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Sacramento, California 95818

**RECEIVED**

By loprojectop at 11:38 am, May 18, 2006

April 28, 2006

Mr. Don Hwang  
Alameda County Health Agency  
1131 Harbor Bay Parkway  
Alameda, California 94502

Re: **Report Transmittal  
Quarterly Summary Report – First Quarter 2006  
76 Service Station #1156  
4276 MacArthur Blvd  
Oakland, CA**

Dear Mr. Hwang:

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

If you have any questions or need additional information, please contact

Shelby S. Lathrop (Contractor)  
ConocoPhillips  
Risk Management & Remediation  
76 Broadway  
Sacramento, CA 95818  
Phone: 916-558-7609  
Fax: 916-558-7639

Sincerely,

Thomas Kosel  
Risk Management & Remediation

Attachment



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**RECEIVED**  
By lopprojectop at 11:38 am, May 18, 2006

May 16, 2006

Mr. Donald Hwang  
Alameda County Department of Public Health  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**Re: Quarterly Summary Report – First Quarter 2006**  
Delta Project No. C101156011

Dear Mr. Hwang:

On behalf of ConocoPhillips (COP), Delta Environmental Consultants, Inc. (Delta) is forwarding the quarterly summary report for the following location:

Service Station

Location

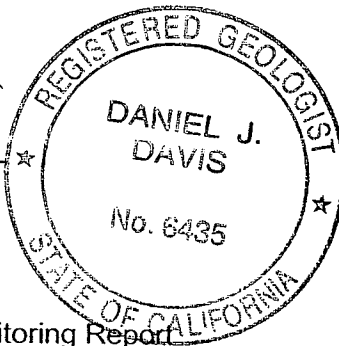
76 Service Station No. 1156

4276 MacArthur Boulevard.  
Oakland, California

Sincerely,  
**Delta Environmental Consultants, Inc.**

Ben Wright  
Staff Geologist

Daniel J. Davis, R.G.  
Senior Project Manager



Forward: TRC - Quarterly Monitoring Report

cc: Ms. Shelby Lathrop, ConocoPhillips (electronic copy)  
Mr. Bob Hale, Alameda County Public Works Agency, Water Resources Section,  
951 Turner Court, Suite 300, Hayward, CA 9454



## QUARTERLY SUMMARY REPORT

First Quarter 2006

76 Service Station No. 1156

4276 MacArthur Blvd.

Oakland, California

### PREVIOUS ASSESSMENT

The site is located at the northeast corner of MacArthur Boulevard and High Street in Oakland, California. Two 12,000-gallon gasoline underground storage tanks (USTs) are present in the southwestern portion of the site and two dispenser islands are present on the site, one to the northwest and one to the east of the USTs. A station building is present in the northern portion of the site. There are currently seven groundwater monitoring wells (MW-1 through MW-7) and one tank backfill well (TP-1) located at and in the vicinity of the site. Properties in the immediate vicinity of the site are utilized for commercial and residential purposes.

In 1997, Pacific Environmental Group Inc. (PEG) advanced 5 soil/gas probes in the vicinity of the USTs, dispenser islands, and product lines to depths ranging from 3 to 15 feet below ground surface (bgs). Elevated soil vapor concentrations of TPH-G, benzene, and MTBE were detected up to 4,700, 70, and 140 micrograms per liter ( $\mu\text{g/l}$ ), respectively. In 1998, Tosco Marketing Company (Tosco, now ConocoPhillips) removed one 280-gallon used-oil UST, and removed and replaced two 10,000-gallon gasoline USTs and associated piping and dispensers. The new USTs were installed in a separate excavation. TPH as diesel (TPH-D), TPH-G, benzene, and total recoverable petroleum hydrocarbons (TRPH) were detected in the soil sample from the used-oil UST excavation at concentrations of 78,000, 130, 0.55, and 8,400 milligrams per kilogram (mg/kg), respectively. Following the over-excavation of approximately 4.6 tons of soil from the used-oil UST excavation, concentrations of TPH-D, TPH-G, benzene, and TRPH were detected in soil samples collected from the used-oil UST excavation at concentrations up to 560, 81, 0.64, and 360 mg/kg, respectively. TPH-G and benzene were detected in the soil samples from the gasoline UST excavation, dispenser islands, and product lines at concentrations up to 1,200 and 1.6 mg/kg, respectively. A groundwater sample collected from the gasoline UST excavation was reported to contain TPH-G and MTBE at concentrations of 41,000 and 1,800  $\mu\text{g/l}$ , respectively. Benzene was not detected in the groundwater sample at or above the laboratory detection limit.

In 1999, Environmental Resolutions Inc. (ERI) conducted a soil and groundwater assessment which included the installation of four on-site groundwater monitoring wells (MW-1 through MW-4). Soil samples collected from the borings at a depth of 10.5 feet bgs were reported to contain TPH-G, benzene, and MTBE at concentrations up to 6,800, 2.6, and 0.71 mg/kg, respectively. The soil sample from MW-1, near the former used-oil UST, was additionally analyzed for TPH-D and TRPH, which were detected at concentrations of 140 and 73 mg/kg, respectively. A deep sample (20.5 feet bgs) collected from MW-4 did not contain TPH-G, benzene, or MTBE at or above the laboratory detection limit. Quarterly groundwater monitoring and sampling commenced July 1999 and is currently ongoing.

In July 2001, ERI installed a UST pit backfill well (TP-1) and initiated monthly purging of groundwater from the UST excavation. Bi-weekly groundwater purging was conducted at the site on wells TP-1 and MW-1 from July 2001 through December 2004. In addition, during

June 2004, the biweekly purging events included monitor well MW-7. Approximately 1,600 gallons were removed from well MW-7 with a cumulative total of approximately 476,000 gallons removed from the site through December 2004.

In August 2001, ERI installed three offsite monitor wells (MW-5 through MW-7). TPH-G and MTBE were not detected in the soil samples from the well borings. Benzene was detected in one soil sample (MW-7) at a concentration of 0.18 mg/kg.

ATC Associates became the new lead consultant for the site in January 2005. A work plan was submitted on May 24, 2005 for on-site and off-site subsurface evaluation.

Delta Environmental Consultants, Inc. became the new consultant for the site in September 2005.

### **SENSITIVE RECEPTORS**

2001 – A GeoTracker database search was conducted which revealed four public water supply wells owned by the East Bay Regional Park District (Park District), within a one-half mile radius of the site. Representatives from the Park District reported having no knowledge or records of any wells located in this area and indicated that the wells may have belonged to the East Bay Municipal Utility District (EBMUD); however, EBMUD was also reported to have no knowledge or records of any wells located in this area.

2001 – A Department of Water Resources (DWR) database search was conducted which revealed four water supply wells belonging to Mills College within the search area. A representative from Mills College indicated that all wells associated with Mills College had been destroyed approximately ten years ago (1991) and that Mills College was now connected to a municipal water supply. The DRW search also revealed a well located at 3397 Arkansas Street, approximately 880 feet outside of the search radius. No other wells, surface water bodies, or potentially sensitive environmental habitats were identified during ERI's field receptor search.

### **MONITORING AND SAMPLING**

The monitor well network is currently sampled on a quarterly basis. During the most recent groundwater monitoring event, conducted on January 27, 2006, depths to groundwater ranged from 1.32 feet (MW-6) to 5.82 feet (MW-7) below top of casing (TOC). The groundwater flow direction was west at a gradient of 0.07 foot per foot (ft/ft), consistent with historic events.

Maximum detectable hydrocarbon concentrations in groundwater samples collected during the January 2006 monitoring and sample event were as follows: TPH-G (94,000 µg/l in MW-1), TPH-D (9,000 µg/l in MW-1), benzene (7,400 µg/l in MW-1), and MTBE (7,900 µg/l in MW-7). The concentrations detected during the first quarter 2006 are consistent with the concentrations observed over the previous three quarters.

## REMEDIATION STATUS

No active remediation is presently ongoing at this site.

Approximately 1,350 tons of soil and backfill were removed during the 1998 UST removal. As of December 23, 2004, approximately 476,015 gallons of groundwater have been extracted from the site during bi-weekly groundwater extraction from wells MW-1, MW-7, and TP-1. The groundwater extraction program was discontinued in January 2005.

## CHARACTERIZATION STATUS

Hydrocarbons in soil and groundwater are not delineated and additional site assessment is required to define the extent of contamination; a sensitive receptor survey would be included as part of the assessment in support of evaluating environmental risk from the site. In addition, a former Shell service station located downgradient of the site currently has elevated petroleum hydrocarbons present in groundwater as evidenced in samples collected from onsite monitor wells (38,500 µg/l TPPH, 6,520 µg/l benzene, 1,940 µg/l MTBE in groundwater samples from Shell monitor well MW-3). A new remediation methodology and program are recommended to be developed for the site to address the petroleum hydrocarbon concentrations (up to 94,000 µg/l TPH-G, 7,400 µg/l benzene, and 7,900 µg/l MTBE) in groundwater at and in the downgradient vicinity of the site.

## RECENT CORRESPONDENCE

No recent correspondence was documented during this reporting period.

## THIS QUARTER ACTIVITIES (First Quarter 2006)

1. TRC conducted the quarterly monitoring and sampling event at the site.
2. Delta prepared a site conceptual model (SCM) for the site.

## WASTE DISPOSAL SUMMARY

No waste was generated this quarter.

## NEXT QUARTER ACTIVITIES (Second Quarter 2006)

1. TRC will conduct the quarterly groundwater monitoring and sampling event at the site.
2. Delta will submit a SCM for the site and develop a work plan for upgradient characterization and an appropriate approach to further site remediation.

**CONSULTANT:** Delta Environmental Consultants, Inc.