



76 Broadway  
Sacramento, California 95818

**RECEIVED**

9:37 am, Dec 02, 2008

Alameda County  
Environmental Health

December 1, 2008

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

Re: **Transmittal of Work Plan - Additional Assessment**  
**76 Service Station #5760**  
**376 Lewelling Boulevard**  
**San Lorenzo, California**

Dear Ms. Jakub:

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:

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

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

Sincerely,

Eric G. Hetrick  
Site Manager  
Risk Management & Remediation

Attachment

December 1, 2008

Ms. Barbara J. Jakub, P.G.  
Hazardous Materials Specialist  
Alameda County Health Care Services Agency  
Environmental Protection  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**RE: Work Plan – Additional Assessment  
76 Service Station No. 5760  
376 Lewelling Boulevard  
San Lorenzo, California**



Dear Ms. Jakub:

Delta Consultants (Delta), on behalf of Conoco Phillips Company (COP), has prepared a work plan for the site referenced above, addressing comments contained in a letter to COP from Alameda County Health Care Services Agency (ACHCSA) dated July 2, 2008 (**Attachment A**).

#### **SITE DESCRIPTION**

The site is located at the southeast corner of the intersection of Lewelling Boulevard and Usher Street in San Lorenzo California (**Figures 1**). The site is currently an active service station with two dispenser islands, one underground waste-oil tank, two underground gasoline storage tanks (USTs), and a station building with two mechanic's bays (**Figure 2**).

The ACHCSA, in the July 2, 2008 letter requested "that you [COP] address the following technical comments, perform the proposed work, and send us the technical reports described below."

## **TECHNICAL COMMENTS**

The following sections correspond to the numbered technical comments in the ACHCSA July 2, 2008 letter.

### **1. MONITORING WELL ABANDONMENT AND REPLACEMENT REPORT**

Delta previously submitted a documented titled *Monitoring Well Abandonment and Replacement Report* dated August 24, 2007. The ACHCSA identified a number of items that appeared to be missing from the report. Delta submitted a *Monitoring Well Destruction and Replacement Addendum Report* dated September 8, 2008 providing the information requested by the ACHCSA. A copy of the addendum report is provided as **Attachment B**.

### **2. WELL SURVEY**

#### **WELLS**

The ACHCSA identified that the *Sensitive Receptor Report* submitted on August 22, 2006 did not show the location of the wells identified by the California Department of Water Resources on the report map. The ACHCSA requested that the well locations be plotted a one-mile radius map. The ACHCSA point out that "The East Bay Plain Groundwater Basin Beneficial Use Evaluation Report (CARWQCB June 1999) indicates that there may have been active irrigation, municipal and domestic wells down-gradient of the site. Please provide this information in the Work Plan requested below." These wells are shown in **Attachment C**.

The initial well survey appears to have been performed in 1992 (GeoStrategies, June 1992). Well data was obtained from the Alameda County Flood Control Water Conservation District. Six wells were located within a ½-mile radius of the site. A well location map and data table are contained in **Attachment C**. All six

wells were classified as irrigation and range in depth from 25 to 616 feet deep. One well (#1) was located immediately adjacent to the station.

A second well survey was performed by Delta in 2006. Department of Water Resources files were again reviewed. Delta has prepared a map showing the location of all wells identified from California Department of Water Resources data within one mile of the site (**Attachment C**). The nearest well to the site appears to be approximately 1,800 feet to east. The six wells identified on the 1992 survey were not reported in the most recent survey data. Wells designated 32 and 33 on the survey map are reportedly owned by the San Lorenzo High School. Delta has reviewed the East Bay Plain Groundwater Basin Beneficial Use Evaluation Report. **Attachment C** contains copies of maps from the Report. It appears that a number of irrigation wells are plotted southwest, down-gradient of the site. The exact location of the wells is difficult to determine based on the map scale.

### **SAN LORENZO CREEK**

The San Lorenzo Creek is located approximately 500 feet down-gradient (south) of the site. The Creek lies within an approximately 20-foot deep concrete channel. Shallow groundwater occurs at approximately 13 to 18 feet beneath the site and channel area. Site groundwater monitoring data indicates it is unlikely that petroleum hydrocarbons or fuel oxygenates could travel the 500 feet to the channel. TPHg, benzene, and methyl tertiary butyl ether (MTBE) are below the laboratory's reporting limits approximately 75 feet down-gradient of the site (TRC Quarterly Monitoring Report, 3Q08).

### **3. REGIONAL GEOLOGIC AND HYDROGEOLOGIC SETTING**

The following sections provide the data requested under item three of the ACHCSA letter dated July 2, 2008.

## **REGIONAL GEOLOGY/ STRATIGRAPHY**

The site is located on the East Bay Plain, a gently sloping surface extending from the foothills to the east towards the edge of San Francisco Bay (**Figure 3**). The site area is underlain by Holocene-age alluvial deposits consisting of unconsolidated, poorly graded, permeable fine sands, silts and clays with a few thin beds of coarse sand. Sand and gravel stream channel deposits are mapped along the alignment of San Lorenzo Creek approximately 500 feet south of the site.

## **REGIONAL HYDROLOGY**

The site is located on East Bay Plain Subbasin, which is bounded to west by the San Francisco Bay. The site is located in the northern portion of the San Lorenzo groundwater subarea (**Figure 4**). The following is an excerpt from the East Bay Plain Groundwater Basin Beneficial Use Evaluation Report.

The East Bay Plain is an elongated, northwest trending flat alluvial plain encompassing about 115 square miles. The East Bay Plain, as defined by DWR (1980), is bounded on the west by San Francisco Bay, by San Pablo Bay to the north, and by the Hayward Fault to the east.

San Lorenzo and San Leandro Sub-Areas are very similar in hydrogeologic characteristics, but can be separated based in the surface trace of the junction between the San Leandro and San Lorenzo alluvial fans. The Sub-Areas are primarily filled with alluvial fans, but unlike the Sub-Areas to the north, the Yerba Buena Mud extends west into the San Lorenzo and San Leandro Sub-Areas. It has been proposed that a clay layer forms an extensive east-west aquitard across this basin. Historically there were municipal supply wells in these Sub-Areas that produced from upper Alameda gravels. These Sub-Areas were distinct from the Niles Cone basin to the south, in that the alluvial fans are finer-grained and produce less groundwater. The City of Hayward has emergency supply wells in the San Lorenzo Sub-Area. Also EBMUD has drilled test wells in the San Lorenzo Sub-Area to explore the potential for aquifer storage of injected surface water.

Groundwater was a major part of the water supply for the East Bay during the period from 1860 to 1930, before Sierra water was imported to the area. Groundwater may have supplied up to 15,000,000 gallons of water per day for short periods, and was the

sole supply for months on end during times of drought. Approximately half of the groundwater was pumped from the study area. Most of this was produced from a band of wells stretching from the southeastern end of the Alameda Island to 98<sup>th</sup> Street in Oakland. Groundwater was used widely for municipal supply. It is estimated that 15,000 wells were drilled in the Basin between 1860 and 1950. Most of these wells were less than 50 feet deep, but many were 200 to 500 feet.

### **SITE GEOLOGY**

The site is underlain by interlayered clay (Unified Soil Classification Symbol CL), silt (ML), clayey and silty sand (SC and SM), well graded sand (SW), and poorly graded sand (SP) to a depth of approximately 36 feet, the maximum depth explored. Geologic cross sections are provided as **Figure 5**. Historic geologic cross sections are presented as **Attachment D**; boring logs are included as **Attachment E**.

### **SITE HYDROGEOLOGY**

The site groundwater is currently monitored by nine monitoring wells (U-1R, U-2, U-3R, and U-4 through U-9). The monitoring wells are typically screened from 15 to 30 feet bgs. Depth to groundwater in the monitoring wells on August 29, 2008 ranged from 15.32 to 17.93 feet below top of casing. Groundwater flow is typically to the west-southwest at very shallow gradient of 0.004. TRCs most recent quarterly monitoring report is provided in **Attachment F**.

A soil sieve/hydrometer sample and permeability test was performed in August 1990 (GeoStrategies, November 1990). The sample from boring U-2 at 30 feet bgs was classified in the boring log as clay. The laboratory determined a permeability of  $6.0 \times 10^{-8}$  centimeters per second.

A three-hour step-drawdown and 24-hour constant-rate discharge test were performed utilizing well U-1 as the extraction well on February 2 through 4, 1994. The step-drawdown test indicated a sustainable yield of 2 gallons-per-minute (gpm). During the constant rate discharge test, water level in the pumping well was 3.44 feet. Drawdown was measured in observation wells U-2, U-3, U-7, and U-8 at 0.11 feet, 0.18 feet, 0.07 feet, and 0.14 feet, respectively. Monitoring wells U-2 and U-3 are located approximately 50 feet from the extraction well. Hydraulic conductivity values were

calculated to range from 175.4 gallon per day per square foot (gpd/ft<sup>2</sup>) to 350 gpd/ft<sup>2</sup> (1.6 x 10<sup>-2</sup> centimeters per second).

### **RELEASE HISTORY**

In November and December 1987, two 10,000-gallon gasoline underground storage tanks (USTs) and one 280-gallon waste oil UST were removed from the site. The gasoline tank pits were over excavated to a depth of 18-20 feet bgs. Four soil samples were taken from the resulting pit, and were reported to contain petroleum hydrocarbons ranging from 12.7 to 1,620 ppm. Soil samples taken from beneath the waste oil UST did not contain analytes above the laboratory reporting limit. Groundwater was encountered at 20 feet bgs. A groundwater sample from the pit was reported to contain petroleum hydrocarbons at a concentration of 550,000 ppb.

In February 1988, one groundwater monitoring well (U-1) was installed immediately west of the Fuel USTs (**Figure 2**). Floating product was observed in the well and the results of laboratory analysis indicated that the groundwater sample contained 93,000 parts per billion (ppb) of low boiling hydrocarbons (GeoStrategies, April 1994).

### **SOURCE ZONE**

Four soil samples collected from beneath from the limits of the UST excavation in 1987, contained petroleum hydrocarbons ranging in concentration from 12.7 to 1,620 parts per million (ppm). GeoStrategies in the Remedial Action Plan dated April 21, 1994, state; "Vadose soil containing gasoline range hydrocarbons has been excavated from beneath the former gasoline USTs (approximately 13 feet bgs) to groundwater (approximately 18 to 20 feet bgs). Based on historical groundwater data and laboratory results, soil containing gasoline range hydrocarbons is limited to the groundwater fluctuation zone/capillary fringe adjacent to the western portion of the USTs."

### **PLUME DEVELOPEMENT**

Petroleum hydrocarbons migrated from the former USTs through the vadose zone and into the shallow groundwater at a depth of approximately 20 feet bgs. The petroleum hydrocarbons were found floating on the groundwater in well U-1 in 1988. The petroleum hydrocarbons then dissolved into the groundwater and began to migrate down-gradient to the southwest.

The historic highest maximum concentrations of TPHg were reported in wells U-1 (93,000 ppb on February 9, 1988), U-3 (160,000 ppb on March 5, 1992) and U-6 (16,000 on September 7, 1994) located at and down-gradient of the source area. Highest concentrations of benzene were reported in wells U-1 (5,200 ppb on June 9, 1994), U-3 (6,100 ppb on June 9, 1994) and U-6 (160 ppm on August 6, 1992). Toluene, ethyl-benzene and total xylenes have been found at elevated levels in U-1 and U-3, similar to benzene.

Currently, U-1R, U-3R, and U-6 are the only wells containing levels of TPHg and BTEX compounds above the laboratory reporting limit. TPHg is currently present in U-1R, U-3R and U-6 at concentrations of 35,000 ppb, 1,500 ppb, and 120 ppb, respectively. Benzene is not currently present in any wells, although ethyl-benzene and total xylenes remain in wells U-1R at concentrations of 3000 ppb and 8900 ppb and U-3R at 100 ppb and 51 ppb respectively. Historic groundwater data is provided in **Attachment F**.

No analytes exist in off-site down-gradient wells U-9, U-8 or U-7. The horizontal extent of the plume seems to be delineated at well U-7 in the down-gradient direction.

### **PREFERENTIAL PATHWAYS**

Groundwater movement is primarily through sand layers (see Geologic Cross-Sections, **Figure 5**). Natural groundwater flow has carried dissolved petroleum hydrocarbons approximately 75 feet down-gradient to the southwest.

Underground utility trenches such as on-and off-site sewer, water, storm drain, telephone, and electric lines are not anticipated to have acted as preferential pathways due to the release of contaminants from the base of the UST pit at a depth of approximately 13 feet bgs. A complete preferential pathway assessment will be completed for submittal.

### **THREAT TO POTENTIAL RECEPTORS**

In November 2003, COP advanced five borings (GP-1 through GP-5, **Figure 2**) as part of a internal site baseline assessment. Soil samples were collected and analyzed from depths of 7 to 20 feet bgs. TPHg, BTEX compounds, fuel oxygenates, and ethanol were reported in only one of seven soil samples. TPHg was reported at 1,600 milligrams per kilogram (mg/kg) in the 19.5-foot sample of boring GP-4 located adjacent to the fuel



UST. TPHg was reported in the groundwater sample from adjacent well U-1R at 35,000 micrograms per liter ( $\mu\text{g/L}$ ).

### DERMAL CONTACT

There is no indication of near surface impacted soil within the range of normal construction excavations. A comparison of site data and Environmental Screening levels (ESLs) for direct exposure for site excavation worker exposure is provided in the following table;

	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA
Max. Site (1)	1,600	<1.3	<01.3	26	130	<1.3	<6.3
ESL (2)	4,200	12	650	210	420	2,800	320,000

All values in mg/kg

- (1) Maximum soil concentrations from November 2003 borings (see **Attachment F**)
- (2) Table K-3 Direct Exposure Soil Screening Levels Construction/Trench Worker Exposure Scenario; Interim Final - November 2007 (May 2008 revision); Final Screening Level (lowest composite of individual screening levels)

Maximum soil concentrations are all below the corresponding ESLs. Current risk of soil contact with construction/trench workers appears to be acceptable.

### SOIL INHALATION

No ESLs exist for soil concentrations related to risk of indoor or outdoor inhalation. The Regional Water Quality Control Board (RWQCB) recommends direct measurement of soil vapor concentrations. Benzene, a carcinogen, is the critical parameter in evaluating vapor inhalation risk. Benzene was not reported in any of the recent soil samples, thus the risk to human health from the current site conditions appears to be low.

### LEACHING TO GROUNDWATER

The site is located in the East Bay Groundwater Basin, which is classified as having a potential beneficial use. Groundwater beneath the site is of poor quality due to high total dissolved solids (TDS). Well purge monitoring found groundwater conductivities of 1012 micro Siemens per centimeter (uS/cm), 1038 uS/cm, 934 uS/cm, and 664 uS/cm for wells U-1R, U-3R, U-6, and U-8, respectively. There is no exact relationship between electrical conductivity as uS/cm and total dissolved solids as parts per million (ppm). However, a rough comparison is obtained by multiplying the electrical conductivity by 0.5 to obtain a TDS value in ppm or mg/L (<http://www.appslab.com.au/salinity.htm>). This results in site TDS concentrations of up to 519 mg/L, which exceeds the secondary drinking water limit for TDS of 500 mg/L.

A comparison of site data and ESLs for leaching of shallow soil to non-drinking water supply and potential source of drinking water is provided in the following table;

	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA
Max. Site (1)	1,600	<1.3	<1.3	26	130	<1.3	<6.3
ESL (2)	83	0.044	2.9	3.3	2.3	0.023	0.075

All values in mg/kg

- (1) Maximum soil concentrations from November 2003 borings (see **Attachment G**).
- (2) Table C-2 Environmental Screening Levels (ESLs); Deep Soils (>3 m bgs); Groundwater is a potential source of drinking water; Industrial/Commercial.

The main area of concern appears to be near the former fuel UST pit in the southern portion of the site. TPHg was reported at 1,600 mg/kg at 19.5 feet in boring GP-4. Ethyl-benzene and total xylenes also exceeded the ESL in the same sample.

## GROUNDWATER INGESTION

A comparison of site data and ESLs for drinking water and water supply is provided in the following tables;

	TPHg	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE	TBA
Max. Site (1)	35,000	<25	<25	3,000	8,900	<25	<500
ESL (2)	100	1.0	40	30	20	5	12

All values in µg/L

(1) Maximum groundwater concentration August 29, 2008 (see **Attachment F**)

(2) Table A-2 Environmental Screening Levels (ESLs); Shallow Soils (<3 m bgs); Groundwater is a potential source of drinking water; commercial/industrial land use.

Current groundwater conditions exceed ESLs for an existing or potential beneficial aquifer for TPHg, ethyl-benzene, and total xylenes. The highest TPHg concentration is from well U-1R located adjacent to the fuel UST. Domestic and irrigation wells have been reported approximately 0.3 miles north of the Site. The apparent distance to the nearest wells, lack of highly mobile chemicals such as MTBE, a shallow perched nature of the groundwater indicates that the risk to drinking water resources is very low.

An evaluation of site conditions does not indicate a threat to down-gradient receptors. The depth to groundwater and relatively low concentrations of petroleum hydrocarbons mitigates the threat for inhalation of soil vapor containing petroleum hydrocarbons. No drinking water supply wells appear to be located within 1,000 feet of the site.

## REMEDIATION

Soil beneath the fuel USTs was over-excavated to a depth of approximately 18-20 bgs during replacement in 1987 (Woodward-Clyde Consultants, 1987)

Approximately 3,500 gallons of groundwater were pumped during aquifer testing in March 1994. The groundwater was transported to UNOCAL's refinery in Rodeo, California for disposal (Geostrategies, March 7, 1994).

Between August 8 and 13, 1994, a soil vapor extraction (SVE) feasibility test was conducted by Pacific Environmental Group (PEG). The results of the test showed SVE to be an applicable technology for removal of petroleum hydrocarbons from soil and groundwater below the site (Delta, 2006).

In September 1995, a combination SVE and groundwater treatment (GWT) system was constructed at the site. Start-up activities for the GWT system began on October 2, 1995. SVE system start-up and continuous GWT operation began in mid-October 1995. The system continued to operate until February 1997 when it was shut down due to diminishing incremental benefit (Delta, 2006).

#### **4. CONTAMINANT SOURCE AREA CHARACTERIZATION**

The ACHCSA in their letter dated July 2, 2008, stated "It appears that the lateral extent of contamination in off-site soil and groundwater have been characterized but neither the vertical extent of the contamination nor the lateral extent of on-site contamination has been fully characterized."

Delta agrees that data gaps exist in definition of the lateral and vertical extent of contamination beneath the site. Delta, in the following work plan, will propose both shallow and deep borings to complete site assessment.

#### **5. GROUNDWATER CONTAMINATION PLUME MONITORING**

By request of the ACHCSA, the following changes will be implemented to the quarterly groundwater monitoring program. U-1R and U-3R will be purged and sampled on a quarterly basis for one year. Monitoring wells will no longer be analyzed for ethanol, with the exception of U-1R and U-3R. Groundwater elevation data will be collected for all wells each quarter. All wells will be analyzed for TPHg, benzene, toluene, ethylbenzene, total xylenes, MTBE, di-isopropyl alcohol (DIPE), ethyl tertiary butyl amyl (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA method 8260. Monitoring results will be continued to be submitted in semi-annual reports.

## **SOIL AND GROUNDWATER WORK PLAN**

Delta has prepared the following work plan based on the data provided in the above technical responses.

### **LATERAL EXTENT OF CONTAMINATION**

Delta proposes to collect soil and groundwater samples from the area of the northern fuel dispenser islands. Delta proposes to drill three direct push borings (GP-6, GP-7, and GP-8, **Figure 2**) to the north, west, and east of the dispenser islands. An additional boring (GP-9) will be placed near the northeast corner of the fuel USTs. Borings will be advanced to a depth of approximately 20 feet or first encountered groundwater. Discrete soil samples will be collected at 5, 10, 15 and 20 feet bgs using a California modified split spoon sampler with brass sleeves. A sleeve from each sampler will be sealed with Teflon sheeting, and a tight fitting plastic cap. The sample will be logged on to a chain of custody sheet and stored on ice for transportation to the laboratory.

A "grab" groundwater sample will be collected from each borehole using a Teflon bailer. Water samples will be decanted into laboratory prepared 40 milliliter VOA bottles. Samples will be logged onto a chain of custody sheet and stored on ice for transportation to the laboratory. Soil and groundwater samples will be analyzed for TPHg, BTEX compounds, MTBE, and TBA by EPA Method 8260B.

### **VERTICAL EXTENT OF CONTAMINATION**

Delta proposes to collect soil and groundwater samples to maximum depth of 50 feet bgs using cone penetration test (CPT) equipment. Three CPT sample locations are proposed (CPT-1, CPT-2, and CPT-3, **Figure 2**). Discrete soil samples will be collected from predominant soil zones. Two or three discrete groundwater samples will be collected from permeable layers identified from the CPT computerized boring log. Groundwater samples will be collected using a hydropunch sampler. CPT field procedures are described in **Attachment H**.

## **REMEDIATION**

Delta recommends performing feasibility testing in the area of well U-1R in order to reduce TPHg and BTEX compound concentrations to below ESLs.

### **Preferential Pathway Assessment**

A complete preferential pathway assessment will be completed for submittal.

## **PERMITTING, UTILITY NOTIFICATION AND BOREHOLE CLEARANCE**

Before commencing field operations Delta will prepare a Health and Safety Plan in accordance with state and federal requirements for use during on-site assessment activities. In addition, drilling permits for the advancement of the CPT borings will be obtained from the Alameda County Public Works Agency (ACPWA). Prior to drilling, Underground Service Alert (USA) and a private utility locator will be notified as required to clear the proposed drilling locations for underground utilities.

## **REPORTING**

Delta will prepare an *Additional Site Assessment Report* upon completion of this scope of work. This will contain a map showing all boring locations, CPT boring logs, geologic cross-sections, summary of soil and groundwater analytical data, laboratory certified reports, and conclusions and recommendations.

## **REMARKS/SIGNATURES**

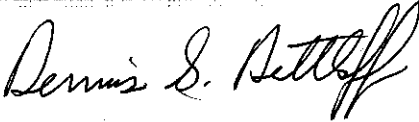
The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report will be performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in

this paragraph, Delta makes no express or implied warranty as to the contents of this report.

If you have any questions regarding this project, please contact Dennis Dettloff at (916) 503-1261 or Mr. Ted Moise of ConocoPhillips at (510) 245-5162.

Sincerely,

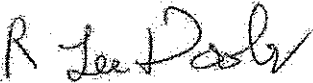
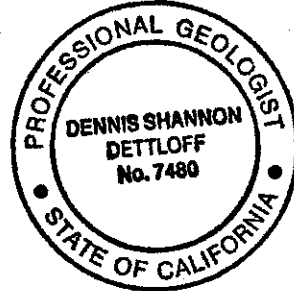
**DELTA CONSULTANTS**



Dennis S. Dettloff, P.G.

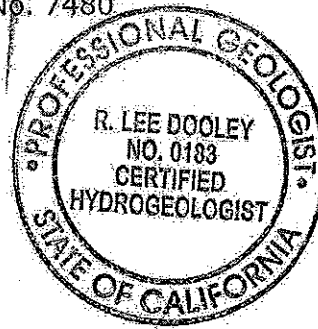
Senior Project Manger

California Registered Professional Geologist No. 7480



Lee Dooley, P.G.

California Certified Hydrogeologist 183



**Figures:**

Figure 1 – Site Location Map

Figure 2 – Site Plan

Figure 3 – Regional Geologic Map

Figure 4 – Regional Hydrogeologic Map

Figure 5 – Geologic Cross Sections

**Attachments:**

Attachment A: ACHCSA Letter

Attachment B: Monitoring Well Destruction and Replacement Addendum Report

Attachment C: Well Location Map and Data Table

Attachment D: Historic Cross Sections

Attachment E: Boring Logs

Attachment F: TRC Quarterly Monitoring Report

Attachment G: Soil Analytical Data

Attachment H: CPT Procedure

cc: Mr. Ted Moise, ConocoPhillips (electronic copy only)



**References:**

GeoStrategies Inc., *Aquifer Test Report, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, March 7, 1994.

GeoStrategies, Inc., *Remedial Action Plan, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, April 21, 1994.

GeoStrategies, Inc., *Well Installation Report, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, June 15, 1992.

Woodward-Clyde Consultants, *Well Installation, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, March 25, 1988.

GeoStrategies Inc., *Monitoring Well Installation Report, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, November 16, 1990.

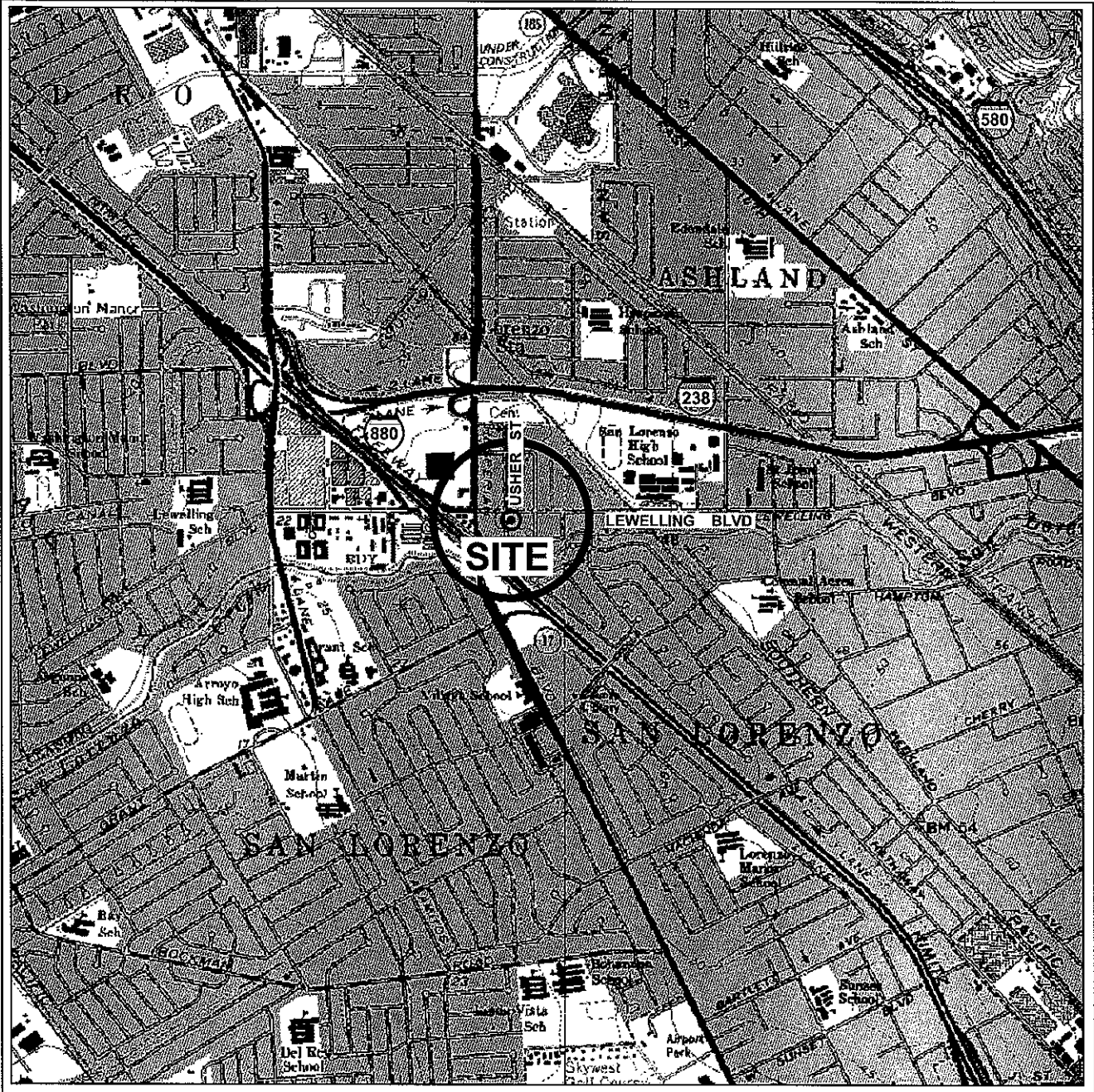
GeoStrategies Inc., *Well Installation Report, UNOCAL Service Station No. 5760, 376 Lewelling Boulevard, San Lorenzo, California*, August 9, 1993.

Delta Consultants, *Sensitive Receptor Survey, 76 Service Station 5760, 376 Lewelling Boulevard, San Lorenzo, CA*, August 22, 2006.

Delta Consultants, *Baseline Assessment Report, Conoco Phillips Service Station 5760, 376 Lewelling Boulevard, San Lorenzo, CA*, December 1, 2003.

California Regional Water Quality Control Board, San Francisco Bay Region, Groundwater Committee, *East Bay Plain Groundwater Basin Beneficial Use Evaluation Report, Alameda and Contra Costa Counties, CA*, June 1999.

## Figures



GENERAL NOTES:  
 BASE MAP FROM 3-D TOPO QUADS  
 SAN LEANDRO AND HAYWARD, CA. QUADRANGLE  
 1967

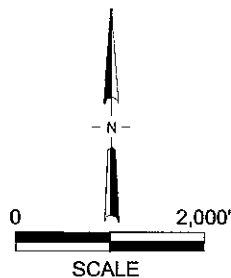
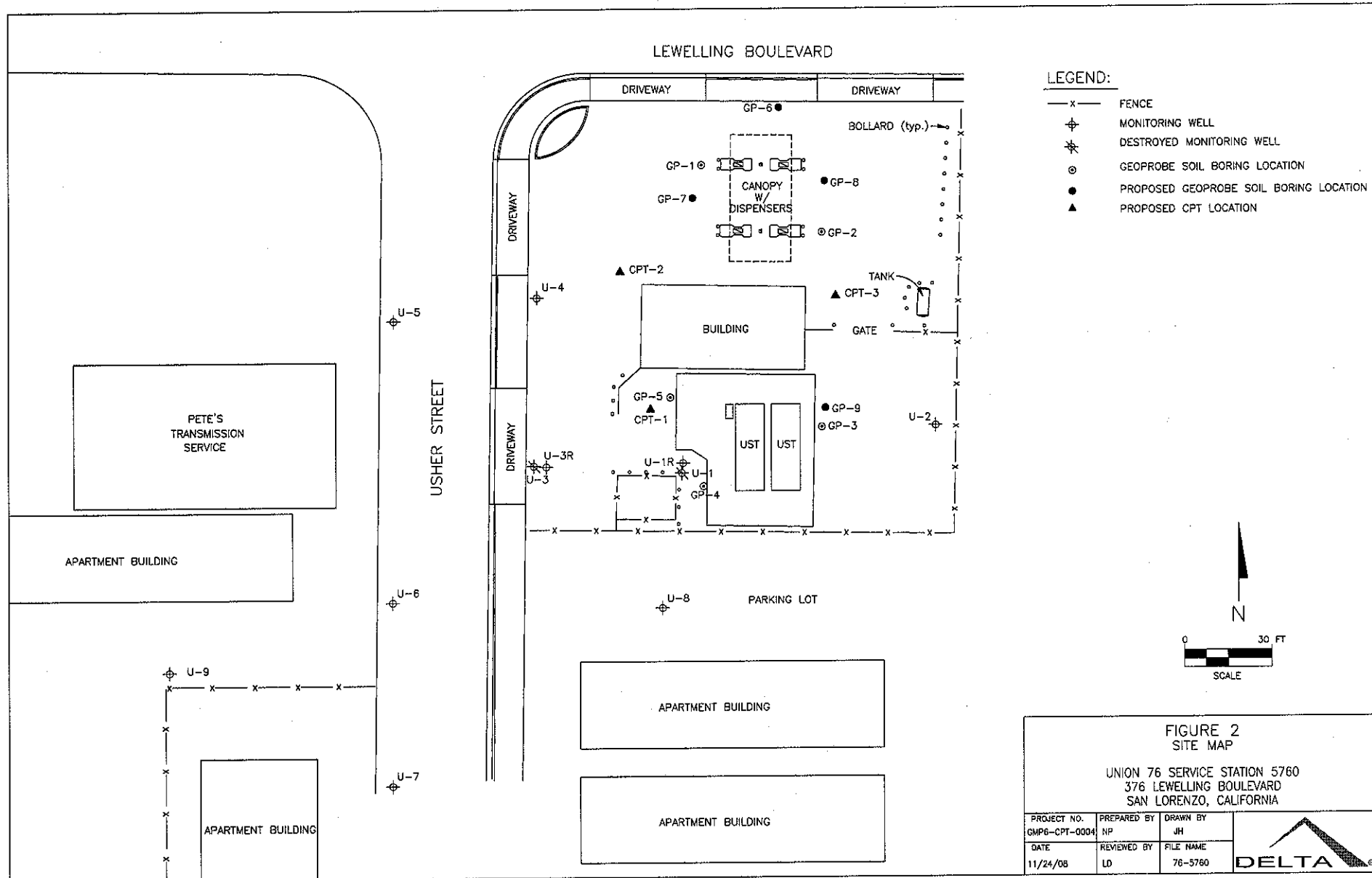


FIGURE 1  
 SITE LOCATION MAP  
 76 SERVICE STATION NO. 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CA.

PROJECT NO. C105760	DRAWN BY K. MARTIN
FILE NO. 1202-SLM	PREPARED BY D. DETTLOFF
DATE 12 DEC 06	REV. 0
	REVIEWED BY





# East Bay Plain Groundwater Basin Beneficial Use Evaluation Report

Alameda and Contra Costa Counties, CA

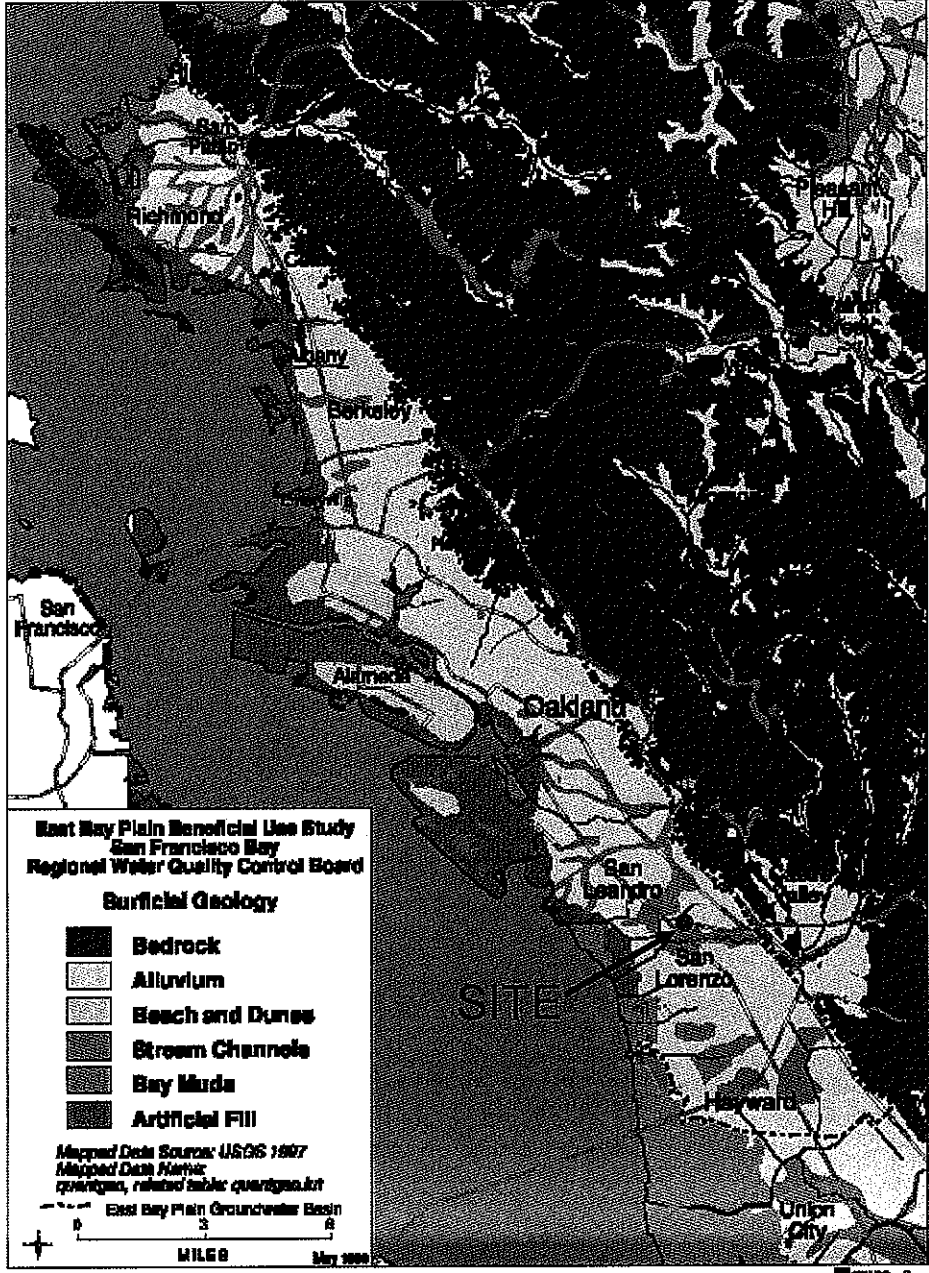
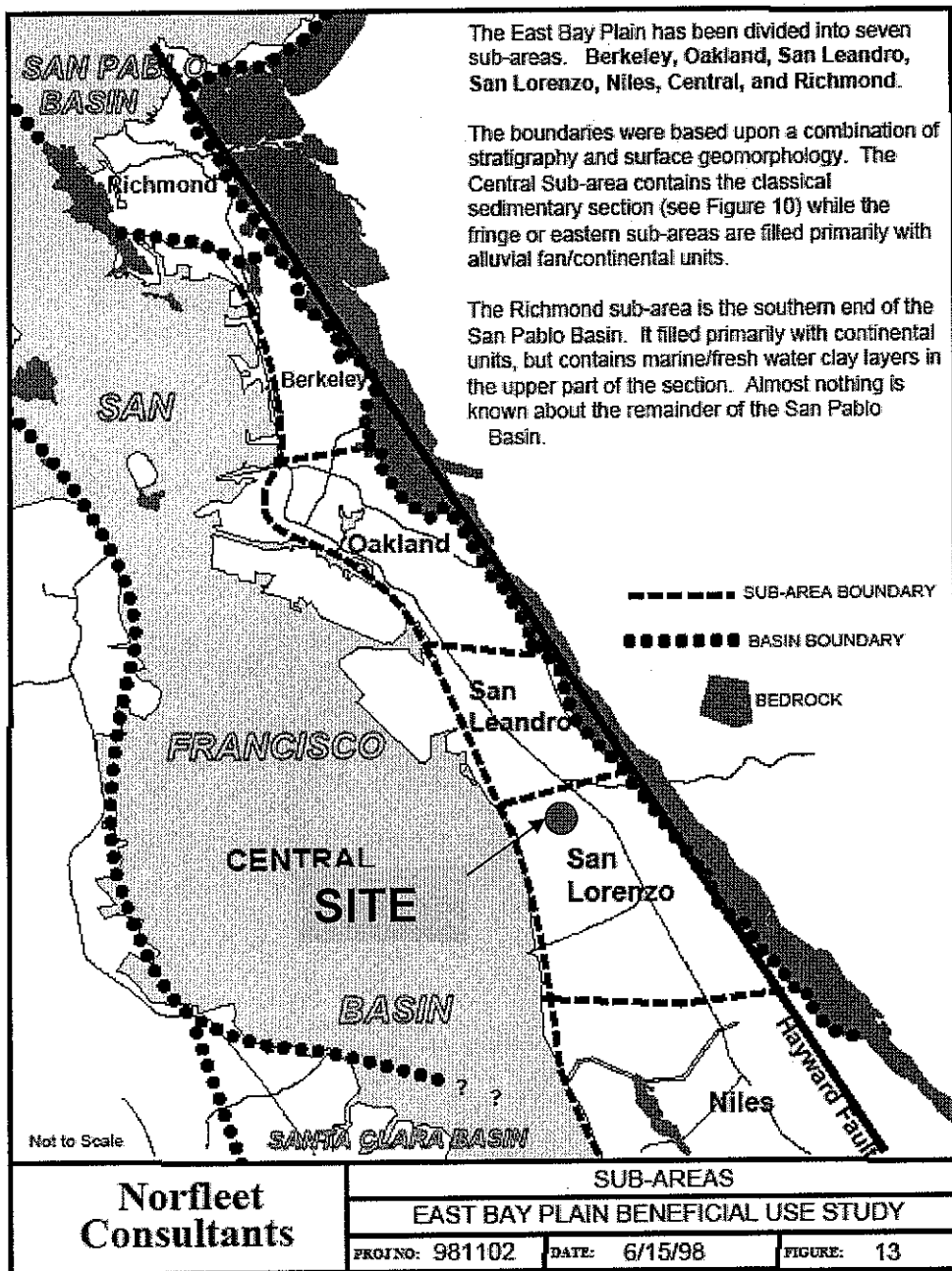


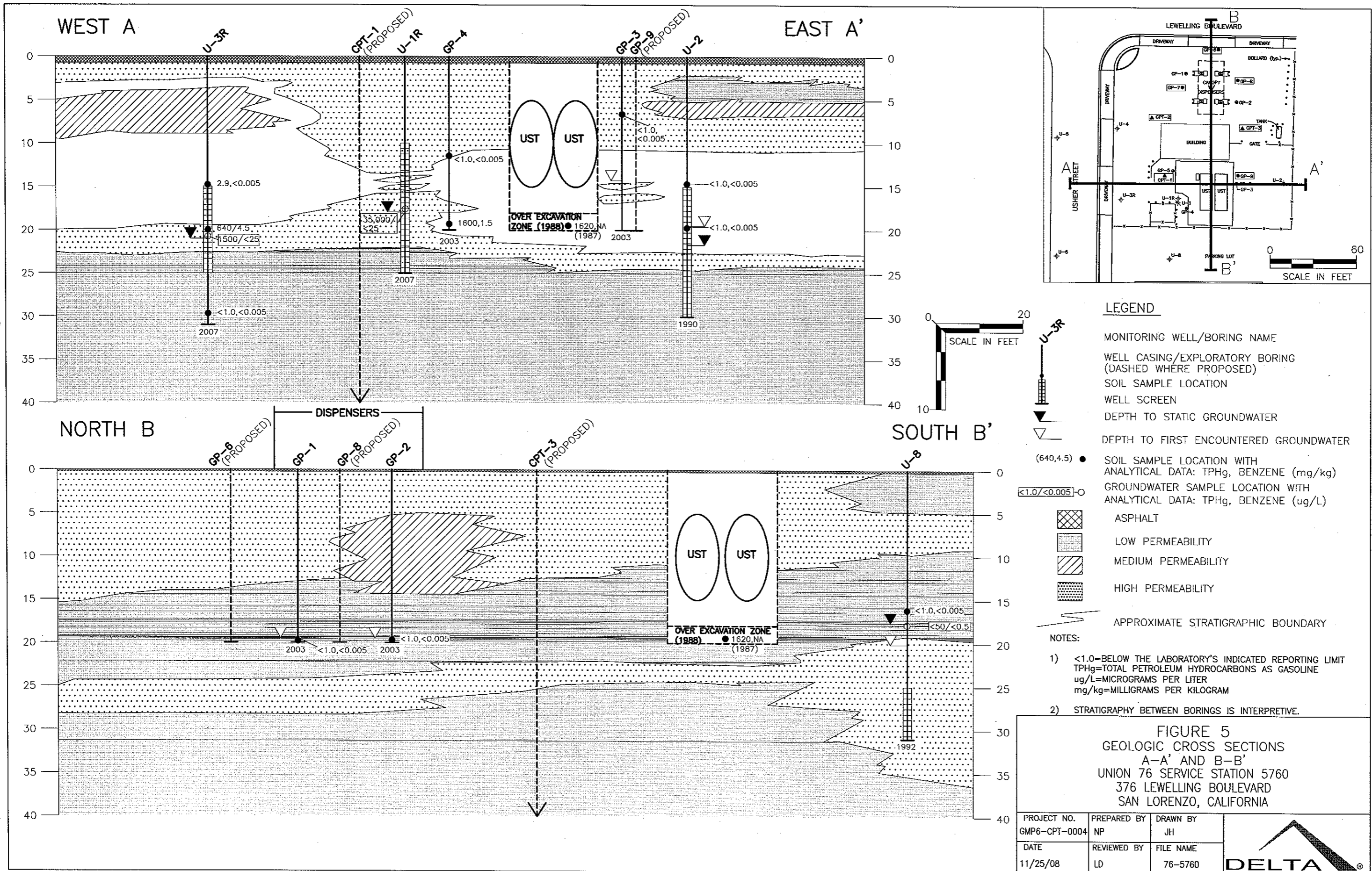
Figure 3  
Regional Geologic Map

Figure 9



**East Bay Plain Groundwater Basin  
Beneficial Use Evaluation Report**  
Alameda and Contra Costa Counties, CA

**FIGURE 4  
GROUNDWATER SUB-  
BASINS**



**Attachment A**

***ACHSA Letter***





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

July 2, 2008

Mr. Bill Borgh (via electronic mail)  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Ramesh and Promila Sood  
376 Lewelling Blvd.  
San Lorenzo, CA 94580

Subject: Fuel Leak Case No. RO0000344 and Geotracker Global ID T0600101469, UNOCAL #5760, 376 Lewelling Boulevard, San Lorenzo, CA 94580

Dear Mr. Borgh and Mr. and Mrs. Sood:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted documents entitled, *Semi-Annual Summary Report – Fourth Quarter 2007 through First Quarter 2008* dated April 1, 2008, *Monitoring Well Abandonment and Replacement Report* dated August 24, 2007, and *Sensitive Receptor Report* dated August 22, 2006, which were prepared by Delta Consultants. Based upon our review of the case file, we request that you address the following technical comments, perform the proposed work, and send us the technical reports described below.

#### **TECHNICAL COMMENTS**

1. **Monitoring Well Abandonment and Replacement Report** – Thank you for recently uploading this document to the Alameda County ftp site. I have reviewed this report and have identified a number of items that appear to be missing:
  - The original well construction details for U-1 and U-3 were not provided in either the work plan or the report. Information on the auger size used for the original wells is needed to ensure that the wells have been properly destroyed. Please provide the original well construction details for U-1 and U-3 in the addendum requested below.
  - The report does not show destroyed well locations, in particular, U1 which was relocated. It is advised that all historical wells, borings and sample points be included on site maps, especially the location of destroyed wells for which historical groundwater monitoring data is presented in the data tables.
  - The report indicates that well U-1 was grouted rather than overdrilled because a trailer was parked too close to the well to obtain rig access. The report does not indicate that this change was approved by the Alameda County Public Works Agency (ACWA) nor does it provide specifics of the well destruction. Please provide a copy of the ACPWA approval. Delta indicated in our April 14, 2008 meeting that the well was grouted and the top of the well seal was removed and replaced with material. Please describe the well destruction method that was used in the addendum requested below. Include a

description of the well destruction method, how the well seal was removed, to what depth and with what material it was replaced.

- The report does not include the driller's information, the geologist on-site, a copy of the DWR well logs for destruction and reinstallation, or the survey data. Please include these in the addendum.
- The well development field data sheets were not included in the report. Please include a copy of these in the addendum.

Please submit a Well Decommissioning Report Addendum with the missing information as described in this technical comment.

2. **Well Survey** – The Sensitive Receptor Report that was submitted on August 22, 2006 did not show the location of the wells identified by the Department of Water Resources on the map. Please plot these on the one-mile radius map to ensure that there are no downgradient receptors and include the well information obtained in a report. The East Bay Plain Groundwater Basin Beneficial Use Evaluation Report (CARWQCB, June 1999) indicates that there may have been active irrigation, municipal and domestic wells downgradient of the site. Please provide this information in the Work Plan requested below.

The report also mentions that San Lorenzo Creek is located within 500 feet of the site. However, no evaluation was made as to whether San Lorenzo Creek is a receptor for groundwater contamination from the site. Please include an evaluation of this in the Work Plan requested below. If your evaluation determines that San Lorenzo Creek could potentially be affected, please include a plan to assess the Creek in the Work Plan requested below.

3. **Regional Geologic and Hydrogeologic Setting** – The regional and local geologic and hydrogeologic setting must be understood in order to begin preparing a site conceptual model (SCM). Please include a concise narrative discussion of the regional geologic and hydrogeologic setting. Include a list of technical references you reviewed. Include a concise discussion of the on-site geology, hydrogeology, release history, source zone, plume development and migration, attenuation mechanisms, preferential pathways, and potential threat to down-gradient and above-ground receptors (e.g. contaminant fate and transport) in the Work Plan requested below.
4. **Contaminant Source Area Characterization** – It appears that the lateral extent of contamination in off-site soil and groundwater has been characterized but neither the vertical extent of the contamination nor the lateral extent of on-site contamination has been fully characterized. This is evident from the dissolved phase TPHg map presented in the monitoring reports which show the TPHg groundwater contours drawn with question marks upgradient of U-1 and U-1R. Also, no soil samples were collected from U-1 (downgradient of the underground storage tanks [USTs]) during well installation (or re-installation). In a dispenser sample collected from D-4, the 3-foot sample contained 0.020 ppm MTBE. No deeper samples were obtained from this location and no follow up investigation was performed to further investigate the MTBE after the dispenser sampling was performed. Please submit a work plan to fully define the vertical extent of petroleum hydrocarbons and oxygenates in soil and groundwater in the areas adjacent to the dispenser islands and the USTs by the due date requested below.

Your work plan may include injection well installation and sampling that will help with future pilot testing in the areas with residual dissolved petroleum hydrocarbon contamination. However, ACEH believes that until the source area is fully characterized, a work plan for

hydrogen peroxide injection is premature. Also, ACEH will not entertain "spot remediation" in the same well that is used as a compliance point. As stated above, the source area needs to be defined and an appropriate method to remediate and monitor the residual contamination whether it be in soil, groundwater or both, should be determined after the full extent of contamination is defined.

5. **Groundwater Contaminant Plume Monitoring** – ACEH agrees with Delta that U-1R and U-3R should be purged and sampled on a quarterly basis for one year. Please ensure that the following analytes are included for all on- and off-site wells: TPH-g, benzene, toluene, ethylbenzene, xylenes, MTBE, Di-isopropyl alcohol (DIPE), ethyl tertiary butyl amyl (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260. Please discontinue ethanol analysis in all wells except U-1R and U-3R and please collect groundwater elevation data for all wells each quarter. You may continue to submit the results in your semi-annual monitoring reports.

#### **REQUEST FOR INFORMATION**

ACEH's case file for the subject site contains only the electronic reports as listed on our website (<http://www.acgov.org/aceh/lop/ust.htm>). You are requested to submit copies of all other reports related to environmental investigations for this property (including Phase 1 reports) by **October 6, 2008**.

#### **TECHNICAL REPORT REQUEST**

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

- **September 8, 2008** – Well Decommissioning Report Addendum
- **October 1, 2008** – Semi-annual Monitoring Report and Soil and Water Investigation Work Plan

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/electronic\\_submittal/report\\_rqmts.shtml](http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml)).

#### 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.

Bill Borgh  
RO0000344  
July 2, 2008, Page 5

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Sincerely,

A handwritten signature in cursive script that reads "Barbara J. Jakub". The signature is written in dark ink and is positioned above the typed name.

Barbara J. Jakub, P.G.  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Delta, Dennis Dettloff, 11050 White Rock Rd., Rancho Cordova, CA 95670 (via electronic mail)  
Donna Drogos, ACEH (via electronic mail)  
Barbara Jakub, ACEH  
File

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

Effective **January 31, 2006**, 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](mailto:dehloptoxic@acgov.org)  
or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
  - 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](mailto: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 at acgov.org. (e.g., [firstname.lastname@acgov.org](mailto: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)

**Attachment B**

***Monitoring Well Destruction  
And  
Replacement Addendum Report***



76 Broadway  
Sacramento, California 95818

September 8, 2008

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

Re: **Report Transmittal**  
**Monitoring Well Destruction and Replacement Addendum Report**  
76 Service Station #5760  
376 Lewelling Boulevard  
San Lorenzo, California

Dear Ms. Jacob:

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:

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

Phone: (916) 558-7666  
Fax: (918) 662-4480

Sincerely,

A handwritten signature in black ink, appearing to read "Eric G. Hetrick".

Eric G. Hetrick  
Site Manager  
Risk Management & Remediation

Attachment



September 8, 2008

Ms. Barbara Jakub  
Alameda County Health Care Services Agency  
1131 Harbor Bay Parkway, Suite 250  
Alameda, California 94502

**RE: Monitoring Well Destruction and Replacement  
Addendum Report  
76 Service Station No. 5760  
376 Lewelling Boulevard  
San Lorenzo, California**



Dear Ms. Jakub:

On behalf of ConocoPhillips Company (COP), Delta Consultants (Delta), has prepared this *Monitoring Well Destruction and Replacement Addendum Report* for the removal and replacement of two monitoring wells at the site located at 376 Lewelling Boulevard, San Lorenzo, California (Figure 1).

Groundwater monitoring wells U-1 and U-3 were used for groundwater monitoring at the site. In addition, these two wells were previously used for remediation at the site. Analytical data from quarterly groundwater samples collected from these two monitoring wells indicated that they were consistently impacted by petroleum hydrocarbons. It is suspected that this petroleum hydrocarbon impact may be originating from fuel spills at the surface. Therefore, Delta proposed the removal and replacement of the two monitoring wells in a work plan submitted to the Alameda County Health Care Services Agency (ACHCSA) dated December 14, 2007. The monitoring well locations are shown on Figure 2. The monitoring wells were destroyed and replaced in July 2007 and a report was submitted to ACHCSA in August 2007. However, in a letter dated, July 2, 2008, ACHCSA requested additional information from the well destruction and replacement activities. A copy of the letter is presented as Attachment A. This addendum report was prepared to supply the requested additional information.

#### **SITE DESCRIPTION**

The site is located at the southeast corner of the intersection of Lewelling Boulevard and Usher Street in San Lorenzo California. The site is currently an active service station with two dispenser islands, one underground waste-oil tank, two underground

gasoline storage tanks (USTs), and a station building with two mechanic's bays.

## **PREVIOUS ASSESSMENT**

The underground storage tanks (USTs) were removed and replaced in November 1987. At that time monitoring well U-1 was installed in response to the contamination observed during the UST replacement. Information on the installation of well U-1 is documented in a report *Well Installation* prepared by Woodward-Clyde Consultants dated March 25, 1988. Three additional monitoring wells (U-2, U-3, and U-4) were installed in August 1990 by GeoStrategies Inc. (GSI). The installation of these monitoring wells is documented in a report *Monitoring Well Installation Report* prepared by GSI dated November 16, 1990.

In March 1992 GSI installed four off-site monitoring wells (U-5 through U-8) to further delineate the hydrocarbon impact to the groundwater down-gradient of the site. The installation of these monitoring wells is documented in a report *Well Installation Report* prepared by GSI dated June 15, 1992.

An additional off-site monitoring well, U-9, was installed by GSI in May 1993. The installation of this monitoring well is documented in a report *Well Installation Report* prepared by GSI dated August 9, 1993.

In September 1993, twelve borings were advanced as part of a property divestment program. Due to hydrocarbon impacted soils being encountered, three of the borings were converted to vapor extraction wells.

In March 1994, the delineation of hydrocarbon-impacted soils was completed with the advancement of two additional soil borings.

Between August 8 and 13, 1994, a soil vapor extraction (SVE) feasibility test was conducted by Pacific Environmental Group (PEG). The results of the test indicated SVE to be an applicable technology for removal of petroleum hydrocarbons from soil and groundwater beneath the site.

In September 1995 a combination SVE and groundwater treatment (GWT) system was constructed at the site. Start-up activities for the GWT system began on October 3, 1995. SVE system start-up and continuous GWT operation began in mid-October 1995. The system continued to operate until February 1997 when it was shut down due to diminishing incremental benefit.

## **SENSITIVE RECEPTORS**

A sensitive receptor survey was completed in August 2006. No wells were identified within 1,000 feet of the site.

## **Pre-Field Investigation Activities**

A utility survey was conducted prior to the field investigation. Underground Services Alert (USA) was notified prior to drilling operations and the services of a private utility locating company was utilized to reduce the risk of damage to utilities beneath the

property. Additionally, the first five feet of each borehole was cleared before well destruction and replacement activities were conducted on July 18 and 19, 2007.

Delta prepared a site-specific Health and Safety Plan (HASP) in accordance with Title 8, Section 5192 of the California Code of Regulations. The HASP contains a list of emergency contacts, as well as a hospital route map to the nearest emergency facility.

A drilling permit was obtained from the Alameda County Public Works Agency (ACPWA) prior to scheduling the field work. The drilling permits are presented as Attachment B.

### **Monitoring Well Destruction**

On July 18 and 19, 2007, monitoring wells U-1 and U-3 were destroyed and replaced with monitoring wells U-1R and U-3R by Gregg Drilling (Gregg) under supervision of a Delta field geologist. Monitoring well U-1 was destroyed by first removing the well vault, surrounding concrete, neat cement, and the well casing to a depth of 5 feet bgs, using an air-knife and jack-hammer. The remaining well casing was then filled from the bottom up to the ground surface with neat cement using a tremie pipe. This well was initially proposed to be destroyed by over drilling to a depth of 31-feet below the ground surface (bgs) using a limited access drill-rig (LAR) equipped with 10-inch diameter hollow-stem augers. However, upon arrival at the site a large storage container had been placed next to this well not allowing access to the well by the LAR. The additional permit approving the destruction of monitoring well U-1 is presented as Attachment B.

Monitoring well U-3 was destroyed by first removing the well vault, surrounding concrete, neat cement, and the well casing to a depth of 5 feet bgs, using an air-knife and jack-hammer. The remaining well was over-drilling using the LAR equipped with 10-inch diameter hollow-stem augers to a depth of 26 feet bgs. This depth is one foot deeper than the original construction depth of this well. Monitoring well U-3R was subsequently constructed in this borehole. Monitoring well construction details for monitoring wells U-1, U-1R, U-3, and U-3R are presented as attachment C. Department of Water Resources (DWR) 188 forms are presented as Attachment D.

### **Monitoring Well Installation**

Monitoring well U-1R was constructed approximately 2 feet north of the former U-1 location. The boring was advanced to a depth of 25-feet bgs using the LAR equipped with 8-inch diameter hollow-stem augers. The boring was converted to a groundwater monitoring well by installing a 2-inch diameter schedule 40 poly-vinyl chloride (PVC) well casing with a screen interval from 10 to 25 feet bgs. The perforation size in the screen interval is 0.010-inch. A sand pack consisting of RMC Lonestar #2/12 sand was installed into the annular space and extended to approximately two feet above the top of the screen interval. A one-foot thick bentonite seal was placed on top of the sand pack. The monitoring well was surged prior to the placement of the bentonite seal to promote settling of the sand pack. The remainder of the annular space was filled with neat cement and the monitoring well fitted with a locking cap and encased in a trafficked protective vault placed at existing ground level. Monitoring well construction details are presented as Attachment C.

Monitoring well U-3R was constructed in the same borehole that previously contained monitoring well U-3. Subsequent to destroying monitoring well U-3 by over-drilling the borehole was backfilled with bentonite chips from 26- to 25-feet bgs. The boring was converted to a groundwater monitoring well by installing a 2-inch diameter schedule 40 PVC well casing with a screen interval from 10 to 25 feet bgs. The perforation size in the screen interval is 0.010-inch. A sand pack consisting of RMC Lonestar #2/12 sand was installed into the annular space and extended to approximately two feet above the top of the screen interval. A one-foot thick bentonite seal was placed on top of the sand pack. The monitoring well was surged prior to the placement of the bentonite seal to promote settling of the sand pack. The remainder of the annular space was filled with neat cement and the monitoring well fitted with a locking cap. The monitoring well was completed using the existing traffic-rated protective vault from monitoring well U-3. Monitoring well construction details are presented as Attachment C. Gregg Drilling's, drillers logs, are presented as Attachment E.

### **Well Development, Monitoring, and Sampling**

On July 24, 2007 Gregg, under supervision of a Delta field geologist, developed the two newly installed monitoring wells. The newly installed monitoring wells, U-1R and U-3R, were developed using a surge block followed by bailing and pumping removing approximately 20 and 22.5 gallons of groundwater, respectively. Gregg Drilling's, well development logs, are presented as Attachment E.

Monitoring wells, U-1R and U-3R, were first purged and sampled on July 6, 2007 by TRC Solutions, Inc. (TRC) as part of the first monitoring and sampling event following installation and development. The data was presented in the Semi-Annual Monitoring Report prepared by TRC and the Semi-Annual Status Report prepared by Delta and submitted to ACHCAS on October 16, 2007. Groundwater samples were collected from the monitoring wells and analyzed for total purgeable petroleum hydrocarbons (TPPH), benzene, toluene, ethyl-benzene, and total xylenes, (BTEX), methyl tertiary butyl ether (MTBE), and ethanol by EPA method 8260B.

### **Wellhead Survey**

Morrow Surveying, a California licensed surveyor, surveyed the northing and easting of the new monitoring wells using Datum NAVD 88. The monitoring well elevations were surveyed relative to mean sea level, with an accuracy of +/- 0.01 foot. A global positioning system (GPS) was also used to survey in the latitude and longitude of the wells to be uploaded into the State GeoTracker database. A copy of the map produced by Morrow Surveying showing the well locations, site structures, and survey data is presented as Attachment F.

### **Disposal of Drill Cuttings and Wastewater**

Drill cuttings and wastewater generated during well destruction, installation, and development activities was placed into labeled 55-gallon Department of Transportation (DOT) approved steel drums and stored on the service station property. Samples of the drill cuttings and generated wastewater were collected, properly labeled, and placed on ice pending submittal to a California-certified laboratory where they were analyzed for by TPPH, BTEX, and MTBE by EPA Method 8260B and total lead by EPA Method

6010B. A chain-of-custody accompanied the samples during transportation to the BC Laboratories in Bakersfield, California, a California-certified laboratory. The drummed drill cuttings and wastewater were transported and disposed of at a COP approved facility by Filter Recycling on August 14, 2007.

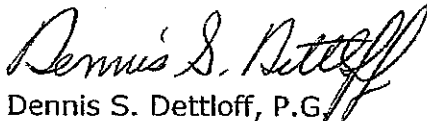
### REMARKS/SIGNATURES

The recommendations contained in this report represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This report is based upon a specific scope of work requested by the client. The Contract between Delta and its client outlines the scope of work, and only those tasks specifically authorized by that contract or outlined in this report will be performed. This report is intended only for the use of Delta's Client and anyone else specifically listed on this report. Delta will not and cannot be liable for unauthorized reliance by any other third party. Other than as contained in this paragraph, Delta makes no expressed or implied warranty as to the contents of this report.

If you have any questions regarding this report don't hesitate to contact me at (916) 503-1261 or Mr. Ted Moise of COP at (510) 245-5162.

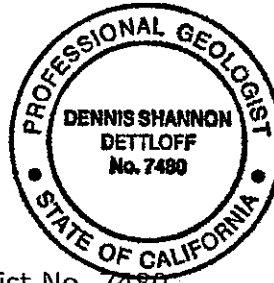
Sincerely,

**DELTA CONSULTANTS**



Dennis S. Dettloff, P.G.  
Senior Project Manager

California Registered Professional Geologist No. 7480



cc: Mr. Ted Moise, ConocoPhillips (electronic copy only)

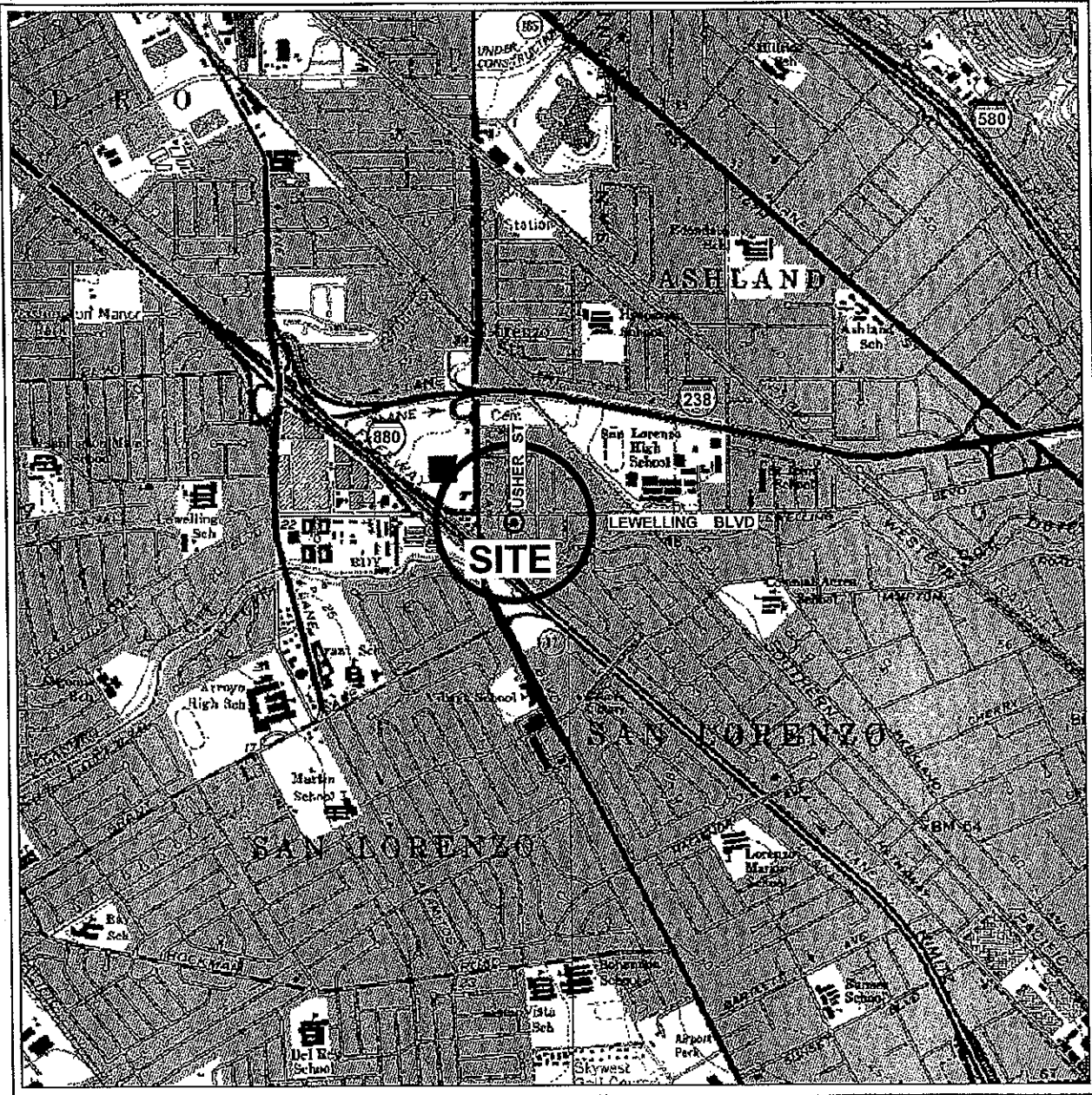
#### Figures:

- Figure 1 - Site Location Map
- Figure 2 - Site Plan

#### Attachments:

- Attachment A - ACHCSA Directive Letter, July 2, 2008
- Attachment B - ACPWA Permits
- Attachment C - Well Construction Details
- Attachment D - DWR 188 Forms
- Attachment E - Gregg Drilling Logs
- Attachment F - Morrow Surveying, Survey Data

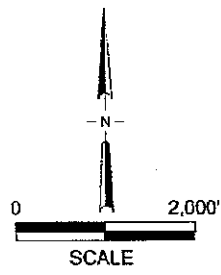
## Figures



GENERAL NOTES:  
 BASE MAP FROM 3-D TOPO QUADS  
 SAN LEANDRO AND HAYWARD, CA. QUADRANGLE  
 1967



QUADRANGLE LOCATION



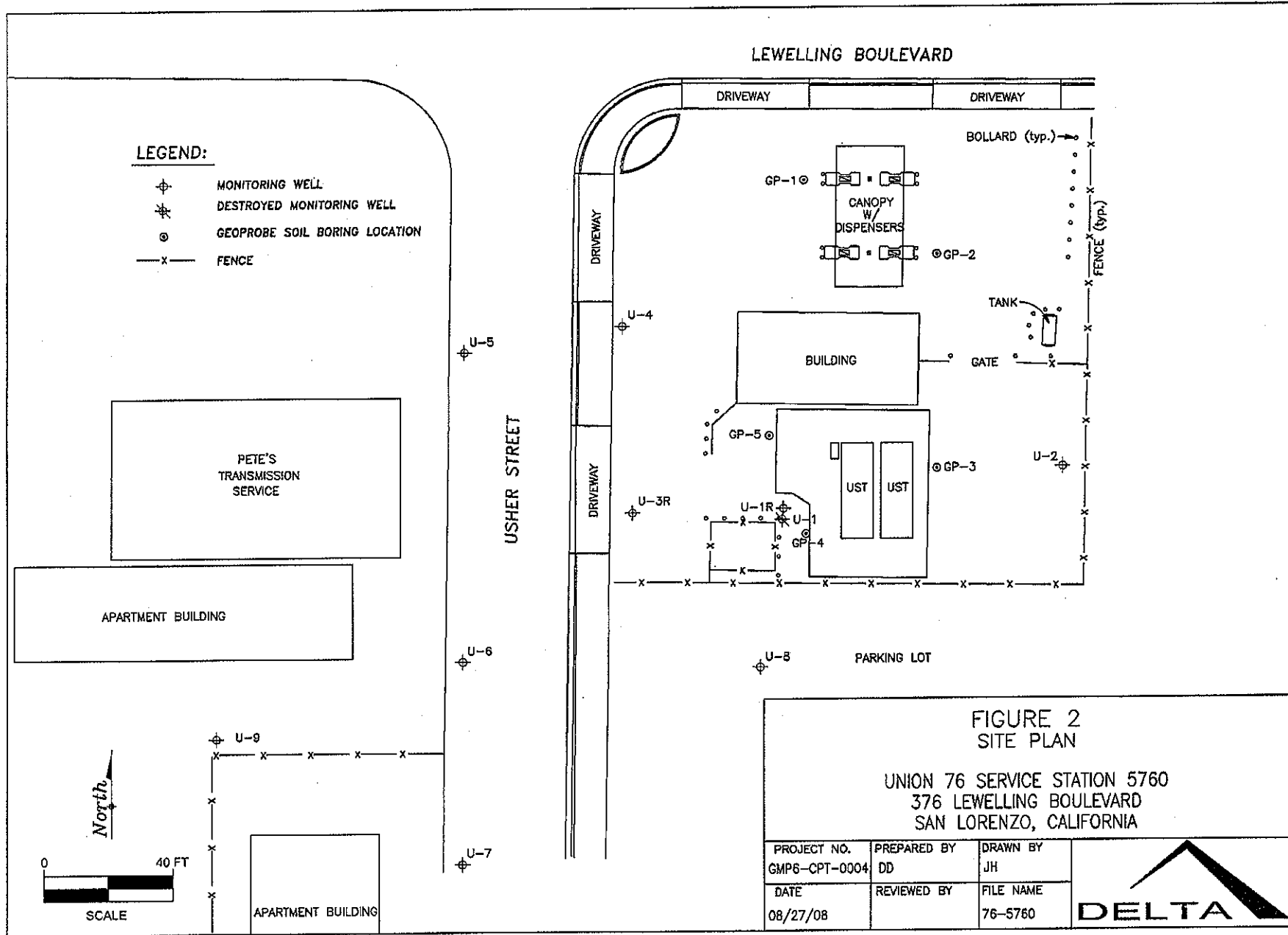
SCALE

FIGURE 1

SITE LOCATION MAP  
 76 SERVICE STATION NO. 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CA.

PROJECT NO. C105760	DRAWN BY K. MARTIN
FILE NO. 1202-SLM	PREPARED BY D. DETTLOFF
DATE 12 DEC 06	REV. 0
	REVIEWED BY







**Attachment A**

***ACHCSA Directive Letter***

***July 2, 2008***

ALAMEDA COUNTY  
HEALTH CARE SERVICES  
AGENCY  
DAVID J. KEARS, Agency Director



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

July 2, 2008

Mr. Bill Borgh (via electronic mail)  
ConocoPhillips  
76 Broadway  
Sacramento, CA 95818

Ramesh and Promila Sood  
376 Lewelling Blvd.  
San Lorenzo, CA 94580

Subject: Fuel Leak Case No. RO0000344 and Geotracker Global ID T0600101469, UNOCAL #5760, 376 Lewelling Boulevard, San Lorenzo, CA 94580

Dear Mr. Borgh and Mr. and Mrs. Sood:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site including the recently submitted documents entitled, *Semi-Annual Summary Report – Fourth Quarter 2007 through First Quarter 2008* dated April 1, 2008, *Monitoring Well Abandonment and Replacement Report* dated August 24, 2007, and *Sensitive Receptor Report* dated August 22, 2006, which were prepared by Delta Consultants. Based upon our review of the case file, we request that you address the following technical comments, perform the proposed work, and send us the technical reports described below.

**TECHNICAL COMMENTS**

1. **Monitoring Well Abandonment and Replacement Report** – Thank you for recently uploading this document to the Alameda County ftp site. I have reviewed this report and have identified a number of items that appear to be missing:
  - The original well construction details for U-1 and U-3 were not provided in either the work plan or the report. Information on the auger size used for the original wells is needed to ensure that the wells have been properly destroyed. Please provide the original well construction details for U-1 and U-3 in the addendum requested below.
  - The report does not show destroyed well locations, in particular, U1 which was relocated. It is advised that all historical wells, borings and sample points be included on site maps, especially the location of destroyed wells for which historical groundwater monitoring data is presented in the data tables.
  - The report indicates that well U-1 was grouted rather than overdrilled because a trailer was parked too close to the well to obtain rig access. The report does not indicate that this change was approved by the Alameda County Public Works Agency (ACWA) nor does it provide specifics of the well destruction. Please provide a copy of the ACPWA approval. Delta indicated in our April 14, 2008 meeting that the well was grouted and the top of the well seal was removed and replaced with material. Please describe the well destruction method that was used in the addendum requested below. Include a

description of the well destruction method, how the well seal was removed, to what depth and with what material it was replaced.

- The report does not include the driller's information, the geologist on-site, a copy of the DWR well logs for destruction and reinstallation, or the survey data. Please include these in the addendum.
- The well development field data sheets were not included in the report. Please include a copy of these in the addendum.

Please submit a Well Decommissioning Report Addendum with the missing information as described in this technical comment.

2. **Well Survey** – The Sensitive Receptor Report that was submitted on August 22, 2006 did not show the location of the wells identified by the Department of Water Resources on the map. Please plot these on the one-mile radius map to ensure that there are no downgradient receptors and include the well information obtained in a report. The East Bay Plain Groundwater Basin Beneficial Use Evaluation Report (CARWQCB, June 1999) indicates that there may have been active irrigation, municipal and domestic wells downgradient of the site. Please provide this information in the Work Plan requested below.

The report also mentions that San Lorenzo Creek is located within 500 feet of the site. However, no evaluation was made as to whether San Lorenzo Creek is a receptor for groundwater contamination from the site. Please include an evaluation of this in the Work Plan requested below. If your evaluation determines that San Lorenzo Creek could potentially be affected, please include a plan to assess the Creek in the Work Plan requested below.

3. **Regional Geologic and Hydrogeologic Setting** – The regional and local geologic and hydrogeologic setting must be understood in order to begin preparing a site conceptual model (SCM). Please include a concise narrative discussion of the regional geologic and hydrogeologic setting. Include a list of technical references you reviewed. Include a concise discussion of the on-site geology, hydrogeology, release history, source zone, plume development and migration, attenuation mechanisms, preferential pathways, and potential threat to down-gradient and above-ground receptors (e.g. contaminant fate and transport) in the Work Plan requested below.
4. **Contaminant Source Area Characterization** – It appears that the lateral extent of contamination in off-site soil and groundwater has been characterized but neither the vertical extent of the contamination nor the lateral extent of on-site contamination has been fully characterized. This is evident from the dissolved phase TPHg map presented in the monitoring reports which show the TPHg groundwater contours drawn with question marks upgradient of U-1 and U-1R. Also, no soil samples were collected from U-1 (downgradient of the underground storage tanks [USTs]) during well installation (or re-installation). In a dispenser sample collected from D-4, the 3-foot sample contained 0.020 ppm MTBE. No deeper samples were obtained from this location and no follow up investigation was performed to further investigate the MTBE after the dispenser sampling was performed. Please submit a work plan to fully define the vertical extent of petroleum hydrocarbons and oxygenates in soil and groundwater in the areas adjacent to the dispenser islands and the USTs by the due date requested below.

Your work plan may include injection well installation and sampling that will help with future pilot testing in the areas with residual dissolved petroleum hydrocarbon contamination. However, ACEH believes that until the source area is fully characterized, a work plan for

hydrogen peroxide injection is premature. Also, ACEH will not entertain "spot remediation" in the same well that is used as a compliance point. As stated above, the source area needs to be defined and an appropriate method to remediate and monitor the residual contamination whether it be in soil, groundwater or both, should be determined after the full extent of contamination is defined.

5. **Groundwater Contaminant Plume Monitoring** – ACEH agrees with Delta that U-1R and U-3R should be purged and sampled on a quarterly basis for one year. Please ensure that the following analytes are included for all on- and off-site wells: TPH-g, benzene, toluene, ethylbenzene, xylenes, MTBE, Di-isopropyl alcohol (DIPE), ethyl tertiary butyl amyl (ETBE), tertiary amyl methyl ether (TAME), tertiary butyl alcohol (TBA), 1,2-dichloroethane (1,2-DCA) and ethylene dibromide (EDB) by EPA Method 8260. Please discontinue ethanol analysis in all wells except U-1R and U-3R and please collect groundwater elevation data for all wells each quarter. You may continue to submit the results in your semi-annual monitoring reports.

#### **REQUEST FOR INFORMATION**

ACEH's case file for the subject site contains only the electronic reports as listed on our website (<http://www.acgov.org/aceh/lop/ust.htm>). You are requested to submit copies of all other reports related to environmental investigations for this property (including Phase 1 reports) by **October 6, 2008**.

#### **TECHNICAL REPORT REQUEST**

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

- **September 8, 2008** – Well Decommissioning Report Addendum
- **October 1, 2008** – Semi-annual Monitoring Report and Soil and Water Investigation Work Plan

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/electronic\\_submittal/report\\_rqmts.shtml](http://www.swrcb.ca.gov/ust/electronic_submittal/report_rqmts.shtml)).

#### 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.

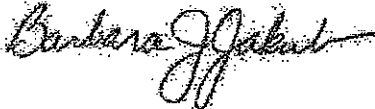
#### AGENCY OVERSIGHT

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.

Bill Borgh  
RO0000344  
July 2, 2008, Page 5

If you have any questions, please call me at (510) 639-1287 or send me an electronic mail message at [barbara.jakub@acgov.org](mailto:barbara.jakub@acgov.org).

Sincerely,

A handwritten signature in cursive script, appearing to read "Barbara J. Jakub".

Barbara J. Jakub, P.G.  
Hazardous Materials Specialist

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Delta, Dennis Dettloff, 11050 White Rock Rd., Rancho Cordova, CA 95670 (via electronic mail)  
Donna Drogos, ACEH (via electronic mail)  
Barbara Jakub, ACEH  
File

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

Effective **January 31, 2006**, 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](mailto:dehloptoxic@acgov.org)  
or
    - ii) Send a fax on company letterhead to (510) 337-9335, to the attention of Alicia Lam-Finneke.
  - 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](mailto: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 at acgov.org. (e.g., [firstname.lastname@acgov.org](mailto: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)

**Attachment B**

***ACPWA Permits***



# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

Application Approved on: 05/22/2007 By jamesy

Permit Numbers: W2007-0634 to W2007-0635  
Permits Valid from 06/20/2007 to 06/25/2007

Application Id: 1179786354509  
Site Location: 376 Lewelling Blvd, San Lorenzo, CA 94541  
Project Start Date: 06/20/2007

City of Project Site: San Lorenzo

Completion Date: 06/25/2007

Applicant: Delta Consultants - Dennis Dettloff  
3164 Gold Camp Dr #200, Rancho Cordova, CA 95670  
Property Owner: Ramesh Sood  
376 Lewelling Bl., San Lorenzo, CA 94541  
Client: \*\* same as Property Owner \*\*

Phone: 916-503-1261

Phone: 510-481-9260

	<b>Total Due:</b>	\$600.00
<b>Receipt Number: WR2007-0225</b>	<b>Total Amount Paid:</b>	\$600.00
<b>Payer Name : Delta</b>	<b>Paid By: CHECK</b>	<b>PAID IN FULL</b>

**Works Requesting Permits:**

Well Construction-Monitoring-Monitoring - 2 Wells  
Driller: Gregg Drilling - Lic #: 485165 - Method: drill

**Work Total: \$600.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth
W2007-0634	05/22/2007	09/18/2007	U-1-UR-1	11.00 in.	2.00 in.	4.00 ft	31.00 ft
W2007-0635	05/22/2007	09/18/2007	U-2-UR-2	11.00 in.	2.00 in.	4.00 ft	26.00 ft

**Specific Work Permit Conditions**

1. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost, liability in connection with or resulting from the exercise of this Permit including, but not limited to, properly damage, personal injury and wrongful death.
  
2. Permitte, permittee's contractors, consultants or agents shall be responsible to assure that all material or waters generated during drilling, boring destruction, and/or other activities associated with this Permit will be safely handled, properly managed, and disposed of according to all applicable federal, state, and local statutes regulating such. In no case shall these materials and/or waters be allowed to enter, or potentially enter, on or off-site storm sewers, dry wells, or waterways or be allowed to move off the property where work is being completed.
  
3. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
  
4. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the

## Alameda County Public Works Agency - Water Resources Well Permit

Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.

5. Drill out & Replace with New Well

6. Wells shall have a Christy box or similar structure with a locking cap or cover. Well(s) shall be kept locked at all times. Well(s) that become damaged by traffic or construction shall be repaired in a timely manner or destroyed immediately (through permit process). No well(s) shall be left in a manner to act as a conduit at any time.

7. Minimum surface seal thickness is two inches of cement grout placed by tremie

8. Minimum seal (Neat Cement seal) depth for monitoring wells is 5 feet below ground surface(BGS) or the maximum depth practicable or 20 feet.

9. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

10. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to [vickyh@acpwa.org](mailto:vickyh@acpwa.org) at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

---

# Alameda County Public Works Agency - Water Resources Well Permit



399 Elmhurst Street  
Hayward, CA 94544-1395  
Telephone: (510)670-6633 Fax:(510)782-1939

**Application Approved on: 08/23/2007 By jamesy**

**Permit Numbers: W2007-0932**  
**Permits Valid from 07/18/2007 to 07/19/2007**

**Application Id:** 1187650627308  
**Site Location:** 376 Lewelling Blvd, San Lorenzo, CA 94541  
**Project Start Date:** 07/18/2007

**City of Project Site:** San Lorenzo  
**Completion Date:** 07/19/2007

**Requested Inspection:**

**Applicant:** Delta Consultants - Dennis Dettloff  
3164 Gold Camp Dr #200, Rancho Cordova, CA 95670  
**Property Owner:** Ramesh Sood  
376 Lewelling Blvd., San Lorenzo, CA 94541  
**Client:** \*\* same as Property Owner \*\*

**Phone:** 916-503-1261  
**Phone:** 510-481-9260

**Receipt Number:** WR2007-0378 **Total Due:** \$300.00  
**Payer Name :** Delta **Total Amount Paid:** \$300.00  
**Paid By:** CHECK **PAID IN FULL**

**Works Requesting Permits:**

Well Destruction-Monitoring - 1 Wells  
Driller: Gregg - Lic #: 485165 - Method: auger

**Work Total: \$300.00**

**Specifications**

Permit #	Issued Date	Expire Date	Owner Well Id	Hole Diam.	Casing Diam.	Seal Depth	Max. Depth	State Well #	Orig. Permit #	DWR #
W2007-0932	08/23/2007	10/16/2007	U-1	10.00 in.	4.00 in.	5.50 ft	30.50 ft	0	W2007-0932	0

**Specific Work Permit Conditions**

1. Drilling Permit(s) can be voided/ cancelled only in writing. It is the applicant's responsibility to notify Alameda County Public Works Agency, Water Resources Section in writing for an extension or to cancel the drilling permit application. No drilling permit application(s) shall be extended beyond ninety (90) days from the original start date. Applicants may not cancel a drilling permit application after the completion date of the permit issued has passed.
2. Prior to any drilling activities, it shall be the applicant's responsibility to contact and coordinate an Underground Service Alert (USA), obtain encroachment permit(s), excavation permit(s) or any other permits or agreements required for that Federal, State, County or City, and follow all City or County Ordinances. No work shall begin until all the permits and requirements have been approved or obtained. It shall also be the applicants responsibilities to provide to the Cities or to Alameda County an Traffic Safety Plan for any lane closures or detours planned. No work shall begin until all the permits and requirements have been approved or obtained.
3. Compliance with the well-sealing specifications shall not exempt the well-sealing contractor from complying with appropriate State reporting-requirements related to well construction or destruction (Sections 13750 through 13755 (Division 7, Chapter 10, Article 3) of the California Water Code). Contractor must complete State DWR Form 188 and mail original to the Alameda County Public Works Agency, Water Resources Section, within 60 days. Including permit number and site map.
4. Permittee shall assume entire responsibility for all activities and uses under this permit and shall indemnify, defend and save the Alameda County Public Works Agency, its officers, agents, and employees free and harmless from any and all expense, cost and liability in connection with or resulting from the exercise of this Permit including, but not limited to,

## Alameda County Public Works Agency - Water Resources Well Permit

property damage, personal injury and wrongful death.

5. Applicant shall contact Vicky Hamlin for an inspection time at 510-670-5443 or email to vickyh@acpwa.org at least five (5) working days prior to starting, once the permit has been approved. Confirm the scheduled date(s) at least 24 hours prior to drilling.

6. Remove the Christy box or similar structure.

Destroy well by grouting neat cement with a tremie pipe or pressure grouting (25 psi for 5min.) to the bottom of the well and by filling with neat cement to three (3-5) feet below surface grade. Allow the sealing material to spill over the top of the casing to fill any annular space between casing and soil.

After the seal has set, backfill the remaining hole with concrete or compacted material to match existing conditions.

7. Copy of approved drilling permit must be on site at all times. Failure to present or show proof of the approved permit application on site shall result in a fine of \$500.00.

8. Work Completed on 7/18/07-7/19/07

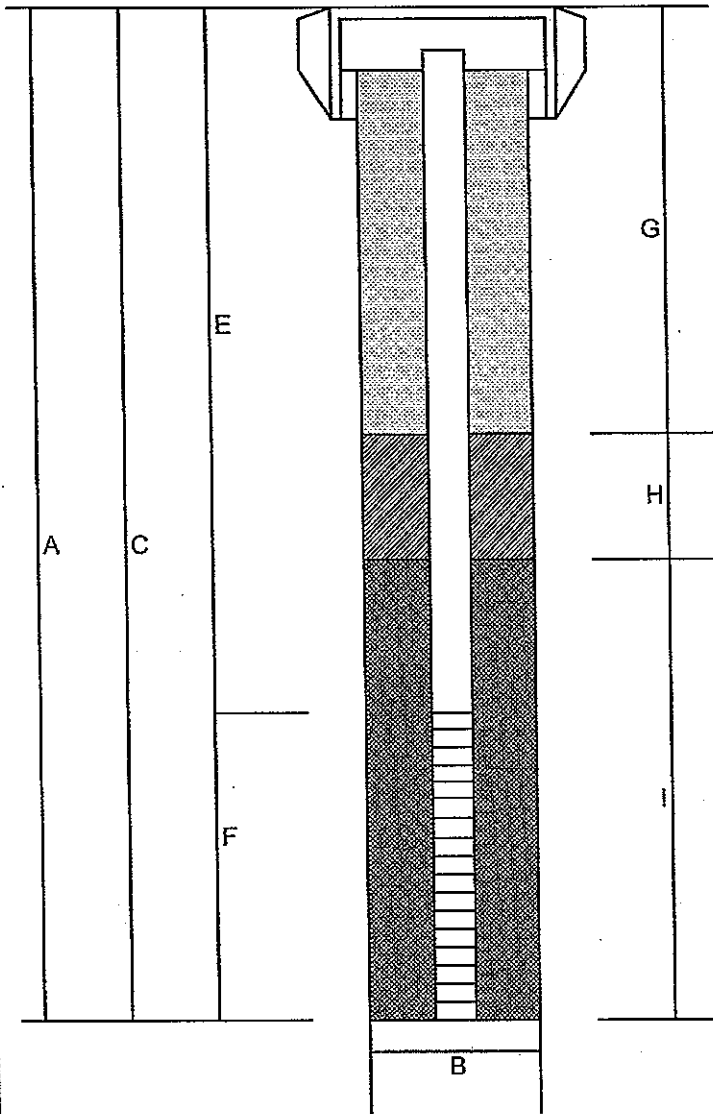
---

**Attachment C**

***Well Construction Details***

MONITORING WELL LOCATION 376 Lewelling Blvd., San Lorenzo, CA			ELEVATION AND DATUM		
DRILLING AGENCY Bay Land Drilling	DRILLER Kurt	DATE STARTED 2/1/88	DATE FINISHED 2/1/88		
DRILLING EQUIPMENT CME - 55	COMPLETION DEPTH 30.5'	SAMPLER California Modified Sampler			
DRILLING METHOD 8-inch Hollowstem Augers	DRILL BIT	NO. OF SAMPLES	DIST. 6	UNDIST. none	
SIZE AND TYPE OF CASING 3-inch PVC	WATER LEVEL	FIRST 17.9'	COMPL. 24 HRS.		
TYPE OF PERFORATION 0.020-inch slotted screen	FROM 30.5 TO 10.5 FT.	LOGGED BY: G. Heyman		CHECKED BY: M. Bonkawold	
SIZE AND TYPE OF PACK 12/20 Monterey sand	FROM 30.5 TO 7 FT.				
TYPE OF SEAL NO. 1 Bentonite	FROM 7 TO 5.5 FT.				
	NO. 2 Cement	FROM 5.5 TO 0.7 FT.			

Depth (feet)	Samples	Blogs	MATERIAL DESCRIPTION	USCS	Well Construction
0 - 5	1	Sampler Pushed @ 450 psi	ASPHALTIC PAVEMENT		
5 - 10	2		SAND with CLAYEY SAND yellow-brown with dark gray brown clayey pockets, fine to medium grained, loose, moist, subrounded, moderately to poorly sorted, clayey sand is more common in samples C and D, contains organic fragments  No odor	SP-SC	
10 - 15	3		medium brown, fine to medium grained with little to some clay, very loose to loose, wet, subrounded, well to moderately sorted, fine organic fragments throughout  No odor	SP-SC	
15 - 20	4		SAND with interlayered CLAYEY SILT brown to dark brown, silt is dark gray, fine to very coarse grained sand, little gravel to 2x2x2.5 cm., little to some clay, medium dense, stiff, silt has low plasticity, wet, subrounded to subangular, silt layers are up to 3-inches thick in the B sample  Organic odor	SW & ML	
20 - 25	5		SAND dark gray, fine to medium grained, little to some clay, little gravel to 0.5x0.5x1cm., loose, saturated, subrounded to subangular, poorly sorted, homogeneous  Strong hydrocarbon odor Free product on sampler	SW	
25 - 30	6		CLAY at 23.5 feet in cuttings  SILTY CLAY and CLAY dark to medium gray brown, trace very fine to medium sand, one 2-inch layer of clayey sand, medium to high plasticity, stiff, saturated, homogeneous  Weak hydrocarbon odor	CH	
30 - 30.5	7		CLAY dark gray brown, little to some silt, occasionally little very fine to medium sand, very plastic, very stiff to hard, wet, homogeneous  Weak hydrocarbon odor	CH	
			BOTTOM OF BORING: 30.5'		



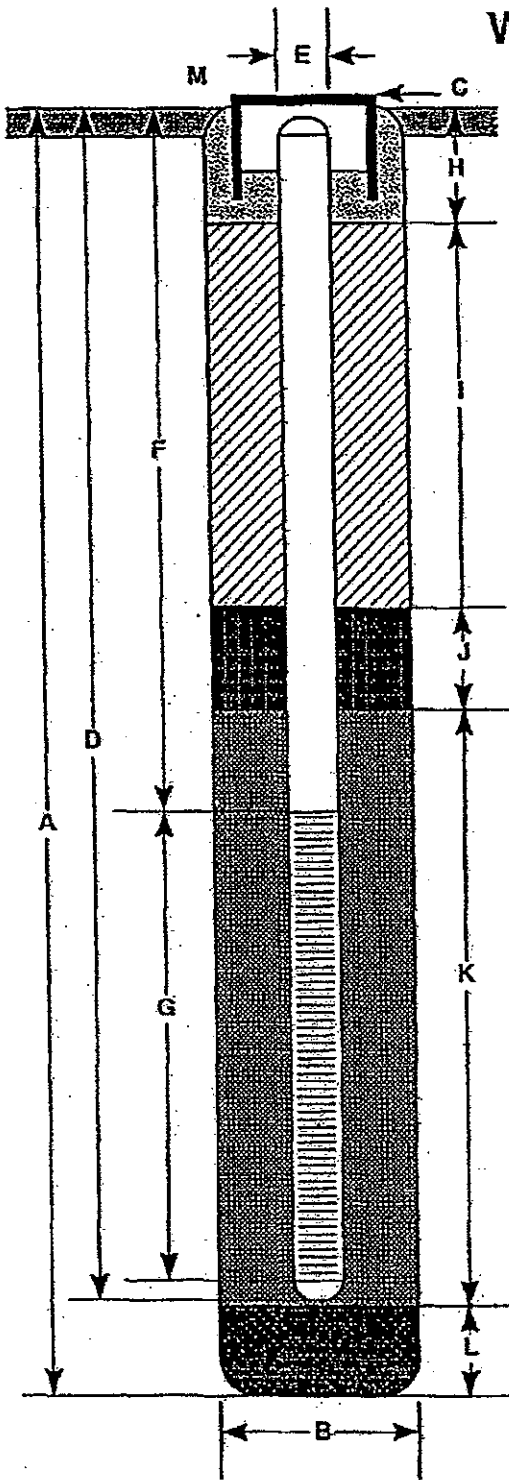
- A: Total Depth: 25' bgs
- B: Boring Diameter: 8-inch  
Drilling Method: Hollow Stem Auger
- C: Casing Length: 25'  
Material: Schedule 40 PVC
- D: Casing Diameter: 2"
- E: Depth to Perforations: 10'
- F: Perforated Length: 15'  
Perforated Size: 0.010"
- G: Surface Seal: 7'  
Seal Material: Neat Cement
- H: Seal: 1'  
Seal Material: Bentonite
- I: Gravel Pack: 17'  
Pack Material: Monterey Sand  
Size: #2/12

**WELL COMPLETION DIAGRAM (U-1R)**  
**76 Service Station No. 5760**  
**San Lorenzo, California**

PROJECT NO. C105760131	PREPARED BY TC	DRAWN BY TC
DATE 7/25/2007	REVIEWED BY	FILE NAME COP 5760



# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 29.0 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 39.64 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 25.0 ft.  
Material Schedule 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 15.0 ft.
- G Perforated Length 10.0 ft.  
Perforated Interval from 15.0 to 25.0 ft.  
Perforation Type Machine Slot  
Perforation Size 0.020 in.
- H Surface Seal from 0.5 to 1.5 ft.  
Seal Material Concrete
- I Backfill from 1.5 to 11.0 ft.  
Backfill Material Concrete Grout
- J Seal from 11.0 to 13.0 ft.  
Seal Material Bentonite
- K Gravel Pack from 13.0 to 25.0 ft.  
Pack Material #2/12 Graded Sand
- L Bottom Seal 4.0 ft.  
Seal Material Bentonite
- M Waterproof vault with locking well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

**U-3**

JOB NUMBER  
7809

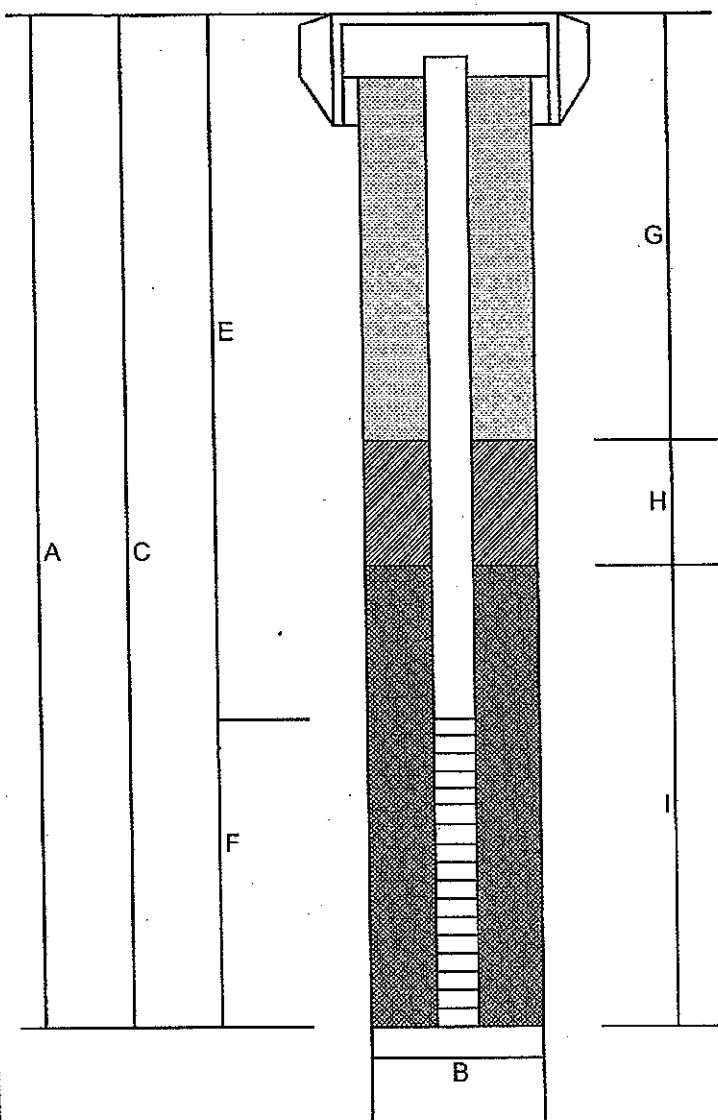
REVIEWED BY FG/CEG  
CWP/CEG/1262

DATE  
08/90

REVISED DATE

REVISED DATE





- A: Total Depth: 25' bgs
- B: Boring Diameter: 10-inch  
Drilling Method: Hollow Stem Auger
- C: Casing Length: 25'  
Material: Schedule 40 PVC
- D: Casing Diameter: 2"
- E: Depth to Perforations: 10'
- F: Perforated Length: 15'  
Perforated Size: 0.010"
- G: Surface Seal: 7'  
Seal Material: Neat Cement
- H: Seal: 1'  
Seal Material: Bentonite
- I: Gravel Pack: 17'  
Pack Material: Monterey Sand  
Size: #2/12

**WELL COMPLETION DIAGRAM (U-3R)**  
**76 Service Station No. 5760**  
**San Lorenzo, California**

PROJECT NO. C105760131	PREPARED BY TC	DRAWN BY TC
DATE 7/25/2007	REVIEWED BY	FILE NAME COP 5760



**Attachment D**

***DWR 188 Forms***

**CONFIDENTIAL**

**STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)**

**REMOVED**

No. 749529

U1

**Woodward-Clyde Consultants**

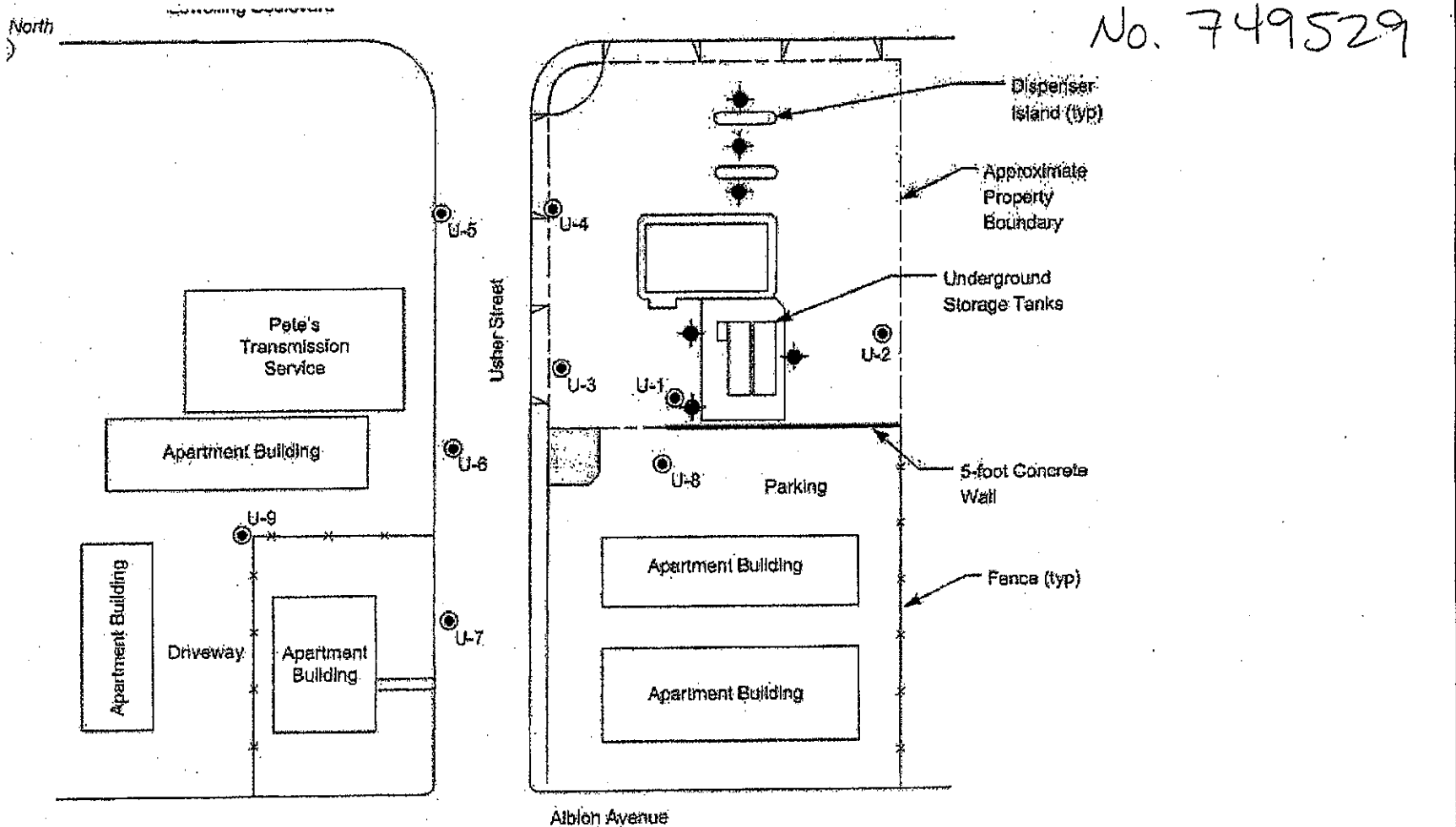


PROJECT NAME Gettier-Ryan NO. 8920011A

MONITORING WELL LOCATION 376 Lewelling Blvd., San Lorenzo, CA			ELEVATION AND DATUM			
DRILLING AGENCY	Bay Land Drilling	DRILLER	Kurt	DATE STARTED	2/1/88	
				DATE FINISHED	2/1/88	
DRILLING EQUIPMENT	CME - 55	COMPLETION DEPTH	30.5'	SAMPLER	California Modified Sampler	
DRILLING METHOD	8-inch Hollowstem Augers	DRILL BIT		NO. OF SAMPLES	6	
				UNDIST.	none	
SIZE AND TYPE OF CASING	3-inch PVC	WATER LEVEL	FIRST 17.9'	COMPL.	24 HRS.	
TYPE OF PERFORATION	0.020-inch slotted screen	FROM	30.5 TO 10.5 FT.	LOGGED BY:	G. Heyman	
SIZE AND TYPE OF PACK	12/20 Monterey sand	FROM	30.5 TO 7 FT.	CHECKED BY:		M. Bonkowski
TYPE OF SEAL		FROM	7 TO 5.5 FT.			
	NO. 1 Bentonite	FROM	5.5 TO 0.7 FT.			
	NO. 2 Cement					

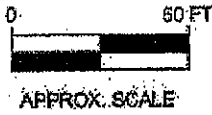
Depth (feet)	samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALTIC PAVEMENT		
1	1	1	SAND with CLAYEY SAND yellow-brown with dark gray brown clayey pockets, fine to medium grained, loose, moist, subrounded, moderately to poorly sorted, clayey sand is more common in samples C and D, contains organic fragments	SP-SC	
5	2	1	medium brown, fine to medium grained with little to some clay, very loose to loose, wet, subrounded, well to moderately sorted, fine organic fragments throughout	SP-SC	
10	3	3	SAND with interlayered CLAYEY SILT brown to dark brown, silt is dark gray, fine to very coarse grained sand, little gravel to 2x2x2.5 cm., little to some clay, medium dense, stiff, silt has low plasticity, wet, subrounded to subangular, silt layers are up to 3-inches thick in the B sample	SW & ML	
15	4	2	SAND dark gray, fine to medium grained, little to some clay, little gravel to 0.5x0.5x1cm., loose, saturated, subrounded to subangular, poorly sorted, homogeneous	SW	
20	5	3	CLAY at 23.5 feet in cuttings		
25	6	7	SILTY CLAY and CLAY dark to medium gray brown, trace very fine to medium sand, one 2-inch layer of clayey sand, medium to high plasticity, stiff, saturated, homogeneous	CH	
30	6	9	CLAY dark gray brown, little to some silt, occasionally little very fine to medium sand, very plastic, very stiff to hard, wet, homogeneous	CH	
			BOTTOM OF BORING: 30.5'		

No. 749529



**LEGEND**


- 7 ● **GROUNDWATER MONITORING WELL**
- **PROPOSED GEOPROBE™ SOIL BORING**
- **PLANTER**



**FIGURE 1**  
**PROPOSED GEOPROBE SOIL BORING LOCATION MAP**

**TOSCO (UNOCAL) SERVICE STATION # 5760**  
378 Lewellin Boulevard  
San Lorenzo, California

PROJECT NO. GMP&CPT-1004 FILE NO. GMP&CPT-0004 REVISION NO. 2	DRAWN BY VF 10/15/03 PREPARED BY VF REVIEWED BY VF
--	---



**Delta**  
Environmental  
Consultants, Inc.

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

No. 749530

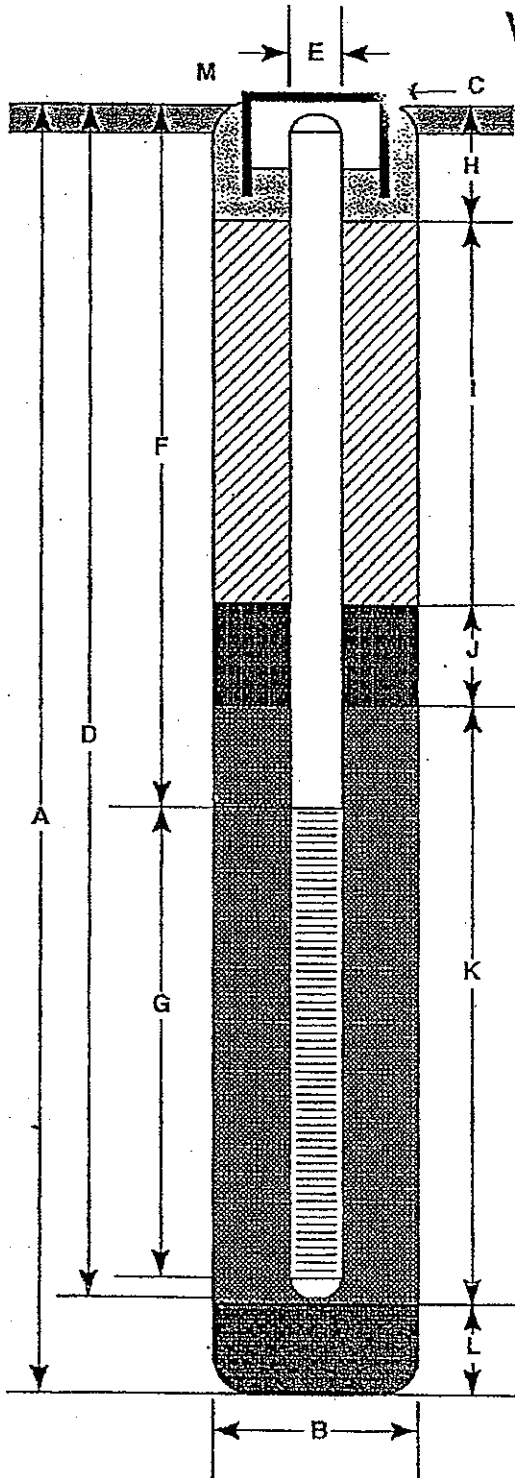
Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:  U-3	
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California	
				Logged by: M.J.J.		Driller: Bayland		Sheet 1 of 2	
Drilling method: Hollow Stem Auger				Casing installation data:					
Hole diameter: 8-Inches				Top of Box Elevation: 39.64		Datum: MSL			
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	
								19.5'	20.80'
								Time	
								14:25	
								Date	
								08/06/90	
Description									
PAVEMENT SECTION - 0.5 feet									
FILL - Gravel (GW) - dark gray (2.5Y N9/0), loose, dry; 85% fine to coarse gravel; 15% coarse sand; trace silt; no chemical odor.									
SANDY SILT (ML) - olive brown (2.5Y 4/4), medium stiff, damp; 70% silt; 30% fine sand; no chemical odor.									
0	175	S&H	U-3-5	4				SILTY SAND (SM) - light olive brown (2.5Y 5/6), loose, damp; 60% fine sand; 35% silt; 5% clay; trace fine gravel; no chemical odor.	
	175	push		5					
				6					
				7					
				8				Moist at 8.0 to 9.0 feet.	
	150			9					
	150	S&H	U-3-10	9				SILTY CLAY (CL-ML) - dark grayish brown (2.5Y 4/2), medium stiff, damp; 50% clay; 35% silt; 15% fine sand; no chemical odor.	
0.7	150	push		10					
				11					
				12					
				13					
	3			14				COLOR CHANGE to very dark gray (5Y 3/1) at 14.0 feet; rootholes; 5% organic content; weak chemical odor.	
1.8	3	S&H	U-3-15	14					
	4			15					
				16					
				17					
				18					
	2			19					
235	4	S&H	U-3-20	19					
	5			20					
Remarks:									

No. 749530

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:	
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California	
Drilling method: Hollow Stem Auger				Casing installation data:		Top of Box Elevation:		Datum:	
Hole diameter: 8-inches				Water Level		Time		Date	
				Description					
				SAND with GRAVEL (SW) - very dark gray (2.5Y N3/0), loose, saturated; 80% medium to coarse sand; 20% fine to coarse gravel; strong chemical odor.					
				CLAY (CL) - light olive brown (2.5Y 5/4), stiff, damp, medium plasticity; 85% clay; 15% silt; trace sand; no chemical odor.					
				no chemical odor.					
				Bottom of sample at 29.0 feet.					
				Bottom of boring at 29.0 feet.					
				08/06/90					
Remarks:									



# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 29.0 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 39.64 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 25.0 ft.  
Material Schedule 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 15.0 ft.
- G Perforated Length 10.0 ft.  
Perforated Interval from 15.0 to 25.0 ft.  
Perforation Type Machine Slot  
Perforation Size 0.020 in.
- H Surface Seal from 0.5 to 1.5 ft.  
Seal Material Concrete
- I Backfill from 1.5 to 11.0 ft.  
Backfill Material Concrete Grout
- J Seal from 11.0 to 13.0 ft.  
Seal Material Bentonite
- K Gravel Pack from 13.0 to 25.0 ft.  
Pack Material #2/12 Graded Sand
- L Bottom Seal 4.0 ft.  
Seal Material Bentonite
- M Waterproof vault with locking well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

**U-3**

JOB NUMBER  
7809

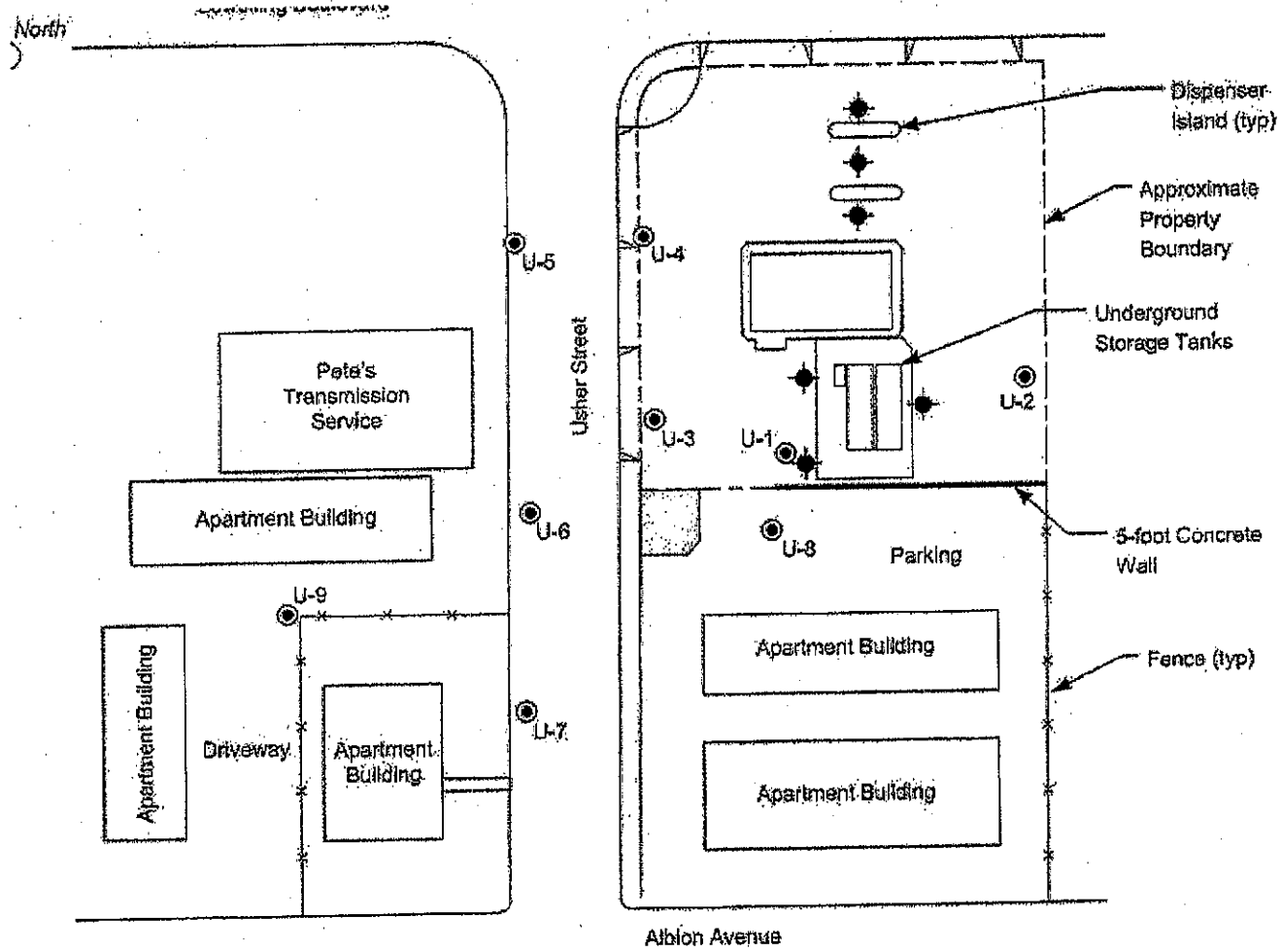
REVIEWED BY RG/CEG  
UMP/CEG 12/22

DATE  
08/90

REVISED DATE

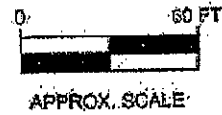
REVISED DATE

No. 749530



**LEGEND**

- 7 ● GROUNDWATER MONITORING WELL
- PROPOSED GEOPROBE™ SOIL BORING
- PLANTER



**FIGURE 1**  
**PROPOSED GEOPROBE SOIL BORING LOCATION MAP**

**TOSCO (UNOCAL) SERVICE STATION # 5760**  
376 Lewallen Boulevard  
San Lorenzo, California

PROJECT NO. GMS-CPT-0004	DRAWN BY VF 10/15/93
FILE NO. GMS-CPT-0004	PREPARED BY VF
REVISION NO. 2	REVIEWED BY VF

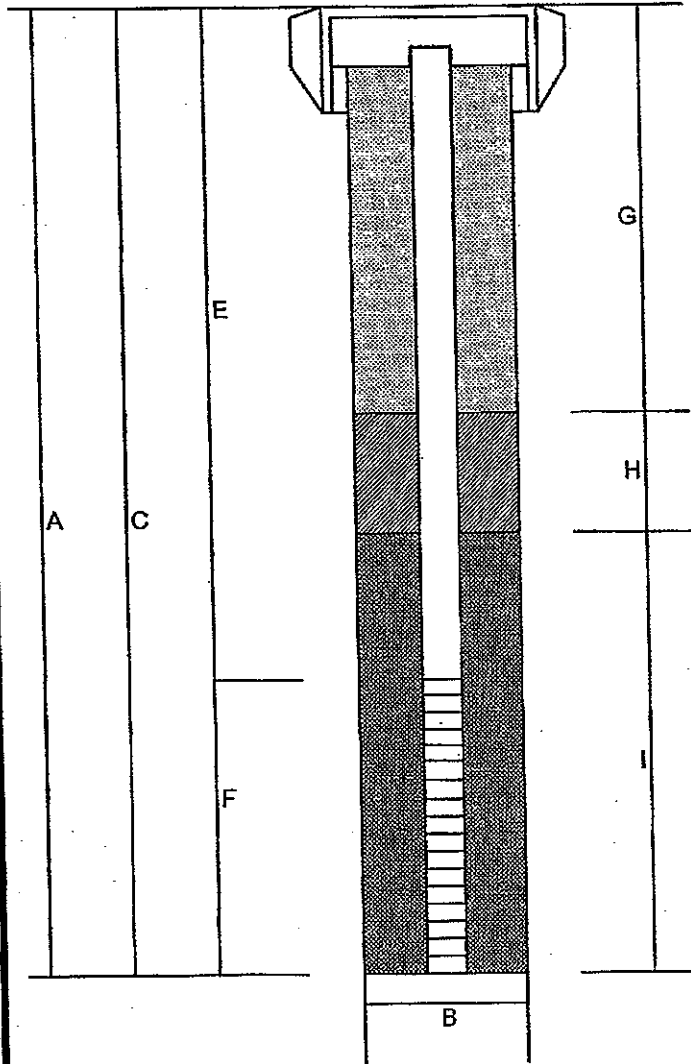
**Delta**  
Environmental  
Consultants, Inc.

**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

NO. 749531



- A: Total Depth: 25' bgs
- B: Boring Diameter: 8-inch  
Drilling Method: Hollow Stem Auger
- C: Casing Length: 25'  
Material: Schedule 40 PVC
- D: Casing Diameter: 2"
- E: Depth to Perforations: 10'
- F: Perforated Length: 15'  
Perforated Size: 0.010"
- G: Surface Seal: 7'  
Seal Material: Neat Cement
- H: Seal: 1'  
Seal Material: Bentonite
- I: Gravel Pack: 17'  
Pack Material: Monterey Sand  
Size: #2/12


**WELL COMPLETION DIAGRAM (U-1R)**  
76 Service Station No. 5760  
San Lorenzo, California

PROJECT NO. C105760131	PREPARED BY TC	DRAWN BY TC
DATE 7/25/2007	REVIEWED BY	FILE NAME COP 5760

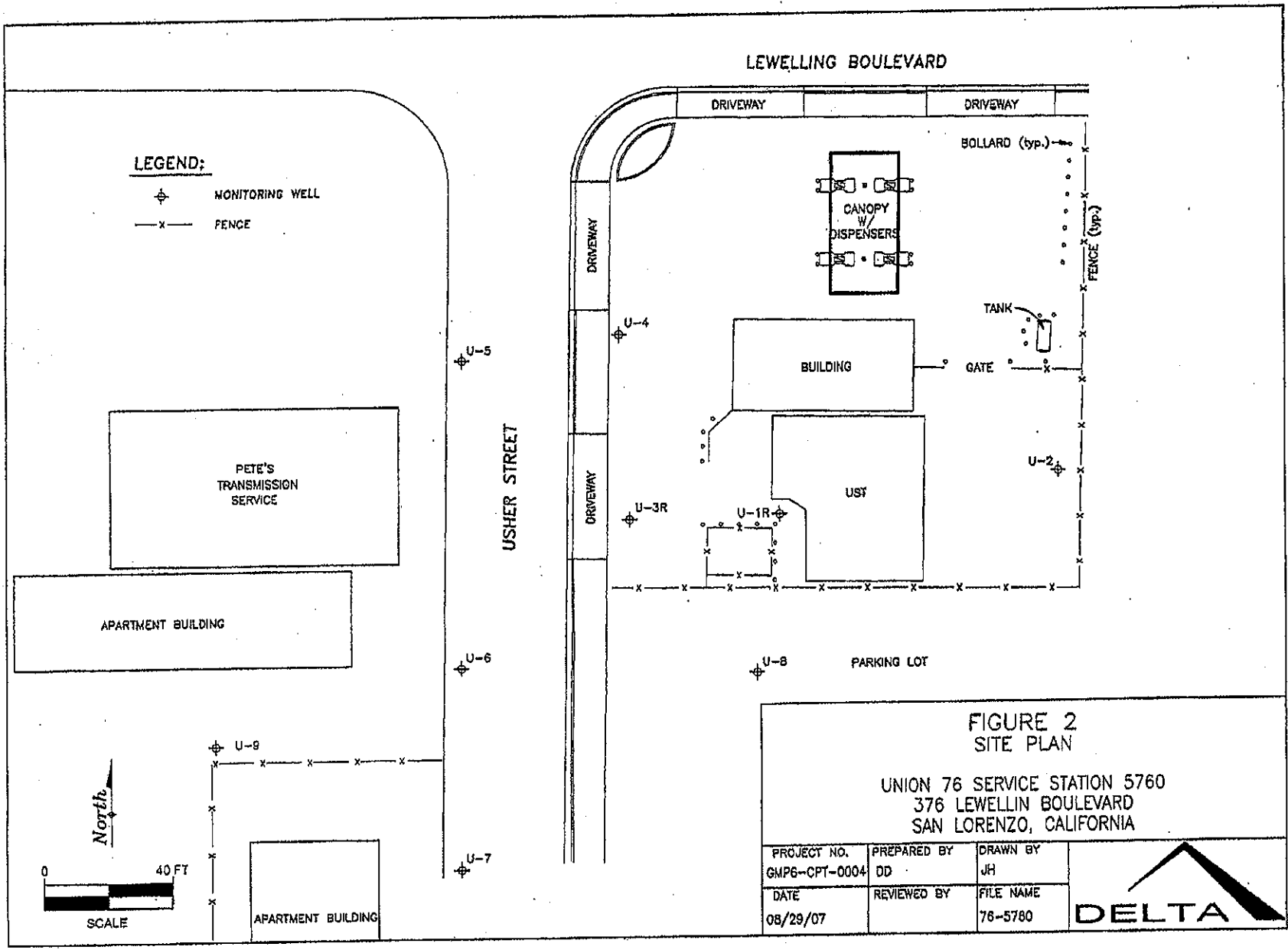


No. 749531 ULR

MONITORING WELL LOCATION <u>376 Lowellling Blvd., San Lorenzo, CA</u>			ELEVATION AND DATUM		
DRILLING AGENCY <u>Bay Land Drilling</u>		DRILLER <u>Kurt</u>	DATE STARTED <u>2/1/88</u>		DATE FINISHED <u>2/1/88</u>
DRILLING EQUIPMENT <u>CME - 55</u>			COMPLETION DEPTH <u>30.5'</u>	SAMPLER <u>California Modified Sampler</u>	
DRILLING METHOD <u>8-inch Hollowstem Augers</u>		DRILL BIT	NO. OF SAMPLES	DIST. <u>6</u>	UNDIST. <u>none</u>
SIZE AND TYPE OF CASING <u>3-inch PVC</u>			WATER LEVEL	FIRST <u>17.9'</u>	COMPL. <u>24 HRS.</u>
TYPE OF PERFORATION <u>0.020-inch slotted screen</u>		FROM <u>30.5 TO 10.5 FT.</u>	LOGGED BY:		CHECKED BY: *
SIZE AND TYPE OF PACK <u>12/20 Monterey sand</u>		FROM <u>30.5 TO ? FT.</u>	<u>G. Heyman</u>		<u>M. Bonkowski</u>
TYPE OF SEAL	NO. 1 <u>Bentonite</u>	FROM <u>7 TO 5.5 FT.</u>			
	NO. 2 <u>Cement</u>	FROM <u>5.5 TO 0.7 FT.</u>			

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALTIC PAVEMENT		
1	1	1	SAND with CLAYEY SAND yellow-brown with dark gray brown clayey pockets, fine to medium grained, loose, moist, subrounded, moderately to poorly sorted, clayey sand is more common in samples C and D, contains organic fragments	SP-SC	
5	2	2	medium brown, fine to medium grained with little to some clay, very loose to loose, wet, subrounded, well to moderately sorted, fine organic fragments throughout	SP-SC	
10	3	3	SAND with interlayered CLAYEY SILT brown to dark brown, silt is dark gray, fine to very coarse grained sand, little gravel to 2x2x2.5 cm., little to some clay, medium dense, stiff, silt has low plasticity, wet, subrounded to subangular, silt layers are up to 3-inches thick in the B sample	SW & ML	
15	4	4	SAND dark gray, fine to medium grained, little to some clay, little gravel to 0.5x0.5x1cm., loose, saturated, subrounded to subangular, poorly sorted, homogeneous	SW	
20	5	5	CLAY at 23.5 feet in cuttings		
25	6	6	SILTY CLAY and CLAY dark to medium gray brown, trace very fine to medium sand, one 2-inch layer of clayey sand, medium to high plasticity, stiff, saturated, homogeneous	CH	
30	7	7	CLAY dark gray brown, little to some silt, occasionally little very fine to medium sand, very plastic, very stiff to hard, wet, homogeneous	CH	
			BOTTOM OF BORING: 30.5'		

No. 749531



**CONFIDENTIAL**

STATE OF CALIFORNIA DWR  
WELL COMPLETION REPORT  
(WELL LOGS)

**REMOVED**

No. 749532

Field location of boring:  (See Plate 2)					Project No.: 7809		Date: 08/06/90		Boring No:  U-3	
					Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		Sheet 1	
					City: San Lorenzo, California		Logged by: M.J.J.		Driller: Bayland	
							Casing installation data:		of 2	
Drilling method: Hollow Stem Auger					Top of Box Elevation: 39.64		Datum: MSL			
Hole diameter: 8-Inches					Water Level: 19.5'		20.80'			
					Time: 14:25		16:05			
					Date: 08/06/90		08/06/90			
					Description					
					PAVEMENT SECTION - 0.5 feet					
					FILL - Gravel (GW) - dark gray (2.5Y N9/0), loose, dry; 85% fine to coarse gravel; 15% coarse sand; trace silt; no chemical odor.					
					SANDY SILT (ML) - olive brown (2.5Y 4/4), medium stiff, damp; 70% silt; 30% fine sand; no chemical odor.					
					SILTY SAND (SM) - light olive brown (2.5Y 5/6), loose, damp; 60% fine sand; 35% silt; 5% clay; trace fine gravel; no chemical odor.					
					Moist at 8.0 to 9.0 feet.					
					SILTY CLAY (CL-ML) - dark grayish brown (2.5Y 4/2), medium stiff, damp; 50% clay; 35% silt; 15% fine sand; no chemical odor.					
					COLOR CHANGE to very dark gray (5Y 3/1) at 14.0 feet; rootholes; 5% organic content; weak chemical odor.					

PID (ppm)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft)	Sample	Well Detail	Soil Group Symbol (USCS)
				1			
				2			
				3			
	175			4			
0	175	S&H	U-3-5	5			
	175	push		6			
				7			
				8			
	150			9			
	150	S&H	U-3-10	10			
0.7	150	push		11			
				12			
				13			
	3			14			
1.8	3	S&H	U-3-15	15			
	4			16			
				17			
				18			
	2			19			
235	4	S&H	U-3-20	20			
	5						

Remarks:



GeoStrategies Inc.

Log of Boring

BORING NO.

U-3R

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CWD/CEG 1262

DATE  
08/90

REVISED DATE

REVISED DATE



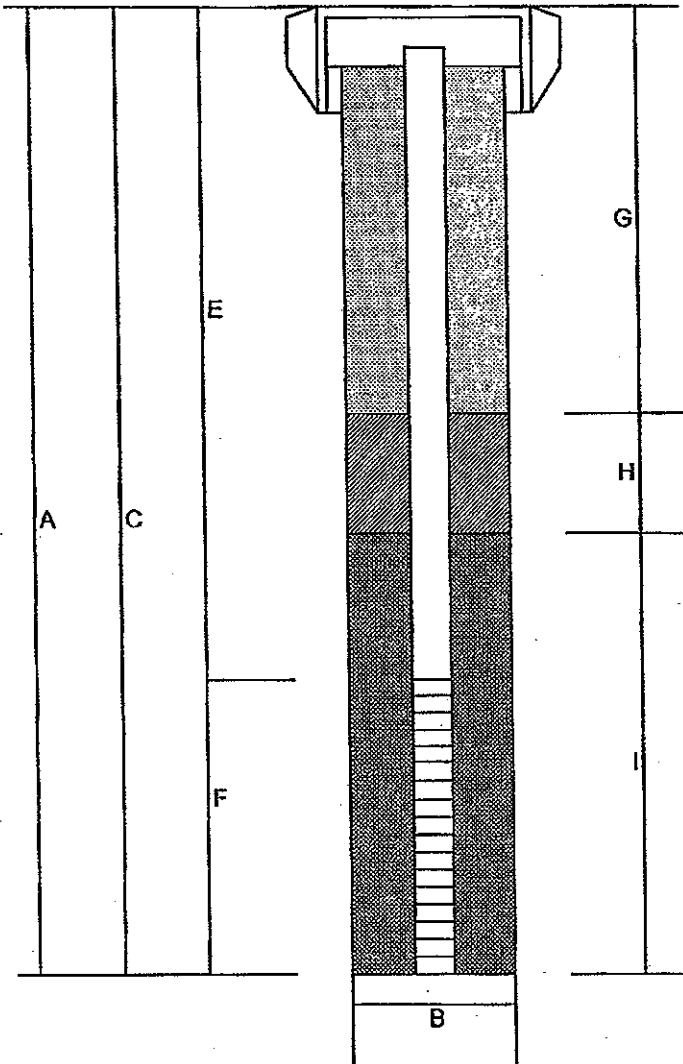
No. 749532

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:			
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California		Sheet 2	
				Logged by: M.J.J.		Driller: Bayland		Casing installation data:		of 2	
				Drilling method: Hollow Stem Auger		Hole diameter: 8-Inches		Top of Box Elevation:		Datum:	

PID (ppm)	Blows/ft. or Pressure (pcf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				21				SAND with GRAVEL (SW) - very dark gray (2.5Y N3/0), loose, saturated; 80% medium to coarse sand; 20% fine to coarse gravel; strong chemical odor.
				22				
				23				
	3			24				CLAY (CL) - light olive brown (2.5Y 5/4), stiff, damp, medium plasticity; 85% clay; 15% silt; trace sand; no chemical odor.
0.7	4	S&H	U-3-25	25				
	9			26				
				27				
	4			28				no chemical odor.  Bottom of sample at 29.0 feet. Bottom of boring at 29.0 feet. 08/06/90
0	5	S&H	U-3-29	29				
	5			30				
				31				
				32				
				33				
				34				
				35				
				36				
				37				
				38				
				39				
				40				

Remarks:

No. 749532



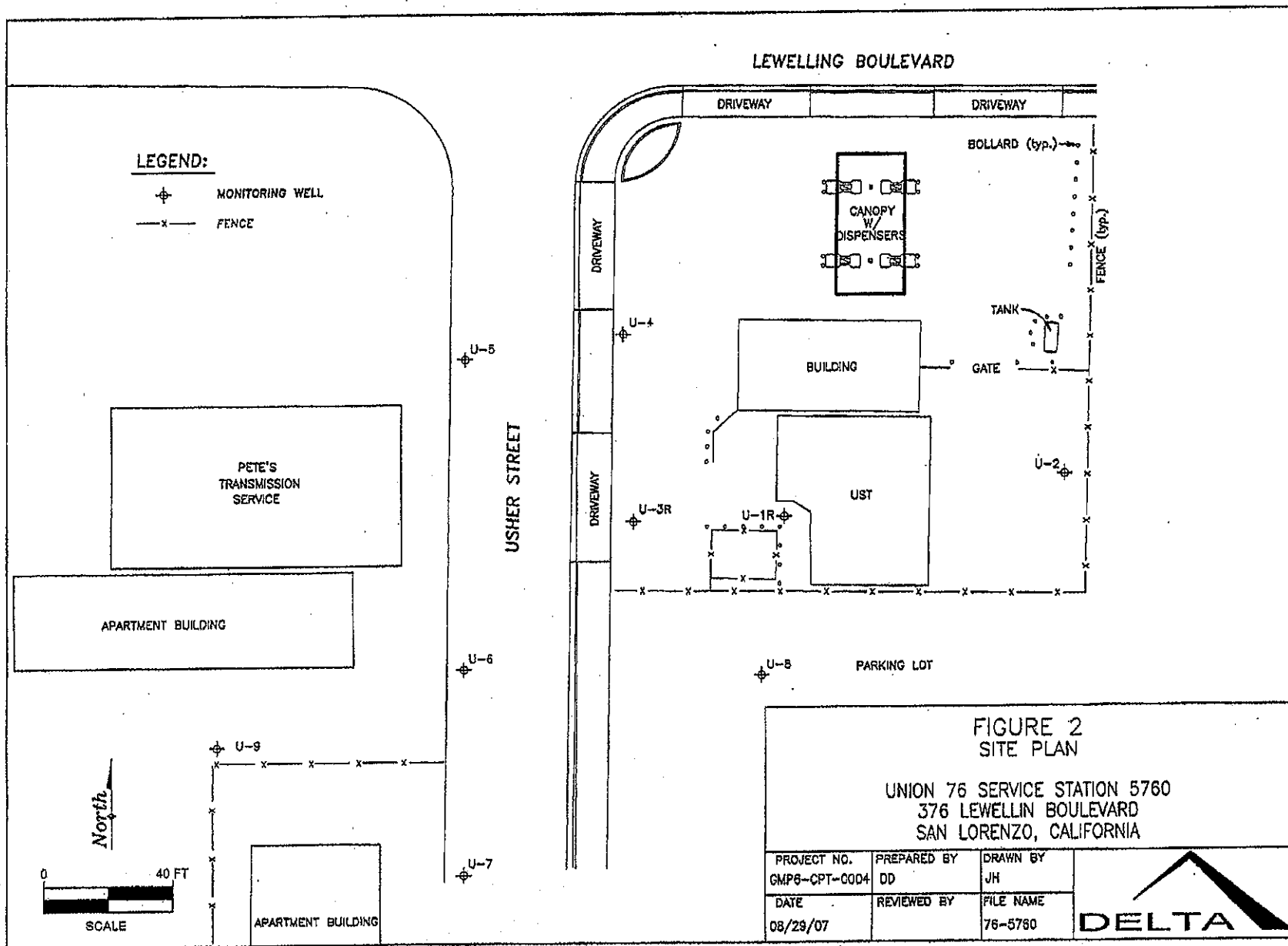
- A: Total Depth: 25' bgs
- B: Boring Diameter: 10-inch  
Drilling Method: Hollow Stem Auger
- C: Casing Length: 25'  
Material: Schedule 40 PVC
- D: Casing Diameter: 2"
- E: Depth to Perforations: 10'
- F: Perforated Length: 15'  
Perforated Size: 0.010"
- G: Surface Seal: 7'  
Seal Material: Neat Cement
- H: Seal: 1'  
Seal Material: Bentonite
- I: Gravel Pack: 17'  
Pack Material: Monterey Sand  
Size: #2/12

**WELL COMPLETION DIAGRAM (U-3R)**  
**76 Service Station No. 5760**  
**San Lorenzo, California**

PROJECT NO. C105760131	PREPARED BY TC	DRAWN BY TC
DATE 7/25/2007	REVIEWED BY	FILE NAME COP 5760



No. 749532



**Attachment E**  
***Gregg Drilling Logs***



# GREGG DRILLING & TESTING

11037

950 Howe Rd. Martinez, CA 94553  
 Ph: (925)313-5800 Fax: (925)313-0302  
 www.greggdrilling.com

DATE: 7-18-07  
 TIME ARRIVE: 7:00

TIME LEFT: 11:00

Company Name: DELTA CONSULTANTS  
 Site Name: Union 76 Station #5760  
 Address Line 1: 376 Lewelling Blvd  
 Address Line 2:  
 Cross Street: Usher St  
 City: San Lorenzo  
 State: Ca  
 Thomas Coordinate:

GDT Job Number:  
 Reference Number: GD2070728  
 Job Start Date: 7/17/2007  
 Job End Date: 7/17/2007  
 Start Time: 7:30  
 Equipments: V70  
 Driller/Staff Safety: Armando  
 Field Staff 2: Rob

ITEM	UNITS	QUANTITY
RIG NO./TYPE: <u>570- Ave - VAC</u>	HOURL	<u>4</u>
MOB-DEMOB-TRAVEL	HOURL	<u>2.5</u>
PER DIEM	MAN/NGT	
PREMIUM TIME	MAN/HR	
ADDITIONAL TECHNICIAN	HOURL	
STABBY/MOVE TIME/CONSTRUCTION TIME	HOURL	
STEAM CLEANING AT YARD	DAY	
GROUT PUMP/STEAM CLEANER	DAY	
MUD SYSTEM	DAY	
FRONT-END LOADER/BOBCAT	DAY	
WATER TRUCK TENDER	DAY	
SERVICE TRUCK	DAY	
SERVICE RUNS	HOURL	
CONST./HAND AUGER CREW (2 men)	HOURL	
CONCRETE CORING DIA.	EACH	
P.P.D. TIME	HOURL	
BORING #	DEPTH	INTERVAL/TYPE OF SAMPLING
<u>1</u>	<u>5'</u>	<u>CLEAR</u>
<u>1</u>	<u>5'</u>	<u>CLEAR</u>

ITEMS	UNITS	QUANTITY
SEISMIC CPT (Interval Test)	TEST	
UVIF RENTAL	DAY	
RESISTIVITY RENTAL	DAY	
BACKFILL TEST LOCATIONS	FOOT	
BENTONITE CHIPS	BAG	
BENTONITE PELLETS	PAIL	
BENTONITE DRILL MUD	BAG	
BENTONITE GROUT	BAG	
FILTER SAND	BAG	
ASPHALT PATCH	BAG	<u>1</u>
READY-MIX CONCRETE	BAG	
PORTLAND CEMENT/QUICK SET	BAG	
WOOD PLUGS	EACH	
DISPOSABLE BAILERS	EACH	
PVC CASING 3/4" 2" 4" OTHER	FOOT	
PVC SCREEN 3/4" 2" 4" OTHER	FOOT	
THREADED FITTINGS 3/4" 2" 4" OTHER	EACH	
SLIP FITTINGS 3/4" 2" 4" OTHER	EACH	
LOCKING CAPS 2" 4" OTHER	EACH	
MONITORING WELL BOX (WATERTIGHT)	EACH	
ANODIZED STAND PIPE	EACH	
GROUNDWATER SAMPLE CONSUMABLES	EACH	
1/4" TUBING	FOOT	
DISPOSABLE TIPS	EACH	
SAMPLE RINGS & CAPS/SHELBY TUBES	EACH	
55-GALLON DRUM	EACH	<u>1</u>
CORE BOXES	EACH	

Section 13751 through 13754 of the California Water Code requires that a report be filed for every groundwater well installation or abandonment. If the client does not elect to submit this report, Gregg Drilling & Testing, Inc. will complete the appropriate paperwork for a \$20 fee per well.

Client to complete  GDT to complete

ADDITIONAL SAFETY/CONST. MATERIALS \_\_\_\_\_

SUBCONTRACTOR & ADDITIONAL EQUIPMENT \_\_\_\_\_

EQUIPMENT DAMAGE \_\_\_\_\_

The named parties are hereby notified that if charges for above labor, services, equipment or materials furnished or to be furnished are not paid for in full, the improved property referred to above may be subject to mechanics lien (per Section 1181, et. seq. to the California Code of Civil Procedure) and construction funds are subject to "Stop notice" action (per Section 1190.1, California Code of Civil Procedure).

TERMS: NET 30 days. A 3% Reduction of total price if paid within 10 days. 1.5% per month finance charge on accounts 30 days past due. The undersigned accepts the terms as stated above for services rendered.

WE CAN ASSUME NO RESPONSIBILITY FOR DAMAGE OF UNDERGROUND UTILITIES. In the event of adverse and/or hazardous drilling conditions, client will be informed if rate changes and/or responsibility for replacement of lost of damaged equipment. Minimum call out \$500. Also applicable to cancellations within 24 hrs. of scheduled start.

Project Name: \_\_\_\_\_ P.O./Task # C105760  
 Signature of Field Representative: [Signature]  
 Printed Name: Tabitha Gray Date: 7/18/07



# GREGG DRILLING & TESTING

950 Howe Rd. Martinez, CA 94553  
Ph: (925)313-5800 Fax: (925)313-0302  
www.greggdrilling.com

DATE: 7-19-07  
TIME ARRIVE: 7:30

TIME LEFT: 2:30

Company Name: DELTA CONSULTANTS  
 Site Name: Union 76 Station #5760  
 Address Line 1: 376 Lewelling Blvd  
 Address Line 2:  
 Cross Street: Usher St  
 City: San Diego *Wormo*  
 State: CA  
 Thomas Coordinate:

GDT Job Number:  
 Reference Number: GD2070729  
 Job Start Date: 7/19/2007  
 Job End Date: 7/19/2007  
 Start Time: 7:30  
 Equipments: D42 S67  
 Driller/Staff Safety: Bobby  
 Field Staff 2: Marco

ITEM	UNITS	QUANTITY	
RIG NO/TYPE: <u>D-42 Rino</u>	HOUR	<u>4</u>	
MOB/DEMOB TRAVEL	HOUR	<u>2.5</u>	
PER DIEM	MAN/MT		
PREMIUM TIME	MAN/HR		
ADDITIONAL TECHNICIAN	HOUR		
STANDBY/MOVE TIME/CONSTRUCTION TIME	HOUR	<u>3</u>	
STEAM CLEANING AT YARD	DAY	<u>1</u>	
GROUT PUMP/STEAM CLEANER	DAY		
MUD SYSTEM	DAY		
FRONT-END LOADER/BOBCAT	DAY		
WATER TRUCK TENDER	DAY		
SERVICE TRUCK	DAY	<u>1</u>	
SERVICE RUNS	HOUR		
CONST/HAND AUGER CREW (2 men)	HOUR		
CONCRETE CORING DIA.	EACH		
P.P.D. TIME	HOUR		
BORING #	DEPTH	INTERVAL/TYPE OF SAMPLING	SIZE OF WELL
<u>1</u>	<u>26'</u>	<u>Drill out - 4" Reinstalled</u>	
		<u>a 2" well at 25'</u>	
<u>1</u>	<u>25'</u>	<u>No sampling</u>	<u>2"</u>
		<u>20" x 30" x 4" Sp For</u>	
		<u>well Box</u>	
<u>1</u>	<u>30'</u>	<u>Tremmie Grout</u>	<u>4"</u>
		<u>cleaned size, moved</u>	
		<u>Drums</u>	

ITEMS	UNITS	QUANTITY
SEISMIC CPT (Interval Test)	TEST	
UVIF RENTAL	DAY	
RESISTIVITY RENTAL	DAY	
BACKFILL TEST LOCATIONS	FOOT	
BENTONITE CHIPS	BAG	<u>4</u>
BENTONITE PELLETS	PAIL	
BENTONITE DRILL MUD	BAG	
BENTONITE GROUT	BAG	
FILTER SAND	BAG	<u>16</u>
ASPHALT PATCH	BAG	
READY MIX CONCRETE	BAG	<u>4</u>
PORTLAND CEMENT/QUICK SET	BAG	<u>11/2</u>
WOOD PLUGS	EACH	<u>2</u>
DISPOSABLE BAILERS	EACH	
PVC CASING 3/4" (2) 4" OTHER	FOOT	<u>20'</u>
PVC SCREEN 3/4" (2) 4" OTHER	FOOT	<u>30'</u>
THREADED FITTINGS 3/4" (2) 4" OTHER	EACH	<u>2</u>
SLIP FITTINGS 3/4" 2 4" OTHER	EACH	
LOCKING CAPS (2) 4" OTHER	EACH	<u>2</u>
MONITORING WELL BOX (WATER TIGHT)	EACH	<u>2</u>
ANODIZED STAND PIPE	EACH	
GROUNDWATER SAMPLE CONSUMABLES	EACH	
1/4" TUBING	FOOT	
DISPOSABLE TIPS	EACH	
SAMPLE RINGS & CAPS/SHELBY TUBES	EACH	
55 GALLON DRUM	EACH	<u>4</u>
CORE BOXES	EACH	

Section 13751 through 13754 of the California Water Code requires that a report be filed for every groundwater well installation or abandonment. If the client does not elect to submit this report, Gregg Drilling & Testing, Inc. will complete the appropriate paperwork for a \$20 fee per well.

Client to complete  GDT to complete

The named parties are hereby notified that if charges for above labor, services, equipment or materials furnished or to be furnished are not paid for in full, the improved property referred to above may be subject to mechanics lien (per Section 1181, et. seq. to the California Code of Civil Procedure) and construction funds are subject to "Stop notice" action (per Section 1190.1, California Code of Civil Procedure).

TERMS: NET 30 days. A 3% Reduction of total price if paid within 10 days. 1.5% per month finance charge on accounts 30 days past due. The undersigned accepts the terms as stated above for services rendered.

ADDITIONAL SAFETY/CONST. MATERIALS \_\_\_\_\_

SUBCONTRACTOR & ADDITIONAL EQUIPMENT \_\_\_\_\_

EQUIPMENT DAMAGE \_\_\_\_\_

WE CAN ASSUME NO RESPONSIBILITY FOR DAMAGE OF UNDERGROUND UTILITIES. In the event of adverse and/or hazardous drilling conditions, client will be informed if rate changes and/or responsibility for replacement of lost of damaged equipment. Minimum call out \$500. Also applicable to cancellations within 24 hrs. of scheduled start.

Project Name: \_\_\_\_\_ P.O./Task # C105760

Signature of Field Representative *[Signature]*

Printed Name Tabbitha Croy

Date 7/19/07



**MONITORING WELL DEVELOPMENT LOG**

All measurements taken from:  Top of Casing  Protective Casing  Ground Level

Well Number U-1  
 Date 7-24-07  
 Time Start: 11:40 End: 12:50  
 Client Delta consultants  
 Project \_\_\_\_\_  
 Job Number \_\_\_\_\_  
 Installation Date \_\_\_\_\_  
 Well Diameter 2"

Borehole Diameter \_\_\_\_\_  
 Screen Length 15'  
 Measured Depth (pre-development) 24.35  
 Measured Depth (post-development) 24.60  
 Static Water Level (ft.) pre 17.15 / post 17.15  
 Standing Water Column (ft.) 7.2  
 One Well Volume (gal.) 1.22  
 One Annulus Vol. (gal.) \_\_\_\_\_

Sample ID \_\_\_\_\_  
 Qty. of Drilling Fluid Lost \_\_\_\_\_  
 Minimum Gal. to be Purged \_\_\_\_\_  
 Development Method 5 cory, bail pump  
 Purging Equipment 55 bailer 2" pump  
 Water Level Equipment Sel. 052  
 pH/EC Meter Hanba U-10  
 Turbidity Meter Hanba U-10  
 Other \_\_\_\_\_

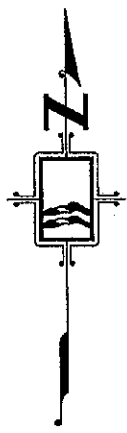
Time	Amount Purged (gal.)	Field Parameters Measured							Comments	Field Tech.
		pH	EC	Turbidity	D.O.	D.O. Temp.	SAL.	GPM W.L.		
12:25	10.00	6.78	1.53	2999	0.20	20.1°	0.07	1.26	bailed 1 gallon +	
12:27	12:50	6.72	1.44	2999	0.19	20.0°	0.06		settling - surged 10	
12:29	15.00	6.71	1.41	669	0.18	20.0°	0.06		mins bailed 1 gallon	
12:31	17.50	6.70	1.40	780	0.13	20.1°	0.05		to settlement	
12:33	20	6.69	1.40	169	0.13	20.1°	0.05			
<b>FINAL FIELD PARAMETER MEASUREMENTS</b>										





**Attachment F**

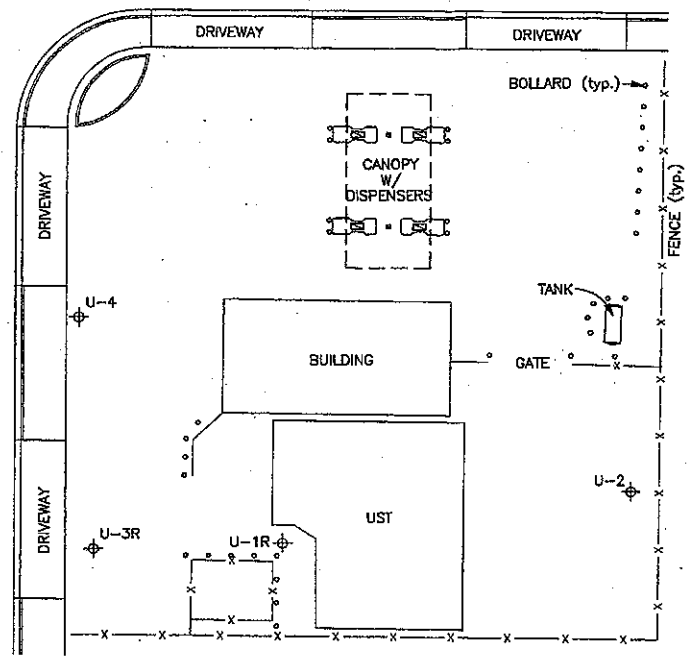
***Morrow Surveying, Survey Data***



APPROX. EDGE OF ROAD

USHER STREET

LEWELLING BOULEVARD



DESCRIPTION	NORTHING	EASTING	ELEV (PVC)	ELEV (BOX)
U-1R	2076434.9	6090472.0	42.65	43.11
U-2	2076447.7	6090559.2	43.65	44.15
U-3R	2076433.7	6090424.7	41.58	42.03
U-4	2076492.3	6090421.5	42.69	42.93
U-5	2076484.4	6090372.0	41.74	42.11
U-6	2076387.1	6090371.6	40.07	40.57
U-7	2076323.6	6090371.5	39.50	40.21
U-8	2076384.9	6090464.8	40.95	41.30
U-9	2076363.2	6090294.8	39.72	40.45

DESCRIPTION	LATITUDE	LONGITUDE
U-1R	37.6862331	-122.1284470
U-2	37.6862724	-122.1281463
U-3R	37.6862276	-122.1286103
U-4	37.6863881	-122.1286249
U-5	37.6863641	-122.1287953
U-6	37.6860969	-122.1287910
U-7	37.6859225	-122.1287873
U-8	37.6860955	-122.1284689
U-9	37.6860277	-122.1290548

BASIS OF COORDINATES AND ELEVATIONS:  
 COORDINATES ARE CALIFORNIA STATE PLANE ZONE 2 COORDINATES FROM GPS OBSERVATIONS USING UNIVERSITY OF CALIFORNIA BAY AREA DEFORMATION CORS STATION OBSERVATION FILES AND BASED ON THE CALIFORNIA SPATIAL REFERENCE CENTER DATUM, REFERENCE EPOCH 2000.35.  
 COORDINATE DATUM IS NAD 83(CORS).  
 DATUM ELLIPSOID IS GRS80.  
 REFERENCE GEOID IS GEOID99.  
 CORS STATIONS USED WERE FARB AND MONB.  
 VERTICAL DATUM IS NAVD 88 FROM GPS OBSERVATIONS.

## Monitoring Well Exhibit

Prepared For:  
**Delta Environmental Consultants, Inc.**

76 Station 5760  
 376 Lewelling Boulevard  
 San Lorenzo  
 Alameda County  
 California



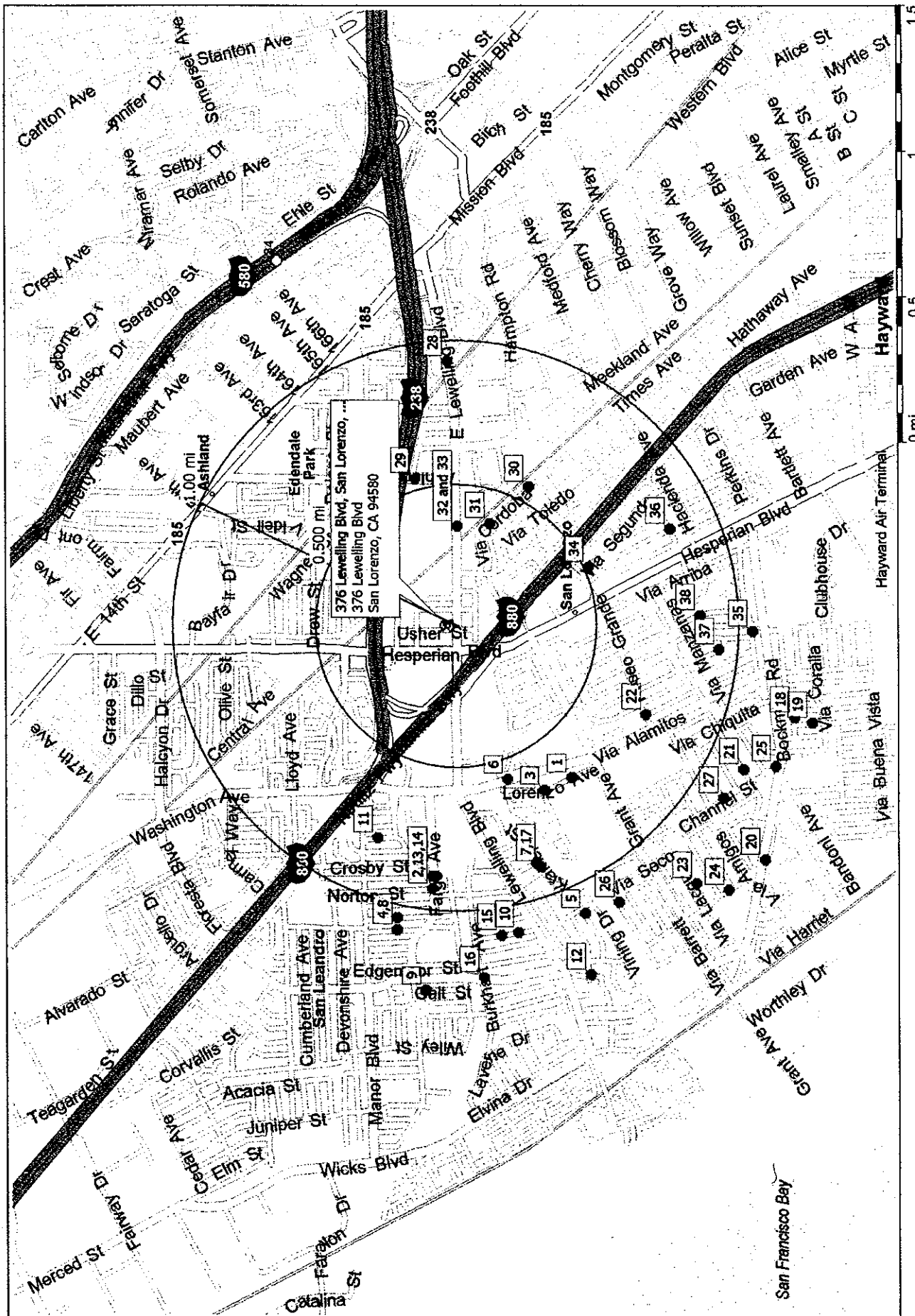
1450 Harbor Blvd. Ste. D  
 West Sacramento  
 California 95691  
 (916) 372-8124  
 curt@morrowssurveying.com

Date: 8-23-07  
 Scale: 1" = 30'  
 Sheet 1 of 1  
 Revised:  
 Field Book: MW-36  
 Dwg. No. 1275-100 ct

**Attachment C**

***Well Location Map  
And  
Data Table***

# Well Locations

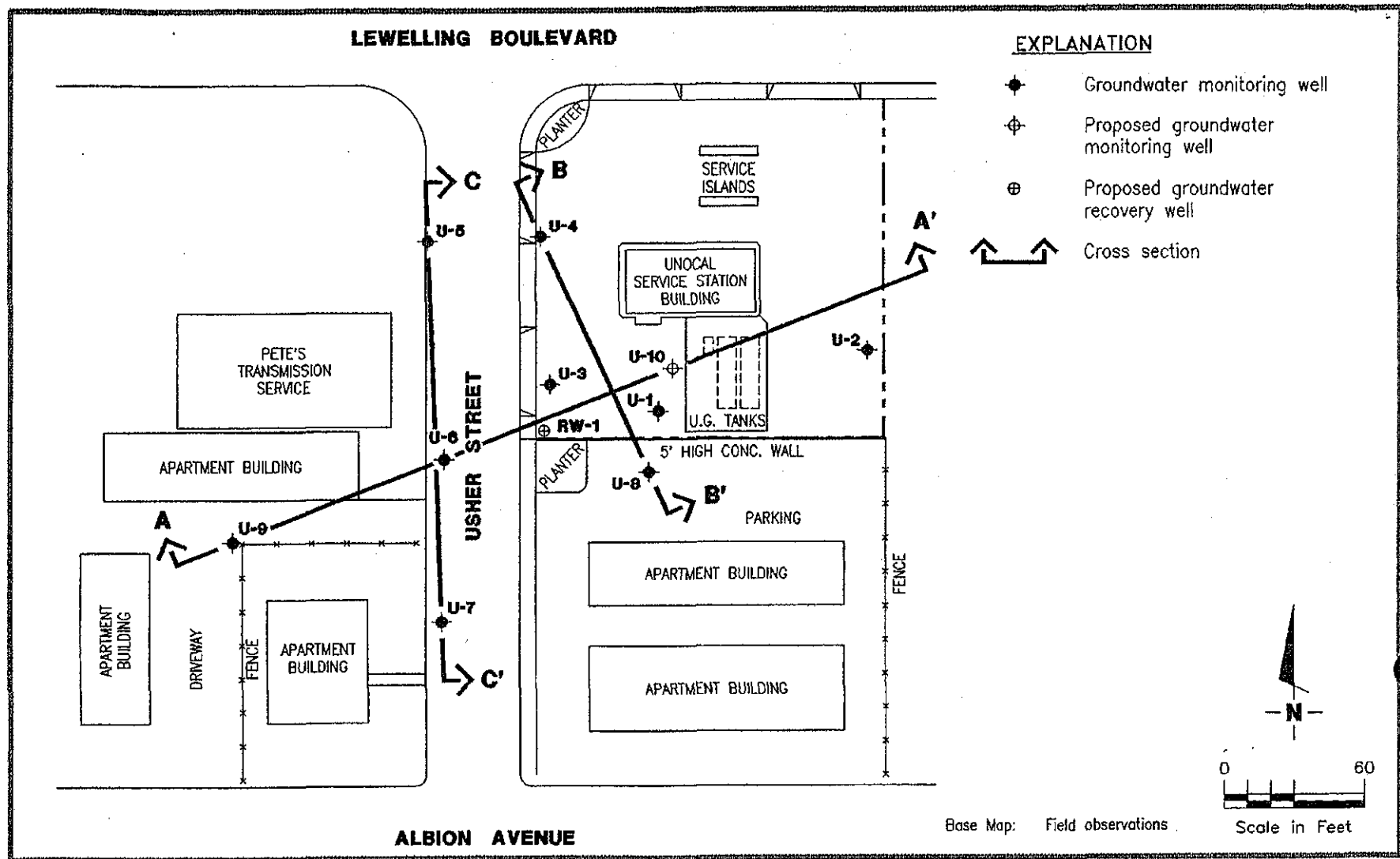


**One-Mile Radius Agency Receptor Survey**  
 ConocoPhillips Station #5760  
 376 Lewelling Blvd.  
 San Lorenzo, CA

Well Owner	Street Address	Well No.	Well Designation
Name obtained from DWR	Address obtained from the DWR		
Arroyo High School	15701 Lorenzo Avenue	3S/3W-12R	1
Christ Presbyterian Church	890 Fargo Avenue	3S/3W-12F7	2
Frank Perry	15600 Lorenzo Avenue	3S/3W-12J4	3
Richard Almstrone	15088 Andover Street	3S/3W-12F4	4
George Bolla	1335 Sayre Street	3S/3W-12N4	5
Modern Vegetable Produce Co.	15550 Washington Avenue	3S/3W-12Q	6
Aubrey Elloit	1018 Kramer Street	3S/3W-12L4	7
Mrs. Lapin	15105 Beatty Street	3S/3W-12F6	8
Herman Albright	15205 Galt Street	3S/3W-12F3	9
Ronald Stanley	15368 Churchill Street	3S/3W-12M5	10
Roy Swatman	15034 Alexandria Street	3S/3W-12B5	11
Alvin Brown	15501 Jutland Street	3S/3W-12N5	12
Mr. Jan Tisby	15193 Endicott Street	3S/3W-12F5	13
Sal Camilongo	15190 Nocton Street	3S/3W-12F8	14
Donald Woolory	15340 Churchill	3S/3W-12M3	15
Herman Howell	15307 Furnsworth	3S/3W-12M4	16
Robert Perino	15596 Tilden Street	3S/3W-12L3	17
Tom Sharp	1318 Via Madera	3S/3W-13J5	18
Xerxes Cole	17260 Via El Cerrito	3S/3W-13R2	19
Herman Eppenberger	1794 Via Redondo	3S/3W-13G2	20
Robert Harris	1432 Via Lucas	3S/3W-13H1	21
San Lorenzo Community Church	945 Paseo Grande	3S/3W-13A5	22
Thomas Bratton	15868 Corte Ulisse	3S/3W-13C1	23
David Norris	16030 Via Nueva	3S/3W-13F2	24
Robert Zoller	17050 Channel Street	3S/3W-13J4	25
Lawrence Moyers	1508 Via Hermana	3S/3W-13D1	26
E Lichty	16148 Channel Street	3S/3W-13G1	27
F.J.Goyett Machine Works	624 Lewelling Blvd	3S/2W-7G1	28
Kawahara Nursery, Inc.	16550 Ashland Avenue	3S/2W-7H3	29
William Santos	16068 Via Cordoba	3S/2W-7J7	30
Kurt Teschke	15939 Via Cordoba	3S/2W-7J8	31
San Lorenzo High School	50 East Lewelling Blvd.	3S/2W-7G3	32
San Lorenzo High School	50 East Lewelling Blvd.	3S/2W-7G11	33
Kennith Larson	16138 Via Segundo	3S/2W-18B1	34
P.F. Neal	840 Hacienda Avenue	3S/2W-18F3	35
Andres Glassow	17578 Via Primero	3S/2W-18B6	36
Wallace Leroy	17061 Via Perdido	3S/2W-18F4	37
Horace Robertson	17127 Via Flores	3S/2W-18C1	38
Lewis Barton	Unknown	3S/2W-18G1	39

**Attachment D**

***Historic Cross Sections***



**GSI** GeoStrategies Inc.

**SITE PLAN**  
 UNOCAL Service Station #5760  
 376 Lewelling Boulevard  
 San Lorenzo, California

FIGURE

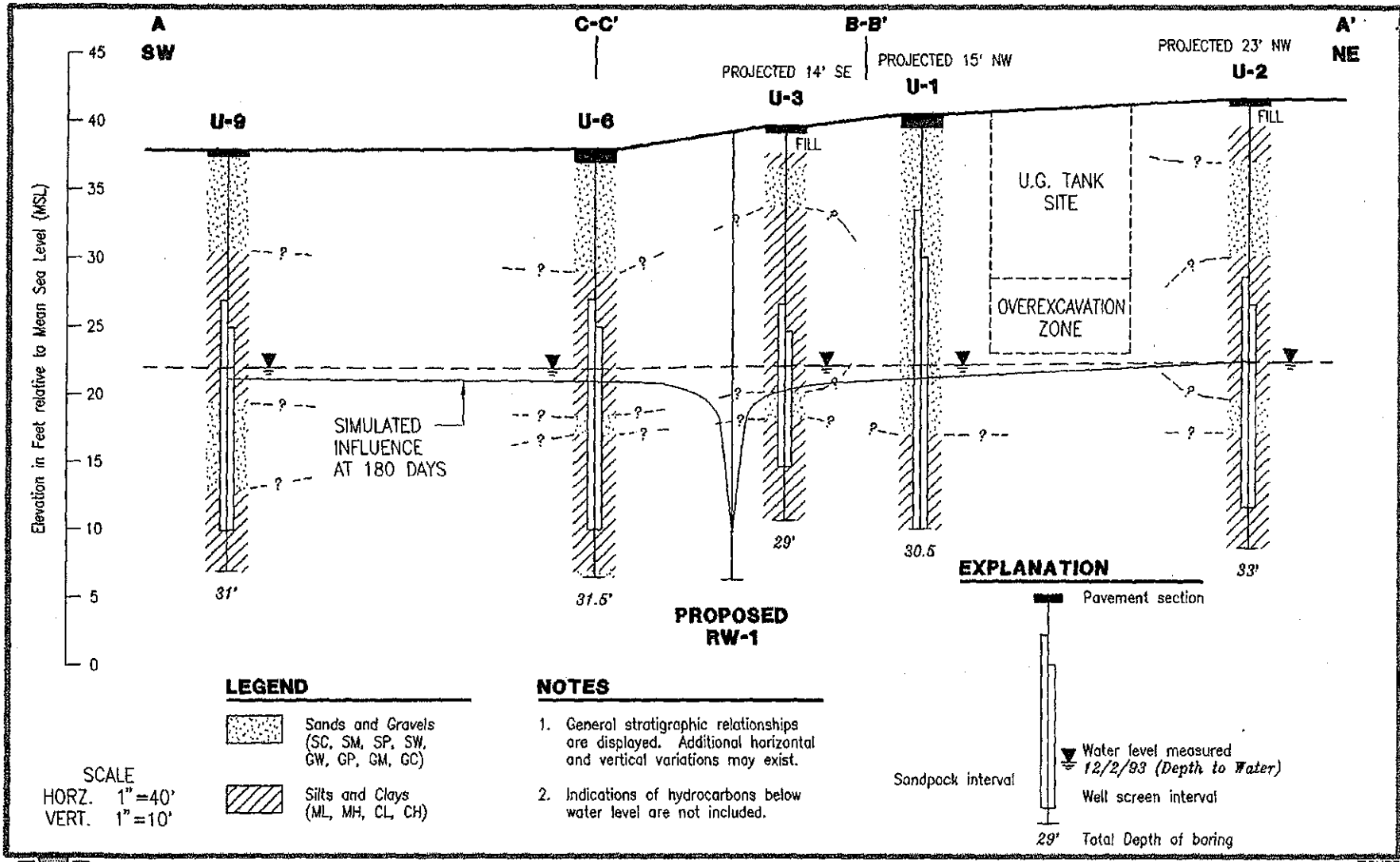
**2**

JOB NUMBER  
7809

REVIEWED BY

DATE  
4/94

REVISED DATE



**LEGEND**

- Sands and Gravels (SC, SM, SP, SW, GW, GP, GM, GC)
- Silts and Clays (ML, MH, CL, CH)

**NOTES**

- General stratigraphic relationships are displayed. Additional horizontal and vertical variations may exist.
- Indications of hydrocarbons below water level are not included.

**SCALE**

HORZ. 1" = 40'  
VERT. 1" = 10'



GeoStrategies Inc.

CROSS SECTION A-A'  
UNOCAL Service Station #5760  
376 Lewelling Boulevard  
San Lorenzo, California

FIGURE

**3**

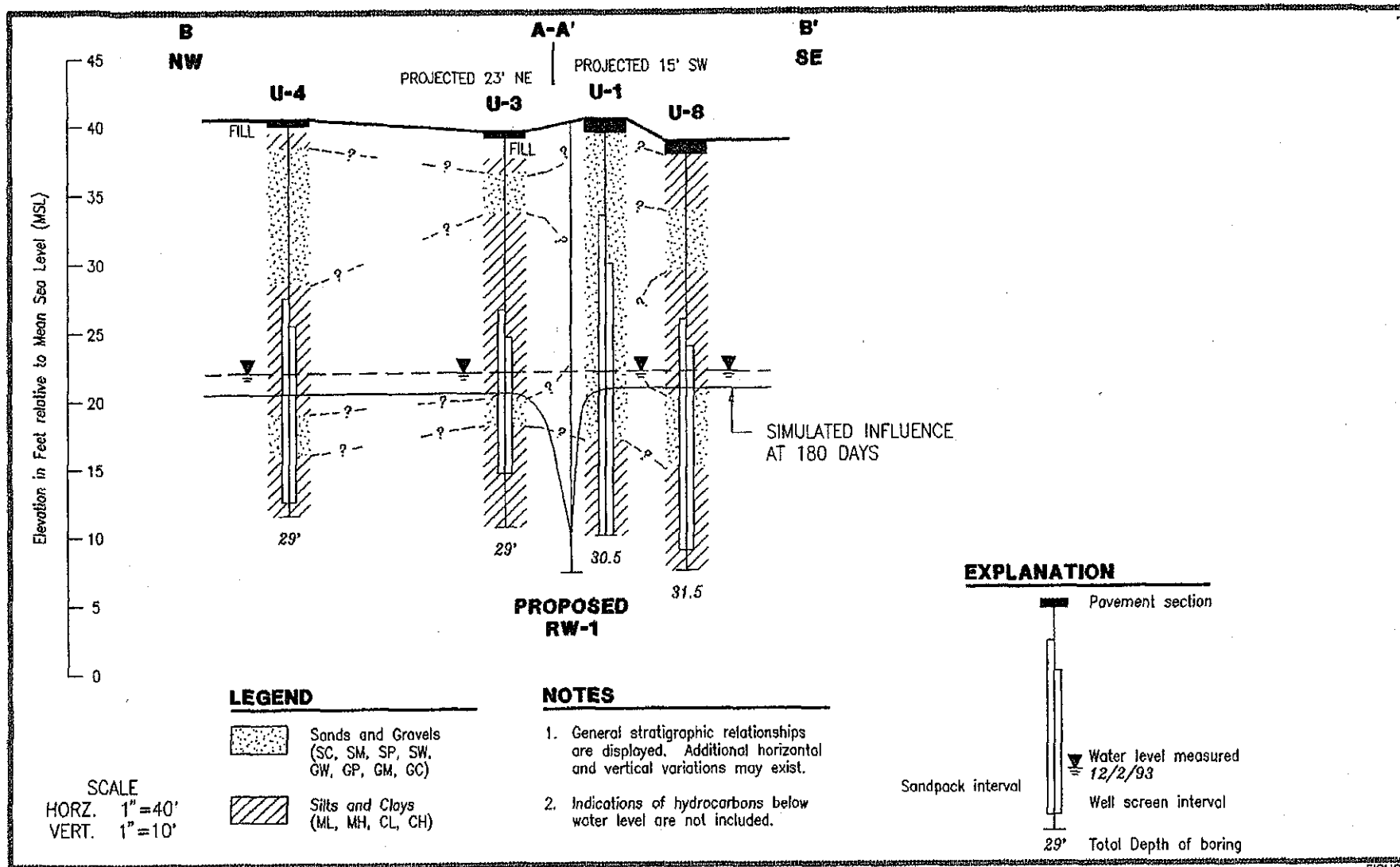
JOB NUMBER  
789010-19

REVIEWED BY

DATE  
4/94

REVISED DATE





GeoStrategies Inc.

CROSS SECTION B-B'  
UNOCAL Service Station #5760  
376 Lewelling Boulevard  
San Lorenzo, California

FIGURE

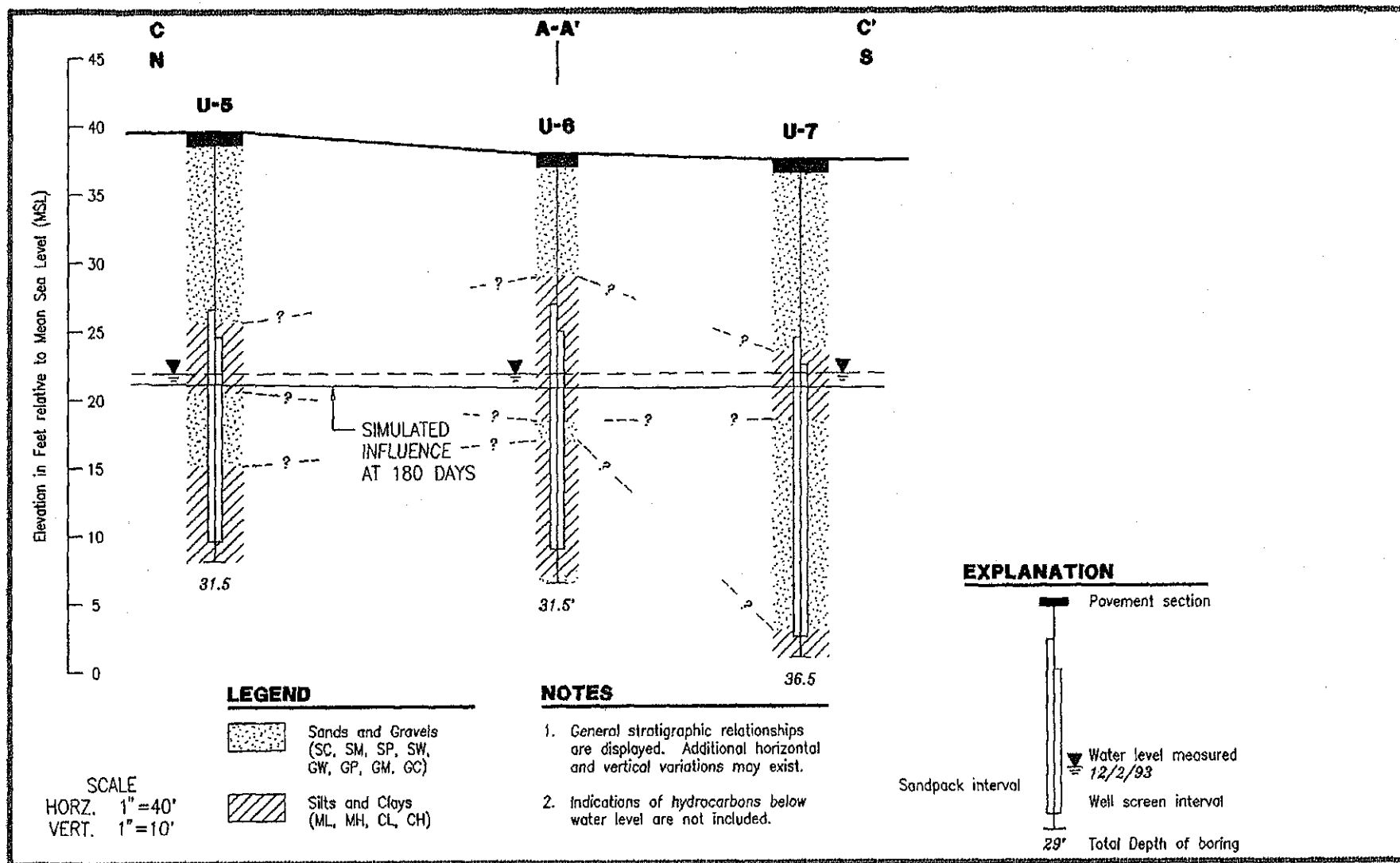
4

JOB NUMBER  
789010-19

REVIEWED BY

DATE  
4/94

REVISED DATE



GeoStrategies Inc.

CROSS SECTION C-C'  
UNOCAL Service Station #5760  
376 Lewelling Boulevard  
San Lorenzo, California

FIGURE

**5**

JOB NUMBER  
789010-19

REVIEWED BY

DATE  
4/94

REVISED DATE

**Attachment E**

***Boring Logs***

MONITORING WELL LOCATION 376 Lowelling Blvd., San Lorenzo, CA			ELEVATION AND DATUM		
DRILLING AGENCY Bay Land Drilling		DRILLER Kurt	DATE STARTED 2/1/88		DATE FINISHED 2/1/88
DRILLING EQUIPMENT CME - 55			COMPLETION DEPTH 30.5'	SAMPLER California Modified Sampler	
DRILLING METHOD 8-inch Hollowstem Augers		DRILL BIT	NO. OF SAMPLES	DIST. 6	UNBIST. none
SIZE AND TYPE OF CASING 3-inch PVC			WATER LEVEL FIRST 17.9'	COMPL. 24 HRS.	
TYPE OF PERFORATION 0.020-inch slotted screen		FROM 30.5 TO 10.5 FT.	LOGGED BY: G. Heyman		CHECKED BY: M. Bonkowski
SIZE AND TYPE OF PACK 12/20 Monterey sand		FROM 30.5 TO ? FT.			
TYPE OF SEAL	NO. 1 Bentonite	FROM ? TO 5.5 FT.			
	NO. 2 Cement	FROM 5.5 TO 0.7 FT.			

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALTIC PAVEMENT		
1	1	1	SAND with CLAYEY SAND yellow-brown with dark gray brown clayey pockets, fine to medium grained, loose, moist, subrounded, moderately to poorly sorted, clayey sand is more common in samples C and D, contains organic fragments	SP-SC	
5	2	2			
10	3	3	medium brown, fine to medium grained with little to some clay, very loose to loose, wet, subrounded, well to moderately sorted, fine organic fragments throughout	SP-SC	
15	4	4	SAND with interlayered CLAYEY SILT brown to dark brown, silt is dark gray, fine to very coarse grained sand, little gravel to 2x2x2.5 cm., little to some clay, medium dense, stiff, silt has low plasticity, wet, subrounded to subangular, silt layers are up to 3-inches thick in the B sample	SW & ML	
	5	5			
20	6	6	SAND dark gray, fine to medium grained, little to some clay, little gravel to 0.5x0.5x1 cm., loose, saturated, subrounded to subangular, poorly sorted, homogeneous	SW	
			-CLAY at 23.5 feet in cuttings-		
25	7	7	SILTY CLAY and CLAY dark to medium gray brown, trace very fine to medium sand, one 2-inch layer of clayey sand, medium to high plasticity, stiff, saturated, homogeneous	CH	
30	8	8	CLAY dark gray brown, little to some silt, occasionally little very fine to medium sand, very plastic, very stiff to hard, wet, homogeneous	CH	
	15	15			
	23	23			
BOTTOM OF BORING: 30.5'					

No. 749531 ULR

**Woodward-Clyde Consultants**



PROJECT NAME

Gettler-Ryan

NO. 8820011A

MONITORING WELL LOCATION 376 Lowell Blvd., San Lorenzo, CA			ELEVATION AND DATUM		
DRILLING AGENCY Bay Land Drilling		DRILLER Kurt	DATE STARTED 2/1/88		DATE FINISHED 2/1/88
DRILLING EQUIPMENT CME - 55		COMPLETION DEPTH 30.5'		SAMPLER California Modified Sampler	
DRILLING METHOD 8-inch Hollowstem Augers		DRILL BIT	NO. OF SAMPLES	DIST. 6	UNDIST. none
SIZE AND TYPE OF CASING 3-inch PVC		WATER LEVEL	FIRST 17.9'	COMPL. 24 HRS.	
TYPE OF PERFORATION 0.020-inch slotted screen		FROM 30.5 TO 10.5 FT.		LOGGED BY: G. Heyman	
SIZE AND TYPE OF PACK 12/20 Monterey sand		FROM 30.5 TO 7 FT.		CHECKED BY: M. Bonkowski	
TYPE OF SEAL	NO. 1 Bentonite	FROM 7 TO 5.5 FT.			
	NO. 2 Cement	FROM 5.5 TO 0.7 FT.			

Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION	USCS	Well Construction
			ASPHALTIC PAVEMENT		
1	1	1	SAND with CLAYEY SAND yellow-brown with dark gray brown clayey pockets, fine to medium grained, loose, moist, subrounded, moderately to poorly sorted, clayey sand is more common in samples C and D, contains organic fragments	SP-SC	
5	2	1	medium brown, fine to medium grained with little to some clay, very loose to loose, wet, subrounded, well to moderately sorted, fine organic fragments throughout	SP-SC	
10	3	3	SAND with interlayered CLAYEY SILT brown to dark brown, silt is dark gray, fine to very coarse grained sand, little gravel to 2x2x2.5 cm., little to some clay, medium dense, stiff, silt has low plasticity, wet, subrounded to subangular, silt layers are up to 3-inches thick in the B sample	SW & ML	
15	4	4	SAND dark gray, fine to medium grained, little to some clay, little gravel to 0.5x0.5x1cm., loose, saturated, subrounded to subangular, poorly sorted, homogeneous	SW	
20	5	5	CLAY at 23.5 feet in cuttings		
25	6	7	SILTY CLAY and CLAY dark to medium gray brown, trace very fine to medium sand, one 2-inch layer of clayey sand, medium to high plasticity, stiff, saturated, homogeneous	CH	
30	9	9	CLAY dark gray brown, little to some silt, occasionally little very fine to medium sand, very plastic, very stiff to hard, wet, homogeneous	CH	
			BOTTOM OF BORING: 30.5'		

MAJOR DIVISIONS					TYPICAL NAMES
COARSE-GRAINED SOILS MORE THAN HALF IS COARSER THAN NO. 200 SIEVE	GRAVELS MORE THAN HALF COARSE FRACTION IS LARGER THAN NO. 4 SIEVE SIZE	CLEAN GRAVELS WITH LITTLE OR NO FINES	GW		WELL GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
			GP		POORLY GRADED GRAVELS WITH OR WITHOUT SAND, LITTLE OR NO FINES
		GRAVELS WITH OVER 15% FINES	GM		SILTY GRAVELS, SILTY GRAVELS WITH SAND
			GC		CLAYEY GRAVELS, CLAYEY GRAVELS WITH SAND
	SANDS MORE THAN HALF COARSE FRACTION IS SMALLER THAN NO. 4 SIEVE SIZE	CLEAN SANDS WITH LITTLE OR NO FINES	SW		WELL GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
			SP		POORLY GRADED SANDS WITH OR WITHOUT GRAVEL, LITTLE OR NO FINES
		SANDS WITH OVER 15% FINES	SM		SILTY SANDS WITH OR WITHOUT GRAVEL
			SC		CLAYEY SANDS WITH OR WITHOUT GRAVEL
FINE-GRAINED SOILS MORE THAN HALF IS FINER THAN NO. 200 SIEVE	SILTS AND CLAYS LIQUID LIMIT 50% OR LESS		ML		INORGANIC SILTS AND VERY FINE SANDS, ROCK FLOUR, SILTS WITH SANDS AND GRAVELS
			CL		INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, CLAYS WITH SANDS AND GRAVELS, LEAN CLAYS
			OL		ORGANIC SILTS OR CLAYS OF LOW PLASTICITY
	SILTS AND CLAYS LIQUID LIMIT GREATER THAN 50%		MH		INORGANIC SILTS, MICACEOUS OR DIATOMACEOUS, FINE SANDY OR SILTY SOILS, ELASTIC SILTS
			CH		INORGANIC CLAYS OF HIGH PLASTICITY, FAT CLAYS
			OH		ORGANIC SILTS OR CLAYS OF MEDIUM TO HIGH PLASTICITY
HIGHLY ORGANIC SOILS			PT		PEAT AND OTHER HIGHLY ORGANIC SOILS

- Perm - Permeability  
 Consol - Consolidation  
 LL - Liquid Limit (%)  
 PI - Plastic Index (%)  
 G<sub>s</sub> - Specific Gravity  
 MA - Particle Size Analysis  
 2.5 YR 6/2 - Soil Color according to Munsell Soil Color Charts (1975 Edition)  
 5 GY 5/2 - GSA Rock Color Chart

- No Soil Sample Recovered  
 - "Undisturbed" Sample  
 - Bulk or Classification Sample  
 - First Encountered Ground Water Level  
 - Piezometric Ground Water Level
- Penetration - Sample drive hammer weight - 140 pounds falling 30 inches. Blows required to drive sampler 1 foot are indicated on the logs



GeoStrategies Inc.

Unified Soil Classification - ASTM D 2488-85  
 and Key to Test Data

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:			
				Client: UNOCAL #5760				U-2			
				Location: 376 Lewelling Boulevard						Sheet 1	
				City: San Lorenzo, California						of 2	
Drilling method: Hollow Stem Auger				Logged by: M.J.J.		Driller: Bayland		Casing installation data:			
Hole diameter: 8-Inches				Top of Box Elevation: 41.62		Datum: MSL					
PID (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level			
								20.0'	21.52'		
								Time			
								10:30 16:02			
								Date			
								08/06/90 08/06/90			
Description											
				0				PAVEMENT SECTION - 0.5 feet			
				1				FILL - Gravel with Sand (GW) - dark brown (7.5YR 3/4), loose, damp; 75% fine to coarse gravel; 20% sand; 5% silt; no chemical odor.			
				2				SANDY SILT (ML) - very dark grayish brown (10YR 3/2), medium stiff, damp; 55% silt; 35% sand; 10% clay; no chemical odor.			
				3				COLOR CHANGE to olive brown (2.5Y 4/4) at 3.0 feet; increasing sand at 3.0 feet.			
				4							
	150	S&H		5							
0	150	push	U-2-5	6				SILTY SAND (SM) - olive brown (2.5Y 4/4), soft, damp; 60% fine sand; 40% silt; no chemical odor.			
	150			7							
				8							
				9							
	150	S&H		10				SAND (SP) - dark brown (10YR 3/3), loose, damp; 85% fine sand; 15% silt; no chemical odor.			
0	150	push	U-2-10	11							
	150			12							
				13							
				14							
	0	S&H	U-2-15	15				SILTY CLAY (CL/ML) - very dark grayish brown (10YR 3/2), soft, saturated; 50% clay; 40% silt; 10% fine sand; rootholes; no chemical odor.			
0	0			16							
	4			17							
				18							
				19							
Remarks:											



GeoStrategies Inc.

Log of Boring

BORING NO.

U-2

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CWP/08/12/92

DATE  
08/90

REVISED DATE

REVISED DATE

Field location of boring:  
  
(See Plate 2)

Project No.: 7809      Date: 08/06/90      Boring No:  
Client: UNOCAL #5760      U-2  
Location: 376 Lewelling Boulevard  
City: San Lorenzo, California      Sheet 2  
Logged by: M.J.J.      Driller: Bayland      of 2

Drilling method: Hollow Stem Auger  
Hole diameter: 8-Inches

Casing installation data:  
Top of Box Elevation:      Datum:

PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description			
								Water Level	Time	Date	
	0			20				SANDY SILT (ML) - dark brown (10YR 3/3), medium stiff, very moist; 70% silt; 30% fine sand; trace clay; no chemical odor.			
0	2	S&H	U-2-20	21							
	3			22							
				23				SAND (SP) - dark brown (10YR 3/3), loose, saturated; 100% fine to coarse sand; trace silt; no chemical odor.			
	3			24							
0	4	S&H	U-2-25	25							
	3			26				CLAY (CL) - very dark grayish brown (2.5Y 3/2), medium stiff, moist; 55% clay; 40% silt; 5% very fine sand; no chemical odor.			
				27							
				28							
				29				Hard drilling at 28.0 feet.			
				30				Increasing clay at 29.0 feet.			
0	7	S&H	U-2-30	30				COLOR CHANGE to light olive brown (2.5Y 5/4), very stiff, damp; no chemical odor.			
	10			31							
	12			32							
0	9	S&H	U-2-33	32				no chemical odor.			
	11			33							
	13			34				Bottom of sample at 33.0 feet.			
				35				Bottom of boring at 33.0 feet.			
				36				08/06/90			
				37							
				38							
				39							

Remarks:

Log of Boring

BORING NO.



GeoStrategies Inc.

U-2

JOB NUMBER  
7809

REVIEWED BY  
OMP/CEJ/1202

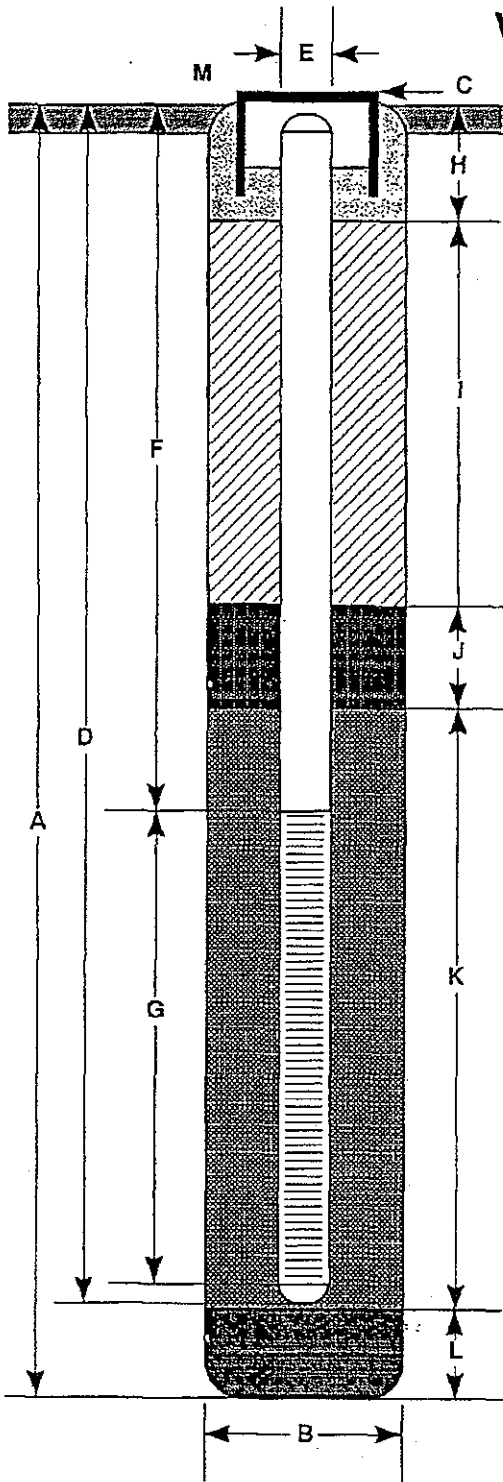
DATE  
08/90

REVISED DATE

REVISED DATE



# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring \_\_\_\_\_ 33.0 ft.
- B Diameter of Boring \_\_\_\_\_ 8 in.  
Drilling Method \_\_\_\_\_ Hollow Stem Auger
- C Top of Box Elevation \_\_\_\_\_ 41.62 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length \_\_\_\_\_ 30.0 ft.  
Material \_\_\_\_\_ Schedule 40 PVC
- E Casing Diameter \_\_\_\_\_ 3 in.
- F Depth to Top Perforations \_\_\_\_\_ 15.0 ft.
- G Perforated Length \_\_\_\_\_ 15.0 ft.  
Perforated Interval from \_\_\_\_\_ 15.0 to \_\_\_\_\_ 30.0 ft.  
Perforation Type \_\_\_\_\_ Machine Slot  
Perforation Size \_\_\_\_\_ 0.020 in.
- H Surface Seal from \_\_\_\_\_ 0.5 to \_\_\_\_\_ 1.5 ft.  
Seal Material \_\_\_\_\_ Concrete
- I Backfill from \_\_\_\_\_ 1.5 to \_\_\_\_\_ 11.0 ft.  
Backfill Material \_\_\_\_\_ Concrete Grout
- J Seal from \_\_\_\_\_ 11.0 to \_\_\_\_\_ 13.0 ft.  
Seal Material \_\_\_\_\_ Bentonite
- K Gravel Pack from \_\_\_\_\_ 13.0 to \_\_\_\_\_ 30.0 ft.  
Pack Material \_\_\_\_\_ #2/12 Graded Sand
- L Bottom Seal \_\_\_\_\_ 3.0 ft.  
Seal Material \_\_\_\_\_ 2 feet Slough/1 foot Bentonite
- M \_\_\_\_\_ Waterproof vault with locking well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

**U-2**

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CMP CEG 1262

DATE  
08/90

REVISED DATE

REVISED DATE

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:							
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		U-3		Sheet 1 of 2					
				City: San Lorenzo, California		Logged by: M.J.J.						Driller: Bayland			
				Drilling method: Hollow Stem Auger		Hole diameter: 8-inches		Top of Box Elevation: 39.64		Datum: MSL		Casing installation data:			
PID (ppm)	Blows/ft or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level		19.5'		20.80'			
								Time		14:25		16:05			
0		S&H		U-3-5				Date		08/06/90		08/06/90			
Description															
PAVEMENT SECTION - 0.5 feet															
FILL - Gravel (GW) - dark gray (2.5Y N9/0), loose, dry; 85% fine to coarse gravel; 15% coarse sand; trace silt; no chemical odor.															
SANDY SILT (ML) - olive brown (2.5Y 4/4), medium stiff, damp; 70% silt; 30% fine sand; no chemical odor.															
SILTY SAND (SM) - light olive brown (2.5Y 5/6), loose, damp; 60% fine sand; 35% silt; 5% clay; trace fine gravel; no chemical odor.															
Moist at 8.0 to 9.0 feet.															
SILTY CLAY (CL-ML) - dark grayish brown (2.5Y 4/2), medium stiff, damp; 50% clay; 35% silt; 15% fine sand; no chemical odor.															
COLOR CHANGE to very dark gray (5Y 3/1) at 14.0 feet; rootholes; 5% organic content; weak chemical odor.															
Remarks:															



GeoStrategies Inc.

Log of Boring

BORING NO.

**U-3**

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CWP/CEG/262

DATE  
08/90

REVISED DATE

REVISED DATE

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:			
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California		U-3	
				Logged by: M.J.J.		Driller: Bayland		Sheet 2		of 2	
				Casing installation data:		Top of Box Elevation:		Datum:			
				Drilling method: Hollow Stem Auger		Hole diameter: 8-Inches		Water Level		Time	
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description			
				21				SAND with GRAVEL (SW) - very dark gray (2.5Y N3/0), loose, saturated; 80% medium to coarse sand; 20% fine to coarse gravel; strong chemical odor.			
				22							
				23							
	3			24							
0.7	4	S&H	U-3-25	25				CLAY (CL) - light olive brown (2.5Y 5/4), stiff, damp, medium plasticity; 85% clay; 15% silt; trace sand; no chemical odor.			
	9			26							
				27							
	4			28							
0	5	S&H	U-3-29	29				no chemical odor.			
	5			30				Bottom of sample at 29.0 feet.			
				31				Bottom of boring at 29.0 feet.			
				32				08/06/90			
				33							
				34							
				35							
				36							
				37							
				38							
				39							
				40							
Remarks:											



GeoStrategies Inc.

Log of Boring

BORING NO.

U-3

JOB NUMBER  
7809

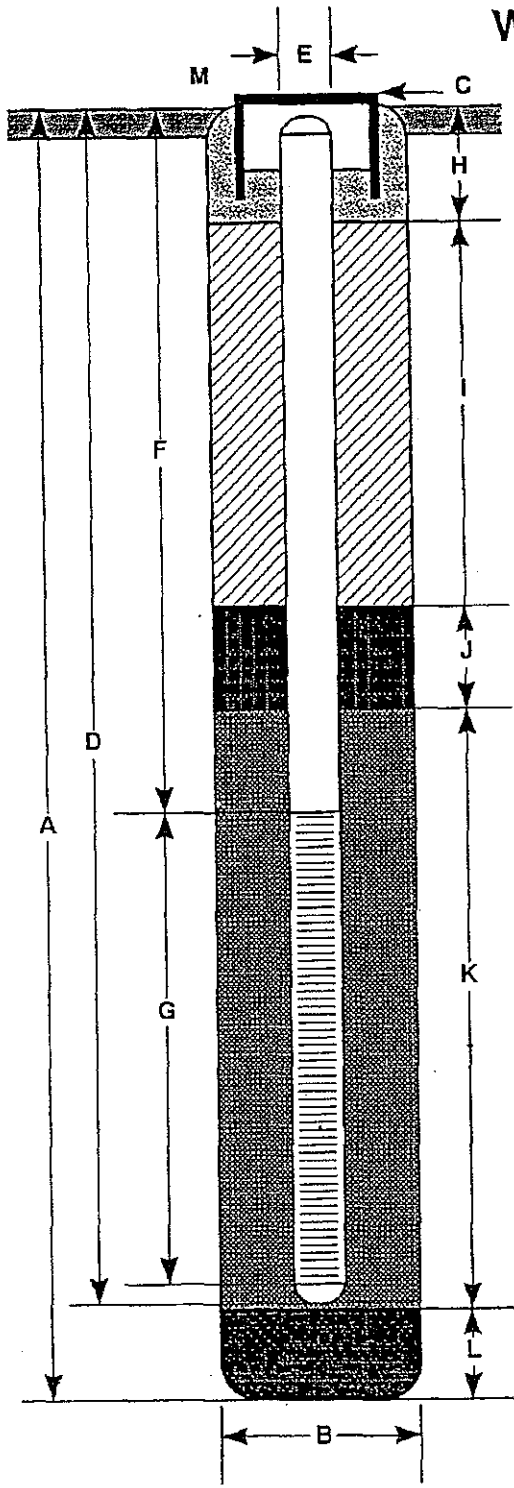
REVIEWED BY RG/CEG  
CMB/CEG/202

DATE  
08/90

REVISED DATE

REVISED DATE

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 29.0 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 39.64 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 25.0 ft.  
Material Schedule 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 15.0 ft.
- G Perforated Length 10.0 ft.  
Perforated Interval from 15.0 to 25.0 ft.  
Perforation Type Machine Slot  
Perforation Size 0.020 in.
- H Surface Seal from 0.5 to 1.5 ft.  
Seal Material Concrete
- I Backfill from 1.5 to 11.0 ft.  
Backfill Material Concrete Grout
- J Seal from 11.0 to 13.0 ft.  
Seal Material Bentonite
- K Gravel Pack from 13.0 to 25.0 ft.  
Pack Material #2/12 Graded Sand
- L Bottom Seal 4.0 ft.  
Seal Material Bentonite
- M Waterproof vault with locking well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

**U-3**

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CWP/CEG/12/02

DATE  
08/90

REVISED DATE

REVISED DATE

No. 749532

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:  U-3	
				Client: UNOCAL #5760					
				Location: 376 Lewelling Boulevard				Sheet 1	
				City: San Lorenzo, California				of 2	
				Logged by: M.J.J.		Driller: Bayland			
Drilling method: Hollow Stem Auger				Casing installation data:					
Hole diameter: 8-Inches				Top of Box Elevation: 39.64		Datum: MSL			
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	
								19.5'	20.80'
								Time	14:25 16:05
								Date	08/06/90 08/06/90
Description									
PAVEMENT SECTION - 0.5 feet									
FILL - Gravel (GW) - dark gray (2.5Y N9/0), loose, dry; 85% fine to coarse gravel; 15% coarse sand; trace silt; no chemical odor.									
SANDY SILT (ML) - olive brown (2.5Y 4/4), medium stiff, damp; 70% silt; 30% fine sand; no chemical odor.									
0	175	S&H	U-3-5	4				SILTY SAND (SM) - light olive brown (2.5Y 5/6), loose, damp; 60% fine sand; 35% silt; 5% clay; trace fine gravel; no chemical odor.	
	175	push		5					
				6					
				7					
				8				Moist at 8.0 to 9.0 feet.	
	150			9					
	150	S&H	U-3-10	9				SILTY CLAY (CL-ML) - dark grayish brown (2.5Y 4/2), medium stiff, damp; 50% clay; 35% silt; 15% fine sand; no chemical odor.	
0.7	150	push		10					
				11					
				12					
				13					
1.8	3	S&H	U-3-15	14				COLOR CHANGE to very dark gray (5Y 3/1) at 14.0 feet; rootholes; 5% organic content; weak chemical odor.	
	4			15					
				16					
				17					
				18					
	2			19					
235	4	S&H	U-3-20	19					
	5			20					
Remarks:									

No. 749532

Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:	
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California	
Drilling method: Hollow Stem Auger				Casing installation data:		Top of Box Elevation:		Datum:	
Hole diameter: 8-inches				Water Level		Time		Date	
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description	
								SAND with GRAVEL (SW) - very dark gray (2.5Y N3/0), loose, saturated; 80% medium to coarse sand; 20% fine to coarse gravel; strong chemical odor.	
				21					
				22					
				23					
	3			24					
0.7	4	S&H	U-3-25	25				CLAY (CL) - light olive brown (2.5Y 5/4), stiff, damp, medium plasticity; 85% clay; 15% silt; trace sand; no chemical odor.	
	9			26					
				27					
	4			28					
0	5	S&H	U-3-29	29				no chemical odor.	
	5			30				Bottom of sample at 29.0 feet.	
				31				Bottom of boring at 29.0 feet.	
				32				08/06/90	
				33					
				34					
				35					
				36					
				37					
				38					
				39					
				40					
Remarks:									



GeoStrategies Inc.

Log of Boring

BORING NO.

U-3R

JOB NUMBER  
7809

REVIEWED BY RG/CEG

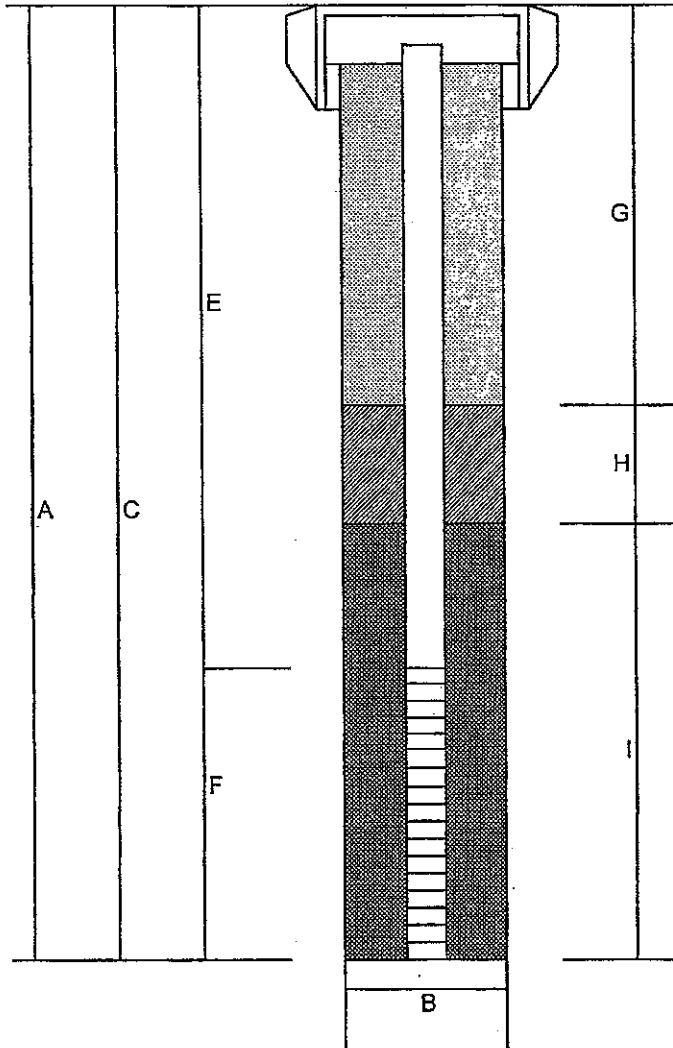
CEG/CEG/RGL

DATE  
08/90

REVISED DATE

REVISED DATE

No. 749532



- A: Total Depth: 25' bgs
- B: Boring Diameter: 10-inch  
Drilling Method: Hollow Stem Auger
- C: Casing Length: 25'  
Material: Schedule 40 PVC
- D: Casing Diameter: 2"
- E: Depth to Perforations: 10'
- F: Perforated Length: 15'  
Perforated Size: 0.010"
- G: Surface Seal: 7'  
Seal Material: Neat Cement
- H: Seal: 1'  
Seal Material: Bentonite
- I: Gravel Pack: 17'  
Pack Material: Monterey Sand  
Size: #2/12

**WELL COMPLETION DIAGRAM (U-3R)**  
**76 Service Station No. 5760**  
**San Lorenzo, California**

PROJECT NO. C105760131	PREPARED BY TC	DRAWN BY TC
DATE 7/25/2007	REVIEWED BY	FILE NAME COP 5760



Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:			
				Client: UNOCAL #5760		Location: 376 Lewelling Boulevard		City: San Lorenzo, California		Sheet 1 of 2	
				Logged by: M.J.J.		Driller: Bayland		Casing installation data:			
				Drilling method: Hollow Stem Auger		Hole diameter: 8-Inches		Top of Box Elevation: 40.53		Datum: MSL	
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level			
								21.0'	20.33'		
								Time	13:05		
								Date	08/06/90		
								Description			
				0				PAVEMENT SECTION - 0.5 feet			
				1				FILL - Gravel (GW) - dark brown (7.5YR 3/4), loose, damp; 100% fine to coarse gravel; no chemical odor.			
				2				SANDY SILT (ML) - very dark grayish brown (10YR 3/2), medium stiff, damp; 60% silt; 35% fine sand; 5% clay; no chemical odor.			
				3							
				4				SILTY SAND (SM) - olive brown (2.5Y 4/4), loose, damp; 60% fine sand; 35% silt; 5% clay; no chemical odor.			
0	100	S&H		4							
	100	push	U-4-5	5							
	100			5							
				6							
				7							
				8							
				9				SAND (SP) - dark yellowish brown (10YR 3/4), loose, damp; 85% medium to coarse sand; 10-15% fine gravel; trace silt; no chemical odor.			
0	125	S&H		9							
	125	push	U-4-10	10							
	125			10							
				11							
				12							
				13							
				14							
0	3	S&H	U-4-15	15				SILT with SAND (ML) - very dark brown (10YR 2/2), medium stiff, damp; 80% silt; 10% clay; 10% fine sand; trace fine gravel; no chemical odor.			
	3			15							
	3			16							
				17							
				18							
				19							
Remarks:											



GeoStrategies Inc.

Log of Boring

BORING NO.

U-4

JOB NUMBER  
7809

REVIEWED BY RGCEG  
Cmpceg1202

DATE  
08/90

REVISED DATE

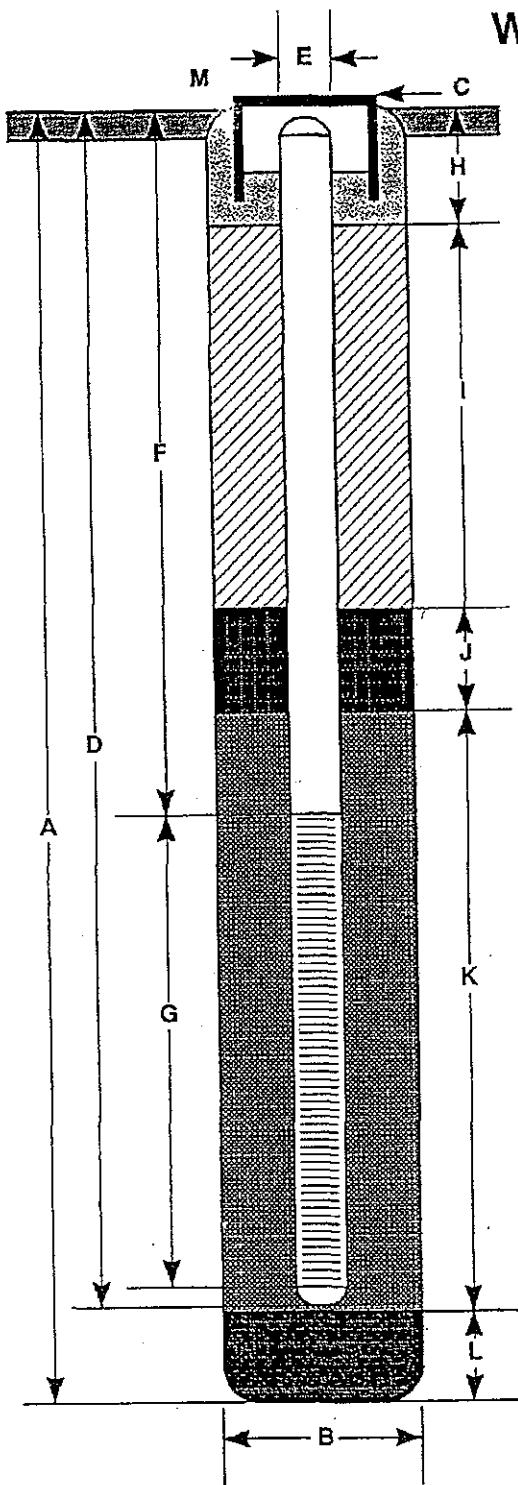
REVISED DATE



Field location of boring:  (See Plate 2)				Project No.: 7809		Date: 08/06/90		Boring No:			
				Client: UNOCAL #5760				U-4			
				Location: 376 Lewelling Boulevard						Sheet 2	
				City: San Lorenzo, California						of 2	
				Logged by: M.J.J.		Driller: Bayland					
Drilling method: Hollow Stem Auger				Casing installation data:							
Hole diameter: 8-Inches				Top of Box Elevation:				Datum:			
PD (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level			
								Description			
	0			20				Moist at 20.0 feet.			
0	0	S&H	U-4-20	20				Increasing sand at 20.0 feet; 70% silt; 25% sand; 5-10% clay; no chemical odor.			
	4			21							
	6			22							
0	8	S&H	U-4-22	22				SAND with GRAVEL (SW) - dark brown (10YR 3/3), medium dense, saturated; 75% fine to coarse sand; 25% fine to coarse gravel; trace silt; no chemical odor.			
	9			23							
				24							
				25							
	6			26							
0	8	S&H	U-4-27	27				CLAY (CL) - light olive brown (2.5Y 5/4), very stiff, damp, low to medium plasticity; 70% clay; 25% silt; 5% fine sand; no chemical odor.			
	12			28							
	4			28							
0	10	S&H	U-4-29	29				Bottom of sample at 29.0 feet.			
	14			29				Bottom of boring at 29.0 feet.			
				30				08/06/90			
				31							
				32							
				33							
				34							
				35							
				36							
				37							
				38							
				39							

Remarks:

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 29.0 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 40.53 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 28.0 ft.  
Material Schedule 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 15.0 ft.
- G Perforated Length 13.0 ft.  
Perforated Interval from 15.0 to 28.0 ft.  
Perforation Type Machine Slot  
Perforation Size 0.020 in.
- H Surface Seal from 0.5 to 1.5 ft.  
Seal Material Concrete
- I Backfill from 1.5 to 11.0 ft.  
Backfill Material Concrete Grout
- J Seal from 11.0 to 13.0 ft.  
Seal Material Bentonite
- K Gravel Pack from 13.0 to 28.0 ft.  
Pack Material #2/12 Graded Sand
- L Bottom Seal 1.0 ft.  
Seal Material Native Material
- M Waterproof vault with locking well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

**U-4**

JOB NUMBER  
7809

REVIEWED BY RG/CEG  
CMP CEG 1262

DATE  
08/90

REVISED DATE

REVISED DATE

Field location of boring:  (See Plate 2)	Project No.: 780902	Date: 3/12/92	Boring No:
	Client: Unocal Service Station #5760		U-5
	Location: 376 Lewelling		Sheet 1
	City: San Lorenzo, California		of 2
	Logged by: TDL	Driller: W. Hazmat	
Casing installation data:			

Drilling method: Hollow Stem Auger	Top of Box Elevation:	Datum:
------------------------------------	-----------------------	--------

Hole diameter: 8 Inches	Water Level	20.0 Ft	18.0 Ft	
-------------------------	-------------	---------	---------	--

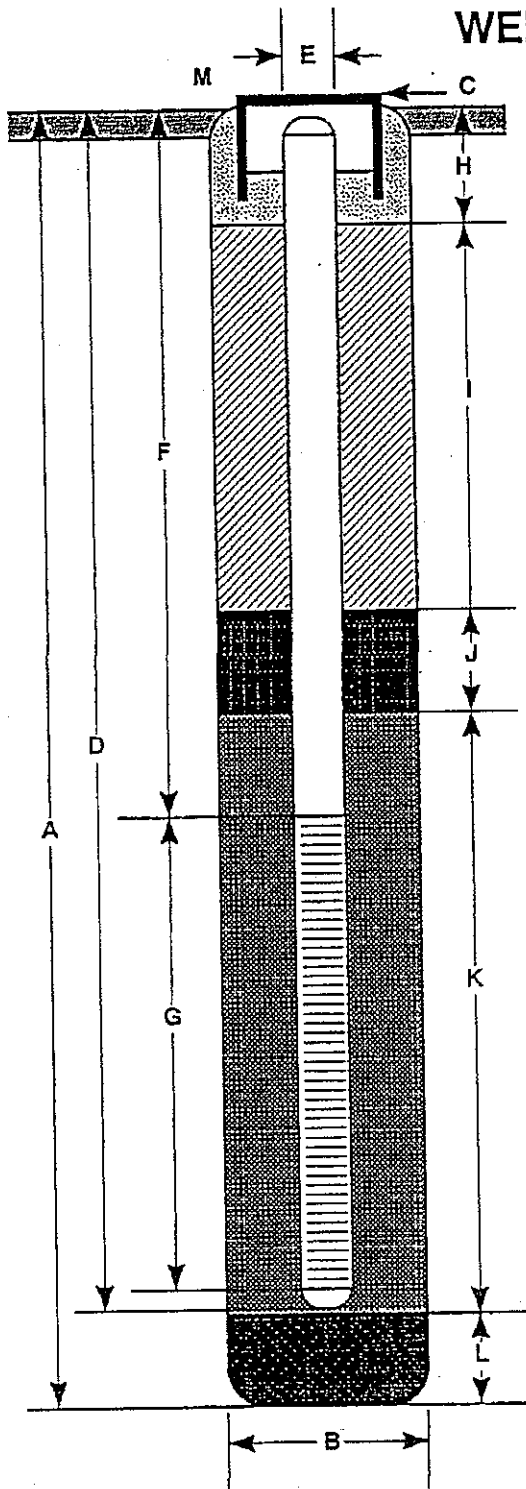
Time	1:20	2:30	
Date	3/12	3/12	

FD (gpm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				Pavement Section 1.0 feet
				2				SAND (SP) dark brown (10 YR 3/3) loose; damp; 100% fine sand; trace fines.
				3				
				4				
		S&H		5				Medium dense at 5.5 feet.
0	18			6				
				7				
				8				
				9				
		S&H		10				
0	12			11				SAND WITH SILT (SW-SM) dark brown (10 YR 3/3) medium dense; damp; 90% fine sand, 10% silt.
				12				
				13				
				14				
		S&H		15				
0	9		U-5-16.5	16				SILT (ML) very dark grayish brown (10 YR 3/2) stiff; damp; 90% silt; 10% fine sand; slightly clayey; rootholes
				17				
				18				
				19				
				20				

Remarks:

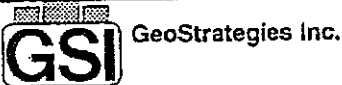
Field location of boring:  (See Plate 2)				Project No.: 780902		Date: 3/12/92		Boring No:			
				Client: Unocal Service Station #5760		Location: 376 Lewelling		U-5		Sheet 2	
				City: San Lorenzo, California		Logged by: TDL				Driller: W. Hazmat	
				Drilling method: Hollow Stem Auger		Hole diameter: 8 in. ches		Top of Box Elevation:		Datum:	
PD (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	Time	Date	Description
0	15	S&H		21							SAND WITH SILT (SW-SM) very dark gray (10 YR 3/1) medium dense; saturated; 90% fine sand, 10% silt.
				22							
				23							
				24							
		S&H		25							
0	18			26							CLAY (CL) dark gray (10 YR 4/1) very stiff; saturated; 95% clay, 5% sand; slightly silty; mottling; nodules.
				27							
				28							
				29							
		S&H		30							
0	8			31							SILT WITH SAND (ML) brown (10 YR 4/3) stiff; saturated; 85% silt, 15% fine sand; slightly clayey.
				32							
				33							Bottom of boring 31.5 feet.
				34							3/12/92
				35							
				36							
				37							
				38							
				39							
				40							
Remarks: Quickly saw 2 blades, 9809											

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 31.5 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 39.52 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 30 ft.  
Material Schedule 40 PVC
- E Casing Diameter 2 in.
- F Depth to Top Perforations 15 ft.
- G Perforated Length 15 ft.  
Perforated Interval from 15 to 30 ft.  
Perforation Type Machine slot  
Perforation Size 0.02 in.
- H Surface Seal from 0 to 1 ft.  
Seal Material Cement
- I Backfill from 1 to 11 ft.  
Backfill Material 11-Sack cement
- J Seal from 11 to 13 ft.  
Seal Material Bentonite
- K Gravel Pack from 13 to 30 ft.  
Pack Material Lone Star 2/12
- L Bottom Seal None ft.  
Seal Material \_\_\_\_\_
- M Traffic-rated vault, locking cap and lock

Note: Depths measured from initial ground surface.



Well Construction Detail

WELL NO.

**U-5**

JOB NUMBER  
780902

REVIEWED BY RG/CEG  
*RG*

DATE  
3/92

REVISED DATE

REVISED DATE

Field location of boring:  (See Plate 2)	Project No.: 780902	Date: 3/13/92	Boring No:
	Client: Unocal Service Station #5760		U-6
	Location: 376 Lewelling		Sheet 1
	City: San Lorenzo, California		of 2
	Logged by: TDL	Driller: W. Hazmat	
Casing installation data:			

Drilling method: Hollow Stem Auger	Top of Box Elevation:	Datum:
Hole diameter: 8 Inch		

Water Level	20.0 Ft.		
Time	10:40		
Date	3/13		

PID (ppm)	Blows/ft.* or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				Pavement section 1.0 foot
				2				
				3				
				4				
		S&H		5				
0	5			6				SAND (SP) brown (10 YR 4/3) loose; damp; 100% fine sand; trace clay
				7				
				8				
				9				
		S&H		10				
0	11			11				SILT (ML) dark gray (10 YR 4/1) stiff; damp; 90% silt, 10% fine sand, trace clay.
				12				
				13				
				14				
		S&H		15				
0	8		U-6-16.5	16				Rootholes, mottling.
				17				
				18				
				19				
				20				

Remarks:  
\* Converted to equivalent Standard Penetration blows/ft.

Field location of boring: (See Plate 2)				Project No.: 7809		Date: 3/13/92		Boring No: U-6	
				Client: Unocal Service Station #5760				Sheet 2	
				Location: 376 Lewelling				of 2	
				City: San Lorenzo, California					
				Logged by: TDL		Driller: W. Hazmat			
Drilling method: Hollow Stem Auger				Casing installation data:					
Hole diameter: 8 inches				Top of Box Elevation:			Datum:		
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	
								Time	Date
Description									
0	12	S&H		21				SAND (SP) dark gray (5 YR 4/1) medium dense; saturated; 100% fine sand.	
				22				CLAY (CL) very dark gray (5 YR 3/1) stiff; saturated; 90% clay, 10% sand, trace silt.	
				23					
				24					
				25				Color change to olive (5 YR 5/3) , very stiff; mottling at 25 feet.	
0	26	S&H		26					
				27					
				28					
				29					
				30					
0	26	S&H		31				SILT (ML) brown (10 YR 5/3) very stiff; saturated; 80% silt, 20% sand, slightly clayey; mottling.	
				32				SAND (SP) brown (10 YR 4/3) dense; saturated; 100% fine sand, slightly clayey.	
				33					
				34					
				35				Bottom of boring 31.5 feet.	
				36				3/13/92	
				37					
				38					
				39					
				40					
Remarks:									



GeoStrategies Inc.

Log of Boring

BORING NO.

U-6

JOB NUMBER  
780902

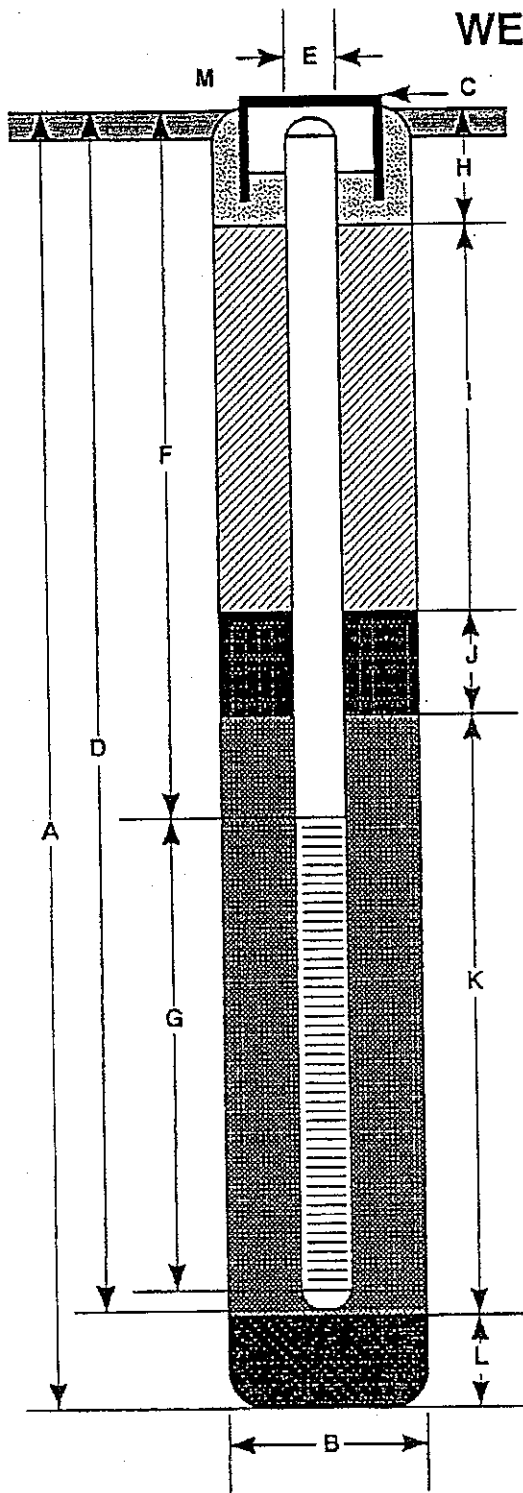
REVIEWED BY PG/CEG  
*ML*

DATE  
3/92

REVISED DATE

REVISED DATE

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring \_\_\_\_\_ 31.5 ft.
- B Diameter of Boring \_\_\_\_\_ 8 in.  
Drilling Method \_\_\_\_\_ Hollow Stem Auger
- C Top of Box Elevation \_\_\_\_\_ 37.80 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length \_\_\_\_\_ 28 ft.  
Material \_\_\_\_\_ Schedule 40 PVC
- E Casing Diameter \_\_\_\_\_ 2 in.
- F Depth to Top Perforations \_\_\_\_\_ 13 ft.
- G Perforated Length \_\_\_\_\_ 15 ft.  
Perforated Interval from \_\_\_\_\_ 13 to \_\_\_\_\_ 28 ft.  
Perforation Type \_\_\_\_\_ Factory Slot  
Perforation Size \_\_\_\_\_ 0.02 in.
- H Surface Seal from \_\_\_\_\_ 0 to \_\_\_\_\_ 1 ft.  
Seal Material \_\_\_\_\_ Cement
- I Backfill from \_\_\_\_\_ 1 to \_\_\_\_\_ 9 ft.  
Backfill Material \_\_\_\_\_ 11-Sack cement
- J Seal from \_\_\_\_\_ 9 to \_\_\_\_\_ 11 ft.  
Seal Material \_\_\_\_\_ Bentonite
- K Gravel Pack from \_\_\_\_\_ 11 to \_\_\_\_\_ 28 ft.  
Pack Material \_\_\_\_\_ Lonestar 2/12
- L Bottom Seal \_\_\_\_\_ 2 ft.  
Seal Material \_\_\_\_\_ Bentonite
- M \_\_\_\_\_ Traffic-rated vault, locking cap and lock

Note: Depths measured from initial ground surface.



Field location of boring:  (See Plate 2)	Project No.: 780902	Date: 3/13/92	Boring No:
	Client: Unocal Service Station #5760		U-7
	Location: 376 Lewelling		Sheet 1
	City: San Lorenzo, California	Logged by: TDL	Driller: W. Hazmat
Casing installation data:			

Drilling method: Hollow Stem Auger	Top of Box Elevation:	Datum:
Hole diameter: 8-inch		

PTD (psf)	Blows/ft.* or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	Time	Date	Description
				1				20.0 Ft.	1:40	3/13	Pavement section 1.0 foot
				2							SAND (SP) brown (10 YR 4/3) loose; damp; 100% fine sand; roots
				3							
				4							
				5							Medium dense at 5 feet.
0	19	S&H		6							
				7							
				8							
				9							
				10							
		S&H		11							Color change to olive gray (5 YR 4/2); roots.
0	22			12							
				13							
				14							
				15							
		S&H	U-7-	16							CLAY (CL) very dark grayish brown (10 YR 3/2) stiff; moist; trace sand.
0	11		16.0	17							
				18							
				19							
				20							Saturated at 20 feet.

Remarks:  
\* Converted to equivalent Standard Penetration blows/ft.

Field location of boring:  (See Plate 2)				Project No.: 780902		Date: 3/13/92		Boring No:			
				Client: Unocal Service Station #5760		Location: 376 Lewelling		City: San Lorenzo, California		U-7	
				Logged by: TDL		Driller: W. Hazmat		Sheet 2		of 2	
				Casing installation data:		Top of Box Elevation:		Datum:			
				Drilling method: Hollow Stem Auger		Hole diameter: 8 Inches		Water Level: 20.0 Ft.		Time: 12:10	
PID (ppm)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Depth	Soil Group Symbol (USCS)	Description			
				21				No sample recovery (heaving sands)			
				22							
				23							
				24							
		S&H		25							
0	23			26				SAND (SP) dark gray (10 YR 4/1) medium dense; saturated; 100% medium to coarse subrounded sand.			
				27							
				28							
		S&H		29							
0	18			30							
				31							
				32							
				33							
				34							
0	19	S&H		35				CLAY (CL) brown (10 YR 5/3) very stiff; saturated; 100% fines, slightly silty.			
				36				Bottom of boring 36.5 feet.			
				37				3/13/92			
				38							
				39							
				40							
Remarks:											



GeoStrategies Inc.

Log of Boring

BORING NO.

U-7

JOB NUMBER  
780902

REVIEWED BY: RJC/EG

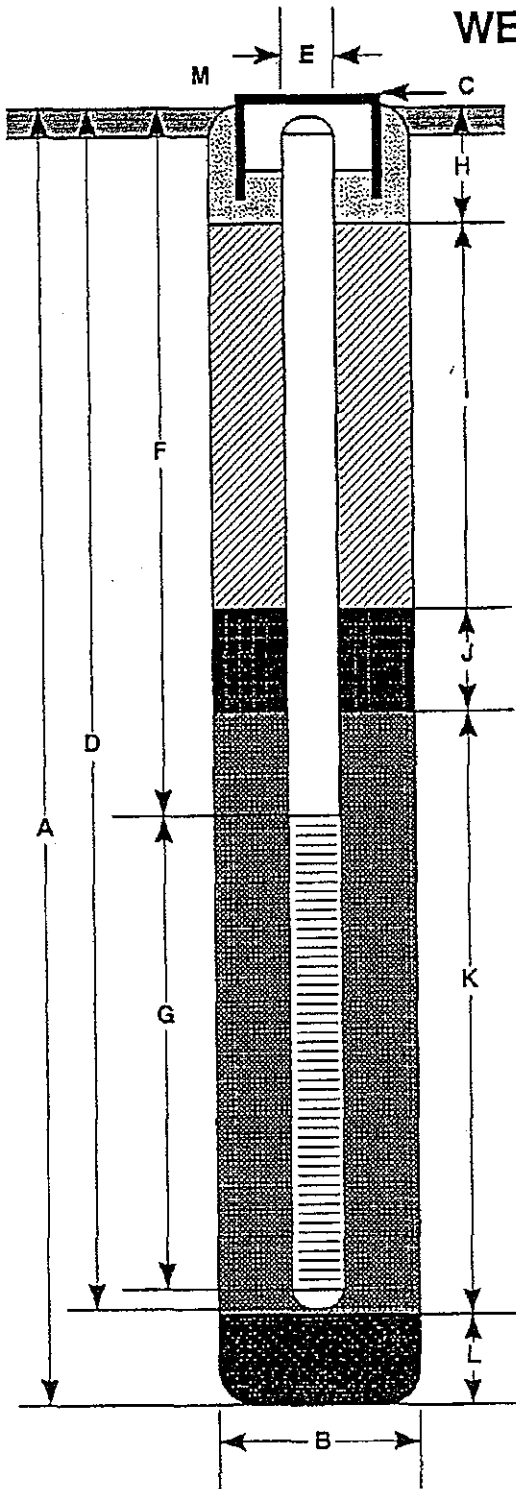
*RJA*

DATE  
3/92

REVISED DATE

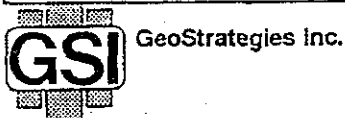
REVISED DATE

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 36.5 ft.
- B Diameter of Boring 8 in.  
Drilling Method Hollow Stem Auger
- C Top of Box Elevation 37.37 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length 35 ft.  
Material Schedule 40 PVC
- E Casing Diameter 2 in.
- F Depth to Top Perforations 15 ft.
- G Perforated Length 20 ft.  
Perforated Interval from 15 to 35 ft.  
Perforation Type Machine slot  
Perforation Size 0.02 in.
- H Surface Seal from 0 to 1 ft.  
Seal Material Cement
- I Backfill from 1 to 11 ft.  
Backfill Material 11-Sack cement
- J Seal from 11 to 13 ft.  
Seal Material Bentonite
- K Gravel Pack from 13 to 35 ft.  
Pack Material Lonestar 2/12
- L Bottom Seal none ft.  
Seal Material \_\_\_\_\_
- M Traffic-rated vault, locking cap and lock.

Note: Depths measured from initial ground surface.



Well Construction Detail

WELL NO.

**U-7**

JOB NUMBER  
780902

REVIEWED BY RG/CEG  
*RG*

DATE  
3/92

REVISED DATE

REVISED DATE

Field location of boring:  (See Plate 2)	Project No.: 780902	Date: 3/12/92	Boring No:
	Client: Unocal Service Station #5760		U-8
	Location: 376 Lewelling		Sheet 1
	City: San Lorenzo, California		of 2
	Logged by: TDL	Driller: W. Hazmat	

Drilling method: Hollow Stem Auger  
 Hole diameter: 8 inch  
 Top of Box Elevation: Datum:

Water Level	20 Ft	17.5 Ft	
Time	10:30	2:30	
Date	3/12	3/12	

PID (ppm)	Blows/ft.* or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description
				1				Pavement section 1.0 foot
				2				SANDY CLAY (CL) very dark grayish brown (10 YR 3/2) soft; damp; 60% clay; 40% fine sand.
				3				
				4				
		S&H		5				
0	7			6				SAND WITH SILT (SW-SM) dark brown (10 YR 3/3) loose; damp; 90% fine sand; 10% silt.
				7				
				8				
				9				
		S&H		10				
0	7			11				SANDY CLAY (CL) dark gray (10 YR 4/1) stiff; damp; 70% clay, 30% fine sand; mottled; rootholes.
				12				
				13				
				14				
		S&H		15				Decrease sand to 10%
0	12		U-8-16.5	16				
				17				
				18				
				19				
				20				

Remarks:  
 \* Converted to equivalent Standard Penetration blows/ft.

Field location of boring: (See Plate 2)				Project No.: 780902		Date: 3/12/92		Boring No: U-8	
				Client: Unocal Service Station #5760		Location: 376 Lewelling		Sheet 2	
				City: San Lorenzo, California		Logged by: TDL		Driller: W. Hazmat	
				Casing installation data:				of 2	
Drilling method: Hollow Stem Auger				Top of Box Elevation:		Datum:			
Hole diameter: 8 Inches									
PID (ppm)	Blow/ft.* or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	
								Time	Date
								Description	
0	26	S&H		21				SAND (SP) brown (10 YR 4/3) medium dense; saturated; 80% fine sand, 20% medium sand	
				22					
				23					
				24					
				25					
0	24	S&H		26				CLAY (CL) very dark gray (10 YR 3/1) very stiff; saturated; 80% clay, 20% silt; trace firm sand.	
				27					
				28					
				29					
				30					
0	23	S&H		31				SILT WITH SAND (ML) dark grayish brown (10 YR 4/2) very stiff, saturated; 75% silt; 25% fine sand, moderately clay.	
				32					
				33					
				34				Bottom of boring 31.5 feet.	
				35				3/12/92	
				36					
				37					
				38					
				39					
				40					
Remarks:									



GeoStrategies Inc.

Log of Boring

BORING NO.

U-8

JOB NUMBER  
780902

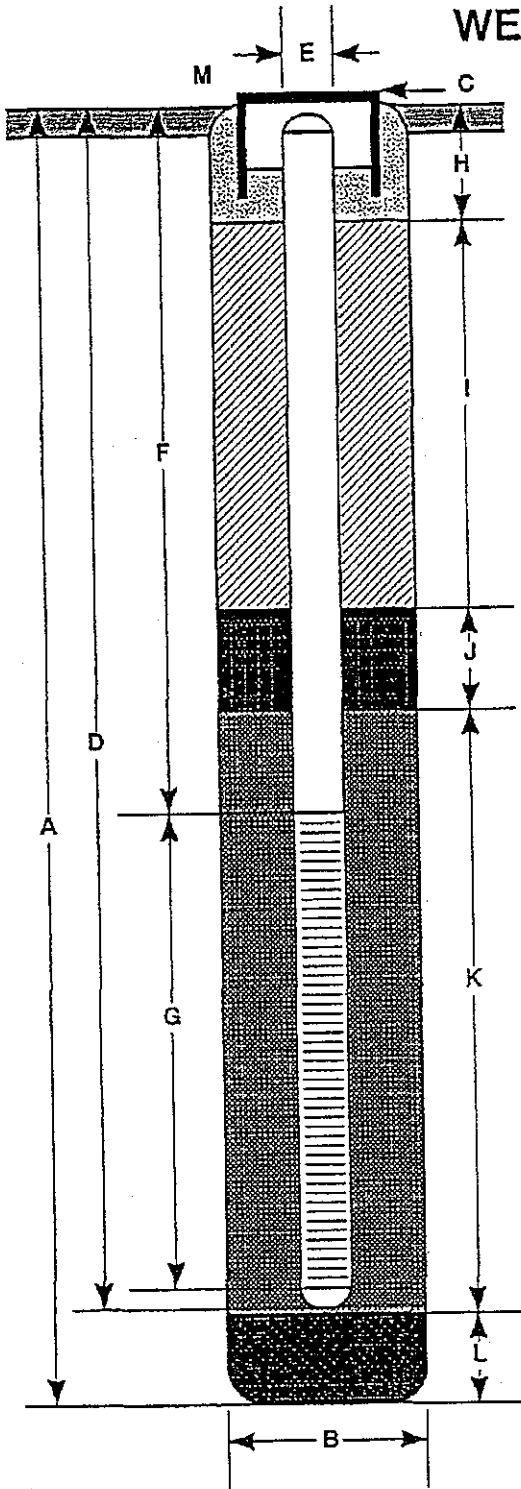
REVIEWED BY RG/CEG  
*RG*

DATE  
3/92

REVISED DATE

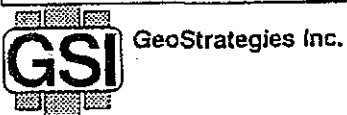
REVISED DATE

# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring \_\_\_\_\_ 31.5 ft.
- B Diameter of Boring \_\_\_\_\_ 8 in.  
Drilling Method \_\_\_\_\_ Hollow Stem Auger
- C Top of Box Elevation \_\_\_\_\_ 38.81 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length \_\_\_\_\_ 30 ft.  
Material \_\_\_\_\_ Schedule 40 PVC
- E Casing Diameter \_\_\_\_\_ 2 in.
- F Depth to Top Perforations \_\_\_\_\_ 15 ft.
- G Perforated Length \_\_\_\_\_ 15 ft.  
Perforated Interval from \_\_\_\_\_ 15 to \_\_\_\_\_ 30 ft.  
Perforation Type \_\_\_\_\_ Machine slot  
Perforation Size \_\_\_\_\_ 0.02 in.
- H Surface Seal from \_\_\_\_\_ 0 to \_\_\_\_\_ 1 ft.  
Seal Material \_\_\_\_\_ Cement
- I Backfill from \_\_\_\_\_ 1 to \_\_\_\_\_ 11 ft.  
Backfill Material \_\_\_\_\_ 11-Sack cement
- J Seal from \_\_\_\_\_ 11 to \_\_\_\_\_ 13 ft.  
Seal Material \_\_\_\_\_ Bentonite
- K Gravel Pack from \_\_\_\_\_ 13 to \_\_\_\_\_ 30 ft.  
Pack Material \_\_\_\_\_ Lone Star, 2/12
- L Bottom Seal \_\_\_\_\_ None ft.  
Seal Material \_\_\_\_\_
- M \_\_\_\_\_ Traffic-rate vault, locking cap and lock

Note: Depths measured from initial ground surface.



Well Construction Detail

WELL NO.

U-8

JOB NUMBER  
780902

REVIEWED BY RG/CEG  
*RG*

DATE  
3/92

REVISED DATE

REVISED DATE



Field location of boring:  (See Plate 2)	Project No.: 780907	Date: 5/25/93	Boring No:
	Client: UNOCAL Service Station #5760		U-9
	Location: 376 Lewelling Boulevard		Sheet 2
	City: San Lorenzo, California	Logged by: ECF	Driller: W. Hazmat
Casing installation data:			

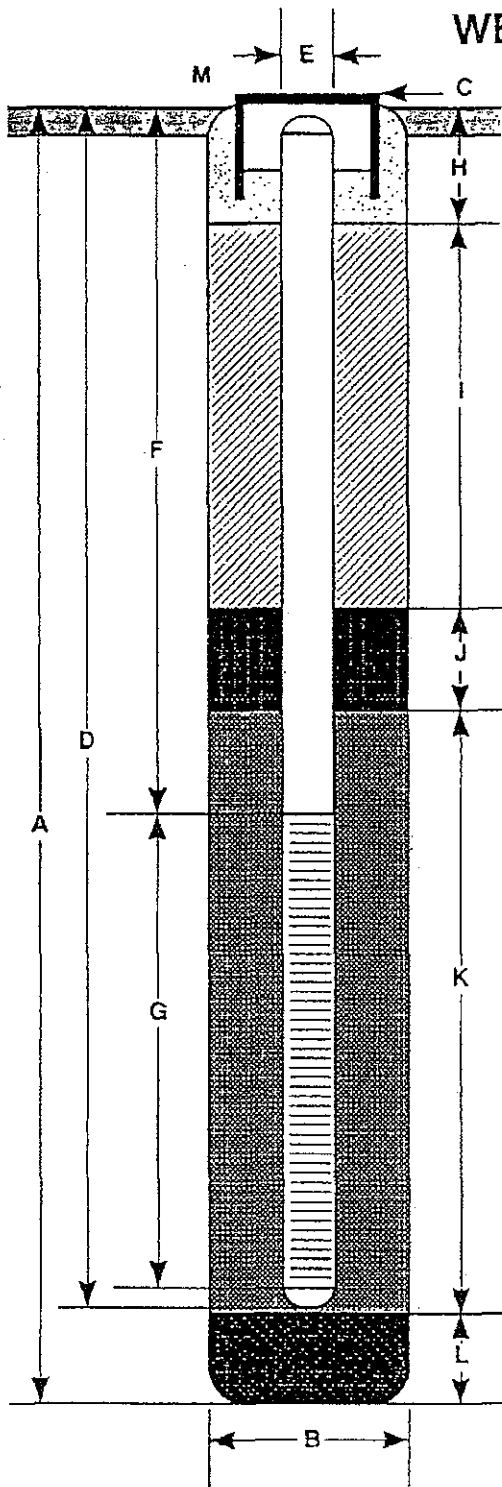
Drilling method: Hollow Stem Auger	Top of Box Elevation:	Datum:
------------------------------------	-----------------------	--------

FID (ft)	Blows/ft. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level			Description
								Time	Date		
		S&H	U-9	21							SAND (SP) - light olive brown (2.5Y 5/4); loose, saturated; 80% coarse sand, 10% fine sand, 5% gravel.
2.1	9		21.5								
				23							
				24							
				25							CLAY (CL) - light yellowish brown (2.5Y 6/4); hard, saturated; 95% clay, 5% coarse sand; medium plasticity.
0.5	36	S&H	U-9	26							
				27							
				28							
				29							
				30							Consistency decreasing to very stiff at 30.0 ft.; trace gravel.
0	26	S&H	U-9	31							
				32							
				33							Bottom of boring at 31.0 ft. 5/25/93
				34							
				35							
				36							
				37							
				38							
				39							
				40							

Remarks:



# WELL CONSTRUCTION DETAIL



- A Total Depth of Boring \_\_\_\_\_ 31.0 ft.
- B Diameter of Boring \_\_\_\_\_ 8 in.  
Drilling Method \_\_\_\_\_ Hollow Stem Auger
- C Top of Box Elevation \_\_\_\_\_ 37.88 ft.  
 Referenced to Mean Sea Level  
 Referenced to Project Datum
- D Casing Length \_\_\_\_\_ 28 ft.  
Material \_\_\_\_\_ Schedule 40 PVC
- E Casing Diameter \_\_\_\_\_ 2 in.
- F Depth to Top Perforations \_\_\_\_\_ 13.0 ft.
- G Perforated Length \_\_\_\_\_ 15.0 ft.  
Perforated Interval from \_\_\_\_\_ 13.0 to \_\_\_\_\_ 28.0 ft.  
Perforation Type \_\_\_\_\_ Machine Slotted  
Perforation Size \_\_\_\_\_ 0.020 in.
- H Surface Seal from \_\_\_\_\_ 0 to \_\_\_\_\_ 1.5 ft.  
Seal Material \_\_\_\_\_ Concrete
- I Backfill from \_\_\_\_\_ 1.5 to \_\_\_\_\_ 9.0 ft.  
Backfill Material \_\_\_\_\_ Cement
- J Seal from \_\_\_\_\_ 9.0 to \_\_\_\_\_ 11.0 ft.  
Seal Material \_\_\_\_\_ Bentonite
- K Gravel Pack from \_\_\_\_\_ 11.0 to \_\_\_\_\_ 28.0 ft.  
Pack Material \_\_\_\_\_ Lonestar 2/12
- L Bottom Seal \_\_\_\_\_ Sluff 31.0-29.0 ft  
Seal Material \_\_\_\_\_ Bentonite 29.0-28.0 ft.
- M \_\_\_\_\_ Water-resistant vault box, locking waterproof well cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

U-9

JOB NUMBER  
780907

REVIEWED BY RG/CEG  
SAC. RG 5577

DATE  
5/93

REVISED DATE

REVISED DATE



# BORING LOG

PROJECT NO.:  
 LOGGED BY: YANTIS  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEO PROBE  
 SAMPLING METHOD: CONTINUOUS  
 CASING TYPE:  
 SLOT SIZE:  
 GRAVEL PACK:

CLIENT: COP  
 LOCATION: 376 LEWELLING  
 DATE DRILLED: 11/7/03  
 HOLE DIAMETER:  
 HOLE DEPTH: 20"  
 WELL DIAMETER:  
 WELL DEPTH:  
 CASING STICKUP:

BORING/WELL NO.: GP-1  
 PAGE 1 OF 1

ELEVATION                      NORTHING                      EASTING

LOCUS

WELL COMPLETION BACKFILL CASING	STATIC WATER LEVEL	PID READING (ppm)	PENETRATION (BLOWS/6")	DEPTH (FT.)	SAMPLE		LITHOLOGY/ DESCRIPTION
					RECOVERY	INTERVAL	
	NOTE: DID ~ 0.5			1			ASPHALT WATER KNIFED TO 5'
				2			GRAVEL AND SAND
	DAMP			3			
				4			
				5			SW - WELL GRADED SAND W/GRAVEL
	DAMP	0.5		6			GRAVELLY SAND, MEDIUM BROWN, 60% FINE-MED SAND; DAMP, NO ODORS
				7			
				8			
				9			@9' AS ABOVE, NO ODORS
	VERY MOIST	0.1		10			
				11			
				12			
	MOIST-WET			13			
				14			CL - LEAN CLAY W/SAND BROWN; 85%
				15			LOW MED. PLAST. FINES, 15% FINE SAND VERY FAINT FED MOTTLING; NO ODORS
				16			@16'; RARE WEATHERED ROOT INCREASE IN CLAY
				17			GRAVEL AND SAND
				18			@19' INCREASE IN ROOTHOLE DIAMETER
		0.1	∇	19			
				20			



# BORING LOG

PROJECT NO.:  
 LOGGED BY: YANTIS  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEO PROBE  
 SAMPLING METHOD: CONTINUOUS  
 CASING TYPE:  
 SLOT SIZE:  
 GRAVEL PACK:

CLIENT: COP  
 LOCATION: 376 LEWELLING  
 DATE DRILLED: 11/7/03  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 20"  
 WELL DIAMETER:  
 WELL DEPTH:  
 CASING STICKUP:

BORING/WELL NO.: GP-2  
 PAGE 1 OF 1

ELEVATION      NORTHING      EASTING

LOCUS

WELL COMPLETION BACKFILL CASING	STATIC WATER LEVEL	PID READING (PPM)	PENETRATION (BLOWS/6")	DEPTH (FT.)	SAMPLE		LITHOLOGY/ DESCRIPTION
					RECOVERY	INTERVAL	
	BACKGROUND DID=~0.5						NOTE: WATER KNIFED SELECTED HOLE LOCATION; PEA GRAVEL + 2" PIPE MOVED OUT 10"
				1			
				2			
				3			SAND/GRAVEL/CLAY
				4			
				5			
				6			
	DAMP			7			SM - SILTY SAND, YELLOWISH BROWN ~ 30% NON-PLAST FINES; 70% FINE SAND; NO ODORS
		0.1		8			
	DAMP			9			SP - POORLY GRADED SAND, YELLOWISH BROWN <5% FINES; ~98-100% FINE SAND; DAMP, NO ODORS
		0.1		10			
				11			
				12			
				13			
				14			
				15			CL - LEAN CLAY W/SAND, YELLOWISH BROWN; 85% MED. PLAST. FINES, 15% FINE SAND
	DAMP	0.1		16			ABUNDANT ROOTHOLES; FAINT MOTTLING; NO ODORS
				17			
				18			
				19			
				20			TD=20'



# BORING LOG

PROJECT NO.:  
 LOGGED BY: YANTIS  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEO PROBE  
 SAMPLING METHOD: CONTINUOUS  
 CASING TYPE:  
 SLOT SIZE:  
 GRAVEL PACK:

CLIENT: COP  
 LOCATION: 376 LEWELLING  
 DATE DRILLED: 11/7/03  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 20"  
 WELL DIAMETER:  
 WELL DEPTH:  
 CASING STICKUP:

BORING/WELL NO.: GP-3  
 PAGE 1 OF 1

ELEVATION      NORTHING      EASTING

LOCUS

WELL COMPLETION BACKFILL CASING	STATIC WATER LEVEL	PID READING (PPM)	PENETRATION (BLOWS/6")	DEPTH (FT.)	SAMPLE		LITHOLOGY/ DESCRIPTION
					RECOVERY	INTERVAL	
	BACKGROUND PID=0.1						ASPHALT
				1			WATER KNIFED TO 5'
				2			
				3			SAND AND GRAVEL
				4			
				5			SW - WELL GRADED SAND, YELLOWISH BROWN, <5% FINES, 95-100% FINE-MED
	DAMP			6			SAND; DAMP NO ODORS
		0.1		7			
				8			
				9			
				10			SP - POORLY GRADED SAND, 2-5% NON PLAST. FINES; ~95-98% FINE SAND;
				11			
				12			CL - LEAN CLAY YELLOWISH BROWN 95% MED. PLAST.
		0.2		13			FINES, MOIST
				14			
				15			SW - WELL GRADED SAND 95% FINE-MED SAND
	WET			16			CL - LEAN CLAY
		0.1		17			SP - POORLY GRADED SAND, 95% FINE SAND DK. BRN. CL - LEAN CLAY W/SAND ~85% MED. PLAST. FINES, 15% FINE SAND, ABUNDANT GRAY AND IRON OXIDE MOTTLING
				18			
				19			@17-20' ABUNDANT BRIGHT ORANGE 15% FINE SAND, ABUNDANT GRAY AND MOTTLING AND ROOTS
	VERY MOIST- WET			20			TD=20'



# BORING LOG

PROJECT NO.:  
 LOGGED BY: YANTIS  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEO PROBE  
 SAMPLING METHOD: CONTINUOUS  
 CASING TYPE:  
 SLOT SIZE:  
 GRAVEL PACK:

CLIENT: COP  
 LOCATION: 376 LEWELLING  
 DATE DRILLED: 11/7/03  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 20"  
 WELL DIAMETER:  
 WELL DEPTH:  
 CASING STICKUP:

BORING/WELL NO.: GP-4  
 PAGE 1 OF 1

ELEVATION      NORTHING      EASTING

LOCUS

WELL COMPLETION BACKFILL CASING	STATIC WATER LEVEL	PID READING (PPM)	PENETRATION (BLOWS/6")	DEPTH (FT.)	SAMPLE		LITHOLOGY/ DESCRIPTION
					RECOVERY	INTERVAL	
	BACKGROUND PID=0.4			1			WATER KNIFED TO 5'
				2			
				3			SAND AND GRAVEL
				4			
				5			SW - WELL GRADED SAND, YELLOWISH BROWN, <5% FINES, 95-100% FINE-MED
				6			SAND; DAMP NO ODORS
				7			
		0.1		8			SP - POORLY GRADED SAND, LIGHT BROWN 5% NON-PLASTIC FINES, 95%, FINE SAND, DAMP, NO ODORS
	DAMP			9			
				10			
				11			CL - SANDY LEAN CLAY, LIGHT BROWN, 60% LOW- MED. PLAST. FINES, 40% FINE SAND, FAINT MOTTLING, COMMON ROOTHOLES, NO ODORS
	MOIST			12			
				13			CL - LEAN CLAY, W/SAND, BROWN, 75-80% MED. PLAST. FINES, 20-25% FINE, SAND, VERY MOIST
				14			
				15			@13' PERVOSIVE BRIGHT ORANGE, WEATHER ROOTS, MOIST, NO ODORS
		0.1		16			
	VERY MOIST- WET			17			@17' COLOR CHANGE, GREY, NO MOTTLING ODORS AT 17'
				18			SP - POORLY GRADED SAND LENSE
				19			LEAN CLAY @20' ODORS
	VERY MOIST- WET	289		20			TD=20'



# BORING LOG

PROJECT NO.:  
 LOGGED BY: YANTIS  
 DRILLER: VIRONEX  
 DRILLING METHOD: GEO PROBE  
 SAMPLING METHOD: CONTINUOUS  
 CASING TYPE:  
 SLOT SIZE:  
 GRAVEL PACK:

CLIENT: COP  
 LOCATION: 376 LEWELLING  
 DATE DRILLED: 11/7/03  
 HOLE DIAMETER: 2"  
 HOLE DEPTH: 20"  
 WELL DIAMETER:  
 WELL DEPTH:  
 CASING STICKUP:

BORING/WELL NO.: GP-5  
 PAGE 1 OF 1

ELEVATION                      NORTHING                      EASTING

LOCUS

WELL COMPLETION BACKFILL CASING	STATIC WATER LEVEL	PID READING (PPM)	PENETRATION (BLOWS/6")	DEPTH (FT.)	SAMPLE		LITHOLOGY/ DESCRIPTION
					RECOVERY	INTERVAL	
							CONCRETE
				1			WATER KNIFED TO 5'
				2			CLAY, BLACKISH GRAY
				3			
				4			
				5			SW - WELL GRADED SAND, YELLOWISH BROWN, 5% NON PLASTIC FINES, 95% FINE SAND, DAMP, NO ODORS
	DAMP	0.2		6			
				7			
				8			
				9			
				10			CL - LEAN CLAY @ 9.5', BROWN 95% MED. PLASTIC FINES, 5% SAND
	MOIST	0.1		11			SC - CLAYEY SAND/SANDY LEAN CLAY, YELLOWISH BRN. 45-55% MED. PLAST. FINES, 45-55% FINE SAND, MOIST NO ODORS
				12			
				13			
				14			SM - SILTY SAND, YELLOWISH BROWN, 15% NON-LOW PLAST. FINES, 85% FINE SAND, WET, NO ODORS
				15			CL - @15' LEAN CLAY, BLACKISH GRAY, 95% MED-HIGH PLAST. FINES, 5% FINE SAND, WET, ABUNDANT BRIGHT ORANGE WEATHERED ROOTS
	WET		∇	16			
				17			@17' ABUNDANT DARK ORANGE WEATHERED ROOT, OPEN ROOT HOLES, VERY MOIST, SLIGHT ODORS
				18			
				19			
	VERY MOIST	9.8		20			

**Attachment F**

***TRC Quarterly Monitoring report***



21 Technology Drive  
Irvine, CA 92618

949.727.9336 PHONE  
949.727.7399 FAX

www.TRCSolutions.com

DATE: September 26, 2008

TO: ConocoPhillips Company  
76 Broadway  
Sacramento, CA 95818

ATTN: MR. TED MOISE

SITE: 76 STATION 5760  
376 LEWELLING BOULEVARD  
SAN LORENZO, CALIFORNIA

RE: QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2008

Dear Mr. Moise:

Please find enclosed our Quarterly Monitoring Report for 76 Station 5760, located at 376 Lewelling Boulevard, San Lorenzo, California. If you have any questions regarding this report, please call us at (949) 727-9336.

Sincerely,

TRC

A handwritten signature in black ink, appearing to read 'Anju Farfan', written over a light background.

Anju Farfan  
Groundwater Program Operations Manager

CC: Mr. Dennis Dettloff, Delta Environmental (1 copy)

Enclosures  
20-0400/5760R12 QMS



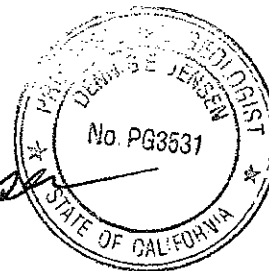
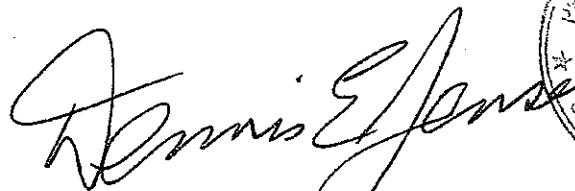
**QUARTERLY MONITORING REPORT  
JULY THROUGH SEPTEMBER 2008**

76 STATION 5760  
376 Lewelling Boulevard  
San Lorenzo, California

Prepared For:

Mr. Ted Moise  
CONOCOPHILLIPS COMPANY  
76 Broadway  
Sacramento, California 95818

By:



Senior Project Geologist, Irvine Operations

Date: 9/25/08



**LIST OF ATTACHMENTS**

<b>Summary Sheet</b>	Summary of Gauging and Sampling Activities
<b>Tables</b>	Table Key Contents of Tables Table 1: Current Fluid Levels and Selected Analytical Results Table 1a: Additional Current Analytical Results Table 2: Historic Fluid Levels and Selected Analytical Results Table 2a: Additional Historic Analytical Results
<b>Figures</b>	Figure 1: Vicinity Map Figure 2: Groundwater Elevation Contour Map Figure 3: Dissolved-Phase TPH-G (GC/MS) Concentration Map Figure 4: Dissolved-Phase Benzene Concentration Map Figure 5: Dissolved-Phase MTBE Concentration Map
<b>Graphs</b>	Groundwater Elevations vs. Time Benzene Concentrations vs. Time
<b>Field Activities</b>	General Field Procedures Field Monitoring Data Sheet – 08/29/08 Groundwater Sampling Field Notes – 08/29/08 Statement of Non-Completion – 08/29/08
<b>Laboratory Reports</b>	Official Laboratory Reports Quality Control Reports Chain of Custody Records
<b>Statements</b>	Purge Water Disposal Limitations

**Summary of Gauging and Sampling Activities**  
**July 2008 through September 2008**  
**76 Station 5760**  
**376 Lewelling Boulevard**  
**San Lorenzo, CA**

Project Coordinator: **Ted Moise**  
Telephone: **510-245-5162**

Water Sampling Contractor: **TRC**  
Compiled by: **Christina Carrillo**

Date(s) of Gauging/Sampling Event: **08/29/08**

**Sample Points**

Groundwater wells: **4 onsite, 5 offsite**      Points gauged: **8**      Points sampled: **4**  
Purging method: **Submersible pump**  
Purge water disposal: **Veolia/Rodeo Unit 100**  
Other Sample Points: **0**      Type: **--**

**Liquid Phase Hydrocarbons (LPH)**

Sample Points with LPH: **0**      Maximum thickness (feet): **--**  
LPH removal frequency: **--**      Method: **--**  
Treatment or disposal of water/LPH: **--**

**Hydrogeologic Parameters**

Depth to groundwater (below TOC):      Minimum: **15.32 feet**      Maximum: **17.93 feet**  
Average groundwater elevation (relative to available local datum): **24.91 feet**  
Average change in groundwater elevation since previous event: **-0.31 feet**  
Interpreted groundwater gradient and flow direction:  
    Current event: **0.004 ft/ft, southwest**  
    Previous event: **0.0025 ft/ft, west (06/24/08)**

**Selected Laboratory Results**

Sample Points with detected **Benzene**: **0**      Sample Points above MCL (1.0 µg/l): **--**  
    Maximum reported benzene concentration: **--**  
  
Sample Points with **TPH-G by GC/MS** **3**      Maximum: **35,000 µg/l (U-1R)**  
Sample Points with **MTBE 8260B** **0**

**Notes:**

U-2=Monitored only, U-4=Monitored only, U-5=Sampled Q1 only, U-7=Car parked over well, U-9=Sampled Q1 only

This report presents the results of groundwater monitoring and sampling activities performed by TRC. Please contact the primary consultant for other specific information on this site.

# TABLES

TABLE I. Summary of the data used in the analysis. The table lists the number of events, the number of signal events, and the number of background events for each decay mode. The branching ratios are also listed.

## TABLE KEY

### STANDARD ABBREVIATIONS

—	=	not analyzed, measured, or collected
LPH	=	liquid-phase hydrocarbons
Trace	=	less than 0.01 foot of LPH in well
ug/l	=	micrograms per liter (approx. equivalent to parts per billion, ppb)
mg/l	=	milligrams per liter (approx. equivalent to parts per million, ppm)
ND<	=	not detected at or above laboratory detection limit
IOC	=	top of casing (surveyed reference elevation)

### ANALYTES

BTEX	=	benzene, toluene, ethylbenzene, and (total) xylenes
DIPE	=	di-isopropyl ether
EIIBE	=	ethyl tertiary butyl ether
MTBE	=	methyl tertiary butyl ether
PCB	=	polychlorinated biphenyls
PCE	=	tetrachloroethene
TBA	=	tertiary butyl alcohol
TCA	=	trichloroethane
TCE	=	trichloroethene
IPH-G	=	total petroleum hydrocarbons with gasoline distinction
IPH-G (GC/MS)	=	total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B
IPH-D	=	total petroleum hydrocarbons with diesel distinction
IRPH	=	total recoverable petroleum hydrocarbons
IAME	=	tertiary amyl methyl ether
1,1-DCA	=	1,1-dichloroethane
1,2-DCA	=	1,2-dichloroethane (same as EDC, ethylene dichloride)
1,1-DCE	=	1,1-dichloroethene
1,2-DCE	=	1,2-dichloroethene (cis- and trans-)

### NOTES

- 1 Elevations are in feet above mean sea level. Depths are in feet below surveyed top-of-casing.
2. Groundwater elevations for wells with LPH are calculated as:  $\text{Surface Elevation} - \text{Measured Depth to Water} + (\text{Dp} \times \text{LPH Thickness})$ , where Dp is the density of the LPH, if known. A value of 0.75 is used for gasoline and when the density is not known. A value of 0.83 is used for diesel.
3. Wells with LPH are generally not sampled for laboratory analysis (see General Field Procedures).
4. Comments shown on tables are general. Additional explanations may be included in field notes and laboratory reports, both of which are included as part of this report.
5. A "J" flag indicates that a reported analytical result is an estimated concentration value between the method detection limit (MDL) and the practical quantification limit (PQL) specified by the laboratory.
6. Other laboratory flags (qualifiers) may have been reported. See the official laboratory report (attached) for a complete list of laboratory flags.
7. Concentration graphs based on tables (presented following Figures) show non-detect results prior to the Second Quarter 2000 plotted at fixed values for graphical display. Non-detect results reported since that time are plotted at reporting limits stated in the official laboratory report.
8. Groundwater vs. Time graphs may be corrected for apparent level changes due to re-survey.

### REFERENCE

TRC began groundwater monitoring and sampling for 76 Station 5760 in October 2003. Historical data compiled prior to that time were provided by Gettler-Ryan Inc.

**Contents of Tables 1 and 2**  
**Site: 76 Station 5760**

**Current Event**

<b>Table 1</b>	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
<b>Table 1a</b>	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME					

**Historic Data**

<b>Table 2</b>	Well/ Date	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)
<b>Table 2a</b>	Well/ Date	TBA	Ethanol (8260B)	Ethylene- dibromide (EDB)	1,2-DCA (EDC)	DIPE	ETBE	TAME	1,1-DCA	Post-purge Dissolved Oxygen	Pre-purge Dissolved Oxygen		

Table 1  
**CURRENT FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
 August 29, 2008  
 76 Station 5760

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-1R</b>			<b>(Screen Interval in feet: 10-25)</b>											
08/29/08	42.65	17.68	0.00	24.97	-0.12	--	35000	ND<25	ND<25	3000	8900	--	ND<25	
<b>U-2</b>			<b>(Screen Interval in feet: 15.0-30.0)</b>											
08/29/08	43.65	17.93	0.00	25.72	0.07	--	--	--	--	--	--	--	--	Monitored only
<b>U-3R</b>			<b>(Screen Interval in feet: 10-25)</b>											
08/29/08	41.58	16.74	0.00	24.84	-0.44	--	1500	ND<0.50	ND<0.50	100	51	--	ND<0.50	
<b>U-4</b>			<b>(Screen Interval in feet: 15.0-28.0)</b>											
08/29/08	42.69	17.62	0.00	25.07	-0.22	--	--	--	--	--	--	--	--	Monitored only
<b>U-5</b>			<b>(Screen Interval in feet: 15.0-30.0)</b>											
08/29/08	41.74	16.98	0.00	24.76	-0.47	--	--	--	--	--	--	--	--	Sampled Q1 only
<b>U-6</b>			<b>(Screen Interval in feet: 13.0-28.0)</b>											
08/29/08	40.07	15.42	0.00	24.65	-0.44	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>U-7</b>			<b>(Screen Interval in feet: 15.0-35.0)</b>											
08/29/08	39.50	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well
<b>U-8</b>			<b>(Screen Interval in feet: 15.0-30.0)</b>											
08/29/08	40.95	16.11	0.00	24.84	-0.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>U-9</b>			<b>(Screen Interval in feet: 13.0-28.0)</b>											
08/29/08	39.72	15.32	0.00	24.40	-0.43	--	--	--	--	--	--	--	--	Sampled Q1 only

**Table 1 a**  
**ADDITIONAL CURRENT ANALYTICAL RESULTS**  
**76 Station 5760**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)
<b>U-1R</b>							
08/29/08	ND<500	ND<12000	ND<25	ND<25	ND<25	ND<25	ND<25
<b>U-3R</b>							
08/29/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
<b>U-6</b>							
08/29/08	ND<10	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50
<b>U-8</b>							
08/29/08	ND<10	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground- water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl- benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-1</b>														
(Screen Interval in feet: 10.5-30.5)														
02/09/88	--	--	--	--	--	93000	--	3600	11000	--	20000	--	--	
03/20/90	--	--	--	--	--	36000	--	2100	5500	1900	9300	--	--	
06/05/90	--	--	--	--	--	46000	--	2300	5500	2500	11000	--	--	
08/24/90	--	--	--	--	--	27000	--	1200	1800	1400	5500	--	--	
12/05/90	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
03/04/91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
06/03/91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
09/19/91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
12/04/91	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
03/05/92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
04/07/92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
08/06/92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
11/20/92	--	--	--	--	--	--	--	--	--	--	--	--	--	Not sampled due to free product
02/12/93	--	--	--	--	--	70000	--	2200	8400	3100	18000	--	--	
06/04/93	40.51	16.72	0.00	23.79	--	35000	--	1300	5700	900	9200	--	--	
09/09/93	40.51	17.77	0.00	22.74	-1.05	67000	--	2900	18000	6200	32000	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-1 continued</b>														
12/02/93	40.20	18.36	0.01	21.85	-0.89	--	--	--	--	--	--	--	--	Not sampled due to free product
03/09/94	40.20	17.20	0.00	23.00	1.15	45000	--	930	4100	2000	11000	--	--	
06/09/94	40.20	17.42	0.00	22.78	-0.22	59000	--	5200	1300	5200	15000	--	--	
09/07/94	40.20	18.17	0.00	22.03	-0.75	41000	--	1600	6200	3100	16000	--	--	
12/05/94	40.20	16.67	0.00	23.53	1.50	1300	--	55	20	16	330	--	--	
03/09/95	40.20	15.82	0.00	24.38	0.85	49000	--	860	3200	1900	10000	1500	--	
06/13/95	40.20	14.70	0.00	25.50	1.12	53000	--	1400	5000	2500	14000	2800	--	
09/12/95	40.01	16.77	0.00	23.24	-2.26	43000	--	910	2700	1700	9600	1400	--	
12/14/95	40.20	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/20/96	40.20	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/22/96	40.20	--	--	--	--	13000	--	200	590	640	4000	790	--	
09/24/96	40.20	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/27/97	40.20	15.29	0.00	24.91	--	1300	--	8	ND	ND	400	ND	--	
09/23/97	40.20	17.20	0.00	23.00	-1.91	2000	--	15	ND	ND	530	ND	--	
03/10/98	40.20	12.68	0.00	27.52	4.52	2200	--	19	4.8	ND	980	38	--	
09/04/98	40.20	16.84	0.00	23.36	-4.16	5300	--	53	ND	410	620	ND	--	
03/04/99	40.20	13.04	0.00	27.16	3.80	1500	--	19	ND	56	110	310	--	
09/13/99	40.20	17.14	0.00	23.06	-4.10	5850	--	32.7	ND	520	925	ND	--	
03/21/00	40.20	14.36	0.00	25.84	2.78	4820	--	17.4	7.74	297	1370	ND	--	
09/18/00	40.20	16.72	0.00	23.48	-2.36	647	--	6.44	ND	22.3	6.86	22.2	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-1 continued</b>														
10/13/00	40.20	16.85	0.00	23.35	-0.13	--	--	--	--	--	--	--	29	
03/16/01	40.20	15.84	0.00	24.36	1.01	4950	--	1.73	1.77	429	536	613	--	
09/04/01	40.20	17.16	0.00	23.04	-1.32	11000	--	25	ND<10	1100	1800	370	--	
03/18/02	40.20	15.60	--	24.60	1.56	8100	--	ND<20	ND<20	740	1300	ND<200	--	
09/17/02	40.20	17.35	0.00	22.85	-1.75	--	4200	ND<2.5	ND<2.5	120	43	--	280	
03/28/03	40.20	15.72	0.00	24.48	1.63	--	560	ND<0.50	ND<0.50	0.96	ND<1.0	--	69	
09/05/03	40.20	16.77	--	23.43	-1.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2	
03/04/04	40.20	14.64	0.00	25.56	2.13	--	20000	ND<20	ND<20	1900	8300	--	ND<80	
09/09/04	40.20	16.64	0.00	23.56	-2.00	--	22000	ND<20	ND<20	1800	6100	--	ND<20	
03/01/05	40.20	14.70	0.00	25.50	1.94	--	25000	ND<13	ND<13	1900	6800	--	ND<13	
08/02/05	40.20	15.44	0.00	24.76	-0.74	--	11000	ND<10	ND<10	780	2600	--	ND<10	
01/20/06	40.20	14.66	0.00	25.54	0.78	--	65000	5.0	ND<0.50	5000	18000	--	2.6	
07/11/06	40.20	15.01	0.00	25.19	-0.35	--	9200	ND<50	ND<50	680	2400	--	ND<50	
03/09/07	40.20	15.52	0.00	24.68	-0.51	--	15000	6.7	ND<5.0	890	3200	--	ND<5.0	
07/06/07	40.20	--	--	--	--	--	--	--	--	--	--	--	--	Abandoned on 7/18/07
<b>U-1R (Screen Interval in feet: 10-25)</b>														
07/06/07	42.65	17.24	0.00	25.41	--	--	36000	7.2	8.3	2200	10000	--	ND<0.50	Gauged and sampled on 8/10/07
01/07/08	42.65	16.51	0.00	26.14	0.73	--	28000	ND<12	ND<12	1900	7300	--	ND<12	
06/24/08	42.65	17.56	0.00	25.09	-1.05	--	29000	ND<25	ND<25	2400	7900	--	ND<25	
08/29/08	42.65	17.68	0.00	24.97	-0.12	--	35000	ND<25	ND<25	3000	8900	--	ND<25	
<b>U-2 (Screen Interval in feet: 15.0-30.0)</b>														
08/23/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation  (feet)	Depth to Water  (feet)	LPH Thickness  (feet)	Ground- water Elevation  (feet)	Change in Elevation  (feet)	TPH-G (8015M)  (µg/l)	TPH-G (GC/MS)  (µg/l)	Benzene  (µg/l)	Toluene  (µg/l)	Ethyl- benzene  (µg/l)	Total Xylenes  (µg/l)	MTBE (8021B)  (µg/l)	MTBE (8260B)  (µg/l)	Comments
<b>U-2 continued</b>														
12/05/90	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
03/04/91	--	--	--	--	--	ND	--	ND	0.9	ND	2.6	--	--	
06/03/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
09/19/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
12/04/91	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
03/05/92	--	--	--	--	--	ND	--	ND	0.36	ND	ND	--	--	
04/07/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
08/06/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
02/12/93	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
06/04/93	41.62	17.59	0.00	24.03	--	ND	--	ND	ND	ND	ND	--	--	
09/09/93	41.62	18.68	0.00	22.94	-1.09	ND	--	ND	ND	ND	ND	--	--	
12/02/93	41.26	19.23	0.00	22.03	-0.91	ND	--	ND	ND	ND	ND	--	--	
03/09/94	41.26	18.05	0.00	23.21	1.18	62	--	1.1	5.4	1.1	9.7	--	--	
04/13/94	41.26	18.18	0.00	23.08	-0.13	ND	--	ND	ND	ND	ND	--	--	
06/09/94	41.26	18.26	0.00	23.00	-0.08	ND	--	ND	ND	ND	ND	--	--	
09/07/94	41.26	19.28	0.00	21.98	-1.02	ND	--	ND	0.63	ND	0.61	--	--	
12/05/94	41.26	18.82	0.00	22.44	0.46	ND	--	ND	ND	ND	ND	--	--	
03/09/95	41.26	16.96	0.00	24.30	1.86	ND	--	ND	ND	ND	ND	ND	--	
06/13/95	41.26	16.71	0.00	24.55	0.25	ND	--	ND	ND	ND	ND	ND	--	
09/12/95	41.26	17.80	0.00	23.46	-1.09	ND	--	ND	ND	ND	ND	ND	--	
12/14/95	41.26	18.18	0.00	23.08	-0.38	ND	--	ND	ND	ND	ND	ND	--	
03/20/96	41.26	15.02	0.00	26.24	3.16	--	--	--	--	--	--	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-2 continued</b>														
09/24/96	41.26	17.90	0.00	23.36	-2.88	--	--	--	--	--	--	--	--	
03/27/97	41.26	16.45	0.00	24.81	1.45	ND	--	ND	ND	ND	ND	ND	--	
09/23/97	41.26	18.40	0.00	22.86	-1.95	--	--	--	--	--	--	--	--	
03/10/98	41.26	13.79	0.00	27.47	4.61	ND	--	ND	ND	ND	ND	ND	--	
09/04/98	41.26	17.98	0.00	23.28	-4.19	--	--	--	--	--	--	--	--	
03/04/99	41.26	14.96	0.00	26.30	3.02	ND	--	ND	ND	ND	ND	ND	--	
09/13/99	41.26	18.25	0.00	23.01	-3.29	--	--	--	--	--	--	--	--	
03/21/00	41.26	15.54	0.00	25.72	2.71	ND	--	ND	ND	ND	ND	ND	--	
09/18/00	41.26	17.55	0.00	23.71	-2.01	--	--	--	--	--	--	--	--	
03/16/01	41.26	17.06	0.00	24.20	0.49	--	--	--	--	--	--	--	--	
09/04/01	41.26	18.39	0.00	22.87	-1.33	--	--	--	--	--	--	--	--	
03/18/02	41.26	16.87	--	24.39	1.52	--	--	--	--	--	--	--	--	
09/17/02	41.26	18.33	0.00	22.93	-1.46	--	--	--	--	--	--	--	--	
03/28/03	41.26	16.95	0.00	24.31	1.38	--	--	--	--	--	--	--	--	
09/05/03	41.26	18.00	0.00	23.26	-1.05	--	--	--	--	--	--	--	--	Monitored Only
03/04/04	41.26	16.17	0.00	25.09	1.83	--	--	--	--	--	--	--	--	Monitored Only
09/09/04	41.26	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible-car parked on well
03/01/05	41.26	--	--	--	--	--	--	--	--	--	--	--	--	Car parked on well
08/02/05	41.26	16.62	0.00	24.64	--	--	--	--	--	--	--	--	--	Monitored only
01/20/06	41.26	16.24	0.00	25.02	0.38	--	--	--	--	--	--	--	--	Monitored only
07/11/06	41.26	16.15	0.00	25.11	0.09	--	--	--	--	--	--	--	--	Monitored Only
03/09/07	41.26	16.71	0.00	24.55	-0.56	--	--	--	--	--	--	--	--	Monitored Only

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-2 continued</b>														
07/06/07	43.65	17.80	0.00	25.85	1.30	--	--	--	--	--	--	--	--	Monitored Only
01/07/08	43.65	17.73	0.00	25.92	0.07	--	--	--	--	--	--	--	--	Monitored Only
06/24/08	43.65	18.00	0.00	25.65	-0.27	--	--	--	--	--	--	--	--	Monitored Only
08/29/08	43.65	17.93	0.00	25.72	0.07	--	--	--	--	--	--	--	--	Monitored only
<b>U-3 (Screen Interval in feet: 15.0-25.0)</b>														
08/23/90	--	--	--	--	--	110000	--	4400	13000	2800	17000	--	--	
12/05/90	--	--	--	--	--	69000	--	1900	3500	1600	9800	--	--	
01/18/91	--	--	--	--	--	51000	--	1700	3100	1500	7500	--	--	
03/04/91	--	--	--	--	--	84000	--	1400	10000	2900	17000	--	--	
06/03/91	--	--	--	--	--	130000	--	5800	19000	4600	24000	--	--	
09/19/91	--	--	--	--	--	61000	--	3300	9700	2800	15000	--	--	
12/04/91	--	--	--	--	--	75000	--	2500	6100	1900	11000	--	--	
03/05/92	--	--	--	--	--	160000	--	5300	15000	5400	26000	--	--	
04/07/92	--	--	--	--	--	97000	--	6100	16000	5400	28000	--	--	
08/06/92	--	--	--	--	--	140000	--	5100	13000	5000	23000	--	--	
11/20/92	--	--	--	--	--	50000	--	3200	4700	1900	10000	--	--	
02/12/93	--	--	--	--	--	80000	--	3700	9400	3700	18000	--	--	
06/04/93	39.64	15.48	0.00	24.16	--	92000	--	2900	8700	4300	20000	--	--	
09/09/93	39.64	17.04	0.00	22.60	-1.56	110000	--	2800	10000	6500	31000	--	--	
12/02/93	39.26	17.55	0.00	21.71	-0.89	110000	--	3200	7700	5600	26000	--	--	
03/09/94	39.26	16.35	0.00	22.91	1.20	120000	--	4500	8300	5600	28000	--	--	
06/09/94	39.26	16.60	0.00	22.66	-0.25	120000	--	3300	6100	5200	26000	--	--	
09/07/94	39.26	17.61	0.00	21.65	-1.01	100000	--	2400	4900	4200	21000	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-3 continued</b>														
12/05/94	39.26	17.08	0.00	22.18	0.53	140000	--	3100	5100	4900	21000	--	--	
03/09/95	39.26	15.20	0.00	24.06	1.88	100000	--	2300	3300	4800	21000	54000	--	
06/13/95	39.26	15.11	0.00	24.15	0.09	64000	--	1700	1500	3800	18000	900	--	
09/12/95	39.26	16.11	0.00	23.15	-1.00	69000	--	1700	820	4000	19000	29000	--	
12/14/95	39.26	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/20/96	39.26	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/22/96	39.26	--	--	--	--	15000	--	150	490	480	3100	400	--	
09/24/96	39.26	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible; system not running
03/27/97	39.26	14.77	0.00	24.49	--	110	--	ND	ND	ND	0.62	9.6	--	
09/23/97	39.26	16.74	0.00	22.52	-1.97	ND	--	ND	ND	ND	ND	ND	--	
03/10/98	39.26	12.18	0.00	27.08	4.56	ND	--	ND	ND	ND	3.1	ND	--	
09/04/98	39.26	16.46	0.00	22.80	-4.28	ND	--	ND	ND	1.2	2.3	ND	--	
03/04/99	39.26	13.48	0.00	25.78	2.98	ND	--	ND	ND	ND	ND	ND	--	
09/13/99	39.26	16.71	0.00	22.55	-3.23	ND	--	ND	1.77	ND	1.06	9.08	--	
03/21/00	39.26	13.87	--	25.39	2.84	18700	--	ND	ND	1290	4770	ND	--	
09/18/00	39.26	16.12	0.00	23.14	-2.25	ND	--	ND	ND	ND	ND	ND	--	
03/16/01	39.26	15.35	0.00	23.91	0.77	2310	--	ND	ND	184	618	ND	--	
09/04/01	39.26	16.71	0.00	22.55	-1.36	340	--	0.95	ND<0.50	8.1	18	ND<5.0	--	
03/18/02	39.26	15.11	--	24.15	1.60	6500	--	ND<10	ND<10	390	1400	ND<100	--	
09/17/02	39.26	17.67	0.00	21.59	-2.56	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	2.0	
03/28/03	39.26	15.25	0.00	24.01	2.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-3 continued</b>														
09/05/03	39.26	16.30	0.00	22.96	-1.05	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
03/04/04	39.26	14.11	0.00	25.15	2.19	--	14000	ND<10	ND<10	940	3500	--	ND<40	
09/09/04	39.26	16.22	0.00	23.04	-2.11	--	1300	ND<2.5	ND<2.5	66	160	--	ND<2.5	
03/01/05	39.26	14.18	0.00	25.08	2.04	--	14000	ND<5.0	ND<5.0	690	2000	--	ND<5.0	
08/02/05	39.26	14.93	0.00	24.33	-0.75	--	6300	ND<2.5	ND<2.5	320	970	--	ND<2.5	
01/20/06	39.26	14.14	0.00	25.12	0.79	--	7600	ND<0.50	ND<0.50	390	890	--	ND<0.50	
07/11/06	39.26	14.52	0.00	24.74	-0.38	--	3800	ND<5.0	ND<5.0	190	420	--	ND<5.0	
03/09/07	39.26	15.05	0.00	24.21	-0.53	--	3800	ND<2.5	ND<2.5	130	240	--	ND<2.5	
07/06/07	39.26	16.17	0.00	23.09	-1.12	--	390	ND<0.50	ND<0.50	11	16	--	ND<0.50	Abandoned on 7/19/07
<b>U-3R (Screen Interval in feet: 10-25)</b>														
07/06/07	41.58	16.29	0.00	25.29	--	--	290	ND<0.50	ND<0.50	ND<0.50	0.99	--	ND<0.50	Gauged and sampled on 8/10/07
01/07/08	41.58	15.46	0.00	26.12	0.83	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	41.58	16.30	0.00	25.28	-0.84	--	99	ND<0.50	ND<0.50	11	2.5	--	ND<0.50	
08/29/08	41.58	16.74	0.00	24.84	-0.44	--	1500	ND<0.50	ND<0.50	100	51	--	ND<0.50	
<b>U-4 (Screen Interval in feet: 15.0-28.0)</b>														
08/23/90	--	--	--	--	--	--	ND	--	ND	1.0	ND	1.8	--	--
12/05/90	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	
01/18/91	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	
03/04/91	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	
06/03/91	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	
09/19/91	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	
12/04/91	--	--	--	--	--	--	ND	--	ND	ND	ND	--	--	



**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation	Depth to Water	LPH Thickness	Ground- water Elevation	Change in Elevation	TPH-G (8015M)	TPH-G (GC/MS)	Benzene	Toluene	Ethyl- benzene	Total Xylenes	MTBE (8021B)	MTBE (8260B)	Comments
(feet)	(feet)	(feet)	(feet)	(feet)	(feet)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	(µg/l)	
<b>U-4 continued</b>														
03/05/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
04/07/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
08/06/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/92	--	--	--	--	--	ND	--	ND	2.5	ND	ND	--	--	
02/12/93	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
06/04/93	40.53	16.73	0.00	23.80	--	ND	--	ND	ND	ND	ND	--	--	
09/09/93	40.53	16.89	0.00	23.64	-0.16	ND	--	ND	ND	ND	ND	--	--	
12/02/93	40.25	18.46	0.00	21.79	-1.85	ND	--	ND	ND	ND	2.6	--	--	
03/09/94	40.25	17.30	0.00	22.95	1.16	ND	--	1.4	4.7	1.1	8.1	--	--	
04/13/94	40.25	17.44	0.00	22.81	-0.14	ND	--	ND	ND	ND	ND	--	--	
06/09/94	40.25	17.53	0.00	22.72	-0.09	ND	--	ND	ND	ND	ND	--	--	
09/07/94	40.28	18.52	0.00	21.76	-0.96	ND	--	ND	1.1	ND	1.0	--	--	
12/05/94	40.28	18.08	0.00	22.20	0.44	ND	--	ND	ND	ND	ND	--	--	
03/09/95	40.28	16.16	0.00	24.12	1.92	ND	--	ND	ND	ND	ND	ND	--	
06/13/95	40.25	15.95	0.00	24.30	0.18	ND	--	ND	ND	ND	ND	2.7	--	
09/12/95	40.25	17.10	0.00	23.15	-1.15	ND	--	ND	ND	ND	ND	ND	--	
12/14/95	40.25	17.43	0.00	22.82	-0.33	ND	--	ND	ND	ND	ND	1.3	--	
03/20/96	40.25	14.93	0.00	25.32	2.50	--	--	--	--	--	--	--	--	
09/24/96	40.25	17.19	0.00	23.06	-2.26	--	--	--	--	--	--	--	--	
03/27/97	40.25	15.66	0.00	24.59	1.53	ND	--	ND	ND	ND	ND	ND	--	
09/23/97	40.25	17.69	0.00	22.56	-2.03	--	--	--	--	--	--	--	--	
03/10/98	40.25	12.99	0.00	27.26	4.70	ND	--	ND	ND	ND	ND	ND	--	
09/04/98	40.25	17.28	0.00	22.97	-4.29	--	--	--	--	--	--	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-4 continued</b>														
03/04/99	40.25	14.17	0.00	26.08	3.11	ND	--	ND	ND	ND	ND	ND	--	
09/13/99	40.25	17.55	0.00	22.70	-3.38	--	--	--	--	--	--	--	--	
03/21/00	40.25	14.74	0.00	25.51	2.81	ND	--	ND	ND	ND	ND	ND	--	
09/18/00	40.25	16.88	0.00	23.37	-2.14	--	--	--	--	--	--	--	--	
03/16/01	40.25	16.32	0.00	23.93	0.56	--	--	--	--	--	--	--	--	
09/04/01	40.25	17.70	0.00	22.55	-1.38	--	--	--	--	--	--	--	--	
03/18/02	40.25	16.08	--	24.17	1.62	--	--	--	--	--	--	--	--	
09/17/02	40.25	16.56	0.00	23.69	-0.48	--	--	--	--	--	--	--	--	
03/28/03	40.25	16.15	0.00	24.10	0.41	--	--	--	--	--	--	--	--	
09/05/03	40.25	17.20	0.00	23.05	-1.05	--	--	--	--	--	--	--	--	Monitored Only
03/04/04	40.25	15.39	0.00	24.86	1.81	--	--	--	--	--	--	--	--	Monitored Only
09/09/04	40.25	16.98	0.00	23.27	-1.59	--	--	--	--	--	--	--	--	Monitored Only
03/01/05	40.25	14.97	0.00	25.28	2.01	--	--	--	--	--	--	--	--	Monitor Only
08/02/05	40.25	15.82	0.00	24.43	-0.85	--	--	--	--	--	--	--	--	Monitored Only
01/20/06	40.25	15.04	0.00	25.21	0.78	--	--	--	--	--	--	--	--	Monitored only
07/11/06	40.25	15.38	0.00	24.87	-0.34	--	--	--	--	--	--	--	--	Monitored Only
03/09/07	40.25	16.00	0.00	24.25	-0.62	--	--	--	--	--	--	--	--	Monitored Only
07/06/07	42.69	17.15	0.00	25.54	1.29	--	--	--	--	--	--	--	--	Monitored Only
01/07/08	42.69	16.65	0.00	26.04	0.50	--	--	--	--	--	--	--	--	Monitored Only
06/24/08	42.69	17.40	0.00	25.29	-0.75	--	--	--	--	--	--	--	--	Monitored Only
08/29/08	42.69	17.62	0.00	25.07	-0.22	--	--	--	--	--	--	--	--	Monitored only
<b>U-5 (Screen Interval in feet: 15.0-30.0)</b>														
04/07/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-5 continued</b>														
08/06/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
02/12/93	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
06/04/93	39.61	16.05	0.00	23.56	--	ND	--	ND	ND	ND	ND	--	--	
09/09/93	39.61	16.90	0.00	22.71	-0.85	ND	--	ND	ND	ND	ND	--	--	
12/02/93	39.31	17.66	0.00	21.65	-1.06	ND	--	ND	ND	ND	ND	--	--	
03/09/94	39.31	16.45	0.00	22.86	1.21	71	--	1.7	6.3	1.5	10	--	--	
04/13/94	39.31	16.64	0.00	22.67	-0.19	ND	--	ND	ND	ND	ND	--	--	
06/09/94	39.31	16.70	0.00	22.61	-0.06	ND	--	ND	ND	ND	ND	--	--	
09/07/94	39.31	17.73	0.00	21.58	-1.03	ND	--	ND	0.73	ND	0.84	--	--	
12/05/94	39.31	17.23	0.00	22.08	0.50	ND	--	ND	ND	ND	ND	--	--	
03/09/95	39.31	15.35	0.00	23.96	1.88	ND	--	ND	ND	ND	ND	ND	--	
06/13/95	39.31	15.16	0.00	24.15	0.19	ND	--	ND	ND	ND	ND	0.87	--	
09/12/95	39.31	16.30	0.00	23.01	-1.14	ND	--	ND	ND	ND	ND	ND	--	
12/14/95	39.31	16.56	0.00	22.75	-0.26	ND	--	ND	ND	ND	ND	ND	--	
03/20/96	39.31	14.07	0.00	25.24	2.49	--	--	--	--	--	--	--	--	
09/24/96	39.31	16.55	0.00	22.76	-2.48	--	--	--	--	--	--	--	--	
03/27/97	39.31	14.85	0.00	24.46	1.70	ND	--	ND	ND	ND	ND	ND	--	
09/23/97	39.31	16.90	0.00	22.41	-2.05	--	--	--	--	--	--	--	--	Sampled annually
03/10/98	39.31	12.21	0.00	27.10	4.69	ND	--	ND	ND	ND	ND	ND	--	
09/04/98	39.31	16.57	0.00	22.74	-4.36	--	--	--	--	--	--	--	--	
03/04/99	39.31	13.42	0.00	25.89	3.15	ND	--	ND	0.67	ND	ND	ND	--	
09/13/99	39.31	17.02	0.00	22.29	-3.60	--	--	--	--	--	--	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-5 continued</b>														
03/21/00	39.31	13.93	0.00	25.38	3.09	ND	--	ND	ND	ND	ND	ND	--	
09/18/00	39.31	16.17	0.00	23.14	-2.24	--	--	--	--	--	--	--	--	
03/16/01	39.31	15.51	0.00	23.80	0.66	ND	--	ND	ND	ND	ND	ND	--	
09/04/01	39.31	16.88	0.00	22.43	-1.37	--	--	--	--	--	--	--	--	
03/18/02	39.31	15.25	--	24.06	1.63	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
09/17/02	39.31	16.71	0.00	22.60	-1.46	--	--	--	--	--	--	--	--	Sampled annually
03/28/03	39.31	15.21	0.00	24.10	1.50	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/05/03	39.31	16.26	0.00	23.05	-1.05	--	--	--	--	--	--	--	--	Sampled annually
03/04/04	39.31	14.79	0.00	24.52	1.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/09/04	39.31	16.30	0.00	23.01	-1.51	--	--	--	--	--	--	--	--	Monitored Only
03/01/05	39.31	14.38	0.00	24.93	1.92	--	ND<50	ND<0.50	ND<0.50	0.53	2.0	--	ND<0.50	
08/02/05	39.31	15.02	0.00	24.29	-0.64	--	--	--	--	--	--	--	--	Sampled Annually
01/20/06	39.31	14.23	0.00	25.08	0.79	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
07/11/06	39.31	14.60	0.00	24.71	-0.37	--	--	--	--	--	--	--	--	Sampled Q1 only
03/09/07	39.31	15.10	0.00	24.21	-0.50	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
07/06/07	41.74	16.23	0.00	25.51	1.30	--	--	--	--	--	--	--	--	Sampled Q1 only
01/07/08	41.74	15.81	0.00	25.93	0.42	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	41.74	16.51	0.00	25.23	-0.70	--	--	--	--	--	--	--	--	Sampled Q1 only
08/29/08	41.74	16.98	0.00	24.76	-0.47	--	--	--	--	--	--	--	--	Sampled Q1 only
<b>U-6 (Screen Interval in feet: 13.0-28.0)</b>														
04/07/92	--	--	--	--	--	6600	--	90	ND	820	1200	--	--	
08/06/92	--	--	--	--	--	9200	--	160	ND	360	150	--	--	
11/20/92	--	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-6 continued</b>														
02/12/93	--	--	--	--	--	2600	--	27	ND	120	51	--	--	
06/04/93	37.94	14.45	0.00	23.49	--	13000	--	100	38	450	320	--	--	
09/09/93	37.94	15.56	0.00	22.38	-1.11	6300	--	29	ND	120	34	--	--	
12/02/93	37.68	16.08	0.00	21.60	-0.78	2100	--	12	1.6	21	1.1	--	--	
03/09/94	37.68	14.90	0.00	22.78	1.18	2200	--	11	8.2	24	16	--	--	
06/09/94	37.68	15.18	0.00	22.50	-0.28	2600	--	16	ND	29	ND	--	--	
09/07/94	37.68	16.20	0.00	21.48	-1.02	16004	--	ND	ND	ND	ND	--	--	
12/05/94	37.68	15.60	0.00	22.08	0.60	450	--	ND	ND	ND	ND	--	--	
03/09/95	37.68	13.74	0.00	23.94	1.86	2500	--	29	ND	70	120	320	--	
06/13/95	37.68	13.73	0.00	23.95	0.01	1300	--	ND	ND	20	46	5400	--	
09/12/95	37.68	14.85	0.00	22.83	-1.12	ND	--	ND	ND	ND	ND	6600	--	
12/14/95	37.68	14.89	0.00	22.79	-0.04	760	--	ND	ND	7	8.4	1100	--	
03/20/96	37.68	12.41	0.00	25.27	2.48	52	--	1.1	0.98	ND	0.75	1200	--	
09/24/96	37.68	15.06	0.00	22.62	-2.65	ND	--	ND	ND	ND	ND	750	--	
03/27/97	37.68	13.48	0.00	24.20	1.58	ND	--	ND	ND	ND	ND	150	--	
09/23/97	37.68	15.36	0.00	22.32	-1.88	66	--	0.81	ND	ND	ND	150	--	
03/10/98	37.68	10.90	0.00	26.78	4.46	ND	--	ND	ND	ND	ND	18	--	
09/04/98	37.68	14.85	0.00	22.83	-3.95	ND	--	ND	ND	ND	ND	ND	--	
03/04/99	37.68	12.10	0.00	25.58	2.75	ND	--	ND	ND	ND	ND	6.5	--	
09/13/99	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
03/21/00	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-6 continued</b>														
09/18/00	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
03/16/01	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/04/01	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
03/18/02	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/17/02	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/05/03	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
03/04/04	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
09/09/04	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
03/01/05	37.68	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate-Paved over
09/08/05	37.68	13.98	0.00	23.70	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	Paved over on 8/2/05
01/20/06	37.68	12.76	0.00	24.92	1.22	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
07/11/06	37.68	13.23	0.00	24.45	-0.47	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
03/09/07	37.68	13.67	0.00	24.01	-0.44	--	140	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
07/06/07	40.07	14.76	0.00	25.31	1.30	--	79	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
01/07/08	40.07	14.02	0.00	26.05	0.74	--	65	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	40.07	14.98	0.00	25.09	-0.96	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
08/29/08	40.07	15.42	0.00	24.65	-0.44	--	120	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>U-7 (Screen Interval in feet: 15.0-35.0)</b>														
04/07/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-7 continued</b>														
08/06/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
11/20/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
02/12/93	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
06/04/93	37.49	14.17	0.00	23.32	--	ND	--	ND	ND	ND	ND	--	--	
09/09/93	37.49	15.23	0.00	22.26	-1.06	ND	--	ND	ND	ND	ND	--	--	
12/02/93	37.11	15.61	0.00	21.50	-0.76	ND	--	ND	ND	ND	ND	--	--	
03/09/94	37.11	14.45	0.00	22.66	1.16	ND	--	1.4	4.4	0.96	7.5	--	--	
04/13/94	37.11	14.63	0.00	22.48	-0.18	ND	--	ND	ND	ND	ND	--	--	
06/09/94	37.11	14.70	0.00	22.41	-0.07	ND	--	ND	ND	ND	ND	--	--	
09/07/94	37.11	15.72	0.00	21.39	-1.02	ND	--	ND	ND	ND	ND	--	--	
12/05/94	37.11	15.10	0.00	22.01	0.62	ND	--	ND	ND	ND	ND	--	--	
03/09/95	37.11	13.36	0.00	23.75	1.74	ND	--	ND	ND	ND	ND	ND	--	
06/13/95	37.11	13.33	0.00	23.78	0.03	ND	--	ND	ND	ND	ND	3.5	--	
09/12/95	37.11	14.40	0.00	22.71	-1.07	ND	--	ND	ND	ND	ND	ND	--	
12/14/95	37.11	14.39	0.00	22.72	0.01	ND	--	ND	ND	ND	ND	1.4	--	
03/20/96	37.11	11.96	0.00	25.15	2.43	--	--	--	--	--	--	--	--	
09/24/96	37.11	14.59	0.00	22.52	-2.63	--	--	--	--	--	--	--	--	
03/27/97	37.11	13.08	0.00	24.03	1.51	ND	--	ND	ND	ND	ND	ND	--	
09/23/97	37.11	14.90	0.00	22.21	-1.82	--	--	--	--	--	--	--	--	
03/10/98	37.11	10.46	0.00	26.65	4.44	ND	--	ND	ND	ND	ND	ND	--	
09/04/98	37.11	14.42	0.00	22.69	-3.96	--	--	--	--	--	--	--	--	
03/04/99	37.11	11.64	0.00	25.47	2.78	ND	--	ND	ND	ND	ND	6.6	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-7 continued</b>														
09/13/99	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
03/21/00	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/18/00	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
03/16/01	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/04/01	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/17/02	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Inaccessible covered with asphalt
09/05/03	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
03/04/04	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
09/09/04	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Covered with asphalt
03/01/05	37.11	--	--	--	--	--	--	--	--	--	--	--	--	Unable to locate-Paved over
09/08/05	37.11	13.59	0.00	23.52	--	--	ND<50	ND<0.50	0.89	ND<0.50	1.7	--	ND<0.50	Paved over on 8/2/05
01/20/06	37.11	12.33	0.00	24.78	1.26	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
07/11/06	37.11	12.84	0.00	24.27	-0.51	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
03/09/07	37.11	13.25	0.00	23.86	-0.41	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
07/06/07	39.50	--	--	--	--	--	--	--	--	--	--	--	--	Car over well
01/07/08	39.50	13.50	0.00	26.00	--	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	39.50	14.05	0.00	25.45	-0.55	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
08/29/08	39.50	--	--	--	--	--	--	--	--	--	--	--	--	Car parked over well

U-8

(Screen Interval in feet: 15.0-30.0)

5760





**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-8 continued</b>														
04/07/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
08/06/92	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
02/12/93	--	--	--	--	--	ND	--	ND	ND	ND	ND	--	--	
06/04/93	38.94	15.26	0.00	23.68	--	ND	--	ND	ND	ND	ND	--	--	
09/09/93	38.94	16.38	0.00	22.56	-1.12	ND	--	ND	ND	ND	ND	--	--	
12/02/93	38.57	16.80	0.00	21.77	-0.79	ND	--	ND	ND	ND	ND	--	--	
03/09/94	38.57	15.62	0.00	22.95	1.18	ND	--	1.2	3.7	0.79	6.1	--	--	
04/13/94	38.57	15.80	0.00	22.77	-0.18	ND	--	ND	0.78	ND	0.98	--	--	
06/09/94	38.57	15.86	0.00	22.71	-0.06	ND	--	ND	ND	ND	ND	--	--	
09/07/94	38.57	16.87	0.00	21.70	-1.01	ND	--	ND	ND	ND	ND	--	--	
12/05/94	38.57	16.32	0.00	22.25	0.55	ND	--	ND	ND	ND	ND	--	--	
03/09/95	38.57	14.56	0.00	24.01	1.76	ND	--	ND	ND	ND	ND	ND	--	
06/13/95	38.57	14.40	0.00	24.17	0.16	ND	--	ND	ND	ND	ND	ND	--	
09/12/95	38.57	15.50	0.00	23.07	-1.10	ND	--	ND	ND	ND	ND	ND	--	
12/14/95	38.57	15.67	0.00	22.90	-0.17	ND	--	ND	ND	ND	ND	ND	--	
03/20/96	38.57	13.25	0.00	25.32	2.42	--	--	--	--	--	--	--	--	
09/24/96	38.57	15.75	0.00	22.82	-2.50	--	--	--	--	--	--	--	--	
03/27/97	38.57	14.18	0.00	24.39	1.57	ND	--	ND	ND	ND	ND	ND	--	
09/23/97	38.57	16.05	0.00	22.52	-1.87	--	--	--	--	--	--	--	--	Sampled annually
03/10/98	38.57	11.63	0.00	26.94	4.42	ND	--	ND	ND	ND	ND	ND	--	
09/04/98	38.57	15.81	0.00	22.76	-4.18	--	--	--	--	--	--	--	--	
03/04/99	38.57	12.81	0.00	25.76	3.00	ND	--	ND	ND	ND	ND	ND	--	
09/13/99	38.57	16.37	0.00	22.20	-3.56	--	--	--	--	--	--	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-8 continued</b>														
03/21/00	38.57	13.25	0.00	25.32	3.12	ND	--	ND	ND	ND	ND	ND	--	
09/18/00	38.57	15.31	0.00	23.26	-2.06	--	--	--	--	--	--	--	--	
03/16/01	38.57	14.71	0.00	23.86	0.60	ND	--	ND	ND	ND	ND	ND	--	
09/04/01	38.57	16.01	0.00	22.56	-1.30	--	--	--	--	--	--	--	--	
03/18/02	38.57	14.46	--	24.11	1.55	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
09/17/02	38.57	15.93	0.00	22.64	-1.47	--	--	--	--	--	--	--	--	Sampled annually
03/28/03	38.57	14.40	0.00	24.17	1.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/05/03	38.57	15.46	0.00	23.11	-1.06	--	--	--	--	--	--	--	--	Sampled annually
03/04/04	38.57	13.98	0.00	24.59	1.48	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/09/04	38.57	15.53	0.00	23.04	-1.55	--	--	--	--	--	--	--	--	Monitored Only
03/01/05	38.57	13.56	0.00	25.01	1.97	--	ND<50	ND<0.50	ND<0.50	0.80	2.8	--	ND<0.50	
08/02/05	38.57	14.31	0.00	24.26	-0.75	--	--	--	--	--	--	--	--	Sampled annually
01/20/06	38.57	13.51	0.00	25.06	0.80	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
07/11/06	38.57	13.94	0.00	24.63	-0.43	--	--	--	--	--	--	--	--	Sampled Q1 only
03/09/07	38.57	14.40	0.00	24.17	-0.46	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
07/06/07	40.95	15.44	0.00	25.51	1.34	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
01/07/08	40.95	14.79	0.00	26.16	0.65	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	40.95	15.67	0.00	25.28	-0.88	--	--	--	--	--	--	--	--	Sampled Q1 and Q3 only
08/29/08	40.95	16.11	0.00	24.84	-0.44	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
<b>U-9 (Screen Interval in feet: 13.0-28.0)</b>														
06/04/93	37.88	14.67	0.00	23.21	--	2100	--	ND	ND	ND	ND	--	--	
09/09/93	37.88	15.79	0.00	22.09	-1.12	1200	--	ND	ND	ND	ND	--	--	
12/02/93	37.31	15.93	0.00	21.38	-0.71	ND	--	ND	ND	ND	ND	--	--	

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethylbenzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-9 continued</b>														
03/09/94	37.31	14.74	0.00	22.57	1.19	5700	--	ND	ND	ND	ND	--	--	
04/13/94	37.31	14.96	0.00	22.35	-0.22	ND	--	ND	ND	ND	ND	--	--	
06/09/94	37.31	15.05	0.00	22.26	-0.09	2900	--	ND	ND	ND	ND	--	--	
09/07/94	37.31	16.06	0.00	21.25	-1.01	2700	--	ND	ND	ND	ND	--	--	
12/05/94	37.31	15.43	0.00	21.88	0.63	3700	--	ND	ND	ND	ND	--	--	
03/09/95	37.31	13.50	0.00	23.81	1.93	2500	--	ND	ND	ND	ND	5800	--	
06/13/95	37.31	13.63	0.00	23.68	-0.13	ND	--	ND	ND	ND	ND	1200	--	
09/12/95	37.31	14.73	0.00	22.58	-1.10	ND	--	ND	ND	ND	ND	1600	--	
12/14/95	37.31	14.67	0.00	22.64	0.06	ND	--	ND	ND	ND	ND	4400	--	
03/20/96	37.31	12.27	0.00	25.04	2.40	ND	--	ND	ND	ND	ND	480	--	
09/24/96	37.31	14.92	0.00	22.39	-2.65	ND	--	ND	ND	ND	ND	ND	--	
03/27/97	37.31	13.36	0.00	23.95	1.56	ND	--	ND	ND	ND	ND	42	--	
09/23/97	37.31	15.28	0.00	22.03	-1.92	ND	--	ND	ND	ND	ND	ND	--	
03/10/98	37.31	10.86	0.00	26.45	4.42	ND	--	ND	ND	ND	3.1	ND	--	
09/04/98	37.31	15.03	0.00	22.28	-4.17	ND	--	ND	ND	ND	ND	ND	--	
03/04/99	37.31	11.95	0.00	25.36	3.08	ND	--	ND	ND	ND	ND	ND	--	
09/13/99	37.31	15.61	0.00	21.70	-3.66	ND	--	ND	1.67	ND	1.01	7.85	--	
03/21/00	37.31	12.38	0.00	24.93	3.23	ND	--	ND	ND	ND	ND	ND	--	
09/18/00	37.31	14.87	0.00	22.44	-2.49	ND	--	ND	1.42	ND	1.06	ND	--	
03/16/01	37.31	13.85	0.00	23.46	1.02	ND	--	ND	ND	ND	ND	ND	--	
09/04/01	37.31	15.22	0.00	22.09	-1.37	--	--	--	--	--	--	--	--	Sampled annually
03/18/02	37.31	13.56	--	23.75	1.66	ND<50	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<5.0	--	
09/17/02	37.31	15.14	0.00	22.17	-1.58	--	--	--	--	--	--	--	--	Sampled annually

**Table 2**  
**HISTORIC FLUID LEVELS AND SELECTED ANALYTICAL RESULTS**  
**February 1988 Through August 2008**  
**76 Station 5760**

Date Sampled	TOC Elevation (feet)	Depth to Water (feet)	LPH Thickness (feet)	Ground-water Elevation (feet)	Change in Elevation (feet)	TPH-G (8015M) (µg/l)	TPH-G (GC/MS) (µg/l)	Benzene (µg/l)	Toluene (µg/l)	Ethyl-benzene (µg/l)	Total Xylenes (µg/l)	MTBE (8021B) (µg/l)	MTBE (8260B) (µg/l)	Comments
<b>U-9 continued</b>														
03/28/03	37.31	13.61	0.00	23.70	1.53	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/05/03	37.31	14.64	0.00	22.67	-1.03	--	--	--	--	--	--	--	--	Sampled annually
03/04/04	37.31	13.07	0.00	24.24	1.57	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<2.0	
09/09/04	37.31	14.75	0.00	22.56	-1.68	--	--	--	--	--	--	--	--	Monitored Only
03/01/05	37.31	12.68	0.00	24.63	2.07	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	4.1	
08/02/05	37.31	13.47	0.00	23.84	-0.79	--	--	--	--	--	--	--	--	Sampled annually
01/20/06	37.31	12.61	0.00	24.70	0.86	--	ND<50	ND<0.50	ND<0.50	0.78	2.8	--	ND<0.50	
07/11/06	37.31	13.10	0.00	24.21	-0.49	--	--	--	--	--	--	--	--	Sampled Q1 only
03/09/07	37.31	13.55	0.00	23.76	-0.45	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	ND<0.50	
07/06/07	39.72	14.63	0.00	25.09	1.33	--	--	--	--	--	--	--	--	Sampled Q1 only
01/07/08	39.72	13.85	0.00	25.87	0.78	--	ND<50	ND<0.50	ND<0.50	ND<0.50	ND<1.0	--	ND<0.50	
06/24/08	39.72	14.89	0.00	24.83	-1.04	--	--	--	--	--	--	--	--	Sampled Q1 only
08/29/08	39.72	15.32	0.00	24.40	-0.43	--	--	--	--	--	--	--	--	Sampled Q1 only

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5760**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,1-DCA (µg/l)	Post-purge	Pre-purge
									Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)
<b>U-1</b>										
03/27/97	--	--	--	--	--	--	--	--	2.35	2.41
10/13/00	ND	ND	ND	--	ND	ND	ND	ND	--	--
09/17/02	ND<500	ND<2500	ND<10	--	ND<10	ND<10	ND<10	ND<10	--	--
09/05/03	--	ND<500	--	--	--	--	--	--	--	--
03/04/04	--	ND<20000	--	--	--	--	--	--	--	--
09/09/04	--	ND<2000	--	--	--	--	--	--	--	--
03/01/05	--	ND<1300	--	--	--	--	--	--	--	--
08/02/05	--	ND<1000	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
07/11/06	--	ND<25000	--	--	--	--	--	--	--	--
03/09/07	--	ND<2500	--	--	--	--	--	--	--	--
<b>U-1R</b>										
07/06/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<6200	--	--	--	--	--	--	--	--
06/24/08	--	ND<12000	--	--	--	--	--	--	--	--
08/29/08	ND<500	ND<12000	ND<25	ND<25	ND<25	ND<25	ND<25	ND<25	--	--
<b>U-2</b>										
03/27/97	--	--	--	--	--	--	--	--	4.49	4.36
<b>U-3</b>										
03/27/97	--	--	--	--	--	--	--	--	3.32	3.18
09/05/03	--	ND<500	--	--	--	--	--	--	--	--
03/04/04	--	ND<10000	--	--	--	--	--	--	--	--
09/09/04	--	ND<250	--	--	--	--	--	--	--	--
03/01/05	--	ND<500	--	--	--	--	--	--	--	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5760**

Date Sampled								Post-purge	Pre-purge	
	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,1-DCA (µg/l)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)
<b>U-3 continued</b>										
08/02/05	--	ND<250	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
07/11/06	--	ND<2500	--	--	--	--	--	--	--	--
03/09/07	--	ND<1200	--	--	--	--	--	--	--	--
07/06/07	--	ND<250	--	--	--	--	--	--	--	--
<b>U-3R</b>										
07/06/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--
06/24/08	--	ND<250	--	--	--	--	--	--	--	--
08/29/08	ND<10	ND<250	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--
<b>U-4</b>										
03/27/97	--	--	--	--	--	--	--	--	3.26	3.32
<b>U-5</b>										
03/27/97	--	--	--	--	--	--	--	--	3.77	3.74
03/04/04	--	ND<500	--	--	--	--	--	--	--	--
03/01/05	--	ND<50	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
03/09/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--
<b>U-6</b>										
03/20/96	--	--	--	--	--	--	--	--	3.89	3.85
09/24/96	--	--	--	--	--	--	--	--	3.81	3.73
03/27/97	--	--	--	--	--	--	--	--	4.36	4.43
09/23/97	--	--	--	--	--	--	--	--	4.14	--

**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5760**

Date Sampled								Post-purge	Pre-purge	
	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,1-DCA (µg/l)	Dissolved Oxygen (mg/l)	Dissolved Oxygen (mg/l)
<b>U-6 continued</b>										
03/10/98	--	--	--	--	--	--	--	--	3.95	--
09/08/05	--	ND<1000	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
07/11/06	--	ND<250	--	--	--	--	--	--	--	--
03/09/07	--	ND<250	--	--	--	--	--	--	--	--
07/06/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--
08/29/08	ND<10	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--
<b>U-7</b>										
03/27/97	--	--	--	--	--	--	--	--	3.38	3.29
09/08/05	--	ND<1000	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
07/11/06	--	ND<250	--	--	--	--	--	--	--	--
03/09/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--
<b>U-8</b>										
03/27/97	--	--	--	--	--	--	--	--	3.11	3.04
03/04/04	--	ND<500	--	--	--	--	--	--	--	--
03/01/05	--	ND<50	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
03/09/07	--	ND<250	--	--	--	--	--	--	--	--
07/06/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--
08/29/08	ND<10	--	ND<0.50	ND<0.50	ND<0.50	ND<0.50	ND<0.50	--	--	--

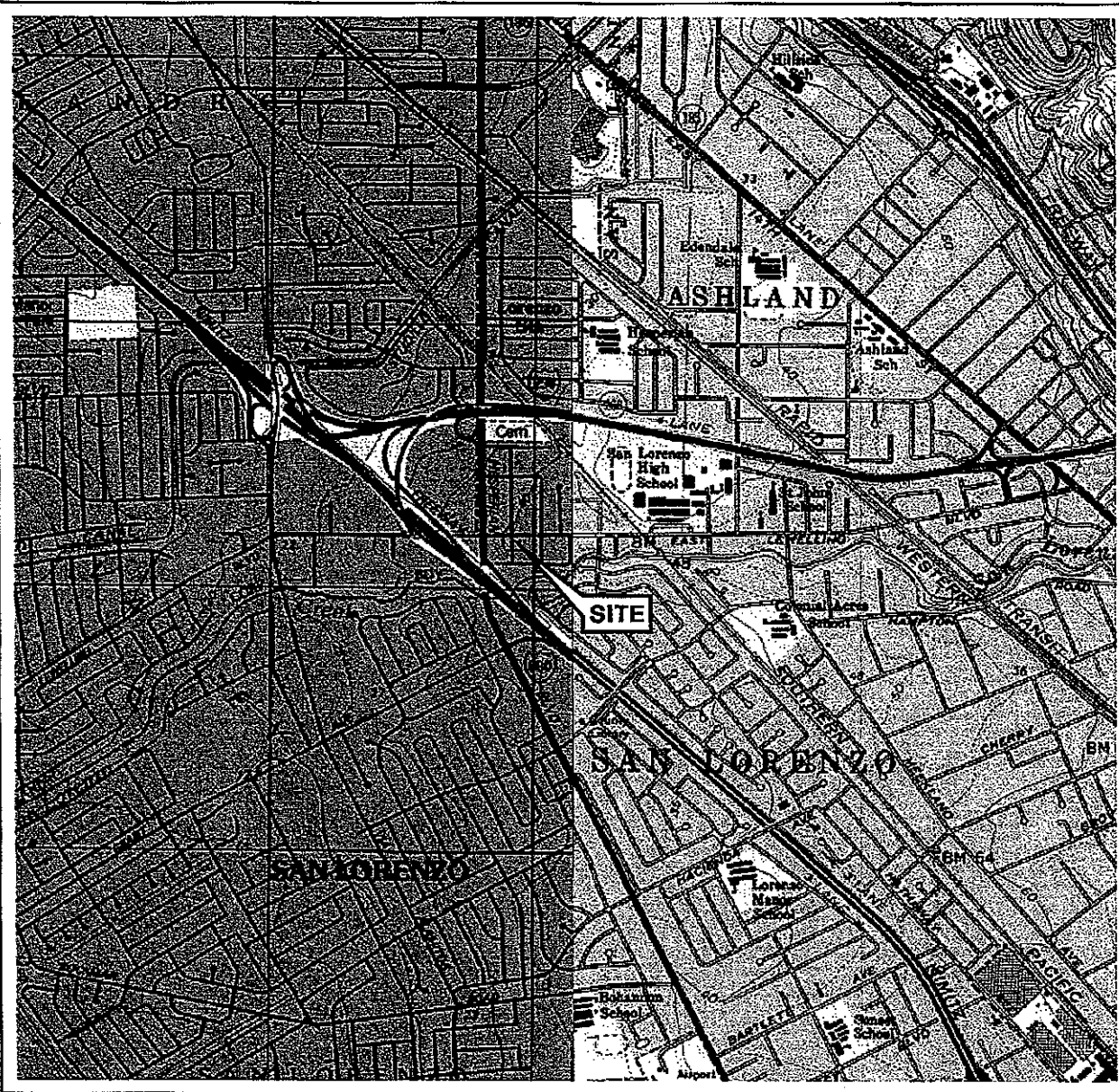
**Table 2 a**  
**ADDITIONAL HISTORIC ANALYTICAL RESULTS**  
**76 Station 5760**

Date Sampled	TBA (µg/l)	Ethanol (8260B) (µg/l)	Ethylene- dibromide (EDB) (µg/l)	1,2-DCA (EDC) (µg/l)	DIPE (µg/l)	ETBE (µg/l)	TAME (µg/l)	1,1-DCA (µg/l)	Post-purge Dissolved Oxygen (mg/l)	Pre-purge Dissolved Oxygen (mg/l)
<b>U-9</b>										
03/20/96	--	--	--	--	--	--	--	--	4	4.02
09/24/96	--	--	--	--	--	--	--	--	3.98	3.85
03/27/97	--	--	--	--	--	--	--	--	3.57	3.65
09/23/97	--	--	--	--	--	--	--	--	3.8	--
03/10/98	--	--	--	--	--	--	--	--	3.62	--
03/04/04	--	ND<500	--	--	--	--	--	--	--	--
03/01/05	--	ND<50	--	--	--	--	--	--	--	--
01/20/06	--	ND<250	--	--	--	--	--	--	--	--
03/09/07	--	ND<250	--	--	--	--	--	--	--	--
01/07/08	--	ND<250	--	--	--	--	--	--	--	--



# FIGURES

PS=f:1 L:DCMS V I C I N I T Y M A P SD5750.m.dwg Nov 16, 2007 - 7:32am c.wong



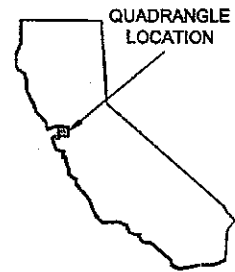
SOURCE:

United States Geological Survey  
7.5 Minute Topographic Map:  
Hayward Quadrangle

0 1/4 1/2 3/4 1 MILE



SCALE 1:24,000







PROJECT: 154771

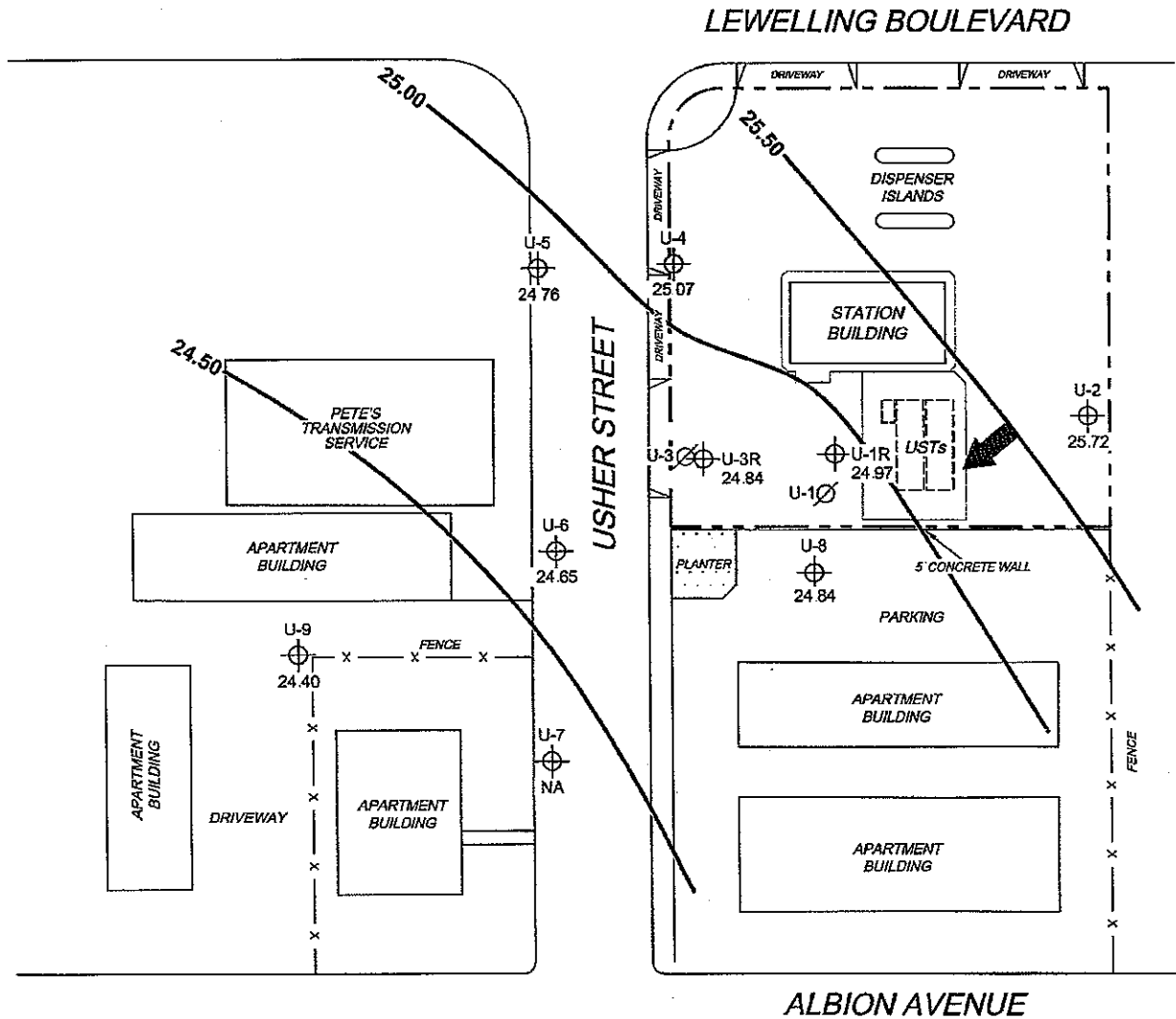
FACILITY:  
76 STATION 5760  
376 LEWELLING BOULEVARD  
SAN LORENZO, CALIFORNIA

VICINITY MAP

FIGURE 1

**LEGEND**

- U-9  Monitoring Well with Groundwater Elevation (feet)
- U-3  Abandoned Well
- 25.50  Groundwater Elevation Contour
-  General Direction of Groundwater Flow



**NOTES:**

Contour lines are interpretive and based on fluid levels measured in monitoring wells  
 Elevations are in feet above mean sea level. NA = not analyzed, measured, or collected.  
 UST = underground storage tank.

SCALE (FEET)



L:\Graphics\GIS\NORTH-SOUTH\TK-5000\5760-003-QMS(NEW).dwg Sep 17, 2008 - 2:32pm bschnidt

MS=1:1 5760-003



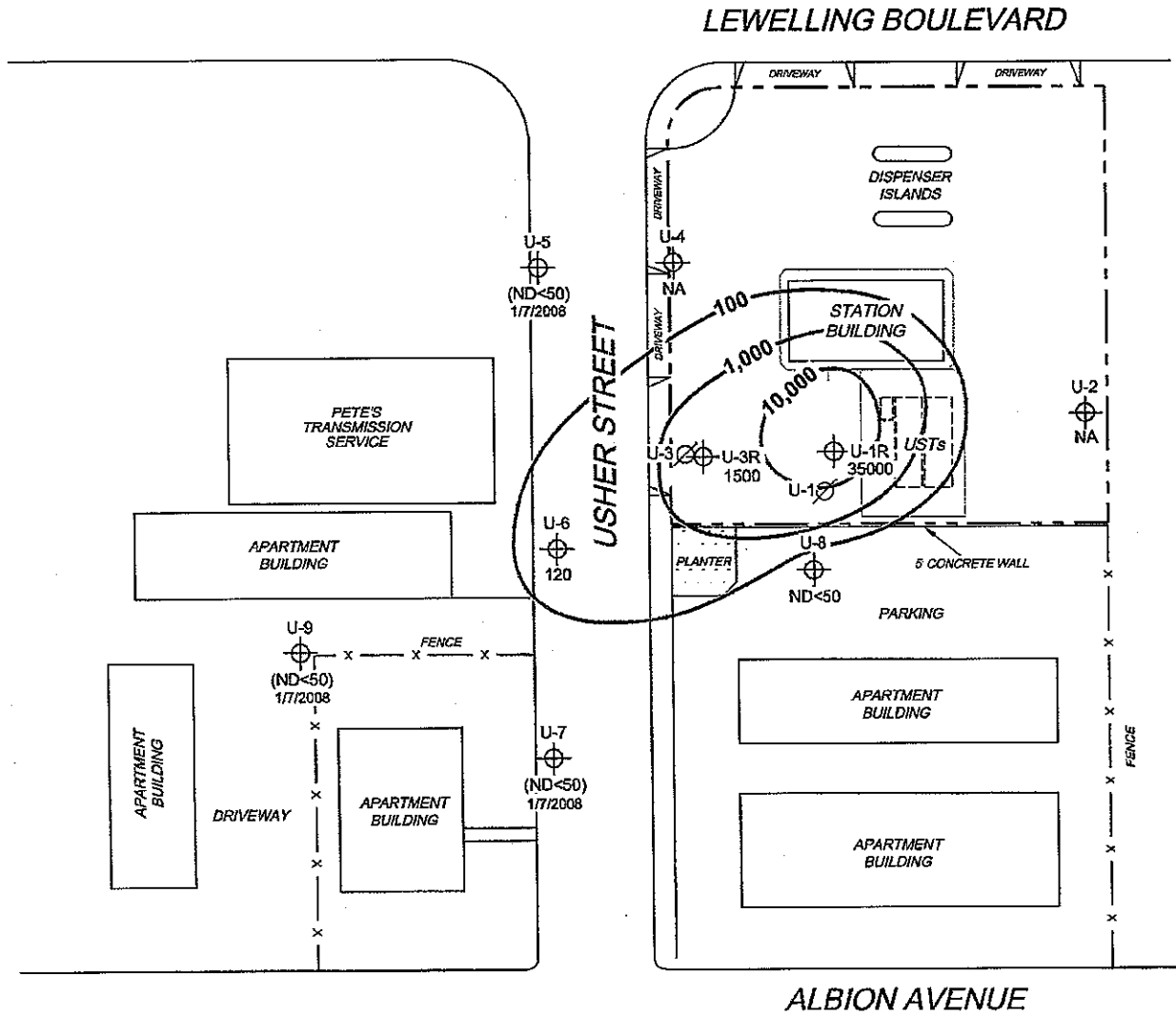
PROJECT: 154771  
 FACILITY:  
 76 STATION 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CALIFORNIA

**GROUNDWATER ELEVATION  
 CONTOUR MAP  
 August 29, 2008**

**FIGURE 2**

**LEGEND**

- U-9 ⊕ Monitoring Well with Dissolved-Phase TPH-G (GC/MS) Concentration (µg/l)
- U-3 ∅ Abandoned Well
- 10,000- Dissolved-Phase TPH-G (GC/MS) Contour (µg/l)



**NOTES:**

Contour lines are interpretive and based on laboratory analysis results of groundwater samples. TPH-G (GC/MS) = total petroleum hydrocarbons with gasoline distinction utilizing EPA Method 8260B. µg/l = micrograms per liter. ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured or collected ( ) = representative historical value. UST = underground storage tank.

SCALE (FEET)



L:\Graphics\GIS NORTH-SCUTHLIX-500016760-15760-GMS(NEW).dwg Sep 17, 2008 - 2:39pm bschmidt

MS=1:1 5760-003




PROJECT: 154771  
 FACILITY:  
 76 STATION 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CALIFORNIA

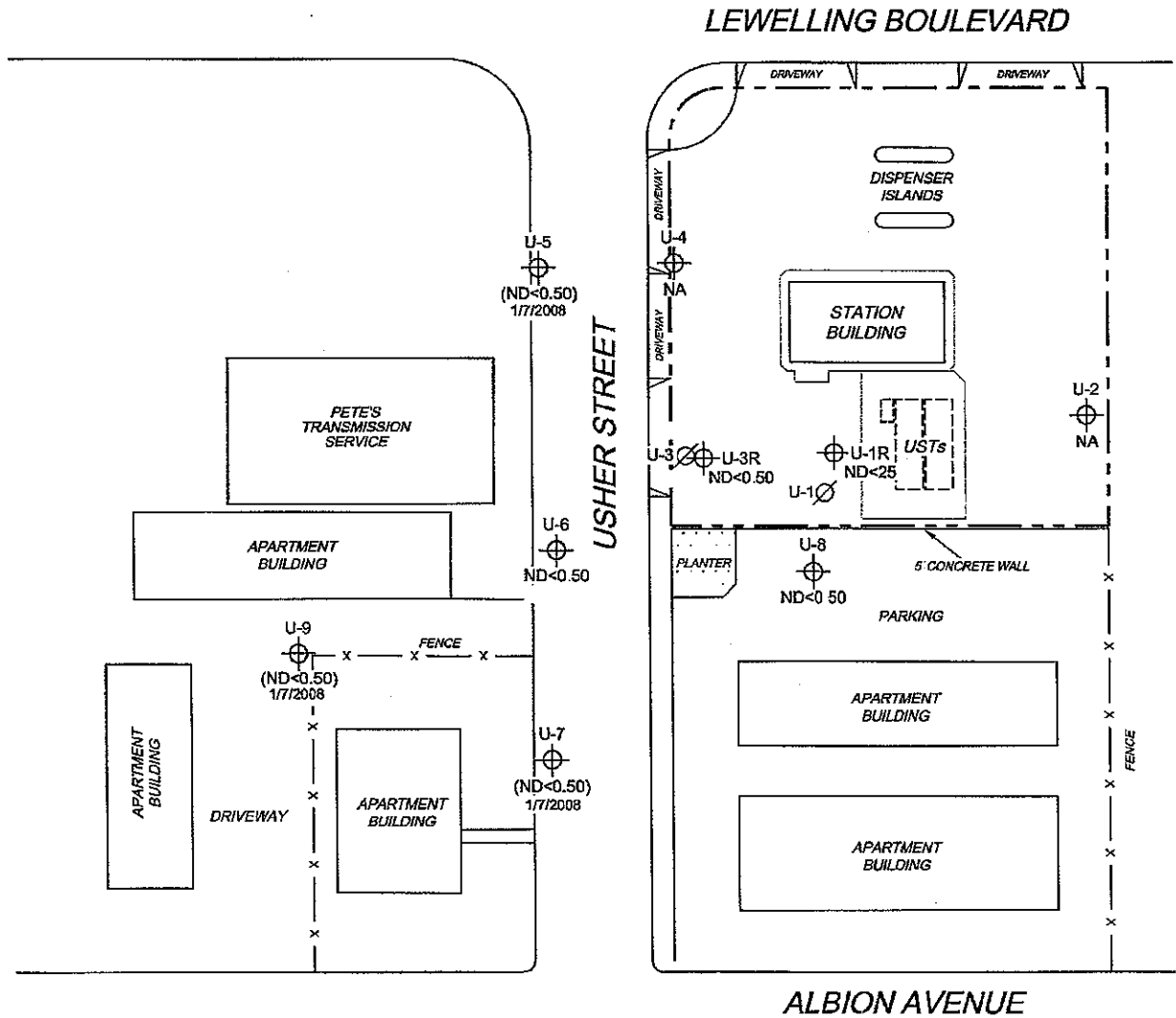
**DISSOLVED-PHASE TPH-G (GC/MS)  
 CONCENTRATION MAP  
 August 29, 2008**

**FIGURE 3**

**LEGEND**

U-9  Monitoring Well with Dissolved-Phase Benzene Concentration (µg/l)

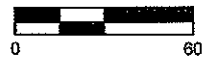
U-3  Abandoned Well



**NOTES:**

µg/l = micrograms per liter ND = not detected at limit indicated on official laboratory report  
 NA = not analyzed, measured or collected ( ) = representative historical value.  
 UST = underground storage tank.

SCALE (FEET)



L:\Graphics\GIS NORTH-SOUTH\4x-5000\6760-16760-ONS(NEW).dwg Sep 17, 2008 - 2:39pm bschmidt

MS-1:1 5760-003




PROJECT: 154771  
 FACILITY:  
 76 STATION 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CALIFORNIA

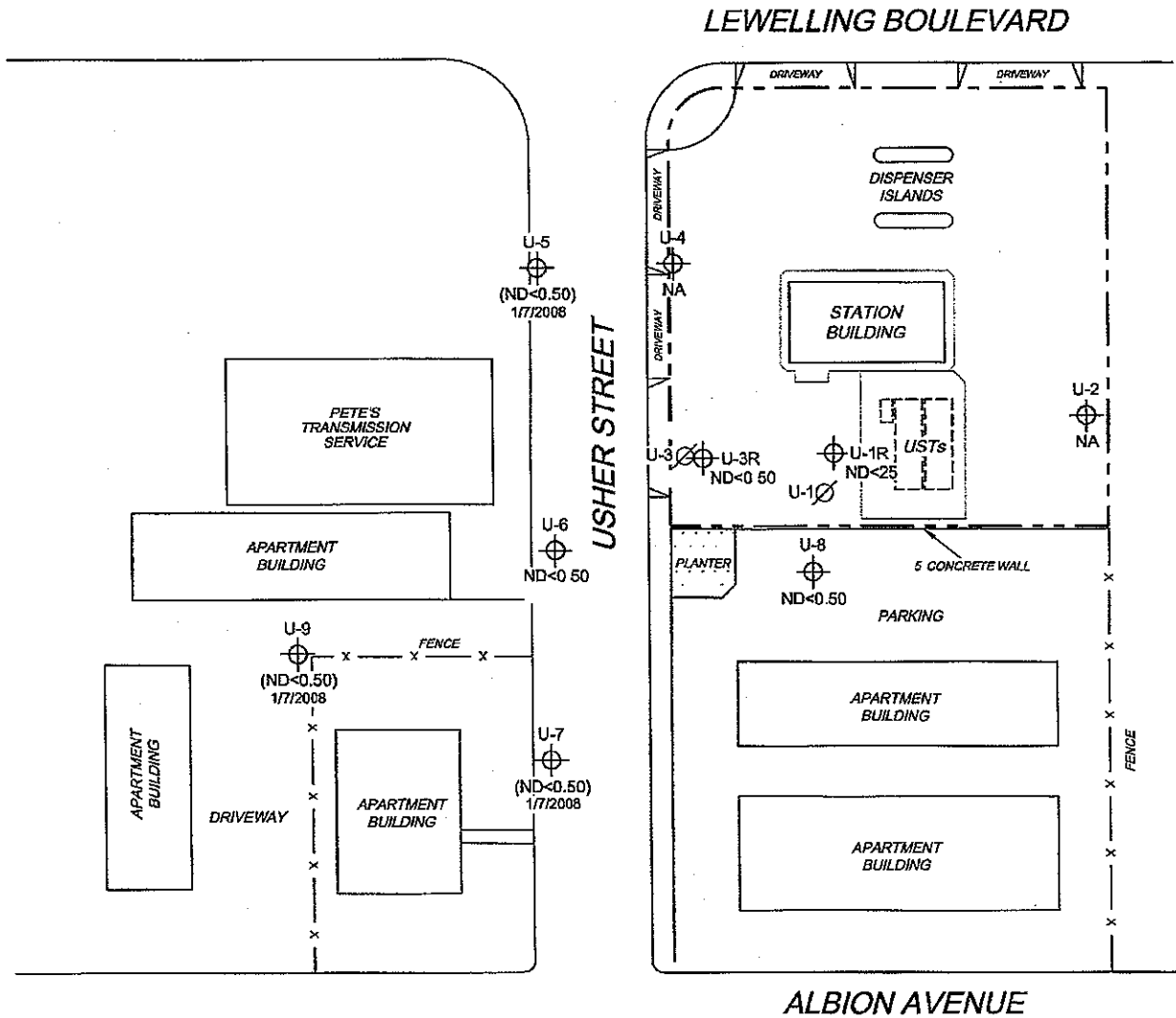
**DISSOLVED-PHASE BENZENE  
 CONCENTRATION MAP**  
 August 29, 2008

**FIGURE 4**

**LEGEND**

U-9  Monitoring Well with Dissolved-Phase MTBE Concentration (µg/l)

U-3  Abandoned Well



**NOTES:**

MTBE = methyl tertiary butyl ether. µg/l = micrograms per liter ND = not detected at limit indicated on official laboratory report. NA = not analyzed, measured, or collected. ( ) = representative historical value. UST = underground storage tank. Results obtained using EPA Method 8260B

SCALE (FEET)



L:\graphics\CMS NORTH-SOUTH\HX-6000\5760-QMS(NEW).dwg Sep 17, 2008 - 2:40pm bschmidt

MS=1:1 5760-003



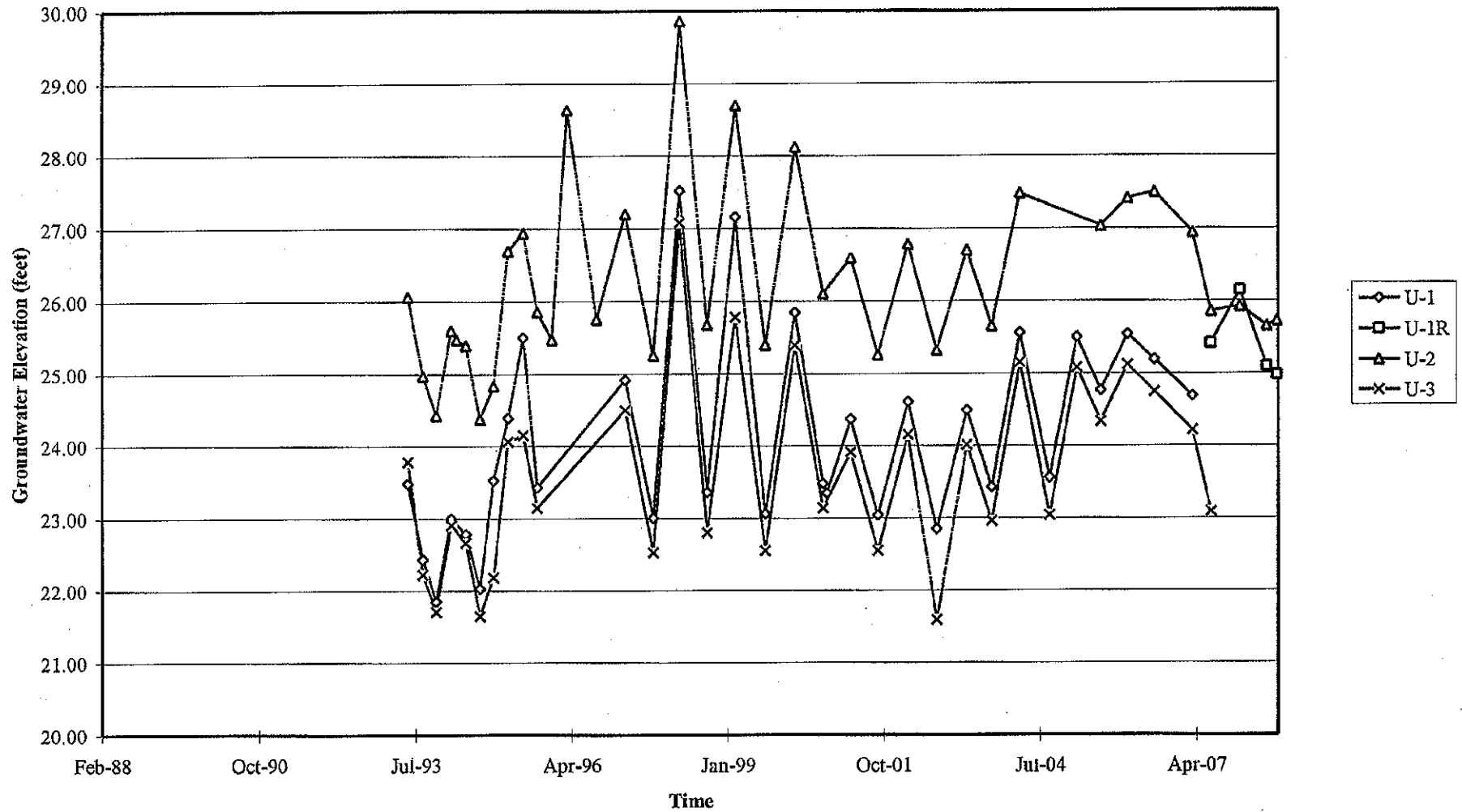
PROJECT: 154771  
 FACILITY:  
 76 STATION 5760  
 376 LEWELLING BOULEVARD  
 SAN LORENZO, CALIFORNIA

**DISSOLVED-PHASE MTBE  
 CONCENTRATION MAP  
 August 29, 2008**

**FIGURE 5**

# GRAPHS

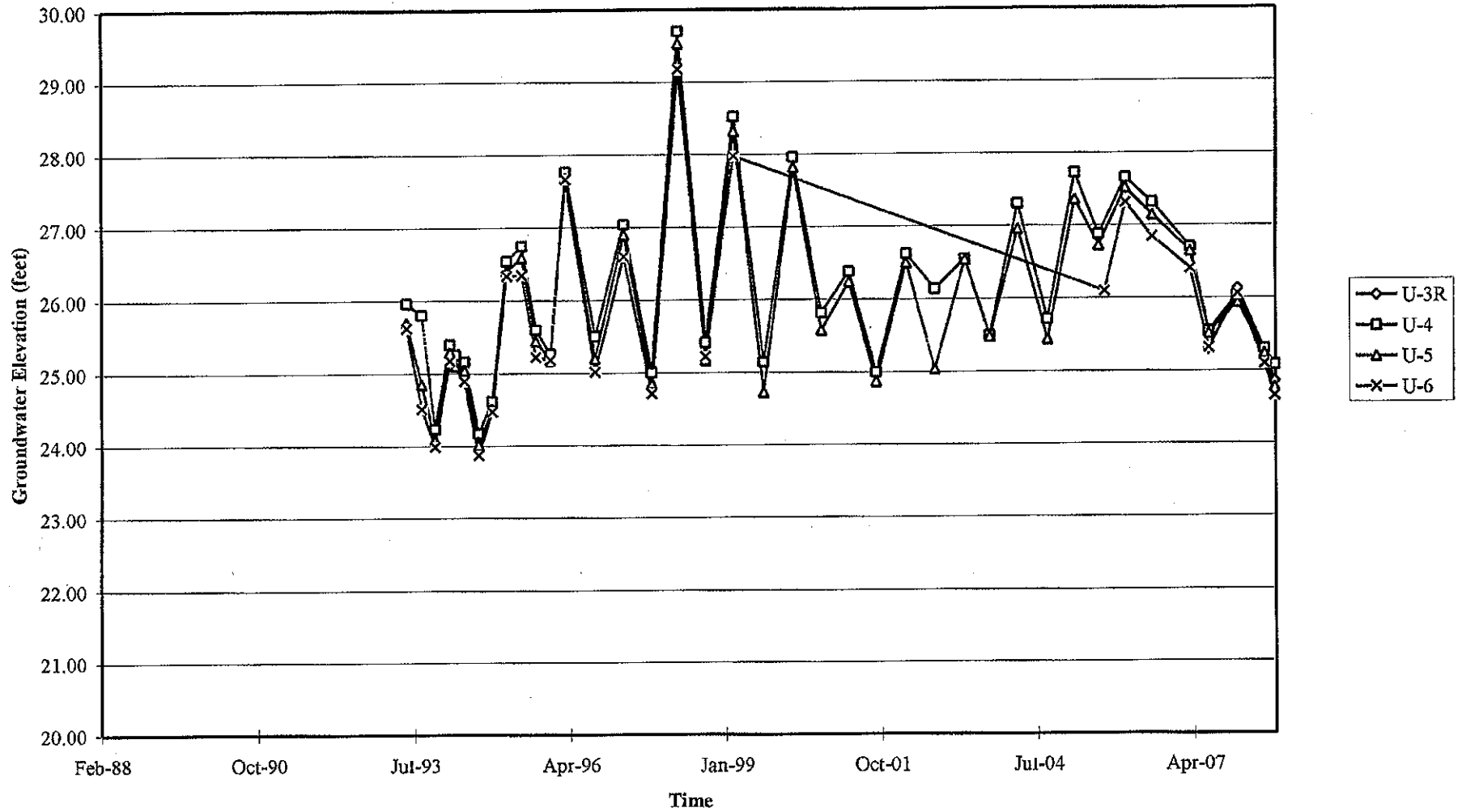
Groundwater Elevations vs. Time  
76 Station 5760



Elevations may have been corrected for apparent changes due to resurvey

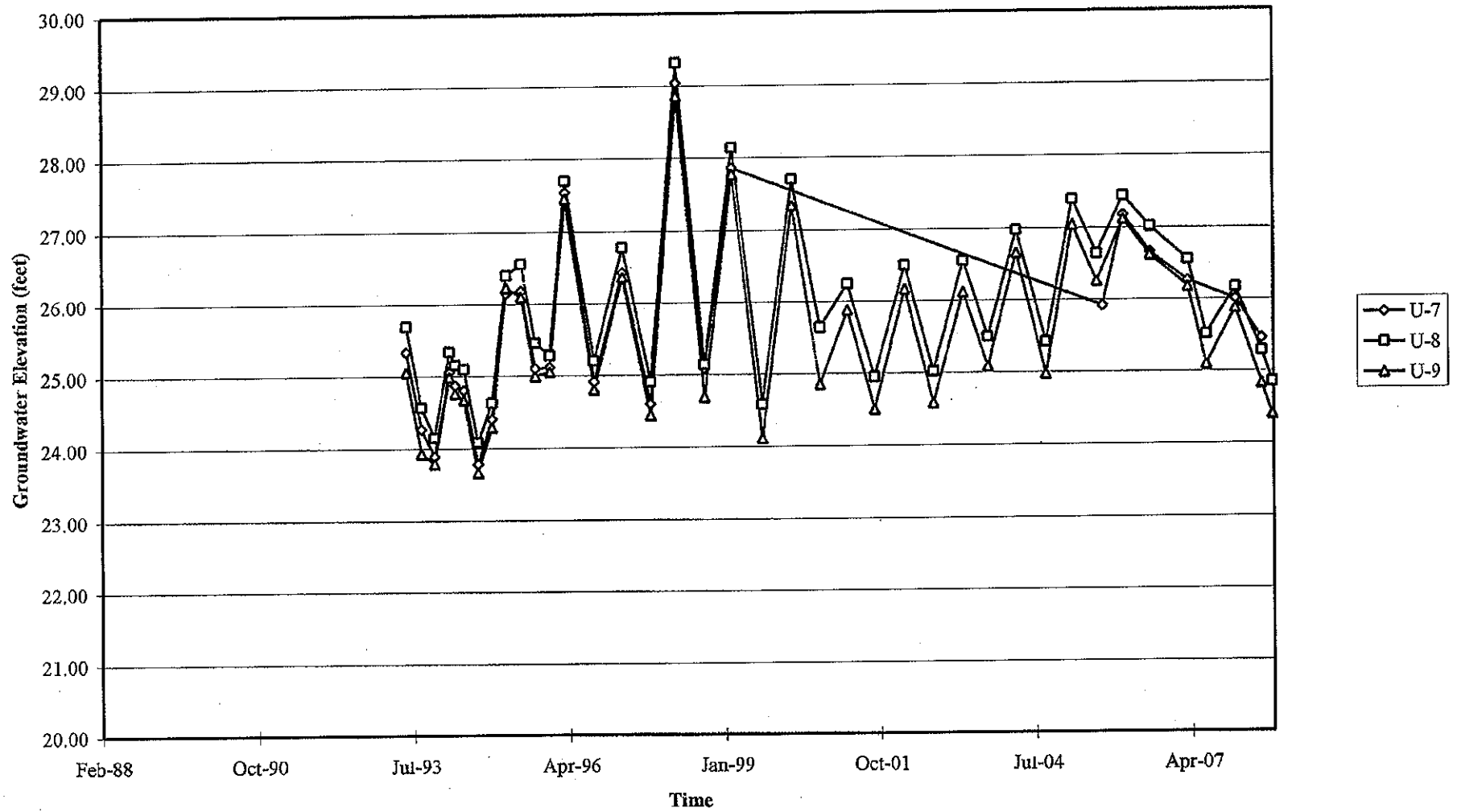


Groundwater Elevations vs. Time  
76 Station 5760



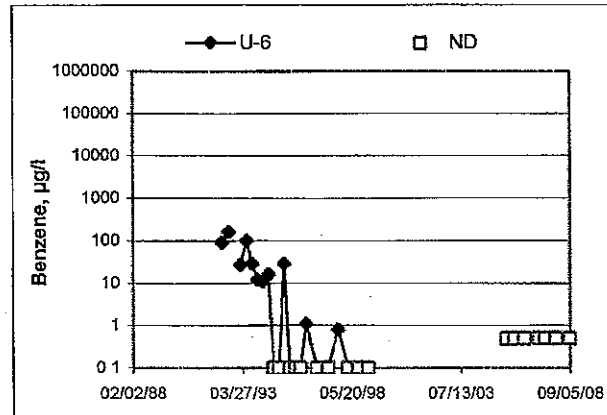
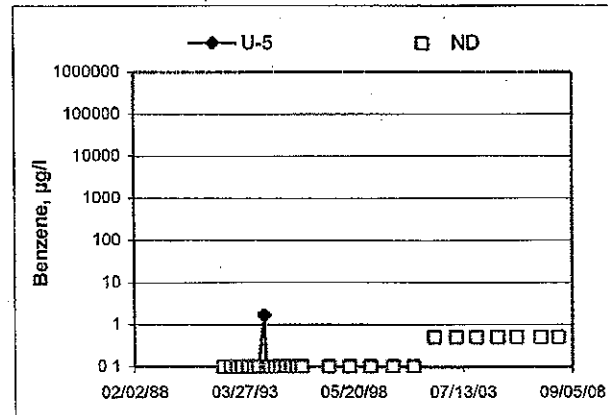
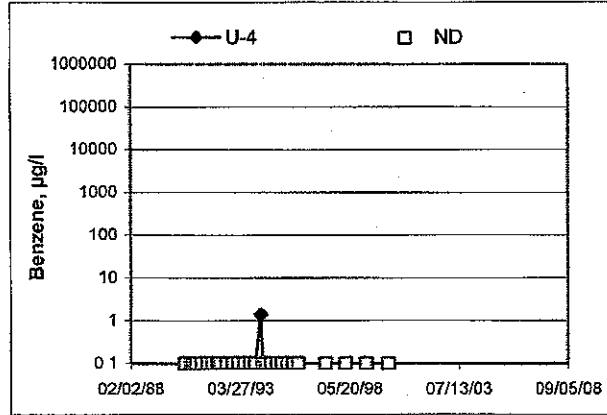
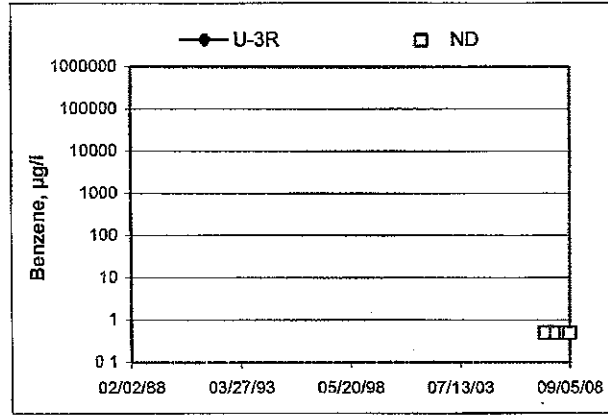
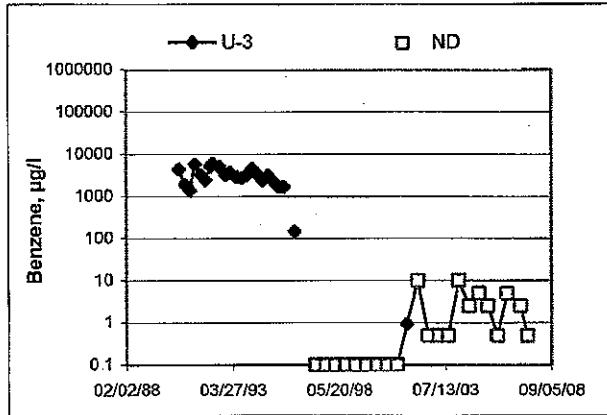
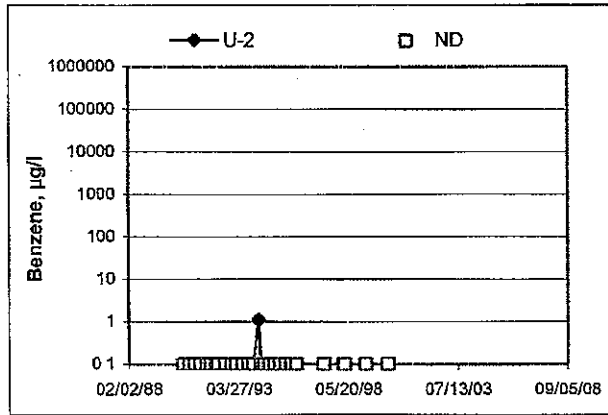
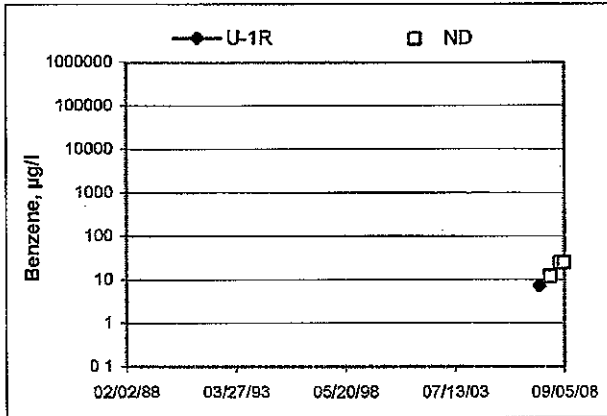
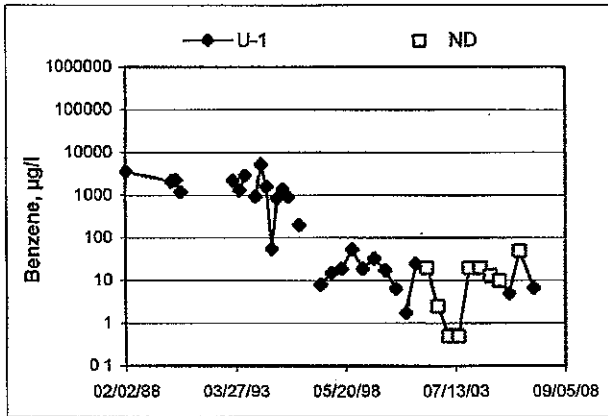
Elevations may have been corrected for apparent changes due to resurvey

Groundwater Elevations vs. Time  
76 Station 5760

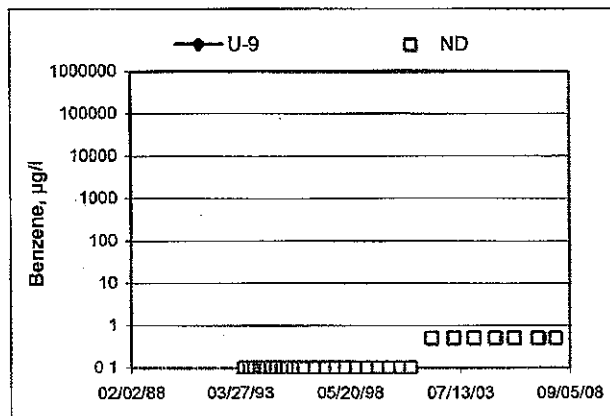
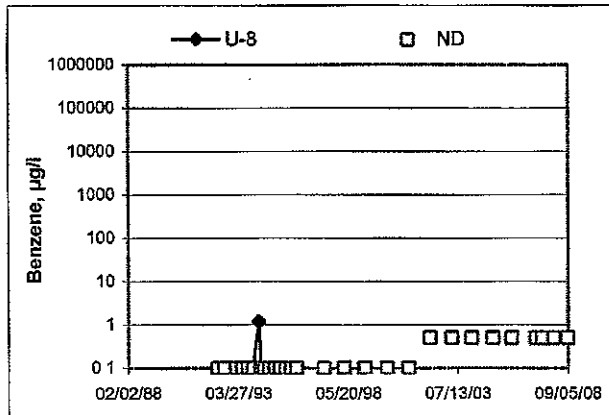
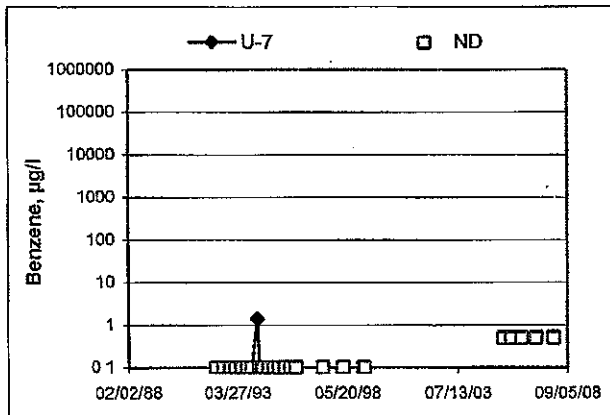


Elevations may have been corrected for apparent changes due to resurvey

### Benzene Concentrations vs Time 76 Station 5760



**Benzene Concentrations vs Time**  
76 Station 5760



## GENERAL FIELD PROCEDURES

### Groundwater Monitoring and Sampling Assignments

For each site, IRC technicians are provided with a Technical Service Request (TSR) that specifies activities required to complete the groundwater monitoring and sampling assignment for the site. TSRs are based on client directives, instructions from the primary environmental consultant for the site, regulatory requirements, and IRC's previous experience with the site.

### Fluid Level Measurements

Initial site activities include determination of well locations based on a site map provided with the TSR. Well boxes are opened and caps are removed. Indications of well or well box damage or of pressure buildup in the well are noted.

Fluid levels in each well are measured using a coated cloth tape equipped with an electronic interface probe, which distinguishes between liquid phase hydrocarbon (LPH) and water. The depth to LPH (if it is present), to water, and to the bottom of the well are measured from the top of the well casing (surveyors mark or notch if present) to the nearest 0.01 foot. Unless otherwise instructed, a well with less than 0.67 foot between the measured top of water and the measured bottom of the well casing is considered dry, and is not sampled. If the well contains 0.67 foot or more of water, an attempt is made to bail and/or sample as specified on the TSR.

Wells that are found to contain LPH are not purged or sampled. Instead, one casing volume of fluid is bailed from the well and the well is re-sealed. Bailed fluids are placed in a container separate from normal purge water, and properly disposed.

### Purging and Groundwater Parameter Measurement

ISR instructions may specify that a well not be purged (no-purge sampling), be purged using low-flow methods, or be purged using conventional pump and/or bail methods. Conventional purging generally consists of pumping or bailing until a minimum of three casing volumes of water have been removed or until the well has been pumped dry. Pumping is generally accomplished using submersible electric or pneumatic diaphragm pumps.

During conventional purging, three groundwater parameters (temperature, pH, and conductivity) are measured after removal of each casing volume. Stabilization of these parameters, to within 10 percent, confirm that sufficient purging has been completed. In some cases, the ISR indicates that other parameters are also to be measured during purging. IRC commonly measures dissolved oxygen (DO), oxidation-reduction potential (ORP), and/or turbidity. Instruments used for groundwater parameter measurements are calibrated daily according to manufacturer's instructions.

Low-flow purging utilizes a bladder or peristaltic pump to remove water from the well at a low rate. Groundwater parameters specified by the ISR are measured continuously until they become stable in general accordance with EPA guidelines.

Purge water is generally collected in labeled drums for disposal. Drums may be left on site for disposal by others, or transported to a collection location for eventual transfer to a licensed treatment or recycling facility. In some cases, purge water may be collected directly from the site by a licensed vacuum truck company, or may be treated on site by an active remediation system, if so directed.

## **Groundwater Sample Collection**

After wells are purged, or not purged, according to TSR instructions, samples are collected for laboratory analysis. For wells that have been purged using conventional pump or bail methods, sampling is conducted after the well has recovered to 80 percent of its original volume or after two hours if the well does not recover to at least 80 percent. If there is insufficient recharge of water in the well after two hours, the well is not sampled.

Samples are collected by lowering a new, disposable, ½-inch to 4-inch polyethylene bottom-fill bailer to just below the water level in the well. The bailer is retrieved and the water sample is carefully transferred to containers specified for the laboratory analytical methods indicated by the TSR. Particular care is given to containers for volatile organic analysis (VOAs) which require filling to zero headspace and fitting with Teflon-sealed caps.

After filling, all containers are labeled with project number (or site number), well designation, sample date, sample time, and the sampler's initials, and placed in an insulated chest with ice. Samples remain chilled prior to and during transport to a state-certified laboratory for analysis. Sample container descriptions and requested analyses are entered onto a chain-of-custody form in order to provide instructions to the laboratory. The chain-of-custody form accompanies the samples during transportation to provide a continuous record of possession from the field to the laboratory. If a freight or overnight carrier transports the samples, the carrier is noted on the form.

For wells that have been purged using low-flow methods, sample containers are filled from the effluent stream of the bladder or peristaltic pump. In some cases, if so specified by the TSR, samples are taken from the sample ports of actively pumping remediation wells.

## **Sequence of Gauging, Purging and Sampling**

The sequence in which monitoring activities are conducted is specified on the TSR. In general, wells are gauged beginning with the least affected well and ending with the well that has the highest concentration based on previous analytic results. After all gauging for the site is completed, wells are purged and/or sampled from the least-affected to the most-affected well.

## **Decontamination**

In order to reduce the possibility of cross contamination between wells, strict isolation and decontamination procedures are observed. Portable pumps are not used in wells with LPH. Technicians wear nitrile gloves during all gauging, purging, and sampling activities. Gloves are changed between wells and more often if warranted. Any equipment that could come in contact with fluids are either dedicated a particular well, decontaminated prior to each use, or discarded after a single use. Decontamination consists of washing in a solution of Liqui-nox and water and rinsing twice. The final rinse is in deionized water.

## **Exceptions**

Additional tasks or non-standard procedures, if any, that may be requested or required for a particular site, and noted on the site TSR, are documented in field notes on the following pages.



**GROUNDWATER SAMPLING FIELD NOTES**

Technician: Rick R

Site: 5760

Project No.: 154771

Date: 8/29/08

Well No. U-8

Purge Method: Sub

Depth to Water (feet): 16.11

Depth to Product (feet):       

Total Depth (feet) 29.82

LPH & Water Recovered (gallons):       

Water Column (feet): 13.71

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 18.85

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F °C)	pH	D.O. (mg/L)	ORP	Turbidity
<u>1024</u>			<u>3</u>	<u>746.1</u>	<u>24.6</u>	<u>7.52</u>			
			<u>6</u>	<u>674.2</u>	<u>21.8</u>	<u>7.42</u>			
	<u>1030</u>		<u>9</u>	<u>664.3</u>	<u>21.2</u>	<u>7.14</u>			
Static at Time Sampled			Total Gallons Purged		Sample Time				
<u>16.13</u>			<u>9</u>		<u>1035</u>				
Comments:									

Well No. U-6

Purge Method: Sub

Depth to Water (feet): 15.42

Depth to Product (feet):       

Total Depth (feet) 28.26

LPH & Water Recovered (gallons):       

Water Column (feet): 12.84

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 17.99

1 Well Volume (gallons): 3

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F °C)	pH	D.O. (mg/L)	ORP	Turbidity
<u>1046</u>			<u>3</u>	<u>933.0</u>	<u>22.6</u>	<u>7.07</u>			
			<u>6</u>	<u>933.2</u>	<u>22.2</u>	<u>6.95</u>			
	<u>1052</u>		<u>9</u>	<u>934.6</u>	<u>22.3</u>	<u>6.90</u>			
Static at Time Sampled			Total Gallons Purged		Sample Time				
<u>15.49</u>			<u>9</u>		<u>1055</u>				
Comments:									



**GROUNDWATER SAMPLING FIELD NOTES**

Technician: Rick R.

Site: 5760

Project No.: 154771

Date: 8/29/08

Well No. U-3R

Purge Method: Sub

Depth to Water (feet): 16.74

Depth to Product (feet):           

Total Depth (feet) 24.96

LPH & Water Recovered (gallons):           

Water Column (feet): 8.22

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 18.38

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F/C)	pH	D.O. (mg/L)	ORP	Turbidity
1110			2	1058	25.0	7.25			
			4	1060	23.5	7.12			
	1115		6	1038	22.9	7.03			
Static at Time Sampled			Total Gallons Purged		Sample Time				
			6		1120				
Comments:									

Well No. U-1R

Purge Method: Sub

Depth to Water (feet): 17.68

Depth to Product (feet):           

Total Depth (feet) 24.57

LPH & Water Recovered (gallons):           

Water Column (feet): 6.89

Casing Diameter (Inches): 2"

80% Recharge Depth(feet): 19.06

1 Well Volume (gallons): 2

Time Start	Time Stop	Depth to Water (feet)	Volume Purged (gallons)	Conductivity (uS/cm)	Temperature (F/C)	pH	D.O. (mg/L)	ORP	Turbidity
1134			2	1037	25.4	6.97			
			4	1015	23.2	6.90			
	1139		6	1012	22.4	6.86			
Static at Time Sampled			Total Gallons Purged		Sample Time				
			6		1145				
Comments:									



STATEMENT OF NON-COMPLETION OF JOB

DATE OF EVENT: 8/29/08 STATION NUMBER: 5760

NAME OF TECH: Rick R. CALLED GORDON: \_\_\_\_\_

CALLED PM: X NAME OF PM CALLED: A. Collins

WELL NUMBER: U-7 STATEMENT FROM PM \_\_\_\_\_ OR TECH X

CAR PARKED ON TOP OF WELL. DID NOT MOVE  
ALL DAY

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_

WELL NUMBER: \_\_\_\_\_ STATEMENT FROM PM \_\_\_\_\_ OR TECH \_\_\_\_\_



**Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

Date of Report: 09/05/2008

Anju Farfan

TRC

21 Technology Drive  
Irvine, CA 92618

RE: 5760

BC Work Order: 0811433

Enclosed are the results of analyses for samples received by the laboratory on 8/29/2008. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Contact Person: Molly Meyers  
Client Service Rep

Authorized Signature



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

### Laboratory / Client Sample Cross Reference

Laboratory	Client Sample Information			Receive Date:	Sampling Date:	Sample Depth:	Sample Matrix:	Delivery Work Order:	Global ID:	Matrix:	Sample QC Type (SACode):	Cooler ID:
0811433-01	COC Number:	---		08/29/2008 20:20	08/29/2008 10:35	---	Water		T0600101469	W	CS	
	Project Number:	5760										
	Sampling Location:	U-8										
	Sampling Point:	U-8										
	Sampled By:	TRCI										
0811433-02	COC Number:	---		08/29/2008 20:20	08/29/2008 10:55	---	Water		T0600101469	W	CS	
	Project Number:	5760										
	Sampling Location:	U-6										
	Sampling Point:	U-6										
	Sampled By:	TRCI										
0811433-03	COC Number:	---		08/29/2008 20:20	08/29/2008 11:20	---	Water		T0600101469	W	CS	
	Project Number:	5760										
	Sampling Location:	U-3R										
	Sampling Point:	U-3R										
	Sampled By:	TRCI										
0811433-04	COC Number:	---		08/29/2008 20:20	08/29/2008 11:45	---	Water		T0600101469	W	CS	
	Project Number:	5760										
	Sampling Location:	U-1R										
	Sampling Point:	U-1R										
	Sampled By:	TRCI										

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.

4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A

TRC  
 21 Technology Drive  
 Irvine, CA 92618

 Project: 5760  
 Project Number: [none]  
 Project Manager: Aniu Farfan

Reported: 09/19/2008 9:28

## Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0811433-01		Client Sample Name: 5760, U-8, U-8, 8/29/2008 10:35:00AM												
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
Benzene	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Ethylbenzene	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Toluene	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Total Xylenes	ND	ug/L	1.0		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
t-Butyl alcohol	ND	ug/L	10		EPA-8260	09/02/08	09/02/08 23:58	mwb	HPCHEM	1	BRI0010	ND		
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
Total Purgeable Petroleum Hydrocarbons	ND	ug/L	50		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010	ND		
1,2-Dichloroethane-d4 (Surrogate)	109	%	76 - 114 (LCL - UCL)		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010			
Toluene-d8 (Surrogate)	98.3	%	88 - 110 (LCL - UCL)		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010			
4-Bromofluorobenzene (Surrogate)	101	%	86 - 115 (LCL - UCL)		EPA-8260	09/02/08	09/02/08 23:59	mwb	HPCHEM	1	BRI0010			

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
 All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
 4100 Atlas Court, Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
 Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



**BC Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/19/2008 9:28

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0811433-02		Client Sample Name: 5760, U-6, U-6, 8/29/2008 10:55:00AM												
Constituent	Result	Units	PQL	MDL	Method	Prep	Run		Instru- ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals	
						Date	Date/Time	Analyst						
Benzene	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Ethylbenzene	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Toluene	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Total Xylenes	ND	ug/L	1.0		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
Total Purgeable Petroleum Hydrocarbons	120	ug/L	50		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dichloroethane-d4 (Surrogate)	111	%	76 - 114 (LCL - UCL)		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010		
Toluene-d8 (Surrogate)	99.1	%	88 - 110 (LCL - UCL)		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010		
4-Bromofluorobenzene (Surrogate)	99.1	%	86 - 115 (LCL - UCL)		EPA-8260	09/02/08	09/03/08	00:17	mwb	HPCHEM	1	BRI0010		

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0811433-03		Client Sample Name: 5760, U-3R, U-3R, 8/29/2008 11:20:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dibromoethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dichloroethane	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Ethylbenzene	100	ug/L	5.0		EPA-8260	09/02/08	09/03/08 13:18	mwb	MS-V13	10	BRI0010	ND	A01
Methyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Toluene	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Total Xylenes	51	ug/L	1.0		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
t-Amyl Methyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
t-Butyl alcohol	ND	ug/L	10		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Diisopropyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Ethanol	ND	ug/L	250		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Ethyl t-butyl ether	ND	ug/L	0.50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
Total Purgeable Petroleum Hydrocarbons	1500	ug/L	50		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010	ND	
1,2-Dichloroethane-d4 (Surrogate)	101	%	76 - 114 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 13:18	mwb	MS-V13	10	BRI0010		
1,2-Dichloroethane-d4 (Surrogate)	113	%	76 - 114 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010		
Toluene-d8 (Surrogate)	97.0	%	88 - 110 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010		
Toluene-d8 (Surrogate)	95.9	%	88 - 110 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 13:18	mwb	MS-V13	10	BRI0010		
4-Bromofluorobenzene (Surrogate)	104	%	86 - 115 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 00:35	mwb	HPCHEM	1	BRI0010		
4-Bromofluorobenzene (Surrogate)	103	%	86 - 115 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 13:18	mwb	MS-V13	10	BRI0010		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
 4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
 Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



BC Laboratories, Inc.

Environmental Testing Laboratory Since 1949

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

### Volatile Organic Analysis (EPA Method 8260)

BCL Sample ID: 0811433-04		Client Sample Name: 5760, U-1R, U-1R, 8/29/2008 11:45:00AM											
Constituent	Result	Units	PQL	MDL	Method	Prep Date	Run Date/Time	Analyst	Instru-ment ID	Dilution	QC Batch ID	MB Bias	Lab Quals
Benzene	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
1,2-Dibromoethane	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
1,2-Dichloroethane	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Ethylbenzene	3000	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Methyl t-butyl ether	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Toluene	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Total Xylenes	8900	ug/L	50		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
t-Amyl Methyl ether	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
t-Butyl alcohol	ND	ug/L	500		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Diisopropyl ether	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Ethanol	ND	ug/L	12000		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Ethyl t-butyl ether	ND	ug/L	25		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
Total Purgeable Petroleum Hydrocarbons	35000	ug/L	2500		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010	ND	A01
1,2-Dichloroethane-d4 (Surrogate)	98.8	%	76 - 114 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010		
Toluene-d8 (Surrogate)	96.2	%	88 - 110 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010		
4-Bromofluorobenzene (Surrogate)	102	%	86 - 115 (LCL - UCL)		EPA-8260	09/02/08	09/03/08 15:41	mwb	MS-V13	50	BRI0010		

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A





TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

### Volatile Organic Analysis (EPA Method 8260) Quality Control Report - Precision & Accuracy

Constituent	Batch ID	QC Sample Type	Source Sample ID	Source Result	Result	Spike Added	Units	RPD	Control Limits		
									Percent Recovery	RPD	Percent Recovery
Benzene	BRI0010	Matrix Spike	0811431-03	0	28.110	25.000	ug/L		112		70 - 130
		Matrix Spike Duplicate	0811431-03	0	28.610	25.000	ug/L	1.8	114	20	70 - 130
Toluene	BRI0010	Matrix Spike	0811431-03	0	27.020	25.000	ug/L		108		70 - 130
		Matrix Spike Duplicate	0811431-03	0	26.890	25.000	ug/L	0	108	20	70 - 130
1,2-Dichloroethane-d4 (Surrogate)	BRI0010	Matrix Spike	0811431-03	ND	10.530	10.000	ug/L		105		76 - 114
		Matrix Spike Duplicate	0811431-03	ND	10.920	10.000	ug/L		109		76 - 114
Toluene-d8 (Surrogate)	BRI0010	Matrix Spike	0811431-03	ND	9.8100	10.000	ug/L		98.1		88 - 110
		Matrix Spike Duplicate	0811431-03	ND	9.6400	10.000	ug/L		96.4		88 - 110
4-Bromofluorobenzene (Surrogate)	BRI0010	Matrix Spike	0811431-03	ND	9.7000	10.000	ug/L		97.0		86 - 115
		Matrix Spike Duplicate	0811431-03	ND	9.4600	10.000	ug/L		94.6		86 - 115

The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety. All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



**BC Laboratories, Inc.**

Environmental Testing Laboratory Since 1949

TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Laboratory Control Sample

Constituent	Batch ID	QC Sample ID	QC Type	Result	Spike Level	PQL	Units	Percent Recovery	RPD	Control Limits		Lab Quals
										Percent Recovery	RPD	
Benzene	BRI0010	BRI0010-BS1	LCS	27.600	25.000	0.50	ug/L	110		70 - 130		
Toluene	BRI0010	BRI0010-BS1	LCS	27.290	25.000	0.50	ug/L	109		70 - 130		
1,2-Dichloroethane-d4 (Surrogate)	BRI0010	BRI0010-BS1	LCS	10.280	10.000		ug/L	103		76 - 114		
Toluene-d8 (Surrogate)	BRI0010	BRI0010-BS1	LCS	9.9000	10.000		ug/L	99.0		88 - 110		
4-Bromofluorobenzene (Surrogate)	BRI0010	BRI0010-BS1	LCS	9.5400	10.000		ug/L	95.4		86 - 115		

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

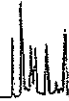
Reported: 09/19/2008 9:28

## Volatile Organic Analysis (EPA Method 8260)

### Quality Control Report - Method Blank Analysis

Constituent	Batch ID	QC Sample ID	MB Result	Units	PQL	MDL	Lab Quals
Benzene	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
1,2-Dibromoethane	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
1,2-Dichloroethane	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Ethylbenzene	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Methyl t-butyl ether	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Toluene	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Total Xylenes	BRI0010	BRI0010-BLK1	ND	ug/L	1.0		
t-Amyl Methyl ether	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
t-Butyl alcohol	BRI0010	BRI0010-BLK1	ND	ug/L	10		
Diisopropyl ether	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Ethanol	BRI0010	BRI0010-BLK1	ND	ug/L	250		
Ethyl t-butyl ether	BRI0010	BRI0010-BLK1	ND	ug/L	0.50		
Total Purgeable Petroleum Hydrocarbons	BRI0010	BRI0010-BLK1	ND	ug/L	50		
1,2-Dichloroethane-d4 (Surrogate)	BRI0010	BRI0010-BLK1	99.5	%	76 - 114 (LCL - UCL)		
Toluene-d8 (Surrogate)	BRI0010	BRI0010-BLK1	96.1	%	88 - 110 (LCL - UCL)		
4-Bromofluorobenzene (Surrogate)	BRI0010	BRI0010-BLK1	102	%	86 - 115 (LCL - UCL)		

*The results in this report apply to the samples analyzed in accordance with the chain of custody document. This analytical report must be reproduced in its entirety.*  
All results listed in this report are for the exclusive use of the submitting party. BC Laboratories, Inc. assumes no responsibility for report alteration, separation, detachment or third party interpretation.  
4100 Atlas Court · Bakersfield, CA 93308 (661) 327-4911 FAX (661) 327-1918 www.bclabs.com  
Certifications: California - ELAP Certification Number 1186; Nevada Administrative Code - NAC-445A



TRC  
21 Technology Drive  
Irvine, CA 92618

Project: 5760  
Project Number: [none]  
Project Manager: Anju Farfan

Reported: 09/05/2008 11:30

**Notes And Definitions**

- MDL Method Detection Limit
- ND Analyte Not Detected at or above the reporting limit
- PQL Practical Quantitation Limit
- RPD Relative Percent Difference
- A01 PQL's and MDL's are raised due to sample dilution.

Submission #: 08/1433

**SHIPPING INFORMATION**  
 Federal Express  UPS  Hand Delivery   
 BC Lab Field Service  Other  (Specify) \_\_\_\_\_

**SHIPPING CONTAINER**  
 Ice Chest  None   
 Box  Other  (Specify) \_\_\_\_\_

Refrigerant: Ice  Blue Ice  None  Other  Comments: \_\_\_\_\_

Custody Seals: Ice Chest  Containers  None  Comments: \_\_\_\_\_

All samples received? Yes  No  All samples containers intact? Yes  No  Description(s) match COC? Yes  No

**COC Received**  
 YES  NO

Emissivity: 0.97 Container: QTA Thermometer ID: 48  
 Temperature: A 0.8 °C / C 1.8 °C

Date/Time 8-29-08  
 Analyst Init JDU

SAMPLE CONTAINERS	SAMPLE NUMBERS									
	1	2	3	4	5	6	7	8	9	10
QT GENERAL MINERAL/ GENERAL PHYSICAL										
PT PE UNPRESERVED										
QT INORGANIC CHEMICAL METALS										
PT INORGANIC CHEMICAL METALS										
PT CYANIDE										
PT NITROGEN FORMS										
PT TOTAL SULFIDE										
2oz. NITRATE / NITRITE										
PT TOTAL ORGANIC CARBON										
PT TOX										
PT CHEMICAL OXYGEN DEMAND										
PIA PHENOLICS										
40ml VOA VIAL TRAVEL BLANK										
40ml VOA VIAL	A	B	A	B	A	B	A	B	A	B
QT EPA 413.1, 413.2, 413.1										
PT ODOR										
RADIOLOGICAL										
BACTERIOLOGICAL										
40 ml VOA VIAL- 504										
QT EPA 503/603/8030										
QT EPA 515.1/8150										
QT EPA 525										
QT EPA 525 TRAVEL BLANK										
100ml EPA 547										
100ml EPA 531.1										
QT EPA 548										
QT EPA 549										
QT EPA 632										
QT EPA 8015M										
QT AMBER										
8 OZ. JAR										
32 OZ. JAR										
SOIL SLEEVE										
PCB VIAL										
PLASTIC BAG										
FERROUS IRON										
ENCORE										

Comments: \_\_\_\_\_  
 Sample Numbering Completed By: AMB Date/Time: 8/29/08 - 9:15  
 A = Actual / C = Corrected

**BC LABORATORIES, INC.**

4100 Atlas Court Bakersfield, CA 93308  
(661) 327-4911 FAX (661) 327-1918

**CHAIN OF CUSTODY**

**Analysis Requested**

08/14/08

Bill to: Conoco Phillips/ TRC		Consultant Firm: TRC		MATRIX (GW) Ground-water (S) Soil (WW) Waste-water (SL) Sludge	BTEX/MTBE by 8021B, Gas by 8015	TPH GAS by 8015M	TPH DIESEL by 8015	8260 full list w/ oxygenates	BTEX/MTBE/OXYS BY 8260B	ETHANOL by 8260B	TPH - G by GC/MS, <i>EDP/EDC by 8260B</i>			Turnaround Time Requested
Address: 376 LEWELLING RD		21 Technology Drive Irvine, CA 92618-2302 Attn: Anju Farfan												
City: SAN JOSE		4-digit site#: 5760												
State: CA Zip:		Workorder # 01468-4509118566												
Conoco Phillips Mgr: TED MOISE		Project #: 154771												
Lab#	Sample Description	Field Point Name	Date & Time Sampled											
1		U-8	8/29/08 - 1035	GW					X		X			STD
2		U-6	↓ 1055	↓					↓		↓			↓
3		U-3R	↓ 1120	↓					↓	X	↓			↓
4		U-1R	↓ 1145	↓					↓	X	↓			↓

CHK BY [Signature] DISTRIBUTION SUB-OUT [Signature]

Comments:  GLOBAL ID: T0600101469	Relinquished by: (Signature) <i>[Signature]</i>	Received by: <i>Ross Dickey</i>	Date & Time 8/29/08 1420
	Relinquished by: (Signature) <i>Ross Dickey 8/29/08</i>	Received by: <i>[Signature]</i>	Date & Time 8-29-08 1720
	Relinquished by: (Signature) <i>[Signature] 8-29-08 2020</i>	Received by: <i>[Signature]</i>	Date & Time 8-29-08 2020

## STATEMENTS

### Purge Water Disposal

Non-hazardous groundwater produced during purging and sampling of monitoring was accumulated at TRC's groundwater monitoring facility at Concord, California, for transportation by a licensed carrier, to the ConocoPhillips Refinery at Rodeo, California. Disposal at the Rodeo facility was authorized by ConocoPhillips in accordance with "ESD Standard Operating Procedures - Water Quality and Compliance", as revised on February 7, 2003. Documentation of compliance with ConocoPhillips requirements is provided by an ESD Form R-149, which is on file at TRC's Concord Office. Purge water suspected of containing potentially hazardous material, such as liquid-phase hydrocarbons, was accumulated separately in a drum for transportation and disposal by others.

### Limitations

The fluid level monitoring and groundwater sampling activities summarized in this report have been performed under the responsible charge of a California Registered Geologist or Registered Civil Engineer and have been conducted in accordance with current practice and the standard of care exercised by geologists and engineers performing similar tasks in this area. No warranty, express or implied, is made regarding the conclusions and professional opinions presented in this report. The conclusions are based solely upon an analysis of the observed conditions. If actual conditions differ from those described in this report, our office should be notified.

**Attachment G**

***Soil Analytical Table***



**TABLE 2**  
**HISTORICAL SOIL ANALYTICAL DATA**  
 UNOCAL Service Station No. 5760  
 376 Lewelling Boulevard  
 San Lorenzo, California

SAMPLE I.D.	SAMPLE DEPTH	SAMPLE DATE	ANALYZED DATE	TPH-G (PPM)	TPH (PPM)	BENZENE (PPM)	TOLUENE (PPM)	ETHYLBENZENE (PPM)	XYLENES (PPM)
1	19	19-Nov-87	19-Nov-87	12.7 <sup>2</sup>	NA	NA	NA	NA	NA
2	20	19-Nov-87	19-Nov-87	838 <sup>2</sup>	NA	NA	NA	NA	NA
3	18	19-Nov-87	19-Nov-87	51.7 <sup>2</sup>	NA	NA	NA	NA	NA
4	20	19-Nov-87	19-Nov-87	1620 <sup>2</sup>	NA	NA	NA	NA	NA
WO1	7	19-Nov-87	19-Nov-87	NA	<1.0	<.01	<.01	<.05	<.01
U-2-15	15	06-Aug-90	16-Aug-90	<1	NA	<0.005	<0.005	<0.005	0.006
U-2-20	20	06-Aug-90	16-Aug-90	<1	NA	<0.005	<0.005	<0.005	0.006
U-3-15	15	06-Aug-90	16-Aug-90	2.9	NA	<0.005	<0.005	0.29	<0.005
U-3-20	20	06-Aug-90	16-Aug-90	640	NA	4.5	37	22	110
U-3-29	29	06-Aug-90	16-Aug-90	<1	NA	<0.005	0.017	0.009	0.045
U-4-15	15	06-Aug-90	16-Aug-90	<1	NA	<0.005	<0.005	<0.005	<0.005
U-4-20	20	06-Aug-90	16-Aug-90	<1	NA	<0.005	<0.005	<0.005	<0.005
U-5-16.5	16.5	12-Mar-92	16-Mar-92	<1	NA	<0.005	<0.005	<0.005	<0.005
U-6-16.5	16.5	13-Mar-92	13-Mar-92	<1	NA	<0.005	<0.005	<0.005	<0.005
U-7-16.0	16.0	13-Mar-92	16-Mar-92	<1	NA	<0.005	<0.005	<0.005	<0.005
U-8-16.5	16.5	12-Mar-92	16-Mar-92	<1	NA	<0.005	<0.005	<0.005	<0.005
U-9-4.5	4.5	25-May-93	28-May-93	<.50	NA	<.0050	<.0050	<.0050	<.0050
U-9-11.5	11.5	25-May-93	28-May-93	<.50	NA	<.0050	<.0050	<.0050	<.0050

TABLE 1

**SUMMARY OF SOIL ANALYTICAL RESULTS  
CONOCOPHILLIPS SITE NO. 5760  
376 LEWELLING BOULEVARD  
SAN LORENZO, CALIFORNIA**

Soil Sample Location	Date	Sample Depth (ft)	Oil and Grease (Petroleum) (mg/kg)	TPPH (mg/kg)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl- benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	TBA (mg/kg)	Lead (mg/kg)
GP-1	11/7/2003	20	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
GP-2	11/7/2003	19.5	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
GP-3	11/7/2003	7	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
GP-4	11/7/2003	12	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
		19.5		1600	ND <1.3	ND <1.3	26	130	ND <1.3	ND <2.5	ND <1.3	ND <1.3	<63	<6.3	NA
GP-5	11/7/2003	11.5	NA	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	NA
		19.5	ND <50	ND <1.0	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.005	ND <0.010	ND <0.005	ND <0.005	ND <0.10	ND <0.010	<5.0

## Notes:

EPA = Environmental Protection Agency  
 mg/kg = Milligrams per kilogram  
 TPPH = Total purgeable petroleum-hydrocarbons  
 MTBE = Methyl tert-butyl ether  
 DIPE = Di-isopropyl ether

ETBE = Ethyl tertiary butyl ether  
 TAME = Tertiary amyl methyl ether  
 TBA = Tert-butyl alcohol  
 NA = Not analyzed  
 ND = Not detected, see CARS for method detection limits

**Attachment H**

***CPT Procedure***

## **ATTACHMENT A CPT FIELD PROCEDURES**

### **Pre-Field Investigation Activities**

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

Delta will obtain exploratory boring permits from the Santa Clara Valley Water District.

A utility survey will be completed prior to conducting the field investigation. Underground Services Alert (USA) will be notified at least 48 hours prior to drilling operations, and the services of a private utility locating company will be utilized to reduce the risk of damage to utilities beneath the property. Additionally, the first five feet of each borehole will be cleared utilizing air-vacuum equipment (air-knife). The purpose of using air-knife technology is to minimize the possibility of encountering unmarked underground utilities during drilling.

### **Boring and Sampling Procedures**

The proposed CPT locations (Figure 2) will be advanced by a licensed contractor using a CPT rig. Two separate boreholes will be advanced for each proposed boring location. The first boring will be advanced for stratigraphic profiling and a second for collecting discrete soil and groundwater samples. The CPT locations have been chosen to better aid in assessing the subsurface conditions.

CPT soil classifications are based on the cone penetration resistance, sleeve friction, and friction ratio. A soil classification graph will be generated during the advancement of the CPT borehole. CPT equipment will be provided and operated by Gregg In Situ, Inc. (License C57-656407). Grout will be pumped into the initial borehole behind the cone by using a grout collar (retraction grouting).

Soil samples will be collected using a direct push piston sampler. A sealed pointed piston will be advanced within the core barrel of the CPT to the desired sample depth. The piston will then be opened and driven to further depth to collect a soil sample at which time the piston assembly will be removed and the soil sample recovered. The sample tube from each interval will be sealed with Teflon tape and plastic end caps and placed in an ice chest cooled with ice for delivery to the analytical laboratory for analysis under chain-of-custody protocol. The remaining soil collected from the sample tubes will be used for field screening and lithologic description purposes. Soil

samples from each sample interval will be field screened for the presence of VOCs using a PID. It is anticipated that a minimum three soil samples per boring will be collected for laboratory analysis. Additional soil samples will be submitted for analysis if the PID measurements show evidence of substantial petroleum hydrocarbon impact. The PID measurements will be recorded on the soil boring log by the field geologist. Each soil sample will be logged using the Unified Soil Classification System (USCS).

Groundwater samples will be collected, as appropriate, from each borehole based on field observations. Groundwater samples are anticipated to be collected from just above first water and the bottom of each borehole. The assembly is driven with the outer tube casing in place. When the desired groundwater sample depth is reached, the outer casing is retracted to expose the screen to groundwater. A small-diameter bailer will then be lowered through the drill casing and a groundwater sample collected. The expendable drive point is left in place when the drill casing and sampling assembly are removed.

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

Upon completion of each boring, Delta will oversee Gregg Drilling (Gregg) backfill the borehole with Portland I/II cement mixed with potable water to form a cement mixture. The cement mixture will be placed to within 1-2 feet of ground surface in each boring. The top 1-2 feet of each boring will be finished to grade using a cold patch of asphalt. All soil and cement cuttings will be containerized and stored on-site. The containers will be labeled and later transferred off-site. No boreholes will be left open for more than a 24-hour period.

Upon completing the backfill at each borehole location, all down-hole tools will be decontaminated to avoid cross contamination. The decontamination procedure will entail multiple wash and rinse cycles using potable water and a non-phosphate detergent.