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RECEIVED
By lopprojectop at 4:40 pm, Mar 29, 2006

March 29, 2006

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

Re: Work Plan – Soil Boring Assessment and Groundwater Monitoring Well Sampling
Delta Project No. C106034021
76 Service Station No. 6034
4700 First Street
Livermore, California

Dear Mr. Wickham:

This work plan has been prepared by Delta Environmental Consultants, Inc. (Delta) on behalf of ConocoPhillips Company (COP) for the above referenced site. The proposed scope of work is for assessing site conditions through (1) completion of one soil boring and collection of depth-discrete grab groundwater samples, and (2) collection of groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 in conjunction with the soil and depth-discrete grab groundwater sampling. In addition, analytical data and boring logs for soil borings SB1 through SB-5, completed during baseline site assessment, will be presented as an attachment.

The purpose of drilling the soil boring is to collect and analyze soil samples to delineate the vertical and downgradient extent of contamination at the site. Figure 2 shows site facility details and the location of the proposed soil boring.

SITE DESCRIPTION

The subject site is an active gasoline station. The site is located adjacent to and northeast of an intermittent drainage stream. Two other gasoline stations are located adjacent to the site.

Current aboveground site facilities consist of two dispenser islands, a canopy and a station building, two 12,000-gallon gasoline underground storage tanks (USTs), one waste-oil UST, and three hoists.

SITE BACKGROUND AND ACTIVITY

Two fuel USTs, one waste oil UST, and the product piping were removed from the site in August 1989. Petroleum hydrocarbon concentrations in soil samples collected beneath the fuel USTs were non-detect to moderate. The fuel UST pit was subsequently over excavated to a depth of 17.5 feet below ground surface (bgs), where groundwater was encountered, in order to remove hydrocarbon impacted soil. Petroleum hydrocarbon concentrations in soil samples collected from beneath the waste oil UST were non-detect.

In October 1989, four monitoring wells (MW-1 through MW-4) were installed to depths ranging from 26 to 29 feet bgs. Groundwater was encountered at depths ranging from 14.5 to 17.5 feet bgs.

In April 1991, three additional monitor wells (MW-5 through MW-7) were installed to an average depth of 25 feet bgs. Groundwater was initially encountered at a depth of approximately 16 feet bgs.

In August 1995, an oxygen-releasing compound (magnesium peroxide) was placed in well MW-2 to enhance biodegradation of petroleum hydrocarbons. Also, a non-attainment zone status was sought from the regulatory agencies.

On October 30, 2003, five soil borings (SB-1 though SB-5) were completed to depths of 20 feet bgs. Adsorbed-phase methyl tertiary butyl ether (MTBE) was detected in two of the four soil samples analyzed at concentrations ranging from 0.042 milligrams per kilogram (mg/kg) (SB-5@5') to 0.064 mg/kg (SB-4@5'), which exceed the applicable Tier 1 environmental screening level (ESL) of the San Francisco Bay Regional Water Quality Control Board of 0.023 mg/kg. In addition, MTBE in the groundwater sample collected from SB-3 was detected at 13 micrograms per liter (µg/l), above the applicable ESL of 5.00 µg/l. The final report of this investigation, titled *Baseline Site Assessment Report* and dated December 3, 2003, is presented as an attachment to this work plan and includes the laboratory analytical report and the soil boring logs.

SITE GEOLOGY AND HYDROGEOLOGY

The results of previous subsurface investigations show the subject site is underlain by Quaternary-age alluvium to at least 28.5 feet bgs. The alluvium generally consists of a gravely unit at the surface varying from about 5 to 7 feet thick that is underlain by a clay unit to depths below grade of 11 to 13 feet. A second gravelly unit is recognized beneath the clay unit but varies significantly in thickness from abut 6.5 to 8 feet thick near MW-1 and MW-2 to about 12.5 feet thick in the vicinity of MW-3. The second gravelly unit is underlain by a second clay unit which locally contains sandy and gravelly lenses and extends from depths below grade of about 23.5 to 25 feet and extends to the maximum depth explored (26 to 28.5 feet bgs).

Groundwater was initially encountered at depths of 14 to 15.5 feet bgs during drilling at the site. Historical monitoring data show the static depth to water onsite varies from 13 to 18 feet bgs. Historical groundwater flow direction has been predominantly northwest with an average gradient of 0.01 foot per foot (ft/ft). The nearest surface water to the site is an intermittent drainage system. The system flows to the northwest and takes a sharp turn to the northeast behind the site and then bends toward the northwest again.

PROPOSED SCOPE OF WORK

The proposed scope of work includes the following activities:

- Conduct utility clearance and obtain the appropriate drilling permits;
- Drill one soil boring to approximately 50 feet bgs with the initial five feet cleared by "air-knife" technology or by hand augering;
- Collect soil samples from the borehole for laboratory analysis;
- Collect depth-discrete grab groundwater samples from the borehole;
- Collect groundwater samples from monitoring wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-7 in conjunction with the soil and discrete-grab groundwater sampling;
- Upload analytical laboratory data into the State of California Geotracker System; and
- Prepare a report of findings.

Pre-Field Investigation Activities

A utility survey will be completed prior to conducting the field investigation. Underground Services Alert (USA) will be notified at least 48 hours prior to drilling operations, and the services of a private utility locating company will be utilized to reduce the risk of damage to utilities beneath the property. Additionally, the first five feet of each borehole will be cleared before drilling is begun.

Delta will prepare a site-specific Health and Safety (H&S) plan in accordance Title 8, Section 5192 of the California Code of Regulations. The H&S plan will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility.

A drilling permit will be obtained from the Zone 7 Water Agency.

Soil Boring and Sampling Procedures

The proposed soil boring (Figure 2) will be drilled by a licensed contractor using a cone penetrometer (CPT) rig. A minimum two boreholes will be advanced for the proposed soil boring location. The initial borehole will be drilled to identify water-bearing zones for grab groundwater sampling, provide a CPT log of subsurface lithologies, and collect soil samples for identification and laboratory analysis. A second borehole will be drilled to collect a depth-discrete groundwater sample; additional boreholes may be drilled if more than one depth-discrete groundwater is collected. Soil samples from selected depths will be collected for analysis. Each boring will be backfilled with grout upon completion.

Soil samples will be collected using a direct push piston sampler. A sealed pointed piston will be advanced within the core barrel of the CPT to the desired sample depth. The piston will then be opened and driven to further depth to collect a soil sample at which time the piston assembly will be removed and the soil sample recovered. The sample tube from each interval will be sealed with Teflon tape and plastic end caps and placed in an ice chest cooled with ice for delivery to the analytical laboratory for analysis under chain-of-custody protocol. The remaining soil collected from the sample tubes will be used for field screening and lithologic description purposes. Soil samples from each sample interval will be field screened for the presence of volatile organic compounds (VOCs) using a photoionization detector (PID). It is anticipated that a minimum four soil samples per boring will be collected for laboratory analysis. Additional soil samples will be submitted for analysis if the PID measurements show evidence of substantial contamination. The PID measurements will be

recorded on the soil boring log by the field geologist. Each soil sample will be logged using the Unified Soil Classification System (USCS).

Groundwater samples will be collected using a closed screen sampler. The assembly is driven with the outer tube casing in place. When the desired groundwater sample depth is reached, the outer casing is retracted to expose the screen to groundwater. A small-diameter bailer is then lowered through the drill casing and a groundwater sample collected. The expendable drive point is left in place when the drill casing and sampling assembly are removed.

Each groundwater sample will be placed into an appropriately labeled container, sealed, and placed in an ice chest cooled with ice and transported to a state-certified laboratory for analysis under chain-of-custody protocol.

Groundwater sampling from the monitoring wells requires that each well be purged of three well volumes prior to collection of a groundwater sample. Following purging, a groundwater sample is collected using a clean disposable bailer, transferred to an appropriate labeled container, sealed, stored in an ice chest, and transported to a laboratory for analysis.

Laboratory Analysis

Soil and groundwater samples will be submitted under chain of custody protocol to a California-certified laboratory. The soil and groundwater samples will be analyzed for total petroleum hydrocarbons as gasoline (TPH-G) by United States Environmental Protection Agency (US EPA) Method 8015 and benzene, toluene, ethylbenzene, and xylenes (BTEX), MTBE, di-isopropyl ether (DIPE), ethyl tertiary butyl ether (ETBA), tertiary amyl methyl ether (TAME), and ethanol by EPA Method 8260B. In addition, for waste profiling purposes, one soil sample will be analyzed for total lead by EPA Method 6010.

Waste Disposal

Soil cuttings and purge water generated during this investigation will be temporarily stored onsite in appropriately labeled 55-gallon Department of Transportation (DOT)-approved drums pending disposal arrangements. The soil and water will be transported offsite by a licensed waste hauler once an approved destination for the waste is found.

Report

The findings of the field investigation will be presented in a Subsurface Investigation Report. The contents of the report will include a sample location map, copies of the analytical laboratory data sheets, a soil boring log, and conclusions and recommendations for additional investigation, monitoring, and/or remediation.

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

Sincerely,
Delta Environmental Consultants, Inc.

Ben Wright
Staff Geologist

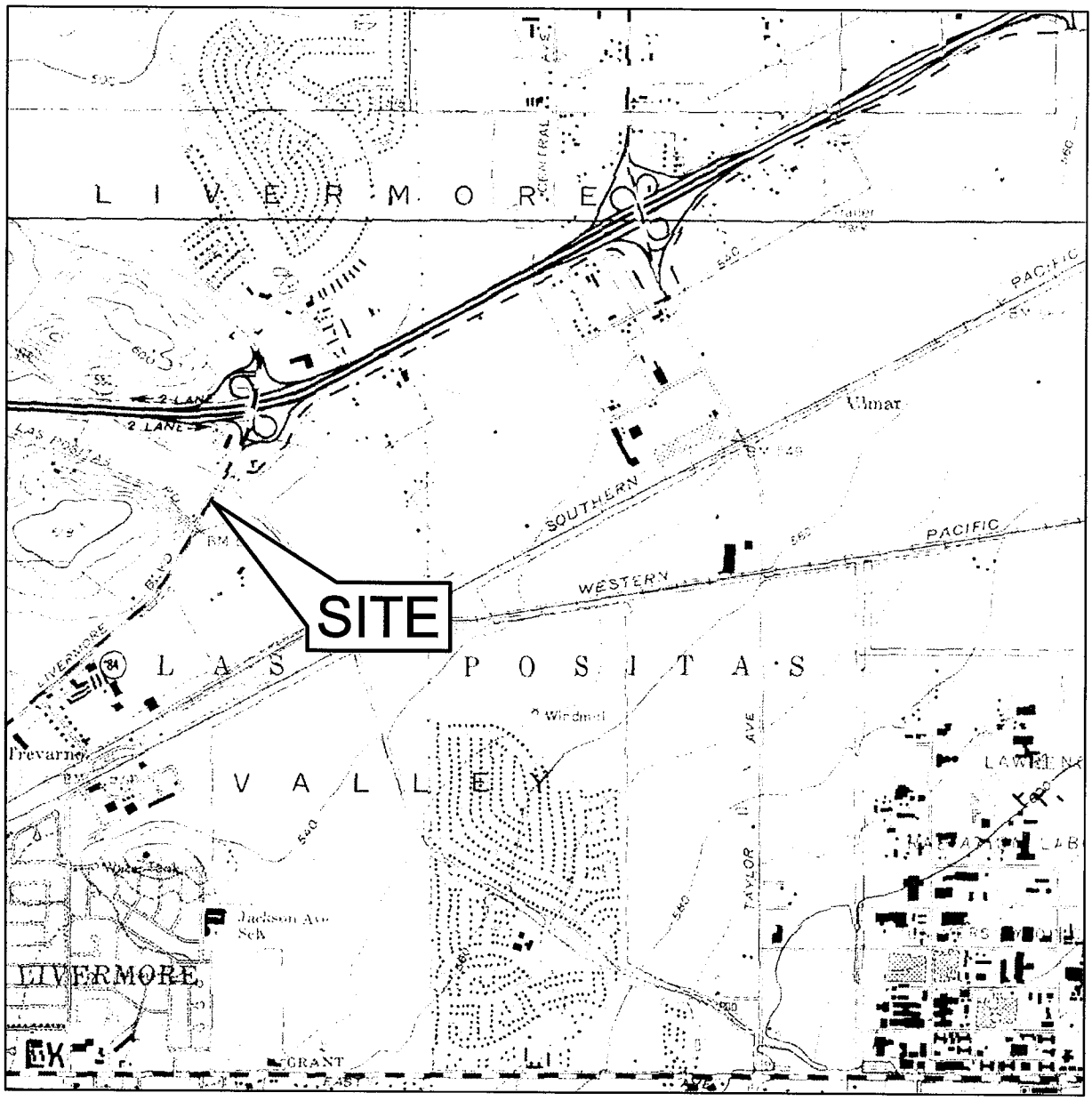
Daniel J. Davis, R.G.
Senior Project Manager

REGISTERED GEOLOGIST
DANIEL J. DAVIS
No. 6435
STATE OF CALIFORNIA

Cc: Shelby Lathrop – ConocoPhillips (electronic copy)

Figures: Figure 1 – Site Vicinity Map
Figure 2 – Site Map with Proposed Monitoring Locations

Attachment: Baseline Site Assessment Report (TRC, December 2003)



North

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, ALTAMONT QUADRANGLE, 1995

FIGURE 1

SITE LOCATION MAP

76 STATION NO. 6034
4700 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C106-034	DRAWN BY MC 3/16/06
FILE NO. Site Locator 4844	PREPARED BY MC
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.

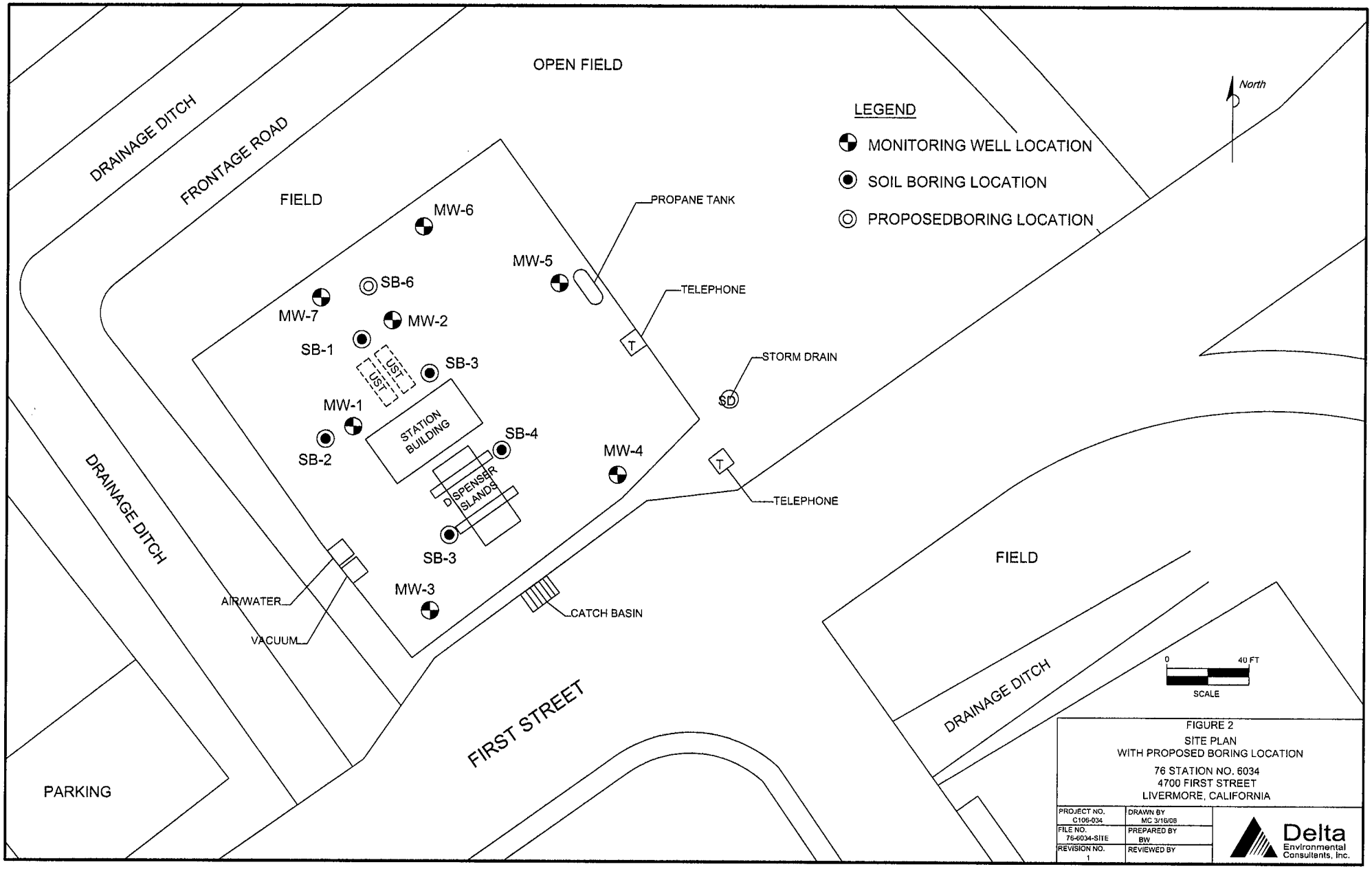


FIGURE 2
SITE PLAN
WITH PROPOSED BORING LOCATION

76 STATION NO. 6034
4700 FIRST STREET
LIVERMORE, CALIFORNIA

PROJECT NO. C106-034	DRAWN BY MC 3/16/08
FILE NO. 76-6034-SITE	PREPARED BY BW
REVISION NO. 1	REVIEWED BY

Delta Environmental Consultants, Inc.