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Alameda County  
Environmental Health

The logo for ConocoPhillips, featuring the word "Conoco" in a bold, sans-serif font and "Phillips" in a similar font, with a stylized checkmark above the "i" in Phillips.

76 Broadway  
Sacramento, California 95818

November 11, 2008

Mr. Jerry Wickham  
Alameda County Health Agency  
1131 Harbor Bay parkway, Suite250  
Alameda, California 94502-577

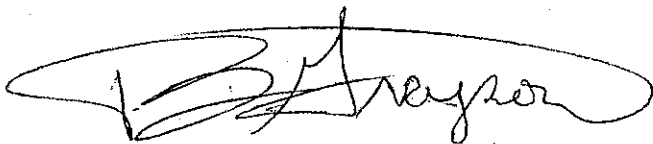
Re: **Site Investigation Report**  
**Former 76 Service Station # 4186 RO # 0436**  
**1771 First Street**  
**Livermore, CA**

Dear Mr. Wickham:

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 call me at (916) 558-7666.

Sincerely,

A handwritten signature in black ink, appearing to read "Terry L. Grayson". The signature is written in a cursive style with a large, sweeping underline.

Terry L. Grayson  
Site Manager  
Risk Management & Remediation

November 11, 2008

Mr. Jerry Wickham  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502-6577

**Subject: Site Investigation Report  
Former 76 Station No. 4186  
1771 First Street  
Livermore, California  
Fuel Leak Case No. R00000436**



Dear Mr. Wickham:

On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta), has prepared this report presenting the results of the installation of eight additional monitoring well at the above-referenced site. The work was performed as proposed in our *Work Plan Addendum* dated October 30, 2007, and approved by the Alameda County Health Care Services Agency (ACHCSA) in a letter dated March 21, 2008. A copy of the letter is presented as Attachment A.

The investigation consisted of the installation of four middle water bearing zone monitoring wells (U-8 through U-11) and four lower water bearing monitoring wells (U-12 through U-15) to assess the horizontal and vertical extent of the dissolved phase petroleum hydrocarbon impact to the groundwater beneath the site.

#### **SITE BACKGROUND AND PREVIOUS ENVIRONMENTAL WORK**

The site is located on the southwest corner of the intersection of First Street and N Street (Figure 1), and is an active Chevron station. Two 10,000-gallon gasoline underground storage tanks (USTs), two fuel dispenser islands, and a station building are present at the site (Figure 2). The site is located in a generally commercial area.

In June 1996, during dispenser and piping replacement activities, six soil samples were collected beneath the dispensers and product piping. Total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethyl-benzene and total xylenes (BTEX) were below the laboratory's indicated reporting limits in each of the samples collected and submitted for analysis.

In September 1997, a soil gas survey was conducted at the site. Six soil gas probes were advanced and samples were collected at 3 or 15 feet below ground surface (bgs) in the vicinity of the USTs, dispenser islands, and product lines. TPHg was reported in the samples at concentrations ranging from 41 to 4,500 parts per billion by volume (ppbv), benzene was reported at concentrations up to 110 ppbv, and methyl tertiary butyl ether (MTBE) was reported at concentrations up to 8,000 ppbv. The highest concentrations were reported in the area of the USTs.

In June 1998, three groundwater monitoring wells (U-1 through U-3) were installed at the site to depths of 34 feet bgs. TPHg, benzene, and MTBE were below the laboratory's indicated reporting limits in the soil samples collected from the well borings. The approximate well locations are shown on Figure 2.

A site conceptual model (SCM) was completed for the site in May 2000. The groundwater flow velocity was calculated to estimate plume travel time to the nearest down-gradient receptor. Groundwater velocity was calculated to be 46 feet per year. In addition, it was concluded that petroleum hydrocarbon impact to groundwater appears to fluctuate with the rise and fall of the groundwater surface beneath the site.

In February 2001, two additional monitoring wells (U-4 and U-5) were installed. The monitoring wells were installed to depths of 45 feet bgs (U-4) and 47 feet bgs (U-5). TPHg, BTEX, and MTBE were below the laboratory's indicated reporting limits in soil samples collected from the well borings. TPHg and benzene were below the laboratory's indicated reporting limits in the initial groundwater samples collected from monitoring wells U-4 and U-5; however, MTBE was reported at concentrations of 38.2 and 55.4 micrograms per liter ( $\mu\text{g/L}$ ), respectively. The approximate well locations are shown on Figure 2.

In December 2001, two additional monitoring wells (U-6 and U-7) and eight ozone sparge wells (SP-1 through SP-4, SP-5/5S, SP-6S, SP-7S, and SP-8/8S) were installed at the site. The monitoring wells were installed to 45 feet bgs. The sparge points in wells SP-1 through SP-4 were installed to a depth of 45 feet bgs. The sparge points in wells SP-6S and SP-7S were installed to a shallower depth of 25 feet bgs. The remaining two sparge wells each contained dual-nested sparge points installed to 25 feet bgs (SP-5S and SP-8S) and 45 feet bgs (SP-5 and SP-8). An ozone microsparge system was then installed and began operation in December 2001. The system injected ozone into the 10 sparge points. The approximate well locations are shown on Figure 2.

In April 2006, seven borings (B-1 through B-7) were advanced at the site. Three boreholes were advanced at each boring location. The initial borehole was advanced to record a cone penetration test (CPT) log of subsurface lithology. The second borehole was advanced for the purpose of collecting soil samples for observation and laboratory analysis, and to collect discrete groundwater samples at depths of approximately 38 feet to 44 feet bgs. The third borehole was advanced to collect a discrete groundwater sample at approximately 57 feet to 65 feet bgs. Three general stratigraphic zones were identified: an upper zone from 36 to 43 feet bgs, a middle clay zone from 43 to 55 feet bgs, and a lower zone from 55 to the maximum depth of 65.5 feet bgs explored. Soil samples from various depths were submitted for laboratory analysis. TPHg was reported in five upper zone, six clay zone, and three lower zone soil samples at concentrations up to 700 milligrams per kilogram (mg/kg). MTBE was reported in three

upper zone, three clay zone, and two lower zone soil samples at concentrations up to 0.29 milligrams per kilogram (mg/kg). Benzene was reported in three clay zone soil samples at concentrations up to 1.3 milligrams per kilogram (mg/kg). TPHg was reported in each of the 14 groundwater samples at concentrations up to 26,000 µg/L. Benzene was reported in five upper zone, and six lower zone groundwater samples at concentrations up to 510 µg/L. MTBE was reported in four upper zone, and six lower zone groundwater samples at concentrations up to 1,100 µg/L.

In March 2007, two additional on-site borings (B-8 and B-9) and one additional off-site boring (B-10) were advanced using a CPT rig. The borings were advanced to further evaluate the vertical extent of impacted groundwater to the base of the lowermost sand and gravel unit, to evaluate groundwater quality in the lowermost sand and gravel unit down-gradient of the site, and to evaluate the presence of a clay layer underlying the lowermost coarse-grained soils which may represent a regional aquitard. Four soil samples were collected for laboratory analysis from off-site boring B-10. MTBE was reported in two of the samples at concentrations up to 0.016 mg/kg; TPHg and benzene were below the laboratory's indicated reporting limits in each of the soil samples collected for analysis. TPHg (200 µg/L), benzene (0.94 µg/L), and MTBE (7.1 µg/L) were reported in the groundwater sample collected at 79 to 83 feet bgs from boring B-8. TPHg, BTEX, and fuel oxygenates were below the laboratory's indicated reporting limits in the groundwater sample collected at 78 to 88 feet bgs from boring B-9. A low concentration of MTBE (0.73 µg/L) was reported in the groundwater sample collected at 66 to 70 feet bgs from boring B-10, and a low concentration of toluene (1.4 µg/L) was reported in the groundwater sample collected at 83 to 87 feet bgs from boring B-10. Based on the results of the investigation, soil and groundwater in the area of off-site boring B-10 did not appear to be significantly impacted, groundwater within the lowermost sand and gravel unit in the area of boring B-8 was slightly impacted, and groundwater within the lowermost sand and gravel unit in the area of boring B-9 was not impacted.

Although the ozone system experienced problems with consistent operation, it appeared to be effective as TPHg, BTEX, and MTBE concentrations in monitoring well U-3 significantly decreased since startup of the system. The system was shut down in October 2006 to evaluate for groundwater concentration rebound. In March 2007, oxygen injection testing was performed in sparge wells SP-5/5S and SP-6S to evaluate the radius of influence (ROI) of the existing sparge wells, and to evaluate the effectiveness of the existing system. As described in our *Additional Subsurface Assessment Report*, dated April 26, 2007, the testing suggested a ROI of between 10 to 15 feet around the wells on average, but perhaps greater in some areas.

Impacted groundwater remains beneath the site in the areas of monitoring wells U-6 and U-7. Impacted groundwater also remains in the northwest portion of the site based on the results of the borings advanced in April 2006.

### **Sensitive Receptors**

Alameda County Zone 7 Water Agency files were reviewed on April 8, 1998, to identify water supply wells located within a one half mile radius of the site. Two municipal wells were identified as present approximately 1,500 feet and 1,800 feet northwest of the site, and two domestic wells were located approximately 1,900 feet and 2,800 feet southwest and west of the site.

2006 – A survey entailing a visit to the DWR office in Sacramento was conducted to examine well log records and to identify domestic wells within the survey area. The DWR survey provided 53 potential receptors within a one mile radius of the site; eleven municipal wells, five irrigation wells, two domestic wells, one domestic/irrigation well, and seventeen with an unknown well type. Seventeen additional potential receptors were identified although the specific addresses could not be located.

## **Site Geology and Hydrogeology**

The subject site is located in the Livermore Valley in the north-central Coast Range and is underlain by interbedded Holocene age alluvial fan and gravel facies. These deposits are composed of semi-consolidated deposits of sand and gravel in a matrix of clayey sand. During this soil boring assessment and previous field investigations, it was determined that the unsaturated (vadose) zone is composed predominantly of gravel with varying amounts of clay, silt and sand. The saturated zone is composed of clay, silty sand, and gravel.

Groundwater was initially encountered at depths of 28 to 30.5 feet bgs during drilling at the site and across First Street. Historical monitoring data show the static depth to water on-site varies from 23 to 44 feet bgs. The historical groundwater flow direction has varied from northwest to southwest with the most recent gradient of 0.06 feet per foot (ft/ft). The nearest surface water to the site is the Arroyo Mocho Creek, located approximately 2,900 feet south of the site.

Soil encountered during this investigation consisted primarily of gravel with varying amounts of silt and sand near the surface, and continued to depths of approximately 19 to 25 feet bgs. Units composed of clay with various amounts of silt and sand was encountered below the gravel to depths of approximately 32 to 39 feet bgs and 47 to 68 feet bgs. A saturated layer generally consisting of silty sand with gravel and comprised of multiple smaller units consisting of various amounts of gravel, sand and silt was encountered at approximately 32 to 36 feet bgs and continued to a depth of approximately 47 feet bgs. Similar lithology was encountered from 68 feet bgs to the total depth explored, 75 feet bgs. With the exception of monitoring well U-8, groundwater was not encountered in the middle zone monitoring wells. Groundwater in monitoring well U-8 was encountered at a depth of approximately 45 feet bgs. In the lower zone monitoring wells groundwater was first encountered at depths ranging from 70 to 72 feet bgs. Zones of saturated soil varied in thickness and lithology within and between borings.

## **SITE INVESTIGATION**

### **Pre-Field Activities**

A utility survey was conducted prior to the field investigation. Underground Services Alert (USA) was notified prior to drilling and a private utility locator was retained to minimize the risk of damage to underground utilities. Additionally, the first five feet of

the borehole was cleared using an air-knife to further minimize the risk of damage to underground utilities.

Delta prepared a site-specific Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP contained a list of emergency contacts, as well as a hospital route map to the nearest emergency facility.

Drilling permits were obtained for the eight monitoring wells from Zone 7 prior to drilling. A copy of the drilling permits is presented as Attachment B.

### **Middle Zone Monitoring Well Installation**

On September 8, through 12, 2008, Gregg Drilling (Gregg), under supervision of a Delta field geologist, advanced four borings for monitoring wells (U-8 through U-11) at the site. The borings were advanced to a depths ranging from of approximately 45 feet bgs to 50 feet bgs using a truck mounted drill-rig equipped with 8-inch outside diameter hollow-stem augers. The soils encountered in the boring were logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened using a calibrated photo ionization detector (PID). Soil samples were collected for lithologic interpretation and field screening at approximately 5-foot intervals beginning at 5 feet bgs. A copy of the boring logs is presented as Attachment C. The boring locations are shown on Figure 2.

Soil samples were collected at depths of approximately 37 feet bgs (U-8), 40 feet bgs, (U-9), 39 and 48 feet bgs, (U-10), and 30 and 44 feet bgs (U-11) were retained for laboratory analysis. The soil samples were analyzed by BC Laboratories (BC) for total purgeable petroleum hydrocarbons (TPPH), BTEX and MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), TBA, 1,2-dichloroethane (1,2-DCA), ethylene di-bromide (EDB), and ethanol - (8 oxygenates) by Environmental Protection Agency (EPA) Method 8260 and total lead by EPA Method 6010B.

The borings were converted to groundwater monitoring wells by installing a 2-inch diameter schedule 40 polyvinyl chloride (PVC) well casing with a screened intervals from 35 and 45 feet bgs. The perforation size in the screened interval was 0.020-inch. A sand pack consisting of RMC Lonestar #3 sand was placed in the annular space and extended to approximately 2 feet above the top of the screen. Borings U-8 and U-10 were advanced to depths of approximately 50 feet bgs and 48.5 feet bgs, respectively and backfilled with a bentonite slurry to a depth of 45 feet bgs prior to well construction.

A 2-foot thick bentonite seal was placed on top of the sand pack. The monitoring wells were surged prior to the placement of the bentonite seal to promote settling of the sand pack. The remainder of the annular space was filled with neat cement and the well fitted with a locking cap and encased in a traffic-rated protective vault placed at existing ground level. Well construction details are shown on Figure 3.

### **Lower Zone Monitoring Well Installation**

On September 22, through October 10, 2008, Gregg Drilling (Gregg), under supervision of a Delta field geologist, advanced four borings for monitoring wells (U-12 through U-15) at the site. The borings were advanced to a depths ranging from of approximately 55 feet bgs to 59 feet bgs using a truck mounted drill-rig equipped with 17-inch outside

diameter tri-cone drill-bit using the mud-rotary drilling method. The soils encountered in the boring were logged using the USCS for lithologic interpretation. Soil samples were collected for lithologic interpretation at approximately 5-foot intervals beginning at 5 feet bgs. A 12-inch outside diameter conductor casing was placed in each the borings and pushed into the clay unit described above a minimum of 2 feet. The final depth of the conductor casing ranged from 52 feet bgs to 57 feet bgs in the four borings.

Subsequent to the installation of the conductor casing the borings were further advanced to depths ranging from 71.5 feet bgs to 75 feet bgs using a truck mounted drill-rig equipped with 10-inch outside diameter hollow-stem augers. The borings were converted to groundwater monitoring wells by installing a 4-inch diameter schedule 40 PVC well casing with a 10-foot screen interval. The perforation size in the screened interval was 0.020-inch. A sand pack consisting of RMC Lonestar #3 sand was placed in the annular space and extended to approximately 2 feet above the top of the screen. A copy of the boring logs is presented as Attachment C. The boring locations are shown on Figure 2.

A 2-foot thick bentonite seal was placed on top of the sand pack. The monitoring wells were surged prior to the placement of the bentonite seal to promote settling of the sand pack. The remainder of the annular space was filled with neat cement and the well fitted with a locking cap and encased in a traffic-rated protective vault placed at existing ground level.

#### **Well Development, Monitoring, and Sampling**

On October 13, 2008, Gregg, under supervision of a Delta field geologist, attempted to develop the newly installed middle zone monitoring wells (U-8 through U-11). However, the middle zone monitoring wells contained insufficient water for development. Therefore, Gregg, under supervision of a Delta field geologist, developed the newly installed lower zone monitoring wells (U-12 through U-15). The lower zone monitoring wells were developed using by bailing and a surge block followed by bailing and pumping. A copy of the well development logs is presented as Attachment D.

The newly installed monitoring wells are currently scheduled to be purged and sampled for the first time on December 3, 2008, by TRC Solutions, Inc. (TRC) as part of the quarterly monitoring and sampling activities at the site. Details of the quarterly monitoring and sampling activities will be presented in a report under a separate cover.

Groundwater samples will be collected for analysis from the seven previously installed monitoring wells, five on-site and two off-site, as well as the eight newly installed monitoring wells. Groundwater samples will be analyzed for TPH, BTEX and MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB, and ethanol by EPA Method 8260B and dissolved lead by EPA Method 6010B. In addition, as directed by the SCEMD the groundwater samples were analyzed for hexavalent chromium by EPA Method 7196, and total arsenic and total lead by EPA Method 6010B and bromate by EPA Method 300.1 prior to restarting the ozone remediation system.

#### **Wellhead Survey**

A California licensed surveyor will be retained to survey the northing and easting of the newly installed monitoring wells as well as the previously installed monitoring wells using Datum NAD 83. The monitoring well elevations will be surveyed relative to mean

sea level, with an accuracy of +/- 0.01 foot on September 15, 2008. A global positioning system (GPS) will be used to survey in the latitude and longitude of the wells. This data will be uploaded to the State GeoTracker database.

#### **Disposal of Drill Cuttings and Wastewater**

Drill cuttings generated during the investigation were placed into were placed into roll-off bins properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored on-site. Samples of the drill cuttings, well development water, and decontamination water were collected, properly labeled, placed on ice, and transported to BC with chain of custody documentation. The samples were analyzed for TPPH, BTEX and MTBE, DIPE, ETBE, TAME, TBA, 1,2-DCA, EDB, and ethanol by EPA Method 8260, and total lead by EPA Method 6010B. The drummed drill cuttings and wastewater are currently being profiled for transportation to and disposal at a COP-approved facility.

### **RESULTS OF THE INVESTIGATION**

The subsurface materials encountered in the borings consisted of silt, clay and sand with well graded gravel. A copy of the boring logs for the monitoring wells is presented as Attachment C.

Data collected during this investigation indicated that TPPH was present in each of the soil samples collected. The highest TPPH concentration (1,900 mg/kg) was found in the soil sample collected from the U-9 boring at a depth of 40 feet bgs. Benzene was present one of the six soil samples collected during this investigation. The highest benzene concentration (0.7 mg/kg) was found in the soil sample collected from boring U-10 at a depth of 48 feet bgs. MTBE was also present four of the six soil samples collected during this investigation. The highest MTBE concentration (1.3 mg/kg) was found in the soil sample collected from boring U-10 at a depth of 48 feet bgs. Soil analytical results are presented in Table 1. A copy of the laboratory report and chain of custody documentation is presented as Attachment E.

### **CONCLUSIONS AND RECOMMENDATIONS**

The analytical results from the soil samples collected and submitted for analysis during this investigation indicate petroleum hydrocarbons are present in the soil at depths ranging from 30 feet bgs to 48 feet bgs. The impacted soil likely originated from the fuel dispensers and the USTs.

Analytical data from soil samples collected during this investigation as well as previous investigations at the site indicate that the highest petroleum hydrocarbon impacted soil is found in the vicinity of borings B-1, B-2, and U-9 at depths ranging from 40 feet bgs to 45 feet bgs. These borings are located in the northwest corner of the site.

**Delta recommends that the newly installed monitoring wells (U-8 through U-15) as well as the previously installed monitoring wells (U-1 through U-7) be purged and sampled on a quarterly basis for a minimum of two quarters. Then based on the analytical data from quarterly groundwater monitoring and data obtained during previous site investigations a work plan will be prepared proposing additional ozone injection wells be installed at the site. These injection wells will be added to the existing ozone injection network for the**



**purpose of remediating the petroleum hydrocarbon impacted soil and groundwater beneath the site.**

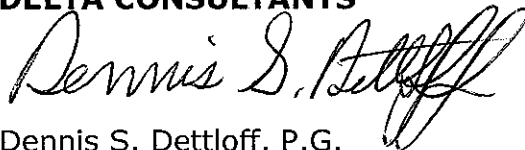
## REMARKS/SIGNATURES

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 will be 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 expressed or implied warranty as to the contents of this report.

If you have any questions regarding this project, please contact me at (916) 503-1261 or Mr. Terry Grayson of COP at (916) 558-7666.

Sincerely,

**DELTA CONSULTANTS**



Dennis S. Dettloff, P.G.  
Senior Project Manager

California Registered Professional Geologist No. 7480



### Figures:

- Figure 1 – Site Location Map
- Figure 2 – Site Plan
- Figure 3 – Middle Zone Monitoring Well Construction Detail

### Table:

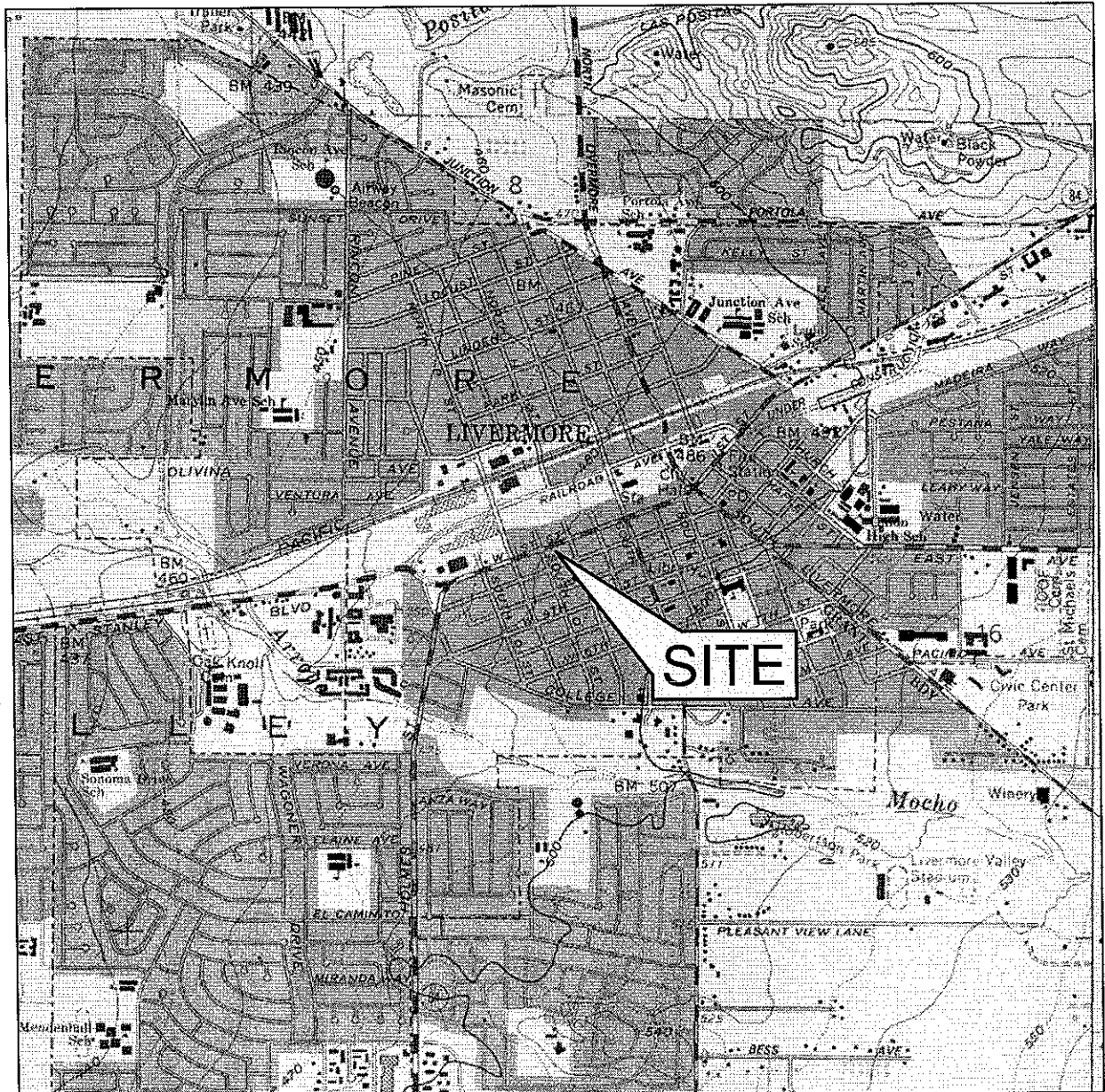
- Table 1 – Soil Analytical Results

### Attachments:

- Attachment A – ACHCSA Approval Letter
- Attachment B – Drilling Permit
- Attachment C – Boring Logs
- Attachment D – Well Development Logs
- Attachment E – Site Investigation Analytical Reports

cc: Mr. Terry Grayson, ConocoPhillips (electronic copy only)

## Figures



0 1000 FT 2000 FT  
SCALE: 1 : 24,000



FIGURE 1

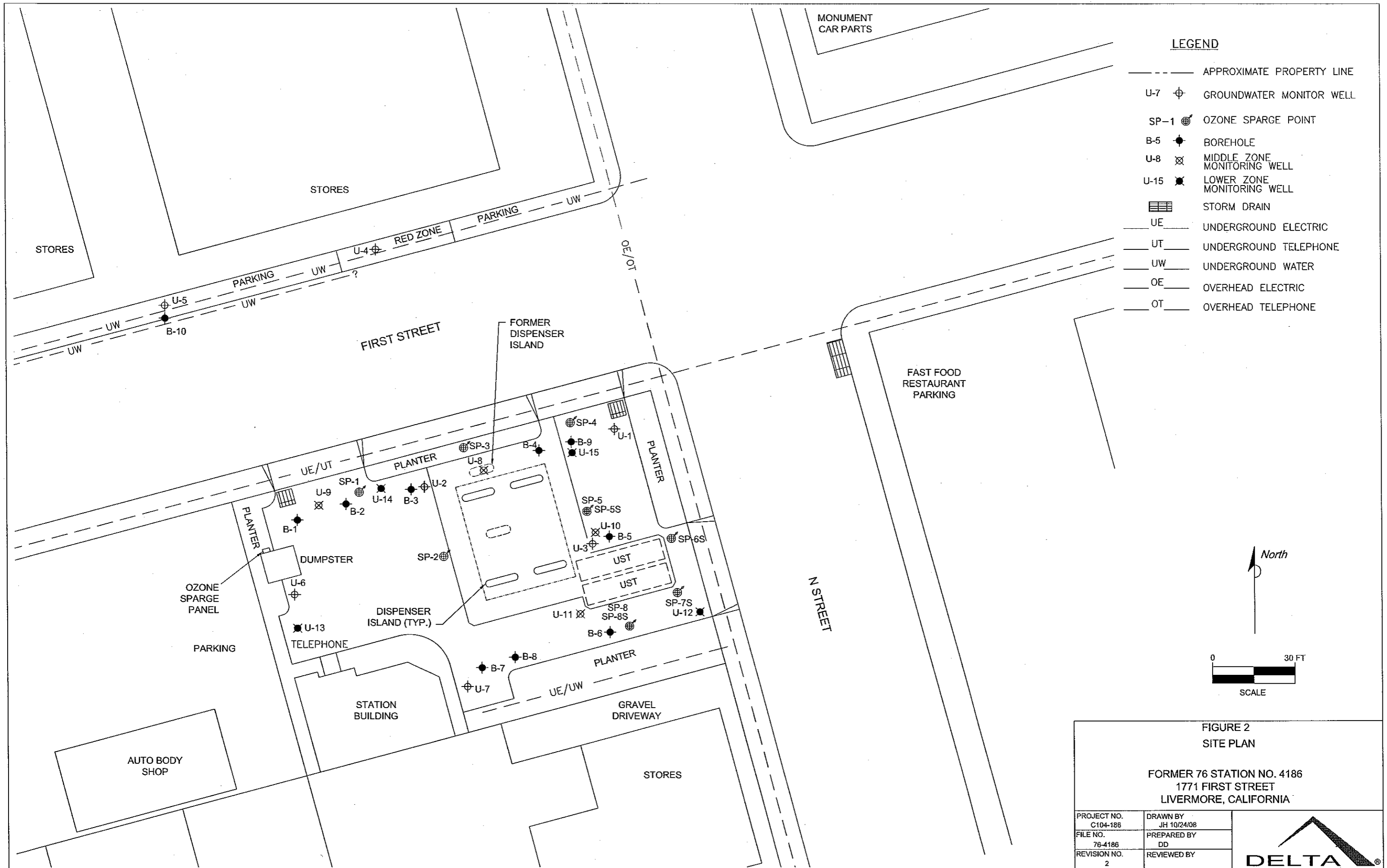
SITE LOCATION MAP

76 STATION NO. 4186  
1771 FIRST STREET  
LIVERMORE, CA

PROJECT NO. C104-186	DRAWN BY MC 12/28/05
FILE NO. Site Locator 4186	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

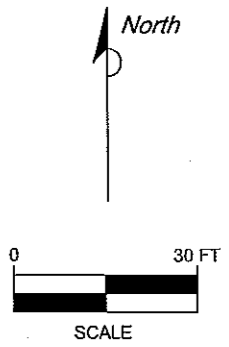


SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, CALABASAS QUADRANGLE, 1967



**LEGEND**

- APPROXIMATE PROPERTY LINE
- U-7 ⊕ GROUNDWATER MONITOR WELL
- SP-1 ⊕ OZONE SPARGE POINT
- B-5 ● BOREHOLE
- U-8 ⊗ MIDDLE ZONE MONITORING WELL
- U-15 ⊗ LOWER ZONE MONITORING WELL
- ▨ STORM DRAIN
- UE — UNDERGROUND ELECTRIC
- UT — UNDERGROUND TELEPHONE
- UW — UNDERGROUND WATER
- OE — OVERHEAD ELECTRIC
- OT — OVERHEAD TELEPHONE



**FIGURE 2  
SITE PLAN**

**FORMER 76 STATION NO. 4186  
1771 FIRST STREET  
LIVERMORE, CALIFORNIA**

PROJECT NO. C104-186	DRAWN BY JH 10/24/08
FILE NO. 76-4186	PREPARED BY DD
REVISION NO. 2	REVIEWED BY

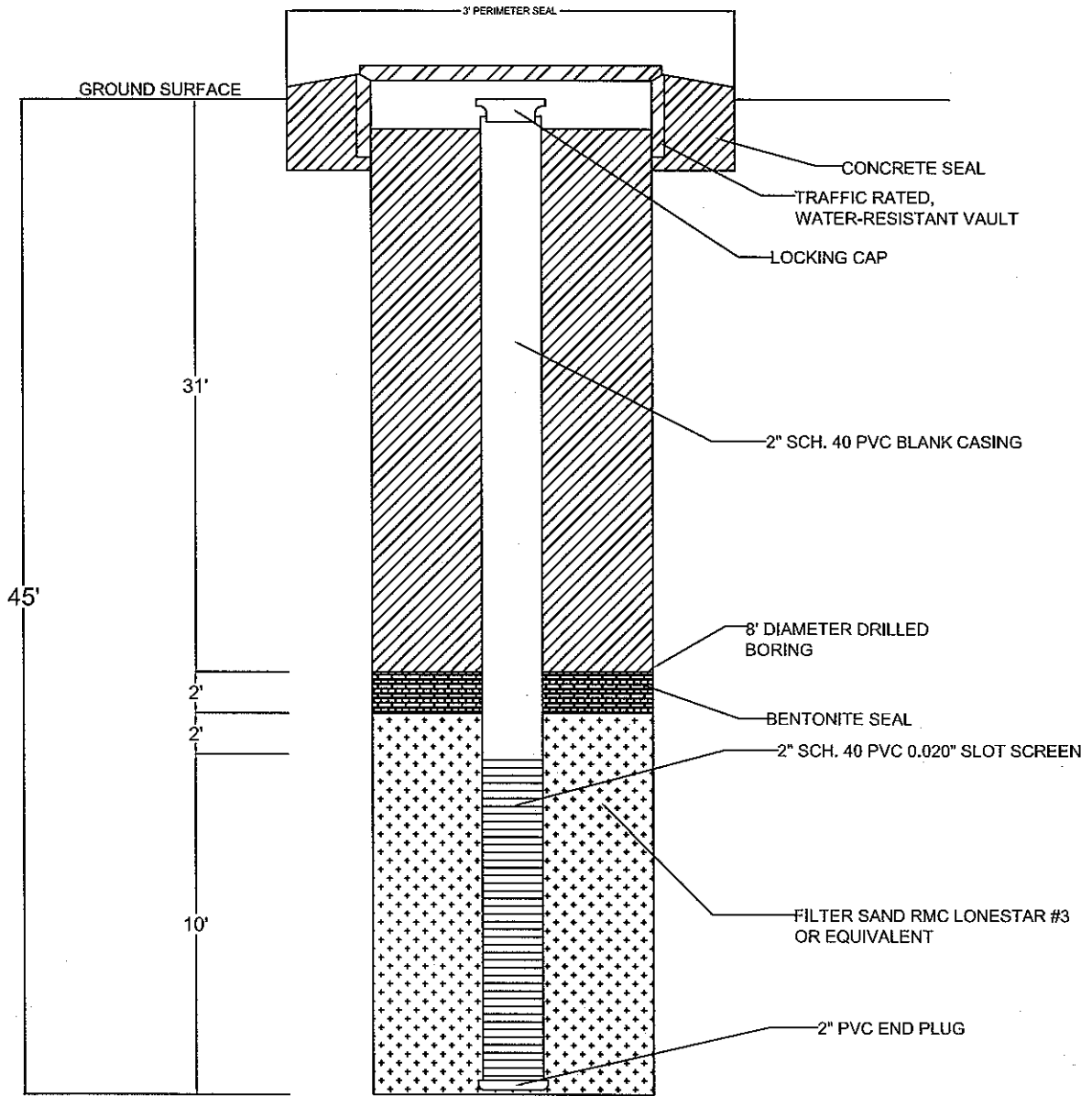


FIGURE 3  
 MIDDLE ZONE MONITORING WELL  
 CONSTRUCTION DETAIL  
 FORMER SERVICE STATION NO. 4186  
 1771 FIRST STREET  
 LIVERMORE, CALIFORNIA

PROJECT NO. C104186	DRAWN BY JH 10/24/08
FILE NO. 4186-WELLDDETAIL	PREPARED BY DD
REVISION NO.	REVIEWED BY DD



## Table

Table 1

**SOIL ANALYTICAL RESULTS**  
**Former 76 Station No. 4186**  
**1771 First Street, Livermore, California**

Sample ID	Date	Sample Depth (feet)	TPPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	TBA (mg/kg)	TAME (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	Ethanol (mg/kg)	1,2-DCA (mg/kg)	EDB (mg/kg)	Lead (mg/kg)
<b>Soil Samples</b>																
U-8 @ 37	9/8/2008	37	<b>1.3</b>	<0.005	<b>0.0051</b>	<0.005	<b>0.011</b>	<0.005	<0.005	<0.005	<0.005	<0.005	<1.0	<0.005	<0.005	NA
U-9 @ 40	9/10/2008	40	<b>1,900</b>	<0.25	<0.25	<b>8.0</b>	<b>48</b>	<0.25	<2.5	<0.25	<0.25	<0.25	<50	<0.25	<0.25	NA
U-10 @ 39	9/11/2008	39	<b>2.4</b>	<0.005	<0.005	<0.005	<0.01	<0.005	<b>0.058</b>	<0.005	<0.005	<0.005	<1.0	<0.005	<0.005	NA
U-10 @ 48	9/11/2008	48	<b>22</b>	<b>0.7</b>	<b>0.12</b>	<b>0.31</b>	<b>2.2</b>	<b>0.29</b>	<b>1.3</b>	<0.05	<0.05	<0.05	<10	<0.05	<0.05	NA
U-11 @ 30	9/12/2008	30	<b>2.0</b>	<0.005	<0.005	<0.005	<b>0.017</b>	<b>0.54</b>	<b>0.93</b>	<0.005	<0.005	<0.005	<1.0	<0.005	<0.005	NA
U-11 @ 44	9/12/2008	44	<b>0.45</b>	<0.005	<0.005	<0.005	<0.01	<b>0.34</b>	<b>0.54</b>	<0.005	<0.005	<0.005	<1.0	<b>0.011</b>	<0.005	NA
<b>Waste Samples</b>																
WD-1	9/24/2008		<0.2	<0.005	<0.005	<0.005	<0.01	<b>0.0052</b>	NA	NA	NA	NA	NA	NA	NA	<b>6.7</b>
WD-2	9/25/2008		<b>0.42</b>	<0.005	<0.005	<0.005	<0.01	<0.005	NA	NA	NA	NA	NA	NA	NA	NA
<b>Notes:</b>																
TPPH = total purgeable petroleum hydrocarbons by EPA Method 8260B						1,2-DCA = 1,2-Dichloroethane by EPA Method 8260B										
BTEX = benzene, toluene, ethyl-benzene, total xylenes by EPA Method 8260B						EDB = 1,2-Dibromoethane by EPA Method 8260B										
MTBE = methyl tertiary butyl ether by EPA Method 8260B						Lead = total lead by EPA Method 6010B										
TBA = tertiary butyl alcohol by EPA Method 8260B						mg/kg = milligrams per kilogram										
TAME = tertiary-amyl methyl ether by EPA Method 8260B						< = Below the laboratory's indicated reporting limit										
DIPE = Di-isopropyl ether by EPA Method 8260B						NA = not analyzed										
ETBE = Ethyl tertiary-butyl ether by EPA Method 8260B						<b>Bold</b> = Above the laboratory's indicated reporting limit										
Ethanol = Ethanol by EPA Method 8260B						EPA = US Environmental Protection Agency										

**Attachment A**

***ACHCSA Approval Letter***



ALAMEDA COUNTY  
HEALTH CARE SERVICES

AGENCY

DAVID J. KEARS, Agency Director

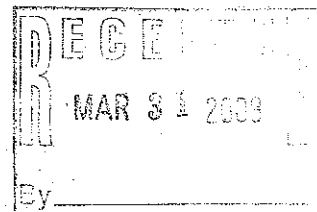


ENVIRONMENTAL HEALTH SERVICES  
ENVIRONMENTAL PROTECTION  
1131 Harbor Bay Parkway, Suite 250  
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(510) 567-6700  
FAX (510) 337-9335

March 21, 2008

William Borgh  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel  
4481 Peacock Court  
Dublin, CA 94568



Subject: Fuel Leak Case No. RO0000436 and Geotracker Global ID T0600101777, Unocal #4186, 1771 First Street, Livermore, CA 94550

Dear Mr. Borgh and Mr. and Ms. Vadakkekunnel:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site including the recently submitted document entitled, "*Work Plan - Second Addendum*," dated February 12, 2008. The Work Plan Addendum was prepared in response to technical comments in ACEH correspondence dated December 7, 2007. The "*Work Plan - Second Addendum*," dated February 12, 2008 is acceptable and may be implemented as proposed. We request that you perform the proposed work and send us the technical reports requested below.

**TECHNICAL REPORT REQUEST**

Please submit technical reports to Alameda County Environmental Health (Attention: Jerry Wickham), according to the following schedule:

- **July 22, 2008** – Well Installation Report
- **45 days following sampling event** – Quarterly Report (To include summary report, remedial performance summary, and quarterly monitoring report)

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**

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. Instructions for

William Borgh  
Thomas and Celine Vadakkekunnel  
RO0000436  
March 21, 2008  
Page 3

**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.

If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at [jerry.wickham@acgov.org](mailto:jerry.wickham@acgov.org).

Sincerely,



Jerry Wickham, California PG 3766, CEG 1177, and CHG 297  
Senior Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Cheryl Dizon, QIC 80201  
Zone 7 Water Agency  
100 North Canyons Parkway  
Livermore, CA 94551

Danielle Stefani  
Livermore-Pleasanton Fire Department  
3560 Nevada Street  
Pleasanton, CA 94566

Dennis Dettloff  
Delta Environmental Consultants, Inc.  
3164 Gold Camp Drive, Suite 200  
Rancho Cordova, CA 95670

Donna Drogos, ACEH  
Jerry Wickham, ACEH  
File

**Attachment B**  
***Drilling Permit***



ALAMEDA COUNTY FLOOD CONTROL AND WATER CONSERVATION DISTRICT

100 NORTH CANYONS PARKWAY, LIVERMORE, CA 94551-9486

PHONE (925) 454-5000

September 8, 2008

RECEIVED

SEP 10 2008

Ms. Joyce Welsh  
Delta Consultants  
11050 Whiterock Road, Suite 110  
Rancho Cordova, CA 95670

Dear Ms. Welsh:

Enclosed is drilling permit 28123 for a monitoring well construction project at 1771 First Street in Livermore for Conoco Phillips. Also enclosed is a current drilling permit application for your files. Drilling permit applications for future projects can also be downloaded from our web site at [www.zone7water.com](http://www.zone7water.com).

Please note that permit conditions A-2 requires that a well construction report be submitted after completion of the work. The report must be completed on Department of Water Resources form 188. Please submit the original of your completion report signed by the driller. Also include a copy of any analysis of the soil and water samples. We will forward your submittal to the California Department of Water Resources.

If you have any questions, please contact me at extension 5056 or Matt Katen at extension 5071.

Sincerely,

A handwritten signature in cursive script that reads "Wyman Hong".

Wyman Hong  
Water Resources Specialist

Enc.



# ZONE 7 WATER AGENCY

100 NORTH CANYONS PARKWAY, LIVERMORE, CALIFORNIA 94551 VOICE (925) 454-5000 FAX (925) 245-9306  
E-MAIL [whong@zone7water.com](mailto:whong@zone7water.com)

## DRILLING PERMIT APPLICATION

FOR APPLICANT TO COMPLETE

FOR OFFICE USE

LOCATION OF PROJECT 1771 FIRST ST  
LIVERMORE CA

Coordinates Source GOOGLE EARTH ft. Accuracy 5 ft.  
LAT: 37.679801 ft. LONG: -121.773967 ft.  
APN \_\_\_\_\_

### CLIENT

Name CONOCO PHILLIPS  
Address 76 BROADWAY Phone 916 558 7600  
City SACRAMENTO CA Zip 95818

### APPLICANT

Name DELTA CONSULTANTS  
Email D.D. HLOFF @ DELTAENR.COM Fax 916 638 2085 8385  
Address 11050 WHITE ROCK RD 110 Phone 916 638 2085  
City RANCHO CORDOVA CA Zip 95670

### TYPE OF PROJECT:

Well Construction  Geotechnical Investigation 9  
Well Destruction 9 Contamination Investigation 9  
Cathodic Protection 9 Other \_\_\_\_\_ 9

### PROPOSED WELL USE:

Domestic 9 Irrigation 9  
Municipal 9 Remediation 9  
Industrial 9 Groundwater Monitoring   
Dewatering 9 Other \_\_\_\_\_ 9

### DRILLING METHOD:

Mud Rotary  Air Rotary 9 Hollow Stem Auger   
Cable Tool 9 Direct Push 9 Other \_\_\_\_\_ 9

DRILLING COMPANY BRGGG

DRILLER'S LICENSE NO. C-57 4885165

### WELL SPECIFICATIONS:

Drill Hole Diameter 8/12 in. Maximum  
Casing Diameter 2/10 in. Depth 45/75 ft.  
Surface Seal Depth 24/54 ft. Number 4/4

### SOIL BORINGS:

Number of Borings \_\_\_\_\_ Maximum  
Hole Diameter \_\_\_\_\_ in. Depth \_\_\_\_\_ ft.

ESTIMATED STARTING DATE 9/2/08  
ESTIMATED COMPLETION DATE 9/26/08

I hereby agree to comply with all requirements of this permit and Alameda County Ordinance No. 73-68.

APPLICANT'S SIGNATURE Joyce Welsh Date 8-1-08  
Joyce Welsh

ATTACH SITE PLAN OR SKETCH

PERMIT NUMBER 28123  
WELL NUMBER 3S/2E-17A16 to 3S/2E-17A23  
APN 097-0010-001-01

### PERMIT CONDITIONS

(Circled Permit Requirements Apply)

#### A. GENERAL

1. A permit application should be submitted so as to arrive at the Zone 7 office five days prior to your proposed starting date.
2. Submit to Zone 7 within 60 days after completion of permitted work the original **Department of Water Resources Water Well Drillers Report (DWR Form 188), signed by the driller.**
3. Permit is void if project not begun within 90 days of approval date.

#### B. WATER SUPPLY WELLS

1. Minimum surface seal diameter is four inches greater than the well casing diameter.
2. Minimum seal depth is 50 feet for municipal and industrial wells or 20 feet for domestic and irrigation wells unless a lesser depth is specially approved.
3. Grout placed by tremie.
4. An access port at least 0.5 inches in diameter is required on the wellhead for water level measurements.
5. A sample port is required on the discharge pipe near the wellhead.

#### C. GROUNDWATER MONITORING WELLS INCLUDING PIEZOMETERS

1. Minimum surface seal diameter is four inches greater than the well or piezometer casing diameter.
2. Minimum seal depth for monitoring wells is the maximum depth practicable or 20 feet.
3. Grout placed by tremie.

D. GEOTECHNICAL. Backfill bore hole with compacted cuttings or heavy bentonite and upper two feet with compacted material. In areas of known or suspected contamination, tremied cement grout shall be used in place of compacted cuttings.

E. CATHODIC. Fill hole above anode zone with concrete placed by tremie.

F. WELL DESTRUCTION. See attached.

G. SPECIAL CONDITIONS. Submit to Zone 7 within 60 days after completion of permitted work the well installation report **including all soil and water laboratory analysis results.**

Approved: Wyman Hong Date 9/5/08  
Wyman Hong

**Attachment C**

***Boring Logs***

# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-8
Logged By: Joyce Welsh	Location: 1771 First Street, Livermore, CA	Page 1 of 2
Driller: Gregg Drilling	Date Drilled: 9/4/08, 9/8/08	Location Map Please see site map
Drilling Method: Hollow Stem Auger/Rhino	Hole Diameter: 8 inches	
Sampling Method: Split Spoon	Hole Depth: 50 feet	
Casing Type: SCH 40 PVC	Well Diameter: 2 inches	
Slot Size: 0.020	Well Depth: 45 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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Well Completion			Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing	Backfill								
										Concrete
							1.0			
							2.0		GM	Silty Sandy Gravel: well graded, no odor
							3.0			
							4.0			
							5.0		GM	Silty Sandy Gravel: dark brown, well graded, 30-40% silty sand matrix, loose, no odor, dry
			DRY	0			6.0			
							7.0			
							8.0			
							9.0			
			DRY	0.3			10.0			
							11.0			
							12.0			
							13.0			
							14.0			
			DRY	0			15.0			
							16.0			
							17.0			
							18.0		CL	Gravelly Silty Clay: brown, medium plasticity, >50% silty clay matrix, soft to firm, (as per driller from augers)
							19.0			
							20.0		CL	Silty Clay: brown, medium plasticity, firm, moderate hydrocarbon odor, wet
			WET	146			21.0			
							22.0			
							23.0			
							24.0			
							25.0		CL	Gravelly Clay: brown, well graded, >50% clay, no odor

Air Knife

Rhino Rig used- no blow counts collected

# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-8  
 Logged By: Joyce Welsh Location: 1771 First Street, Livermore, CA Page 2 of 2  
 Driller: Gregg Drilling Date Drilled: 9/4/08, 9/8/08 Location Map  
 Drilling Method: Hollow Stem Auger/Rhino Hole Diameter: 8 inches Please see site map  
 Sampling Method: Split Spoon Hole Depth: 50 feet  
 Casing Type: SCH 40 PVC Well Diameter: 2 inches  
 Slot Size: 0.020 Well Depth: 45 feet  
 Gravel Pack: #3 Sand Casing Stickup: -

Elevation Latitude Longitude

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION	
Backfill Casing Backfill	neat cement		WET			26.0		CL	Gravelly Clay: brown, well graded, >50% clay, no odor wet	
	2" PVC casing					27.0				
	bentonite					28.0				
	#3 sand					29.0				
	well screen					30.0		CL	Silty Clay: orange-brown, high plasticity, soft, no odor, wet	
				WET	0.3		31.0			
							32.0			
							33.0			
				WET	0.4		35.0		GC	Sandy Clayey Gravel: orange-brown mottled, low plasticity, soft, no odor, wet
							36.0			
			WET	1338*		37.0			As above: grey mottled with moderate to strong hydrocarbon odor	
						38.0				
						39.0			* soil sample collected for laboratory analysis	
			MOIST	358		40.0		CL	Silty Clay: orange-brown, medium-high plasticity, <20% silt, strong hydrocarbon odor, moist	
						41.0				
			MOIST	20		42.0			As above: with no odor	
			MOIST	57		43.0		CL	Sandy Clay: medium brown, medium-high plasticity, <30% sand, well graded, soft, no odor, moist	
	# 3 sand		MOIST	56		44.0				
	bentonite		MOIST	238		45.0		CL	Silty Clay: grey-brown to orange-brown, medium plasticity, soft, no odor, moist	
			MOIST	70		46.0				
			MOIST			47.0				
			MOIST	15		48.0				
			MOIST			49.0				
						50.0				

Rhino Rig used- no blow counts collected

Boring terminated at 50 feet below ground surface.



# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-9
Logged By: Joyce Welsh	Location: 1771 First Street, Livemore, CA	Page 1 of 2
Driller: Gregg Drilling	Date Drilled: 9/4/08, 9/10/08	Location Map Please see site map
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches	
Sampling Method: Split Spoon	Hole Depth: 45 feet	
Casing Type: SCH 40 PVC	Well Diameter: 2 inches	
Slot Size: 0.020	Well Depth: 45 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/ft)	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	well box					1.0			Asphalt
Casing	neat cement					2.0		GM	Silty Sandy Gravel: well graded, no odor
Backfill	2" PVC casing					3.0			
			DRY	0.7	9	4.0			
					54	5.0		GM	Sandy Silty Gravel: medium to dark brown, ~30% sandy silt, well graded, no odor, dry
					5	6.0			
			DRY	0.7	9	7.0			
					18	8.0			
					10	9.0			as above: medium dense
			DRY	0.3	18	10.0			
					25	11.0			
					26	12.0		GM	Silty Sandy Gravel: brown, 30-35% silty sand, well graded, no odor, dry
			DRY	0.2	12	13.0		GC	Sandy Clayey Gravel: brown, low plasticity, 20-30% sandy clay, no odor, dry
					50	14.0			
					5	15.0			
						16.0			
						17.0			
						18.0			
						19.0			
			MOIST	0	8	20.0		CL	Silty Clay: orange-brown, medium plasticity, very stiff, no odor, moist
					10	21.0			
					12	22.0			as above: with less gravel (50-60%) (as per driller from augers)
						23.0			
						24.0			
						25.0			

# Delta Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-9
Logged By: Joyce Welsh	Location: 1771 First Street, Livemore, CA	Page 2 of 2
Driller: Gregg Drilling	Date Drilled: 9/4/08, 9/10/08	Location Map Please see site map
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches	
Sampling Method: Split Spoon	Hole Depth: 45 feet	
Casing Type: SCH 40 PVC	Well Diameter: 2 inches	
Slot Size: 0.020	Well Depth: 45 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Well Completion			Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing	Backfill								
	neat cement			MOIST			26.0		CL	Silty Clay: orange-brown, medium plasticity, stiff to hard, no odor, moist
	2" PVC casing						27.0			
							28.0			
				MOIST	0	6	29.0		CL	Clay: orange-brown, medium-high plasticity, stiff to very stiff, no odor, moist
						8	30.0			
						9	31.0			
	bentonite						32.0		GM	Gravel
							33.0			(as per driller from augers)
	#3 sand			MOIST	0	18	34.0		CL	Gravelly Sandy Clay: orange-brown mottled, medium plasticity, 50-60% sandy clay, soft, no odor, moist
						25	35.0			
						34	36.0			
	well screen			WET	1	8	37.0		GM	Sandy Silty Gravel: green-grey mottled with black staining, hydrocarbon odor, wet
						18	38.0			
				WET	60	36	39.0		GC	Sandy Clayey Gravel: black-brown mottled in color, low plasticity, dense, strong hydrocarbon odor, wet
						21	40.0			
						34	41.0			
				WET	122	21	42.0		CL	Clay: orange brown, medium-high plasticity, medium stiff, strong hydrocarbon odor, moist
						24	43.0		CL	Silty Clay: orange brown, medium-high plasticity, medium stiff, hydrocarbon odor, moist
				MOIST	647	9	44.0			
						5	45.0			
				WET	75	4				as above: becoming wet
						2				
						3				
						5				
						1				
						4				
						4				

Boring terminated at 45 feet below ground surface.

# Delta

Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No:	U-10
Logged By:	Joyce Welsh	Location:	1771 First Street, Livermore, CA	Page 1 of 2	
Driller:	Gregg Drilling	Date Drilled:	9/5/08, 9/11/08	Location Map	
Drilling Method:	Hollow Stem Auger	Hole Diameter:	8 inches	Please see site map	
Sampling Method:	Split Spoon	Hole Depth:	48.5 feet		
Casing Type:	SCH 40 PVC	Well Diameter:	2 inches		
Slot Size:	0.020	Well Depth:	47 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		

Well Completion			Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing	Backfill								Asphalt
	well box						1.0		GM	Gravel with Cobbles and Silt: well graded, no odor
	neat cement						2.0			
	2" PVC casing						3.0			
							4.0			
				DRY	13	18	5.0		GM	Silty Sandy Gravel: brown, well graded, 20-30% silty sand matrix, dense, no odor, dry
						21	6.0			
						34	7.0			
				DRY	1	50/5	8.0			
							9.0		GC	Sandy Clayey Gravel: brown, well graded, medium-low plasticity, 30-40% sandy clay, very dense, no odor, dry
							10.0			
							11.0			
							12.0			
							13.0			
				DRY	2	27	14.0		GC	Clayey Sandy Gravel: brown-orange mottled, 20-30% clayey sand, very dense, no odor, dry
						30	15.0			
						40	16.0			
							17.0			
							18.0			
							19.0			
				MOIST	1	15	20.0		CL	Silty Clay: orange-brown, high plasticity, hard, no odor, moist
						20	21.0			
						4	22.0			
							23.0			
							24.0			as above: with medium plasticity, hard
				MOIST	1	16	25.0			
						15				
						25				

# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-10
Logged By: Joyce Welsh	Location: 1771 First Street, Livemore, CA	Page 2 of 2
Driller: Gregg Drilling	Date Drilled: 9/5/08, 9/11/08	Location Map Please see site map
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches	
Sampling Method: Split Spoon	Hole Depth: 48.5 feet	
Casing Type: SCH 40 PVC	Well Diameter: 2 inches	
Slot Size: 0.020	Well Depth: 47 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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Well Completion			Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6')	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Casing	Backfill								
	neat cement			MOIST			26.0		CL	Silty Clay: orange-brown, medium plasticity, hard, no odor moist
	2" PVC casing			MOIST	1	6 7 9	29.0			as above: with high plasticity, stiff to very stiff
	bentonite			MOIST	1	5	34.0		CL	Gravelly Clay: orange-brown, high plasticity, <20% gravel, stiff to very stiff, no odor, moist
	#3 sand			WET	2	14	35.0			as above: with sandy clay (<20%) and mottling
	well screen			WET	4	19	37.0			as above: with black staining and slight hydrocarbon odor, 30-40% sandy clay
				MOIST	11	8 27	38.0			
				WET	2	18 21	39.0		CL	Clay: orange-brown with grey mottling, medium plasticity, hard, no odor
				WET	1	4 14 28	41.0		GC	Silty Clayey Gravel: orange-brown with ~20% silty clay, black staining, medium plasticity, no odor, wet
				WET	1	11 14	42.0			
				WET	3	53 10	44.0			
				WET	10	50/5"	45.0			as above: turning grey in color with orange mottling and staining, slight hydrocarbon odor
				WET		20 25	46.0			
				MOIST	62	30	47.0		CL	Sandy Clay: orange-brown mottled with grey staining, high plasticity, <10% sand, stiff to very stiff, moderate hydrocarbon odor, moist
	bentonite					8 7 7	48.0			

Boring terminated at 48.5 feet below ground surface.

# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-11
Logged By: Joyce Welsh	Location: 1771 First Street, Livermore, CA	Page 1 of 2
Driller: Gregg Drilling	Date Drilled: 9/3/08, 9/12/08	Location Map  Please see site map
Drilling Method: Hollow Stem Auger	Hole Diameter: 8 inches	
Sampling Method: Split Spoon	Hole Depth: 45 feet	
Casing Type: SCH 40 PVC	Well Diameter: 2 inches	
Slot Size: 0.020	Well Depth: 45 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box								Asphalt
	neat cement					1.0			
	2" PVC casing					2.0		GM	Gravel with Cobbles and Silty Sand: well graded, no odor
						3.0			
						4.0			
			MOIST	0	4	5.0		SW	Gravelly Sand: brown, 1/4 - 3/4" diameter gravel, ~75% well graded sand, loose to medium dense, no odor, moist
					19	6.0			
					19	7.0			
						8.0			
						9.0			
			MOIST	0	11	10.0		GM	Gravel with Silty Sand: light brown-brown, 1/2 - 1 1/4" diameter gravel, 40% sandy silt, medium dense, no odor, moist
					14	11.0			
					14	12.0			
						13.0			
						14.0			
			MOIST	0	23	15.0			as above: with 25-30% sandy silt, dense, 1/4" - 1" diameter gravel, no odor, moist
					50/5"	16.0			
					5	17.0			
						18.0			
						19.0			
						20.0			
			MOIST	0	20	21.0			
					24	22.0		CL	Silty Clay: light brown, medium-high plasticity, stiff, no odor, moist (as per driller from augers)
					29	23.0			
						24.0			
						25.0		CL	Gravelly Silty Clay: light brown, medium plasticity very stiff, 5% gravel, no odor, moist
					7				



# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-12  
 Logged By: Joyce Welsh Location: 1771 First Street, Livermore, CA Page 1 of 3  
 Driller: Gregg Drilling Date Drilled: 9/2, 9/22-26, 10/7/08 Location Map  
 Drilling Method: Mud Rotary/Hollow Stem Hole Diameter: 17 inches Please see site map  
 Sampling Method: Split Spoon Auger Hole Depth: 75 feet  
 Casing Type: 12" Steel/ 4" SCH 40 PVC Well Diameter: 4 inches  
 Slot Size: 0.020 Well Depth: 75 feet  
 Gravel Pack: #3 Sand Casing Stickup: -

Elevation Latitude Longitude  
 ▼ = Static Groundwater

Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box				Water Knife	1.0			Asphalt
	neat cement					2.0		GC	Gravel with Sand, Silt and Clay: tight sand-clay, no odor
	12" steel & 4" PVC casings					3.0			
						4.0			
						5.0		GW	Sandy Gravel: well graded, no odor (Note: Mud Rotary does not allow for detailed lithology)
						6.0			
						7.0			
						8.0			
						9.0			
						10.0			
						11.0			
						12.0			
						13.0			
						14.0			
						15.0			
						16.0			
						17.0		GM	Sandy Gravel: smaller coarse grained sand, no odor with < 1 1/2" diameter cobbles, no odor (as per driller)
						18.0			
						19.0			
						20.0		SW	Gravelly Sand: no odor (as per driller)
						21.0			
						22.0			as above: with cobbles
						23.0		SP	Sand: green-grey, no odor
						24.0			
						25.0		GC	Clayey Gravel: orange-brown, no odor

# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-12
Logged By: Joyce Welsh	Location: 1771 First Street, Livermore, CA	Page 2 of 3
Driller: Gregg Drilling	Date Drilled: 9/2, 9/22-26, 10/7/08	Location Map
Drilling Method: Mud Rotary/Hollow Stem	Hole Diameter: 17 inches	Please see site map
Sampling Method: Split Spoon Auger	Hole Depth: 75 feet	
Casing Type: 12" Steel/ 4" SCH 40 PVC	Well Diameter: 4 inches	
Slot Size: 0.020	Well Depth: 75 feet	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Well Completion		Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/ft)	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Steel Casing									
		neat cement					26.0		GC	Clayey Gravel: orange-brown, no odor
		12" steel & 4" PVC casings					27.0			
							28.0		CL	Clay: orange-brown, no odor
							29.0			
							30.0		CL	Sandy Clay: orange-brown, no odor
							31.0			
							32.0			
							33.0			
							34.0			
							35.0			
							36.0		GW	Sandy Gravel: well graded, no odor
						37.0				
						38.0				
						39.0				
						40.0				
						41.0				
						42.0				
						43.0				
						44.0				
						45.0				
						46.0				
						47.0				
						48.0		CL	Gravelly Clay: light brown, no odor	
						49.0				
						50.0				

Mud Rotary



# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-12  
 Logged By: Joyce Welsh Location: 1771 First Street, Livermore, CA Page 3 of 3  
 Driller: Gregg Drilling Date Drilled: 9/2, 9/22-26, 10/7/08  
 Drilling Method: Mud Rotary/Hollow Stem Hole Diameter: 17 inches  
 Sampling Method: Split Spoon Auger Hole Depth: 75 feet  
 Casing Type: 12" Steel/ 4" SCH 40 PVC Well Diameter: 4 inches  
 Slot Size: 0.020 Well Depth: 75 feet  
 Gravel Pack: #3 Sand Casing Stickup: -

Location Map  
 Please see site map  
 ▼ = Static Groundwater

Elevation Latitude Longitude

Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/ft)	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement	▼				51.0		CL	Gravelly Clay: light brown, no odor
	12" steel & 4" PVC casings					52.0			
						53.0			
						54.0			
	4" PVC casings					55.0			
						56.0			
						57.0			NO RECOVERY
						58.0			
						59.0			
			MOIST TO WET	0	10	60.0		CL	Sandy Clay: light brown, ~10" diameter coarse sand, medium plasticity, firm, no odor, moist to wet
						61.0			
	bentonite		MOIST	0	14	62.0			as above: becoming light brown-orange mottled
						63.0			
	#3 sand		WET	0	16	63.0		CL	Gravelly Clay: light brown, ~30-40% gravel, medium-high plasticity, very stiff, no odor, wet
						64.0			
						65.0			NO RECOVERY
	well screen		WET	0	18	66.0		CL	Gravelly Sandy Clay: light brown, >30% sand, 5-10% gravel, high plasticity, soft, no odor, wet
						67.0			
						68.0			NO RECOVERY
						69.0			
			WET	0	10	72.0		GP	Sandy Gravel: light brown, <5% sand, loose, no odor, wet
						73.0			
			WET	0		74.0		GC	Clayey Gravel: light brown, <20% clay, soft, wet as above: with >40% clay, high plasticity, very firm to hard, no odor, wet
						75.0			

Mud Rotary - 5 - 55' bgs; Hollow Stem Auger 55-75' bgs Boring terminated at 75 feet below ground surface (bgs).

# Delta

Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No:	U-13
Logged By:	Joyce Welsh	Location:	1771 First Street, Livemore, CA	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2,26,29-30,10/8/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	Please see site map	
Sampling Method:	Split Spoon Auger	Hole Depth:	72 feet		
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	72 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		

Elevation	Latitude	Longitude	▼ = Static Groundwater
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Backfill Steel Casing Steel Backfill	Well Completion Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
		well box neat cement					1.0			Asphalt
		12" steel & 4" PVC casings				Air Knife	2.0		GM	Gravel with Silty Sand and Cobbles: no odor
							3.0			
							4.0			
							5.0		GW	Sandy Gravel with Cobbles: well graded, no odor (Note: Mud Rotary does not allow for detailed lithology)
							6.0			
							7.0			
							8.0			
							9.0			
							10.0			
							11.0			
						12.0				
						13.0				
						14.0				
						15.0				
						16.0				
						17.0				
						18.0				
						19.0				
						20.0				
						21.0		SW	Gravelly Sand: 1-1.5" diameter gravel, coarse grained sand well graded, no odor	
						22.0				
						23.0				
						24.0				
						25.0		GC	Clayey Gravel: orange-brown, no odor	

# Delta

Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No:	U-13
Logged By:	Joyce Welsh	Location:	1771 First Street, Livemore, CA	Page 2 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/2,26,29-30,10/8/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	Please see site map	
Sampling Method:	Split Spoon Auger	Hole Depth:	72 feet		
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	72 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement					26.0		GC	Clayey Gravel: orange-brown, no odor
	12" steel & 4" PVC casings					27.0			
						28.0		CL	Clay: orange-brown, high plasticity, no odor
						29.0			
						30.0		SC	Sandy Clay: orange-brown, no odor
						31.0			
						32.0			
						33.0			
						34.0			
						35.0			
						36.0			
						37.0		GP	Sandy Gravel: no odor
						38.0			
						39.0			
						40.0			
						41.0			
						42.0			
						43.0			
						44.0			
						45.0			
						46.0			
						47.0			
						48.0		CL	Gravelly Clay: no odor
						49.0			
						50.0			

# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-13  
 Logged By: Joyce Welsh Location: 1771 First Street, Livemore, CA Page 3 of 3  
 Driller: Gregg Drilling Date Drilled: 9/2,26,29-30,10/8/08 Location Map  
 Drilling Method: Mud Rotary/Hollow Stem Hole Diameter: 17 inches Please see site map  
 Sampling Method: Split Spoon Auger Hole Depth: 72 feet  
 Casing Type: 12" Steel/ 4" SCH 40 PVC Well Diameter: 4 inches  
 Slot Size: 0.020 Well Depth: 72 feet  
 Gravel Pack: #3 Sand Casing Stickup: -

Elevation Latitude Longitude  
 ▼ = Static Groundwater

Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/ft)	Depth (feet)	Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement 12" steel & 4" PVC casings	▼				51.0		GC	Gravelly Clay: no odor
						52.0		GP	Gravel: no odor
						53.0			
	bentonite grout plug					54.0		GC	Clayey Gravel: no odor
						55.0		GP	Gravel: no odor
	4" PVC casing					56.0			
	bentonite					57.0			
						58.0			
						59.0			NOTE: Drilled to 59' with 10" bit; backfilled to 54' with bentonite quick grout
	#3 sand		WET	0		60.0		GC	Clayey Gravel: light brown, 20-30% clay, no odor
			WET	0		61.0		CL	Gravelly Sandy Clay: light brown-orange mottled, ~30% gravel, low plasticity, hard, no odor, wet
	well screen		WET	0		62.0			
			WET	0		63.0			
			WET	0		64.0			
			WET	0		65.0			
			WET	0		66.0			
			WET	0		67.0		GP	Sandy Gravel: light brown, ~10% sand, no odor, wet
			WET	0		68.0		GC	Sandy Clayey Gravel: light brown, no odor, wet
			WET	0		69.0		CL	Sandy Clay: light brown, 20-30% sand, medium stiff, no odor, wet
			WET	0		70.0			
			WET	0		71.0			as above: with <20% sand, low plasticity, soft
			WET	0		72.0			as above: with ~5-10% sand, stiff, no odor, wet

Mud Rotary - 5 - 59' bgs; Hollow Stem Auger 59-72' bgs Boring terminated at 72 feet below ground surface (bgs).

# Delta

Consultants

Project No:	C104186	Client:	ConocoPhillips	Well No:	U-14
Logged By:	Joyce Welsh	Location:	1771 First Street, Livemore, CA	Page 1 of 3	
Driller:	Gregg Drilling	Date Drilled:	9/3,29,30,10/1, 9/08	Location Map	
Drilling Method:	Mud Rotary/Hollow Stem	Hole Diameter:	17 inches	Please see site map	
Sampling Method:	Split Spoon Auger	Hole Depth:	73 feet		
Casing Type:	12" Steel/ 4" SCH 40 PVC	Well Diameter:	4 inches		
Slot Size:	0.020	Well Depth:	73 feet		
Gravel Pack:	#3 Sand	Casing Stickup:	-		

Elevation	Latitude	Longitude	▼ = Static Groundwater
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Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/ft)	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	well box					1.0			Asphalt
	neat cement					2.0		GM	Gravel with Silty Sand and Cobbles: well graded, no odor
	12" steel & 4" PVC casings				Air Knife	3.0			
						4.0			
						5.0		GW	Sandy Gravel with Cobbles: well graded, no odor (Note: Mud Rotary does not allow for detailed lithology)
						6.0			
						7.0			
						8.0			
						9.0			
						10.0			
						11.0			
						12.0			
					13.0				
					14.0				
					15.0				
					16.0				
					17.0				
					18.0				
					19.0				
					20.0				
					21.0		SW	Gravelly Sand: well graded, no odor	
					22.0				
					23.0				
					24.0		GC	Clayey Gravel: orange-brown, no odor	
					25.0		CL	Sandy Clay: orange-brown, no odor	

# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-14  
 Logged By: Joyce Welsh Location: 1771 First Street, Livemore, CA Page 2 of 3  
 Driller: Gregg Drilling Date Drilled: 9/3,29,30,10/1, 9/08 Location Map  
 Drilling Method: Mud Rotary/Hollow Stem Hole Diameter: 17 inches  
 Sampling Method: Split Spoon Auger Hole Depth: 73 feet Please see site map  
 Casing Type: 12" Steel/ 4" SCH 40 PVC Well Diameter: 4 inches  
 Slot Size: 0.020 Well Depth: 73 feet  
 Gravel Pack: #3 Sand Casing Stickup: -

Elevation Latitude Longitude  
 ▼ = Static Groundwater

Well Completion			Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Steel Casing	Backfill								
							26.0		CL	Sandy Clay: orange-brown, no odor
							27.0			
							28.0			
							29.0			
							30.0			
							31.0			
							32.0			
							33.0			
							34.0			
							35.0			
							36.0			
							37.0			
							38.0			
							39.0			
							40.0		GM	Sandy Gravel: no odor
							41.0			
							42.0		GC	Clayey Gravel: no odor
							43.0			
							44.0			
							45.0		CL	Gravelly Clay: no odor
							46.0			
							47.0			
							48.0			
							49.0			
							50.0		CL	Sandy Clay: no odor

neat cement  
 12" steel & 4" PVC casings

Mud Rotary

# Delta Consultants

Project No: C104186      Client: ConocoPhillips      Well No: U-14  
 Logged By: Joyce Welsh      Location: 1771 First Street, Livemore, CA      Page 3 of 3  
 Driller: Gregg Drilling      Date Drilled: 9/3,29,30,10/1-3/08      Location Map  
 Drilling Method: Mud Rotary/Hollow Stem      Hole Diameter: 17 inches  
 Sampling Method: Split Spoon      Auger      Hole Depth: 73 feet  
 Casing Type: 12" Steel/ 4" SCH 40 PVC      Well Diameter: 4 inches  
 Slot Size: 0.020      Well Depth: 73 feet  
 Gravel Pack: #3 Sand      Casing Stickup: -

▼ = Static Groundwater

Well Completion		Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill	Steel Casing									
		12" steel casing					51.0		CL	Sandy Clay: no odor
		neat cement					52.0			
				MOIST	1		53.0			
				MOIST	0		54.0		CL	Gravelly Clay: orange-brown-light brown mottled, ~20% gravel, high-medium plasticity, hard, no odor, moist
				MOIST	0		55.0		CL	Gravelly Sandy Clay: orange-brown-light brown, <20% gravel, ~20% sand, low-medium plasticity
				MOIST	0		56.0			
		4" PVC casing		MOIST	0		57.0		CL	Sandy Gravelly Clay: light brown, <5% gravel, 20-40% sand, high plasticity, firm, no odor, moist
				MOIST	0		58.0			
				MOIST	1		59.0			
		bentonite		WET	1		60.0		GC	Clayey Sandy Gravel: orange-brown, 20-30% clay, low plasticity, soft, no odor, moist
				MOIST	0		61.0			
							62.0			
		#3 sand		MOIST	0		63.0			
				MOIST	0		64.0			
		well screen		MOIST	0		65.0			
				WET	0		66.0			
				WET	0		67.0		CL	Gravelly Clay: light brown, ~ 40% gravel, medium-high plasticity, soft-firm, no odor, wet
							68.0			
				MOIST	0		69.0		GM	Sandy Gravel: light brown, loose, no odor, wet
				MOIST	0		70.0		CL	Sandy Clay: orange-brown, high plasticity, hard, no odor, moist
				MOIST	0		71.0			
				WET	1		72.0			
							73.0		CL	Gravelly Clay: orange-brown, 5-10% gravel, high plasticity firm to hard, no odor, wet

Blow counts not recorded

Mud Rotary - 5 - 50' bgs; Hollow Stem Auger 50-73' bgs

Boring terminated at 73 feet below ground surface (bgs).

# Delta Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-15
Logged By: Joyce Welsh	Location: 1771 First Street, Livmore, CA	Page 1 of 3
Driller: Gregg Drilling	Date Drilled: 9/4-5,23,10/2-3,6,10/08	Location Map
Drilling Method: Mud Rotary/Hollow Stem	Hole Diameter: 17 inches	Please see site map
Sampling Method: Split Spoon Auger	Hole Depth: 71.5	
Casing Type: 12" Steel/ 4" SCH 40 PVC	Well Diameter: 4 inches	
Slot Size: 0.020	Well Depth: 71	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Backfill	Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	Steel Casing	well box					1.0			Asphalt
	Steel Casing	neat cement					2.0		GM	Gravel with Silty Sand and Cobbles: well graded no odor
	Steel Casing	12" steel & 4" PVC casings					3.0			
	Steel Casing						4.0			
	Backfill						5.0		GW	Sandy Gravel with Cobbles: well graded, no odor (Note: Mud Rotary does not allow for detailed lithology)
							6.0			
							7.0			
							8.0			
							9.0			
							10.0			
							11.0			
							12.0			
							13.0			
							14.0			
							15.0			
							16.0			
							17.0			
							18.0			
							19.0			
							20.0			
							21.0			
							22.0			
							23.0		GC	Clayey Gravel with Cobbles: no odor
							24.0			
							25.0			



# Delta

Consultants

Project No: C104186	Client: ConocoPhillips	Well No: U-15
Logged By: Joyce Welsh	Location: 1771 First Street, Livermore, CA	Page 2 of 3
Driller: Gregg Drilling	Date Drilled: 9/4-5,23,10/2-3,6,10/08	Location Map
Drilling Method: Mud Rotary/Hollow Stem	Hole Diameter: 17 inches	Please see site map
Sampling Method: Split Spoon Auger	Hole Depth: 71.5	
Casing Type: 12" Steel/ 4" SCH 40 PVC	Well Diameter: 4 inches	
Slot Size: 0.020	Well Depth: 71	
Gravel Pack: #3 Sand	Casing Stickup: -	

Elevation	Latitude	Longitude
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▼ = Static Groundwater

Well Completion	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
Backfill Steel Casing Steel Backfill	neat cement 12" steel & 4" PVC casings					26.0		GC	Clayey Gravel with Cobbles: no odor
						27.0			
						28.0			
						29.0			
						30.0		CL	Clay: light brown, no odor
						31.0			
						32.0			
						33.0			
						34.0			
						35.0			
						36.0			
						37.0			
						38.0		GC	Clayey Gravel: no odor
						39.0			
						40.0		CL	Gravelly Clay: light brown, no odor
						41.0			
						42.0			
						43.0			
						44.0			
						45.0			
						46.0			
						47.0		GC	Clayey Gravel: no odor
						48.0			
						49.0			
						50.0			

Mud Rotary

▼

# Delta

Consultants

Project No: C104186 Client: ConocoPhillips Well No: U-15  
 Logged By: Joyce Welsh Location: 1771 First Street, Livemore, CA Page 3 of 3  
 Driller: Gregg Drilling Date Drilled: 9/4-5,23,10/2-3,6,10/08  
 Drilling Method: Mud Rotary/Hollow Stem Auger Hole Diameter: 17 inches  
 Sampling Method: Split Spoon Auger Hole Depth: 71.5  
 Casing Type: 12" Steel/ 4" SCH 40 PVC Well Diameter: 4 inches  
 Slot Size: 0.020 Well Depth: 71  
 Gravel Pack: #3 Sand Casing Stickup: -

Location Map  
 Please see site map  
 ▼ = Static Groundwater

Elevation Latitude Longitude

Well Completion Backfill Steel Casing Steel Backfill	Well Details	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample Recovery Interval	Soil Type	LITHOLOGY / DESCRIPTION
	neat cement					51.0		GC	Gravelly Clay: light brown
	12" steel casing					52.0			
						53.0			
						54.0			
	4" PVC casing		DRY	5		55.0		CL	Gravelly Sandy Clay: orange-brown-light brown mottled, 10-15% gravel, medium plasticity, hard-firm, no odor
			DRY	5		56.0			
	bentonite					57.0			
			MOIST	2		58.0		CL	Sandy Clay: light brown, <5% gravel, low plasticity, soft-firm, no odor, moist
	#3 sand		MOIST	1		59.0			
			WET			60.0		GC	Sandy Clayey Gravel: light brown, ~30% sandy clay, 1-2" diameter cobbles, soft, loose, no odor, moist
	well screen		WET			61.0			
						62.0			
						63.0			NO RECOVERY
			WET	14		64.0		GC	Sandy Clayey Gravel: light brown, 20-30% sandy clay, loose, no odor, wet
			WET	7		65.0			
			WET	0		66.0			
			WET	8		67.0			as above: with 40% sandy clay
						68.0			
						69.0			NO RECOVERY
						70.0		CL	(as per driller: clay @ 69')
			WET	1		71.0		CL	Sandy Clay: light brown, 5-10% sand, high plasticity, soft, no odor, wet

Mud Rotary - 5 - 59' bgs; Hollow Stem Auger 59-71.5' bgs Boring terminated at 71.5 feet below ground surface (bgs).

**Attachment D**

***Well Development Logs***





# MONITORING WELL DEVELOPMENT LOG

All measurements taken from:  Top of Casing  Protective Casing  Ground Level

Sample ID \_\_\_\_\_

Qty. of Drilling Fluid Lost \_\_\_\_\_

Minimum Gal. to be Purged 140.03

Development Method Bail-Surge-

Bail-pump

Purging Equipment SS Bailer-2 pump

Water Level Equipment Solinst

pH/EC Meter HORZBA U10

Turbidity Meter HORZBA U16

Other \_\_\_\_\_

Well Number U-12

Borehole Diameter 10"

Date 10-14-08

Screen Length 10'

Time Start: 8:40 End: 10:45

Measured Depth (pre-development) 72.1

Client \_\_\_\_\_

Measured Depth (post-development) 74.95

Project \_\_\_\_\_

Static Water Level (ft.) 50.84

Job Number \_\_\_\_\_

Standing Water Column (ft.) 21.26

Installation Date \_\_\_\_\_

One Well Volume (gal.) 14.03

Well Diameter 4"

One Annulus Vol. (gal.) \_\_\_\_\_

Time	Amount Purged (gal.)	Field Parameters Measured							Comments	Field Tech.
		pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.		
9:40	40	6.41	1.05	>999	-	19.0	0.04	2/54.55	Fail - 10 GAL	
9:50	60	6.37	.831	>999	-	19.7	0.03	2/54.96	SURGE-8:50-9:10	
10:00	80	6.43	.829	>999	-	18.4	0.03	2/54.97	Bail - 10 GAL	
10:10	100	6.41	.831	704	-	19.1	0.03	2/54.97		
10:20	120	6.39	.829	617	-	19.1	0.03	2/54.97		
10:30	140	6.46	.831	441	-	19.2	0.03	2/54.97		
FINAL FIELD PARAMETER MEASUREMENTS										





MONITORING WELL DEVELOPMENT LOG

All measurements taken from:  Top of Casing  Protective Casing  Ground Level

*should be 14*

Well Number U-15  
 Date 10/13/08  
 Time Start: 10:00 End: 1:05  
 Client \_\_\_\_\_  
 Project \_\_\_\_\_  
 Job Number \_\_\_\_\_  
 Installation Date \_\_\_\_\_  
 Well Diameter 4"

Borehole Diameter 10"  
 Screen Length 10"  
 Measured Depth (pre-development) 70.5  
 Measured Depth (post-development) 70.88  
 Static Water Level (ft.) 50.2  
 Standing Water Column (ft.) 20.3  
 One Well Volume (gal.) 13.39  
 One Annulus Vol. (gal.) \_\_\_\_\_

Sample ID \_\_\_\_\_  
 Qty. of Drilling Fluid Lost \_\_\_\_\_  
 Minimum Gal. to be Purged 133.9  
 Development Method Bail - Surge  
Bail - pump  
 Purging Equipment SS boiler - 2" pump  
 Water Level Equipment Solinst  
 pH/EC Meter Horzba 410  
 Turbidity Meter Horzba 410  
 Other \_\_\_\_\_

Time	Amount Purged (gal.)	Field Parameters Measured							Comments	Field Tech.
		pH	EC	Turbidity	D.O.	D.O. Temp.	SAL	GPM / W.L.		
11:47	55	6.21	1.09	7999	-	27.5	0.04	2/51.1	Bail - 15 GAL	
11:57	75	6.49	0.96	7999	-	22.1	0.04	2/51.14	Surge - 10:15 - 10:45	
12:07	95	6.38	0.92	7999	-	22.2	0.04	2/52.12	Bail - 15 GAL	
12:16	110	6.37	0.92	794	-	22.1	0.04	2/52.67		
12:26	130	6.35	0.93	674	-	22.2	0.04	2/52.67		
12:33	140	6.36	0.92	697	-	22.1	0.04	2/52.67		
FINAL FIELD PARAMETER MEASUREMENTS										

All measurements taken from:  Top of Casing  Protective Casing  Ground Level

Sample ID \_\_\_\_\_

Well Number V-15

Borehole Diameter 10"

Qty. of Drilling Fluid Lost \_\_\_\_\_

Date 10-13-68

Screen Length 16"

Minimum Gal. to be Purged 141.1

Time Start: 1:40 End: 4:10

Measured Depth (pre-development) 71.59

Development Method Bail - SURGE -

Client \_\_\_\_\_

Measured Depth (post-development) 71.59

Bail - pump

Project \_\_\_\_\_

Static Water Level (ft.) 50.2

Purging Equipment SS Bailor - 2 pump

Job Number \_\_\_\_\_

Standing Water Column (ft.) 21.39

Water Level Equipment Solinst

Installation Date \_\_\_\_\_

One Well Volume (gal.) 14.11

pH/EC Meter HORIBA U10

Well Diameter 4"

One Annulus Vol. (gal.) \_\_\_\_\_

Turbidity Meter HORIBA U10

Other \_\_\_\_\_

Time	Amount Purged (gal.)	Field Parameters Measured							Comments	Field Tech.
		pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM / W.L.		
2:45	50	6.61	784	7999	-	23.1	0.03	2/51.89	Bail - 5 GAL	
2:55	75	6.41	786	794	-	23.2	0.03	2/52.14	SURGE - 1:45 - 2:15	
3:05	95	6.49	787	350	-	23.1	0.03	2/52.17	Bail - 5 GAL	
3:10	110	6.41	785	157	-	23.1	0.03	2/52.17		
3:35	140	6.42	786	23	-	23.2	0.03	2/52.17		
<b>FINAL FIELD PARAMETER MEASUREMENTS</b>										



**Attachment E**

***Site Investigation Analytical Reports***

Date of Report: 09/17/2008

RECEIVED

SEP 24 2008

Dennis Dettloff

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

RE: 4186

BC Work Order: 0812134

Enclosed are the results of analyses for samples received by the laboratory on 9/12/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

*Molly Meyers*

Contact Person: Molly Meyers  
Client Service Rep

*[Signature]*

Authorized Signature



Submission #: 08-12134

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  Containers  None  Comments: \_\_\_\_\_

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

COC-Received  
 YES  NO

Emissivity: \_\_\_\_\_ Container: <sup>3011</sup> Sleeve Thermometer ID: T1082

Date/Time 9-12-08

Temperature: A 3.0 °C / C 1.1 °C

Analyst Init JLD

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										
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	A	A								
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: \_\_\_\_\_  
Sample Numbering Completed By: JLD Date/Time: 9/12/08 1235

A = Actual / C = Corrected



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Delivery Work Order:	Global ID:	Matrix:	Sample QC Type (SACode):	Cooler ID:
0812134-01	COC Number:	---		09/12/2008 21:25	09/12/2008 10:05	---	Solids		T0600101777	SO	CS	
	Project Number:	4186										
	Sampling Location:	U-11										
	Sampling Point:	U-11-30										
	Sampled By:	DECR										
0812134-02	COC Number:	---		09/12/2008 21:25	09/12/2008 11:10	---	Solids		T0600101777	SO	CS	
	Project Number:	4186										
	Sampling Location:	U-11										
	Sampling Point:	U-11-44										
	Sampled By:	DECR										

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

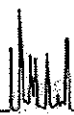
Reported: 09/17/2008 15:28

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812134-01		Client Sample Name: 4186, U-11, U-11-30, 9/12/2008 10:05:00AM												
Constituent	Result	Units	PQL	MDL	Method	Prep	Run		Analyst	Instru-ment ID	Dilution	QC	MB	Lab Quals
						Date	Date/Time	Batch ID				Bias		
Benzene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Methyl t-butyl ether	0.54	mg/kg	0.025		EPA-8260	09/16/08	09/16/08	17:20	LHS	MS-V2	5	BRI0695	ND	A01
Toluene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Total Xylenes	0.017	mg/kg	0.010		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
t-Butyl alcohol	0.93	mg/kg	0.050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695	ND	
Total Purgeable Petroleum Hydrocarbons	2.0	mg/kg	1.0		EPA-8260	09/16/08	09/16/08	17:20	LHS	MS-V2	5	BRI0695	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	98.6	%	70 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695		
1,2-Dichloroethane-d4 (Surrogate)	103	%	70 - 121 (LCL - UCL)		EPA-8260	09/16/08	09/16/08	17:20	LHS	MS-V2	5	BRI0695		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695		
Toluene-d8 (Surrogate)	104	%	81 - 117 (LCL - UCL)		EPA-8260	09/16/08	09/16/08	17:20	LHS	MS-V2	5	BRI0695		
4-Bromofluorobenzene (Surrogate)	92.4	%	74 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08	19:00	LHS	MS-V2	1	BRI0695		
4-Bromofluorobenzene (Surrogate)	88.3	%	74 - 121 (LCL - UCL)		EPA-8260	09/16/08	09/16/08	17:20	LHS	MS-V2	5	BRI0695		

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812134-02		Client Sample Name: 4186, U-11, U-11-44, 9/12/2008 11:10:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane	0.011	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Methyl t-butyl ether	0.34	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
t-Butyl alcohol	0.54	mg/kg	0.050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
Total Purgeable Petroleum Hydrocarbons	0.45	mg/kg	0.20		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane-d4 (Surrogate)	92.3	%	70 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695		
4-Bromofluorobenzene (Surrogate)	87.5	%	74 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 19:28	LHS	MS-V2	1	BRI0695		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

## Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits	
									Percent Recovery	Percent Recovery Lab Quals
Benzene	BRI0695	Matrix Spike	0811604-19	0	0.13590	0.12500	mg/kg		109	70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13437	0.12500	mg/kg	1.9	107	20
Toluene	BRI0695	Matrix Spike	0811604-19	0	0.12342	0.12500	mg/kg		98.7	70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13497	0.12500	mg/kg	9.0	108	20
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.050217	0.050000	mg/kg		100	70 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.049275	0.050000	mg/kg		98.6	
Toluene-d8 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048216	0.050000	mg/kg		96.4	81 - 117
		Matrix Spike Duplicate	0811604-19	ND	0.052881	0.050000	mg/kg		106	
4-Bromofluorobenzene (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048141	0.050000	mg/kg		96.3	74 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.047283	0.050000	mg/kg		94.6	

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

## Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI0695	BRI0695-BS1	LCS	0.13336	0.12500	0.0050	mg/kg	107		70 - 130		
Toluene	BRI0695	BRI0695-BS1	LCS	0.11931	0.12500	0.0050	mg/kg	95.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.049860	0.050000		mg/kg	99.7		70 - 121		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.047299	0.050000		mg/kg	94.6		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.046543	0.050000		mg/kg	93.1		74 - 121		

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
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Delta Environmental Consultants, Inc.  
11050 White Rock Rd, Suite 110  
Rancho Cordova, CA 95670

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Toluene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI0695	BRI0695-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BRI0695	BRI0695-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethanol	BRI0695	BRI0695-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BRI0695	BRI0695-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BLK1	101	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BLK1	95.0	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BLK1	88.3	%	74 - 121 (LCL - UCL)		

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 15:28

**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.

Date of Report: 09/17/2008

RECEIVED  
SEP 23 2008

Dennis Dettloff

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


RE: 4186  
BC Work Order: 0812073

Enclosed are the results of analyses for samples received by the laboratory on 9/9/2008. 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

STL- San Francisco  
 1220 Quarry Lane  
 Pleasanton, CA 94566  
 (925) 454-1919 (925) 484-1096 fax

0812073

# ConocoPhillips Chain Of Custody Record

ConocoPhillips Site Manager: Terry Grayson  
 INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS  
 Attn: Dee Hutchinson  
 3611 South Harbor, Suite 200  
 Santa Ana, CA. 92704

ConocoPhillips Work Order Number  
**4510293584**  
 ConocoPhillips Cost Object  
 000010120349-00022

DATE: 9/9/08  
 PAGE: 1 of 1

SAMPLING COMPANY: <b>Delta Consultants</b>		Valid Value ID:	CONOCOPHILLIPS SITE NUMBER <b>4186</b>		GLOBAL ID NO.: <b>T0600101777</b>
ADDRESS: <b>11060 White Rock Road, Suite 110 Rancho Cordova, CA 95670</b>		SITE ADDRESS (Street and City): <b>1771 First St., Livermore, CA</b>			CONOCOPHILLIPS SITE MANAGER: <b>Shelby Lathrop</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Dennis Dettloff</b>		EDF DELIVERABLE TO (RP or Designee): <b>Joyce Welsh</b>		PHONE NO.: <b>916-503-1268</b>	E-MAIL: <b>jwelsh@deltaenv.com</b>
TELEPHONE: <b>916-503-1261</b>	FAX: <b>916-638-8385</b>	EMAIL: <b>ddettloff@deltaenv.com</b>	LAB USE ONLY		
SAMPLER NAME(S) (Print): <b>Joyce Welsh</b>		CONSULTANT PROJECT NUMBER: <b>C104186201</b>		REQUESTED ANALYSES	

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

SPECIAL INSTRUCTIONS OR NOTES: CHECK BOX IF EDD IS NEEDED

\* Field Point name only required if different from Sample ID

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8260B - TPH-GIBTEX/MTBE/TAME/ETBE/DIPE/ TBA/1,2-DCM/1,2-DBA/ethanol	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> TCLP	8015M - TPH-D	VOCs - 8260	CAM 17 Metals	RCI	Fish Bioassay	Pesticides	Total Cyanide	Total Sulfide	TEMPERATURE ON RECEIPT C°
		DATE	TIME													
	<b>U-8-37</b>	<b>9/8/08</b>	<b>10:50</b>	<b>SOIL</b>	<b>1</b>	<input checked="" type="checkbox"/>										

CHK BY [Signature] DISTRIBUTION [Signature]  
 SUB OUT

Relinquished by: (Signature) <u>[Signature]</u>	Received by: (Signature) <u>Ross Didoy BC LAB</u>	Date: <u>9/9/08</u>	Time: <u>1700</u>
Relinquished by: (Signature) <u>R Ross Didoy 9/9/08</u>	Received by: (Signature) <u>R Key</u>	Date: <u>9.9.08</u>	Time: <u>5 19:00</u>
Relinquished by: (Signature) <u>R Key 9.9.08 2155</u>	Received by: (Signature) <u>[Signature]</u>	Date: <u>9-9-08</u>	Time: <u>2155</u>

Please E mail copy of COC

Submission #: ~~0811949~~ 10812073

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  Containers  None  Comments: \_\_\_\_\_

Intact? Yes  No

Intact? Yes  No

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: p/pe Thermometer ID: 48

Temperature: A 3.9 °C / C 3.7 °C

Date/Time 9-10-08

Analyst Init JNW

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										
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										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

AABC CCL 010

Comments:

Sample Numbering Completed By: CCL - ~~Alia~~ Date/Time: 9-10-08 011208

A = Actual / C = Corrected

CCL 1037 950  
0112.

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

Project: 4186  
 Project Number: [none]  
 Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		Receive Date:	Delivery Work Order:
0812073-01	COC Number:	---	09/09/2008 21:55	
	Project Number:	4186	Sampling Date:	09/08/2008 10:50
	Sampling Location:	U-8	Sample Depth:	---
	Sampling Point:	U-8-37	Sample Matrix:	Solids
	Sampled By:	DECR		
				Global ID: T0600101777
				Matrix: SO
				Sample QC Type (SACode): CS
				Cooler ID:

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4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
 Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812073-01		Client Sample Name: 4186, U-8, U-8-37, 9/8/2008 10:50:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Toluene	0.0051	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Total Xylenes	0.011	mg/kg	0.010		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
t-Butyl alcohol	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695	ND	
Total Purgeable Petroleum Hydrocarbons	1.3	mg/kg	0.50		EPA-8260	09/15/08	09/15/08 16:14	LHS	MS-V2	2.500	BRI0695	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	102	%	70 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 16:14	LHS	MS-V2	2.500	BRI0695		
1,2-Dichloroethane-d4 (Surrogate)	99.3	%	70 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695		
Toluene-d8 (Surrogate)	105	%	81 - 117 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695		
Toluene-d8 (Surrogate)	105	%	81 - 117 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 16:14	LHS	MS-V2	2.500	BRI0695		
4-Bromofluorobenzene (Surrogate)	88.5	%	74 - 121 (LCL - UCL)		EPA-8260	09/15/08	09/15/08 16:14	LHS	MS-V2	2.500	BRI0695		
4-Bromofluorobenzene (Surrogate)	95.3	%	74 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 19:44	LHS	MS-V2	1	BRI0695		

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A





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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

## Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BRI0695	Matrix Spike	0811604-19	0	0.13590	0.12500	mg/kg		109		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13437	0.12500	mg/kg	1.9	107	20	70 - 130
Toluene	BRI0695	Matrix Spike	0811604-19	0	0.12342	0.12500	mg/kg		98.7		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13497	0.12500	mg/kg	9.0	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.050217	0.050000	mg/kg		100		70 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.049275	0.050000	mg/kg		98.6		70 - 121
Toluene-d8 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048216	0.050000	mg/kg		96.4		81 - 117
		Matrix Spike Duplicate	0811604-19	ND	0.052881	0.050000	mg/kg		106		81 - 117
4-Bromofluorobenzene (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048141	0.050000	mg/kg		96.3		74 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.047283	0.050000	mg/kg		94.6		74 - 121

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI0695	BRI0695-BS1	LCS	0.13336	0.12500	0.0050	mg/kg	107		70 - 130		
Toluene	BRI0695	BRI0695-BS1	LCS	0.11931	0.12500	0.0050	mg/kg	95.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.049860	0.050000		mg/kg	99.7		70 - 121		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.047299	0.050000		mg/kg	94.6		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.046543	0.050000		mg/kg	93.1		74 - 121		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Toluene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI0695	BRI0695-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BRI0695	BRI0695-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethanol	BRI0695	BRI0695-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BRI0695	BRI0695-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BLK1	101	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BLK1	95.0	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BLK1	88.3	%	74 - 121 (LCL - UCL)		

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/17/2008 9:40

**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.



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



Date of Report: 09/16/2008

Dennis Dettloff

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

RE: 4186

BC Work Order: 0811985

Enclosed are the results of analyses for samples received by the laboratory on 9/10/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

# ConocoPhillips Chain Of Custody Record

STL- San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 454-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

Terry Grayson

INVOICE REMITTANCE ADDRESS:

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

ConocoPhillips Work Order Number

4510293584

ConocoPhillips Cost Object

000010120349-00022

DATE: 9/10/08

PAGE: 1 of 1

SAMPLING COMPANY: <b>Delta Consultants</b>		Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: <b>4186</b>		GLOBAL ID NO.: <b>T0600101777</b>
ADDRESS: <b>11050 White Rock Road, Suite 110 Rancho Cordova, CA 95670</b>		SITE ADDRESS (Street and City): <b>1771 First St., Livermore, CA</b>		CONOCOPHILLIPS SITE MANAGER: <b>Shelby Lathrop</b>	
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Dennis Dettloff</b>		EDF DELIVERABLE TO (RP or Designee): <b>Joyce Welsh</b>		PHONE NO.: <b>916-503-1268</b>	E-MAIL: <b>jwelsh@deltaenv.com</b>
TELEPHONE: <b>916-503-1261</b>	FAX: <b>916-638-8385</b>	E-MAIL: <b>ddettloff@deltaenv.com</b>		LAB USE ONLY <b>08/19/05</b>	
SAMPLER NAME(S) (Print): <b>Joyce Welsh</b>		CONSULTANT PROJECT NUMBER: <b>C104186201</b>		<b>REQUESTED ANALYSES</b>	

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

\* Field Point name only required if different from Sample ID

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8260B - TPH-GIBTEX/MTBE/TAME/ETBE/DIPE/ TBA/1,2-DCA/1,2-DBA/ethanol	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCLP	8015M - TPH-D	VOCs - 8260	CAM 17 Metals	RCI	Fish Bioassay	Pesticides	Total Cyanide	Total Sulfide	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	TEMPERATURE ON RECEIPT °C
		DATE	TIME														

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8260B - TPH-GIBTEX/MTBE/TAME/ETBE/DIPE/ TBA/1,2-DCA/1,2-DBA/ethanol	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCLP	8015M - TPH-D	VOCs - 8260	CAM 17 Metals	RCI	Fish Bioassay	Pesticides	Total Cyanide	Total Sulfide	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	TEMPERATURE ON RECEIPT °C
		DATE	TIME														
	U-9-40	9/10/08	1330	SOIL	1	X											

CHK BY [Signature] DISTRIBUTION

SUB-OUT

Relinquished by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>Ross Dickey BC LAB</i>	Date: 9/10/08	Time: 1600
Relinquished by: (Signature) <i>Ross Dickey</i>	Received by: (Signature) <i>R. Keyman</i>	Date: 9-10-08	Time: 1620
Relinquished by: (Signature) <i>R. Keyman</i>	Received by: (Signature) <i>[Signature]</i>	Date: 9-10-08	Time: 2045

Please email signed copy of COC to above referenced email

Submission #:

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  Containers  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: 101Pa Thermometer ID: 4.8

Temperature: A 1.2 °C | C 1.0 °C

Date/Time: 2005 9-10-8

Analyst Init: ALW

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										
40ml VOA VIAL	(	(	(	(	(	(	(	(	(	(
QT EPA 413.1, 413.2, 418.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/508/8080										
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	A									
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments:

Sample Numbering Completed By: AMB Date/Time: 9-11-08-830

A = Actual / C = Corrected



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information		
0811985-01	<b>COC Number:</b> --- <b>Project Number:</b> 4186 <b>Sampling Location:</b> U-9-40 <b>Sampling Point:</b> U-9-40 <b>Sampled By:</b> DECR	<b>Receive Date:</b> 09/10/2008 20:45 <b>Sampling Date:</b> 09/10/2008 13:30 <b>Sample Depth:</b> --- <b>Sample Matrix:</b> Solids	<b>Delivery Work Order:</b> Global ID: T0600101777 Matrix: SO Sample QC Type (SACode): CS Cooler ID:

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0811985-01    Client Sample Name: 4186, U-9-40, U-9-40, 9/10/2008 1:30:00PM

Constituent	Result	Units	PQL	MDL	Method	Prep	Run	Analyst	Instru- ment ID	Dilution	QC	MB	Lab
						Date	Date/Time				Batch ID	Bias	Quals
Benzene	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
1,2-Dibromoethane	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
1,2-Dichloroethane	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Ethylbenzene	8.0	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Methyl t-butyl ether	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Toluene	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Total Xylenes	48	mg/kg	0.50		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
t-Amyl Methyl ether	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
t-Butyl alcohol	ND	mg/kg	2.5		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Diisopropyl ether	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Ethanol	ND	mg/kg	50		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Ethyl t-butyl ether	ND	mg/kg	0.25		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695	ND	A01
Total Purgeable Petroleum Hydrocarbons	1900	mg/kg	200		EPA-8260	09/12/08	09/12/08 17:25	LHS	MS-V2	1000	BRI0695	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	98.6	%	70 - 121 (LCL - UCL)		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695		
1,2-Dichloroethane-d4 (Surrogate)	101	%	70 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 17:25	LHS	MS-V2	1000	BRI0695		
Toluene-d8 (Surrogate)	106	%	81 - 117 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 17:25	LHS	MS-V2	1000	BRI0695		
Toluene-d8 (Surrogate)	110	%	81 - 117 (LCL - UCL)		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695		
4-Bromofluorobenzene (Surrogate)	97.4	%	74 - 121 (LCL - UCL)		EPA-8260	09/11/08	09/12/08 03:51	LHS	MS-V2	50	BRI0695		
4-Bromofluorobenzene (Surrogate)	89.4	%	74 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 17:25	LHS	MS-V2	1000	BRI0695		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BRI0695	Matrix Spike	0811604-19	0	0.13590	0.12500	mg/kg		109		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13437	0.12500	mg/kg	1.9	107	20	70 - 130
Toluene	BRI0695	Matrix Spike	0811604-19	0	0.12342	0.12500	mg/kg		98.7		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13497	0.12500	mg/kg	9.0	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.050217	0.050000	mg/kg		100		70 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.049275	0.050000	mg/kg		98.6		70 - 121
Toluene-d8 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048216	0.050000	mg/kg		96.4		81 - 117
		Matrix Spike Duplicate	0811604-19	ND	0.052881	0.050000	mg/kg		106		81 - 117
4-Bromofluorobenzene (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048141	0.050000	mg/kg		96.3		74 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.047283	0.050000	mg/kg		94.6		74 - 121

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI0695	BRI0695-BS1	LCS	0.13336	0.12500	0.0050	mg/kg	107		70 - 130		
Toluene	BRI0695	BRI0695-BS1	LCS	0.11931	0.12500	0.0050	mg/kg	95.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.049860	0.050000		mg/kg	99.7		70 - 121		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.047299	0.050000		mg/kg	94.6		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.046543	0.050000		mg/kg	93.1		74 - 121		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Toluene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI0695	BRI0695-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BRI0695	BRI0695-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethanol	BRI0695	BRI0695-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BRI0695	BRI0695-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BLK1	101	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BLK1	95.0	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BLK1	88.3	%	74 - 121 (LCL - UCL)		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/16/2008 8:19

### 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.



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Date of Report: 09/15/2008

Dennis Dettloff

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

RE: 4186

BC Work Order: 0812074

Enclosed are the results of analyses for samples received by the laboratory on 9/11/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature

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# ConocoPhillips Chain Of Custody Record

# 6812074

STL - San Francisco  
1220 Quarry Lane  
Pleasanton, CA 94566

(925) 454-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:  
Terry Grayson

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

ConocoPhillips Work Order Number  
4510293584  
ConocoPhillips Cost Object

DATE: 9/11/08  
PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants  
ADDRESS: 11060 White Rock Road, Suite 110 Rancho Cordova, CA 95670  
PROJECT CONTACT (Hardcopy or PDF Report to): Dennis Dettloff  
TELEPHONE: 916-603-1261 FAX: 916-638-8385  
E-MAIL: ddettloff@deltaenv.com  
SAMPLER NAME(S) (Print): Joyce Welsh  
CONSULTANT PROJECT NUMBER: C104186201

Valid Value ID: 4186  
CONOCOPHILLIPS SITE NUMBER: 4186  
SITE ADDRESS (Street and City): 1771 First St., Livermore, CA  
EDF DELIVERABLE TO (RP or Designee): Joyce Welsh  
PHONE NO.: 916-503-1268  
E-MAIL: jwelsh@deltaenv.com

GLOBAL ID NO.: T0600101777  
CONOCOPHILLIPS SITE MANAGER: Terry Grayson

LAB USE ONLY  
FIELD NOTES:  
Container/Preservative or PID Readings or Laboratory Notes

TEMPERATURE ON RECEIPT °C

REQUESTED ANALYSES

8260B - TPH-G/BTEX	MTB/E/TM/E/TB/DIPE/ TBAM/2-	DCA/1,2-DBA/Ethanol	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> TLCLP	8015M - TPH-D	VOCs - 8260	CAM 17 Metals	RCI	Fish Bioassay	Pesticides	Total Cyanide	Total Sulfide
U-10-39	X										
U-10-48	X										

LAB USE ONLY  
CHK BY: [Signature]  
DISTRIBUTION  
SUB OUT

Reimposed By: (Signature) [Signature]  
Reimposed By: (Signature) [Signature]  
Reimposed By: (Signature) [Signature]  
Date: 9/11/08 Time: 1720  
Date: 9-11-08 Time: 1830  
Date: 9-11-08 Time: 2205

please send email copy of signed COC to above circled address

Submission # 0812074

<p><b>SHIPPING INFORMATION</b></p> <p>Federal Express <input type="checkbox"/> UPS <input type="checkbox"/> Hand Delivery <input type="checkbox"/></p> <p>BC Lab Field Service <input checked="" type="checkbox"/> Other <input type="checkbox"/> (Specify) _____</p>	<p><b>SHIPPING CONTAINER</b></p> <p>Ice Chest <input checked="" type="checkbox"/> None <input type="checkbox"/></p> <p>Box <input type="checkbox"/> Other <input type="checkbox"/> (Specify) _____</p>
---	--

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals Ice Chest Containers None  Comments: \_\_\_\_\_

Intact? Yes  No  Intact? Yes  No

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

**COC Received**  
 YES  NO

Emissivity: \_\_\_\_\_ Container: Sleeve Thermometer ID: 48  
 Temperature: A 3.7 °C / C 1.2 °C

Date/Time 9-11-08  
 Analyst Init JLW

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										
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	A	BA								
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ML Date/Time: 9/12/08 9:55  
 A = Actual / C = Corrected



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Delivery Work Order:
0812074-01	COC Number:	---		09/11/2008 22:05	09/11/2008 12:35	---	Solids	Global ID: T0600101777
	Project Number:	4186						Matrix: SO
	Sampling Location:	U-10						Sample QC Type (SACode): CS
	Sampling Point:	U-10-39						Cooler ID:
	Sampled By:	DECR						
0812074-02	COC Number:	---		09/11/2008 22:05	09/11/2008 13:20	---	Solids	Global ID: T0600101777
	Project Number:	4186						Matrix: SO
	Sampling Location:	U-10						Sample QC Type (SACode): CS
	Sampling Point:	U-10-48						Cooler ID:
	Sampled By:	DECR						

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812074-01		Client Sample Name: 4186, U-10, U-10-39, 9/11/2008 12:35:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quails
Benzene	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
1,2-Dibromoethane	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
t-Amyl Methyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
t-Butyl alcohol	0.058	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Diisopropyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Ethanol	ND	mg/kg	1.0		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Ethyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
Total Purgeable Petroleum Hydrocarbons	2.4	mg/kg	0.20		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695	ND	
1,2-Dichloroethane-d4 (Surrogate)	99.7	%	70 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695		
4-Bromofluorobenzene (Surrogate)	90.9	%	74 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:11	LHS	MS-V2	1	BRI0695		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812074-02		Client Sample Name: 4186, U-10, U-10-48, 9/11/2008 1:20:00PM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	0.70	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
1,2-Dibromoethane	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
1,2-Dichloroethane	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Ethylbenzene	0.31	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Methyl t-butyl ether	0.29	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Toluene	0.12	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Total Xylenes	2.2	mg/kg	0.10		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
t-Amyl Methyl ether	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
t-Butyl alcohol	1.3	mg/kg	0.50		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Diisopropyl ether	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Ethanol	ND	mg/kg	10		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Ethyl t-butyl ether	ND	mg/kg	0.050		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
Total Purgeable Petroleum Hydrocarbons	22	mg/kg	2.0		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695	ND	A01	
1,2-Dichloroethane-d4 (Surrogate)	96.6	%	70 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695			
Toluene-d8 (Surrogate)	101	%	81 - 117 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695			
4-Bromofluorobenzene (Surrogate)	81.8	%	74 - 121 (LCL - UCL)		EPA-8260	09/12/08	09/12/08 20:39	LHS	MS-V2	10	BRI0695			

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Delta Environmental Consultants, Inc.  
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Rancho Cordova, CA 95670

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Benzene	BRI0695	Matrix Spike	0811604-19	0	0.13590	0.12500	mg/kg		109		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13437	0.12500	mg/kg	1.9	107	20	70 - 130
Toluene	BRI0695	Matrix Spike	0811604-19	0	0.12342	0.12500	mg/kg		98.7		70 - 130
		Matrix Spike Duplicate	0811604-19	0	0.13497	0.12500	mg/kg	9.0	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.050217	0.050000	mg/kg		100		70 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.049275	0.050000	mg/kg		98.6		70 - 121
Toluene-d8 (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048216	0.050000	mg/kg		96.4		81 - 117
		Matrix Spike Duplicate	0811604-19	ND	0.052881	0.050000	mg/kg		106		81 - 117
4-Bromofluorobenzene (Surrogate)	BRI0695	Matrix Spike	0811604-19	ND	0.048141	0.050000	mg/kg		96.3		74 - 121
		Matrix Spike Duplicate	0811604-19	ND	0.047283	0.050000	mg/kg		94.6		74 - 121

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI0695	BRI0695-BS1	LCS	0.13336	0.12500	0.0050	mg/kg	107		70 - 130		
Toluene	BRI0695	BRI0695-BS1	LCS	0.11931	0.12500	0.0050	mg/kg	95.4		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.049860	0.050000		mg/kg	99.7		70 - 121		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.047299	0.050000		mg/kg	94.6		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BS1	LCS	0.046543	0.050000		mg/kg	93.1		74 - 121		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

## Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dibromoethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
1,2-Dichloroethane	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Toluene	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI0695	BRI0695-BLK1	ND	mg/kg	0.010		
t-Amyl Methyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
t-Butyl alcohol	BRI0695	BRI0695-BLK1	ND	mg/kg	0.050		
Diisopropyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Ethanol	BRI0695	BRI0695-BLK1	ND	mg/kg	1.0		
Ethyl t-butyl ether	BRI0695	BRI0695-BLK1	ND	mg/kg	0.0050		
Total Purgeable Petroleum Hydrocarbons	BRI0695	BRI0695-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BRI0695	BRI0695-BLK1	101	%	70 - 121 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRI0695	BRI0695-BLK1	95.0	%	81 - 117 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRI0695	BRI0695-BLK1	88.3	%	74 - 121 (LCL - UCL)		

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Rancho Cordova, CA 95670

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/15/2008 15:22

**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.



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Date of Report: 09/30/2008

RECEIVED

OCT 06 2008

Dennis Dettloff

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

RE: 4186

BC Work Order: 0812670

Enclosed are the results of analyses for samples received by the laboratory on 9/24/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature

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ConocoPhillips Chain Of Custody Record

STL- San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 454-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

Terry Grayson

INVOICE REMITTANCE ADDRESS:

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

ConocoPhillips Work Order Number

4510293584

ConocoPhillips Cost Object

000010120349-00022

DATE: 9/24/08

PAGE: 1 of 1

SAMPLING COMPANY:

Delta Consultants

Valid Value ID:

CONOCOPHILLIPS SITE NUMBER

4186

GLOBAL ID NO.:

T0600101777

ADDRESS:

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

SITE ADDRESS (Street and City):

1771 First St., Livermore, CA

CONOCOPHILLIPS SITE MANAGER:

Shelby Lathrop

PROJECT CONTACT (Hardcopy or PDF Report to):

Dennis Dettloff

EDF DELIVERABLE TO (RP or Designee)

Joyce Welsh

PHONE NO.:

916-503-1268

E-MAIL:

dettloff@deltaenv.com  
jwelsh@deltaenv.com

LAB USE ONLY

08-12670

TELEPHONE:

916-503-1261

FAX:

916-638-8385

E-MAIL:  
ddettloff@deltaenv.com

SAMPLER NAME(S) (Print):

Joyce Welsh

CONOCOPHILLIPS NUMBER

C104186201

REQUESTED ANALYSES

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

8280B - TPH-GIBTEX/  
MITBE/FAME/ETBE/DBP/PAHs  
DMAH-2-DBA-estimates

6010 - Lead Total DTLCLP  
Added by Joyce Welsh  
MM/9/08

8015M - TPH-D

VOCs - 8260

CAM 17 Metals

RCI

Fish Bioassay

Pesticides

Total Cyanide

Total Sulfide

FIELD NOTES:

Container/Preservative  
or PID Readings  
or Laboratory Notes

TEMPERATURE ON RECEIPT C°

\* Field Point name only required if different from Sample ID

LAB USE ONLY

Sample Identification/Field Point Name\*

SAMPLING DATE TIME MATRIX NO. OF CONT.

WD-1

9/24/08 14:10 SOIL 1

X \*

CHK BY DISTRIBUTION

AW [initials]

SUB-OUT

Relinquished by (Signature)

Relinquished by (Signature)

Relinquished by (Signature)

Received by (Signature)

Received by (Signature)

Received by (Signature)

Date: 9/24/08

Date: 9-24-08

Date: 9-24-08

Time: 1540

Time: 1810

Time: 2125

8/19/03 Revision

Please send signed copy to Dennis see above

Submission #: 08-12070

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  Containers  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: 8oz clear glass Thermometer ID: 48

Date/Time 9-24-08

Temperature: A 5.0 °C / C 4.8 °C

Analyst Init JNW

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										
PIA 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	A									
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: NO trace date on sample, time does not match

Sample Numbering Completed By: JNW Date/Time: 9/24/08 23:10

A = Actual / C = Corrected

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

## Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information																														
0812670-01	<table><tr><td>COC Number:</td><td>---</td><td>Receive Date:</td><td>09/24/2008 21:25</td><td>Delivery Work Order:</td><td></td></tr><tr><td>Project Number:</td><td>4186</td><td>Sampling Date:</td><td>09/24/2008 14:40</td><td>Global ID:</td><td>T0600101777</td></tr><tr><td>Sampling Location:</td><td>WD-1</td><td>Sample Depth:</td><td>---</td><td>Matrix:</td><td>SO</td></tr><tr><td>Sampling Point:</td><td>WD-1</td><td>Sample Matrix:</td><td>Solids</td><td>Sample QC Type (SACode):</td><td>CS</td></tr><tr><td>Sampled By:</td><td>DECR</td><td></td><td></td><td>Cooler ID:</td><td></td></tr></table>	COC Number:	---	Receive Date:	09/24/2008 21:25	Delivery Work Order:		Project Number:	4186	Sampling Date:	09/24/2008 14:40	Global ID:	T0600101777	Sampling Location:	WD-1	Sample Depth:	---	Matrix:	SO	Sampling Point:	WD-1	Sample Matrix:	Solids	Sample QC Type (SACode):	CS	Sampled By:	DECR			Cooler ID:	
COC Number:	---	Receive Date:	09/24/2008 21:25	Delivery Work Order:																											
Project Number:	4186	Sampling Date:	09/24/2008 14:40	Global ID:	T0600101777																										
Sampling Location:	WD-1	Sample Depth:	---	Matrix:	SO																										
Sampling Point:	WD-1	Sample Matrix:	Solids	Sample QC Type (SACode):	CS																										
Sampled By:	DECR			Cooler ID:																											

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812670-01		Client Sample Name: 4186, WD-1, WD-1, 9/24/2008 2:40:00PM												
Constituent	Result	Units	PQL	MDL	Method	Prep	Run		Analyst	Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
						Date	Date/Time	Date/Time						
Benzene	ND	mg/kg	0.0050		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556	ND	
Methyl t-butyl ether	0.0052	mg/kg	0.0050		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556	ND	
Total Purgeable Petroleum Hydrocarbons	ND	mg/kg	0.20		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556		
1,2-Dichloroethane-d4 (Surrogate)	111	%	70 - 121 (LCL - UCL)		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556		
Toluene-d8 (Surrogate)	102	%	81 - 117 (LCL - UCL)		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556		
4-Bromofluorobenzene (Surrogate)	95.0	%	74 - 121 (LCL - UCL)		EPA-8260	09/24/08	09/25/08	03:38	LHS	MS-V2	1	BRI1556		

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 Rancho Cordova, CA 95670

Project: 4186  
 Project Number: [none]  
 Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

### Total Concentrations (TTLC)

BCL Sample ID: 0812670-01		Client Sample Name: 4186, WD-1, WD-1, 9/24/2008 2:40:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Lead	6.7	mg/kg	2.5		EPA-6010B	09/26/08	09/29/08 12:12	ARD	PE-OP1	0.971	BRI1796	ND	

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery
Benzene	BRI1556	Matrix Spike	0811604-51	0	0.12107	0.12500	mg/kg		96.9		70 - 130
		Matrix Spike Duplicate	0811604-51	0	0.12657	0.12500	mg/kg	4.1	101	20	70 - 130
Toluene	BRI1556	Matrix Spike	0811604-51	0	0.12400	0.12500	mg/kg		99.2		70 - 130
		Matrix Spike Duplicate	0811604-51	0	0.12816	0.12500	mg/kg	3.8	103	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRI1556	Matrix Spike	0811604-51	ND	0.050435	0.050000	mg/kg		101		70 - 121
		Matrix Spike Duplicate	0811604-51	ND	0.050090	0.050000	mg/kg		100		70 - 121
Toluene-d8 (Surrogate)	BRI1556	Matrix Spike	0811604-51	ND	0.050993	0.050000	mg/kg		102		81 - 117
		Matrix Spike Duplicate	0811604-51	ND	0.051052	0.050000	mg/kg		102		81 - 117
4-Bromofluorobenzene (Surrogate)	BRI1556	Matrix Spike	0811604-51	ND	0.049838	0.050000	mg/kg		99.7		74 - 121
		Matrix Spike Duplicate	0811604-51	ND	0.051382	0.050000	mg/kg		103		74 - 121

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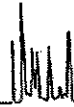
Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

### Total Concentrations (TTLC) Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery Lab Quals
Lead	BRI1796	Duplicate	0812729-01	6.1001	6.2293		mg/kg	2.1		20	
		Matrix Spike	0812729-01	6.1001	100.05	98.039	mg/kg		95.8		75 - 125
		Matrix Spike Duplicate	0812729-01	6.1001	95.305	98.039	mg/kg	5.1	91.0	20	75 - 125

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

## Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI1556	BRI1556-BS1	LCS	0.12219	0.12500	0.0050	mg/kg	97.8		70 - 130		
Toluene	BRI1556	BRI1556-BS1	LCS	0.12500	0.12500	0.0050	mg/kg	100		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI1556	BRI1556-BS1	LCS	0.048541	0.050000		mg/kg	97.1		70 - 121		
Toluene-d8 (Surrogate)	BRI1556	BRI1556-BS1	LCS	0.050193	0.050000		mg/kg	100		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI1556	BRI1556-BS1	LCS	0.050428	0.050000		mg/kg	101		74 - 121		





Delta Environmental Consultants, Inc.  
11050 White Rock Rd, Suite 110  
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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

## Total Concentrations (TTLIC)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Lead	BRI1796	BRI1796-BS1	LCS	107.35	100.00	2.5	mg/kg	107		75 - 125		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

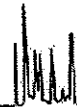
## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI1556	BRI1556-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI1556	BRI1556-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI1556	BRI1556-BLK1	ND	mg/kg	0.0050		
Toluene	BRI1556	BRI1556-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI1556	BRI1556-BLK1	ND	mg/kg	0.010		
1,2-Dichloroethane-d4 (Surrogate)	BRI1556	BRI1556-BLK1	98.7	%		70 - 121 (LCL - UCL)	
Toluene-d8 (Surrogate)	BRI1556	BRI1556-BLK1	103	%		81 - 117 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BRI1556	BRI1556-BLK1	94.7	%		74 - 121 (LCL - UCL)	

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

## Total Concentrations (TTLC) Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Lead	BRI1796	BRI1796-BLK1	ND	mg/kg	2.5		



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/30/2008 9:32

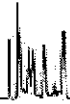
**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



Date of Report: 09/29/2008

Dennis Dettloff

Delta Environmental Consultants, Inc.

11050 White Rock Rd, Suite 110

Rancho Cordova, CA 95670

RE: 4186

BC Work Order: 0812751

Enclosed are the results of analyses for samples received by the laboratory on 9/25/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information																														
0812751-01	<table border="0"> <tr> <td>COC Number:</td> <td>---</td> <td>Receive Date:</td> <td>09/25/2008 21:10</td> <td>Delivery Work Order:</td> <td></td> </tr> <tr> <td>Project Number:</td> <td>4186</td> <td>Sampling Date:</td> <td>09/25/2008 15:20</td> <td>Global ID:</td> <td>T0600101777</td> </tr> <tr> <td>Sampling Location:</td> <td>WD-2</td> <td>Sample Depth:</td> <td>---</td> <td>Matrix:</td> <td>SO</td> </tr> <tr> <td>Sampling Point:</td> <td>WD-2</td> <td>Sample Matrix:</td> <td>Solids</td> <td>Sample QC Type (SACode):</td> <td>CS</td> </tr> <tr> <td>Sampled By:</td> <td>SIRC</td> <td></td> <td></td> <td>Cooler ID:</td> <td></td> </tr> </table>	COC Number:	---	Receive Date:	09/25/2008 21:10	Delivery Work Order:		Project Number:	4186	Sampling Date:	09/25/2008 15:20	Global ID:	T0600101777	Sampling Location:	WD-2	Sample Depth:	---	Matrix:	SO	Sampling Point:	WD-2	Sample Matrix:	Solids	Sample QC Type (SACode):	CS	Sampled By:	SIRC			Cooler ID:	
COC Number:	---	Receive Date:	09/25/2008 21:10	Delivery Work Order:																											
Project Number:	4186	Sampling Date:	09/25/2008 15:20	Global ID:	T0600101777																										
Sampling Location:	WD-2	Sample Depth:	---	Matrix:	SO																										
Sampling Point:	WD-2	Sample Matrix:	Solids	Sample QC Type (SACode):	CS																										
Sampled By:	SIRC			Cooler ID:																											



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0812751-01		Client Sample Name: 4186, WD-2, WD-2, 9/25/2008 3:20:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep	Run	Analyst	Instru- ment ID	Dilution	QC	MB	Lab Quals
						Date	Date/Time				Batch ID	Bias	
Benzene	ND	mg/kg	0.0050		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
Ethylbenzene	ND	mg/kg	0.0050		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
Methyl t-butyl ether	ND	mg/kg	0.0050		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
Toluene	ND	mg/kg	0.0050		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
Total Xylenes	ND	mg/kg	0.010		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
Total Purgeable Petroleum Hydrocarbons	0.42	mg/kg	0.20		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673	ND	
1,2-Dichloroethane-d4 (Surrogate)	112	%	70 - 121 (LCL - UCL)		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673		
Toluene-d8 (Surrogate)	103	%	81 - 117 (LCL - UCL)		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673		
4-Bromofluorobenzene (Surrogate)	104	%	74 - 121 (LCL - UCL)		EPA-8260	09/25/08	09/26/08 07:18	LHS	MS-V2	1	BRI1673		

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**BC Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Benzene	BRI1673	Matrix Spike	0811604-53	0	0.12198	0.12500	mg/kg		97.6		70 - 130	
		Matrix Spike Duplicate	0811604-53	0	0.12253	0.12500	mg/kg	0.4	98.0	20	70 - 130	
Toluene	BRI1673	Matrix Spike	0811604-53	0	0.12824	0.12500	mg/kg		103		70 - 130	
		Matrix Spike Duplicate	0811604-53	0	0.13228	0.12500	mg/kg	2.9	106	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BRI1673	Matrix Spike	0811604-53	ND	0.052031	0.050000	mg/kg		104		70 - 121	
		Matrix Spike Duplicate	0811604-53	ND	0.049619	0.050000	mg/kg		99.2		70 - 121	
Toluene-d8 (Surrogate)	BRI1673	Matrix Spike	0811604-53	ND	0.051144	0.050000	mg/kg		102		81 - 117	
		Matrix Spike Duplicate	0811604-53	ND	0.051511	0.050000	mg/kg		103		81 - 117	
4-Bromofluorobenzene (Surrogate)	BRI1673	Matrix Spike	0811604-53	ND	0.052090	0.050000	mg/kg		104		74 - 121	
		Matrix Spike Duplicate	0811604-53	ND	0.052588	0.050000	mg/kg		105		74 - 121	

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI1673	BRI1673-BS1	LCS	0.12020	0.12500	0.0050	mg/kg	96.2		70 - 130		
Toluene	BRI1673	BRI1673-BS1	LCS	0.12572	0.12500	0.0050	mg/kg	101		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI1673	BRI1673-BS1	LCS	0.050968	0.050000		mg/kg	102		70 - 121		
Toluene-d8 (Surrogate)	BRI1673	BRI1673-BS1	LCS	0.049959	0.050000		mg/kg	99.9		81 - 117		
4-Bromofluorobenzene (Surrogate)	BRI1673	BRI1673-BS1	LCS	0.051266	0.050000		mg/kg	103		74 - 121		

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**Laboratories, Inc.**

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI1673	BRI1673-BLK1	ND	mg/kg	0.0050		
Ethylbenzene	BRI1673	BRI1673-BLK1	ND	mg/kg	0.0050		
Methyl t-butyl ether	BRI1673	BRI1673-BLK1	ND	mg/kg	0.0050		
Toluene	BRI1673	BRI1673-BLK1	ND	mg/kg	0.0050		
Total Xylenes	BRI1673	BRI1673-BLK1	ND	mg/kg	0.010		
Total Purgeable Petroleum Hydrocarbons	BRI1673	BRI1673-BLK1	ND	mg/kg	0.20		
1,2-Dichloroethane-d4 (Surrogate)	BRI1673	BRI1673-BLK1	104	%		70 - 121 (LCL - UCL)	
Toluene-d8 (Surrogate)	BRI1673	BRI1673-BLK1	99.1	%		81 - 117 (LCL - UCL)	
4-Bromofluorobenzene (Surrogate)	BRI1673	BRI1673-BLK1	92.6	%		74 - 121 (LCL - UCL)	

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 09/29/2008 9:32

### 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

# ConocoPhillips Chain Of Custody Record

STL- San Francisco

1220 Quarry Lane  
Pleasanton, CA 94566

(925) 454-1919 (925) 484-1096 fax

ConocoPhillips Site Manager:

Terry Grayson

INVOICE REMITTANCE ADDRESS:

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

ConocoPhillips Work Order Number

4510293584

ConocoPhillips Cost Object

000010120349-00022

DATE: 9/25/08

PAGE: 1 of 1

SAMPLING COMPANY: Delta Consultants	Valid Value ID:	CONOCOPHILLIPS SITE NUMBER: 4186	GLOBAL ID NO.: T0600101777
ADDRESS: 11050 White Rock Road, Suite 110 Rancho Cordova, CA 95670		SITE ADDRESS (Street and City): 1771 First St., Livermore, CA	CONOCOPHILLIPS SITE MANAGER: Shelby Lathrop TERRY GRAYSON
PROJECT CONTACT (Hardcopy or PDF Report to): Dennis Dettloff		EDF DELIVERABLE TO (RP or Designee): Joyce Welsh	PHONE NO.: 916-503-1268
TELEPHONE: 916-503-1261	FAX: 916-638-8385	E-MAIL: ddettloff@deltaenv.com	E-MAIL: jwelsh@deltaenv.com
SAMPLER NAME(S) (Print): Joyce Welsh	CONSULTANT PROJECT NUMBER: C104186201	REQUESTED ANALYSES	

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 <input checked="" type="checkbox"/>	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	TEMPERATURE ON RECEIPT °C
--	--	---------------------------

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8260B - TPH-C&BTEX/MTBE/1,2-DICHLOROETHANE/1,1,1-TRICHLOROETHANE	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> TCLP	8016M - TPH-D	VOCs - 8260	CAM 17 Metals	RCI	Fish Bioassay	Pesticides	Total Cyanide	Total Sulfide
		DATE	TIME												
	WD-2	9/25/08	1530	S	1	X									

Received by: (Signature) <i>[Signature]</i>	Received by: (Signature) Kerry Dickey BELAB	Date: 9/25/08	Time: 1530
Received by: (Signature) Kerry Dickey 9/25/08	Received by: (Signature) <i>[Signature]</i>	Date: 9-25-08	Time: 1740
Received by: (Signature) R. [Signature] 9-25-08 2110	Received by: (Signature) <i>[Signature]</i>	Date: 9-25-08	Time: 2110

NOTE: RUN AS LIQUID IF POSSIBLE.  
SEND COC + DRAFT RESULTS TO ABOVE (2) EMAILS ASAP

Submission #: 08-12751

**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  Containers  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: pHu Thermometer ID: 48  
Temperature: A 10.4 °C / C 10.2 °C

Date/Time 2123 9-25-08  
Analyst Init JNW

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										
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	A									
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

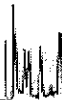
Comments:  
Sample Numbering Completed By: JNW Date/Time: 9/25/08 2338

A = Actual / C = Corrected



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



Date of Report: 11/05/2008

Dennis Dettloff

Delta Environmental Consultants, Inc.

11050 White Rock Rd, Suite 110

Rancho Cordova, CA 95670

RE: 4186

BC Work Order: 0813669

Invoice ID: B052564

Enclosed are the results of analyses for samples received by the laboratory on 10/14/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers

Client Service Rep

Authorized Signature



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Delivery Work Order:
0813669-01	<b>COC Number:</b>	---		10/14/2008 21:45	
	<b>Project Number:</b>	4186		<b>Sampling Date:</b>	10/14/2008 12:15
	<b>Sampling Location:</b>	WD-3		<b>Sample Depth:</b>	---
	<b>Sampling Point:</b>	WD-3		<b>Sample Matrix:</b>	Water
	<b>Sampled By:</b>	DECR			Global ID: T0600101777
					Matrix: W
					Sample QC Type (SACode): CS
					Cooler ID:



**BC Laboratories, Inc.**

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Organochlorine Pesticides (EPA Method 8081)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Aldrin	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
alpha-BHC	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
beta-BHC	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
delta-BHC	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
gamma-BHC (Lindane)	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Chlordane (Technical)	ND	ug/L	0.50		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
4,4'-DDD	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
4,4'-DDE	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
4,4'-DDT	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Dieldrin	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Endosulfan I	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Endosulfan II	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Endosulfan sulfate	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Endrin	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Endrin aldehyde	ND	ug/L	0.010		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Heptachlor	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Heptachlor epoxide	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Methoxychlor	ND	ug/L	0.0050		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
Toxaphene	ND	ug/L	2.0		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872	ND	
TCMX (Surrogate)	53.5	%	72 - 129 (LCL - UCL)		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872		S09
Dibutyl chlorendate (Surrogate)	52.6	%	82 - 177 (LCL - UCL)		EPA-8081	10/17/08	10/30/08 13:39	JYT	GC-1	1	BRJ1872		S09

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**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949



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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Bromobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Bromochloromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Bromodichloromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Bromoform	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Bromomethane	ND	ug/L	1.0		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
n-Butylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
sec-Butylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
tert-Butylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Carbon tetrachloride	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Chlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Chloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Chloroform	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Chloromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
2-Chlorotoluene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
4-Chlorotoluene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Dibromochloromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,2-Dibromo-3-chloropropane	ND	ug/L	1.0		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Dibromomethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,2-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,3-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,4-Dichlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	

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Environmental Testing Laboratory Since 1949

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Dichlorodifluoromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,1-Dichloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,1-Dichloroethene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
cis-1,2-Dichloroethene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
trans-1,2-Dichloroethene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,2-Dichloropropane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,3-Dichloropropane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
2,2-Dichloropropane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,1-Dichloropropene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
cis-1,3-Dichloropropene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
trans-1,3-Dichloropropene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Hexachlorobutadiene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Isopropylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
p-Isopropyltoluene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Methylene chloride	ND	ug/L	1.0		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Methyl t-butyl ether	1.4	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Naphthalene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
n-Propylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
Styrene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,1,1,2-Tetrachloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	
1,1,2,2-Tetrachloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND	

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Tetrachloroethene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
Toluene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,2,3-Trichlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,2,4-Trichlorobenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,1,1-Trichloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,1,2-Trichloroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
Trichloroethene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
Trichlorofluoromethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,2,3-Trichloropropane	ND	ug/L	1.0		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,1,2-Trichloro-1,2,2-trifluoroethane	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,2,4-Trimethylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,3,5-Trimethylbenzene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
Vinyl chloride	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
Total Xylenes	ND	ug/L	1.0		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
p- & m-Xylenes	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
o-Xylene	ND	ug/L	0.50		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074	ND		
1,2-Dichloroethane-d4 (Surrogate)	103	%	76 - 114 (LCL - UCL)		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074			
Toluene-d8 (Surrogate)	97.8	%	88 - 110 (LCL - UCL)		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074			
4-Bromofluorobenzene (Surrogate)	100	%	86 - 115 (LCL - UCL)		EPA-8260	10/16/08	10/16/08 16:46	ANO	MS-V4	1	BRJ1074			

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Total Petroleum Hydrocarbons

<b>BCL Sample ID:</b> 0813669-01	<b>Client Sample Name:</b> 4186, WD-3, WD-3, 10/14/2008 12:15:00PM												
<b>Constituent</b>	<b>Result</b>	<b>Units</b>	<b>PQL</b>	<b>MDL</b>	<b>Method</b>	<b>Prep Date</b>	<b>Run Date/Time</b>	<b>Analyst</b>	<b>Instru-ment ID</b>	<b>Dilution</b>	<b>QC Batch ID</b>	<b>MB Bias</b>	<b>Lab Quals</b>
Diesel Range Organics (C12 - C24)	ND	ug/L	50		Luft/TPHd	10/23/08	11/04/08 20:34	CKD	GC-5	1	BRJ2101	ND	
Tetracosane (Surrogate)	99.8	%	28 - 139 (LCL - UCL)		Luft/TPHd	10/23/08	11/04/08 20:34	CKD	GC-5	1	BRJ2101		

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

### Water Analysis (General Chemistry)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
pH	11.80	pH Units	0.05		EPA-150.1	10/17/08	10/17/08 13:30	FM2	B360	1	BRJ1338		
Total Cyanide	0.0074	mg/L	0.0050		EPA-335.2	10/21/08	10/21/08 12:17	RPL	KONE-1	1	BRJ1414	ND	
Reactive Cyanide	ND	mg/L	0.025		SW-7.3.3.2	10/21/08	10/22/08 10:47	TDC	KONE-1	1	BRJ1481	ND	NR
Total Sulfide	ND	mg/L	0.10		EPA-376.2	10/16/08	10/16/08 03:30	MRM	SPEC05	1	BRJ1058	ND	
Reactive Sulfide	ND	mg/L	20		SW-7.3.4.2	10/21/08	10/21/08 19:30	DIW	MANUAL	1	BRJ1487	ND	NR



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Project Manager: Dennis Dettloff

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### Water Analysis (Metals)

BCL Sample ID: 0813669-01		Client Sample Name: 4186, WD-3, WD-3, 10/14/2008 12:15:00PM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Total Antimony	ND	ug/L	100		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Arsenic	ND	ug/L	50		EPA-6010B	10/20/08	10/22/08 14:22	ARD	PE-OP1	1	BRJ1351	ND		
Total Barium	220	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Beryllium	ND	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Cadmium	ND	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Chromium	620	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Cobalt	ND	ug/L	50		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Copper	14	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Lead	ND	ug/L	50		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Mercury	ND	ug/L	0.20		EPA-7470A	10/20/08	10/22/08 13:59	MEV	CETAC1	1	BRJ1371	ND		
Total Molybdenum	ND	ug/L	50		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Nickel	33	ug/L	10		EPA-6010B	10/20/08	10/22/08 14:22	ARD	PE-OP1	1	BRJ1351	ND		
Total Selenium	ND	ug/L	100		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Silver	ND	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Thallium	ND	ug/L	100		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Vanadium	ND	ug/L	10		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		
Total Zinc	ND	ug/L	50		EPA-6010B	10/20/08	10/20/08 19:29	ARD	PE-OP1	1	BRJ1351	ND		

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Project Number: [none]  
Project Manager: Dennis Dettloff

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## Organochlorine Pesticides (EPA Method 8081)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Aldrin	BRJ1872	Matrix Spike	0811604-32	0	0.22354	0.25000	ug/L		89.4		80 - 136	
		Matrix Spike Duplicate	0811604-32	0	0.23086	0.25000	ug/L	3.2	92.3	20	80 - 136	
gamma-BHC (Lindane)	BRJ1872	Matrix Spike	0811604-32	0	0.18744	0.25000	ug/L		75.0		60 - 126	
		Matrix Spike Duplicate	0811604-32	0	0.19403	0.25000	ug/L	3.4	77.6	24	60 - 126	
4,4'-DDT	BRJ1872	Matrix Spike	0811604-32	0	0.21473	0.25000	ug/L		85.9		61 - 128	
		Matrix Spike Duplicate	0811604-32	0	0.23212	0.25000	ug/L	7.7	92.8	19	61 - 128	
Dieldrin	BRJ1872	Matrix Spike	0811604-32	0	0.24466	0.25000	ug/L		97.9		76 - 132	
		Matrix Spike Duplicate	0811604-32	0	0.25793	0.25000	ug/L	5.1	103	18	76 - 132	
Endrin	BRJ1872	Matrix Spike	0811604-32	0	0.25742	0.25000	ug/L		103		76 - 143	
		Matrix Spike Duplicate	0811604-32	0	0.26836	0.25000	ug/L	3.8	107	19	76 - 143	
Heptachlor	BRJ1872	Matrix Spike	0811604-32	0	0.22265	0.25000	ug/L		89.1		81 - 138	
		Matrix Spike Duplicate	0811604-32	0	0.22866	0.25000	ug/L	2.7	91.5	18	81 - 138	
TCMX (Surrogate)	BRJ1872	Matrix Spike	0811604-32	ND	0.19856	0.30000	ug/L		66.2		72 - 129	S09
		Matrix Spike Duplicate	0811604-32	ND	0.20151	0.30000	ug/L		67.2		72 - 129	S09
Dibutyl chlorendate (Surrogate)	BRJ1872	Matrix Spike	0811604-32	ND	0.99379	0.75000	ug/L		133		82 - 177	
		Matrix Spike Duplicate	0811604-32	ND	1.0984	0.75000	ug/L		146		82 - 177	



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Project Number: [none]  
Project Manager: Dennis Dettloff

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### Volatile Organic Analysis (EPA Method 8260)

#### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Benzene	BRJ1074	Matrix Spike	0813707-01	0	21.920	25.000	ug/L		87.7		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	24.080	25.000	ug/L	9.3	96.3	20	70 - 130	
Bromodichloromethane	BRJ1074	Matrix Spike	0813707-01	0	21.090	25.000	ug/L		84.4		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	23.400	25.000	ug/L	10.3	93.6	20	70 - 130	
Chlorobenzene	BRJ1074	Matrix Spike	0813707-01	0	21.720	25.000	ug/L		86.9		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	23.680	25.000	ug/L	8.6	94.7	20	70 - 130	
Chloroethane	BRJ1074	Matrix Spike	0813707-01	0	22.430	25.000	ug/L		89.7		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	25.180	25.000	ug/L	11.9	101	20	70 - 130	
1,4-Dichlorobenzene	BRJ1074	Matrix Spike	0813707-01	0	20.730	25.000	ug/L		82.9		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	22.980	25.000	ug/L	10.3	91.9	20	70 - 130	
1,1-Dichloroethane	BRJ1074	Matrix Spike	0813707-01	0	22.430	25.000	ug/L		89.7		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	24.630	25.000	ug/L	9.4	98.5	20	70 - 130	
1,1-Dichloroethene	BRJ1074	Matrix Spike	0813707-01	0	22.880	25.000	ug/L		91.5		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	25.780	25.000	ug/L	11.8	103	20	70 - 130	
Toluene	BRJ1074	Matrix Spike	0813707-01	0	21.990	25.000	ug/L		88.0		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	24.150	25.000	ug/L	9.3	96.6	20	70 - 130	
Trichloroethene	BRJ1074	Matrix Spike	0813707-01	0	22.270	25.000	ug/L		89.1		70 - 130	
		Matrix Spike Duplicate	0813707-01	0	24.760	25.000	ug/L	10.5	99.0	20	70 - 130	
1,2-Dichloroethane-d4 (Surrogate)	BRJ1074	Matrix Spike	0813707-01	ND	10.290	10.000	ug/L		103		76 - 114	
		Matrix Spike Duplicate	0813707-01	ND	10.290	10.000	ug/L		103		76 - 114	
Toluene-d8 (Surrogate)	BRJ1074	Matrix Spike	0813707-01	ND	9.9200	10.000	ug/L		99.2		88 - 110	
		Matrix Spike Duplicate	0813707-01	ND	9.9500	10.000	ug/L		99.5		88 - 110	
4-Bromofluorobenzene (Surrogate)	BRJ1074	Matrix Spike	0813707-01	ND	10.010	10.000	ug/L		100		86 - 115	
		Matrix Spike Duplicate	0813707-01	ND	10.050	10.000	ug/L		100		86 - 115	

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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

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## Total Petroleum Hydrocarbons

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Diesel Range Organics (C12 - C24)	BRJ2101	Matrix Spike	0811604-81	5.5210	343.94	500.00	ug/L		67.7		36 - 130	
		Matrix Spike Duplicate	0811604-81	5.5210	361.69	500.00	ug/L	5.0	71.2	30	36 - 130	
Tetracosane (Surrogate)	BRJ2101	Matrix Spike	0811604-81	ND	19.153	20.000	ug/L		95.8		28 - 139	
		Matrix Spike Duplicate	0811604-81	ND	22.423	20.000	ug/L		112		28 - 139	



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## Water Analysis (General Chemistry)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Source Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Total Sulfide	BRJ1058	Duplicate	0813661-04	0.0058800	ND		mg/L			10		
		Matrix Spike	0813661-04	0.0058800	0.47833	0.50000	mg/L		94.5		80 - 120	
		Matrix Spike Duplicate	0813661-04	0.0058800	0.47677	0.50000	mg/L	0.3	94.2	10	80 - 120	
pH	BRJ1338	Duplicate	0813709-11	7.5850	7.6600		pH Units	1.0		20		
Total Cyanide	BRJ1414	Duplicate	0813660-01	0.0034540	ND		mg/L			10		
		Matrix Spike	0813660-01	0.0034540	0.098558	0.10000	mg/L		95.1		90 - 110	
		Matrix Spike Duplicate	0813660-01	0.0034540	0.10437	0.10000	mg/L	6.0	101	20	90 - 110	
Reactive Cyanide	BRJ1481	Duplicate	0813669-01	0.0033850	ND		mg/L			20		NR
		Matrix Spike	0813669-01	0.0033850	0.14342	1.0000	mg/L		14.0		14 - 45	NR
		Matrix Spike Duplicate	0813669-01	0.0033850	0.14096	1.0000	mg/L	1.4	13.8	20	14 - 45	NR
Reactive Sulfide	BRJ1487	Duplicate	0813669-01	0	ND		mg/L			20		NR
		Matrix Spike	0813669-01	0	160.00	352.00	mg/L		45.5		50 - 100	NR,Q03
		Matrix Spike Duplicate	0813669-01	0	164.00	352.00	mg/L	2.4	46.6	20	50 - 100	NR,Q03



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## Water Analysis (Metals)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Total Antimony	BRJ1351	Duplicate	0813669-01	-4.7358	ND		ug/L			20		
		Matrix Spike	0813669-01	-4.7358	425.93	400.00	ug/L		106		75 - 125	
		Matrix Spike Duplicate	0813669-01	-4.7358	420.15	400.00	ug/L	0.9	105	20	75 - 125	
Total Arsenic	BRJ1351	Duplicate	0813669-01	30.061	ND		ug/L			20		A02
		Matrix Spike	0813669-01	30.061	243.20	200.00	ug/L		107		75 - 125	
		Matrix Spike Duplicate	0813669-01	30.061	247.44	200.00	ug/L	1.9	109	20	75 - 125	
Total Barium	BRJ1351	Duplicate	0813669-01	224.32	221.96		ug/L	1.1		20		
		Matrix Spike	0813669-01	224.32	635.32	400.00	ug/L		103		75 - 125	
		Matrix Spike Duplicate	0813669-01	224.32	635.81	400.00	ug/L	0	103	20	75 - 125	
Total Beryllium	BRJ1351	Duplicate	0813669-01	-0.046945	ND		ug/L			20		
		Matrix Spike	0813669-01	-0.046945	203.61	200.00	ug/L		102		75 - 125	
		Matrix Spike Duplicate	0813669-01	-0.046945	204.28	200.00	ug/L	0	102	20	75 - 125	
Total Cadmium	BRJ1351	Duplicate	0813669-01	-0.97313	ND		ug/L			20		
		Matrix Spike	0813669-01	-0.97313	204.11	200.00	ug/L		102		75 - 125	
		Matrix Spike Duplicate	0813669-01	-0.97313	203.36	200.00	ug/L	0	102	20	75 - 125	
Total Chromium	BRJ1351	Duplicate	0813669-01	619.80	620.84		ug/L	0.2		20		
		Matrix Spike	0813669-01	619.80	809.46	200.00	ug/L		94.8		75 - 125	
		Matrix Spike Duplicate	0813669-01	619.80	811.20	200.00	ug/L	0.9	95.7	20	75 - 125	
Total Cobalt	BRJ1351	Duplicate	0813669-01	3.0792	ND		ug/L			20		
		Matrix Spike	0813669-01	3.0792	213.19	200.00	ug/L		105		75 - 125	
		Matrix Spike Duplicate	0813669-01	3.0792	212.38	200.00	ug/L	0	105	20	75 - 125	
Total Copper	BRJ1351	Duplicate	0813669-01	13.991	14.268		ug/L	2.0		20		
		Matrix Spike	0813669-01	13.991	442.67	400.00	ug/L		107		75 - 125	
		Matrix Spike Duplicate	0813669-01	13.991	445.96	400.00	ug/L	0.9	108	20	75 - 125	
Total Lead	BRJ1351	Duplicate	0813669-01	6.0227	ND		ug/L			20		
		Matrix Spike	0813669-01	6.0227	413.76	400.00	ug/L		102		75 - 125	
		Matrix Spike Duplicate	0813669-01	6.0227	410.79	400.00	ug/L	1.0	101	20	75 - 125	

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Project Manager: Dennis Dettloff

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## Water Analysis (Metals)

### Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Percent Recovery	Control Limits		Lab Quals
										RPD	Percent Recovery	
Total Molybdenum	BRJ1351	Duplicate	0813669-01	24.063	ND		ug/L			20		
		Matrix Spike	0813669-01	24.063	230.74	200.00	ug/L		103		75 - 125	
		Matrix Spike Duplicate	0813669-01	24.063	230.13	200.00	ug/L	0	103	20	75 - 125	
Total Nickel	BRJ1351	Duplicate	0813669-01	33.468	32.998		ug/L	1.4		20		
		Matrix Spike	0813669-01	33.468	465.09	400.00	ug/L		108		75 - 125	
		Matrix Spike Duplicate	0813669-01	33.468	469.02	400.00	ug/L	0.9	109	20	75 - 125	
Total Selenium	BRJ1351	Duplicate	0813669-01	-22.425	ND		ug/L			20		
		Matrix Spike	0813669-01	-22.425	163.64	200.00	ug/L		81.8		75 - 125	
		Matrix Spike Duplicate	0813669-01	-22.425	179.22	200.00	ug/L	9.1	89.6	20	75 - 125	
Total Silver	BRJ1351	Duplicate	0813669-01	-2.6054	ND		ug/L			20		
		Matrix Spike	0813669-01	-2.6054	101.08	100.00	ug/L		101		75 - 125	
		Matrix Spike Duplicate	0813669-01	-2.6054	100.91	100.00	ug/L	0	101	20	75 - 125	
Total Thallium	BRJ1351	Duplicate	0813669-01	14.138	ND		ug/L			20		
		Matrix Spike	0813669-01	14.138	436.81	400.00	ug/L		106		75 - 125	
		Matrix Spike Duplicate	0813669-01	14.138	441.05	400.00	ug/L	0.9	107	20	75 - 125	
Total Vanadium	BRJ1351	Duplicate	0813669-01	8.4826	ND		ug/L			20		
		Matrix Spike	0813669-01	8.4826	218.54	200.00	ug/L		105		75 - 125	
		Matrix Spike Duplicate	0813669-01	8.4826	219.25	200.00	ug/L	0	105	20	75 - 125	
Total Zinc	BRJ1351	Duplicate	0813669-01	24.858	ND		ug/L			20		
		Matrix Spike	0813669-01	24.858	543.06	500.00	ug/L		104		75 - 125	
		Matrix Spike Duplicate	0813669-01	24.858	539.62	500.00	ug/L	1.0	103	20	75 - 125	
Total Mercury	BRJ1371	Duplicate	0813659-12	0.052500	ND		ug/L			20		A02
		Matrix Spike	0813659-12	0.052500	1.0275	1.0000	ug/L		97.5		70 - 130	
		Matrix Spike Duplicate	0813659-12	0.052500	1.0225	1.0000	ug/L	0.5	97.0	20	70 - 130	



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## Organochlorine Pesticides (EPA Method 8081)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Aldrin	BRJ1872	BRJ1872-BS1	LCS	0.18963	0.25000	0.0050	ug/L	75.9		77 - 142		L01
gamma-BHC (Lindane)	BRJ1872	BRJ1872-BS1	LCS	0.15962	0.25000	0.0050	ug/L	63.8		62 - 125		
4,4'-DDT	BRJ1872	BRJ1872-BS1	LCS	0.18682	0.25000	0.0050	ug/L	74.7		64 - 130		
Dieldrin	BRJ1872	BRJ1872-BS1	LCS	0.21453	0.25000	0.0050	ug/L	85.8		79 - 133		
Endrin	BRJ1872	BRJ1872-BS1	LCS	0.22437	0.25000	0.0050	ug/L	89.7		82 - 139		
Heptachlor	BRJ1872	BRJ1872-BS1	LCS	0.19047	0.25000	0.0050	ug/L	76.2		76 - 143		
TCMX (Surrogate)	BRJ1872	BRJ1872-BS1	LCS	0.13877	0.30000		ug/L	46.3		72 - 129		S09
Dibutyl chlorendate (Surrogate)	BRJ1872	BRJ1872-BS1	LCS	0.89213	0.75000		ug/L	119		82 - 177		



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## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRJ1074	BRJ1074-BS1	LCS	23.190	25.000	0.50	ug/L	92.8		70 - 130		
Bromodichloromethane	BRJ1074	BRJ1074-BS1	LCS	22.390	25.000	0.50	ug/L	89.6		70 - 130		
Chlorobenzene	BRJ1074	BRJ1074-BS1	LCS	22.340	25.000	0.50	ug/L	89.4		70 - 130		
Chloroethane	BRJ1074	BRJ1074-BS1	LCS	23.330	25.000	0.50	ug/L	93.3		70 - 130		
1,4-Dichlorobenzene	BRJ1074	BRJ1074-BS1	LCS	21.810	25.000	0.50	ug/L	87.2		70 - 130		
1,1-Dichloroethane	BRJ1074	BRJ1074-BS1	LCS	23.550	25.000	0.50	ug/L	94.2		70 - 130		
1,1-Dichloroethene	BRJ1074	BRJ1074-BS1	LCS	24.540	25.000	0.50	ug/L	98.2		70 - 130		
Toluene	BRJ1074	BRJ1074-BS1	LCS	22.870	25.000	0.50	ug/L	91.5		70 - 130		
Trichloroethene	BRJ1074	BRJ1074-BS1	LCS	23.820	25.000	0.50	ug/L	95.3		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRJ1074	BRJ1074-BS1	LCS	10.610	10.000		ug/L	106		76 - 114		
Toluene-d8 (Surrogate)	BRJ1074	BRJ1074-BS1	LCS	9.8800	10.000		ug/L	98.8		88 - 110		
4-Bromofluorobenzene (Surrogate)	BRJ1074	BRJ1074-BS1	LCS	10.010	10.000		ug/L	100		86 - 115		



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## Total Petroleum Hydrocarbons

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Diesel Range Organics (C12 - C24)	BRJ2101	BRJ2101-BS1	LCS	371.02	500.00	50	ug/L	74.2		48 - 125		
Tetracosane (Surrogate)	BRJ2101	BRJ2101-BS1	LCS	20.040	20.000		ug/L	100		28 - 139		



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## Water Analysis (General Chemistry)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Total Sulfide	BRJ1058	BRJ1058-BS1	LCS	0.47052	0.50000	0.10	mg/L	94.1		90 - 110		
pH	BRJ1338	BRJ1338-BS1	LCS	7.0220	7.0000	0.05	pH Units	100		95 - 105		
Total Cyanide	BRJ1414	BRJ1414-BS1	LCS	0.14541	0.15000	0.0050	mg/L	96.9		90 - 110		
Reactive Cyanide	BRJ1481	BRJ1481-BS1	LCS	0.14268	1.0000	0.025	mg/L	14.3		14 - 45		
Reactive Sulfide	BRJ1487	BRJ1487-BS1	LCS	472.00	704.00	40	mg/L	67.0		50 - 100		





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## Water Analysis (Metals)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Total Antimony	BRJ1351	BRJ1351-BS1	LCS	371.38	400.00	100	ug/L	92.8		85 - 115		
Total Arsenic	BRJ1351	BRJ1351-BS2	LCS	178.36	200.00	50	ug/L	89.2		85 - 115		
Total Barium	BRJ1351	BRJ1351-BS1	LCS	387.90	400.00	10	ug/L	97.0		85 - 115		
Total Beryllium	BRJ1351	BRJ1351-BS1	LCS	181.56	200.00	10	ug/L	90.8		85 - 115		
Total Cadmium	BRJ1351	BRJ1351-BS1	LCS	187.39	200.00	10	ug/L	93.7		85 - 115		
Total Chromium	BRJ1351	BRJ1351-BS1	LCS	185.72	200.00	10	ug/L	92.9		85 - 115		
Total Cobalt	BRJ1351	BRJ1351-BS1	LCS	196.11	200.00	50	ug/L	98.1		85 - 115		
Total Copper	BRJ1351	BRJ1351-BS1	LCS	371.32	400.00	10	ug/L	92.8		85 - 115		
Total Lead	BRJ1351	BRJ1351-BS1	LCS	382.50	400.00	50	ug/L	95.6		85 - 115		
Total Molybdenum	BRJ1351	BRJ1351-BS1	LCS	181.06	200.00	50	ug/L	90.5		85 - 115		
Total Nickel	BRJ1351	BRJ1351-BS2	LCS	371.85	400.00	10	ug/L	93.0		85 - 115		
Total Selenium	BRJ1351	BRJ1351-BS1	LCS	184.25	200.00	100	ug/L	92.1		85 - 115		
Total Silver	BRJ1351	BRJ1351-BS1	LCS	87.702	100.00	10	ug/L	87.7		85 - 115		
Total Thallium	BRJ1351	BRJ1351-BS1	LCS	421.25	400.00	100	ug/L	105		85 - 115		
Total Vanadium	BRJ1351	BRJ1351-BS1	LCS	186.36	200.00	10	ug/L	93.2		85 - 115		
Total Zinc	BRJ1351	BRJ1351-BS1	LCS	501.42	500.00	50	ug/L	100		85 - 115		
Total Mercury	BRJ1371	BRJ1371-BS1	LCS	1.0025	1.0000	0.20	ug/L	100		85 - 115		



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## Organochlorine Pesticides (EPA Method 8081)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Aldrin	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
alpha-BHC	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
beta-BHC	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
delta-BHC	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
gamma-BHC (Lindane)	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Chlordane (Technical)	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.50		
4,4'-DDD	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
4,4'-DDE	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
4,4'-DDT	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Dieldrin	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Endosulfan I	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Endosulfan II	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Endosulfan sulfate	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Endrin	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Endrin aldehyde	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.010		
Heptachlor	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Heptachlor epoxide	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Methoxychlor	BRJ1872	BRJ1872-BLK1	ND	ug/L	0.0050		
Toxaphene	BRJ1872	BRJ1872-BLK1	ND	ug/L	2.0		
TCMX (Surrogate)	BRJ1872	BRJ1872-BLK1	46.3	%		72 - 129 (LCL - UCL)	S09
Dibutyl chlorendate (Surrogate)	BRJ1872	BRJ1872-BLK1	120	%		82 - 177 (LCL - UCL)	

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Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Bromobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Bromochloromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Bromodichloromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Bromoform	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Bromomethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	1.0		
n-Butylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
sec-Butylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
tert-Butylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Carbon tetrachloride	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Chlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Chloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Chloroform	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Chloromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
2-Chlorotoluene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
4-Chlorotoluene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Dibromochloromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2-Dibromo-3-chloropropane	BRJ1074	BRJ1074-BLK1	ND	ug/L	1.0		
1,2-Dibromoethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Dibromomethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2-Dichlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,3-Dichlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,4-Dichlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Dichlorodifluoromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
1,1-Dichloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1-Dichloroethene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
cis-1,2-Dichloroethene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
trans-1,2-Dichloroethene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2-Dichloropropane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,3-Dichloropropane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
2,2-Dichloropropane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1-Dichloropropene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
cis-1,3-Dichloropropene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
trans-1,3-Dichloropropene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Ethylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Hexachlorobutadiene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Isopropylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
p-Isopropyltoluene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Methylene chloride	BRJ1074	BRJ1074-BLK1	ND	ug/L	1.0		
Methyl t-butyl ether	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Naphthalene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
n-Propylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Styrene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1,1,2-Tetrachloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1,2,2-Tetrachloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Tetrachloroethene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Toluene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		

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**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

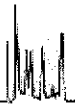
Reported: 11/05/2008 14:26

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
1,2,3-Trichlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2,4-Trichlorobenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1,1-Trichloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,1,2-Trichloroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Trichloroethene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Trichlorofluoromethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2,3-Trichloropropane	BRJ1074	BRJ1074-BLK1	ND	ug/L	1.0		
1,1,2-Trichloro-1,2,2-trifluoroethane	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2,4-Trimethylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,3,5-Trimethylbenzene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Vinyl chloride	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
Total Xylenes	BRJ1074	BRJ1074-BLK1	ND	ug/L	1.0		
p- & m-Xylenes	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
o-Xylene	BRJ1074	BRJ1074-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane-d4 (Surrogate)	BRJ1074	BRJ1074-BLK1	107	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRJ1074	BRJ1074-BLK1	98.9	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRJ1074	BRJ1074-BLK1	99.7	%	86 - 115 (LCL - UCL)		

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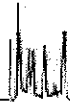
Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

## Total Petroleum Hydrocarbons

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Diesel Range Organics (C12 - C24)	BRJ2101	BRJ2101-BLK1	ND	ug/L	50		
Tetracosane (Surrogate)	BRJ2101	BRJ2101-BLK1	106	%		28 - 139 (LCL - UCL)	



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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

## Water Analysis (General Chemistry)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Sulfide	BRJ1058	BRJ1058-BLK1	ND	mg/L	0.10		
Total Cyanide	BRJ1414	BRJ1414-BLK1	ND	mg/L	0.0050		
Reactive Cyanide	BRJ1481	BRJ1481-BLK1	ND	mg/L	0.025		
Reactive Sulfide	BRJ1487	BRJ1487-BLK1	ND	mg/L	20		



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Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

## Water Analysis (Metals)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Total Antimony	BRJ1351	BRJ1351-BLK1	ND	ug/L	100		
Total Arsenic	BRJ1351	BRJ1351-BLK2	ND	ug/L	50		
Total Barium	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Beryllium	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Cadmium	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Chromium	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Cobalt	BRJ1351	BRJ1351-BLK1	ND	ug/L	50		
Total Copper	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Lead	BRJ1351	BRJ1351-BLK1	ND	ug/L	50		
Total Molybdenum	BRJ1351	BRJ1351-BLK1	ND	ug/L	50		
Total Nickel	BRJ1351	BRJ1351-BLK2	ND	ug/L	10		
Total Selenium	BRJ1351	BRJ1351-BLK1	ND	ug/L	100		
Total Silver	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Thallium	BRJ1351	BRJ1351-BLK1	ND	ug/L	100		
Total Vanadium	BRJ1351	BRJ1351-BLK1	ND	ug/L	10		
Total Zinc	BRJ1351	BRJ1351-BLK1	ND	ug/L	50		
Total Mercury	BRJ1371	BRJ1371-BLK1	ND	ug/L	0.20		





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

Project: 4186  
Project Number: [none]  
Project Manager: Dennis Dettloff

Reported: 11/05/2008 14:26

**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
- A02 The difference between duplicate readings is less than the PQL.
- L01 The Laboratory Control Sample Water (LCSW) recovery is not within laboratory established control limits.
- NR Non-Reactive
- Q03 Matrix spike recovery(s) is(are) not within the control limits.
- S09 The surrogate recovery on the sample for this compound was not within the control limits.

# ConocoPhillips Chain Of Custody Record

STL- San Francisco

1220 Quarry Lane

Pleasanton, CA 94566

(925) 454-1919 (925) 484-1096 fax

ConocoPhillips Site Manager: Terry Grayson  
 INVOICE REMITTANCE ADDRESS: CONOCOPHILLIPS  
 Attn: Dee Hutchinson  
 3611 South Harbor, Suite 200  
 Santa Ana, CA. 92704

ConocoPhillips Work Order Number  
**4510293584**  
 ConocoPhillips Cost Object  
 000010120349-00022

DATE: 10/14/08  
 PAGE: 1 of 1

SAMPLING COMPANY: <b>Delta Consultants</b>		Valid Value ID: <u>0813669</u>	CONOCOPHILLIPS SITE NUMBER: <b>4186</b>		GLOBAL ID NO.: <b>T0600101777</b>
ADDRESS: <b>11050 White Rock Road, Suite 110 Rancho Cordova, CA 95670</b>			SITE ADDRESS (Street and City): <b>1771 First St., Livermore, CA</b>		CONOCOPHILLIPS SITE MANAGER: <b>Shelby Lathrop</b>
PROJECT CONTACT (Hardcopy or PDF Report to): <b>Dennis Dettloff</b>			EDP DELIVERABLE TO (RP or Designee): <b>Joyce Welsh</b>		PHONE NO.: <b>916-503-1268</b>
TELEPHONE: <b>916-503-1261</b>	FAX: <b>916-638-8386</b>	EMAIL: <b>ddettloff@deltaenv.com</b>			E-MAIL: <b>jwelsh@deltaenv.com</b>
SAMPLER NAME(S) (Print): <b>Joyce Welsh</b>			CONSULTANT PROJECT NUMBER: <b>C104186201</b>		

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 EOD IS NEEDED

**REQUESTED ANALYSES**

LAB USE ONLY	Sample Identification/Field Point Name*	SAMPLING		MATRIX	NO. OF CONT.	8260B - TPH-GIBTEXI MTBB/TAME/ETBED/PEI DCAL/2-DBA/ethanol	6010 - Lead <input type="checkbox"/> Total <input type="checkbox"/> CLP	8015M - TPH-D 2 L Amber	VOCs - 8260 3	CAM 17 Metals UNPRESERVED 1 pt PLAST	RCI qt Amber	Fish Bioassay 1 pt PLAST	Pesticides qt water UN	Total Cyanide 500 PAST	Total Sulfide 1 pt PLAST	Total Nitrate 2N OAL	FIELD NOTES: Container/Preservative or PID Readings or Laboratory Notes	TEMPERATURE ON RECEIPT °C
		DATE	TIME															
	WD-3	10/14/08	12:15	W				4	3	1	2	2	1	1	2			

CHIEF BY
DISTRIBUTION  
SUB OUT

Released by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>10/14/08</u>	Time: <u>1457</u>
Released by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>10/14/08</u>	Time: <u>1835</u>
Released by: (Signature) <i>[Signature]</i>	Received by: (Signature) <i>[Signature]</i>	Date: <u>10/14/08</u>	Time: <u>2145</u>

SEE NOTE FROM MOLLIE ABOUT PRESERVING

4 L Amber UN  
 1 qt Amber UN  
 4 pt Plastic UN

3 VGAS HDL  
 email to

Submission #: 18134649

**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  Containers  None  Comments: \_\_\_\_\_  
 Intact? Yes  No  Intact? Yes  No

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

**COC Received**  
 YES  NO

Emissivity: .95 Container: PPe Thermometer ID: TH08C  
 Temperature: A 1.1 °C / C 1.2 °C

Date/Time: 10-14-08  
 Analyst Init: ALM

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED	B	C	D							
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS	E									
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A	B								
QT EPA 413.1, 413.2, 413.1										
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	S	H	I	J						
3 OZ. JAR										
1/2 OZ. JAR										
SOIL SLEEVE										
2CB VIAL										
2LASTIC BAG										
FERROUS IRON										
NCORE										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: ALM Date/Time: 10/15/08 1300  
 = Actual / C = Corrected



November 4, 2008

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

Attached are the results from Aquatic Testing Laboratories.

<u>BCL Sample ID</u>	<u>Client Sample ID</u>	<u>Sample Date/Time</u>
0813669-01	WD-3	10/14/08 12:15

# LABORATORY REPORT



*"dedicated to providing quality aquatic toxicity testing"*

4350 Transport Street, Unit 107  
Ventura, CA 93003  
(805) 650-0546 FAX (805) 650-0756  
CA DOHS ELAP Cert. No.: 1775

**Date:** October 22, 2008

**Client:** BC Laboratories, Inc.  
4100 Atlas Court  
Bakersfield, CA 93308  
Attn: Molly Meyers

**Laboratory No.:** A-08101702-001  
**Sample ID.:** 0813669-01

**Sample Control:** The sample was received by ATL in a chilled state, with the chain of custody record attached.

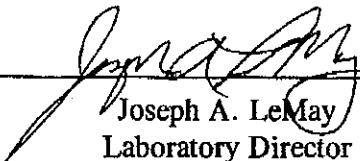
Date Sampled: 10/14/08  
Date Received: 10/17/08  
Date Tested: 10/18/08 to 10/22/08

**Sample Analysis:** The following analyses were performed on your sample:  
CCR Title 22 - Fathead Minnow Hazardous Waste Screen Bioassay (Poitsini and Miller 1988).  
Attached are the test data generated from the analysis of your sample.

## Result Summary:

<u>Sample ID.</u>	<u>Results</u>
0813669-01	PASSED (LC50 > 750 mg/l)

**Quality Control:** Reviewed and approved by:

  
Joseph A. LeMay  
Laboratory Director

**FATHEAD MINNOW HAZARDOUS WASTE  
SCREEN BIOASSAY**



Lab No.: A08101702-01

Client/ID: RC 08131669-01

**TEST SUMMARY**

Species: *Pimephales promelas*.  
 Fish length (mm): av: 27; min: 25; max: 29.  
 Fish weight (gm): av: 0.35; min: 0.30; max: 0.42.  
 Test chamber volume: 10 liters.  
 Temperature: 20 +/- 2°C.  
 Aeration: Single bubble through 30 bore tube.  
 Number of replicates: 2.  
 Dilution water: Soft reconstituted water (40 - 48 mg/l CaCO<sub>3</sub>).  
 QA/QC Batch No.: RT-081001.

Source: In-Lab Culture.  
 Regulations: CCR Title 22.  
 Test Protocol: California F&G/DHS 1988.  
 Endpoints: Survival at 96 hrs.  
 Test type: Static.  
 Feeding: None.  
 Number of fish per chamber: 10.  
 Photoperiod: 16/8 hrs light/dark.

**TEST DATA**

	INITIAL				24 Hr				48 Hr				72 Hr				96 Hr			
Date/Time:	<u>11-18-08 1020</u>				<u>10-19-08 1100</u>				<u>11-20-08 0430</u>				<u>11-21-08 1030</u>				<u>11-22-08 1100</u>			
Analyst:	<u>Rm</u>				<u>J</u>				<u>Rm</u>				<u>Rm</u>				<u>Rm</u>			
	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D	°C	DO	pH	# D
Control A	20.0	8.5	7.2	0	20.4	8.5	7.3	0	20.7	8.5	7.2	0	20.4	8.5	7.0	0	20.5	8.4	7.0	0
Control B	19.9	8.4	7.2	0	20.3	7.9	7.1	0	20.4	8.6	7.2	0	20.3	8.3	7.0	0	20.4	8.6	7.0	0
400 mg/l A	20.0	8.5	7.2	0	20.7	8.6	7.4	0	20.2	8.5	7.2	0	20.4	8.6	7.1	0	20.5	8.8	7.1	0
400 mg/l B	19.9	8.4	7.2	0	20.2	8.6	7.2	0	20.2	8.4	7.2	0	20.3	8.7	7.1	0	20.4	8.8	7.1	0
750 mg/l A	19.9	8.5	7.3	0	20.2	8.6	7.1	0	20.4	8.4	7.2	0	20.3	8.8	7.1	0	20.4	8.6	7.1	0
750 mg/l B	19.8	8.4	7.3	0	20.1	8.8	7.2	0	20.3	8.4	7.2	0	20.2	8.8	7.1	0	20.3	8.9	7.1	0

Comments: Extraction method: Mechanical shaking —  
 None (aqueous solution) X  
 Dissolved Oxygen (DO) readings in mg/l O<sub>2</sub>.

	CONTROL		HIGH CONCENTRATION		Total Number Dead	
	Alkalinity	Hardness	Alkalinity	Hardness	Control	400 mg/l
Initial	<u>30</u> mg/l CaCO <sub>3</sub>	<u>45</u> mg/l CaCO <sub>3</sub>	<u>30</u> mg/l CaCO <sub>3</sub>	<u>46</u> mg/l CaCO <sub>3</sub>	0	120
Final	<u>31</u> mg/l CaCO <sub>3</sub>	<u>46</u> mg/l CaCO <sub>3</sub>	<u>30</u> mg/l CaCO <sub>3</sub>	<u>46</u> mg/l CaCO <sub>3</sub>	0	120

**RESULTS**

(the checked result applies based on fish survival rates)

<u>X</u>	<b>PASSED</b>	LC50 > 750 mg/l (<40% dead in 750 mg/l conc.)
<u>—</u>	<b>FAILED</b>	≥40% dead in 750 mg/l (close to passing - definitive test recommended)
<u>—</u>	<b>FAILED</b>	LC50 < 400 mg/l (>60% dead in 400 mg/l conc.)

SUBCONTRACT ORDER

BC Laboratories

0813669

SENDING LABORATORY:

BC Laboratories  
4100 Atlas Ct  
Bakersfield, CA 93308  
Phone: 661-327-4911  
Fax: 661-327-1918  
Project Manager: Molly Meyers

RECEIVING LABORATORY:

Aquatic Testing Laboratory SAQTCT  
4350 Transport St. #107  
Ventura, CA 93003  
Phone :805-650-0546  
Fax: (805) 650-0756

Analysis	Due	Expires	Laboratory ID	Comments
Sample ID: 0813669-01 <i>e</i> Water		Sampled: 10/14/08 12:15	[REDACTED]	
oiw Fish Tox Haz Waste AQTC	10/28/08 17:00	10/13/09 12:15		
Containers Supplied:				(1) p/pe

Released By: *Christina Mout* Date: 10-16-08 1630 Received By: *JALM* Date: 10-17-08 1000

Released By: \_\_\_\_\_ Date: \_\_\_\_\_ Received By: \_\_\_\_\_ Date: \_\_\_\_\_



LABORATORIES, INC.

November 4, 2008

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

Attached are the results from Zalco Laboratories, Inc.

<u>BCL Sample ID</u>	<u>Client Sample ID</u>	<u>Sample Date/Time</u>
0813669-01	WD-3	10/14/08 12:15





ZALCO LABORATORIES, INC.  
Analytical & Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308

(661) 395-0539  
FAX (661) 395-3069

Tuesday, October 21, 2008

Molly Meyers  
BC Laboratories Inc  
4100 Atlas Court  
Bakersfield, CA 93308

TEL: (661) 327-4911  
FAX (661) 327-1918

RE: 0813669

Order No.: 0810241

Dear Molly Meyers:

Zalco Laboratories, Inc. received 1 sample(s) on 10/17/2008 for the analyses presented in the following report.

We appreciate your business and look forward to serving you in the future. Please feel free to call our office if you have any questions regarding these test results.

Sincerely,

A handwritten signature in black ink, appearing to read "Kevin S. V.", is written over a horizontal line. The signature is stylized and includes a large, looping flourish at the end.

Authorized Signature  
Zalco Laboratories, Inc  
(661) 395-0539

**ZALCO LABORATORIES, INC.**

Analytical and Consulting Services

4309 Armour Avenue  
Bakersfield, California 93308(661) 395-0539  
FAX (661) 395-3069**CLIENT:** BC Laboratories Inc  
**Lab Order:** 0810241  
**Project:** 0813669  
**Client Sample ID:** 0813669-01**Report Date:** 10/21/2008  
**Lab ID:** 0810241-001A  
**Collection Date:** 10/14/2008 12:15:00 PM  
**Matrix:** AQUEOUS**Report Comment:**

Analyses	Method	Result	Units	Date Analyzed	Qual.
<b>FLASH, P. MARTIN CLOSED CUP, ASTM D93 (EPA 1010)</b>					
Flesh Point	SW1010	> 200	°F	10/21/2008	

**Qualifiers /  
Abbreviations:**ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
B - Analyte detected in the associated Method Blank  
\* - Value exceeds Maximum Contaminant Level  
H - Hold Time ExceededS - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
E - Value above quantitation range  
DLR: Detection Limit for Reporting  
NSS - Non-Sufficient Sample Amount

SUBCONTRACT ORDER

BC Laboratories

0813669

SENDING LABORATORY:

BC Laboratories  
4100 Atlas Ct  
Bakersfield, CA 93308  
Phone: 661-327-4911  
Fax: 661-327-1918  
Project Manager: Molly Meyers

RECEIVING LABORATORY:

Zalco Laboratories \$ZLCLB  
4309 Armour  
Bakersfield, CA 93308  
Phone :395-0539  
Fax: 395-3069

0810241

Analysis Due Expires Laboratory ID Comments

Sample ID: 0813669-01 <sup>08/24</sup> ~~10/14/08~~ Water ~~10/14/08 12:15~~ [Redacted]

oil1010w Flash Point ZLCLB 10/28/08 17:00 10/19/08 12:15

Containers Supplied: ① ② Amber 12.1

Released By: *[Signature]* Date: 10-17-08  
Received By: *[Signature]* Date: 10-17-08 09:33  
Released By: *[Signature]* Date: 10-17-08  
Received By: *[Signature]* Date: 10/18 10:05