ConocoPhillips
76 Broadway
Sacramento, California 95818

March 1, 2010

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

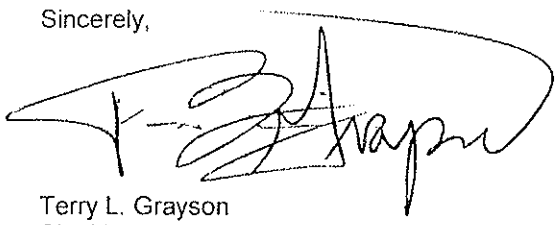
Re: ***Work Plan for Additional Site Assessment***
76 Service Station # 1156
4276 MacAuthur Blvd
Oakland, CA

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,



Terry L. Grayson
Site Manager
Risk Management & Remediation

March 1, 2010

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

RE: **WORK PLAN FOR ADDITIONAL ASSESSMENT**
4276 MacArthur Boulevard
Oakland, California

DELTA

Dear Mr. Wickham:

On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta) is submitting this *Work Plan for Additional Assessment*, for the following location:

76- Service Station No. 1156
4276 Mac Arthur Blvd
Oakland, CA

Please contact James Barnard at (916) 503-1279 if you have questions.

Sincerely,
DELTA CONSULTANTS

James B. Barnard, P.G.
Project Manager

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

a member of: Inogen Environmental Alliance

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WORK PLAN FOR ADDITIONAL ASSESSMENT

76 Service Station No. 1156
4276 MacArthur Blvd
Oakland, California

March 1, 2010

Prepared for

ConocoPhillips Company
76 Broadway
Sacramento, California

The material and data in this report were prepared under the supervision and direction of the undersigned.

Delta Consultants

FOR

Alan Buehler
Staff Geologist

Caitlin Morgan
Staff Scientist

James B. Barnard, P.G.
Project Manager
California Registered Professional Geologist No. 7478

REGISTERED PROFESSIONAL GEOLOGIST
JAMES B. BARNARD
No. 7478
Expires: 9/10
GEOLOGY
STATE OF CALIFORNIA

INTRODUCTION

On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta) has prepared this "Work Plan for Additional Assessment" as directed by the Alameda County Health Care Services Agency (ACHCSA) in its letter to COP dated October 15, 2009 for the site at the above location (Figure 1). A copy of the ACHCSA letter is provided as Attachment A.

Proposed additional assessment activities include the installation of one (1) off-site temporary soil vapor point, four (4) on-site semi-permanent soil vapor wells and six (6) on-site soil/groundwater borings. In addition, Delta proposes to decommission four on-site and one off-site groundwater monitoring wells and reinstall with shorter depth discrete screen intervals.

Field activities are being proposed in response to technical comments outlined in the October 2009 ACHCSA letter (Attachment A). All proposed activities were reviewed in a meeting on November 10, 2009 attended by Mr. Jerry Wickham (ACHCSA), Mr. Terry Grayson (COP), Mr. James Barnard (Delta) and Mr. Chris Christensen [Gregg Drilling and Testing, Inc., (Gregg)].

SITE DESCRIPTION

The site is located at the northeast corner of MacArthur Boulevard and High Street in Oakland, California (Figure 1). Two 10,000-gallon gasoline underground storage tanks (USTs) are located in the southwestern portion of the site. Two dispenser islands are located at the site, one to the northwest and one to the east of the USTs (Figure 2). In October 2009, an undocumented concrete vault was discovered underground in the northeast corner of the site, in vicinity of MW-1. A station building is located in the northern portion of the site. There are currently eight groundwater monitoring wells (MW-1 through MW-8) 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.

PREVIOUS ASSESSMENT

In 1997, Pacific Environmental Group Inc. (PEG) advanced 5 soil vapor probes in the vicinity of the USTs, dispenser islands, and product lines to depths ranging from 3 to 15 feet below ground surface (bgs). Soil vapor concentrations of total petroleum hydrocarbons as gasoline (TPHg), benzene, and methyl tert butyl ether (MTBE) were reported at up to 4,700 micrograms per liter (µg/L), 70 µg/L, and 140 µg/L respectively.

In 1998, Tosco Marketing Company (Tosco) removed one 280-gallon waste oil tank (WOT), and removed and replaced two 10,000-gallon gasoline USTs,

associated piping, and fuel dispensers. Laboratory analyses of soil samples collected at 6 feet bgs from the sidewall at each end of the gasoline UST detected concentrations of total purgeable petroleum hydrocarbons as gasoline (TPPHg) of up to 1,200 mg/Kg. TPPHg was not detected at or above laboratory method detection limits in soil samples collected adjacent to dispensers D1 (2 feet bgs) and D4 (3 feet bgs), but was detected in soil samples collected at from adjacent to dispensers D2 (3 feet bgs) and D3 (3 feet bgs) and within the former product line trenching up to 590 mg/Kg. Laboratory analyses of soil samples from the bottom and western and southern limits of the WOT excavation detected TPPHg (6.5 feet bgs) up to 130 mg/Kg, total extractable petroleum hydrocarbons as diesel (TEPHd) up to 78,000 mg/Kg, Benzene up to 0.55 mg/Kg, and total recoverable petroleum hydrocarbons (TRPH) up to 8,400 mg/Kg. Following the over-excavation of approximately 4.6 tons of soil from the WOT excavation, TEPHd, TPPHg, benzene, and TRPH were reported in soil samples collected from the WOT excavation (6 feet bgs) at concentrations up to 560 mg/kg, 81 mg/kg, 0.64 mg/kg, and 360 mg/kg, respectively. Analytical data from a groundwater sample collected from the gasoline UST excavation (7.5 feet bgs) reported TPPHg, toluene, ethyl-benzene, and xylene concentrations of 41,000 µg/L, 400 µg/L, 770 µg/L and 8,900 µg/L, respectively. Benzene was reported to be below the laboratory's indicated reporting limit in the groundwater sample collected for analysis.

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). Analytical data from the soil samples collected from the borings at a depth of 10.5 feet bgs reported TPPHg, benzene, and MTBE at concentrations up to 6,800 mg/kg, 2.6 mg/kg, and 0.71 mg/kg, respectively. The soil sample collected from MW-1, near the former WOT, was also analyzed for TPHd and TPPH. Analytical data from this soil sample reported TEPHd and TRPH at concentrations of 140 mg/kg and 73 mg/kg, respectively. The groundwater sample collected from MW-1, near the former WOT, was analyzed for TEPHd, TRPH, TPPHg, BTEX, and MTBE. Analytical data from this water sample reported TEPHd, TPPHg, benzene, toluene, ethyl-benzene, xylenes, and MTBE at concentrations of 16,000 µg/L, 120,000 µg/L, 11,000 µg/L, 27,000 µg/L, 3,300 µg/L, 18,000 µg/L, respectively. MTBE was at or below laboratory detection limits in MW-1. However, MTBE was detected in the groundwater sample from MW-2 at a concentration that varied from 4,500 µg/L (EPA Method 8260) to 11,000 µg/L (elevated laboratory detection limit).

Analytical data from an additional soil sample collected at a depth of 20.5 feet bgs from the MW-4 boring reported TPPHg, benzene, and MTBE below the laboratory's indicated reporting limits. Quarterly groundwater monitoring and sampling activities commenced in July 1999 and are 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 using wells TP-1 and MW-1 from July 2001 through December 2004.

In August 2001, ERI installed three off-site monitoring wells (MW-5 though MW-7). Analytical data from soil samples collected from these well borings reported TPHg and MTBE below the laboratory's indicated reporting limits. Analytical data reported benzene in one soil sample collected from MW-7 (10 feet bgs) at a concentration of 0.18 mg/kg.

Beginning in June 2004, monitoring well MW-7 was added to the ongoing bi-weekly purging events. Approximately 1,600 gallons of groundwater were removed from monitoring well MW-7 from June through December 2004. A cumulative total of approximately 476,015 gallons of groundwater was removed from the site from July 2001 through December 2004.

ATC Associates became the new lead consultant for the site in January 2005.

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

In October 2007, Delta advanced six on-site soil borings and installed an additional off-site monitoring well (MW-8). The details of this investigation were presented in Delta's *Site Investigation Report*, dated December 28, 2007.

In July 2009, Delta performed site assessment activities to additionally assess the horizontal and vertical migration of petroleum hydrocarbons in soil, groundwater, and soil vapor. A total of five borings were advanced outside the southeast, southwest and northwest perimeter of the station building (Figure 2). Seven temporary soil vapor sampling points were installed outside the perimeter of all sides of the station building. A complete summary of results and recommendations for future work was provided in Delta's September 8, 2009 *Site Investigation Report.*

Historical sampling locations and site facilities are shown on attached Figure 3.

SENSITIVE RECEPTORS

2001 – A GeoTracker database search was performed which identified four public water supply wells owned by the East Bay Regional Park District (Park District) present within a one-half mile radius of the site. Representatives from the Park District reported having no knowledge or records of any wells

under their ownership or oversight located in this area and indicated that the wells may have belonged to the East Bay Municipal Utility District (EBMUD). EBMUD was contacted and reported no knowledge or records of any wells under their ownership or oversight located in this area.

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

2006 – A well survey, which included a visit to the DWR office in Sacramento, was performed to examine well log records and identify domestic wells within the survey area. The DWR survey identified two potential receptors within one mile of the site: one irrigation well located 0.9 miles northwest of the site and one domestic/irrigation well located 1.0 mile northeast of the site. Two additional potential receptors were identified, although the specific addresses could not be verified.

SITE GEOLOGY

The site is composed of unconsolidated deposits of sand and silt in a clay matrix, with some fine-grained gravel. Clay is predominant in the upper lithology with sandy/silty clay and clayey sand units, between approximately 1 to 15 feet bgs. The clay unit is underlain by clay interbedded with sandy clay, clayey sand, silty sands and some gravelly sandy clay units, observed to the maximum depth explored (44 feet bgs).

SITE HYDROGEOLOGY

During monitoring well installations, groundwater has typically been encountered at depths between 15 and 23.5 feet bgs in six of the eight installed monitoring wells. The reported first water in installed monitoring wells MW-5 (6 feet) and MW-6 (5.5 feet) is suspect and not to be considered first water. The previously mentioned groundwater depths correspond with the interface of the two aforementioned lithologic units. During the most recent groundwater monitoring event, conducted on July 23, 2009 (third quarter), the static depth to groundwater ranged from 1.10 feet (MW-8) to 7.32 feet (MW-7) below top of casing (TOC). The groundwater flow direction and gradient was interpreted to be to the southwest at 0.06 foot per foot (ft/ft). The predominant historical groundwater flow at the 76 service station

has been to the west (with variations to the southwest) at an average gradient of approximately 0.06 foot per foot (ft/ft).

SITE ASSESSMENT UPDATE

Delta submitted the "*Site Investigation Report*" (Report) dated August 26, 2009, detailing the results of soil, soil vapor, and groundwater sampling conducted at the site in July 2009.

Field work was conducted during the week of July 6th through July 10th, 2009, and again on August 11, 2009, to continue to assess the horizontal and vertical migration potential of petroleum hydrocarbons in soil, groundwater, and soil vapor. This assessment was also used to evaluate if a preferential pathway existed between the former UST pit and MW-1.

A total of five CPT/direct push borings were sited along the southeast, southwest and northwest portions of the station building. Seven temporary soil vapor sampling points were installed along all sides of the station building (shown of Figure 2).

In reviewing the report, ACHCSA identified limitations in the collected data which prevented the field investigation from being completed as proposed. Specifically, ACHCSA determined that the horizontal and vertical extent of petroleum hydrocarbon constituents in the area of the station building, WOT, and former UST basin had not been adequately assessed and further investigation into the potential for a shallow preferential pathway was required. These items were reviewed and discussed during an on-site meeting on November 10, 2009 attended by Mr. Jerry Wickham (ACHCSA), Mr. Chris Christensen (Gregg Drilling), Mr. Terry Grayson (COP), and Mr. James Barnard (Delta).

PROPOSED SCOPE OF WORK

Soil vapor sampling, soil vapor well installation and sampling, monitoring well abandonment and reinstallation, soil and groundwater borings, and additional proposed work as identified later in this work plan. Proposed assessment locations are identified on attached Figure 2.

PRE-FIELD ACTIVITIES

ACCESS AGREEMENT, UTILITY NOTIFICATION AND BOREHOLE CLEARANCE

Before commencing field operations Delta will obtain the appropriate access agreement from the neighboring Oakland Veterinary Clinic. Delta will also

obtain the appropriate encroachment permits from the City of Oakland for assessment activities in the public right-of-way, and prepare a site-specific Health and Safety Plan in accordance with state and federal requirements for use during additional site assessment activities.

Prior to performing any drilling activities, Delta will obtain appropriate drilling permits for the proposed work scope fom the Alameda County Department of Public Works (ACDPW). Delta will identify and mark the proposed assessment locations and notify Underground Service Alert (USA) as required. A private utility locating service will also be contracted to clear the proposed working locations for underground utilities.

The soil vapor point and soil vapor well locations will be hand-auger cleared to five-feet below ground surface. All the proposed soil and groundwater boring locations, including monitoring well locations proposed for abandonment and proposed replacement monitoring well locations will be cleared by air vacuum to five feet bgs, to avoid damage to possible underground utilities.

SOIL VAPOR SAMPLING

To confirm the 2009 soil vapor sampling results and continue evaluating potential vapor intrusion on-site and off-site, Delta and COP propose to install one (1) temporary soil vapor point (SV-8) along the northwest boundary of the Oakland Veterinary Clinic and install four (4) semi-permanent soil vapor wells (SVW-1 through SVW-4) along the northwest property boundary between the station building and the Oakland Veterinary Clinic.

SOIL VAPOR POINT

- **Soil Vapor Sampling Point Installation**

To evaluate the lateral extent of petroleum hydrocarbons in soil vapor, proposed temporary sampling point SV-8 will be advanced in proximity to the northern corner of the Oakland Veterinary Clinic parking lot. The boring will be hand-augered to a total depth of 5 feet bgs. Soil cuttings will logged using the Unified Soil Classification System (USCS) for lithologic interpretation. Observed groundwater levels, soil descriptions, and field observations will be recorded on the boring logs. At approximately 4.5 feet bgs a soil sample will be collected for laboratory analysis. The collected soil samples will be analyzed for TPHg and TPHd by EPA method 8015M (silica gel treated), BTEX and 8 oxygenates by EPA method 8260B.

The boring will be backfilled as follows: #30 or equivalent sand from five (5) feet to 3.5 feet bgs, granular bentonite granules hydrated in place from 3.5 to 2.5 feet bgs, thick bentonite grout from 2.5 feet bgs to just below existing surface, and a thin layer of cold patch asphalt to grade. A construction detail of the proposed soil vapor point is included on Figure 4.

The borehole (temporary sampling point) will be allowed to stabilize for a minimum of two weeks in the absence of measurable precipitation prior to sampling.

- **Soil Vapor Sampling from Soil Vapor Point**

SV-8 will be sampled by placing a stainless steel soil vapor sampling tip at the end of a direct-push rod into the previously installed sand zone (approximately 3.5 to five feet bgs) using a pneumatic rotary hammer to advance the soil vapor sampling tip. A 0.25-inch Teflon tube will then be connected to the sampling tip through the direct push rod. A 0.25-inch airtight valve (Swagelok™ or similar) in the closed position will be placed at the top of the Teflon tube. The direct push rod will be retracted approximately one inch in order to expose the screen of the soil vapor sampling tip and allow adequate gas flow for sampling. A seal of hydrated bentonite granules will be placed at the ground surface where the direct push rod exits the asphalt/concrete. A rubber seal will be placed where the Teflon sampling tube exits the direct push rod above the ground surface. The Teflon tubing will be connected to a six-liter purge summa canister and two (2) one-liter sample summa canisters using 0.25" Teflon tubing. The direct push rod and soil vapor sampling equipment will be left in-place and allowed to stabilize for at least 20 minutes. A construction detail of the proposed soil vapor well is included on Figure 5.

After allowing the soil vapor sampling point to stabilize, with the airtight valve remaining in the closed position, a two minute vacuum test will be performed on the tubing connecting the valve to the summa canisters.

A sampling shroud will be constructed of plastic with hydrated bentonite granules sealing the ground contact and tubing connections. The shroud will cover the sample point location and the tubing valve. Leak detection tracer compound, isopropyl alcohol (IPA), will be applied under the shroud. A PID will be placed under the shroud during sampling and one discrete air sample will be collected from under the shroud during sample collection.

Once the shroud is in place, three calculated tubing line volumes will be purged into the six-liter purge summa canister. Once three line volumes have been purged, a soil vapor sample will be collected from this zone using two clean, laboratory-certified, one liter Summa canisters. Once a valid vapor sample has been collected, it will be sent to a certified laboratory. One

of the summa canisters will be analyzed for TPHg, benzene, toluene, ethyl-benzene, total xylenes (collectively BTEX), MTBE, tert amyl methyl ether (TAME), ethylene tert butyl ether (ETBE), di-isopropyl ether (DIPE), tert butyl alcohol (TBA), ethylene dibromide (EDB), ethylene dichloride (EDC), and ethanol (8 oxygenates) and IPA by EPA Method TO-15. The second summa will be used to analyze for Oxygen (O_2), carbon dioxide (CO_2), and methane (CH_4) by EPA Fixed Gas Analysis.

Following sample collection, Delta proposes to backfill the soil vapor point sampling borehole as follows: sand from 3.5 to the original placement depth of the sampling tip, hydrated bentonite granules from 3.5 to 2.5 feet bgs, thick bentonite mixture from 2.5 feet bgs to just below existing surface, and a thin layer of cold patch asphalt to grade and completed to the surface with the concrete paver bricks that make up the driveway/parking area of the Oakland Veterinary Clinic. This temporary method of re-sealing the soil vapor point is being used in case the leak detection compound (IPA) is reported in the sample indicating a leak occurred during vapor sampling that compromised the sample integrity. Once the analysis for this soil vapor point is received, Delta will then evaluate the integrity of the sample. If a leak occurred so as to compromise the integrity of the sample, Delta will be able to re-access the soil vapor point and re-sample. If no leak occurred, the soil vapor point borehole will be cleared by hand auger and backfilled with neat cement to near the surface. A sand layer will finish the borehole to the surface and the decorative paver bricks will be replaced.

SOIL VAPOR WELLS

To evaluate the potential for vapor intrusion, Delta and COP propose to install four soil vapor wells (SVW-1 through SVW-4) at the locations shown on Figure 2. Delta has reviewed general arrangement diagrams and existing utility maps to approximate the proposed locations, which span the northwest property boundary between the station building and the Oakland Veterinary Clinic. Proposed sampling locations may be field adjusted, and are dependent on field conditions.

- **Soil Vapor Well Installations**

Each soil vapor well will be hand augered using a three-inch diameter steel hand auger to a maximum depth of approximately 5 feet bgs. Soil cuttings will logged using the Unified Soil Classification System (USCS) for lithologic interpretation. Observed groundwater levels, soil descriptions, and field observations will be recorded on the boring logs. At approximately 4.5 feet bgs a soil sample will be collected for laboratory analysis. The collected soil samples will be analyzed for TPHg and TPHd by EPA method 8015M (silica gel treated), BTEX and 8 oxygenates by EPA method 8260B.

After augering, a soil vapor tip will be placed at the end of 0.25-inch Teflon tubing and positioned at approximately 4.5 feet bgs. The total length of tubing will be approximately 6 feet to allow for an appropriate length of tubing to extend above the top of the well to facilitate sampling. This exposed end of tubing will be sealed with a 0.25-inch airtight valve (Swagelok™ or similar). Delta personnel will ensure that the valve is in the closed position after installation.

The fill materials for the wells will be as such: #30 mesh sand, or equivalent, from 5 to 4 feet bgs, bentonite granules hydrated in place from 4 to 3.5 feet bgs, thick liquid bentonite grout from 3.5 feet to 1.5 feet bgs, and neat cement from 1.5 to 0.5 feet bgs, and completed with either a 7-inch well box in non-traffic area or a 12-inch traffic-rated well box in light-vehicle traffic areas and neat cement at the ground surface. Delta personnel will then verify the Swagelok™ valve is in the closed position. A construction detail of the proposed soil vapor wells is included on Figure 5.

Vapor Well Sampling

Soil vapors in the vicinity of the installed soil vapor wells will be allowed to stabilize for a minimum of two weeks in the absence of measurable precipitation prior to sampling.

Soil vapor sampling will be performed using the same protocols as noted above for collecting soil vapor samples from the soil vapor sampling point. Once samples have been collected, the air-tight valve will be returned to the closed position and placed inside the well box. The well box lid will then be installed and bolted in place.

MONITORING WELLS

As discussed and agreed upon during the November 10, 2009 meeting between ACHCSA, COP, Delta, and Gregg, existing onsite monitoring wells (MW-1 through MW-4) are proposed to be properly abandoned. Replacement wells (MW-1B through MW-4B) are proposed to reduce the screen interval length from 20 feet in length in the original wells to 5 feet in length in the replacement wells. The limited screen will potentially restrict the contact between groundwater and shallow soil and reduce groundwater flow through preferred pathways at shallow (less than 15-feet bgs) depths in soil.

- **Well Abandonment Activities**

Prior to the abandonment of each well, total depth will be measured to determine if any obstruction or sediment is present in the well.

Each existing monitoring well (MW-1 through MW-4) is proposed to be abandoned by over-drilling to a depth of one-foot below their original constructed depths using a truck mounted drill-rig equipped with 10-inch outside diameter hollow-stem augers. The original wells were installed in an 8-inch borehole. Subsequent to over-drilling, the borehole will be backfilled with neat cement and sealed with concrete dyed to match the existing surface conditions.

If utilities are encountered or known to be present above or below ground in the vicinity of the existing monitoring well that make it unsafe for over-drilling, the monitoring well will be abandoned by pressure grouting using neat cement. Pressure grouting will consist of attaching a hose from the cement mixer directly to the top of the monitoring well and pumping neat cement into the well, under pressure (a minimum of 25 pounds per square inch (psi)) for five minutes or pumping refusal. The boreholes will be backfilled in accordance with ACDPW, with cement grout to approximately one foot below ground surface and finished with a concrete surface seal dyed to match the existing surface conditions.

Boring logs detailing each of the wells proposed for abandonment are included in Attachment B.

- **Replacement Well Installation Activities**

Replacement wells (MW-1B through MW-4B) will be drilled in close proximity to the locations of the corresponding original monitoring well.

Replacement monitoring wells MW-1B through MW-4B will be installed by advancing an 8-inch diameter hollow stem auger to a proposed maximum depth of 25 feet bgs. The final installed depth may be adjusted based on field observations.

Soil samples will be collected for lithologic interpretation and field screened at 5 foot intervals beginning just below the initial depth for utility clearance to approximately 15 feet bgs. From 15 feet bgs to the final depth of the boring, continuous soil samples will be collected to assist in establishing the depth of first water. Soil samples will be logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds at five foot intervals using a pre-calibrated photoionization detector (PID). Observed groundwater levels, PID readings, soil descriptions, and field observations will be recorded on the boring logs.

Soil samples exhibiting the highest PID reading from each boring as well as soil samples collected from just above first water and from the bottom of the

borehole will be properly labeled and placed on ice pending submittal for analysis to a certified laboratory. A minimum of three samples from each borehole will be submitted for laboratory analysis. A chain-of-custody will accompany the samples during transportation to the laboratory. The collected soil samples will be analyzed for TPHg and TPHd by EPA method 8015M (silica gel treated), BTEX and 8 oxygenates by EPA method 8260B.

A monitoring well constructed of 2-inch Schedule 40 poly-vinyl chloride (PVC) with a proposed five-foot screened interval utilizing a 0.010-inch slot size will then be inserted into the borehole. While the augers are being retracted, Lonestar #3 (or equivalent) sand will be continually placed into the borehole until the sand pack reaches 1 foot above the top of the screen. The wells will then be surged to promote settling of the sand pack. Once the well has been surged, with the augers continuing to be retracted, 1-foot of bentonite chips will then be placed in the borehole, hydrated in place, and allowed to set for approximately ten minutes. The remainder of the annular space will be filled with neat cement.

The groundwater monitoring wells will be completed at the ground surface by first cutting and excavating a 30-inch by 30-inch square area into the asphalt or concrete surface, inserting a COP-approved 12-inch well box with reinforcing rods and filling the remaining portion of the borehole with concrete. The concrete will be dyed to match the existing surface. The PVC well casing will be trimmed to an appropriate length and capped with a sealable, locking monitoring well cap. Replacement groundwater monitoring well construction details are included on Figure 6.

- **Well Development, Monitoring, and Sampling**

The wells will be developed a minimum of 72 hours after construction. A minimum of 10 casing volumes of groundwater will be removed from the wells during development.

After development, the wells will be incorporated into the existing groundwater monitoring and sampling schedule. They will be added to the next scheduled event after development, provided that event occurs more than 48 hours after well development. Groundwater samples from these newly installed wells will be analyzed consistent with the current groundwater monitoring and sampling activities, TPHg and TPHd by EPA Method 8015M, (silica gel treated), BTEX and 8 oxygenates by EPA method 8260B.

- **Wellhead and Topographical Survey**

Following the completion of the new monitoring wells, a California licensed surveyor will survey the northing and easting of the monitoring wells using

elevation datum NAVD 88 with an accuracy of +/- 0.001 foot. A global positioning system (GPS) will be used to survey in the latitude and longitude of the wells to be uploaded into California's Geo Tracker database system. When the newly installed wells are surveyed, all site wells, including the newly installed soil vapor wells will also be surveyed.

ADDITIONAL SOIL AND GROUNDWATER ASSESSMENT

Previous site assessment activities illustrate that the use of a 30-ton CPT truck is not feasible to use at this site due to space limitations and configuration of the site and site structures, the space requirements of the CPT equipment, and the location of underground utilities. "Mini-sonic" drilling equipment attached to a limited access drill rig can better accommodate the site conditions, while still accomplishing the desired collection of continuous core and discrete depth groundwater samples.

To achieve the objective of defining the horizontal and vertical extent of contamination, Delta and COP propose to advance six (6) on-site borings (SB-12 through SB-17) using sonic drilling technology along the northwest property line between the property line of MacArthur Blvd, and along the southwest and northeast edges of the station building (Figure 2).

During the November 10, 2010 meeting between Delta, COP, ACHCSA, and Gregg, it was agreed upon to place a boring in the southwest corner of the front parking lot of the adjacent Oakland Veterinary Clinic. However, the approximate location of this boring has been moved based on review of historical groundwater flow direction. Moving boring SB-17 onto the service station property places this boring directly down-gradient from MW-1. Also, upon a review of the space limitations of the parking lot of the Oakland Veterinary Clinic, placing this initial boring as originally proposed would create a disruption to the veterinary clinic as it would require the blocking of their front (main) entrance.

The borings will be advanced to a proposed total depth of 50 feet. Sonic-drilling technology allows for the collection of a continuous soil core. Soil samples will be logged using the Unified Soil Classification System (USCS) for lithologic interpretation and field screened for the presence of volatile organic compounds at five foot intervals using a pre-calibrated photoionization detector (PID). Additional soil samples will be collected for lithologic interpretation & field screening when changes in soil conditions are observed. Observed groundwater levels, PID readings, soil descriptions, and field observations will be recorded on the boring logs.

Soil samples exhibiting the highest PID reading from each boring as well as soil samples collected from just above first water and from the bottom of the

borehole will be properly labeled and placed on ice pending submittal for analysis to a certified laboratory. Also, soil samples will be submitted for laboratory analysis if discoloration, such as black staining, is observed in any of the soil collected in the continuous core. A minimum of three samples from each borehole will be submitted for laboratory analysis. A chain-of-custody will accompany the samples during transportation to the laboratory. The collected soil samples will be analyzed for TPHg and TPHd by EPA method 8015M (silica gel treated), BTEX and 8 oxygenates by EPA method 8260B. Samples containing the above mentioned black staining will be additionally analyzed for total petroleum hydrocarbons as motor oil (TPHmo) by EPA Method 8015M and Oil & Grease by EPA Method 1664.

Up to two discreet groundwater samples can be obtained with the mini-sonic drill rig from a single borehole. If a third water-bearing zone is encountered, a second borehole will be advanced. Also, if water is present at the total proposed depth of 50 feet, a grab groundwater sample will be obtained.

Discrete depth groundwater samples will be collected by advancing a 2-inch direct push groundwater sampling device past the bottom of the current depth of the borehole and placing a PVC screen casing within the interior of the sampling device and exposing this PVC screen to groundwater. Water samples will be collected using a either a ¾-inch re-usable stainless steel bailer or a disposal single-use bailer. When using the stainless steel bailer, decontamination procedures will be followed between each sample event. Discreet groundwater samples will be collected at first encountered water, second encountered water zone (if present) and a grab groundwater sample (if present) at the total depth of 50 feet bgs.

Upon completion of sampling activities the borings will be backfilled with cement grout to approximately 1 foot bgs and finished to existing grade with a surface seal of concrete dyed to match existing surface conditions.

PROPOSED ADDITIONAL WORK

Previously Unidentified Concrete Vault

Following the November 10, 2009 meeting with ACHCSA, Mr. James Barnard (Delta) and Mr. Terry Grayson (COP) performed a site visit to review existing site conditions and identify any potential obstacles related to the proposed soil, groundwater and soil vapor sampling locations. During this visit, a previously unidentified underground concrete vault was observed in the northwest corner of the site, in proximity to MW-1. The vault was not identified in Environmental Data Resources (EDRs) or Sandborn Fire Insurance maps of the parcel. Construction detail and historical use is unknown. The vault is of unknown depth and is currently filled with sand. A

two foot long field instrument was used to probe the sand, and was unable to locate the bottom of the vault. When the instrument was removed from the sand a faint hydrocarbon odor was noted.

Delta, COP and Gregg Drilling propose to sample the contents using the previously noted "mini-sonic" drilling equipment. This rig in capable of identifying the bottom of a concrete vault while minimizing the potential for damage to the bottom of the vault. A continuous core will be obtained and submitted for laboratory analysis for TPHg and TPHd by EPA Method 8015M (silica gel treated), total petroleum hydrocarbons as motor oil (TPHmo) by EPA Method 8015M, BTEX, and 8 oxygenates by EPA method 8260B, and Oil & Grease by EPA Method 1664. In addition, remedial approaches will continue to be investigated, pending further classification of the contents, and vault itself.

Abandonment and Re-Installation of Monitoring Well MW-5

Delta proposes to abandon and replace existing monitoring well MW-5 for the same reasons the abandonment and replacement of monitoring wells MW-1 through MW-4 are proposed. Replacement monitoring well (MW-5B) will be installed in close proximity to the original location of MW-5.

The same methodology for the proposed abandonment and re-installation of wells MW-1 through MW-4 will be used for well MW-5.

Boring logs detailing each of the wells proposed for abandonment are included in Attachment B.

DISPOSAL OF DRILL CUTTINGS AND WASTEWATER

Drill cuttings and wastewater generated during proposed soil, groundwater and soil vapor assessment activities will be placed into properly labeled 55-gallon Department of Transportation (DOT) approved steel drums and temporarily stored at the service station site. Samples of the drill cuttings and wastewater will be collected, properly labeled and placed on ice for submittal to a California-certified laboratory and analyzed for TPHg and TPHd by EPA Method 8015M and BTEX, and MTBE by EPA Method 8260B. Additionally, soil samples will also be analyzed for CAM 17 metals by EPA Method 6010. A chain-of-custody will accompany the samples during transportation to the laboratory. Subsequent to receiving the laboratory analytical results, the drummed drill cuttings and wastewater will be profiled, transported, and disposed of at a COP approved facility.

REPORTING

Following completion of proposed additional assessment activities, a report will be prepared and submitted summarizing and discussing the work performed and providing recommendations for future site assessment and remediation activities. Required electronic submittals will be uploaded to the State of California GeoTracker database.

LIMITATIONS AND CERTIFICATIONS

This report was prepared in accordance with the scope of work outlined in Delta's contract and with generally accepted professional engineering and environmental consulting practices existing at the time this report was prepared and applicable to the location of the site. It was prepared for the exclusive use of ConocoPhillips for the expressed purpose stated above. Any re-use of this report for a different purpose or by others not identified above shall be at the user's sole risk without liability to Delta. To the extent that this report is based on information provided to Delta by third parties, Delta may have made efforts to verify this third party information, but Delta cannot guarantee the completeness or accuracy of this information. The opinions expressed and data collected are based on the conditions of the site existing at the time of the field investigation. No other warranties, expressed or implied, are made by Delta.

CONSULTANT: Delta Consultants

*****

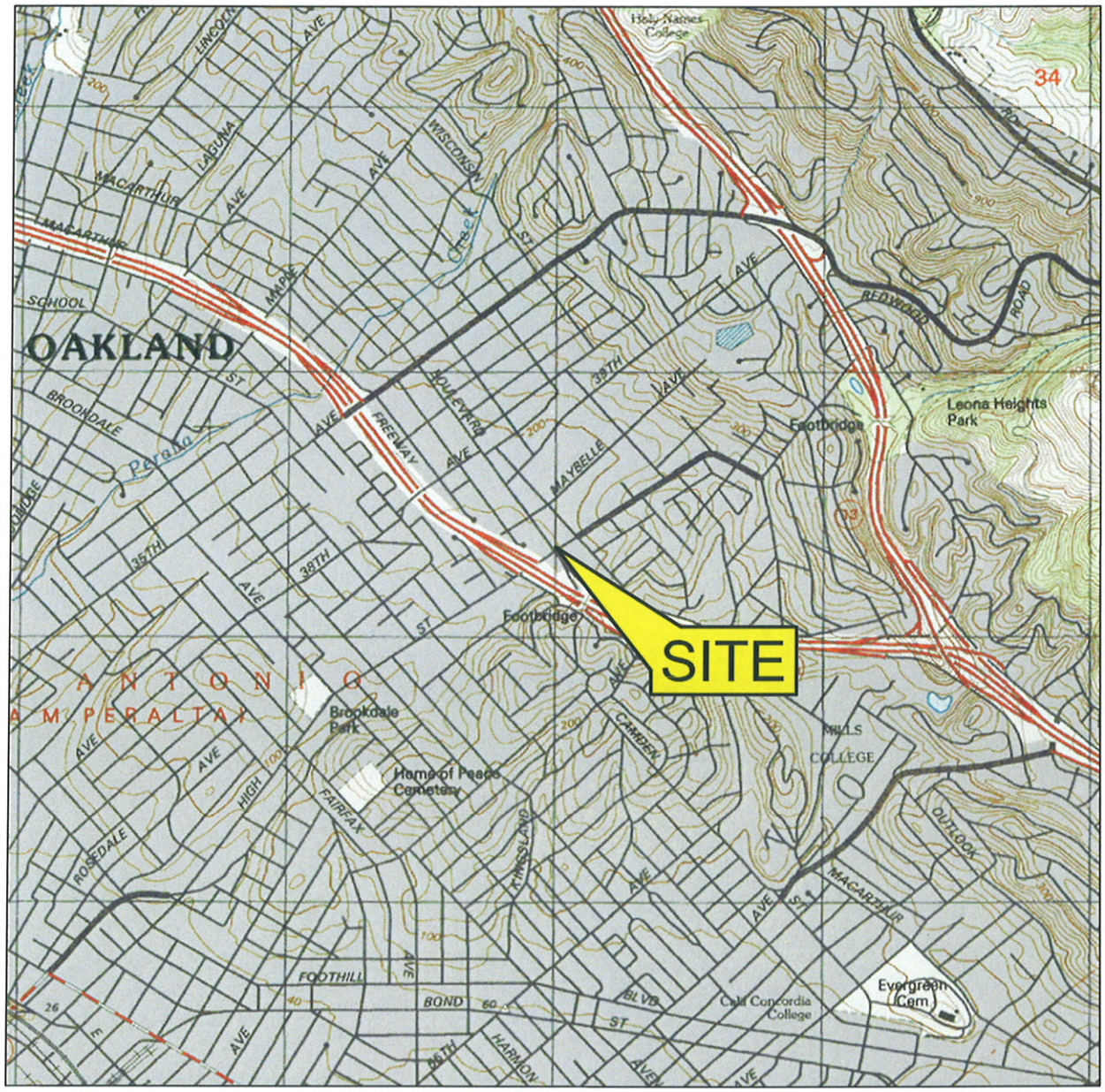
Figures

Figure 1 – Site Location Map
Figure 2 – Site Plan with Proposed Boring and Well Locations
Figure 3 – Site Plan with Historic Sampling Locations
Figure 4 – Soil Vapor Point Construction Detail
Figure 5 – Soil Vapor Well Construction Detail
Figure 6 – Replacement Groundwater Monitoring Well Construction Detail

Attachments

Attachment A – ACHCSA Letter dated October 15, 2009
Attachment B – Boring Logs for Wells to be Abandoned

FIGURES



0 1000 FT 2000 FT

SCALE: 1 : 24,000

North

SOURCE: USGS 7.5 MINUTE TOPOGRAPHIC MAP, OAKLAND EAST QUADRANGLE, 1967

FIGURE 1

SITE LOCATOR MAP

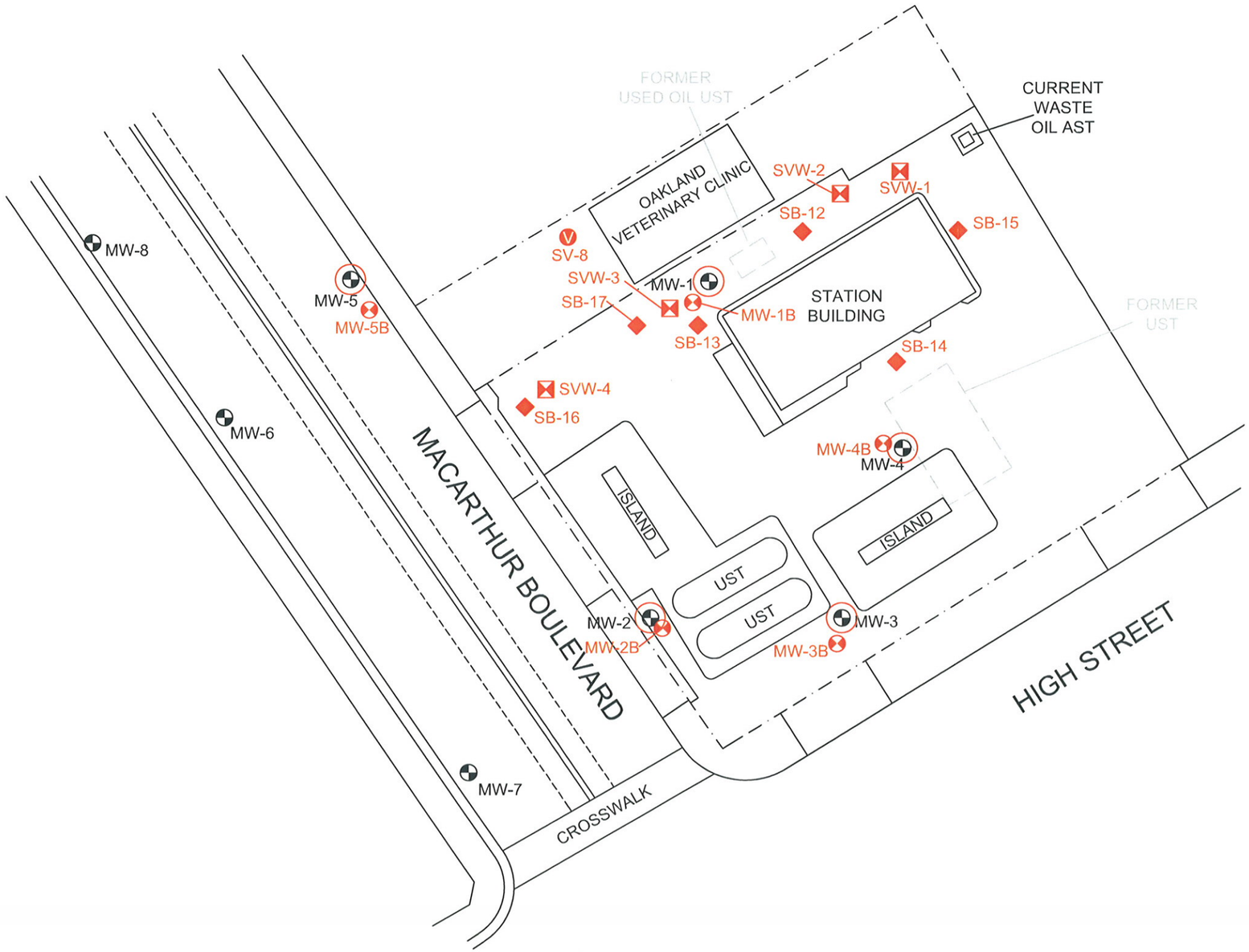
76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 03/01/07
FILE NO. Site Locator	PREPARED BY MC
REVISION NO.	REVIEWED BY

DELTA

LEGEND

- GROUNDWATER MONITORING WELL
- PROPOSED SOIL VAPOR POINT
- PROPOSED SOIL VAPOR WELL
- PROPOSED REPLACEMENT MONITORING WELL
- PROPOSED SONIC BORING
- PROPOSED WELL ABANDONMENT



North

0 40 FT

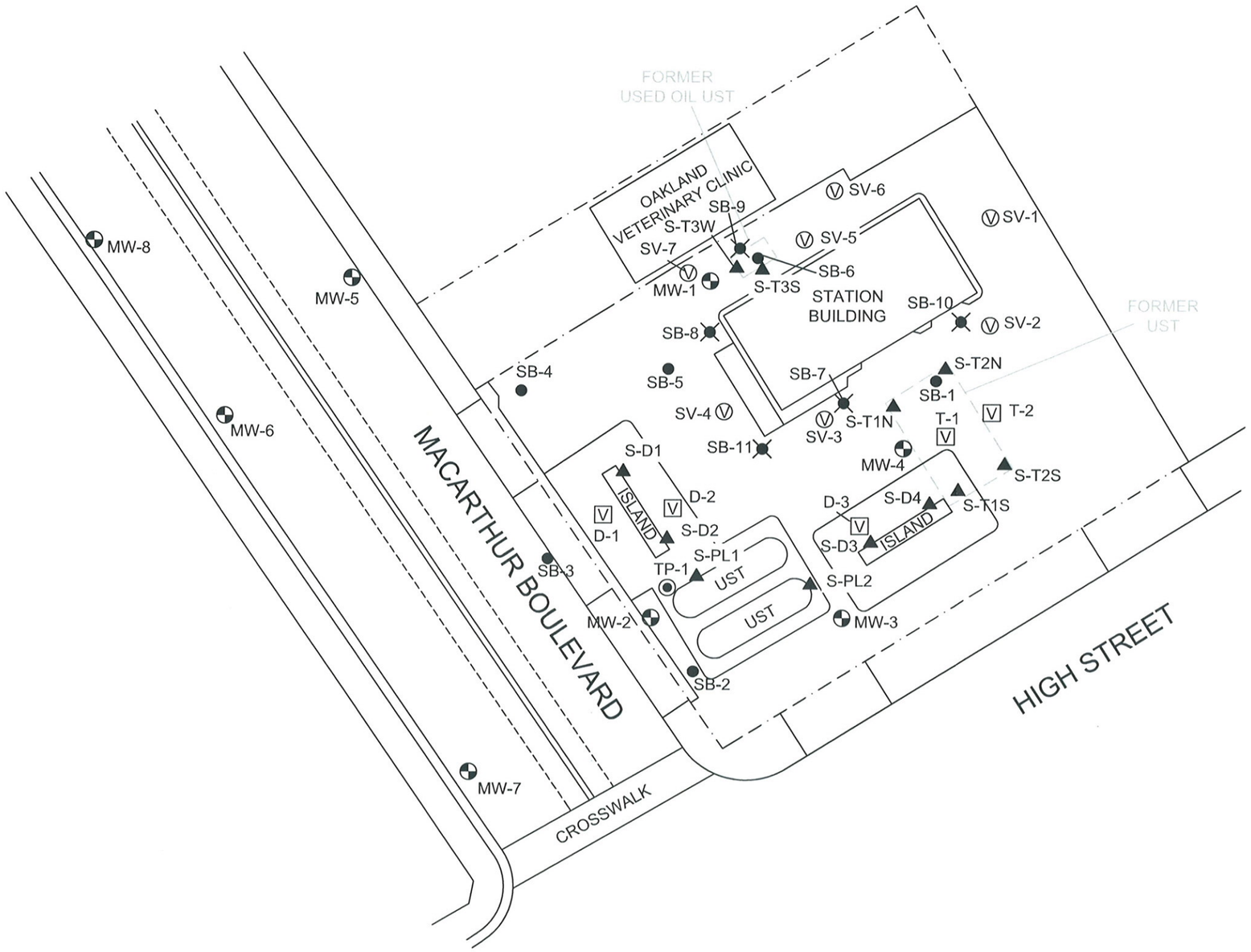
SCALE

FIGURE 2
SITE MAP WITH PROPOSED
BORING AND WELL LOCATIONS

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 02/02/10
FILE NO. 76-1156	PREPARED BY AB
REVISION NO. 10	REVIEWED BY JB

DELTA®



LEGEND

- GROUNDWATER MONITORING WELL
- TANK PIT BACKFILL WELL
- SOIL & GROUNDWATER SAMPLE LOCATION (DELTA, 2009)
- SOIL VAPOR SAMPLE LOCATION (DELTA, 2009)
- SOIL & GROUNDWATER BORING LOCATION (DELTA, 2007)
- SOIL SAMPLE LOCATION (TOSCO, 1998)
- SOIL VAPOR SAMPLE LOCATION (PACIFIC, 1997)

North

0 40 FT

SCALE

FIGURE 3

SITE MAP WITH HISTORICAL SAMPLING LOCATIONS

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 01/05/10
FILE NO. 76-1156	PREPARED BY SM/CM
REVISION NO. 9	REVIEWED BY JB

DELTA®

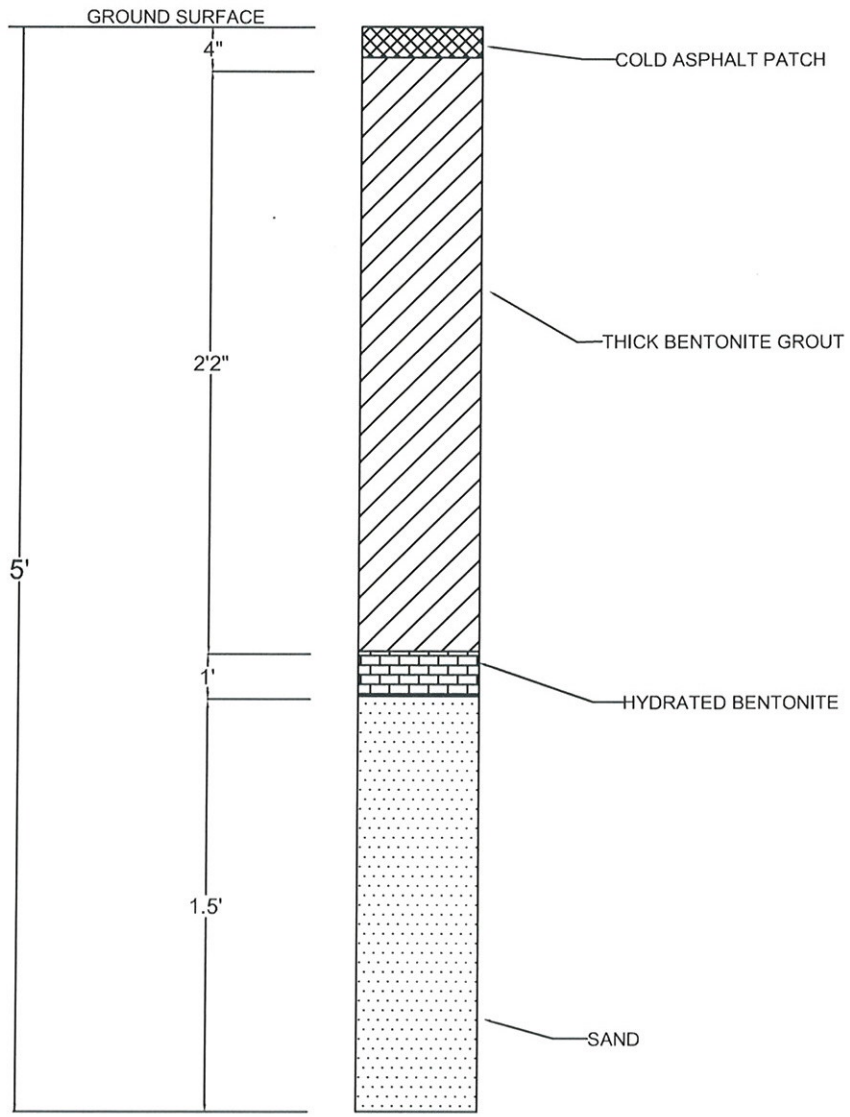


FIGURE 4

SOIL VAPOR POINT
CONSTRUCTION DETAIL

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101156	DRAWN BY JH 02/25/10
FILE NO. 1156-SVP-DETAIL	PREPARED BY AB
REVISION NO.	REVIEWED BY

DELTA®

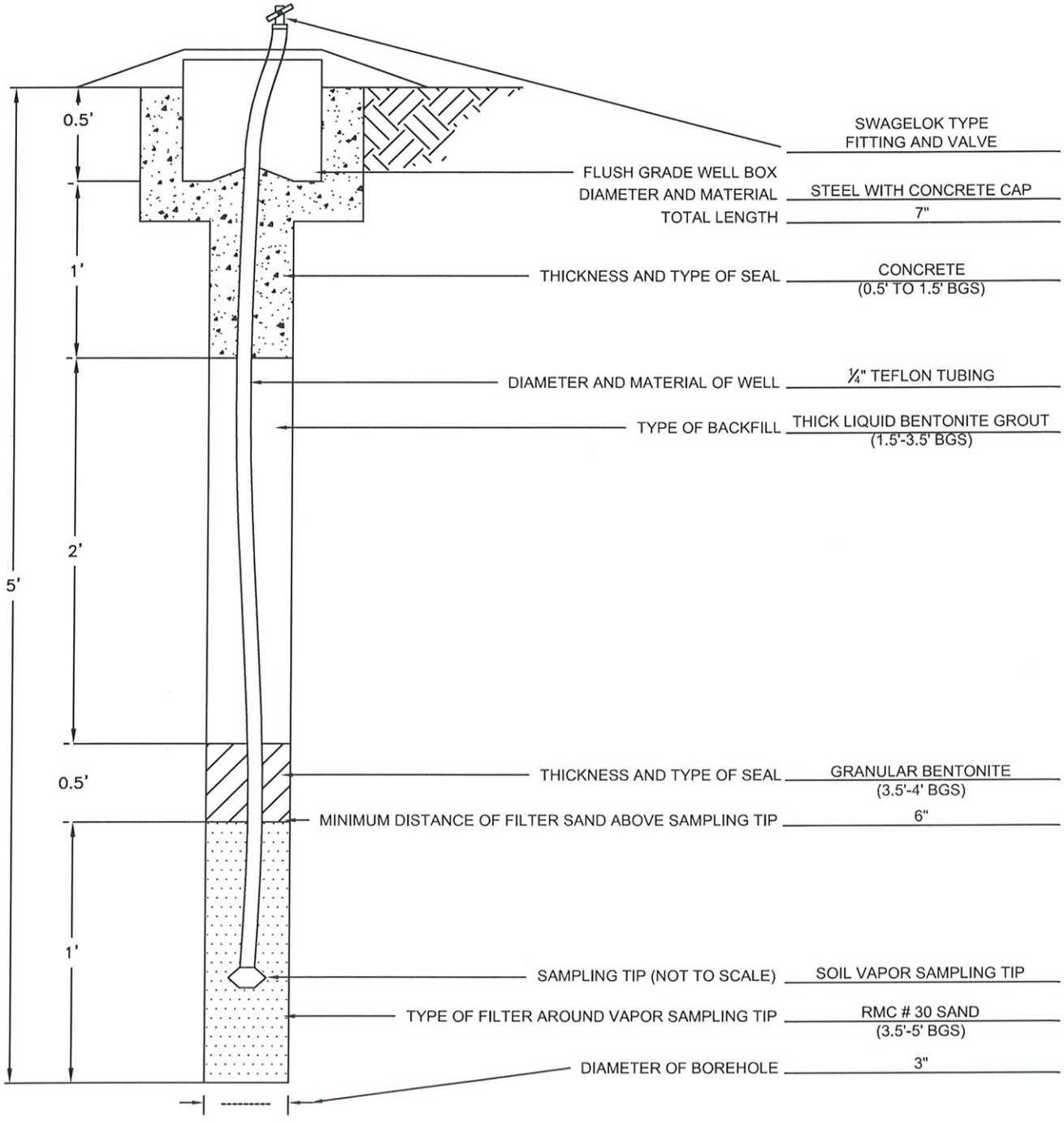


FIGURE 5
SOIL VAPOR WELL
CONSTRUCTION DETAIL

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 02/25/10
FILE NO. 76-1156	PREPARED BY AB
REVISION NO. 0	REVIEWED BY JB

DELTA®

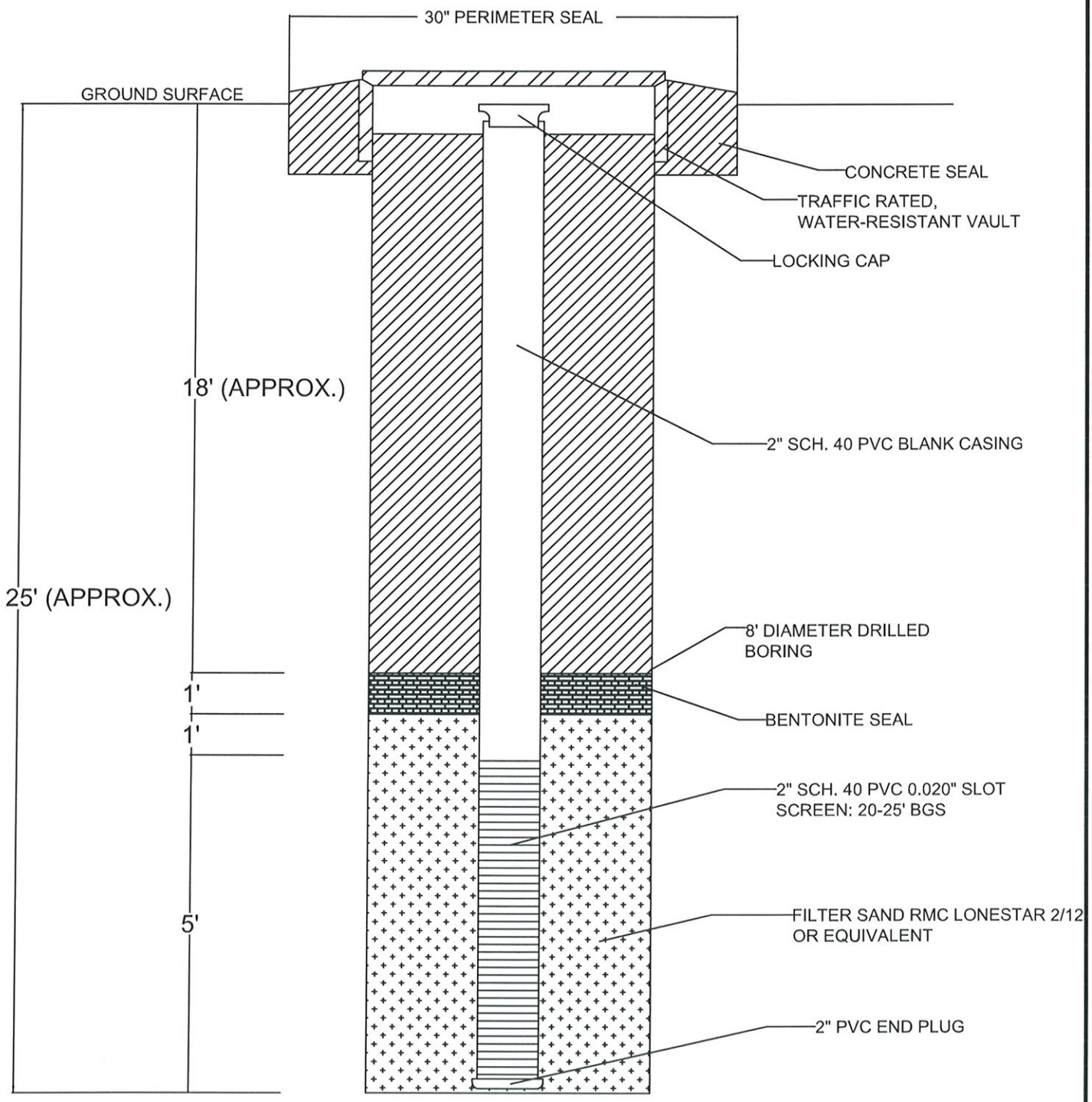


FIGURE 6
REPLACEMENT GROUNDWATER MONITORING
WELL CONSTRUCTION DETAIL

76 SERVICE STATION NO. 1156
4276 MACARTHUR BOULEVARD
OAKLAND, CALIFORNIA

PROJECT NO. C101-156	DRAWN BY JH 02/25/10
FILE NO. 76-1156	PREPARED BY AB
REVISION NO. 0	REVIEWED BY JB

DELTA®

ATTACHMENT A

ACHCSA Letter dated October 15, 2009

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Acting Director

ENVIRONMENTAL HEALTH SERVICES
ENVIRONMENTAL PROTECTION
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577
(510) 567-6700
FAX (510) 337-9335

October 15, 2009

Terry Grayson
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Carole Quick and Lorraine Mudget
P.O. Box 2165
Gearheart, OR 97138

Rajan Goswamy
4276 MacArthur Boulevard
Oakland, CA 94619

Subject: Fuel Leak Case No. RO0000409 and Geotracker Global ID T0600102279, Unocal #1156, 4276 MacArthur Boulevard, Oakland, CA 94619 – Site Investigation Report

Dear Mr. Grayson, Ms. Quick, Ms. Mudget, and Mr. Goswamy:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the recently submitted document entitled, "*Site Investigation Report, 76 Service station, 4276 MacArthur Blvd., Oakland, CA,*" dated August 265, 2009 (Report). The Report, which was prepared in on behalf of ConocoPhillips by Delta Environmental, presents the results of soil, soil vapor, and groundwater sampling conducted at the site in July 2009.

The general objectives of the proposed work were to:

- Define the horizontal and vertical extent of contamination in the area of the station building, waste oil tank, and former UST basin to determine whether a preferential pathway exists between the former tank pit and monitoring well MW-1.
- Collect soil vapor samples to assess the potential for vapor intrusion.

As discussed in the technical comments below, the proposed field investigation could not be completed as planned and the first objective was not met due to limitations in the collected data. The four soil vapor samples collected indicate there is a potential for vapor intrusion that requires further investigation. Therefore, we request that you prepare a Work Plan that addresses the items identified in the technical comments below.

We have also received a document entitled, "*Monitoring Well Abandonment Request,*" dated August 10, 2009. The document requests that well MW-6, which was covered during street paving, be decommissioned. The document also requests that well MW-8, which is located in MacArthur Boulevard west of the site and has not contained reportable concentrations of fuel hydrocarbons during recent sampling events, also be decommissioned. We have no objection to decommissioning wells MW-6 and MW-8 in accordance with Alameda County Public Works requirements.

TECHNICAL COMMENTS

1. **Soil Vapor Sampling Results.** Soil vapor sampling was attempted at seven locations but samples could only be collected at four locations adjacent to the station building and along the property boundary. Total petroleum hydrocarbons as gasoline (TPHg) were detected in soil vapor at concentrations up to 82,000,000 micrograms per cubic meter ($\mu g/m^3$). Benzene was detected in soil vapor at concentrations that exceed the Environmental Screening Level (ESLs [May 2008]) for commercial land use in each of the four soil vapor samples collected. Methane was detected in two of the soil vapor samples at concentrations of 20,000 and 24,000 ppmV, respectively. We also note that the results for SV-7 are unusual in that the samples contained highly elevated concentrations of fuel hydrocarbons but oxygen is at an ambient air level. In addition, sample SV-7 contains 24,000 ppmV methane. The Report lists these results and notes that the concentrations exceed ESLs but does not evaluate the results or make any recommendations for future work. It is apparent that additional work is required to evaluate the potential for vapor intrusion. In future reports, an evaluation of the sampling results must be included with recommendations for appropriate future actions. In the Work Plan requested below, please present plans to confirm the soil vapor sampling results and evaluate the potential for vapor intrusion on-site and off-site. We suggest that you consider the installation of semi-permanent soil vapor probes that can be re-sampled.

2. **Method for Collection of Groundwater Samples.** Groundwater samples were collected using a temporary PVC well placed in an open borehole. As proposed in the "*Revised Work Plan – Site Investigation*," dated March 16, 2009, depth-discrete groundwater samples were to have been collected using a "Hydropunch sampling tool." The purpose of advancing the CPT borings was to identify and target coarse-grained zones for depth-discrete groundwater sampling and vertical delineation. Vertical delineation was not achieved and the grab groundwater sampling results are not comparable between borings or with results from monitoring wells due to the collection of grab groundwater samples from open boreholes of different depths. The source of the groundwater in the borehole is not well known and the amount of mixing from other intervals is also not well known. These differences likely result in higher variability and some uncertainty in the grab groundwater sampling results. Please include plans for collection of depth-discrete groundwater samples in the Work Plan requested below.

3. **CPT Borings.** Five CPT borings were originally proposed to be advanced to a depth of 45 feet bgs. However, CPT borings were advanced at only three locations due to operational problems. In correspondence dated June 30, 2009, Delta requested that the proposed five CPT borings be limited to a depth of 30 feet bgs based on the depth to water for the site. The collection of depth-discrete water samples and vertical delineation was considered feasible with the reduced depth of 30 feet bgs. ACEH agreed to limiting the depth of four CPT borings to 30 feet bgs provided that the downgradient boring (S-11) was extended to a depth of 45 feet bgs. The three CPT borings that were advanced reached depths of approximately 18 to 21 feet bgs. Vertical delineation was not accomplished. Due to the limited number and depth of the CPT borings, the field investigation did not achieve the objective of defining the horizontal and vertical extent of contamination. We request that you submit a Work Plan to conduct further CPT investigation using methods and equipment that are capable of achieving the objective of horizontal and vertical delineation.

4. **Preferential Pathway.** One of the objectives of the proposed investigation activities was to evaluate whether a preferential pathway exists between the former UST tank pit and MW-1 or whether a separate source of TPHg exists in the area of MW-1. The Report concludes that there does not appear to be a preferential pathway between the former USTs and MW-1 based on a comparison of the concentrations of fuel hydrocarbons in the three grab groundwater samples. Given the limitations of the grab groundwater sampling data discussed in technical comment 2, we do not believe that a comparison of the magnitude of concentrations is sufficient to support the interpretation that no preferential pathway exists. A comparison of the results from grab groundwater sample SB-7 to groundwater from MW-1 indicates that the results are generally similar in magnitude. More importantly, a review of grab groundwater sampling results collected from depth does not consider the potential for shallow preferential pathways. A review of the boring logs indicates the potential for a shallow preferential pathway in the area of the station building. In boring SB-10, which is located immediately adjacent to the station building, we note that coarse-grained fill material is identified in the upper 10 feet. Therefore, a shallow preferential pathway potentially exists from the tank pit to beneath the station building in this area. In boring SB-8, which is also adjacent to the station building, the fill material extended to a depth of more than 8 feet bgs and could not be penetrated in the boring. Visible black product was noted in a gravel with sand layer below a depth of 5 feet bgs. Further investigation of the visible black product and fill material and the potential for a shallow preferential pathway is required. Please include these plans in the Work Plan requested below.

5. **Figure 3.** The diagram in Figure 3 includes only depths and filter pack materials and does not show the soil vapor point. In future documents, please show soil vapor sampling point details.

6. **Discussion and Recommendations.** We do not concur with a magnesium sulfate feasibility test at this time.

7. **Groundwater Monitoring.** Groundwater monitoring is to be continued on a semi-annual basis during the first and third quarters. Please present the results in the Groundwater Monitoring Reports requested below.

TECHNICAL REPORT REQUEST

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

- **December 15, 2009** – Work Plan
- **30 days following end of First and Third Quarters** – Semi-annual Groundwater 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

ACEH's Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of reports in electronic form. The electronic copy replaces paper copies and is expected to be used for all public information requests, regulatory review, and compliance/enforcement activities. Instructions for submission of electronic documents to the Alameda County Environmental Cleanup Oversight Program FTP site are provided on the attached "Electronic Report Upload Instructions." Submission of reports to the Alameda County FTP site is an addition to existing requirements for electronic submittal of information to the State Water Resources Control Board (SWRCB) Geotracker website. In September 2004, the SWRCB adopted regulations that require electronic submittal of information for all groundwater cleanup programs. For several years, responsible parties for cleanup of leaks from underground storage tanks (USTs) have been required to submit groundwater analytical data, surveyed locations of monitoring wells, and other data to the Geotracker database over the Internet. Beginning July 1, 2005, these same reporting requirements were added to Spills, Leaks, Investigations, and Cleanup (SLIC) sites. Beginning July 1, 2005, electronic submittal of a complete copy of all reports for all sites is required in Geotracker (in PDF format). Please visit the SWRCB website for more information on these requirements (http://www.swrcb.ca.gov/ust/cleanup/electronic_reporting).

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "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." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

The California Business and Professions Code (Sections 6735, 6835, and 7835.1) requires that work plans and technical or implementation reports containing geologic or engineering evaluations and/or judgments be performed under the direction of an appropriately registered or certified professional. For your submittal to be considered a valid technical report, you are to present site specific data, data interpretations, and recommendations prepared by an appropriately licensed professional and include the professional registration stamp, signature, and statement of professional certification. Please ensure all that all technical reports submitted for this fuel leak case meet this requirement.

UNDERGROUND STORAGE TANK CLEANUP FUND

Please note that delays in investigation, later reports, or enforcement actions may result in your becoming ineligible to receive grant money from the state's Underground Storage Tank Cleanup Fund (Senate Bill 2004) to reimburse you for the cost of cleanup.

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.

Sincerely,

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

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Leroy Griffin, Oakland Fire Department, 250 Frank H. Ogawa Plaza, Ste. 3341, Oakland, CA 94612-2032

Denis Brown, Shell Oil Products US, 20945 S. Wilmington Ave., Carson, CA 90810-1039

Peter Schaefer, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608

James Barnard, Delta Environmental Consultants, Inc., 11050 White Rock Road, Suite 110 Rancho Cordova, CA 95670

Donna Drogos, ACEH
Jerry Wickham, ACEH
Geotracker, File

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**ISSUE DATE:** July 5, 2005
	REVISION DATE: March 27, 2009
	PREVIOUS REVISIONS: December 16, 2005, October 31, 2005
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

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.

REQUIREMENTS

- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection.** (Please do not submit reports as attachments to electronic mail.)
- It **is preferable** that reports be converted to PDF format from their original format, (e.g., Microsoft Word) rather than scanned.
- Signature pages and perjury statements **must** be included and have either original or electronic signature.
- **Do not password protect the document.** Once indexed and inserted into the correct electronic case file, the document will be secured in compliance with the County's current security standards and a password. **Documents with password protection will not be accepted.**
- Each page in the PDF document should be rotated in the direction that will make it easiest to read on a computer monitor.
- Reports must be named and saved using the following naming convention:
  RO#_Report Name_Year-Month-Date (e.g., RO#5555_WorkPlan_2005-06-14)

Additional Recommendations

- A separate copy of the tables in the document should be submitted by e-mail to your Caseworker in **Excel** format. These are for use by assigned Caseworker only.

Submission Instructions

1) Obtain User Name and Password:
   a) Contact the Alameda County Environmental Health Department to obtain a User Name and Password to upload files to the ftp site.
      i) Send an e-mail to dehloptoxic@acgov.org
         Or
      ii) Send a fax on company letterhead to (510) 337-9335, to the attention of My Le Huynh.
   b) In the subject line of your request, be sure to include **"ftp PASSWORD REQUEST"** and in the body of your request, include the **Contact Information, Site Addresses,** and the **Case Numbers (RO# available in Geotracker) you will be posting for.**

2) Upload Files to the ftp Site
   a) Using Internet Explorer (IE4+), go to ftp://alcoftp1.acgov.org
      (i) Note: Netscape and Firefox browsers will not open the FTP site.
   b) Click on File, then on Login As.
   c) Enter your User Name and Password. (Note: Both are Case Sensitive.)
   d) Open "My Computer" on your computer and navigate to the file(s) you wish to upload to the ftp site.
   e) With both "My Computer" and the ftp site open in separate windows, drag and drop the file(s) from "My Computer" to the ftp window.

3) Send E-mail Notifications to the Environmental Cleanup Oversight Programs
   a) Send email to dehloptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload.** (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO# use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

ATTACHMENT B

Boring Logs for Wells to be Abandoned

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: [redacted]/MW1 Plate: APPENDIX

Site: Tosco 76 Service Station 1[redacted] Date: 7/16/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. DOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature:

Location: 10 Feet North of Northwestern Corner of Station Registration: R.G. 4412

Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						2 1/2" asphalt	
					CH	Clay, grayish green, very moist, high plasticity	
					SP	Sand, fine-grained, grayish green, moist, no plasticity, black staining	
5	39	253			CH	Clay, grayish green, very moist, high plasticity	
10	27	87			ML	Silty sand, fine-grained sand, black, very moist, no plasticity, (65% silt, 35% sand)	
15	36	222			CL	Clay, with some sand, medium-grained, light olive brown, medium plasticity, wet	
20	37	22				sandy clay, strong brown, (40% sand, 60% clay)	
25	33	9				yellow orange, high plasticity, very moist	

Total depth at 26.5 feet.
Groundwater encountered at 23'7".

Casing Diameter: 2" Slot Size: .010 , Sand Size: 2/12 , Grout: Portland I/II

EN: BH3B1001

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B2/MW2 Plate: APPENDIX

Site: Tosco 76 Service Station [redacted] Date: 7/16/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. DOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature: [signature]

Location: 2 Feet EAst of Southernmost Driveway Registration: R.G. 4412

Along MacArthur Boulevard Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						4" asphalt	
						Clay, dark greenish gray, mottled redish orange, some coarse-grained sand, slightly damp, high plasticity, (35% sand, 65% clay)	
5	11	20			CH		
10	18	0				15% fine gravels up to 0.5", 20% sand, medium-grained, damp	
						Silty clay, orange brown, mottled green gray, (35% silt, 65% clay), moist, medium plasticity	
15	21	130			CL		
20	29	20				gravelly clay, light yellowish brown, (40% fine gravel, 60% clay), medium plasticity, very moist, black staining	
		▼					
25	45	18			ML	Sandy clay, trace of silt, yellowish brown, wet, medium plasticity, (35% sand, 15% silt, 50% clay)	
						Total depth at 26.5 feet. Groundwater encountered at 23' 6".	

Casing Diameter: 2" Slot Size: 010 , Sand Size: 2/12 , Grout: Portland I,II

FN: 2235B003

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B3/MW3 Plate: APPENDIX

Site: Tosco 76 Service Station [redacted] Date: 7/16/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. DOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature:

Location: Approximately 15' South West of Southern-most Dispenser Island Parallel to High Street Registration: R.G. 4412

Logged by: Dylan Crouse

DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION
						4 1/2" asphalt
						Clay, dark yellowish brown, mottled, trace of medium-grained sand, slightly damp, high plasticity, (15% sand, 85% clay)
5	18	235				brown, mottled gray, dry
					CH	
10	33	265				staining, trace of coarse gravel and rootlets (15% gravel, 85% clay), slightly damp
		▽				
						Sandy clay, greenish gray, mottled, orange, some medium-grained sand, slight plasticity, caliche present, (35% sand, 65% clay)
15	25	81			CL	
						Clay, strong brown, slight mottling, trace of medium-grained sand, 20% sand, high plasticity, black staining, 80% clay
20	36	9			CH	
						Gravel, yellowish brown, wet
		▼			GW	
25	25	0			CH	Clay, trace of medium-grained sand, yellowish brown, very moist, high plasticity, (15% sand)
					GW	Gravel, orange, slight plasticity, wet
						Clay, yellowish brown, moist, high plasticity
30	22	0			CH	
						Total depth at 31.5 feet. Groundwater encountered at 23.3 feet. Static groundwater at 12 feet.

WELL DESIGN

Casing Diameter: 2" Slot Size: .010 , Sand Size: 2/12 , Grout: Portland III

FN: 2235B03

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: B4/MW4 Plate: APPENDIX

Site: Tosco 76 Service Station 11[redacted] Date: 7/16/99

Drill Contractor: Woodward Drilling

Sample Method: Split Spoon Geologist: MARK S. DOCKUM

Drill Rig: B57 Bore Hole Diameter: 8" Signature: Mark S. Dockum

Location: 18 Feet North of Southernmost Dispenser Island Parallel High Street Registration: R.G. 4412

Logged by: Dylan Crouse

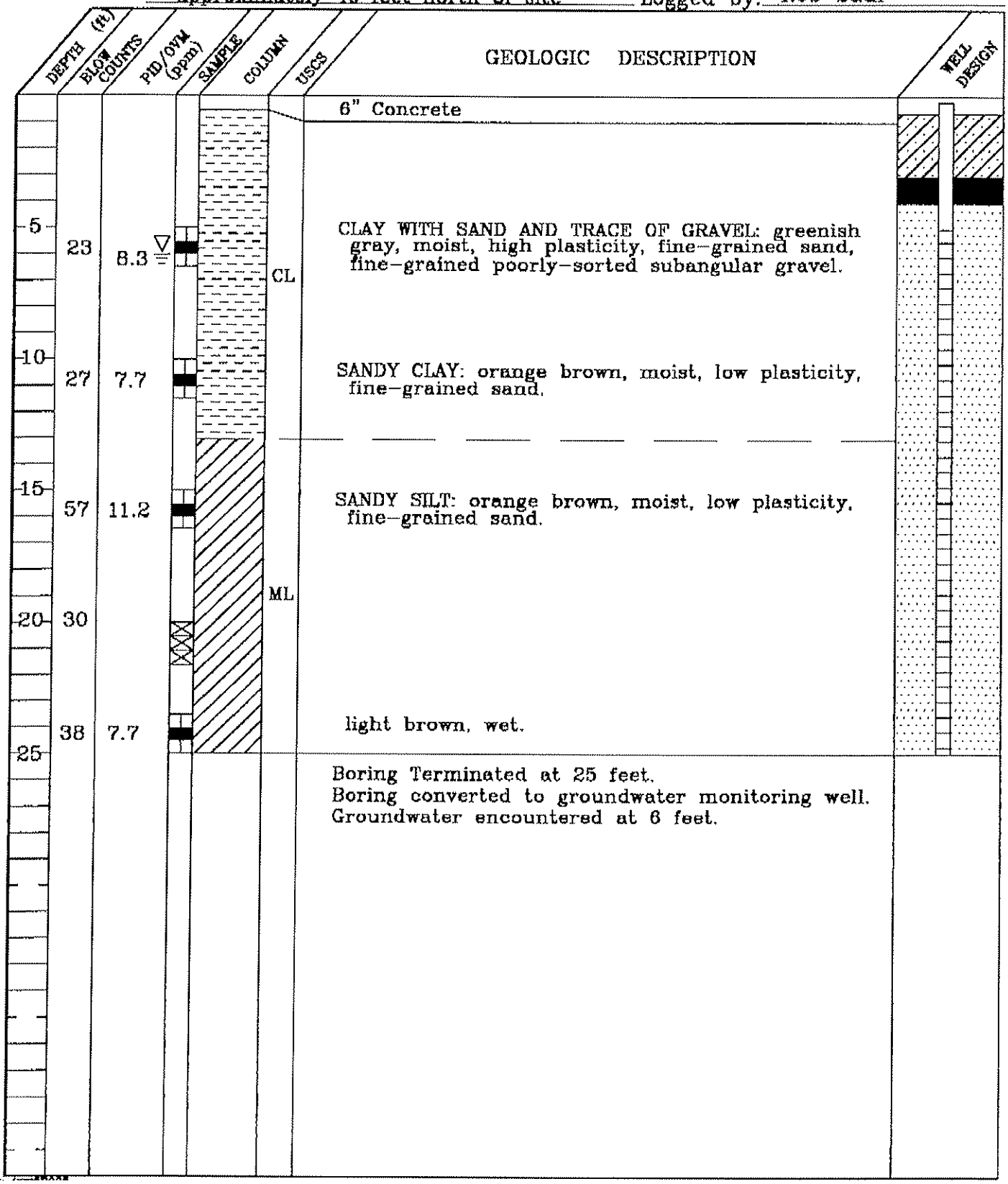
DEPTH (ft)	BLOW COUNTS	PID/OVM (ppm)	SAMPLE	COLUMN	USCS	GEOLOGIC DESCRIPTION	WELL DESIGN
						4 1/2" asphalt	
						Clay, greenish gray, mottled, orange slightly damp, high plasticity	
5	17	309					
10	22	253			CH	trace of medium-grained sand, slightly moist	
15	19	4				moist	
20	28	4				brownish yellow, black staining, 20% gravel, 20% medium-grained sand, moist	
25	36	0				brown, mottled, olive yellow, moist, black staining	
						Total depth at 26.5 feet. Groundwater encountered at 23.6 feet.	

Casing Diameter: 2" Slot Size: 010 , Sand Size: 2/12 , Grout: Portland I,II

EN: 2235D004

ENVIRONMENTAL RESOLUTIONS, INC.

Project No.: 2235 Boring: MW5 Plate: Attachment
Site: Tosco 76 Service Station 1156 Date: 8/29/01
Drill Contractor: Woodward Drilling Company, Inc.
Sample Method: Split Spoon Geologist: JOHN B. BOBBITT
Drill Rig: BK-81 Bore Hole Diameter: 8" Signature:
Location: Eastern side of MacArthur Boulevard approximately 40 feet north of site Registration: R.G. 4313
Logged by: Rob Saur



Casing Diameter: 2" Slot Size: 0.020 , Sand Size: #3 , Grout: Portland Cement