31
Project: 5781
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Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-16 | **Client Sample Name:** 5781, SB-8@24, 6/3/2010 4:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	mg/kg	1.0	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	86.8	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/15/10 03:24	JJH	GC-V8	1	BTF1029

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Reported: 06/25/2010 14:31
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Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1007798-16 | **Client Sample Name:** 5781, SB-8@24, 6/3/2010 4:03:00PM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	mg/kg	2.0	Luft/TPHd	ND		1
Tetracosane (Surrogate)	79.0	%	34 - 136 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/11/10	06/21/10 12:05	MWB	GC-5	0.987	BTF1337

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Solvent Scan (EPA Method 8015)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1325						
Methanol	BTF1325-BLK1	ND	ug/L	100		
2-Chloroacrylonitrile (Surrogate)	BTF1325-BLK1	102	%	60 - 140 (LCL - UCL)		
QC Batch ID: BTF1790						
Methanol	BTF1790-BLK1	ND	mg/kg	0.50		
2-Chloroacrylonitrile (Surrogate)	BTF1790-BLK1	85.8	%	60 - 140 (LCL - UCL)		S09

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Solvent Scan (EPA Method 8015)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1325										
Methanol	BTF1325-BS1	LCS	2070.0	2000.0	ug/L	104		50 - 150		
2-Chloroacrylonitrile (Surrogate)	BTF1325-BS1	LCS	5349.0	4000.0	ug/L	134		60 - 140		
QC Batch ID: BTF1790										
Methanol	BTF1790-BS1	LCS	9.8750	10.000	mg/kg	98.8		50 - 150		
2-Chloroacrylonitrile (Surrogate)	BTF1790-BS1	LCS	14.690	20.000	mg/kg	73.4		60 - 140		S09

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Solvent Scan (EPA Method 8015)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1325	Used client sample: N										
Methanol	MS	1005654-98	ND	1825.0	2000.0	ug/L		91.2		50 - 150	
	MSD	1005654-98	ND	1941.0	2000.0	ug/L	6.2	97.0	30	50 - 150	
2-Chloroacrylonitrile (Surrogate)	MS	1005654-98	ND	4339.0	4000.0	ug/L		108		60 - 140	
	MSD	1005654-98	ND	5029.0	4000.0	ug/L		126		60 - 140	
QC Batch ID: BTF1790	Used client sample: N										
Methanol	MS	1007897-14	ND	13.010	10.000	mg/kg		130		50 - 150	
	MSD	1007897-14	ND	21.365	10.000	mg/kg	48.6	214	30	50 - 150	Q03
2-Chloroacrylonitrile (Surrogate)	MS	1007897-14	ND	10.100	20.000	mg/kg		50.5		60 - 140	S09
	MSD	1007897-14	ND	9.3150	20.000	mg/kg		46.6		60 - 140	S09

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF0917						
Benzene	BTF0917-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BTF0917-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BTF0917-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BTF0917-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BTF0917-BLK1	ND	mg/kg	0.0050		
Toluene	BTF0917-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BTF0917-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BTF0917-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BTF0917-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BTF0917-BLK1	ND	mg/kg	0.0050		
Ethanol	BTF0917-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BTF0917-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane-d4 (Surrogate)	BTF0917-BLK1	99.3	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTF0917-BLK1	99.1	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTF0917-BLK1	98.4	%	74 - 121 (LCL - UCL)		
QC Batch ID: BTF0938						
Benzene	BTF0938-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTF0938-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTF0938-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTF0938-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTF0938-BLK1	ND	ug/L	0.50		
Toluene	BTF0938-BLK1	ND	ug/L	0.50		
Total Xylenes	BTF0938-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BTF0938-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BTF0938-BLK1	ND	ug/L	10		
Diisopropyl ether	BTF0938-BLK1	ND	ug/L	0.50		
Ethanol	BTF0938-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BTF0938-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BTF0938-BLK1	103	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTF0938-BLK1	96.2	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTF0938-BLK1	96.5	%	86 - 115 (LCL - UCL)		

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Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF0917										
Benzene	BTF0917-BS1	LCS	0.12822	0.12500	mg/kg	103		70 - 130		
Toluene	BTF0917-BS1	LCS	0.12935	0.12500	mg/kg	103		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTF0917-BS1	LCS	0.049575	0.050000	mg/kg	99.2		70 - 121		
Toluene-d8 (Surrogate)	BTF0917-BS1	LCS	0.048953	0.050000	mg/kg	97.9		81 - 117		
4-Bromofluorobenzene (Surrogate)	BTF0917-BS1	LCS	0.050124	0.050000	mg/kg	100		74 - 121		
QC Batch ID: BTF0938										
Benzene	BTF0938-BS1	LCS	23.530	25.000	ug/L	94.1		70 - 130		
Toluene	BTF0938-BS1	LCS	23.570	25.000	ug/L	94.3		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTF0938-BS1	LCS	10.080	10.000	ug/L	101		76 - 114		
Toluene-d8 (Surrogate)	BTF0938-BS1	LCS	9.9700	10.000	ug/L	99.7		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTF0938-BS1	LCS	9.7000	10.000	ug/L	97.0		86 - 115		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF0917	Used client sample: N										
Benzene	MS	1007897-16	ND	0.12346	0.12500	mg/kg		98.8		70 - 130	
	MSD	1007897-16	ND	0.12915	0.12500	mg/kg	4.5	103	20	70 - 130	
Toluene	MS	1007897-16	ND	0.12854	0.12500	mg/kg		103		70 - 130	
	MSD	1007897-16	ND	0.13283	0.12500	mg/kg	3.3	106	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1007897-16	ND	0.049773	0.050000	mg/kg		99.5		70 - 121	
	MSD	1007897-16	ND	0.050475	0.050000	mg/kg		101		70 - 121	
Toluene-d8 (Surrogate)	MS	1007897-16	ND	0.049861	0.050000	mg/kg		99.7		81 - 117	
	MSD	1007897-16	ND	0.049873	0.050000	mg/kg		99.7		81 - 117	
4-Bromofluorobenzene (Surrogate)	MS	1007897-16	ND	0.051394	0.050000	mg/kg		103		74 - 121	
	MSD	1007897-16	ND	0.051229	0.050000	mg/kg		102		74 - 121	
QC Batch ID: BTF0938	Used client sample: N										
Benzene	MS	1007829-02	ND	26.490	25.000	ug/L		106		70 - 130	
	MSD	1007829-02	ND	26.010	25.000	ug/L	1.8	104	20	70 - 130	
Toluene	MS	1007829-02	ND	25.230	25.000	ug/L		101		70 - 130	
	MSD	1007829-02	ND	25.280	25.000	ug/L	0.2	101	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1007829-02	ND	10.110	10.000	ug/L		101		76 - 114	
	MSD	1007829-02	ND	10.020	10.000	ug/L		100		76 - 114	
Toluene-d8 (Surrogate)	MS	1007829-02	ND	9.6800	10.000	ug/L		96.8		88 - 110	
	MSD	1007829-02	ND	10.060	10.000	ug/L		101		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1007829-02	ND	9.8300	10.000	ug/L		98.3		86 - 115	
	MSD	1007829-02	ND	9.8900	10.000	ug/L		98.9		86 - 115	

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF0895						
Gasoline Range Organics (C4 - C12)	BTF0895-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF0895-BLK1	78.3	%	70 - 130 (LCL - UCL)		
QC Batch ID: BTF1029						
Gasoline Range Organics (C4 - C12)	BTF1029-BLK1	ND	mg/kg	1.0		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF1029-BLK1	88.5	%	70 - 130 (LCL - UCL)		

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11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF0895										
Gasoline Range Organics (C4 - C12)	BTF0895-BS1	LCS	1021.3	1000.0	ug/L	102		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF0895-BS1	LCS	34.730	40.000	ug/L	86.8		70 - 130		
QC Batch ID: BTF1029										
Gasoline Range Organics (C4 - C12)	BTF1029-BS1	LCS	4.9698	5.0000	mg/kg	99.4		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF1029-BS1	LCS	0.037200	0.040000	mg/kg	93.0		70 - 130		

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Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF0895	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1005654-95	ND	1068.4	1000.0	ug/L		107		70 - 130	
	MSD	1005654-95	ND	1026.8	1000.0	ug/L	4.0	103	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1005654-95	ND	34.899	40.000	ug/L		87.2		70 - 130	
	MSD	1005654-95	ND	34.732	40.000	ug/L		86.8		70 - 130	
QC Batch ID: BTF1029	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1007897-09	ND	5.0340	5.0000	mg/kg		101		70 - 130	
	MSD	1007897-09	ND	4.9391	5.0000	mg/kg	1.9	98.8	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1007897-09	ND	0.037400	0.040000	mg/kg		93.5		70 - 130	
	MSD	1007897-09	ND	0.037400	0.040000	mg/kg		93.5		70 - 130	

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Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1197						
Diesel Range Organics (C12 - C24)	BTF1197-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BTF1197-BLK1	80.7	%	28 - 139 (LCL - UCL)		
QC Batch ID: BTF1337						
Diesel Range Organics (C12 - C24)	BTF1337-BLK1	ND	mg/kg	2.0		
Tetracosane (Surrogate)	BTF1337-BLK1	92.6	%	34 - 136 (LCL - UCL)		

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1197										
Diesel Range Organics (C12 - C24)	BTF1197-BS1	LCS	315.76	500.00	ug/L	63.2		48 - 125		
Tetracosane (Surrogate)	BTF1197-BS1	LCS	15.800	20.000	ug/L	79.0		28 - 139		
QC Batch ID: BTF1337										
Diesel Range Organics (C12 - C24)	BTF1337-BS1	LCS	13.329	16.667	mg/kg	80.0		50 - 136		
Tetracosane (Surrogate)	BTF1337-BS1	LCS	0.65740	0.66667	mg/kg	98.6		34 - 136		

Delta Environmental Consultants, Inc.
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Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1197	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1007897-30	ND	382.98	500.00	ug/L		76.6		36 - 130	
	MSD	1007897-30	ND	345.21	500.00	ug/L	10.4	69.0	30	36 - 130	
Tetracosane (Surrogate)	MS	1007897-30	ND	17.230	20.000	ug/L		86.2		28 - 139	
	MSD	1007897-30	ND	15.945	20.000	ug/L		79.7		28 - 139	
QC Batch ID: BTF1337	Used client sample: Y - Description: MW-4@5, 06/04/2010 12:28										
Diesel Range Organics (C12 - C24)	MS	1007798-01	0.99472	8.0941	16.667	mg/kg		42.6		40 - 137	
	MSD	1007798-01	0.99472	9.9253	16.667	mg/kg	22.8	53.6	30	40 - 137	
Tetracosane (Surrogate)	MS	1007798-01	ND	0.57487	0.66667	mg/kg		86.2		34 - 136	
	MSD	1007798-01	ND	0.57533	0.66667	mg/kg		86.3		34 - 136	

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11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:31
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A10	PQL's and MDL's were raised due to matrix interference.
A91	TPH does not exhibit a "gasoline" pattern. TPH is entirely due to MTBE.
Q03	Matrix spike recovery(s) is(are) not within the control limits.
S05	The sample holding time was exceeded.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
Z1	Combined two VOAs for a complete sample.
Z1a	Sample plugged at 5.0g

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 06/30/2010

Jan Wagoner

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

RE: 5781
BC Work Order: 1008803
Invoice ID: B082751

Enclosed are the results of analyses for samples received by the laboratory on 6/25/2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Chain Of Custody Record

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704

ConocoPhillips SAP Project Number: 4513503991

ConocoPhillips Requisition / Line Number: 000010111210-00005

DATE: 062410

PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: SS# 5781	GLOBAL ID NO.: T0600101467
ADDRESS: 11050 White Rock Road #110, Rancho Cordova, CA 95670		SITE ADDRESS (street and City): 3535 Pierson Street, Oakland, CA	CONOCOPHILLIPS SITE MANAGER: Terry Grayson
PROJECT CONTACT (Hardcopy or PDF Report to): Jan Wagoner		EDF DELIVERABLE TO (ID or Designee): Jan Wagoner (Delta)	PHONE NO.: 916-503-1275
TELEPHONE: (916) 503-1275	FAX: (916) 638-8385	E-MAIL: jwagoner@deltaenv.com	E-MAIL: jwagoner@deltaenv.com
SAMPLER NAME(S) (Print): Jody Demello-Rice	CONSULTANT PROJECT NUMBER: C105781051		LAB USE ONLY: 1008803

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☑ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

H2O 8260B BTEX/Oxys - VOAs with blue caps

H2O 8260B Methanol - VOAs with gray caps

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015M - TPHg	8260B - BTEX, 8 Oxys	8015 - Methanol	8015 - TPHd	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
1	MW-4	062410	1145	H2O	10	X	X	X	X	3 unpreserved VOAs, 6 preserved VOAs & 1 unpreserved 1L Amber

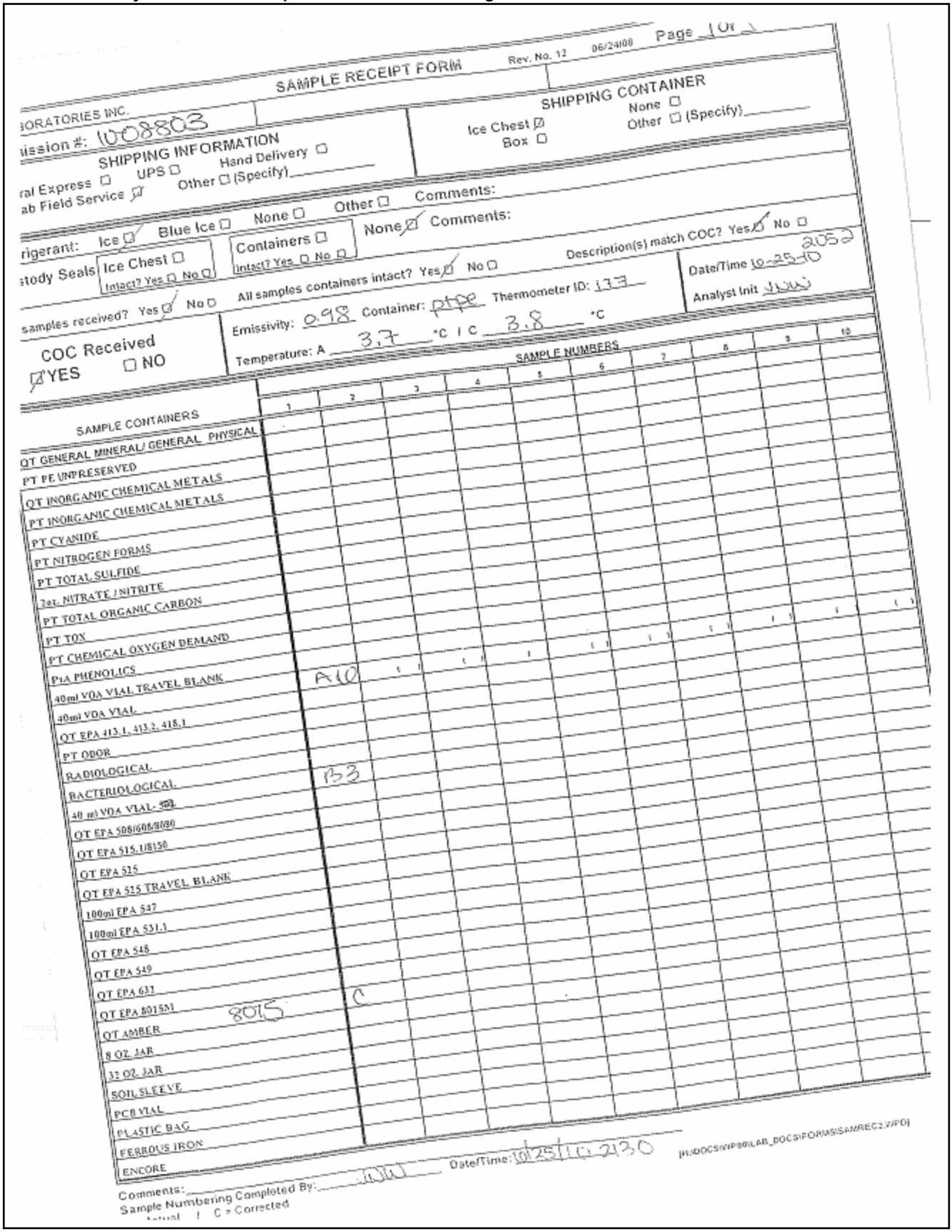
TEMPERATURE ON RECEIPT C°

CHK BY DISTRIBUTION SUB-OUT

Relinquished by: (Signature)	Received by: (Signature) Ross Dickey	Date: 6/25/10	Time: 1220
Relinquished by: (Signature) Ross Dickey 6/25/10	Received by: (Signature)	Date: 6.25.10	Time: 1735
Relinquished by: (Signature) 6.25.10 2050	Received by: (Signature)	Date: 6/25/10	Time: 2050

9/19/03 Revision

Chain of Custody and Cooler Receipt Form for 1008803 Page 2 of 4



SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 of 1

BORATORIES INC.

ission #: 1008803

SHIPPING INFORMATION

ral Express ☐ UPS ☐ Hand Delivery ☐
ab Field Service ☑ Other ☐ (Specify)

SHIPPING CONTAINER

Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)

rigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

stody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

Date/Time 10-25-10 2052

Analyst Init JWW

COC Received
☑ YES ☐ NO

Emissivity: 0.98 Container: ptpe Thermometer ID: 137

Temperature: A 3.7 °C / C 3.8 °C

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
P1A PHENOLICS										
40ml VOA VIAL TRAVEL BLANK	A10	( )	( )	( )	( )	( )	( )	( )	( )	( )
40ml VOA VIAL										
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL	B3									
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M 8015	C									
QT AMBER										
8 OZ JAR										
32 OZ JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: JWW Date/Time: 10/25/10 2130

I:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD

! = Corrected

Golder Associates
CHAIN OF CUSTODY

Golder Associates 1008802

Page 1 of 1
Quotation No.

PROJECT NO.: 053-7444-10
SITE NAME: Recology - Hay Rd
SAMPLER(S): (printed) (signature)
CONTRACT LABORATORY: BC Labs
TURN-AROUND TIME: Standard

EDD required? [X] Yes [ ] No
EDF required? [X] Yes [ ] No

ANALYSES: BOD 5210, Surfactants; TDS, Cl, SO4, Carb, Bicarb, NO3NO2-N, TKN, NH3-N, As, Cr, B; NO2-N

Sample I.D.	Lab I.D.	Collection Date	Collection Time	Matrix	Depth	Container Info	VOA 40ml (Filter N, Preserv. HCl)	PE 1L (Filter N, Preserv. none)	PE 1L (Filter N, Preserv. H2SO4)	PE 1L (Filter Y, Preserv. HNO3)	PE 1L (Filter N, Preserv. none)	Cont. Qty.	Remarks
G-6	-1	6/25/10	810	WATER	-		3	1	1	1		6	
SW-3	-2	↓	1235	WATER	-						1	1	NO2-N
SW-4	-3	↓	1255	|	-						1	1	48 hr hold time
SW-5	-4	↓	1305	|	-						1	1	
SW-7	-5	↓	1245	|	-						1	1	

SHORT HOLDING TIME: Cr+6, (NO2) circled, NO3, OP, SS, DO, CI, BOD, MBAS, COT

CHK BY / DISTRIBUTION / SUB OUT

Relinquished by: (signature)	Received by: (signature)	Date/Time:
[signature]	Ross Wickley	6/25/10 1327
Ross Wickley 6/25/10	R. Raymond	6-25-10 1735
R. Raymond 6-25-10 20.50	[signature]	6/25/10 2050

SEND RESULTS TO:
Attn: Kris Johnson
Golder Associates Inc.
425 Lakeside Drive
Sunnyvale, CA 94085
Phone (408) 220-9223
Fax (408) 220-9224

white: lab copy yellow: project file

Chain of Custody and Cooler Receipt Form for 1008803 Page 4 of 4

BC LABORATORIES INC. **SAMPLE RECEIPT FORM** Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1008803

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☑ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☑ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☑ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ Intact? Yes ☐ No ☐ Containers ☐ Intact? Yes ☐ No ☐ None ☑ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☑ YES ☐ NO

Emissivity: 0.98 Container: pipe Thermometer ID: 173 Date/Time 10-25-10 2052

Temperature: A 4.1 °C / C 4.2 °C Analyst Init JDW

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	A	A	A	A					
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	C									
PT CYANIDE										
PT NITROGEN FORMS	D									
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	AB	( )	( )	( )	( )	( )	( )	( )	( )	( )
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 508/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:_____
Sample Numbering Completed By: JDW Date/Time: 10/25/10 2126
A = Actual / C = Corrected

(H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD)

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1008803-01

COC Number: ---
Project Number: 5781
Sampling Location: ---
Sampling Point: MW-4
Sampled By: DECR

Receive Date: 06/25/2010 20:50
Sampling Date: 06/24/2010 11:45
Sample Depth: ---
Sample Matrix: Water
Delivery Work Order:
Global ID: T0600101467
Location ID (FieldPoint): MW-4
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1008803-01 | **Client Sample Name:** 5781, MW-4, 6/24/2010 11:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	114	%	60 - 140 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/28/10	06/29/10 12:37	MWB	GC-12	1	BTF2025

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1008803-01 | **Client Sample Name:** 5781, MW-4, 6/24/2010 11:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dibromoethane	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane	ND	ug/L	0.50	EPA-8260	ND		1
Ethylbenzene	ND	ug/L	0.50	EPA-8260	ND		1
Methyl t-butyl ether	**4.7**	**ug/L**	**0.50**	**EPA-8260**	**ND**		1
Toluene	ND	ug/L	0.50	EPA-8260	ND		1
Total Xylenes	ND	ug/L	1.0	EPA-8260	ND		1
t-Amyl Methyl ether	ND	ug/L	0.50	EPA-8260	ND		1
t-Butyl alcohol	ND	ug/L	10	EPA-8260	ND		1
Diisopropyl ether	ND	ug/L	0.50	EPA-8260	ND		1
Ethanol	ND	ug/L	250	EPA-8260	ND		1
Ethyl t-butyl ether	ND	ug/L	0.50	EPA-8260	ND		1
1,2-Dichloroethane-d4 (Surrogate)	104	%	76 - 114 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	101	%	88 - 110 (LCL - UCL)	EPA-8260			1
4-Bromofluorobenzene (Surrogate)	96.9	%	86 - 115 (LCL - UCL)	EPA-8260			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/28/10	06/28/10 11:44	KEA	MS-V12	1	BTF1896

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1008803-01 | **Client Sample Name:** 5781, MW-4, 6/24/2010 11:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	ND	ug/L	50	Luft	ND		1
a,a,a-Trifluorotoluene (FID Surrogate)	86.6	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/25/10	06/28/10 12:06	jjh	GC-V4	1	BTF1862

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

BCL Sample ID: 1008803-01 | **Client Sample Name:** 5781, MW-4, 6/24/2010 11:45:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	ND	ug/L	50	Luft/TPHd	ND		1
Tetracosane (Surrogate)	84.3	%	28 - 139 (LCL - UCL)	Luft/TPHd			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/28/10	06/29/10 09:30	MWB	GC-5	0.969	BTF1974

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF2025						
Methanol	BTF2025-BLK1	ND	ug/L	100		
2-Chloroacrylonitrile (Surrogate)	BTF2025-BLK1	107	%	60 - 140 (LCL - UCL)		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF2025										
Methanol	BTF2025-BS1	LCS	1733.0	2000.0	ug/L	86.6		50 - 150		
2-Chloroacrylonitrile (Surrogate)	BTF2025-BS1	LCS	4339.0	4000.0	ug/L	108		60 - 140		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF2025	Used client sample: N										
Methanol	MS	1007897-40	ND	1571.0	2000.0	ug/L		78.6		50 - 150	
	MSD	1007897-40	ND	1742.0	2000.0	ug/L	10.3	87.1	30	50 - 150	
2-Chloroacrylonitrile (Surrogate)	MS	1007897-40	ND	4360.0	4000.0	ug/L		109		60 - 140	
	MSD	1007897-40	ND	4226.0	4000.0	ug/L		106		60 - 140	

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1896						
Benzene	BTF1896-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTF1896-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTF1896-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTF1896-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTF1896-BLK1	ND	ug/L	0.50		
Toluene	BTF1896-BLK1	ND	ug/L	0.50		
Total Xylenes	BTF1896-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BTF1896-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BTF1896-BLK1	ND	ug/L	10		
Diisopropyl ether	BTF1896-BLK1	ND	ug/L	0.50		
Ethanol	BTF1896-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BTF1896-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BTF1896-BLK1	102	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTF1896-BLK1	99.8	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTF1896-BLK1	98.8	%	86 - 115 (LCL - UCL)		

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Reported: 06/30/2010 14:16
Project: 5781
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Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1896										
Benzene	BTF1896-BS1	LCS	25.600	25.000	ug/L	102		70 - 130		
Toluene	BTF1896-BS1	LCS	26.730	25.000	ug/L	107		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTF1896-BS1	LCS	10.340	10.000	ug/L	103		76 - 114		
Toluene-d8 (Surrogate)	BTF1896-BS1	LCS	9.9900	10.000	ug/L	99.9		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTF1896-BS1	LCS	10.240	10.000	ug/L	102		86 - 115		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1896	Used client sample: N										
Benzene	MS	1008762-01	ND	26.070	25.000	ug/L		104		70 - 130	
	MSD	1008762-01	ND	26.260	25.000	ug/L	0.7	105	20	70 - 130	
Toluene	MS	1008762-01	ND	27.150	25.000	ug/L		109		70 - 130	
	MSD	1008762-01	ND	25.890	25.000	ug/L	4.8	104	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1008762-01	ND	10.240	10.000	ug/L		102		76 - 114	
	MSD	1008762-01	ND	10.260	10.000	ug/L		103		76 - 114	
Toluene-d8 (Surrogate)	MS	1008762-01	ND	9.8100	10.000	ug/L		98.1		88 - 110	
	MSD	1008762-01	ND	9.7200	10.000	ug/L		97.2		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1008762-01	ND	10.190	10.000	ug/L		102		86 - 115	
	MSD	1008762-01	ND	10.210	10.000	ug/L		102		86 - 115	

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1862						
Gasoline Range Organics (C4 - C12)	BTF1862-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF1862-BLK1	87.3	%	70 - 130 (LCL - UCL)		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1862										
Gasoline Range Organics (C4 - C12)	BTF1862-BS1	LCS	1048.1	1000.0	ug/L	105		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF1862-BS1	LCS	37.220	40.000	ug/L	93.0		70 - 130		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1862	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1007897-40	ND	1059.8	1000.0	ug/L		106		70 - 130	
	MSD	1007897-40	ND	1028.8	1000.0	ug/L	3.0	103	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1007897-40	ND	37.584	40.000	ug/L		94.0		70 - 130	
	MSD	1007897-40	ND	37.297	40.000	ug/L		93.2		70 - 130	

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1974						
Diesel Range Organics (C12 - C24)	BTF1974-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BTF1974-BLK1	85.6	%	28 - 139 (LCL - UCL)		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1974										
Diesel Range Organics (C12 - C24)	BTF1974-BS1	LCS	364.47	500.00	ug/L	72.9		48 - 125		
Tetracosane (Surrogate)	BTF1974-BS1	LCS	17.110	20.000	ug/L	85.6		28 - 139		

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Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1974	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1007897-40	ND	316.98	500.00	ug/L		63.4		36 - 130	
	MSD	1007897-40	ND	396.84	500.00	ug/L	22.4	79.4	30	36 - 130	
Tetracosane (Surrogate)	MS	1007897-40	ND	14.573	20.000	ug/L		72.9		28 - 139	
	MSD	1007897-40	ND	17.504	20.000	ug/L		87.5		28 - 139	

Delta Environmental Consultants, Inc.
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Rancho Cordova, CA 95670

Reported: 06/30/2010 14:16
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference

BC Laboratories, Inc.
Environmental Testing Laboratory Since 1949

Date of Report: 06/25/2010

Jan Wagoner

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

RE: 5781
BC Work Order: 1008215
Invoice ID: B082502

Enclosed are the results of analyses for samples received by the laboratory on 6/14/2010. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Molly Meyers

Contact Person: Molly Meyers
Client Service Rep

Authorized Signature

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ConocoPhillips Chain Of Custody Record

BC Laboratories, Inc.
4100 Atlas Court
Bakersfield, CA 93308
(661) 327-4911 (661) 327-1918 fax

ConocoPhillips Site Manager: Shelby Lathrop

INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS, Attn: Dee Hutchinson, 3611 South Harbor, Suite 200, Santa Ana, CA. 92704

#1008215

ConocoPhillips SAP Project Number:
ConocoPhillips Requisition / Line Number:
DATE: ________ PAGE: ____ of ____

SAMPLING COMPANY:	Delta Consultants
Valid Value ID:	
CONOCOPHILLIPS SITE NUMBER	SS# 5781
GLOBAL ID NO.:	
ADDRESS:	11050 White Rock Road #110, Rancho Cordova, CA 95670
SITE ADDRESS (Street and City):	900 Highway 1, Bodega Bay, CA
CONOCOPHILLIPS SITE MANAGER:	Terry Grayson
PROJECT CONTACT (Hardcopy or PDF Report to):	Jan Wagoner
EDF DELIVERABLE TO (RP or Designee):	Jan Wagoner (Delta)
PHONE NO.:	916-503-1275
E-MAIL:	jwagoner@deltaenv.com
TELEPHONE:	(916) 503-1275
FAX:	(916) 638-8385
E-MAIL:	jwagoner@deltaenv.com
LAB USE ONLY	10-08215
SAMPLER NAME(S) (Print):	Caitlin Morgan
CONSULTANT PROJECT NUMBER	C105697201

TURNAROUND TIME (CALENDAR DAYS): ☐ 14 DAYS ☐ 7 DAYS ☐ 72 HOURS ☐ 48 HOURS ☐ 24 HOURS ☐ LESS THAN 24 HOURS

**8 Day turn around time

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED ☑

H2O 8260B BTEX/Oxys - VOAs with blue caps

H2O 8260B Methanol - VOAs with gray caps

* Field Point name only required if different from Sample ID

REQUESTED ANALYSES

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING DATE	SAMPLING TIME	MATRIX	NO. OF CONT.	8015M - TPHg, TPHd	8260B - BTEX, 8 Oxys	~~8260B - Methanol~~ 8015 (MM 6/15)	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes
-1	Comp B	6/9/10	10:30a	H2O	10	X	X	X	Various Preservatives Not Field Filtered
									Various Preservatives Not Field Filtered
									Various Preservatives Not Field Filtered
									Various Preservatives Not Field Filtered
									Various Preservatives Not Field Filtered

TEMPERATURE ON RECEIPT C°

CHK BY [signature] DISTRIBUTION SUB-OUT ☐

Relinquished by: (Signature)	Received by: (Signature)	Date	Time
[signature]	Ross Diday	6/14/10	1120
Ross Diday 6/14/10	R Kruyt...	6-14-10	1823
R Kruyt... 6-14-10 2115	[signature]	6-14-10	2115

9/15/03 Revision

Chain of Custody and Cooler Receipt Form for 1008215 Page 2 of 2

BC LABORATORIES INC. SAMPLE RECEIPT FORM Rev. No. 12 06/24/08 Page 1 Of 1

Submission #: 1008215

SHIPPING INFORMATION
Federal Express ☐ UPS ☐ Hand Delivery ☐
BC Lab Field Service ☒ Other ☐ (Specify)_____

SHIPPING CONTAINER
Ice Chest ☒ None ☐
Box ☐ Other ☐ (Specify)_____

Refrigerant: Ice ☒ Blue Ice ☐ None ☐ Other ☐ Comments:

Custody Seals: Ice Chest ☐ (Intact? Yes ☐ No ☐) Containers ☐ (Intact? Yes ☐ No ☐) None ☒ Comments:

All samples received? Yes ☑ No ☐ All samples containers intact? Yes ☑ No ☐ Description(s) match COC? Yes ☑ No ☐

COC Received ☒ YES ☐ NO

Emissivity: 0.95 Container: QTA Thermometer ID: #17

Temperature: A 5.2 °C / C 5.3 °C

Date/Time 6/14/10 2115

Analyst Init

SAMPLE CONTAINERS	SAMPLE NUMBERS 1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PtA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK (Preserved)	B (3)									
40ml VOA VIAL	A 6									
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 505/608/8080										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER	C									
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:
Sample Numbering Completed By: CV Date/Time: 6-15-10 10:33
A = Actual / C = Corrected
[H:\DOCS\WP80\LAB_DOCS\FORMS\SAMREC2.WPD]

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:33
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information

1008215-01

COC Number: ---
Project Number: 5781
Sampling Location: ---
Sampling Point: COMP B
Sampled By: DECR

Receive Date: 06/14/2010 21:15
Sampling Date: 06/09/2010 10:30
Sample Depth: ---
Sample Matrix: Water
Delivery Work Order:
Global ID:
Location ID (FieldPoint): COMP B
Matrix: W
Sample QC Type (SACode): CS
Cooler ID:

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:33
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Solvent Scan (EPA Method 8015)

BCL Sample ID: 1008215-01 | **Client Sample Name:** 5781, COMP B, 6/9/2010 10:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Methanol	ND	ug/L	100	EPA-8015B	ND		1
2-Chloroacrylonitrile (Surrogate)	92.1	%	60 - 140 (LCL - UCL)	EPA-8015B			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8015B	06/22/10	06/23/10 12:49	CKD	GC-12	1	BTF1791

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:33
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 1008215-01 | **Client Sample Name:** 5781, COMP B, 6/9/2010 10:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Benzene	**340**	**ug/L**	**2.5**	**EPA-8260**	**ND**	**A01**	1
1,2-Dibromoethane	ND	ug/L	2.5	EPA-8260	ND	A01	1
1,2-Dichloroethane	ND	ug/L	2.5	EPA-8260	ND	A01	1
Ethylbenzene	**490**	**ug/L**	**25**	**EPA-8260**	**ND**	**A01**	2
Methyl t-butyl ether	**17**	**ug/L**	**2.5**	**EPA-8260**	**ND**	**A01**	1
Toluene	**2700**	**ug/L**	**50**	**EPA-8260**	**ND**	**A01**	3
Total Xylenes	**5200**	**ug/L**	**50**	**EPA-8260**	**ND**	**A01**	2
t-Amyl Methyl ether	ND	ug/L	2.5	EPA-8260	ND	A01	1
t-Butyl alcohol	ND	ug/L	50	EPA-8260	ND	A01	1
Diisopropyl ether	ND	ug/L	2.5	EPA-8260	ND	A01	1
Ethanol	**100000**	**ug/L**	**1200**	**EPA-8260**	**ND**	**A01**	1
Ethyl t-butyl ether	ND	ug/L	2.5	EPA-8260	ND	A01	1
1,2-Dichloroethane-d4 (Surrogate)	102	%	76 - 114 (LCL - UCL)	EPA-8260			1
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)	EPA-8260			2
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	76 - 114 (LCL - UCL)	EPA-8260			3
Toluene-d8 (Surrogate)	100	%	88 - 110 (LCL - UCL)	EPA-8260			1
Toluene-d8 (Surrogate)	102	%	88 - 110 (LCL - UCL)	EPA-8260			2
Toluene-d8 (Surrogate)	103	%	88 - 110 (LCL - UCL)	EPA-8260			3
4-Bromofluorobenzene (Surrogate)	174	%	86 - 115 (LCL - UCL)	EPA-8260		S09	1
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			2
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)	EPA-8260			3

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	EPA-8260	06/16/10	06/18/10 00:45	KEA	MS-V12	5	BTF1018
2	EPA-8260	06/16/10	06/18/10 16:13	KEA	MS-V12	50	BTF1018
3	EPA-8260	06/16/10	06/22/10 19:38	KEA	MS-V12	100	BTF1018

Delta Environmental Consultants, Inc.
11050 White Rock Rd, Suite 110
Rancho Cordova, CA 95670

Reported: 06/25/2010 14:33
Project: 5781
Project Number: 4513503991
Project Manager: Jan Wagoner

Purgeable Aromatics and Total Petroleum Hydrocarbons

BCL Sample ID: 1008215-01 | **Client Sample Name:** 5781, COMP B, 6/9/2010 10:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Gasoline Range Organics (C4 - C12)	**17000**	**ug/L**	**2500**	**Luft**	**ND**	**A01**	1
a,a,a-Trifluorotoluene (FID Surrogate)	83.5	%	70 - 130 (LCL - UCL)	Luft			1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft	06/14/10	06/16/10 16:43	jjh	GC-V4	50	BTF0895

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Total Petroleum Hydrocarbons

BCL Sample ID: 1008215-01 | **Client Sample Name:** 5781, COMP B, 6/9/2010 10:30:00AM

Constituent	Result	Units	PQL	Method	MB Bias	Lab Quals	Run #
Diesel Range Organics (C12 - C24)	**1200**	**ug/L**	**250**	**Luft/TPHd**	**ND**		1
Tetracosane (Surrogate)	84.9	%	28 - 139 (LCL - UCL)	Luft/TPHd		V11	1

Run #	Method	Prep Date	Run Date/Time	Analyst	Instrument	Dilution	QC Batch ID
1	Luft/TPHd	06/16/10	06/22/10 20:03	MWB	GC-5	5	BTF1338

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Solvent Scan (EPA Method 8015)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1791						
Methanol	BTF1791-BLK1	ND	ug/L	100		
2-Chloroacrylonitrile (Surrogate)	BTF1791-BLK1	60.9	%	60 - 140 (LCL - UCL)		

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Solvent Scan (EPA Method 8015)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1791										
Methanol	BTF1791-BS1	LCS	2762.0	2000.0	ug/L	138		50 - 150		
2-Chloroacrylonitrile (Surrogate)	BTF1791-BS1	LCS	1551.0	4000.0	ug/L	38.8		60 - 140		V11

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Solvent Scan (EPA Method 8015)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1791	Used client sample: N										
Methanol	MS	1007897-33	ND	2291.0	2000.0	ug/L		115		50 - 150	
	MSD	1007897-33	ND	2869.0	2000.0	ug/L	22.4	143	30	50 - 150	
2-Chloroacrylonitrile (Surrogate)	MS	1007897-33	ND	2819.0	4000.0	ug/L		70.5		60 - 140	
	MSD	1007897-33	ND	2038.0	4000.0	ug/L		51.0		60 - 140	V11

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1018						
Benzene	BTF1018-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BTF1018-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BTF1018-BLK1	ND	ug/L	0.50		
Ethylbenzene	BTF1018-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BTF1018-BLK1	ND	ug/L	0.50		
Toluene	BTF1018-BLK1	ND	ug/L	0.50		
Total Xylenes	BTF1018-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BTF1018-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BTF1018-BLK1	ND	ug/L	10		
Diisopropyl ether	BTF1018-BLK1	ND	ug/L	0.50		
Ethanol	BTF1018-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BTF1018-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BTF1018-BLK1	101	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BTF1018-BLK1	100	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BTF1018-BLK1	94.5	%	86 - 115 (LCL - UCL)		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1018										
Benzene	BTF1018-BS1	LCS	26.030	25.000	ug/L	104		70 - 130		
Toluene	BTF1018-BS1	LCS	27.490	25.000	ug/L	110		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BTF1018-BS1	LCS	9.9700	10.000	ug/L	99.7		76 - 114		
Toluene-d8 (Surrogate)	BTF1018-BS1	LCS	9.9400	10.000	ug/L	99.4		88 - 110		
4-Bromofluorobenzene (Surrogate)	BTF1018-BS1	LCS	10.130	10.000	ug/L	101		86 - 115		

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Volatile Organic Analysis (EPA Method 8260)

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1018	Used client sample: N										
Benzene	MS	1007897-26	ND	27.370	25.000	ug/L		109		70 - 130	
	MSD	1007897-26	ND	23.790	25.000	ug/L	14.0	95.2	20	70 - 130	
Toluene	MS	1007897-26	ND	28.680	25.000	ug/L		115		70 - 130	
	MSD	1007897-26	ND	25.010	25.000	ug/L	13.7	100	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	MS	1007897-26	ND	10.070	10.000	ug/L		101		76 - 114	
	MSD	1007897-26	ND	9.8600	10.000	ug/L		98.6		76 - 114	
Toluene-d8 (Surrogate)	MS	1007897-26	ND	10.150	10.000	ug/L		102		88 - 110	
	MSD	1007897-26	ND	10.120	10.000	ug/L		101		88 - 110	
4-Bromofluorobenzene (Surrogate)	MS	1007897-26	ND	10.170	10.000	ug/L		102		86 - 115	
	MSD	1007897-26	ND	9.9400	10.000	ug/L		99.4		86 - 115	

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF0895						
Gasoline Range Organics (C4 - C12)	BTF0895-BLK1	ND	ug/L	50		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF0895-BLK1	78.3	%	70 - 130 (LCL - UCL)		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF0895										
Gasoline Range Organics (C4 - C12)	BTF0895-BS1	LCS	1021.3	1000.0	ug/L	102		85 - 115		
a,a,a-Trifluorotoluene (FID Surrogate)	BTF0895-BS1	LCS	34.730	40.000	ug/L	86.8		70 - 130		

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Purgeable Aromatics and Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF0895	Used client sample: N										
Gasoline Range Organics (C4 - C12)	MS	1005654-95	ND	1068.4	1000.0	ug/L		107		70 - 130	
	MSD	1005654-95	ND	1026.8	1000.0	ug/L	4.0	103	20	70 - 130	
a,a,a-Trifluorotoluene (FID Surrogate)	MS	1005654-95	ND	34.899	40.000	ug/L		87.2		70 - 130	
	MSD	1005654-95	ND	34.732	40.000	ug/L		86.8		70 - 130	

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Total Petroleum Hydrocarbons

Quality Control Report - Method Blank Analysis

Constituent	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
QC Batch ID: BTF1338						
Diesel Range Organics (C12 - C24)	BTF1338-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BTF1338-BLK1	100	%	28 - 139 (LCL - UCL)		

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Total Petroleum Hydrocarbons

Quality Control Report - Laboratory Control Sample

Constituent	QC Sample ID	Type	Result	Spike Level	Units	Percent Recovery	RPD	Control Limits Percent Recovery	Control Limits RPD	Lab Quals
QC Batch ID: BTF1338										
Diesel Range Organics (C12 - C24)	BTF1338-BS1	LCS	406.28	500.00	ug/L	81.3		48 - 125		
Tetracosane (Surrogate)	BTF1338-BS1	LCS	21.892	20.000	ug/L	109		28 - 139		

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Total Petroleum Hydrocarbons

Quality Control Report - Precision & Accuracy

Constituent	Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits RPD	Control Limits Percent Recovery	Lab Quals
QC Batch ID: BTF1338	Used client sample: N										
Diesel Range Organics (C12 - C24)	MS	1005654-99	ND	394.99	500.00	ug/L		79.0		36 - 130	
	MSD	1005654-99	ND	331.52	500.00	ug/L	17.5	66.3	30	36 - 130	
Tetracosane (Surrogate)	MS	1005654-99	ND	20.718	20.000	ug/L		104		28 - 139	
	MSD	1005654-99	ND	18.257	20.000	ug/L		91.3		28 - 139	

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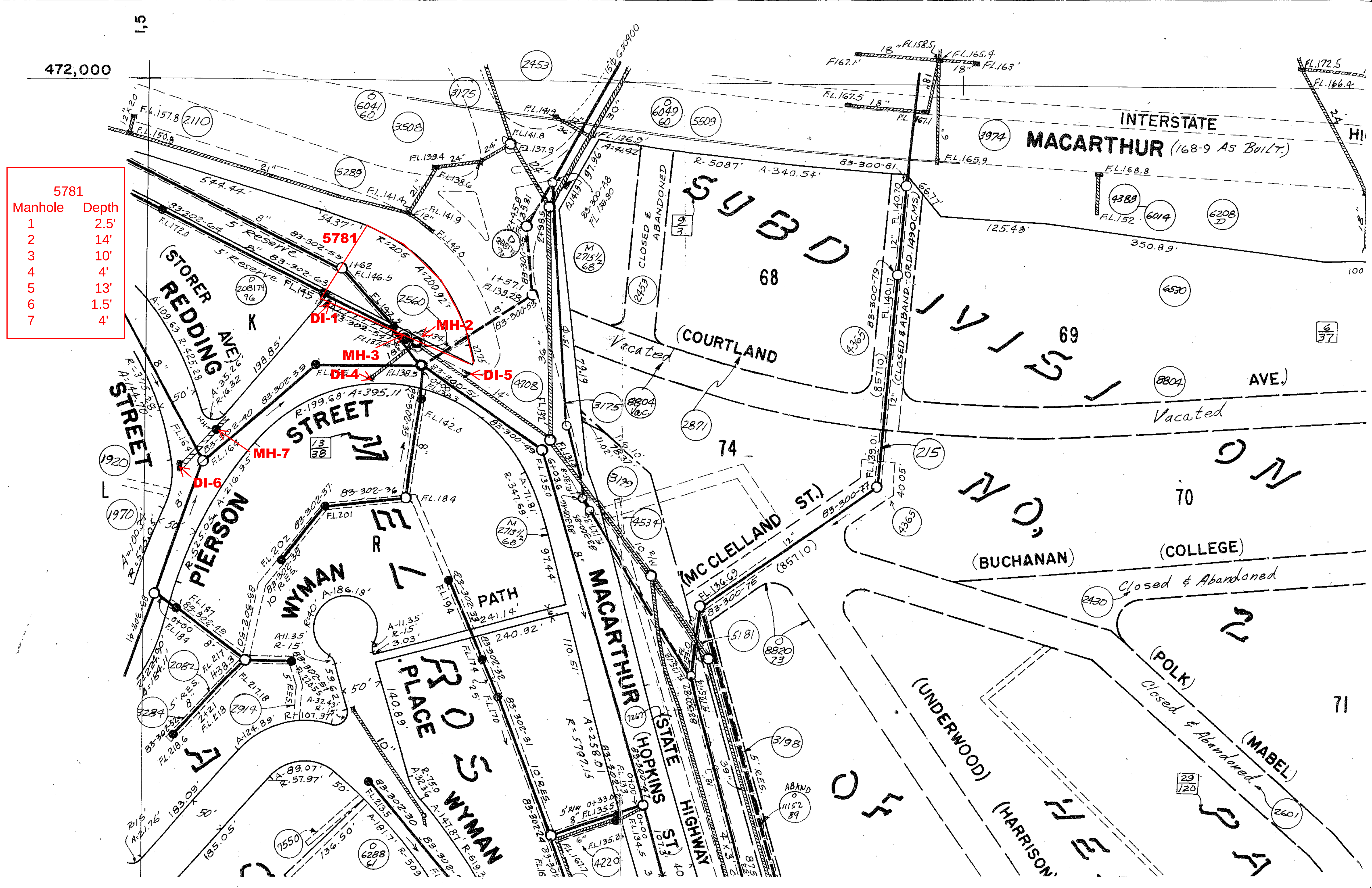
Notes And Definitions

MDL	Method Detection Limit
ND	Analyte Not Detected at or above the reporting limit
PQL	Practical Quantitation Limit
RPD	Relative Percent Difference
A01	PQL's and MDL's are raised due to sample dilution.
S09	The surrogate recovery on the sample for this compound was not within the control limits.
V11	The Continuing Calibration Verification (CCV) recovery is not within established control limits.

APPENDIX H
City of Oakland Utility Maps


472,000
5781
Manhole Depth
1 2.5'
2 14'
3 10'
4 4'
5 13'
6 1.5'
7 4'
MH-2
MH-3
MH-7
DI-1
DI-4
DI-5
DI-6
INTERSTATE
MACARTHUR (168-9 As Built)
SUBDIVISION NO. 2 OF THE
(COURTLAND
AVE.)
Vacated
(MC CLELLAND ST.)
(BUCHANAN)
(COLLEGE)
Closed & Abandoned
(POLK)
(MABEL)
(UNDERWOOD)
(HARRISON)
(STATE ST.)
HIGHWAY
MACARTHUR
(HOPKINS)
STREET
PIERSON
(STORER
REDDING
AVE)
WYMAN
PATH
PLACE
WYMAN
CLOSED & ABANDONED
68
69
70
71
74

STORM DRAINS & CREEKS

0 110 220 Feet