

R0436



Shaw™ Shaw Environmental, Inc.

4005 Port Chicago Hwy
Concord, California 94520

August 25, 2005

Mr. Jerry Wickham
Alameda County Health Agency
1131 Harbor Bay Parkway
Alameda, California 94502

Re: **Report Transmittal
Work Plan – Site Assessment
76 Service Station #4186
1771 First Street
Livermore, 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) 558-7609.

Sincerely,

Shelby Suzanne Lathrop
Project Manager
Shaw Environmental, Inc.
Approved service provider of ConocoPhillips -Risk Management & Remediation
Cell: 707-592-1146

Client Contact Information:
ConocoPhillips
76 Broadway
Sacramento, California 95818
Client office: 916-558-7609
Client fax: 916-558-7639

Attachment
cc: Liz Sewell, ConocoPhillips

**Alameda County
AUG 31 2005
Environmental Health**

RO 436



Alameda County
AUG 24 2005
Environmental Health

6602 Owens Dr. Suite 100
Pleasanton, California 94588
www.atc-enviro.com
925.460.5300
Fax 925.463.2559

August 12, 2005

Mr. Jerry Wickham, P.G.
Alameda County Health Care Services
1131 Harbor Bay Parkway
Alameda, CA 94502-6577

Re: Revised Work Plan – Agency Response and Further Site Characterization Activity
ATC Project No. 75.75118.1237
76 Service Station No. 4186 / COP No. WNO 1237
1771 First Street
Livermore, California

Dear Mr. Wickham:

ATC Associates Inc. (ATC) has prepared this Work Plan on behalf of ConocoPhillips Company for the above referenced property, **Figure 1**, in response to your letter dated July 15, 2005 (attached). This Revised Work Plan is presented in two parts: Part 1 addresses your technical comments and summarizes the proposed activities detailed in your correspondence; Part 2 is the revised version of ATC's May 23, 2005 *Work Plan – Site Assessment*.

PART 1: RESPONSE TO TECHNICAL COMMENTS

1. Site Background and Activity

In June 1996, product line replacement activities were conducted at the facility. Approximately 100 feet of the former product lines, running from the underground storage tank (UST) pad to each respective product dispenser. The product dispensers were also removed. Product line trenches were approximately 3 to 6 feet wide by 3 feet deep. Soil samples were collected from select areas prior to the installation of new double-walled fiberglass piping. Additional excavation was conducted in an isolated area during the line replacement operation resulting from slight hydrocarbon odors detected beneath a section of piping. All soil samples reported non-detect levels for the following analytes: total petroleum hydrocarbons as gasoline (TPHg); and benzene, toluene, ethylbenzene, xylenes (BTEX). This information is documented in the attached August 7, 1996 *Product Line Replacement Report* prepared by GeoStrategies. Based on current and historic subsurface characterization, UST system upgrade activities, and testing compliance, there is no apparent evidence to suggest a release associated with the product piping system. Additionally, the UST system (tanks and lines) has maintained compliance per industry standards for leak detection, monitoring and testing since the time the product lines were replaced in 1996.

2. Lateral Extent of Contamination within the Gravel Layer

The Alameda County Health Care Services (ACHCS) has expressed concern that the lateral extent of contamination within a sand-gravel layer has not been adequately defined. A cross section has been

prepared, **Figure 2**, depicting the lithology, hydrology and well network perpendicular to the direction of groundwater flow across the site. **Figure 3** depicts the site in plan view with the cross section line and associated proposed monitor wells further described herein. The cross section characterizes the subsurface lithology utilizing wells logs prepared by various individuals over time. ATC concurs with your comments describing the lateral delineation deficiencies with the exception of the area surrounding offsite monitor well U-5. Note that this well is installed to approximately 45 feet below ground surface (bgs) within the lower clay-sand sand-gravel transition unit observed from approximately 40 to 45 feet bgs. U-5 is screened within the lower coarse-grained lithologic unit where groundwater was detected at approximately 40 feet bgs during drilling. This unit is bounded by low permeability clays, the upper clay representing an aquitard separating the initial water bearing unit observed at approximately 20 feet bgs. U-5 appears to be cased sufficiently to characterize the second water-bearing unit observed at 40 feet bgs.

ATC concurs that additional monitor wells are necessary in the vicinity of U-2 and U-3. Proposed wells (new U-10 near existing U-2, and new U-9 near existing U-3) are depicted on the cross section, **Figure 2**, and the site map, **Figure 3**. Well screens will be placed in the lower coarse-grained unit from approximately 32 to 40 feet bgs. The cross section also depicts an additional proposed monitor well, previously described in ATC's May 23, 2005 *Work Plan – Site Assessment* document.

ATC also concurs that the ozone sparge wells are not designed to sufficiently address the vertical and lateral extent of dissolved/adsorbed hydrocarbon and MtBE impact. ATC will address the remediation technology strategy under separate cover. Prior to initiating what may be a significant modification to the current remediation approach, ATC proposes to implement the following system alterations:

- Retrofit the ozone sparge wells such that depth to water can be measured and groundwater can be collected for analysis. Based on the current sparge well design (fixed tubing and joints), these operations cannot occur. Field parameters such as dissolved oxygen oxidation potential will be monitored.
- Retrofit the ozone sparge wells such that screened intervals align with the coarser-grained units in the area of greatest contamination such as the area surrounding the northwest side of the tank basin near U-3.
- Modify the ozone injection cycle-times at certain sparge points to increase treatment in those areas with the most significant hydrocarbon/MtBE impact.

3. Source Area Contamination

ATC concurs that the source area requires further investigation to define the vertical and lateral extent of contamination. The screened interval of monitor wells U-3 and U-2 extends across both coarse-grained units as well as the clay unit between, making it difficult to establish the depth of the primary contamination. This could cause cross-contamination between the two units. ATC recommends the abandonment of monitor wells U-3 and U-2 in order to prevent cross contamination. Three proposed new monitor wells and their planned screen intervals are described in Responses 1 and 2 and on the figures.

4. Vertical Extent of Contamination

ATC concurs that the vertical extent of contamination has not been defined for the site, especially in the area surrounding U-3. The proposed deep monitor well U-9, just north of existing well U-3, will be advanced to 45 feet, or to approximately 5 feet deeper than the base of the lower coarse-grained unit,

whichever is deeper, in order to sample soil below the deepest previous test. The screened interval for proposed monitor well U-9 will correspond to the lower coarse-grained unit, and may involve either the placement of several feet of casing blank below the screened interval, or backfilling the hole several feet. We propose to replace wells U-2 and U-3 (to be destroyed) with nested, depth-discrete monitor wells U-11A, U-11B, U-12A and U-12B. Monitor wells U-11A and U-12A will be completed in the shallow sand and monitor wells U-11B and U-12B will be completed in the deep sand.

5. Proposed Upgradient Monitor Well

The screen interval described in ATC's May 23, 2005 *Work Plan – Site Assessment* for proposed upgradient monitor well U-8 was a typo and should have read "from approximately 35 to 45 feet bgs". Revised well construction descriptions are detailed in the section titled "Monitor Well Installation and Soil Sampling Procedures" in Part 2.

6. Remedial System Performance

ATC conducted a preliminary engineering review of the current ozone system operation, maintenance and performance. Our conclusion at this time suggests that the system design is inadequate to address the elevated dissolved MtBE surrounding the UST field, notably from data collected from U-3, and the dissolved TPHg historically observed in monitor wells U-6 and U-7. The cross-section of Figure 2 also shows that sparge screen intervals are placed in the fine-grained units. Sparge efficiency increases with permeability, therefore sparge screen intervals should have been placed in the coarser-grained units. Due to the inadequate run-time of the ozone system and the perceived design issues with ozone sparge wells, there is insufficient historic data to determine if the current system/technology is suitable for this site. ATC proposes to implement those items referenced in the previous sections in an attempt to determine if the current remedial approach (ozone injection) is a viable option for future remediation. These minor system modifications are a prudent financial approach in providing additional data necessary for future design considerations. The system redesign, described above, will be configured in a similar fashion to conducting a long-term ozone pilot test with periodic groundwater extraction (EFR). Future activity to address the remediation technology and site cleanup will be provided under a separate work plan.

PART 2: REVISED WORKPLAN

Monitor Well Installation and Soil Sampling Procedures

Three proposed monitor wells described in Part 1 will be installed to approximately 40 to 45 feet bgs, depending on subsurface lithologic features. Monitor well U-11 and U-12, two nested-pair monitor wells, will be installed at 25 feet to 45 feet bgs, each with a 10 foot screen. Each well will be constructed using 2-inch diameter polyvinyl chloride (PVC) well casing and screen (0.020-slot) and will be designed based upon field conditions observed while drilling. The well construction details will consist of well screen from approximately 35 to 45 feet bgs and well casing from 0 to 35 feet bgs. The exact intervals and screen length will be dependent upon observed aquifer and hydrocarbon impact conditions. The wells will be completed such that the lower coarse-grained unit will be isolated with well screen; this will allow a more adequate representation of dissolved hydrocarbons and aquifer characteristics of the lower coarse-grained unit. The sand pack will consist of #2/12 Monterey sand; the well will be sealed with hydrated bentonite chips and Portland cement. The wells will be set to grade and the well head covered with a traffic-rated vault box. **Figure 4** depicts a typical monitor well construction diagram. A detailed

summary of the pre-field and site activities associated with the subsurface characterization are detailed in the following sections.

Each well (refer to Figure 2) will be installed by a C-57 licensed contractor using a drill rig equipped with 8-inch diameter hollow-stem augers. A sufficient number of clean augers will be brought on site by the drilling contractor each day of the field work. All decontamination of the auger flights will occur at the drilling contractor's off site facility.

Soil samples will be collected and logged continuously using a California-modified split-spoon sampler. Soil samples will be collected using 6-inch long by 2.5-inch diameter brass sample tubes. The middle sample tube from each interval will be sealed with Teflon tape and plastic end caps and placed in a chest cooled with ice for delivery to the analytical laboratory for chemical analysis. 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 two soil samples per boring will be collected for laboratory analysis. The PID readings will be recorded on the soil boring log by the field geologist. All soil samples will be logged using the Unified Soil Classification System (USCS).

Pre-Field Investigation Activities

ATC will prepare a site-specific Health and Safety Plan (HASP) in accordance Title 8, Section 5192 of the California Code of Regulations. The HASP will contain a list of emergency contacts, as well as a hospital route map to the nearest emergency facility. Drilling permits will be obtained from the Zone 7 Water Agency and Alameda County Public Works Agency prior to scheduling the field work. ATC will conduct a utility survey prior to conducting the field investigation. Underground Services Alert (USA) will be notified at least 48 hours prior to installing the proposed monitor well, and the services of a private utility locating company will be utilized to reduce the risk of damage to any utilities beneath the property. Additionally, prior to installing the monitor well, the first 5-feet of each borehole will be cleared using an air knife or hydrovak rig.

Monitor Well Development and Sampling Procedures

After a minimum of 48 hours has elapsed following the completion of the well, it will be developed using a surge block and centrifugal pump equipped with disposable polyethylene tubing. A minimum of 10 well casing volumes will be removed from each well during the development process.

After the wells have been developed and at least 24 hours have elapsed, groundwater samples will be collected for laboratory analysis. The wells will be purged using a centrifugal pump equipped with 3/8-inch disposable polyethylene tubing. A minimum of three well casing volumes will be purged prior to collecting groundwater samples for laboratory analysis. Water temperature, conductivity, pH, and dissolved oxygen will be monitored during the purging of each well to ensure that groundwater from the surrounding formation has entered the well casing prior to sample collection. These environmental parameter readings will be noted on field sampling data sheets, copies of which will be provided in the report of findings.

Groundwater samples will be collected from the tubing once the environmental parameters have stabilized. New polyethylene tubing and bailers will be used to purge and sample each well. After groundwater samples have been collected, the sample containers (40 milliliter glass vials with HCl

preservative) will be placed in a chest cooled with ice and transported to a state-certified laboratory for chemical analysis.

Laboratory Analysis

All soil and groundwater samples will be submitted under chain of custody protocol to Severn Trent Laboratories, Inc., a California-certified laboratory located in Pleasanton, California. The soil and groundwater samples will be analyzed for TPPH using United States Environmental Protection Agency (US EPA) Method 8015 and BTEX, MtBE, DIPE, ETBA, TAME, and ethanol using EPA Method 8260B. Groundwater samples collected from each well will also be analyzed for total dissolved solids (TDS) using US EPA Method 160.1. In addition, for waste profiling purposes, one soil sample will be analyzed for total lead and TCLP lead using EPA Method 6010. Proper chain-of-custody procedures will be followed for sample shipment.

Site Survey and Electronic Deliverable Format (EDF) Upload

ATC will contract with a licensed land surveyor to generate an accurate site map, as well as to provide top of casing elevation and horizontal coordinates for each monitoring well location. The information will be used to produce an accurate site map for the report, as well as to upload analytical data to the State's Geotracker System.

Waste Disposal

All soil cuttings, rinsate fluids 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 fluids and solids 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, soil boring/monitor well construction logs, a cross section, and conclusions and recommendations for additional investigation and/or monitoring, if appropriate.

Enhanced Fluid Recovery (EFR) for Source Area Containment and Interim Remediation

Dissolved MtBE concentrations in U-3 have ranged from 3,400 to 13,000 ug/l over the last four quarterly groundwater monitoring events. TPPH has ranged from 2,700 to 21,000 ug/l over the same period in U-3; monitor wells U-6 and U-7 also show TPPH concentrations similar to those of U-3. **Table 1** summarizes the historic dissolved analytical and monitoring data. ATC recommends implementing an interim remediation approach to address the elevated dissolved contamination in these areas. This interim remediation approach should be considered the precursor to a permanent strategy and corrective action approach that will include a comprehensive system design addressing the overall site clean up.

Enhanced Fluid Recovery (EFR) is a process by which groundwater is recovered from the subsurface using a vacuum truck. ATC has had success at several sites using this method of groundwater recovery to reduce dissolved hydrocarbon and dissolved MtBE concentrations. Dissolved MtBE is especially recalcitrant using conventional remedial technology, but groundwater extraction has been shown to be

effective in reducing MtBE concentrations in groundwater, especially when the initial concentrations are high. Groundwater will initially be recovered from monitor wells U-3, U-6, and U-7 using a vacuum truck equipped with a down-hole “stinger” pipe. Recovery from additional wells (U-11A, U-11B, U-12A, and U-12B) may be implemented in the future if necessary. An ATC technician will measure and record groundwater elevations from U-3, U-6, and U-7 and surrounding site monitor wells and sparge wells before and after each event. The groundwater recovery event will continue until no groundwater recharge is observed for a period of up to one hour. At that time, the recovery event will be discontinued and final monitoring data collected. It is anticipated, based on similar sites, that an average of 2,000 gallons of groundwater could be recovered during each event.

ATC recommends a weekly EFR program be implemented for a period of three months at which time quarterly groundwater sample will be collected during the routine site monitoring event. Additionally, EFR events with a designated frequency will be conducted based upon the results of the groundwater analytical data. It is anticipated that based on the historic MtBE and TPPH dissolved concentrations, three months of weekly EFR events will be necessary, with the frequency likely to be reduced to bi-weekly after the first quarter. Groundwater recovery data and analytical results will be reported in the Quarterly Status Reports.

EFR Wastewater Disposal

All recovered groundwater will be transported to the ConocoPhillips refinery in Rodeo, California for disposal.

If you have any questions regarding the contents of this work plan, please give me a call at (925) 225-7817. Ms. Shelby Lathrop, the ConocoPhillips Site Manager, may also be contacted at (916) 558-7609 for additional questions.

Sincerely,
ATC ASSOCIATES INC.



David A. Evans
Senior Project Manager

for David Evans

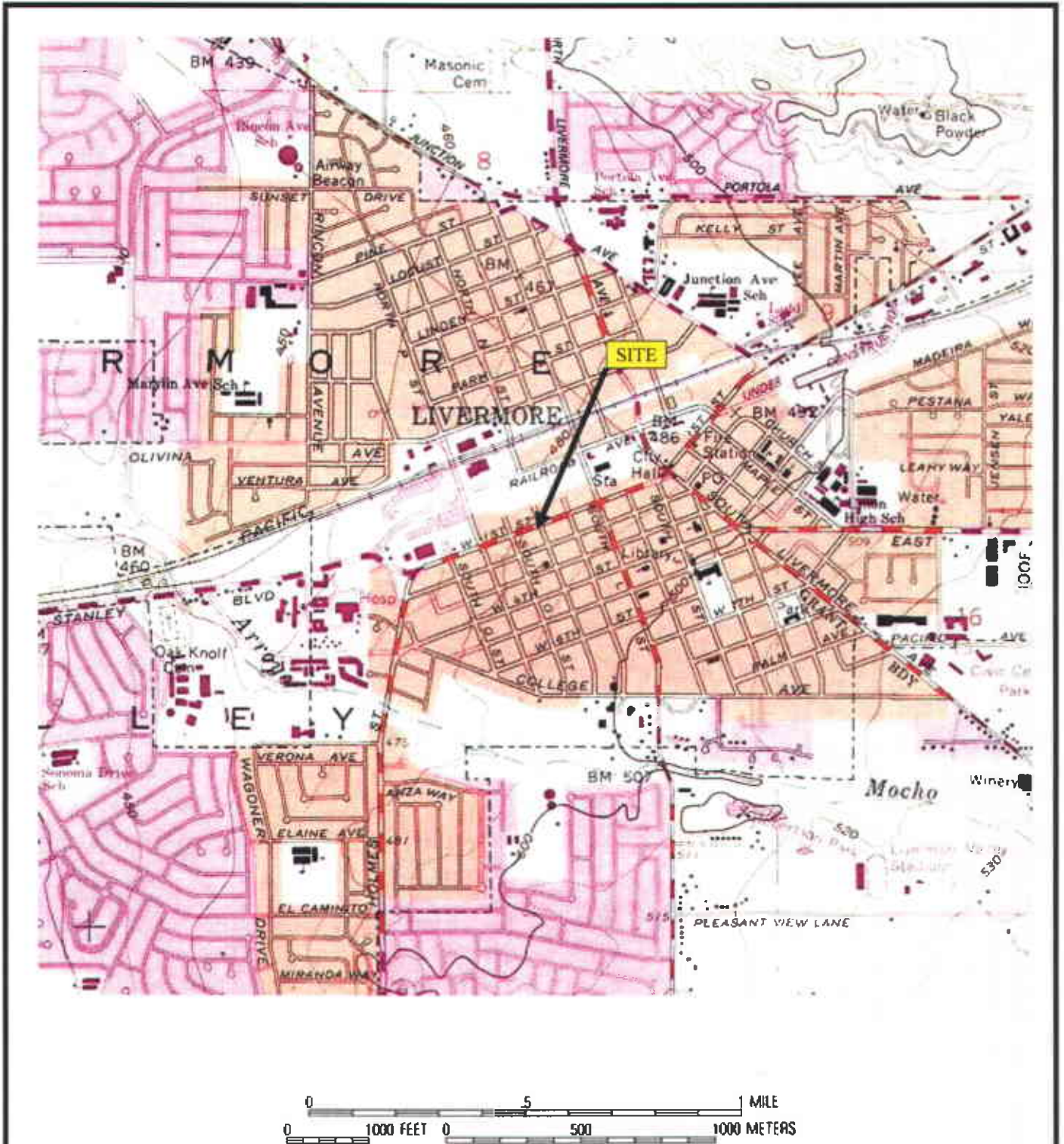


Janine Weber-Band, PhD, CEG #2286
Principal Geologist



Cc: Shelby Lathrop – ConocoPhillips (electronic copy)

- Attachments:
- Figure 1 – Site Vicinity Map
 - Figure 2 – Cross Section Showing Proposed Monitor Wells
 - Figure 3 – Site Map Showing Well Locations
 - Figure 4 – Well Construction Diagram
 - Table 1 – Historic Fluid Levels and Selected Analytical Results
 - Alameda County Health Care Services’ July 15, 2005 Correspondence
 - Product Line Replacement Report August 7, 1996 prepared by GeoStrategies



SOURCE: USGS LIVERMORE QUADRANGLE, CALIFORNIA (7.5 MINUTE SERIES) TOPOGRAPHIC MAP. OBTAINED FROM THE 2000 NATIONAL GEOGRAPHIC TOPOI SOFTWARE



6602 Owens Drive, Suite 100
 Pleasanton, CA 94588
 (925) 460-5300

PROJECT NO: 75.75118 1237

DESIGNED BY: DE

SCALE: N/A

REVIEWED BY: DE

DRAWN BY: EC

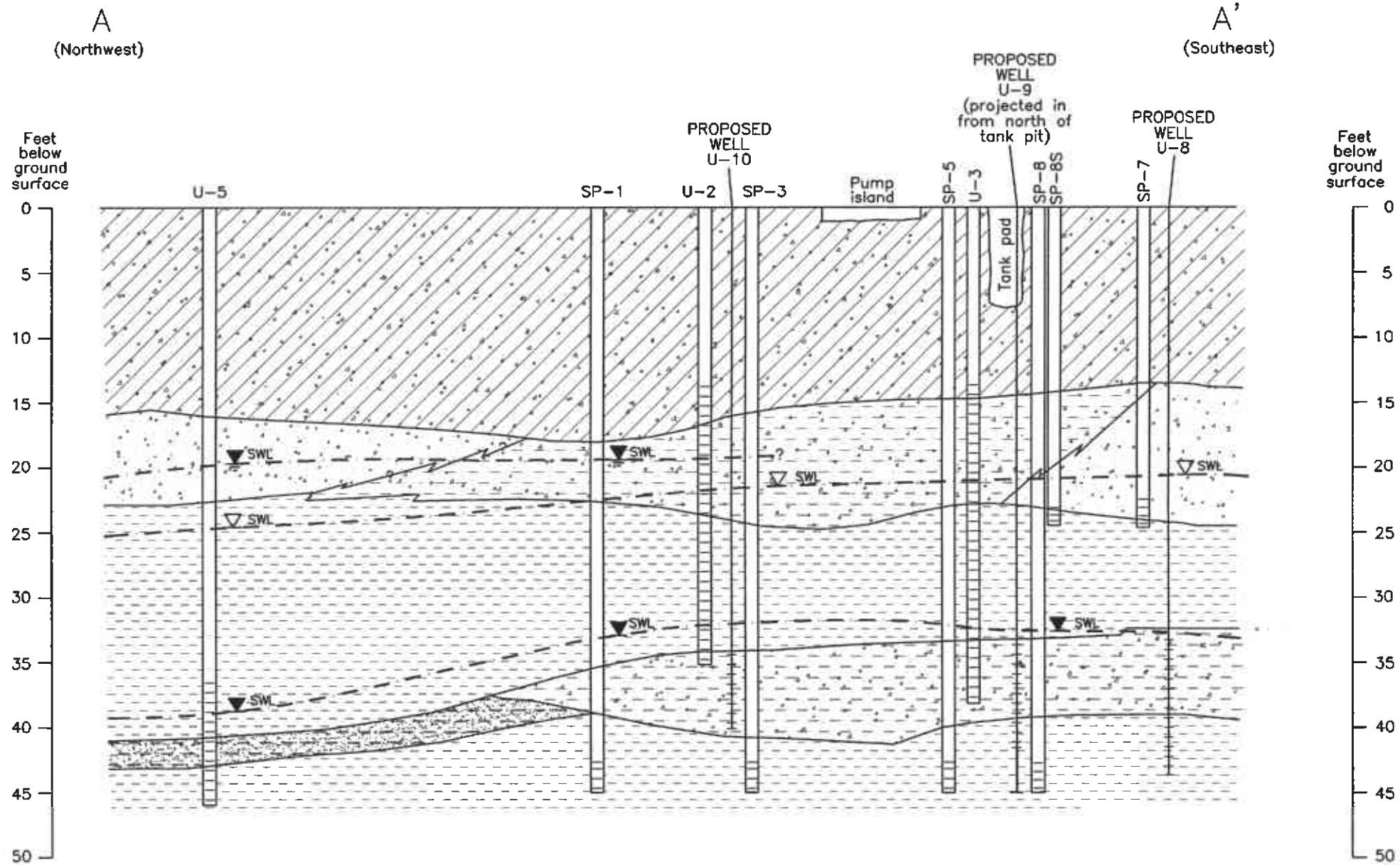
DATE: 04/05

FILE: 4186 SITE VIC












FIGURE 1

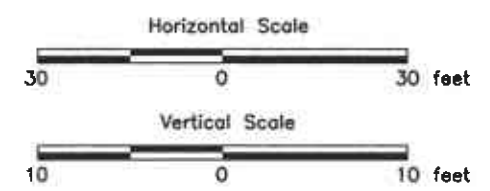
SITE VICINITY MAP

76 STATION 4186
 1771 FIRST STREET
 LIVERMORE, CALIFORNIA



LEGEND

-  BLANK RISER
-  WELL SCREEN INTERVAL
-  PROPOSED WELL
-  STATIC WATER ELEVATION (3/23/05)
-  IWL-INITIAL WATER LEVEL (DURING DRILLING)
-  SWL-SECOND WATER LEVEL (DURING DRILLING)
-  GRAVEL WITH SANDY SILT
-  GRAVEL WITH CLAY AND SAND
-  SAND WITH GRAVEL
-  CLAY WITH SAND
-  CLAY



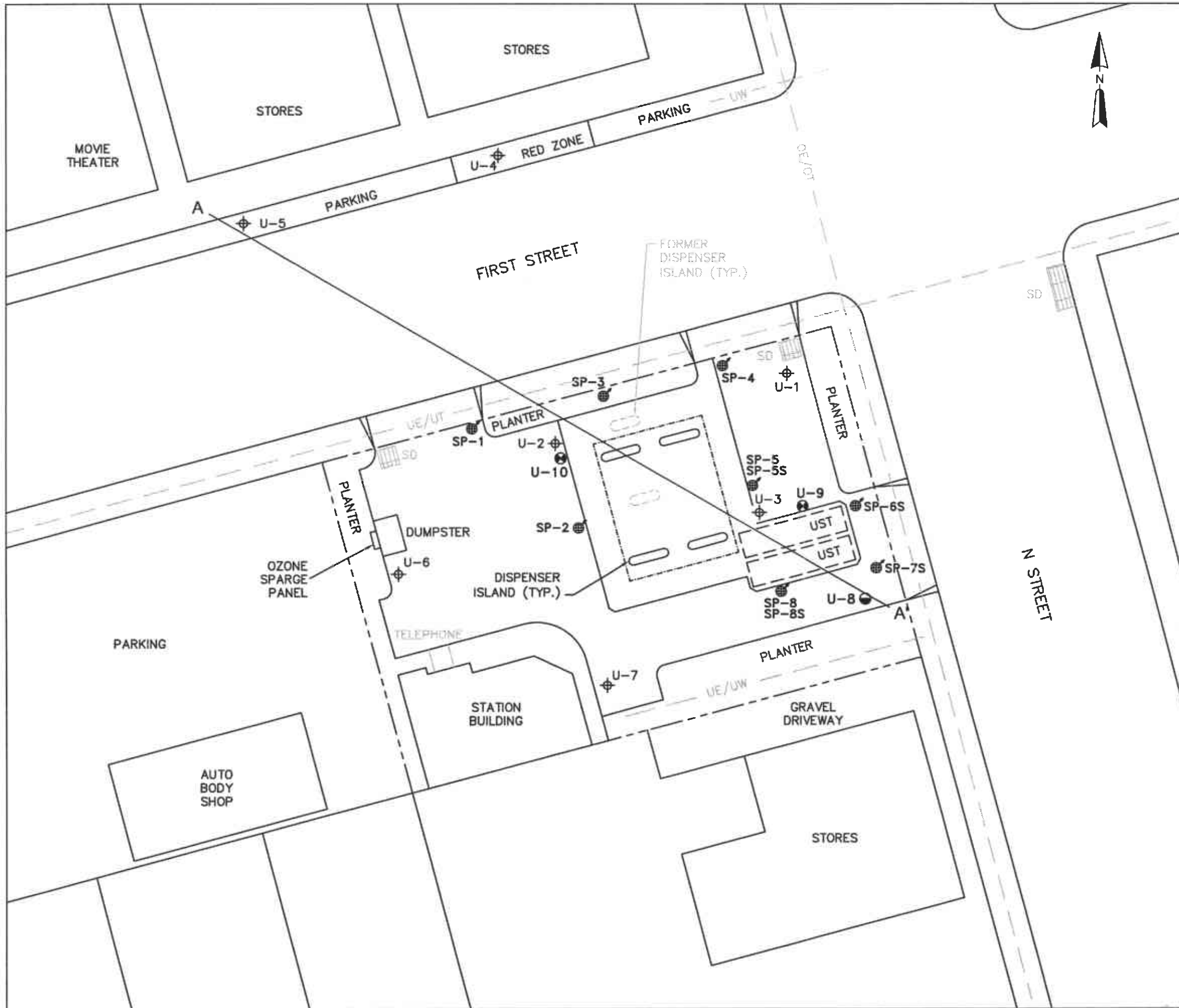
BASE MAP REFERENCE:
 MODIFIED FROM SITE PLAN SUPPLIED BY
 MILLER BROOKS, ENVIRONMENTAL, INC.

VATC ASSOCIATES INC. 6502 Owens Drive, Suite 100
 Pleasanton, CA 94588
 (925) 460-5300

| | | |
|-------------------|--------------------------|------------------------------|
| SCALE AS SHOWN | DRAWING DATE 08/09/05 | ACAD FILE 4186-site cross |
|-------------------|--------------------------|------------------------------|

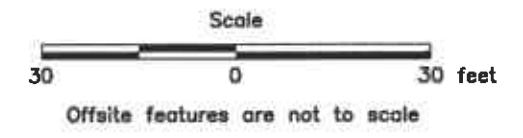
CROSS SECTION MAP

| | | | |
|----------|---|------------------------------|-------------|
| CLIENT | CONOCOPHILLIPS | PM | DAE |
| LOCATION | 76 STATION 4186 1771 FIRST STREET LIVERMORE, CALIFORNIA | PE | DA |
| DESIGNED | DRAWN BY: EC | PROJECT NO. 75.75118.1237 | FIGURE 2 |



LEGEND

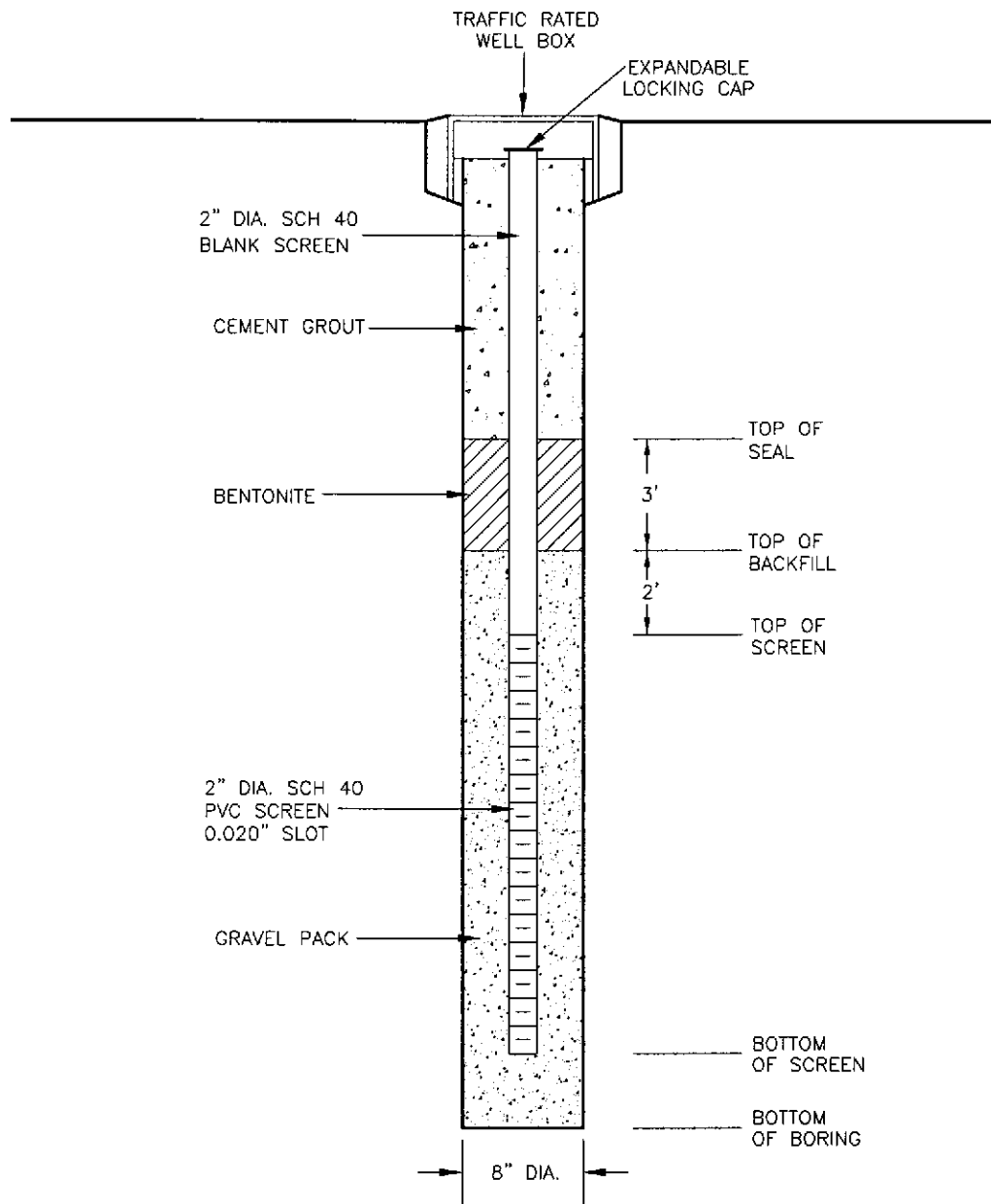
- APPROXIMATE PROPERTY LINE
- U-7 GROUNDWATER MONITOR WELL
- SP-1 OZONE SPARGE POINT
- PMW PROPOSED MONITOR WELL TO 45' BELOW GROUND SURFACE
- PMW PREVIOUSLY PROPOSED MONITOR WELL TO 45' BELOW GROUND SURFACE
- A—A' CROSS SECTION LINE
- SD STORM DRAIN
- UE UNDERGROUND ELECTRIC
- UT UNDERGROUND TELEPHONE
- UW UNDERGROUND WATER
- OE OVERHEAD ELECTRIC
- OT OVERHEAD TELEPHONE



BASE MAP REFERENCE:
 MODIFIED FROM SITE PLAN SUPPLIED BY
 MILLER BROOKS, ENVIRONMENTAL, INC.

VATC ASSOCIATES INC. 6602 Owens Drive, Suite 100
 Pleasanton, CA 94588
 (925) 460-5300

| | | |
|---|--------------------------|------------------------------|
| SCALE AS SHOWN | DRAWING DATE 08/11/05 | ACAD FILE 4186-site cross |
| CROSS SECTION MAP WITH PROPOSED MONITOR WELLS | | |
| CLIENT CONOCOPHILLIPS | PM DAE | |
| LOCATION 76 STATION 4186 1771 FIRST STREET LIVERMORE, CALIFORNIA | PE DA | |
| DESIGNED | DRAWN BY: EC | PROJECT NO. 75.75118.1237 |
| | | FIGURE 3 |



NOTES:

1. NOT DRAWN TO SCALE
2. DEPTH MEASUREMENTS AND INTERVALS ARE APPROXIMATE. ACTUAL WELL DESIGN WILL BE BASED ON EXPLORATORY BORING AND SITE CONDITIONS



6602 Owens Drive, Suite 100
 Pleasanton, CA 94588
 (925) 460-5300

TYPICAL MONITOR WELL DIAGRAM

FIGURE

4

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 4186

1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|----------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-1 | 07/13/98 | 23.28 | 0 | 454.99 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/07/98 | 26.43 | 0 | 451.84 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 01/15/99 | 30.42 | 0 | 447.85 | 478.27 | 34 | 14 | ND | ND | ND | 1.1 | ND | 7.3 | -- | -- |
| | 04/14/99 | 24.21 | 0 | 454.06 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 160 | -- | -- |
| | 07/19/99 | 27.1 | 0 | 451.17 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 92 | -- | -- |
| | 10/12/99 | 29.4 | 0 | 448.87 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 37 | -- | -- |
| | 01/24/00 | 27.9 | 0 | 450.37 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 28 | -- | -- |
| | 04/10/00 | 26.16 | 0 | 452.11 | 478.27 | 34 | 14 | ND | 0.93 | ND | ND | ND | ND | -- | -- |
| | 07/17/00 | 28.04 | 0 | 450.23 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 160 | -- | -- |
| | 10/02/00 | 28.41 | 0 | 449.86 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 120 | -- | -- |
| | 01/08/01 | 28.68 | 0 | 449.59 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 103 | -- | -- |
| | 04/03/01 | 25.74 | 0 | 452.53 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | 55.1 | -- | -- |
| | 07/02/01 | 30.67 | 0 | 447.6 | 478.27 | 34 | 14 | ND | ND | ND | ND | ND | ND | -- | -- |
| | 10/08/01 | 33.13 | 0 | 445.14 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | ND<5.0 | -- | -- |
| | 01/03/02 | 27.67 | 0 | 450.6 | 478.27 | 34 | 14 | ND<0.50 | 0.51 | ND<0.50 | 0.69 | 160 | 31 | -- | -- |
| | 04/05/02 | 29.4 | 0 | 448.87 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 60 | -- | -- |
| | 07/02/02 | 31.17 | 0 | 447.1 | 478.27 | 34 | 14 | ND<0.50 | 1.7 | 0.73 | 130 | -- | -- | 35 | 1100 |
| | 10/01/02 | 33 | 0 | 445.27 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | 8.8 | -- | -- | 28 | 120 |
| | 12/30/02 | 22.03 | 0 | 456.24 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | 1.2 | -- | -- | 90 | ND<50 |
| | 05/02/03 | 24.13 | 0 | 454.14 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 50 | ND<50 |
| | 07/01/03 | 25.35 | 0 | 452.92 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<2.0 | ND<50 |
| | 10/03/03 | 27.24 | 0 | 451.03 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<2.0 | ND<50 |
| | 01/08/04 | 22.67 | 0 | 455.6 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 5.5 | 54 |
| | 04/15/04 | 25.33 | 0 | 452.94 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<0.50 | ND<50 |
| | 07/15/04 | 26.47 | 0 | 451.8 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<0.50 | ND<50 |
| | 12/08/04 | 31.17 | 0 | 447.1 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<0.50 | ND<50 |
| | 03/23/05 | 22.47 | 0 | 455.8 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<0.50 | ND<50 |
| | 06/28/05 | 25.37 | 0 | 452.9 | 478.27 | 34 | 14 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | ND<0.50 | ND<50 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 4186

1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|----------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-2 | 07/13/98 | 23.52 | 0 | 453.92 | 477.44 | 34 | 13 | 130 | 12 | 62 | 180 | 1200 | 1100 | - | - |
| | 10/07/98 | 25.31 | 0 | 452.13 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 160 | - | - |
| | 01/15/99 | 30.22 | 0 | 447.22 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 280 | - | - |
| | 04/14/99 | 24.5 | 0 | 452.94 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 460 | - | - |
| | 07/19/99 | 28.54 | 0 | 448.9 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 220 | - | - |
| | 10/12/99 | 30.48 | 0 | 446.96 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 160 | - | - |
| | 01/24/00 | 24.52 | 0 | 452.92 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 150 | - | - |
| | 04/10/00 | 23.68 | 0 | 453.76 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 177 | - | - |
| | 07/17/00 | 28.35 | 0 | 449.09 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 62.7 | - | - |
| | 10/02/00 | 28.72 | 0 | 448.72 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 52 | - | - |
| | 01/08/01 | 29.11 | 0 | 448.33 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 57.3 | - | - |
| | 04/03/01 | 25.95 | 0 | 451.49 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 30.2 | - | - |
| | 07/02/01 | 29.01 | 0 | 448.43 | 477.44 | 34 | 13 | ND | ND | ND | ND | ND | 16 | - | - |
| | 10/08/01 | 30.94 | 0 | 446.5 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 82 | - | - |
| | 01/03/02 | 27.33 | 0 | 450.11 | 477.44 | 34 | 13 | 7.7 | 11 | 1.7 | 15 | 260 | 42 | - | - |
| | 04/05/02 | 30.02 | 0 | 447.42 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 25 | - | - |
| | 07/02/02 | 31.23 | 0 | 446.21 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<0.50 | ND<50 |
| | 10/01/02 | 32 | 0 | 445.44 | 477.44 | 34 | 13 | ND<0.50 | 0.62 | ND<0.50 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 12/30/02 | 22.32 | 0 | 455.12 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 05/02/03 | 25.92 | 0 | 451.52 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 07/01/03 | 24.99 | 0 | 452.45 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 10/03/03 | 25.31 | 0 | 452.13 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 01/08/04 | 21.94 | 0 | 455.5 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | 0.51 | ND<1.0 | - | - | ND<2.0 | ND<50 |
| | 04/15/04 | 25.2 | 0 | 452.24 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<0.50 | ND<50 |
| | 07/15/04 | 24.45 | 0 | 452.99 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<0.50 | ND<50 |
| | 12/08/04 | 29.89 | 0 | 447.55 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<0.50 | ND<50 |
| | 03/23/05 | 22 | 0 | 455.44 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | 1.1 | - | - | ND<0.50 | ND<50 |
| | 06/28/05 | 25.3 | 0 | 452.9 | 477.44 | 34 | 13 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | - | - | ND<0.50 | ND<50 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 4186

1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|---------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-3 | 07/13/98 | 23.82 | 0 | 454.64 | 478.46 | 34 | 14 | 3100 | 5500 | 2700 | 16000 | 70000 | 7500 | -- | -- |
| | 10/07/98 | 25.64 | 0 | 452.82 | 478.46 | 34 | 14 | 5000 | 1100 | 3100 | 14000 | 54000 | 6100 | -- | -- |
| | 01/15/99 | 30.92 | 0 | 447.54 | 478.46 | 34 | 14 | 3100 | ND | 1800 | 3800 | 41000 | 15000 | -- | -- |
| | 04/14/99 | 24.48 | 0 | 453.98 | 478.46 | 34 | 14 | 86 | 290 | 2200 | 7800 | 33000 | 39000 | -- | -- |
| | 07/19/99 | 28.46 | 0 | 450 | 478.46 | 34 | 14 | 3900 | 2500 | 3600 | 14000 | 48000 | 12000 | 16000 | -- |
| | 10/12/99 | 30.39 | 0 | 448.07 | 478.46 | 34 | 14 | 4200 | ND | 2300 | 1800 | 35000 | 22000 | 8300 | -- |
| | 01/24/00 | 23.43 | 0 | 455.03 | 478.46 | 34 | 14 | 260 | ND | 770 | 3200 | 13000 | 53000 | 42000 | -- |
| | 04/10/00 | 23.31 | 0 | 455.15 | 478.46 | 34 | 14 | 1070 | 241 | 2820 | 8850 | 35200 | 35600 | 40900 | -- |
| | 07/17/00 | 27.53 | 0 | 450.93 | 478.46 | 34 | 14 | 3570 | 525 | 3180 | 5660 | 29000 | 22500 | 21000 | -- |
| | 10/02/00 | 28.19 | 0 | 450.27 | 478.46 | 34 | 14 | 2100 | 31 | 2000 | 780 | 11000 | 25000 | 28000 | -- |
| | 01/08/01 | 29.85 | 0 | 448.61 | 478.46 | 34 | 14 | 3060 | 427 | 3040 | 4190 | 33600 | 24700 | 30900 | -- |
| | 04/03/01 | 24.98 | 0 | 453.48 | 478.46 | 34 | 14 | 660 | 10.8 | 304 | 356 | 5390 | 15200 | 19300 | -- |
| | 07/02/01 | 31.35 | 0 | 447.11 | 478.46 | 34 | 14 | 1200 | 58 | 1300 | 930 | 13000 | 25000 | 26000 | -- |
| | 10/08/01 | 32.69 | 0 | 445.77 | 478.46 | 34 | 14 | 500 | ND<10 | 570 | 130 | 6100 | 23000 | 22000 | -- |
| | 01/03/02 | 23.73 | 0 | 454.73 | 478.46 | 34 | 14 | 700 | 130 | 24 | 1000 | 9900 | 14000 | 12000 | -- |
| | 04/05/02 | 28.27 | 0 | 449.17 | 477.44 | 34 | 14 | 1100 | 180 | 220 | 1400 | 9800 | 16000 | 30000 | -- |
| | 07/02/02 | 29.71 | 0 | 448.75 | 478.46 | 34 | 14 | ND<250 | ND<250 | ND<250 | ND<500 | -- | 12000 | 12000 | ND<25000 |
| | 10/01/02 | 31.18 | 0 | 447.28 | 478.46 | 34 | 14 | ND<250 | ND<250 | ND<250 | ND<500 | -- | 12000 | 12000 | ND<25000 |
| | 12/30/02 | 21.62 | 0 | 456.84 | 478.46 | 34 | 14 | 330 | 170 | 870 | 4900 | -- | 18000 | 18000 | 23000 |
| | 05/02/03 | 23.11 | 0 | 455.35 | 478.46 | 34 | 14 | 280 | ND<50 | 880 | 1500 | -- | 15000 | 15000 | 19000 |
| | 07/01/03 | 24.89 | 0 | 453.57 | 478.46 | 34 | 14 | 120 | ND<100 | 180 | 880 | -- | 22000 | 22000 | 19000 |
| | 10/03/03 | 26.59 | 0 | 451.87 | 478.46 | 34 | 14 | 170 | ND<50 | 250 | 730 | -- | -- | 16000 | 20000 |
| | 01/08/04 | 21.92 | 0 | 456.54 | 478.46 | 34 | 14 | 250 | ND<100 | 770 | 1500 | -- | -- | 9700 | 17000 |
| | 04/15/04 | 23.59 | 0 | 454.87 | 478.46 | 34 | 14 | ND<25 | ND<25 | 36 | 100 | -- | -- | 3700 | 4600 |
| | 07/15/04 | 24.8 | 0 | 453.66 | 478.46 | 34 | 14 | ND<25 | ND<25 | ND<25 | ND<50 | -- | -- | 3400 | 2700 |
| | 12/08/04 | 29.13 | 0 | 449.33 | 478.46 | 34 | 14 | ND<50 | ND<50 | 250 | 140 | -- | -- | 13000 | 12000 |
| | 03/23/05 | 21.64 | 0 | 456.82 | 478.46 | 34 | 14 | 94 | ND<50 | 630 | 1200 | -- | -- | 6200 | 21000 |
| | 06/28/05 | 24.57 | 0 | 453.89 | 478.46 | 34 | 14 | 24 | 0.64 | 150 | 70 | -- | -- | 4700 | 6600 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
76 Station 4186
1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|---------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-4 | 04/03/01 | 31.63 | 0 | 445.3 | 476.93 | 45 | 35 | ND | ND | ND | ND | ND | 37.8 | 38.2 | -- |
| | 07/02/01 | 37.96 | 0 | 438.97 | 476.93 | 45 | 35 | ND | ND | ND | ND | ND | ND | 5.3 | -- |
| | 10/08/01 | 44.24 | 0 | 432.69 | 476.93 | 45 | 35 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 01/03/02 | 36.15 | 0 | 440.78 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | 100 | 10 | 8.5 | -- |
| | 04/05/02 | 37.64 | 0 | 439.29 | 476.93 | 45 | 35 | 0.5 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 4.1 | -- | -- |
| | 07/02/02 | 36.85 | 0 | 440.08 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 12 | 67 |
| | 10/01/02 | 38.54 | 0 | 438.39 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 9.8 | ND<50 |
| | 12/30/02 | 32.64 | 0 | 444.29 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 25 | ND<50 |
| | 05/02/03 | 31.4 | 0 | 445.53 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 4.1 | ND<50 |
| | 07/01/03 | 33.6 | 0 | 443.33 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 2.1 | ND<50 |
| | 10/03/03 | 37.63 | 0 | 439.3 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 9.1 | ND<50 |
| | 01/08/04 | 29.23 | 0 | 447.7 | 476.93 | 45 | 35 | 0.55 | ND<0.50 | 1.6 | 3.7 | -- | -- | 2.5 | ND<50 |
| | 04/15/04 | 29.8 | 0 | 447.13 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 5.2 | ND<50 |
| | 07/15/04 | 35.05 | 0 | 441.88 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 5.1 | ND<50 |
| | 12/08/04 | 35.1 | 0 | 441.83 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 3 | ND<50 |
| | 03/23/05 | 25.38 | 0 | 451.55 | 476.93 | 45 | 35 | ND<0.50 | ND<0.50 | 1.3 | 1.2 | -- | -- | 0.65 | ND<50 |
| | 06/28/05 | 28.67 | 0 | 448.26 | 476.93 | 45 | 35 | ND<0.50 | 0.15 | ND<0.50 | ND<1.0 | -- | -- | 0.23 | 34 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
 76 Station 4186
 1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethyl-benzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|----------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-5 | 04/03/01 | 31.75 | 0 | 444.76 | 476.51 | 47 | 37 | ND | 0.728 | ND | 0.993 | ND | 54.8 | 55.4 | -- |
| | 07/02/01 | 38.68 | 0 | 437.83 | 476.51 | 47 | 37 | ND | ND | ND | ND | ND | 88 | 94 | -- |
| | 10/08/01 | 46.31 | 0 | 430.2 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 37 | 54 | -- |
| | 01/03/02 | 36.55 | 0 | 439.96 | 476.51 | 47 | 37 | ND<0.50 | 0.59 | ND<0.50 | 0.91 | ND<50 | 51 | 53 | -- |
| | 04/05/02 | 37.83 | 0 | 438.68 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<0.50 | ND<50 | 37 | -- | -- |
| | 07/02/02 | 36.92 | 0 | 439.59 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 43 | ND<50 |
| | 10/01/02 | -- | -- | -- | 476.51 | 47 | 37 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 12/30/02 | -- | -- | -- | 476.51 | 47 | 37 | -- | -- | -- | -- | -- | -- | -- | -- |
| | 05/02/03 | 31.55 | 0 | 444.96 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 18 | ND<50 |
| | 07/01/03 | 33.83 | 0 | 442.68 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 46 | 73 |
| | 10/03/03 | 37.72 | 0 | 438.79 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 44 | 58 |
| | 01/08/04 | 29.21 | 0 | 447.3 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | 1.1 | 2.7 | -- | -- | 17 | ND<50 |
| | 04/15/04 | 30.05 | 0 | 446.46 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 37 | 57 |
| | 07/15/04 | 35.15 | 0 | 441.36 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 27 | 60 |
| | 12/08/04 | 35.33 | 0 | 441.18 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 39 | 62 |
| | 03/23/05 | 25.45 | 0 | 451.06 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | 0.51 | ND<1.0 | -- | -- | 4.5 | ND<50 |
| | 06/28/05 | 28.9 | 0 | 447.61 | 476.51 | 47 | 37 | ND<0.50 | ND<0.50 | ND<0.50 | ND<1.0 | -- | -- | 40 | 73 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS

76 Station 4186

1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|----------|-----------------|-----------------------|----------------------|-------------------------------|--------------------------|----------------------|------------------------|----------------|----------------|---------------------|----------------------|--------------|-------------------|-------------------|-------------------|
| U-6 | 01/03/02 | 33.99 | 0 | 444.39 | 478.38 | 45 | 35 | 36 | ND<25 | 260 | 450 | 5000 | ND<250 | ND<10 | -- |
| | 04/05/02 | 36.18 | 0 | 442.2 | 478.38 | 45 | 35 | 16 | ND<5.0 | 54 | ND<5.0 | 1300 | ND<25 | -- | -- |
| | 07/02/02 | 36.33 | 0 | 442.05 | 478.38 | 45 | 35 | 1.4 | ND<0.50 | 16 | ND<1.0 | -- | -- | 0.94 | 1100 |
| | 10/01/02 | 37.7 | 0 | 440.68 | 478.38 | 45 | 35 | 5.4 | ND<0.50 | 62 | ND<1.0 | -- | -- | 2.6 | 2000 |
| | 12/30/02 | 31.63 | 0 | 446.75 | 478.38 | 45 | 35 | ND<0.50 | ND<0.50 | 2.3 | ND<1.0 | -- | -- | ND<2.0 | 130 |
| | 05/02/03 | 31.49 | 0 | 446.89 | 478.38 | 45 | 35 | ND<0.50 | ND<0.50 | 1.8 | 1.7 | -- | -- | 82 | 150 |
| | 07/01/03 | 32.88 | 0 | 445.5 | 478.38 | 45 | 35 | 1.8 | ND<0.50 | 9.4 | 8.7 | -- | -- | 36 | 190 |
| | 10/03/03 | 36.54 | 0 | 441.84 | 478.38 | 45 | 35 | 140 | ND<100 | 940 | 560 | -- | -- | ND<400 | ND<10000 |
| | 01/08/04 | 30.45 | 0 | 447.93 | 478.38 | 45 | 35 | 29 | 32 | 90 | 89 | -- | -- | 27 | 3500 |
| | 04/15/04 | 29.48 | 0 | 448.9 | 478.38 | 45 | 35 | 19 | ND<2.5 | 91 | 53 | -- | -- | 16 | 2400 |
| | 07/15/04 | 34.3 | 0 | 444.08 | 478.38 | 45 | 35 | 150 | 5.7 | 970 | 560 | -- | -- | 24 | 8500 |
| | 12/08/04 | 34.8 | 0 | 443.58 | 478.38 | 45 | 35 | 16 | ND<2.5 | 28 | ND<5.0 | -- | -- | 10 | 2700 |
| | 03/23/05 | 25.08 | 0 | 453.3 | 478.38 | 45 | 35 | 2.7 | ND<0.50 | 9.6 | 4.8 | -- | -- | 2.5 | 960 |
| | 06/28/05 | 28.75 | 0 | 449.63 | 478.38 | 45 | 35 | b | 4.9 | b | 780 | -- | -- | 21 | 12000 |
| | U-7 | 01/03/02 | 32.43 | 0 | 446.31 | 478.74 | 45 | 35 | 93 | ND<10 | 35 | 73 | 3100 | 140 | 130 |
| 04/05/02 | | 34.06 | 0 | 444.68 | 478.74 | 45 | 35 | 22 | 0.53 | 2.6 | ND<0.50 | 630 | 45 | -- | -- |
| 07/02/02 | | 35.28 | 0 | 443.46 | 478.74 | 45 | 35 | 21 | ND<0.50 | 6.9 | ND<1.0 | -- | -- | 60 | 1100 |
| 10/01/02 | | 37.7 | 0 | 441.04 | 478.74 | 45 | 35 | 11 | ND<0.50 | 3.1 | ND<1.0 | -- | -- | 25 | 1700 |
| 12/30/02 | | 31.93 | 0 | 446.81 | 478.74 | 45 | 35 | 41 | 5.3 | 32 | 13 | -- | -- | 34 | 4600 |
| 05/02/03 | | 31.81 | 0 | 446.93 | 478.74 | 45 | 35 | 17 | 2.7 | 14 | 5.1 | -- | -- | 42 | 3000 |
| 07/01/03 | | 33.47 | 0 | 445.27 | 478.74 | 45 | 35 | 11 | 0.53 | 8 | 1.5 | -- | -- | 35 | 2300 |
| 10/03/03 | | 35.84 | 0 | 442.9 | 478.74 | 45 | 35 | 30 | ND<5.0 | 41 | ND<10 | -- | -- | 53 | 6500 |
| 01/08/04 | | 30.35 | 0 | 448.39 | 478.74 | 45 | 35 | 4 | ND<1.0 | 4.2 | 8.7 | -- | -- | 56 | 1600 |
| 04/15/04 | | 29.03 | 0 | 449.71 | 478.74 | 45 | 35 | 22 | 1.3 | 64 | 40 | -- | -- | 57 | 3600 |
| 07/15/04 | | 33.52 | 0 | 445.22 | 478.74 | 45 | 35 | 15 | 1.2 | 59 | 57 | -- | -- | 50 | 4700 |
| 12/08/04 | | 34.68 | 0 | 444.06 | 478.74 | 45 | 35 | 26 | 1.9 | 63 | 27 | -- | -- | 52 | 5800 |
| 03/23/05 | | 24.49 | 0 | 454.25 | 478.74 | 45 | 35 | 18 | 1.3 | 42 | 14 | -- | -- | 39 | 5600 |
| 06/28/05 | | 28.83 | 0 | 449.91 | 478.74 | 45 | 35 | 16 | 1.1 | 35 | 10 | -- | -- | 45 | 5400 |

Table 1

HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS
76 Station 4186
1771 First Street, Livermore, CA

| Well No. | Monitoring Date | Depth to Water (feet) | LPH Thickness (feet) | Ground-water Elevation (feet) | Surface Elevation (feet) | Depth of Well (feet) | Depth of Screen (feet) | Benzene (µg/l) | Toluene (µg/l) | Ethylbenzene (µg/l) | Total Xylenes (µg/l) | TPH-G (µg/l) | MTBE 8021B (µg/l) | MTBE 8260B (µg/l) | TPPH 8260B (µg/l) |
|---------------|---|--------------------------|-------------------------|----------------------------------|--|-------------------------|---------------------------|-------------------|-------------------|------------------------|-------------------------|-----------------|----------------------|----------------------|----------------------|
| LEGEND | | | | | | | | | | | | | | | |
| -- | not analyzed, measured, or collected | | | PCE | tetrachloroethene | | | | | | | | | | |
| LPH | liquid-phase hydrocarbons | | | TBA | tertiary butyl alcohol | | | | | | | | | | |
| Trace | less than 0.01 foot of LPH in well | | | TCA | trichloroethane | | | | | | | | | | |
| µg/l | micrograms per liter | | | TCE | trichloroethene | | | | | | | | | | |
| mg/l | milligrams per liter | | | TPH-G | total petroleum hydrocarbons with gasoline distinction | | | | | | | | | | |
| ND | not detected | | | TPH-D | total petroleum hydrocarbons with diesel distinction | | | | | | | | | | |
| < | not detected at or above laboratory detection limit | | | TPPH | total purgeable petroleum hydrocarbons | | | | | | | | | | |
| TOC | top of casing | | | TRPH | total recoverable petroleum hydrocarbons | | | | | | | | | | |
| BTEX | benzene, toluene, ethylbenzene, and (total) xylenes | | | TAME | tertiary amyl methyl ether | | | | | | | | | | |
| DIPE | di-isopropyl ether | | | 1,1-DCA | 1,1-dichloroethane | | | | | | | | | | |
| ETBE | ethyl tertiary butyl ether | | | 1,2-DCA | 1,1-dichloroethane (same as EC, ethylene dichloride) | | | | | | | | | | |
| MTBE | methyl tertiary butyl ether | | | 1,1-DCE | 1,1-dichloroethene | | | | | | | | | | |
| PCB | polychlorinated biphenyls | | | 1,2-DCE | 1,2-dichloroethene (cis- and trans-) | | | | | | | | | | |

ALAMEDA COUNTY
HEALTH CARE SERVICES

AGENCY
DAVID J. KEARS, Agency Director



COPY

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

July 15, 2005

Shelby Lathrop
ConocoPhillips
76 Broadway
Sacramento, CA 95818

Thomas and Celine Vadakkekunnel
4481 Peacock Court
Dublin, CA 94568

Subject: Fuel Leak Case No. RO0000436, Unocal #4186, 1771 First Street, Livermore, CA

Dear Ms. Lathrop:

Alameda County Environmental Health (ACEH) staff has reviewed the case file and the documents entitled, "Work Plan – Site Assessment," dated May 23, 2005, and "Quarterly Summary Report – First Quarter 2005," dated April 29, 2005, both prepared for the above referenced site on behalf of ConocoPhillips by ATC Associates, Inc. The work plan proposed the installation of one monitoring well in a location that is upgradient from the USTs and dispensers. ACEH concurs with the installation of an upgradient well; however, please see the technical comments below regarding the proposed depth of the upgradient well. ACEH is concerned with the adequacy of the characterization of the lateral and vertical extent of contamination for the site and is requesting additional investigation as described in the technical comments below. Please submit a revised Work Plan that includes additional investigation to address the technical comments below. Based on staff review of the documents referenced above, we request that you address the following technical comments, perform the proposed work, and send us the reports described below.

TECHNICAL COMMENTS

1. **Site Background and Activity.** The Site Background and Activity section of the "Work Plan-Site Assessment," dated May 23, 2005 indicates that six soil samples were collected beneath the fuel dispensers and along the product delivery piping on June 6, 1996 during dispenser and piping replacement activities. Analytical results for the soil samples were reported as not detected. A soil gas survey conducted on September 10, 1997 found an area of elevated concentrations of petroleum hydrocarbons in soil vapor, localized around the UST complex.
→ We do not have records in our files of further investigations, repairs, or removal of the USTs and associated piping. Please provide additional background information on the USTs and piping to document that the cause of elevated concentrations of petroleum hydrocarbons detected in soil vapor was located and repaired. This information is to be provided in the Revised Work Plan requested below.
2. **Lateral Extent of Contamination within Gravel Layer.** ACEH is concerned that the lateral extent of contamination within a sand and gravel layer that is typically encountered at depths

→ of 35 to 40 feet bgs has not been defined by the existing monitoring wells installed at the site. The layer is an approximately 5-foot thick layer consisting of gravel or sand with gravel; the top of the layer is observed in site borings at depths of approximately 34 to 37 feet bgs. This gravel layer is the uppermost coarse-grained layer that is fully submerged. The highest PID reading observed in boring U-3 was the lowermost soil sample collected within the gravel layer at approximately 38 feet bgs. A shallower sand layer that typically extends to a depth of approximately 24 feet bgs is above the water table or only the base of the layer is saturated.

Six ozone sparge points were installed at depths of 42 to 45 feet bgs, apparently to remediate this gravel layer typically encountered at depths of approximately 35 to 40 feet bgs. Monitoring wells U-6 and U-7, which are in cross gradient locations from the USTs, are the only monitoring wells at the site that appear to monitor the gravel layer. All remaining monitoring wells at the site are screened above the gravel layer, at depths less than 35 feet bgs. → Therefore, the extent of groundwater contamination within this gravel layer zone has not been defined and the effectiveness of the remedial system is not being monitored within this layer. Additional investigation is required to define and monitor the lateral extent of contamination within this gravel layer. At a minimum, monitoring wells are to be installed within this sand and gravel layer near the locations of existing wells U-2, U-3, and U-5. ← The use of grab groundwater samples collected along transects oriented perpendicular to groundwater flow should be considered prior to installation of monitoring wells. Please include your plan to characterize the lateral extent of contamination within the Revised Work Plan requested below. Cross sections that show the relationship between site stratigraphy and existing and proposed sampling locations are required in the Revised Work Plan.

3. **Source Area Contamination.** Please use the information that will be provided in response to comment 1, to design and propose an investigation that will define the extent of soil contamination in the source area. Please include your proposal in the Revised Work Plan requested below.
4. **Vertical Extent of Contamination.** The vertical extent of contamination has not been defined for the site. The highest PID reading was observed in the lowermost soil sample collected in boring U-3. Please propose one additional soil boring or CPT boring within the source area to collect soil and groundwater samples beneath the sand and gravel layer typically encountered at depths of 35 to 40 feet bgs.
5. **Proposed Upgradient Monitoring Well.** The "Proposed Scope of Work," on Page 3 of the Work Plan indicates that one monitoring well will be installed to a depth of approximately 45 feet below ground surface (bgs). In contrast, the "Monitor Well Installation and Soil Sampling Procedures," on Page 4 indicates that the well screen will extend from approximately 25 to 35 feet bgs. Please clarify using a cross section in the Revised Work Plan requested below, the proposed target interval for the proposed upgradient well.
6. **Remedial System Performance.** The ozone injection system incurred a large amount of downtime during the first quarter of 2005. ACEH concurs that more frequent site visits are needed after the ozone sparge system is repaired. ACEH also concurs with the proposed engineering system review during the second quarter 2005.

TECHNICAL REPORT REQUEST

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

- **August 15, 2005** - Quarterly Monitoring Report for the Second Quarter 2005
- **August 30, 2005** – Revised Work Plan
- **November 15, 2005** - Quarterly Monitoring Report for the Third Quarter 2005
- **February 15, 2006** - Quarterly Monitoring Report for the Fourth Quarter 2005

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.

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.

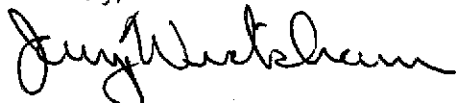
Shelby Lathrop
Thomas and Celine Vadakkekunel
July 15, 2005
Page 4

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.

Sincerely,



Jerry Wickham, P.G.
Hazardous Materials Specialist

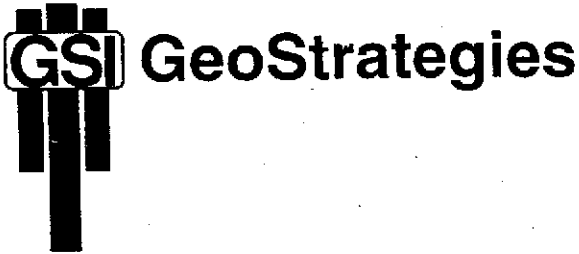
cc: Shelby Lathrop
Shaw Environmental
4005 Port Chicago Highway
Concord, CA 94520

David Evans
ATC Associates, Inc.
6602 Owens Drive, Suite 100
Pleasanton, CA 94588

Colleen Winey, QIC 80201
Zone 7 Water Agency
100 North Canyons Parkway
Livermore, CA 94551

Danielle Stefani
Livermore-Pleasanton Fire Department
3560 Nevada Street
Pleasanton, CA 94566

Donna Drogos, ACEH
Jerry Wickham, ACEH
File



Gas bond

PRODUCT LINE REPLACEMENT REPORT

for
Unocal Service Station #4186
1771 First Street
Livermore, California

Project No. 6797.01

Prepared for:

Unocal Corporation
P.O. Box 5155
San Ramon, California 94583

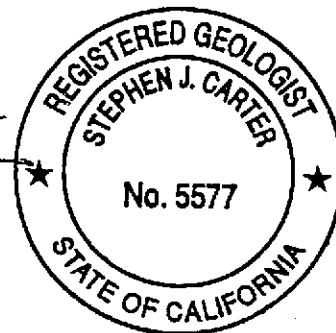
Prepared by:

GeoStrategies
6747 Sierra Court, Suite G
Dublin, California 94568

Barbara Sieminski
Project Geologist

Greg Gurs
Project Manager

Stephen J. Carter
Senior Geologist
R.G. #5577



August 7, 1996

TABLE OF CONTENTS

| | |
|---|---|
| 1.0 INTRODUCTION | 1 |
| 2.0 SITE DESCRIPTION | 1 |
| 3.0 PRODUCT LINE REPLACEMENT ACTIVITIES | 1 |
| 4.0 LABORATORY ANALYSIS AND RESULTS | 2 |
| 5.0 SOIL DISPOSAL | 3 |
| 6.0 SUMMARY AND CONCLUSIONS | 3 |
| 7.0 RECOMMENDATIONS | 4 |
| 8.0 LIMITATIONS | 4 |

TABLES

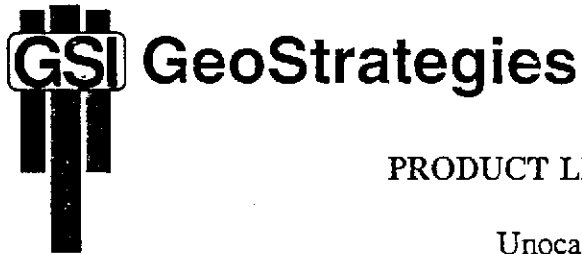
Table 1: Soil Analytical Results

FIGURES

Figure 1. Vicinity Map
Figure 2. Soil Concentration Map

APPENDICES

Appendix A: GSI Methods and Procedures
Appendix B: Laboratory Analytical Reports and Chain-of-Custody Records
Appendix C: Soil Disposal Confirmation Sheet



PRODUCT LINE REPLACEMENT REPORT

for

Unocal Service Station No. 4186
1771 First Street
Livermore, California

Project No. 6797.01

1.0 INTRODUCTION

At the request of Unocal Corporation (Unocal), GeoStrategies (GSI) has prepared this report documenting the results of environmental activities associated with the product line replacement at Unocal Service Station No. 4186 located at 1771 First Street in Livermore, California. The purpose of the environmental work performed was to assess the soil condition beneath the product lines. The scope of work included: sampling and analyzing the soil from the product line trenches and soil stockpile; evaluating soil disposal options; and preparing a report documenting the work.

The scope of work described in this report is intended to comply with the State of California Water Resources Control Board's *Leaking Underground Fuel Tanks (LUFT) Manual*, the Regional Water Quality Control Board (RWQCB) *Tri-Regional Board Staff Recommendations for Preliminary Investigation and Evaluation of Underground Tank Sites*, and Alameda County Health Care Services Agency (ACHCSA) guidelines.

2.0 SITE DESCRIPTION

Unocal Service Station No. 4168 is located on the southwestern corner of the intersection of 1st and South "N" Streets in Livermore, California (Figure 1). Two 10,000-gallon gasoline underground storage tanks (USTs) are located in the common pit in the eastern portion of the site. Two service islands were located northwest of the UST complex (Figure 2).

3.0 PRODUCT LINE REPLACEMENT ACTIVITIES

Field work performed by GSI personnel at the site was conducted in accordance with the GSI Field Methods and Procedures (Appendix A), and the Site Safety Plan dated June 5, 1996.

On June 6, 1996, a GSI geologist was present at the subject site to collect soil samples from the product line trenches. Product line replacement was performed by Paradiso Mechanical, Inc. of San Leandro, California (Paradiso). Approximately 100 feet of the former product lines were uncovered and removed from the dispenser island area. Product dispensers were also removed. Product line trenches were approximately 3 to 6 feet wide and 3 feet deep. Locations of the product line trenches are shown on Figure 2. The former product lines consisted of 2-inch diameter fiberglass piping. New double-contained fiberglass product lines are to be installed at the site.

Soil in the product line area consisted of dark brown sandy gravel with silt. Seven soil samples (PL1-3 through PL7-3) were collected from the bottom of the product line trenches at a depth of approximately 3 feet below ground surface (bgs). Soil sample PL5-3 exhibited a slight hydrocarbon odor. Therefore, soil was excavated from 3 to 4 feet bgs and sample PL5-4 was collected to evaluate the vertical extend of possible hydrocarbon impact. Soil sample locations are shown on Figure 2.

Approximately 30 cubic yards of backfill material and native soil were removed from the product line trenches. This soil was stockpiled onsite, covered with plastic sheeting pending disposal. Four soil samples were collected from arbitrary locations in the soil stockpile and submitted to the laboratory for compositing and analysis as sample SP-(A-D).

4.0 LABORATORY ANALYSIS AND RESULTS

Soil samples collected during this investigation were delivered under chain-of-custody to Sequoia Analytical of Redwood City, California (ELAP #1210). The samples were analyzed for total petroleum hydrocarbons as gasoline (TPHg) and gasoline constituents benzene, toluene, ethylbenzene and xylenes (BTEX) using Environmental Protection Agency (EPA) Method 8015Mod/8020. In addition, the composite soil stockpile sample was analyzed for total and soluble lead using EPA Method 6010. Copies of the laboratory analytical reports and chain-of-custody records are included in Appendix B.

TPHg and BTEX were not detected in any soil samples collected from the product line trenches. Gasoline hydrocarbons (300 parts per million [ppm] TPHg, 0.77 ppm ethylbenzene and 4.9 ppm xylenes) were detected in composite stockpile sample SP-(A-D). Total lead was detected in this sample at a concentration of 59 ppm and the soluble lead concentration was 3.0 ppm. The laboratory analytical results of the soil samples collected during this investigation are summarized in Table 1 and depicted on Figure 2.

5.0 SOIL DISPOSAL

On July 3, 1996, the soil generated during product line replacement and construction activities (419.27 tons) was removed from the site and transported to Forward by Manly & Sons Trucking Inc. A copy of the disposal confirmation sheet is included in Appendix C.

6.0 SUMMARY AND CONCLUSIONS

The results of this phase of the environmental work at the subject site are presented below:

- Analytical results of the soil samples collected from the product line trenches indicated that soil beneath the former product lines has not been impacted by petroleum hydrocarbons.
- The former product lines will be replaced with the new double-contained lines.

7.0 RECOMMENDATIONS

We recommend a copy of the report be forwarded to:

Mr. Robert Weston
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, 2nd Floor
Alameda, California 94502

8.0 LIMITATIONS

This report was prepared in accordance with generally accepted standards of environmental geological and engineering practice in California at the time this investigation was performed. This assessment was conducted solely for the purpose of evaluating environmental conditions of the soil with respect to gasoline hydrocarbons at the site. No soil engineering or geotechnical references are implied or should be inferred.

Table 1. Soil Analytical Results - Unocal Service Station #4168, 1771 First Street, Livermore, California.

| Sample ID | Depth (ft) | Date | Analytic Method | TPHg | Benzene | Toluene | Ethylbenzene | Xylenes | Total Lead | Soluble Lead |
|------------------------------------|------------|----------|-----------------|-----------------|---------|---------|--------------|---------|------------|--------------|
| | | | | ←-----ppm-----> | | | | | | |
| Product Line Trench Samples | | | | | | | | | | |
| PL1-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL2-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL3-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL4-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL5-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL5-4 | 4 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL6-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| PL7-3 | 3 | 06/06/96 | 8015/8020 | <1.0 | <0.0050 | <0.0050 | <0.0050 | <0.0050 | — | — |
| Stockpile Sample | | | | | | | | | | |
| SP-(A-D) | — | 06/06/96 | 8015/8020/6010 | 300 | <0.0050 | <0.0050 | 0.77 | 4.9 | 59 | 3.0 |

EXPLANATION:

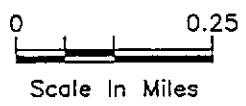
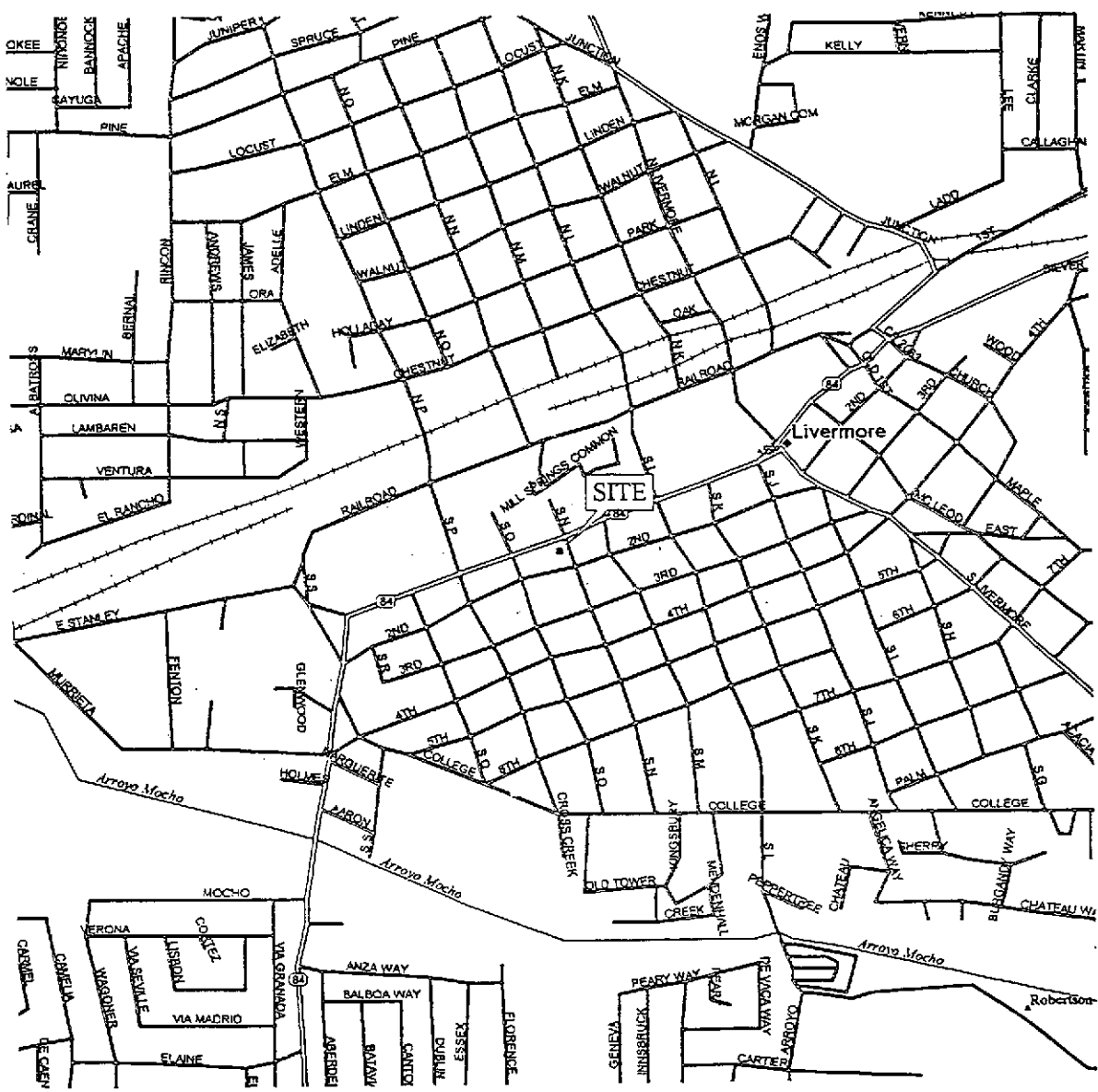
TPHg - Total Petroleum Hydrocarbons as Gasoline
 ft - Feet
 ppm - Parts per million
 — - Not analyzed/not applicable

ANALYTICAL METHODS:

8015 - EPA Method 8015Mod for TPHg
 8020 - EPA Method 8020 for BTEX
 6010 - EPA Method for Lead

ANALYTICAL LABORATORY:

Sequoia Analytical of Redwood City, California (ELAP #1210).



Source: Street Atlas USA, Delorme (1995).



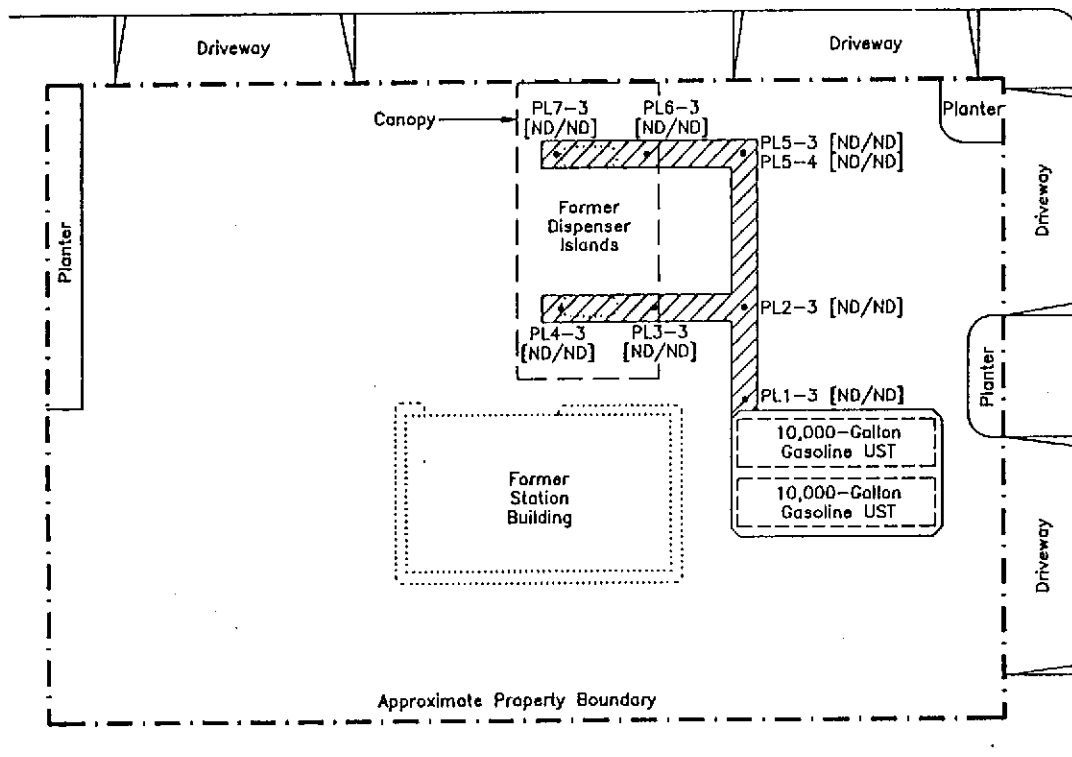
VICINITY MAP
 Unocal Service Station No. 4186
 1771 First Street
 Livermore, California

FIGURE


1

| | | | |
|--------------------|-----------------------------------|--------------|---------------|
| JOB NUMBER 6797 | REVIEWED BY <i>[Signature]</i> | DATE 6/96 | REVISION DATE |
|--------------------|-----------------------------------|--------------|---------------|

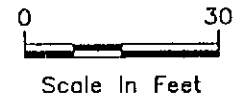
FIRST STREET



EXPLANATION:

- PL7-3 • Soil Sample Location
-  Product Line Trench
- [ND/ND] TPHg/Benzene Concentrations Measured In Parts Per Million
- ND Not Detected

'N' STREET



Source: Figures Modified From Drawing Provided By Unocal.

SOIL CONCENTRATION MAP
 Unocal Service Station No. 4186
 1771 First Street
 Livermore, California

FIGURE
2



JOB NUMBER
6797

REVIEWED BY
DS

DATE
7/96

REVISION DATE