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Sacramento, California 95818

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2:26 pm, Jul 31, 2009

Alameda County
Environmental Health

July 27, 2009

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

Re: **Report Transmittal**
Quarterly Summary Report – Second Quarter 2009
76 Service Station #6277
15803 East 14th Street
San Leandro, California
Fuel Leak Case No. RO00002969

Dear Ms. Jakub:

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

If you have any questions or need additional information, please call:

Ted Moise (Contractor)
ConocoPhillips
Risk Management & Remediation
76 Broadway
Sacramento, CA 95818

Phone: (510) 245-5162
Fax: (918) 662-4480

Sincerely,

Eric G. Hetrick
Site Manager
Risk Management & Remediation

Attachment

July 28, 2009

Mr. Barbara Jakub
Hazardous Materials Specialist
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502

Re: Quarterly Summary Report – Second Quarter 2009
76 Service Station No. 6277
15803 East 14th Street
San Leandro, CA 94578
Fuel Leak Case No. R000002969



Dear Ms. Jakub:

On behalf of ConocoPhillips Company (ConocoPhillips), Delta Consultants (Delta) has prepared this quarterly summary report for the above referenced facility.

Please contact Tony Perini at (408) 826-1867 if you have questions.

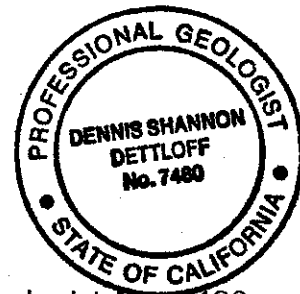
Sincerely,
Delta Consultants

Handwritten signature of Jonathan Fillingame in cursive.

Jonathan Fillingame
Staff Geologist

Handwritten signature of Dennis Dettloff in cursive.

Dennis Dettloff, P.G.
Senior Project Manager
California Registered Professional Geologist No. 7480



cc: Ted Moise, ConocoPhillips (electronic copy only)

QUARTERLY SUMMARY REPORT Second Quarter 2009

76 Service Station No. 6277
15803 East 14th Street
San Leandro, CA 94578

SITE DESCRIPTION

The site is located on the west corner of the intersection of East 14th Street and 159th Avenue in San Leandro California, and is currently an active 76 service station with two fuel dispenser islands and a station building with two service bays. The site is located in a mixed commercial and residential area.

PREVIOUS SITE ACTIVITY

1969 - Reported site history indicates the site was first developed as a gas station from an empty lot in 1969.

1989 - Two 10,000-gallon gasoline underground storage tanks (USTs), one 550-gallon waste oil UST, and the product piping were removed from the site in March of 1989 during UST replacement activities. Kaprealian Engineering Inc. (KEI) work at the site began on March 6, 1989, when KEI was retained by Unocal to advance two exploratory borings designated as SB-1 and SB-2. The borings were advanced at the request of Alameda County. The borings were advanced in order to evaluate the possible presence of petroleum hydrocarbon impacted soil in the vicinity of the excavation for the proposed new USTs. The borings were advanced to depths of 10.5 and 13.5 feet below ground surface (bgs). Ground water was encountered in the borings at depths of 11 to 12 feet bgs.

The soil samples collected from the exploratory borings SB-1 and SB-2 were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and benzene, toluene, ethylbenzene and total xylenes, (BTEX). The analytical results from the soil samples collected at a depth of 5 feet bgs in the two borings indicated that TPHg was present at concentrations up to 2.1 parts per million (ppm).

The analytical results from the soil samples collected at a depth of 10 feet bgs indicated TPHg was present ranging from 200 ppm to 620 ppm. Based on results of this preliminary investigation, KEI recommended that the contractor excavate the existing UST excavation to a depth of approximately 13 feet bgs. KEI returned to the site on March 13, 1989. Water was encountered in the UST excavation at a depth of approximately 11 feet bgs, thus prohibiting the collection of any soil samples from immediately beneath the USTs. Six soil samples, labeled SW1 through SW6, were collected from the sidewalls of the fuel UST excavation at depths of approximately 1 foot above the water table, and one soil sample, labeled W01, was collected from beneath the waste oil UST at a depth of approximately 10 feet bgs. Based on observations in the field, it was decided to excavate additional soil from three of the four UST excavation sidewalls.

On March 14, 1989, four trenches were excavated to evaluate the limits of additional soil excavation needed. Four soil samples were then collected at depths of approximately 10 feet bgs. The analytical results from the soil samples collected from the fuel UST excavation indicated TPHg was present at concentrations ranging from 24 ppm to 150 ppm. A sample collected adjacent to the existing building indicated TPHg was present in the soil at a concentration of 3,500 ppm. However, the sample collected after excavating 2 feet of sidewall toward the building, indicated TPHg was present at a concentration of 100 ppm. One soil sample (SW2) indicated TPHg was present at a concentration of 390 ppm. The analytical results from the soil samples collected from the waste oil UST excavation indicated that total oil and grease (TOG) were present at concentrations of 280 and 41 ppm.

The analytical results from the groundwater sample (W1) collected from the old fuel UST excavation indicated that TPHg and benzene were present at concentrations of 19,000 parts per billion (ppb) and 230 ppb, respectively.

On March 23, 1989, KEI returned to the site for pipe trench soil sampling. Six soil samples, labeled P1, P2, P3, P4, P5, and P6, were collected from beneath the product lines at depths of approximately 3 to 3.5 feet bgs. The analytical results from the soil samples P1 through P6 collected from the pipe trenches indicated TPHg was present in the soil ranging from 1.1 ppm to 6.8 ppm.

The fuel UST excavation and the waste oil UST excavation were over-excavated in order to remove hydrocarbon-impacted soil. The majority of the hydrocarbon-impacted soil appeared to have been removed from the site, except for the capillary fringe in the vicinity of the former UST excavation and the building.

On May 24, 1989, four two-inch diameter monitoring wells (MW-1 through MW-4) were installed at the site. The four monitoring wells were installed to total depths ranging from 24.5 to 25 feet bgs. Groundwater was encountered at depths ranging from approximately 11 to 12 feet bgs during installation.

The monitoring and sampling program was initiated in July of 1989, and monitoring wells MW-1 through MW-4 and two additional monitoring wells (MW-5 and MW-6) installed on March 9, 1993 were monitored monthly and sampled on a quarterly basis until 1996. Groundwater flow has predominantly ranged from the southwest to the north during the course of the investigation. Chlorinated solvents have consistently been reported in the up-gradient monitoring wells MW-3 and MW-4, and it appears that the chlorinated solvent impact at the Tosco site may be due to an unidentified source (or sources) located up-gradient of the subject site, or is part of a regional chlorinated solvent contaminant plume. The perimeter monitoring wells have historically shown relatively low to non-detectable concentrations of TPHg and BTEX.

On February 1, 1990, monitoring well MW-2 was destroyed in preparation for additional soil excavation in the vicinity of this monitoring well. Soil was excavated to a depth corresponding to approximately 6 to 12 inches below the level of the ground water, which was encountered at a depth of about 11.5 feet bgs. After additional excavation, four soil samples were collected from the sidewalls of the excavation, each approximately 6 to 12 inches above ground water. Soil excavation activities were terminated due to the close proximity of the former and new UST excavations and the property line of the site. The analytical results from three soil samples collected

indicated TPHg was present at concentrations ranging from 140 ppm to 1,100 ppm, while concentrations of TPH as diesel (TPHd) ranged from below the laboratory's indicated reporting limits to 280 ppm. The analytical results also indicated that Environmental Protection Agency (EPA) Method 8010 constituents and TOG for all four samples were below the laboratory's indicated reporting limits, except for one sample which indicated that TOG was present at a concentration of 210 ppm. Soil excavation in the vicinity of monitoring well MW-2 was completed in April of 1990. Monitoring well MW-2 was then replaced with a new monitoring well (MW-2A) in March 1991.

1997 - Water samples collected from monitoring well MW-1 continued to indicate the highest concentrations of petroleum hydrocarbons throughout the duration of the investigation. Monitoring well MW-1 is the most down-gradient of the monitoring wells at the site. An off-site study was conducted in March 1997 to assess any impacts in the down-gradient direction.

Three Geoprobe® borings (EB-3, -4, and -5) were advanced through East 14th Street in a northerly transect from the site. The three borings were advanced to total depths ranging from 11 to 15 feet bgs. Ground water was encountered at depths ranging from 10.5 to 15 feet bgs during drilling. All target compounds were below the laboratory's indicated reporting limits in the soil or ground water samples collected during this investigation.

1998 - A "Case Closure Summary" was prepared by the Alameda County Environmental Protection Department. This document concluded that drinking water wells are not affected. It also documented the maximum contaminant concentrations - before and after cleanup as follows:

Contaminant	Soil (ppm)		Water (ppb)		
	Before	After	Before	After	
TPHg	3500	1100	19000	510	
TPHd	ND	6.2	NA	NA	
Benzene	40	8	230	72	
Toluene	280	43	79	ND	
Total Xylenes	600	230	1300	17	
Ethyl-benzene	100	37	ND	ND	
MTBE	NA	NA	NA	390	
Oil & Grease	7700	1300	NA	NA	
Heavy Metals	NA	NA	NA	NA	
Other HVOC TCE	0.063	ND	TCE	4.4	ND
			PCE	110	950
			1,2-DCA	2.8	ND

The "Case Closure Summary" concluded that "there are no known municipal or residential water wells or surface water bodies within 750 feet down-gradient of the site that would be impacted by shallow groundwater from this site".

December 26, 2000 - Alameda County Health Care Services Agency (ACHCSA) issued a "Case Closure" letter.

2003 – Six groundwater monitoring wells were destroyed. Groundwater was at 6 to 11 feet bgs.

2007- On September 25 and 26, 2007, six soil borings (ATC-1, ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6) were advanced in the vicinity of the existing fuel and waste oil USTs and dispensers. The borings were advanced to total depths of approximately 20 feet bgs (ATC-2, ATC-3, ATC-4, and ATC-5) and 25 feet bgs (ATC-1 and ATC-6). Groundwater was initially encountered at depths ranging from 14 feet bgs to 24 feet bgs during drilling activities.

Groundwater samples were collected from borings ATC-1, ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6 after each boring was advanced approximately one to seven feet into groundwater. A duplicate groundwater sample designated as "Duplicate B-1" was collected from boring ATC-1.

The lithology underlying the site generally consists of clay, silty clay and sandy clay from the ground surface to approximately 25 feet bgs, the maximum extent of exploration. Photo ionization detector (PID) readings from the screened soil samples ranged from 1.4 ppm to 2,272 ppm.

Laboratory analytical results for the **soil samples** selected for analysis indicate the following:

- Toluene was reported at a concentration of 1.2 milligrams per kilogram (mg/kg) in the soil sample collected at approximately five feet bgs from boring ATC-5.
- Ethylbenzene was report at concentrations of 0.016 mg/kg, 8.8 mg/kg, 0.82 mg/kg, 11 mg/kg, and 6.2 mg/kg in the soil samples collected at approximately 12 feet bgs from borings ATC-1, ATC-2 and ATC-3 and five feet bgs from borings ATC-4 and ATC-5, respectively.
- Total xylenes were reported at concentrations of 0.029 mg/kg, 48 mg/kg, 2.93 mg/kg, 43 mg/kg, 25.2 mg/kg and 0.007 mg/kg in the soil samples collected at approximately 12 feet bgs from borings ATC-1, ATC-2 and ATC-3, five feet bgs from borings ATC-4 and ATC-5, and 20 feet bgs from boring ATC-5, respectively.
- Tetrachloroethene (PCE) was reported at concentrations of 0.013 mg/kg and 0.033 mg/kg in the soil samples collected at approximately 20 feet bgs from borings ATC-4 and ATC-5, respectively.
- Methyl tertiary-butyl ether (MTBE) was reported at concentrations of 0.024 mg/kg, 0.83 mg/kg, 0.011 mg/kg, and 0.015 mg/kg in the soil samples collected at approximately 12 feet bgs from borings ATC-1 and ATC-2 and 20 feet bgs from borings ATC-2 and ATC-4, respectively.
- Tertiary-Butyl alcohol (TBA) was reported at a concentration of 0.19 mg/kg in the soil sample collected at approximately 12 feet bgs from boring ATC-1.
- Semi-volatile organic compounds (SVOCs) were also present in the soil samples collected during this investigation.

- TPHg was reported at concentrations of 100 mg/kg, 560 mg/kg, 27 mg/kg, 59 mg/kg, 1,000 mg/kg, and 220 mg/kg in the soil samples collected at 12 feet bgs from borings ATC-1, ATC-2, ATC-3, and ATC-6 and five feet bgs from borings ATC-4 and ATC-5, respectively.
- TPHd was reported at concentrations of 57 mg/kg, 51 mg/kg, 310 mg/kg, 18 mg/kg, and 170 mg/kg in the soil samples collected at 12 feet bgs from borings ATC-1, ATC-2, and ATC-3, 18 feet bgs from boring ATC-3, and five feet bgs from boring ATC-4, respectively.
- Chromium was reported at concentrations of 58.2 mg/kg and 44.8 mg/kg in the soil samples collected at approximately 12 and 15 feet bgs from boring ATC-6, respectively.
- Lead was reported in each of the soil samples submitted for analysis. Nickel was reported at concentrations of 57.8 mg/kg and 45.5 mg/kg in the soil samples collected at approximately 12 and 15 feet bgs from boring ATC-6, respectively.
- Zinc was reported at concentrations of 52.9 mg/kg and 42.2 mg/kg in the soil samples collected at approximately 12 and 15 feet bgs from boring ATC-6, respectively.

Laboratory analytical results for the **groundwater samples** collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6 indicated the following:

- Benzene was reported at concentrations of 39 micrograms per liter ($\mu\text{g/L}$), 60 $\mu\text{g/L}$ and 33 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-2, ATC-4, and ATC-5, respectively.
- Toluene was reported at concentrations of 120 $\mu\text{g/L}$ and 64 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-4 and ATC-5, respectively.
- Ethyl-benzene was reported at concentrations of 27 $\mu\text{g/L}$, 160 $\mu\text{g/L}$, 300 $\mu\text{g/L}$, and 110 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-2, ATC-3, ATC-4, and ATC-5, respectively.
- Total xylenes were reported at concentrations of 7 $\mu\text{g/L}$, 12 $\mu\text{g/L}$, 117 $\mu\text{g/L}$, 630 $\mu\text{g/L}$, 1,040 $\mu\text{g/L}$, and 400 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, and ATC-5, respectively.
- Trichloroethylene (TCE) was reported at concentrations of 12 $\mu\text{g/L}$, 11 $\mu\text{g/L}$, 15 $\mu\text{g/L}$, 9 $\mu\text{g/L}$, 14 $\mu\text{g/L}$, 16 $\mu\text{g/L}$, and 12 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6, respectively.
- PCE was reported at concentrations of 100 $\mu\text{g/L}$, 96 $\mu\text{g/L}$, 100 $\mu\text{g/L}$, 29 $\mu\text{g/L}$, 230 $\mu\text{g/L}$, 240 $\mu\text{g/L}$, and 100 $\mu\text{g/L}$ in the groundwater samples collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6, respectively.
- cis-1,2-dichloroethene was reported at a concentration of 8 $\mu\text{g/L}$ in the groundwater sample collected from boring ATC-2.

- MTBE was reported at concentrations of 7 µg/L, 13 µg/L, 210 µg/L, 37 µg/L, and 6 µg/L in the groundwater samples collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-4, and ATC-5, respectively.
- Phenanthrene was reported at a concentration of 5 µg/L in the groundwater sample collected from boring ATC-6.
- Total TPH was reported at a concentration of 2,500 µg/L in the groundwater sample collected from boring ATC-6.
- TPHg was reported at concentrations of 140 µg/L, 140 µg/L, 860 µg/L, 3,700 µg/L, 6,400 µg/L, 2,500 µg/L, and 93 µg/L in the groundwater samples collected from borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6, respectively.
- TPHd was reported at concentrations of 15,000 µg /L, 1,100 µg /L, 5,200 µg /L, 8,100 µg /L, 1,900 µg /L, 810 µg /L, and 910 µg /L in the groundwater samples collected from 1 borings ATC-1 (including Duplicate B-1), ATC-2, ATC-3, ATC-4, ATC-5, and ATC-6, respectively.
- TPH-ORO was reported at a concentration of 1,600 µg/L in the groundwater sample collected from boring ATC-6.

AGENCY RECEPTOR SURVEY

The agency receptor survey was completed to identify all water supply wells within a half-mile radius of the site. The survey entailed a request to the California Department of Water Resources (DWR) office in Sacramento to provide well log records. Using the DWR well logs, a total of 5 wells had verifiable addresses within a half-mile radius of the site.

GROUNDWATER MONITORING AND SAMPLING

No groundwater monitor wells are present at the site.

REMEDIATION STATUS

Remediation is not currently required at this location by the lead regulatory agency for the site.

CHARACTERIZATION STATUS

As indicated above, in 2007, groundwater was encountered at depths ranging from 14 feet bgs to 24 feet bgs during drilling activities. Delta proposes to define the vertical and lateral extent of petroleum hydrocarbon impact to the soil and the groundwater by advancing a series of exploratory borings. Based on the September 2007, ATC report TPHd was reported at a maximum concentration of 15,000 µg/L in ATC-1. TPHg and benzene were reported at maximum concentrations of 6,400 µg/L and 60 µg/L, respectively in ATC-4. MTBE was reported at a maximum concentration of 210 µg/L in ATC-2.

RECENT CORRESPONDENCE

No correspondence was sent to or received from the AHCSA during the second quarter 2009.

THIS QUARTER ACTIVITIES (Second Quarter 2009)

1. A Soil and Groundwater Investigation Work Plan Addendum was submitted to the ACHCSA on April 6, 2009 for their consideration. Pending approval of the Work Plan Addendum Delta will complete the proposed work and ask for site closure if appropriate.

NEXT QUARTER ACTIVITIES (Third Quarter 2009)

1. Delta will prepare and submit *Quarterly Summary Report -Third Quarter 2009*

CONSULTANT: Delta Consultants