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RECEIVED
By lopprojectop at 11:20 am, Dec 01, 2005

November 15, 2005

Mr. Don Hwang
Alameda County Environmental Health Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

RE: Groundwater Sampling and Evaluation Work Plan
ConocoPhillips Service Station #6049
898 A Street
Hayward, California

Dear Mr. Hwang:

Delta Environmental Consultants, Inc. (Delta), on behalf of ConocoPhillips (COP), presents this groundwater evaluation work plan for the site referenced above. The work plan was requested in a letter from the Alameda County Environmental Health Services (ACEH) to Mr. Thomas Kosel of COP, dated August 16, 2005, in response to Delta's *Request for Closure*, dated April 16, 2003.

SITE DESCRIPTION

The site is an operating Tosco (76) service station located on the west corner of the intersection of A Street and Mission Boulevard in Hayward, California (Figure 1). The station currently has two 10,000-gallon double-wall gasoline underground storage tanks (USTs), four dispenser islands, and a station building. Locations of pertinent site features are shown on Figure 1.

SITE HISTORY

Two 10,000-gallon steel gasoline USTs and one 550 gallon steel waste oil UST and associated product piping were removed in July 1993. No holes or cracks were observed in the gasoline USTs; however, the waste oil UST contained several holes. Approximately 23 soil samples were collected from the over excavated UST pits and the product piping trenches. Each soil sample was analyzed for total petroleum hydrocarbons as gasoline (TPHg), total petroleum hydrocarbons as diesel (TPHd), and benzene, toluene, ethylbenzene, and xylenes (BTEX). The soil samples collected from the waste oil tank pit were also analyzed for total oil and grease (TOG), halogenated volatile organic (VOCs), and the metals cadmium, chromium, zinc, lead, and nickel. Approximately 400 cubic yards of soil were removed during the gasoline UST excavation.

The soil samples collected during the waste oil UST over excavation were reported as not detected for concentrations of the hydrocarbon constituents analyzed. The initial soil sample collected from the base of the waste oil UST pit (9.25 feet below ground surface (bgs) labeled WO1) contained TPHg at 440 milligrams per kilogram (mg/kg), TPHd at 990 mg/kg, and TOG at 6,700 mg/kg. Based on the analytical results of WO1, the waste UST pit was over excavated to 16 feet bgs and soil sample WO1(16) was collected at the base of the UST pit. Four sidewall samples collected at 12 feet bgs from the waste oil UST contained no detectable concentrations of the constituent analyzed. Soil sample WO1(16) did not contain detectable concentrations of any hydrocarbon constituents analyzed.

During the over excavation associated with the product piping trenches, a steel 200-gallon rectangular tank was discovered. No holes or cracks were evident in the tank and the tank was filled with soil. A soil sample, OT(8.5), collected from the beneath the tank, was analyzed for TPHg, BTEX, and total lead and found to contain 16 mg/kg total lead. No TPHg or BTEX was present in the sample above detection limits. Approximately 200 cubic yards of soil was removed during the excavation of the used oil UST and the unknown UST.

A subsurface investigation was conducted at the site in January 1995 in the vicinity of the former waste oil UST. One soil boring was advanced to 51 bgs as part of a plan to complete three monitor wells at the site. Soil samples were collected from the boring at five foot intervals. Groundwater was not encountered. The soil samples were analyzed for TPHg, TPHd, BTEX, and TOG and each sample was found to be below detection limits for the constituents analyzed.

In September 1995 one confirmation soil sample was collected following removal of a hydraulic lift at the site. The soil sample was collected from approximately 8.5 feet below the hydraulic lift and analyzed for TPHg, TPH as hydraulic oil (TPHho), BTEX, and VOCs. TPHho was detected at 19 mg/kg in the sample and all other analyzed constituents were reported as non-detect. Approximately 3.5 tons of soil was removed during the removal of the hydraulic lift.

Confirmation soil sampling was conducted at the site in December 1998 following removal of a waste oil UST. One soil sample was collected at approximately 9.5 feet bgs and analyzed for TPHg, TPHd, BTEX, oil and grease, VOCs, and the metals cadmium, chromium, lead, nickel, and zinc. Hydrocarbon constituents were not detected in the sample. Approximately 24 tons of soil was excavated from the site during the waste oil UST removal.

Compliance soil sampling was conducted during the removal of one hydraulic hoist cylinder and one oil-water separator in January 1999. One soil sample collected from the bottom of the hydraulic lift overexcavation was analyzed for TPHho. TPHho was not detected in the sample.

GEOLOGY AND HYDROLOGY

The area of the site is underlain by alluvium consisting of weakly consolidated, slightly weathered, poorly sorted, interbedded clay, silt, sand and gravel. Previous investigations indicate that the subject site is underlain by fill material to approximately 11.5 feet bgs. The fill material is underlain by alluvium described as interbedded sequences of silty sand, silt, well graded gravel, and silty clay. This alluvium was observed at the site to the maximum explored depth of 51 feet bgs.

Groundwater has not been encountered at the site up to the maximum depth of 51 feet bgs explored at the site. However, groundwater is present at nearby sites. Approximately 1,250 feet northeast of the subject site the depth to groundwater has been measured at 26 feet bgs.

Similarly, approximately 2,650 feet southwest of the subject site the depth to groundwater has been measured at 43-46 feet bgs.

PROPOSED SCOPE OF WORK

Delta proposes the following investigative activities.

Pre-field Activities

A site-specific health and safety plan will be prepared prior to commencement of field activities. Delta will contact Underground Service Alert (USA) and will subcontract a local utility locating service to search for any subsurface utilities or conduits. In addition, Delta will obtain the appropriate well drilling permits from the appropriate regulatory agency.

Soil Boring

A site map showing the proposed location of each boring is shown in Figure 1.

Depth to groundwater at the subject is not known. Therefore, the proposed boring will be advanced to a total depth that intersects the groundwater table. Based on the measured depths to groundwater at nearby sites it is anticipated that the total depth of the boring will be 30-50 feet bgs. However, the one boring advanced at the site to 51 feet bgs did not encounter groundwater and so it may be necessary to advance the boring deeper than 50 feet bgs to collect a groundwater sample.

Soil samples for lithologic logging and potential chemical analysis will be collected at five-foot intervals from the proposed boring. Selected soil samples will be field screened with a photoionization detector (PID) for the presence of volatile organic compounds. Three to five soil samples will be collected from the boring at the depths that exhibit the highest PID concentrations or at the depths that indicate a significant change in subsurface lithology. Selected soil samples will be analyzed for the presence of TPH-G, BTEX compounds, methyl tertiary butyl ether (MTBE), diisopropyl ether (DIPE), ethyl tertiary butyl ether (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), ethanol, and ethylene dibromide (EDB), and dichloroethane (1,2-DCA).

Vertical Extent of Petroleum Hydrocarbons

Delta is proposing a hollow stem auger drilling rig to investigate the vertical extent of dissolved petroleum hydrocarbons.

The boring will be advanced to the first groundwater encountered. The drilling rods will be removed and a clean disposable bailer will be lowered through the augers for groundwater sample collection. The groundwater sample will be decanted into laboratory prepared 40-milliliter glass bottles and placed on ice for transportation to the laboratory. Groundwater samples will be analyzed for TPH-G, BTEX compounds, MTBE, DIPE, ETBE, TAME, TBA, ethanol, EDB, and 1,2-DCA by EPA Method 8260B.

Following collection of the groundwater sample, the boring will be filled with cement grout.

REPORT

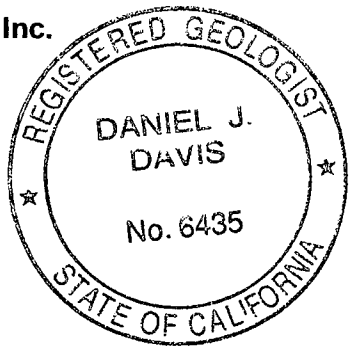
Delta will prepare a report describing groundwater collection activities. The report will contain a map showing the boring location, boring log, and summary tables of soil and groundwater analytical data. Additional borings or drilling of groundwater monitor wells may be recommended based on the results of the soil and groundwater sample analyses. The results of this groundwater investigation may also be incorporated in a site conceptual model in accordance with ACEH requirements.

SCHEDULE

Delta anticipates conducting the drilling and groundwater sampling within 45 days of approval of this work plan. Delta anticipates submittal of a summary report six weeks following completion of field work.

If you have questions, please call me at (916) 503-1260.

Sincerely,
Delta Environmental Consultants, Inc.

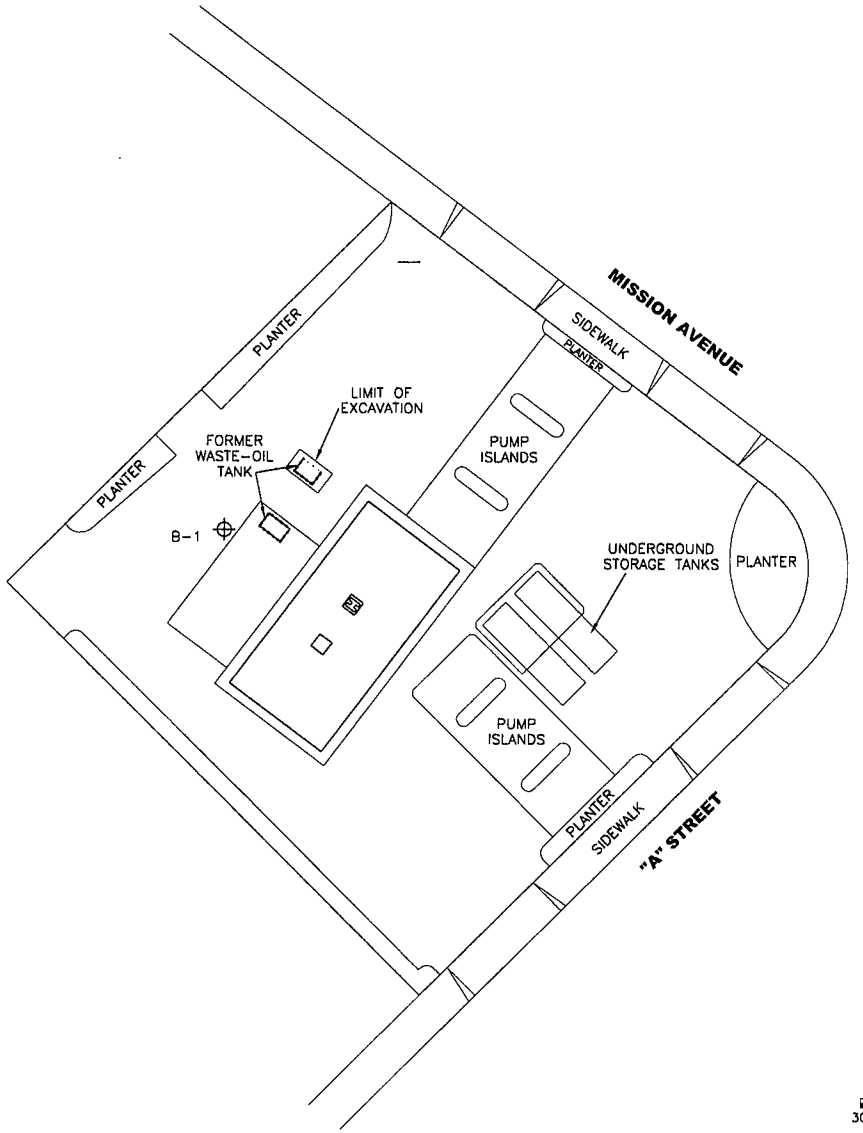


Daniel J. Davis, R.G.
Senior Project Manager

Attachments:

Figure 1 – Site Location Map

cc: Shelby Lathrop, ConocoPhillips, Sacramento



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LEGEND

- SOIL SAMPLE LOCATION
- FORMER HOIST
- FORMER OIL/WATER SEPARATOR
- APPROXIMATE PROPERTY BOUNDARY
- PROPOSED SOIL BORING

Approximate Scale

30 0 30 feet

Subject to Surveyors verificotion

FIGURE 1
SITE PLAN

76 STATION NO. 6049
898 A STREET
HAYWARD, CA

PROJECT NO. C106-049	DRAWN BY MC 11/14/05
FILE NO. 76-6049	PREPARED BY DD
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.