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TRANSMITTAL

DATE: July 3, 2012

REFERENCE NO.: 060058

PROJECT NAME: Former Chevron 211253, Livermore

TO: Mr. Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

ACEH RO #0189

RECEIVED
5:54 pm, Jul 09, 2012
Alameda County
Environmental Health

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QUANTITY	DESCRIPTION
1	Draft Feasibility Study and Corrective Action Plan

- ☐ As Requested
- ☐ For Your Use
- ☒ For Review and Comment
- ☐ For Review and Signature
- ☐

COMMENTS:
Should you have any questions or concerns, please contact Kiersten Hoey of CRA at (510) 420-3347 or Roya Kambin of Chevron at (925) 790-6270.

Copy to: Mr. Jose Rios, 7-Eleven, Inc
Mr. Kirk Sniff, Strasburger & Price, LLP

Completed by: Kiersten Hoey [Please Print] Signed: Kiersten Hoey

Filing: **Correspondence File**

Roya Kambin
Project Manager
Marketing Business Unit

Chevron Environmental Management Company
6101 Bollinger Canyon Road
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Tel (925) 790-6270
rkambin@chevron.com

July 3, 2012

Alameda County Health Care Services
1131 Harbor Bay Parkway, Suite 250
Alameda, CA 94502-6577

Re: Former Texaco Service Station 211253
930 Springtown Boulevard
Livermore, California
ACEHS Case No. RO0189

I accept the Draft Feasibility Study and Corrective Action Plan.

I agree with the conclusions and recommendations presented in this document. The information included is accurate to the best of my knowledge, and appears to meet local agency and Regional Board guidelines. This Draft Feasibility Study and Corrective Action Plan was prepared by Conestoga Rovers & Associates, upon whose assistance and advice I have relied.

This letter is submitted pursuant to the requirements of California Water Code Section 13267(b)(1) and the regulating implementation entitled Appendix A pertaining thereto.

I declare under penalty of perjury that the foregoing is true and correct to the best of my knowledge.

Sincerely,

Roya Kambin
Project Manager

Attachment: Draft Feasibility Study and Corrective Action Plan

DRAFT FEASIBILITY STUDY AND CORRECTIVE ACTION PLAN

FORMER TEXACO STATION 211253
930 SPRINGTOWN BLVD
LIVERMORE, CALIFORNIA
FUEL LEAK CASE NO. RO 0000189

Prepared For:

Mr. Jerry Wickham
Alameda County Environmental Health (ACEH)
1131 Harbor Bay Parkway
Alameda, California 94502

Prepared by:
Conestoga-Rovers & Associates

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JULY 3, 2012
REF. NO. 060058 (16)
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DRAFT FEASIBILITY STUDY AND CORRECTIVE ACTION PLAN

FORMER TEXACO STATION 211253
930 SPRINGTOWN BLVD
LIVERMORE, CALIFORNIA
FUEL LEAK CASE NO. RO 0000189

Kiersten Hoey

N. Scott MacLeod, PG #5747

Prepared by:
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JULY 3, 2012
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1.0 INTRODUCTION

Conestoga-Rovers & Associates (CRA) is submitting this *Draft Feasibility Study and Corrective Action Plan* (FS/CAP) on behalf of Chevron Environmental Management Company (Chevron) for the former Texaco station located at 930 Springtown Blvd in Livermore, California, as requested by the Alameda County Environmental Health (ACEH) in a letter dated April 30, 2012 (Appendix A). The FS/CAP presented below complies with California Code of Regulations, Title 23, Division 3, Chapter 16, Underground Storage Tank Regulations. The site background, previous investigations, distribution of chemicals of concern (COCs), remediation goals, evaluation of remedial alternatives, and final remediation recommendations are presented herein.

2.0 SITE BACKGROUND

2.1 SITE DESCRIPTION

The site is a former Texaco service station located on the south corner of Springtown Boulevard and Lassen Road in Livermore, California (Figure 1). In the summer of 1985, Texaco sold the site to Southland Corporation who removed the USTs, dispenser islands, and product piping and constructed a 7-Eleven convenience store. The site is still occupied by the 7-Eleven convenience store, and is surrounded by a paved parking area (Figure 2). No fuel is currently dispensed at the site. There is a commercial area to the north, residential properties to the west, a hotel to the south, and an active Arco Service Station to the east with an open environmental case (RO0001050).

2.2 PREVIOUS WORK

After the USTs were removed in 1985, ten monitoring wells, one soil vapor extraction well, one air sparge well, and one groundwater extraction well were installed, six soil borings were advanced, and a soil vapor extraction (SVE) system operated for approximately 11 months. In 2002, all wells were destroyed based on ACEH and the San Francisco Bay Region Regional Water Quality Control Board (RWQCB) concurrence that no further action was required. No remedial action completion certificate was ever issued by ACEH or RWQCB. In 2007, ACEH required additional investigative work to fill data gaps prior to issuing case closure. Since then, ACEH has required advancement of seven cone penetration test (CPT) borings and installation of 12 new monitoring wells. A summary of environmental investigations and remediation conducted at the

site is included as Appendix B. Figure 2 shows the locations of all current monitoring wells, known historical monitoring wells, soil borings, and former USTs.

2.3 SITE GEOLOGY AND HYDROGEOLOGY

Regional subsurface soil is identified as a heterogeneous mixture of alluvial and colluvial clays and silts, sandy silts, silty sands, and gravelly sands of Holocene age. These regional sediments have a maximum thickness of approximately 150 feet. The Pliocene aged Tassajara Formation consists of sandstone, shale, and limestone, and forms the bedrock beneath the site. Soil encountered beneath the site consists of clay, silt, and sandy silt to approximately 10 feet below grade (fbg), underlain by silty sand, sand, and gravels to the maximum depth explored of 50 fbg. Boring logs are included in Appendix C and cross sections are included as Figures 3 and 4.

The site is located in the Mocho II sub basin of the Main Basin in the Livermore Valley, as defined by the DWR and the Zone 7 Water Agency. The Mocho II sub basin is defined by the Livermore Fault on the west, thinning Quaternary alluvium on the east, the Livermore Uplands to the south, and the Tassajara Formation to the north. Main Basin groundwater is currently used as a drinking water resource. Depth to groundwater beneath the site is approximately 9.50 to 15 fbg, and groundwater flows toward the northwest. A current network of twelve onsite and offsite wells monitor groundwater at three depths below the site. Because wells screened at different depths have similar groundwater elevations, it appears that there is one hydraulically connected water bearing zone. The shallow wells are MW-9, MW-11, MW-14, MW-18, MW-19, and MW-20; the intermediate wells are MW-10, MW-12, MW-13, MW-16, and MW-17; the only deep well is MW-15. A well construction summary table is included as Table 1.

The nearest surface water bodies are Arroyo Seco and Arroyo Las Positas, which converge approximately one mile west of the site.

2.4 PRODUCT RELEASES AND SOURCE AREA

Based on the distribution of hydrocarbons in soil and groundwater, it appears the primary source of hydrocarbons is the former gasoline USTs and/or dispenser island product piping that were removed in 1985. Due to concentrations detected near the group of wells around MW-A, and the presence of LNAPL in MW-14, CRA contracted Norcal Geophysical, Inc. of Cotati, California to investigate the potential of an orphan

UST. The survey did not identify remote sensing signatures consistent with USTs beneath the site.

2.5 PREVIOUS REMEDIAL ACTIVITY

In 1985, Texaco removed the fuel USTs, dispenser island, and associated product piping. In November 1994, GTI started operation of an air sparging-enhanced soil vapor extraction (AS/SVE) system utilizing a 100 cfm King Buck/Hasstech MMC-5a catalytic oxidizer. The system was connected to wells MW-A, MW-B, MW-3, MW-5, and VE-1 for SVE and SP-1 for AS. The system operated intermittently through October 1995.[1] The total hydrocarbon mass removed was not located in any historical reports.

2.6 SENSITIVE RECEPTOR SURVEY

In 2001, KHM Environmental Management (KHM) conducted a survey to determine the location of water supply wells in the site vicinity. The Alameda County Flood Control and Water Conservation District, Zone 7 provided a map with the locations of all registered wells within approximately ½ mile of the site. In addition, KHM visited the Zone 7 office in Pleasanton to obtain well construction information and data on any other wells identified in the vicinity. No wells were identified within ½ mile of the site. The closest wells, 3S2E3E2 and 3S2E3H1, are both located approximately 2,800 feet from the site. Due to the distance from the site, the small hydrocarbon plume size, and lack of dissolved-phase methyl tertiary butyl ether (MTBE), it is unlikely any wells will be affected by hydrocarbons or oxygenates potentially originating at the site.

Other sensitive receptors in the area include a children's day care facility approximately 350 feet south (crossgradient) of the site, and Arroyo Seco and Arroyo Las Positas creeks approximately 1 mile west (downgradient) of the site. These receptors are also significantly outside the dissolved plume extents and unlikely to be adversely affected.

2.7 PREFERENTIAL PATHWAY ANALYSIS

CRA conducted a preferential pathway study to characterize potential conduits for offsite groundwater migration. CRA obtained utility maps from Zone 7 Water Agency, the City of Livermore, and Pacific Gas & Electric Company to locate underground

[1] KHM's December 10, 2011 letter requesting case closure

utilities, storm drain systems, and other subsurface facilities in the vicinity of the site. The Altamont Pipeline Excavation runs adjacent to the site along the north and west side of the property beneath Springtown Boulevard and Lassen Road. The pipeline excavation was 6 feet wide by 15 feet deep and completed with impermeable slurry, which inhibits preferential pathway migration.

A City of Livermore storm drain system runs along the north side of the property beneath Springtown Boulevard then makes a 90 degree turn across Springtown Road between offsite well MW-16 and boring CPT-3. A sanitary sewer is located beneath Lassen Road, then turns west up Springtown Boulevard, then across Springtown Boulevard between offsite well MW-16 and boring CPT-3. Electric, water, and gas lines are located beneath the north side of Springtown Boulevard and Lassen Road. These utilities are either located above groundwater or are outside the extent of the dissolved hydrocarbon plume.

Based on the plume attenuation with distance observed onsite and the distance to the utilities, CRA concludes it is unlikely offsite migration is occurring via underground utilities and also unlikely that the utilities are acting as preferential flow conduits downgradient of the site. Underground utilities are depicted on Figure 2.

3.0 DISTRIBUTION OF CONSTITUENTS OF CONCERN (COCs)

The primary COCs are total petroleum hydrocarbons as gasoline (TPHg) and benzene. Other COCs are toluene, ethylbenzene, and xylenes. Total petroleum hydrocarbons as diesel (TPHd) and MTBE are not COCs.

3.1 HYDROCARBON DISTRIBUTION IN SOIL

Residual hydrocarbons in soil are limited to the area west of the former USTs and dispenser island between about 5 and 35 fbg. The maximum hydrocarbon concentrations detected in soil since AS/SVE system operation are 6,400 milligrams per kilogram (mg/kg) TPHg detected at 19.5 fbg and 4.5 mg/kg benzene detected at 9.5 fbg in MW-15, located adjacent to the former UST. Soil samples collected from GP-1 and MW-19 indicate the AS/SVE system effectively removed hydrocarbons in soil previously detected in MW-A, EW-1, and VE-1. Residual hydrocarbons in soil are laterally delineated onsite (Figure 5 and 6) and are vertically delineated between 35 fbg and the maximum depth explored of 50 fbg (Figures 3 and 4). Geologic cross-sections illustrating the vertical extent of hydrocarbons in soil are presented as Figures 3 and 4.

Figures illustrating the horizontal extent of TPHg and benzene concentrations in soil are presented as Figures 5 and 6. Cumulative soil analytical results are presented in Table 2.

3.2 HYDROCARBON DISTRIBUTION IN GROUNDWATER

Groundwater was previously monitored between 1990 and 2002 by wells MW-A, MW-B, and MW-1 through MW-8. These wells were destroyed in 2002 after the ACEH indicated the environmental case was to be closed. No closure letter was prepared and the ACEH required new wells be installed. Groundwater has been monitored by new wells MW-9 through MW-20 since July 2009. Current groundwater monitoring and sampling data are presented in Table 3. Grab-groundwater samples collected from soil borings are presented in Table 4. Historical groundwater data are presented in Appendix D. A summary of the current groundwater monitoring data from the first and second quarters 2012 are presented in Table A below.

TABLE A: FIRST AND SECOND QUARTER 2012 GROUNDWATER ANALYTICAL DATA

Well ID	*Date Collected*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*
	micrograms per liter (µg/L)					
Drinking Water ESLs		***100***	***1***	***40***	***30***	***20***
	Shallow Wells					
MW-9	02/09/12 [a]	**5,300**	**6**	7	**250**	**120**
MW-11	02/09/12 [a]	**220**	<0.5	<0.5	<0.5	<0.5
MW-14	02/09/12 [a]	**0.34 ft LNAPL**				
MW-18	05/10/12	**12,000**	**200**	**1,300**	**68**	**2,200**
MW-19	05/10/12	**6,700**	4	<3	18	**35**
MW-20	05/10/12	**9,100**	**3**	**94**	**200**	**600**
	Intermediate Wells					
MW-10	02/09/12 [a]	**140**	<0.5	<0.5	<0.5	<0.5
MW-12	02/09/12 [a]	**8,700**	**85**	**130**	**170**	**590**
MW-13	02/09/12 [a]	**18,000**	**1,600**	**3,700**	**370**	**2,200**
MW-16	02/09/12 [a]	<50	<0.5	<0.5	<0.5	<0.5
MW-17	05/10/12	<50	<0.5	<0.5	<0.5	<0.5
	Deep Wells					
MW-15	02/09/12 [a]	<50	<0.5	<0.5	<0.5	<0.5

a well sampled semi-annually during the first and third quarters.

LNAPL has been detected in shallow well MW-14 since May 2010 at a maximum thickness of 0.34 ft. Dissolved hydrocarbon concentrations are centered on intermediate well MW-13. Deep well MW-15, located adjacent to well MW-14, vertically defines dissolved hydrocarbons in the source area. Dissolved hydrocarbon concentration contours were created using the first quarter data because only wells MW-17 through MW-20 were sampled during the second quarter. The horizontal extent of TPHg and benzene in shallow groundwater are illustrated on Figures 7 and 8, intermediate groundwater on Figures 9 and 10, and deep groundwater on Figures 11 and 12.

3.3 HYDROCARBON DISTRIBUTION IN SOIL VAPOR

No soil vapor samples have been collected at this site following current sampling procedures and guidelines.

3.4 LIGHT NON-AQUEOUS PHASE LIQUIDS

During an initial investigation in 1984, J.H. Kleinfelder and Associates (Kleinfelder) discovered approximately 1-inch of LNAPL adjacent to the USTs. LNAPL was previously detected in wells MW-A and MW-B between 1990 and 1993, but had been mitigated by the time the site was approved for closure in 2002. Since the current wells were installed in 2009, LNAPL has been detected only in well MW-14 at a maximum thickness of 0.34 ft.

4.0 FEASIBILITY STUDY/CORRECTIVE ACTION PLAN

4.1 GROUNDWATER CLEANUP GOALS

According to the September 2005 *Groundwater Management Plan* prepared by the Alameda County Flood Control & Water Conservation District Zone 7 Water Agency (Zone 7), the site is located in the Mocho II Sub-Basin of the Main Livermore-Amadore Valley Groundwater Basin. Zone 7 extracts groundwater from this basin for municipal drinking water.

CRA proposes a groundwater cleanup goal of removing LNAPL to the extent practicable, such that that residual dissolved COC concentrations will naturally

attenuate and reach environmental screening levels (ESLs) within a reasonable timeframe (less than approximately 50 years).

4.2 SOIL CLEANUP GOALS

CRA recommends not setting specific soil cleanup goals and instead assessing whether soil remediation is required based on residual LNAPL presence, dissolved COC concentrations, and soil vapor sampling data that has yet to be collected.

4.3 REMEDIAL ALTERNATIVES DISCUSSION AND APPROACH

Given site conditions, the remediation objective is to remove LNAPL from shallow monitoring well MW-14 to the extent necessary to result in dissolved hydrocarbon concentrations naturally attenuating and reaching ESLs within a reasonable timeframe. The remediation alternatives reviewed in this FS/CAP have been selected and evaluated based on their potential to meet this objective.

Based on current site conditions, it is unlikely residual hydrocarbon vapors in the subsurface pose a risk to human health and the discussion below is based on this assumption. This assumption should be confirmed by collecting soil vapor samples following current regulatory sampling guidance prior to finalizing the remedial approach.

4.3.1 INTERIM LNAPL REMOVAL

As an interim remedial action, Gettler-Ryan, Inc. (G-R) of Dublin, California placed an absorbent sock in MW-14 on May 29, 2012 to begin removing LNAPL from the well. G-R will monitor and replace the sock every 2 weeks and will determine the LNAPL mass removed. This remedial effort will continue until a final remedial remedy is selected.

4.4 REMEDIAL ALTERNATIVES

The remedial technologies selected for evaluation include monitored natural attenuation, surfactant-enhanced LNAPL recovery, AS/SVE, and excavation. These

four alternatives have been evaluated below on the basis of technical feasibility and cost effectiveness.

4.4.1 MONITORED NATURAL ATTENUATION (MNA)

Biodegradation, adsorption, dispersion, chemical reactions, and volatilization can all naturally reduce hydrocarbon concentrations. MNA is the process of monitoring hydrocarbon concentrations in groundwater to confirm that the concentrations are decreasing and will reach water quality objectives in a reasonable time frame. A concentration reduction in groundwater is a primary indicator of natural attenuation. Secondary indicators such as dissolved oxygen (DO) concentrations, oxidation-reduction potential (ORP), alkalinity, and nitrate, sulfate, ferrous iron concentrations, and ^{13}C isotopes can be used to confirm natural attenuation and understand the specific attenuation mechanisms.

MNA is not feasible for this site because of the following:

- It does not effectively remove LNAPL
- Dissolved hydrocarbon concentration trends in well MW-13, containing the highest dissolved hydrocarbon concentrations, do not currently present a declining trend

Recommendation: MNA is not a viable remedial alternative under current site conditions. However, the remediation objective presented above involves removing LNAPL mass such that dissolved concentrations can attenuate naturally within a reasonable timeframe. Therefore, post-remediation groundwater monitoring (MNA) will be part of the implementation plan for any of the active remediation technologies presented below.

4.4.2 SURFACTANT-ENHANCED LNAPL RECOVERY

Surfactant-enhanced LNAPL recovery consists of applying a low concentration surfactant solution to affected monitoring wells, and recovering the resulting mixture of groundwater, surfactant, and LNAPL using groundwater extraction. Surfactants are wetting agents with the ability to lower the interfacial surface tension between two liquids (such as oil and water). Surfactants can effectively emulsify and release LNAPL adsorbed to soil, thereby facilitating removal by fluid extraction. The surfactant solution is allowed to equilibrate in the area of the well for a period of approximately 24 hours to fully contact the residual LNAPL source. Approximately 24 hours after applying the surfactant solution, a mobile vacuum truck is used to recover fluids from the well to

remove the LNAPL source. The duration of the extraction event will be dictated by diminishing levels of surfactant and LNAPL observed in the extracted fluids. Typically, a minimum of three times the volume of the surfactant solution applied will be recovered from the well.

Surfactant injection has been used to successfully remove and prevent the recurrence of LNAPL. In some instances, the LNAPL removal can also reduce mass loading of hydrocarbons to groundwater, resulting in a post-surfactant decline in dissolved concentrations. The effectiveness of surfactant injection is limited by soil heterogeneities; however, the silt, sandy silt and sand observed in the subsurface at this site are not likely to inhibit surfactant effectiveness.

Some regulatory agencies have expressed concern about the possibility that surfactant enhance LNAPL recovery may spread the LNAPL plume. This issue is mitigated by selecting a specific surfactant and concentration that has been used successfully at other sites to emulsify the hydrocarbons in place without spreading, and by monitoring surfactant migration using wells MW-18 and MW-19, located directly downgradient, and well MW-20, located upgradient, of MW-14.

Recommendation: Surfactant-enhanced LNAPL recovery is a feasible method for removing LNAPL in the vicinity of well MW-14, and will be compared to any other feasible methods.

Costs: A typical surfactant-enhanced LNAPL recovery program including multiple treatments is about $200,000.

4.4.3 EXCAVATION

During excavation, contaminated soil is removed and transported to permitted offsite treatment and/or disposal facilities. Although excavation and offsite disposal reduces the hydrocarbon mass in soil at the site, it may not directly treat the dissolved COCs.

Standard earth-moving equipment (backhoes, bobcats, loaders, etc.) is typically utilized for excavation. Depending on available space, this range of equipment can safely excavate to a depth of approximately 20-25 feet maximum due to site constraints. Entry into excavations deeper than 5 feet requires shoring or sloping per OSHA regulations. Deep excavations may require shoring to prevent collapse of the sidewalls and to prevent damage or undermining of neighboring structures, utilities, sidewalks, etc. Additionally, dewatering of the excavated area may be required depending on the

groundwater depth and recharge rates. The extent of excavation is typically estimated in advance using new or available soil boring data.

Based on historical soil analytical data, CRA has estimated an area of 80 feet by 40 feet would need to be excavated to a depth of 35 feet to remove the majority of hydrocarbon mass in soil. This depth exceeds the standard depth limit for which an excavation can be safely performed. In addition, the site is an active 7-Eleven retail store owned and operated by 7-Eleven, Inc. and excavation would negatively impact business.

Recommendation: Based on the depth of hydrocarbons in soil and the fact that this is an operating 7-Eleven retail store owned and operated by 7-Eleven, Inc., excavation is infeasible and not recommend at this site.

4.4.4 AIR SPARGING-ENHANCED SOIL VAPOR EXTRACTION (AS/SVE)

AS is a remedial technology whereby air is injected into the saturated zone to remove VOCs from below the groundwater table. It is typically implemented to remove VOCs adsorbed to saturated soil, although it can also be implemented to remove LNAPL or dissolved-phase VOCs. AS is typically designed to operate at relatively high air injection rates (greater than 10 cubic feet per minute [cfm] per injection point) in order to volatilize the VOCs. AS usually operates in tandem with an SVE system that captures the VOCs stripped from the saturated zone. AS/SVE improves groundwater quality by removing source area VOC mass and by delivering oxygen to the subsurface to accelerate hydrocarbon biodegradation.

Equipment required to implement AS would include a compressed air source (air compressor/blower), compressed air conveyance piping, and specifically designed AS wells. The air compressor or blower size would be based on the number of injection points, pressure requirements, and minimum pressure and flow delivery at the injection depth.

SVE system components would include appropriately constructed SVE wells, vapor conveyance piping, a vapor/liquid separator, a vapor extraction device, and a vapor treatment device. The vapor extraction device (blower) would be sized based on the radius of influence, applied vacuum, and number of wells needed based on pilot testing and/or previous AS/SVE operations. Extracted hydrocarbons are typically treated by a catalytic or thermal oxidizer. The treatment device is determined by the influent flow rate, hydrocarbon concentrations, air quality requirements, and anticipated operating duration.

The limiting factors for an AS/SVE system include permeability of soils and volatility of constituents. At this site, soil permeability is within a range of 10^{-10} to 10^{-6} cm^2 (assumed), and the COCs are adequately volatile. Both factors are considered to be within the moderate to effective range for implementation of AS/SVE.

An AS/SVE system operated at the site for 11 months between 1994 and 1995 with relatively successful results; dissolved concentrations in well MW-A, located adjacent to the remediation wells, were reduced by two orders of magnitude and soil samples collected from GP-1 and MW-19 indicated hydrocarbon concentrations in soil also decreased. However, the remediated area was confined to a small portion of the plume. The success of hydrocarbon reduction in the remedial area indicates a larger scale AS/SVE system could effectively remove residual hydrocarbons in soil and groundwater.

Recommendation: AS/SVE is a viable remedial option. Based on its feasibility, AS/SVE will be compared to other feasible methods to select the appropriate technology for this site.

Costs: A typical AS/SVE system with multiple AS and SVE wells costs about $500,000 to design and install if new equipment is required. Two years of operation would cost about $150,000. Therefore, the total cost is about $650,000.

4.5 SUMMARY OF REMEDIAL ALTERNATIVES

Of the four remedial alternatives evaluated, only surfactant-enhanced LNAPL recovery and AS/SVE appear viable. The remedial objective is to remove LNAPL to the extent practicable, such that that residual dissolved COC concentrations will naturally attenuate and reach ESLs within a reasonable timeframe (less than approximately 50 years). Both remedial options have an equal likelihood of success; therefore CRA proposes to implement surfactant-enhanced LNAPL recovery.

CRA recommends implementing one to two surfactant-enhanced LNAPL recovery events to assess whether it appears likely that this technology can effectively remove LNAPL from well MW-14. If after two events it does not appear that this remedial technology is practical, an AS/SVE system should be considered.

5.0 CONCLUSIONS AND RECOMMENDATIONS

The remedial method recommended presumes there is no risk to human health from a vapor intrusion pathway. CRA recommends confirming that there is no vapor intrusion risk driver by installing vapor probes and collecting vapor samples according to current guidance.

Presuming there is no risk from vapor intrusion, CRA believes surfactant-enhanced LNAPL recovery is an appropriate remedial alternative. Surfactant-enhanced LNAPL recovery is cost-effective and technically feasible and will focus on in-situ remediation of MW-14. Therefore, CRA recommends implementation of surfactant-enhanced LNAPL recovery at MW-14.

CRA also recommends reduction of groundwater monitoring and sampling of new wells MW-17 through MW-20 from quarterly to semi-annually beginning the first quarter 2013 (following four consecutive quarters of groundwater monitoring and sampling). Also, collection of geochemical parameters is proposed to assess the potential effectiveness of natural attenuation after implementation of surfactant-enhanced LNAPL recovery. CRA proposes to collect this data during the third quarter groundwater monitoring event of 2012. CRA will continue monitoring groundwater in all the site wells to evaluate the progress of the remedial action.

CRA will submit a work plan detailing the proposed vapor sampling and surfactant-enhanced LNAPL recover pending ACEH approval.

FIGURES

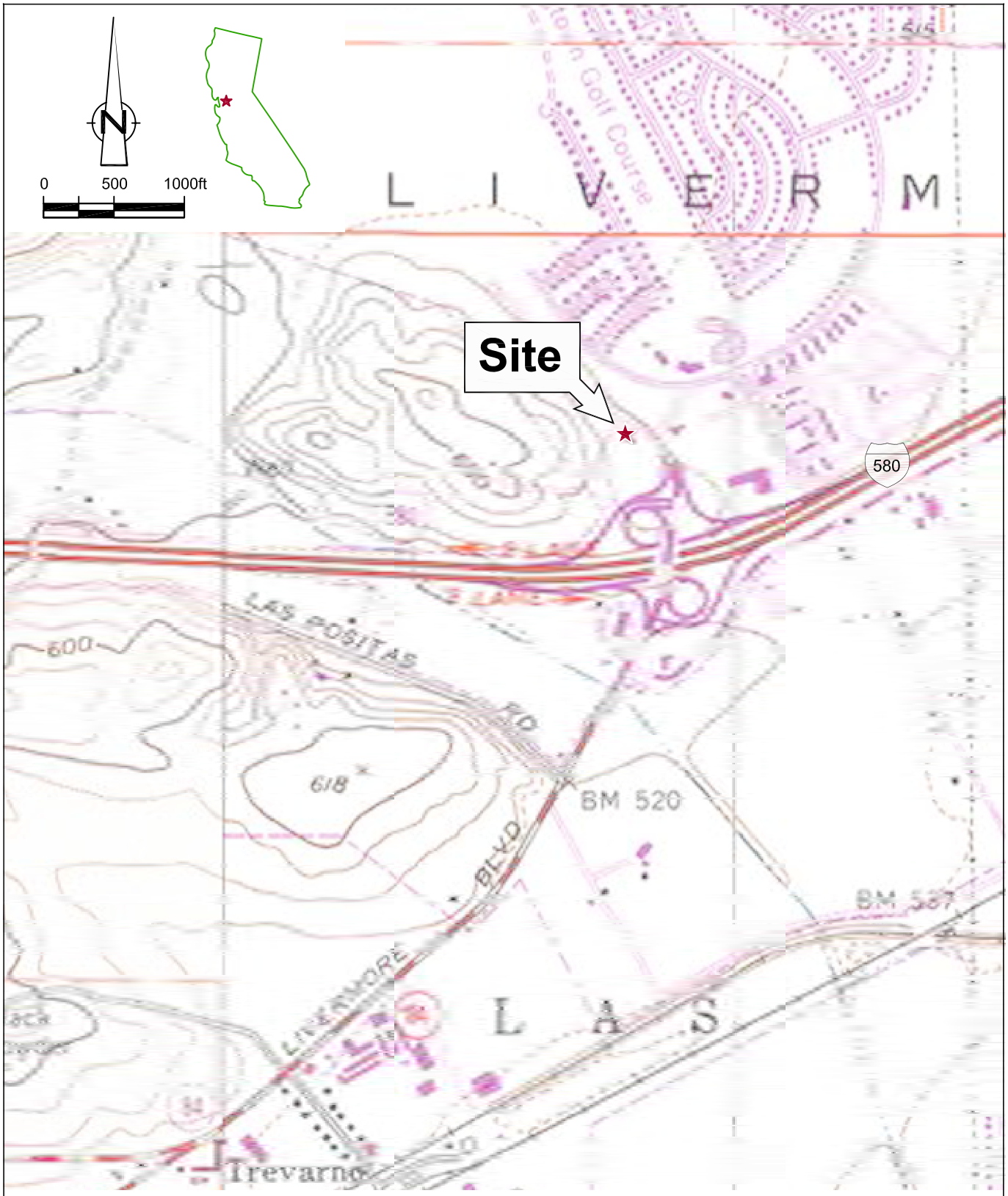
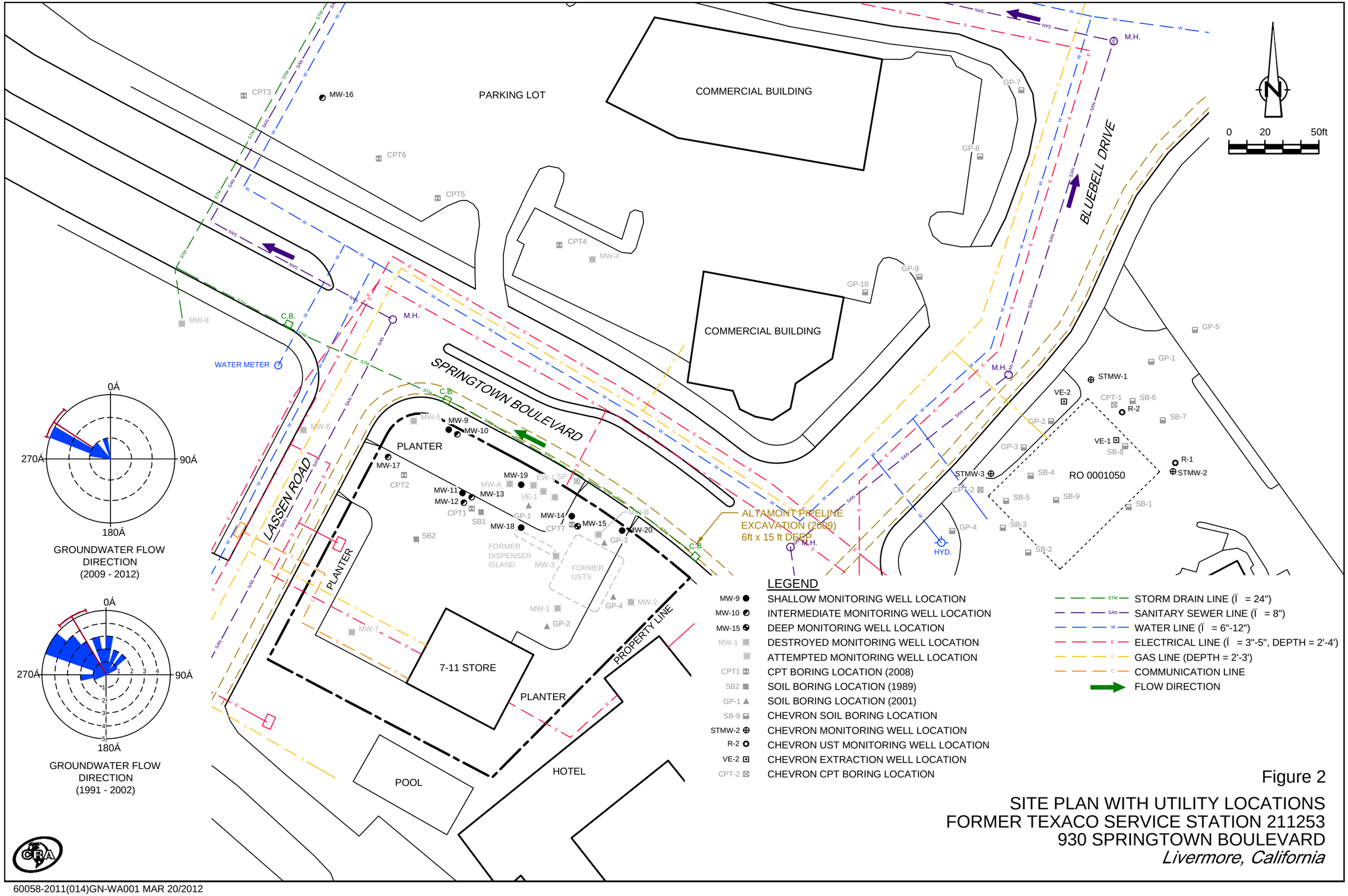


Figure 1

VICINITY MAP
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California



GROUNDWATER FLOW DIRECTION
(2009 - 2012)

GROUNDWATER FLOW DIRECTION
(1991 - 2002)

LEGEND

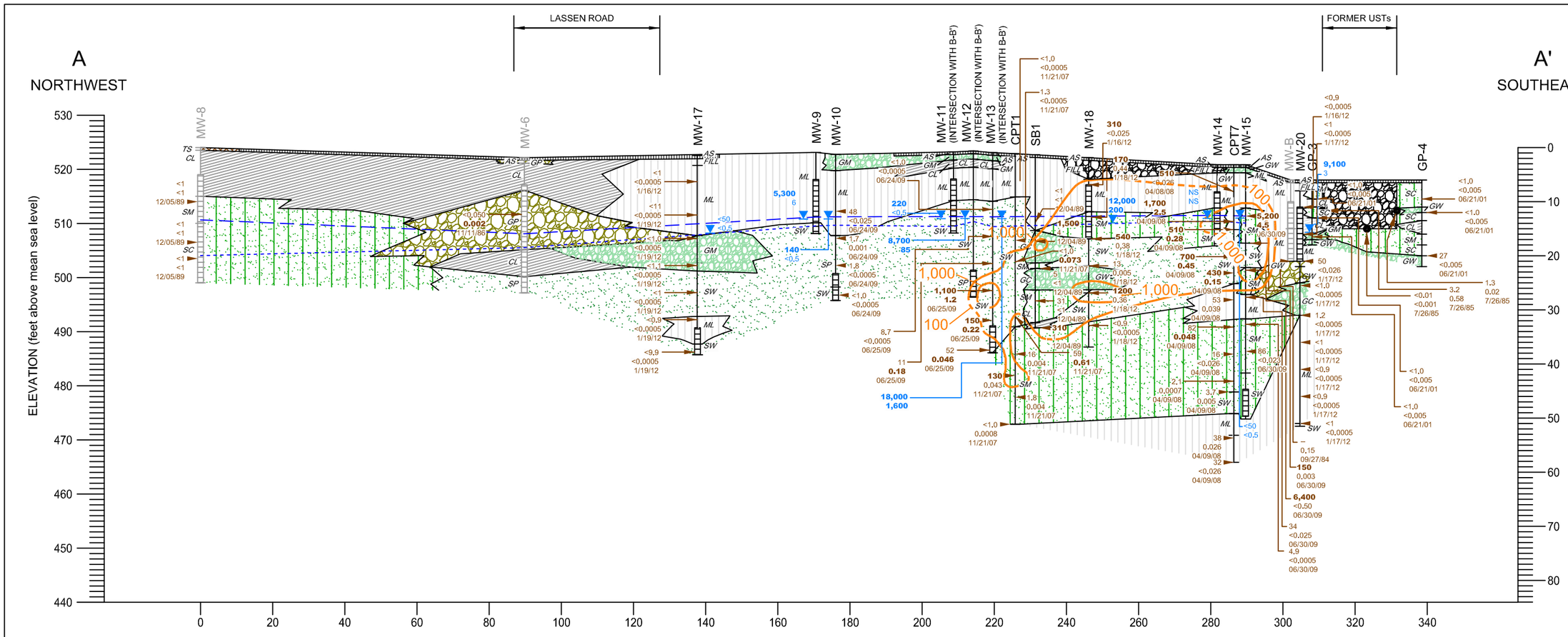
- MW-9 SHALLOW MONITORING WELL LOCATION
- MW-10 INTERMEDIATE MONITORING WELL LOCATION
- MW-15 DEEP MONITORING WELL LOCATION
- MW-1 DESTROYED MONITORING WELL LOCATION
- ATTEMPTED MONITORING WELL LOCATION
- CPT1 CPT BORING LOCATION (2008)
- SB2 SOIL BORING LOCATION (1989)
- GP-1 SOIL BORING LOCATION (2001)
- SB-9 CHEVRON SOIL BORING LOCATION
- STMW-2 CHEVRON MONITORING WELL LOCATION
- R-2 CHEVRON UST MONITORING WELL LOCATION
- VE-2 CHEVRON EXTRACTION WELL LOCATION
- CPT-2 CHEVRON CPT BORING LOCATION

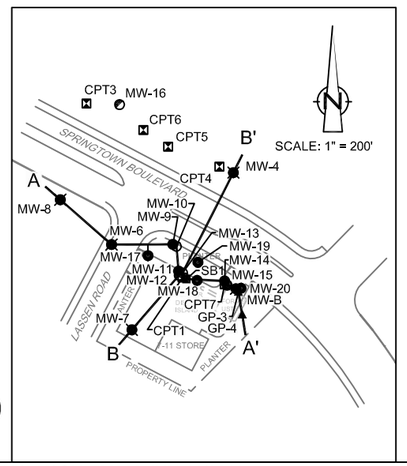
- STM STORM DRAIN LINE (Ï = 24")
- SAN SANITARY SEWER LINE (Ï = 8")
- W WATER LINE (Ï = 6"-12")
- E ELECTRICAL LINE (Ï = 3"-5", DEPTH = 2'-4')
- G GAS LINE (DEPTH = 2'-3')
- C COMMUNICATION LINE
- FLOW DIRECTION

Figure 2

SITE PLAN WITH UTILITY LOCATIONS
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

60058-2011(014)GN-WA001 MAR 20/2012



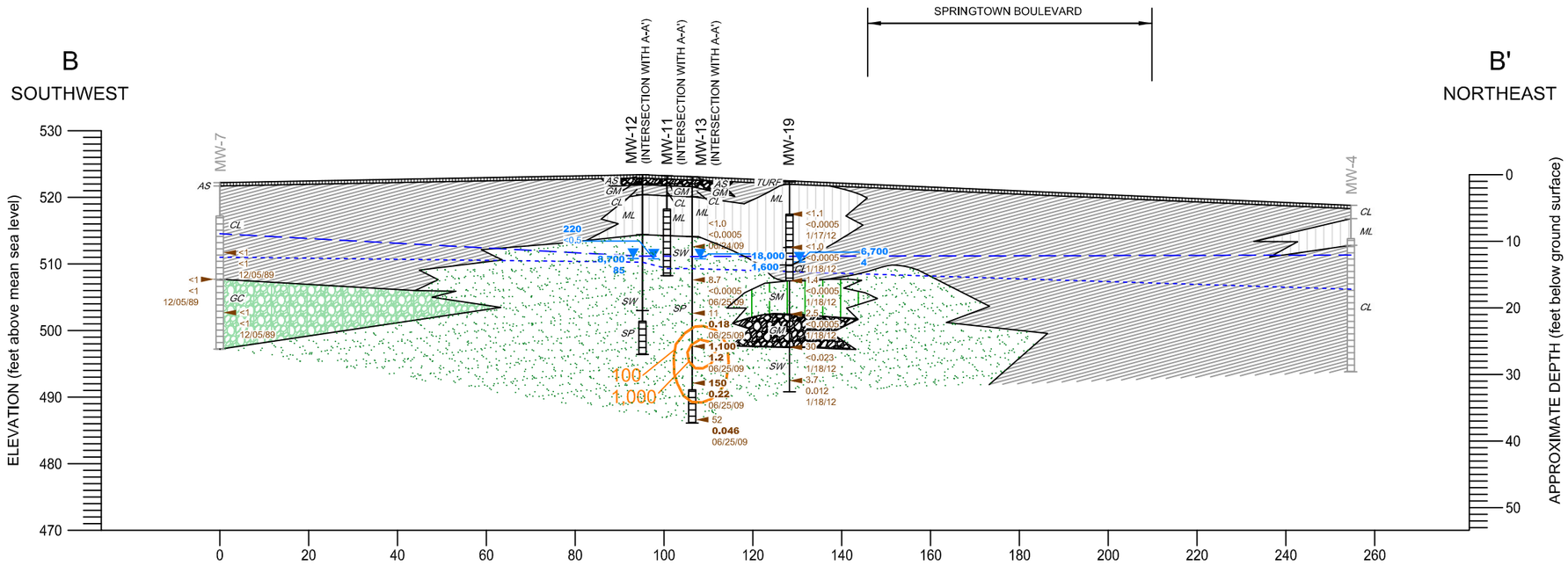


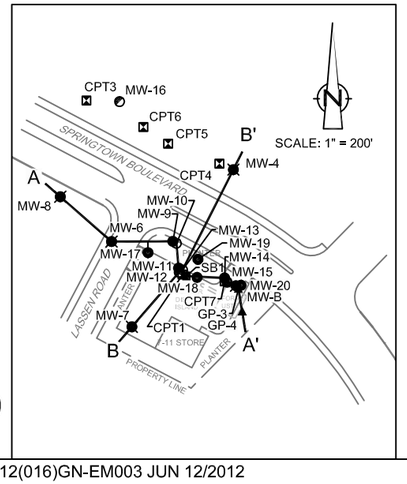
LEGEND

- MW-12 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- APPROXIMATE SOIL SAMPLE LOCATION
- TPHg / BENZENE / DATE — HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- APPROXIMATE GROUNDWATER SAMPLE LOCATION
- TPHg / BENZENE / 02/09/2012 — HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)
- *FILL*
- *TS* - TOPSOIL
- *AS* - ASPHALT
- *CL* - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
- *SM* - SILTY SANDS, SAND-SILT MIXTURES
- *SC* - CLAYEY SANDS, SAND-CLAY MIXTURES
- *GP* - POORLY-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
- *GW* - WELL-GRADED GRAVELS, GRAVEL-SAND MIXTURES, LITTLE OR NO FINES
- *ML* - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- *SW* - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES
- *SP* - POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- *GM* - SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
- *GC* - CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES
- 100 - - - TPHg CONCENTRATION CONTOUR DASHED WHERE INFERRED
- HIGHEST GROUNDWATER ELEVATION (MSL)
- LOWEST GROUNDWATER ELEVATION (MSL)
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
- **BOLD** EXCEEDS ESLs
- -- NOT ANALYZED
- NS NOT SAMPLED

Figure 3

GEOLOGIC CROSS SECTION A-A'
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California





LEGEND

- MW-12 — WELL DESIGNATION
- GROUND SURFACE
- OBSERVATION WELL INSTALLATION
- STRATIGRAPHIC BOUNDARY
- CL — TYPICAL SOIL CLASSIFICATION
- SCREENED INTERVAL
- BOTTOM OF BORING
- APPROXIMATE SOIL SAMPLE LOCATION
- TPHg / BENZENE / DATE — HYDROCARBON CONCENTRATIONS IN SOIL (mg/kg)
- APPROXIMATE GROUNDWATER SAMPLE LOCATION
- TPHg / BENZENE / 02/09/2012 — HYDROCARBON CONCENTRATIONS IN GROUNDWATER (µg/L)

- *AS* - ASPHALT
- *CL* - INORGANIC CLAYS OF LOW TO MEDIUM PLASTICITY, GRAVELLY CLAYS, SANDY CLAYS, SILTY CLAYS, LEAN CLAYS
- *SM* - SILTY SANDS, SAND-SILT MIXTURES
- *ML* - INORGANIC SILTS, VERY FINE SANDS, SILTY OR CLAYEY FINE SANDS, CLAYEY SILTS WITH SLIGHT PLASTICITY
- *SW* - WELL-GRADED SAND, GRAVELLY SANDS, LITTLE OR NO FINES
- *SP* - POORLY-GRADED SANDS, GRAVELLY SANDS, LITTLE OR NO FINES
- *GM* - SILTY GRAVELS, GRAVEL-SAND-SILT MIXTURES
- *GC* - CLAYEY GRAVELS, GRAVEL-SAND-CLAY MIXTURES

- 100 - - - TPHg CONCENTRATION CONTOUR DASHED WHERE INFERRED
- HIGHEST GROUNDWATER ELEVATION (MSL)
- LOWEST GROUNDWATER ELEVATION (MSL)
- < NOT DETECTED AT OR ABOVE STATED REPORTING LIMITS
- **BOLD** EXCEEDS ESLs

Figure 4

GEOLOGIC CROSS SECTION B-B'
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

060058-2012(016)GN-EM003 JUN 12/2012

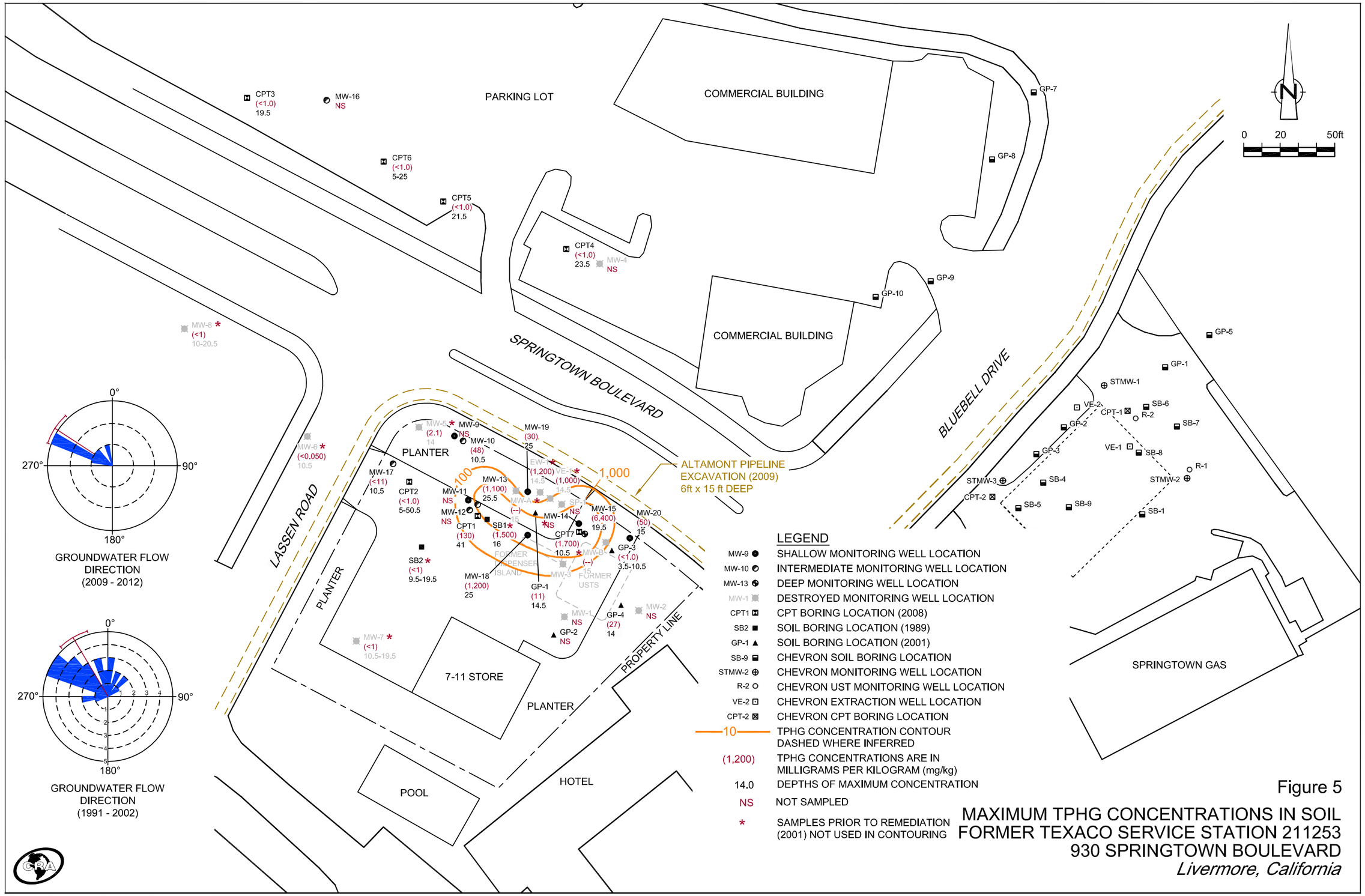
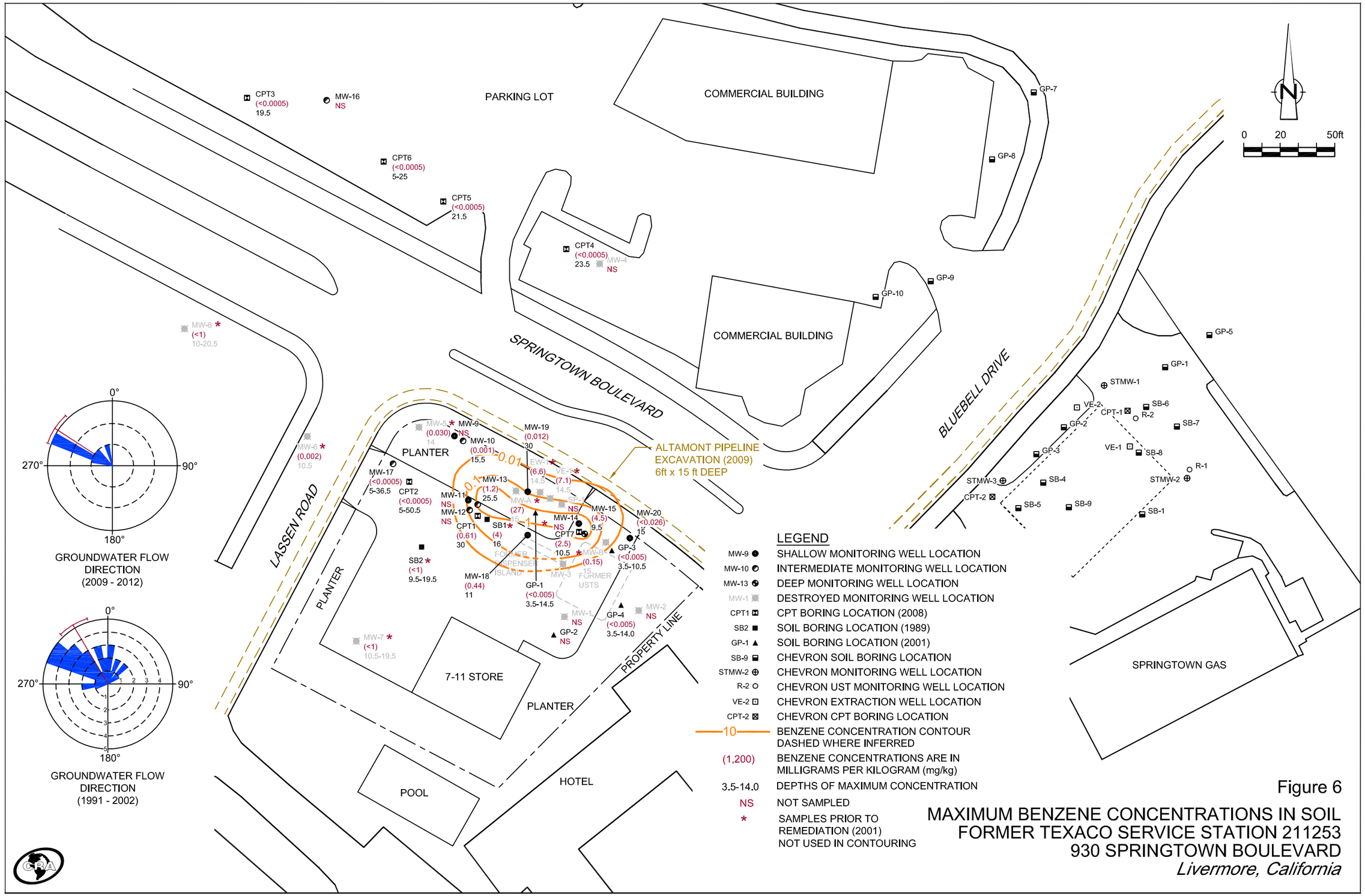


Figure 5

MAXIMUM TPHG CONCENTRATIONS IN SOIL
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California



LEGEND

- MW-9 ● SHALLOW MONITORING WELL LOCATION
- MW-10 ◐ INTERMEDIATE MONITORING WELL LOCATION
- MW-13 ⊕ DEEP MONITORING WELL LOCATION
- MW-1 ⊠ DESTROYED MONITORING WELL LOCATION
- CPT1 ⊠ CPT BORING LOCATION (2008)
- SB2 ■ SOIL BORING LOCATION (1989)
- GP-1 ▲ SOIL BORING LOCATION (2001)
- SB-9 ⬓ CHEVRON SOIL BORING LOCATION
- STMW-2 ⊕ CHEVRON MONITORING WELL LOCATION
- R-2 ○ CHEVRON UST MONITORING WELL LOCATION
- VE-2 ⊡ CHEVRON EXTRACTION WELL LOCATION
- CPT-2 ⊠ CHEVRON CPT BORING LOCATION
- 10 BENZENE CONCENTRATION CONTOUR DASHED WHERE INFERRED
- (1,200) BENZENE CONCENTRATIONS ARE IN MILLIGRAMS PER KILOGRAM (mg/kg)
- 3.5-14.0 DEPTHS OF MAXIMUM CONCENTRATION
- NS NOT SAMPLED
- * SAMPLES PRIOR TO REMEDIATION (2001) NOT USED IN CONTOURING

Figure 6

MAXIMUM BENZENE CONCENTRATIONS IN SOIL
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

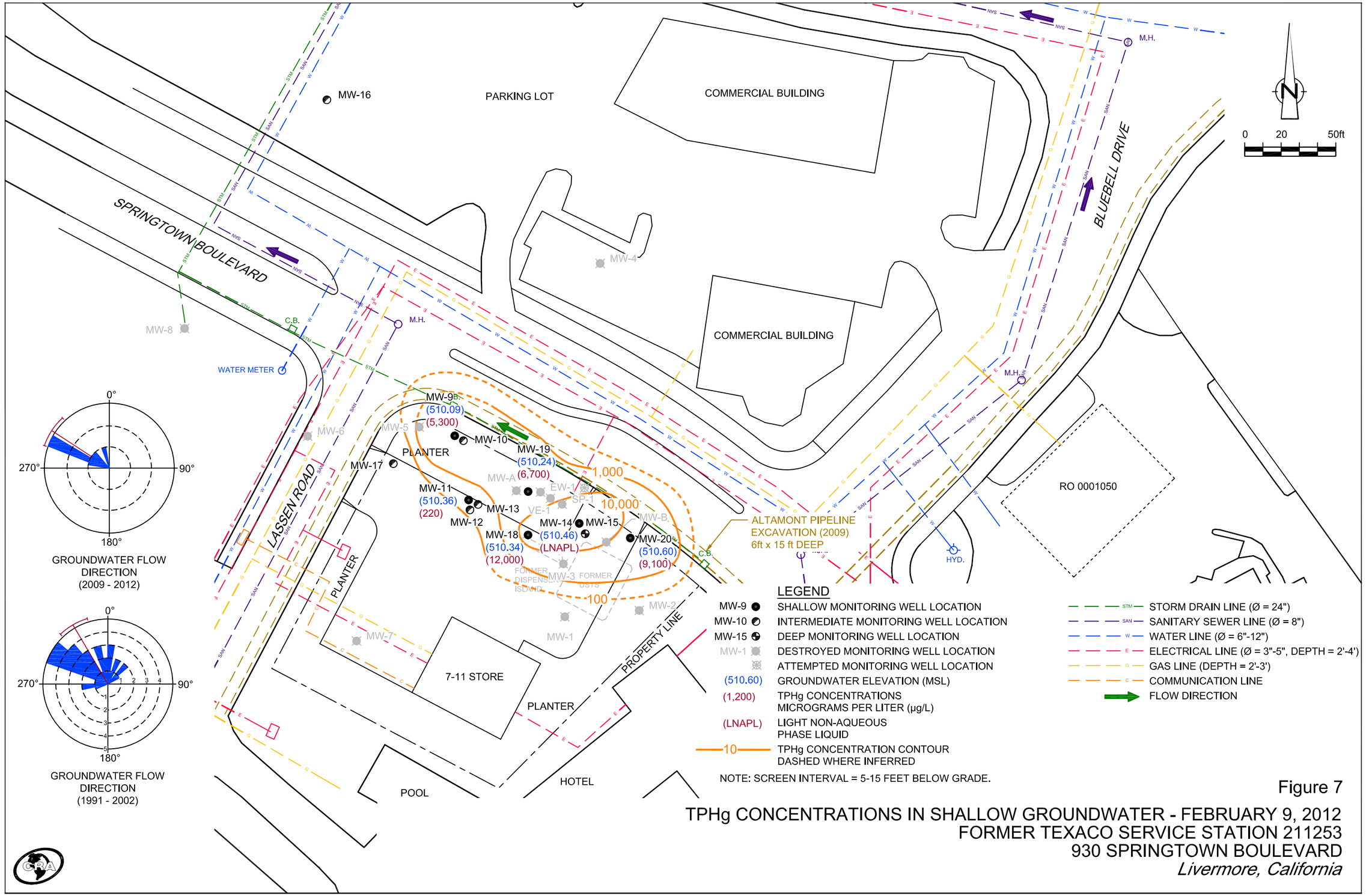
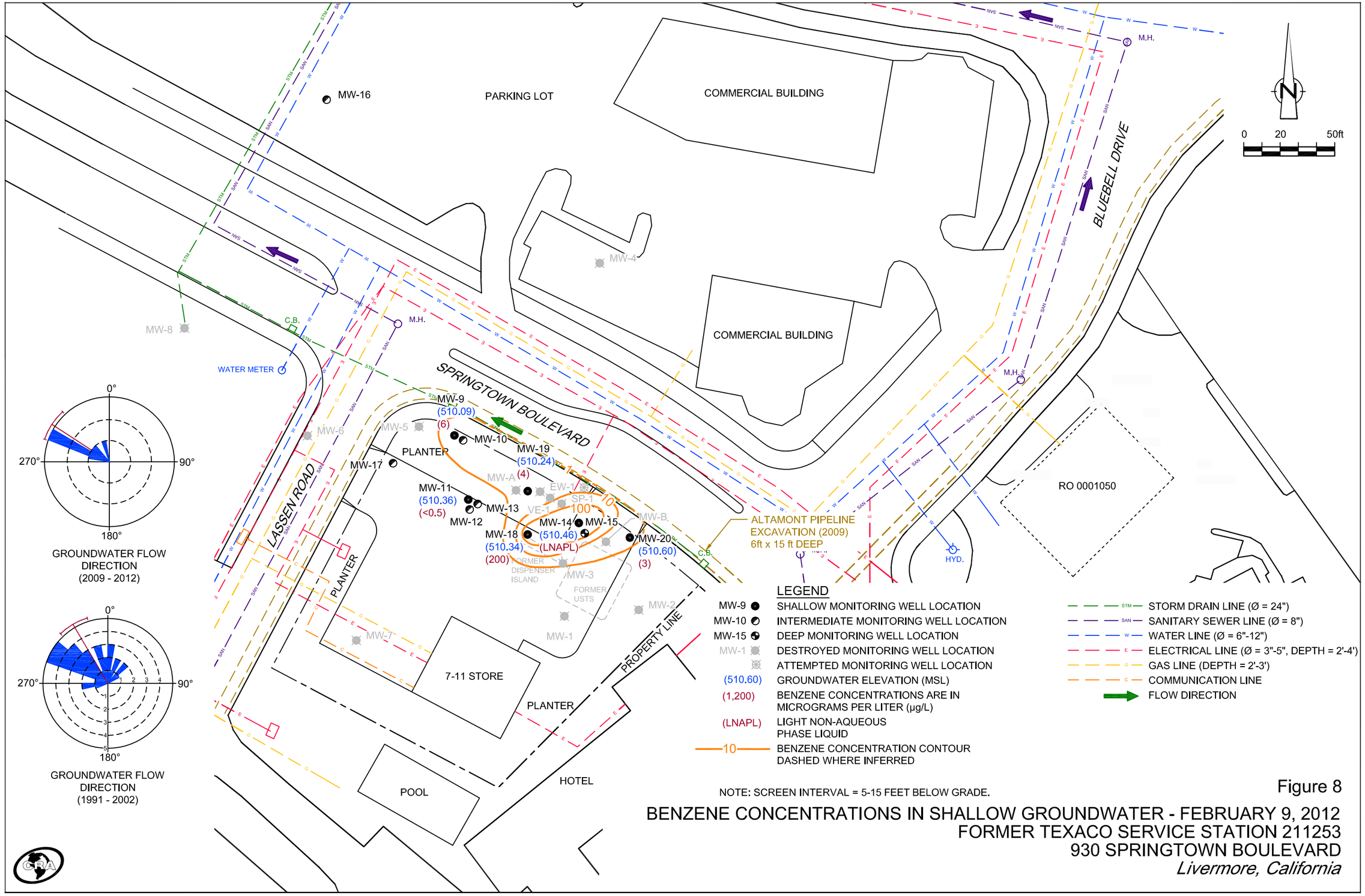


Figure 7

TPHg CONCENTRATIONS IN SHALLOW GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

060058-2012(016)GN-EM007 MAY 31/2012



NOTE: SCREEN INTERVAL = 5-15 FEET BELOW GRADE.

Figure 8

BENZENE CONCENTRATIONS IN SHALLOW GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

MW-16
(509.88)
(<50)

PARKING LOT

COMMERCIAL BUILDING

COMMERCIAL BUILDING

M.H.

BLUEBELL DRIVE

N

0 20 50ft

MW-4

MW-8

C.B.

M.H.

WATER METER

PARK

SPRINGTOWN BOULEVARD

C.B.

MW-6

MW-5

MW-9

MW-10
(510.63)
(140)

PLANTER

MW-17
(510.23)
(<50)

100

1,000

MW-A

MW-19

EW-1

SP-1

VE-1

MW-11

MW-12
(510.01)
(8,700)

MW-13
(508.05)
(18,000)

10,000

MW-14

MW-15

MW-18

MW-B

MW-20

C.B.

ALTAMONT PIPELINE
EXCAVATION (2009)
6ft x 15 ft DEEP

HYD.

RO 0001050

SPRING VALLEY COMMON

LASSEN ROAD

PLANTER

FORMER
DISPENSER
ISLAND

MW-3

FORMER
USTS

MW-2

MW-7

MW-1

PROPERTY LINE

7-11 STORE

PLANTER

HOTEL

POOL

LEGEND

MW-9 ●	SHALLOW MONITORING WELL LOCATION
MW-10 ◪	INTERMEDIATE MONITORING WELL LOCATION
MW-15 ⊕	DEEP MONITORING WELL LOCATION
MW-1 ⊗	DESTROYED MONITORING WELL LOCATION
⊠	ATTEMPTED MONITORING WELL LOCATION
(510.60)	GROUNDWATER ELEVATION (MSL)
(1,200)	TPHg CONCENTRATIONS ARE IN MICROGRAMS PER LITER (µg/L)
10	TPHg CONCENTRATION CONTOUR DASHED WHERE INFERRED

STM	STORM DRAIN LINE (Ø = 24")
SAN	SANITARY SEWER LINE (Ø = 8")
W	WATER LINE (Ø = 6"-12")
E	ELECTRICAL LINE (Ø = 3"-5", DEPTH = 2'-4')
G	GAS LINE (DEPTH = 2'-3')
C	COMMUNICATION LINE
→	FLOW DIRECTION

NOTE:
SCREEN INTERVALS:
MW-16 = 25-30 FEET BELOW GRADE.
MW-10 AND MW-12 = 22-27 FEET BELOW GRADE.
MW-13 AND MW-17 = 32-37 FEET BELOW GRADE.

Figure 9

TPHg CONCENTRATIONS IN INTERMEDIATE GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

060058-2012(016)GN-EM009 JUN 12/2012

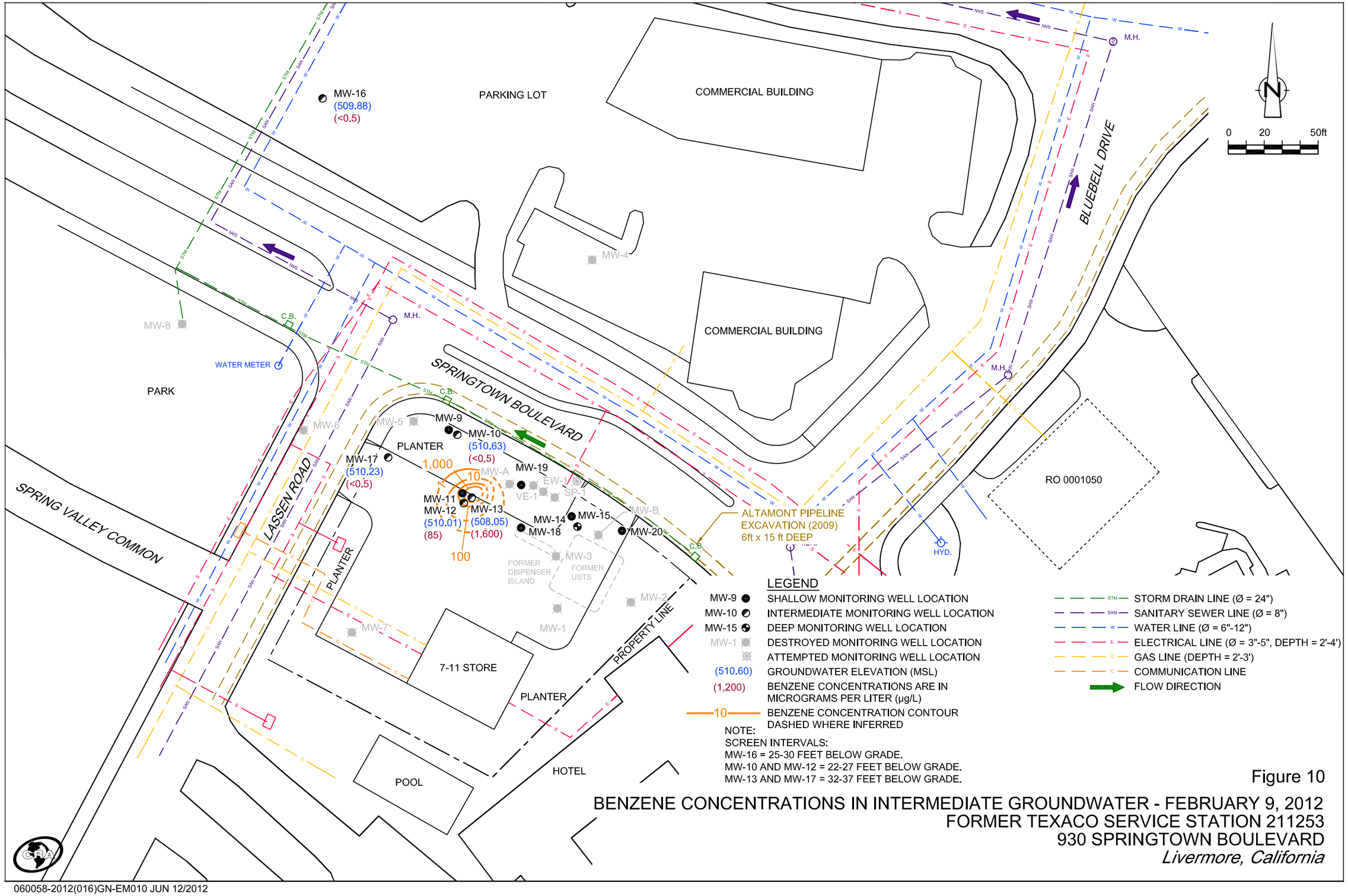
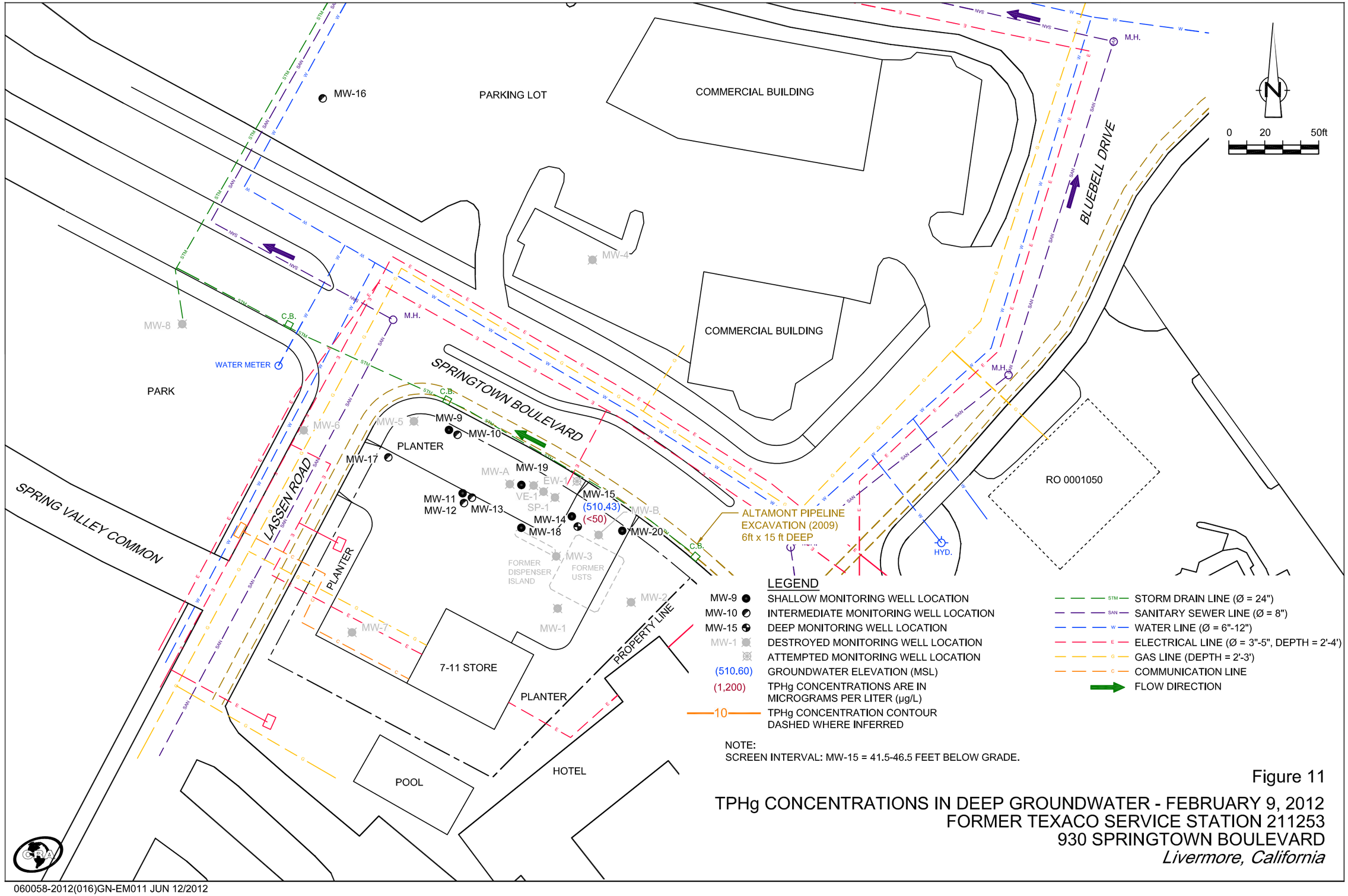


Figure 10

BENZENE CONCENTRATIONS IN INTERMEDIATE GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

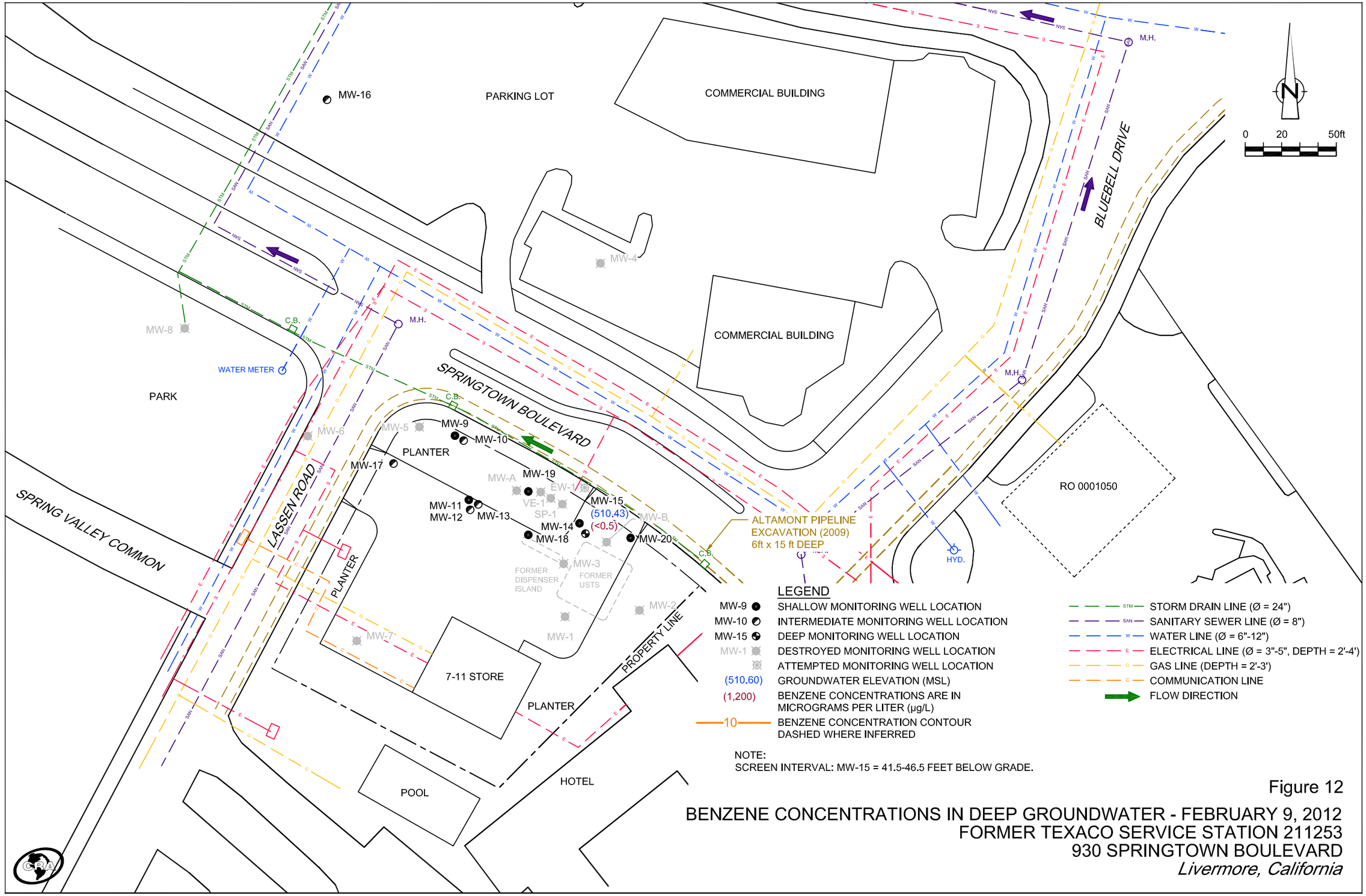


NOTE:
SCREEN INTERVAL: MW-15 = 41.5-46.5 FEET BELOW GRADE.

Figure 11

TPHg CONCENTRATIONS IN DEEP GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

060058-2012(016)GN-EM011 JUN 12/2012



NOTE:
SCREEN INTERVAL: MW-15 = 41.5-46.5 FEET BELOW GRADE.

Figure 12

BENZENE CONCENTRATIONS IN DEEP GROUNDWATER - FEBRUARY 9, 2012
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
Livermore, California

060058-2012(016)GN-EM012 JUN 12/2012

TABLES

TABLE 1

WELL CONSTRUCTION DETAILS
FORMER TEXACO STATION 206145
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Well	Casing Diameter (inches)	Top of Screen (fbg)	Total Depth (fbg)	Screen Interval (fbg)	Screen Interval (fbg)
MW-A*	4	4	16	12	4-15
MW-B*	4	4	16	12	4-15
MW-1*	4	5	20	15	5 - 20
MW-2*	4	5	20	15	5 - 20
MW-3*	4	5	20	15	5 - 20
MW-4*	3	5	27	22	5 - 25
MW-5*	2	5	30	25	5-25
MW-6*	2	5	25	20	5-25
MW-7*	4	5	25	20	5-25
MW-8*	4	5	25	20	5-25
MW-9	4	5	15	10	5 - 15
EW-1*	6	8	33	25	8-33
VE-1*	2	7	12	5	7-12
SP-1*	1	15	20	5	15-20
MW-10	4	22	27	5	22 - 27
MW-11	4	5	15	10	5 - 15
MW-12	4	22	27	5	22 - 27
MW-13	4	32	37	5	32 - 37
MW-14	4	5	15	10	5 - 15
MW-15	4	41.5	47	5.5	41.5 - 46.5
MW-16	4	25	30	5	25 - 30
MW-17	4	32	37	5	32 - 37
MW-18	4	5	15	10	5 - 15
MW-19	4	5	15	10	5 - 15
MW-20	4	5	15	10	5 - 15

Notes:
fbg = feet below grade
* = Destroyed well

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		←				*miligrams per kilogram (mg/kg)*								→
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
2012 Well Installation															
MW-17	01/16/12	5	<1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	10.5	<11	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	15.5	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	20.5	<1.1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	25.5	<1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	30.5	<0.9	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-17	01/19/12	36.5	<9.9	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-18	01/16/12	5	**310**	<0.025	<0.051	**4.6**	**6.6**	--	--	--	--	--	--	--	--
MW-18	01/18/12	11	**170**	**0.44**	**7.1**	1.9	**8.3**	--	--	--	--	--	--	--	--
MW-18	01/18/12	15	**540**	**0.38**	**19**	**12**	**51**	--	--	--	--	--	--	--	--
MW-18	01/18/12	20	13	0.005	0.15	0.091	0.33	--	--	--	--	--	--	--	--
MW-18	01/18/12	25	**1,200**	**0.36**	**9.9**	**13**	**52**	--	--	--	--	--	--	--	--
MW-18	01/18/12	31	<0.9	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-19	01/17/12	5	<1.1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-19	01/18/12	10	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-19	01/18/12	15	1.4	<0.0005	<0.001	0.002	<0.001	--	--	--	--	--	--	--	--
MW-19	01/18/12	20	2.5	<0.0005	<0.0009	0.015	0.001	--	--	--	--	--	--	--	--
MW-19	01/18/12	25	30	<0.023	<0.046	0.067	<0.046	--	--	--	--	--	--	--	--
MW-19	01/18/12	30	3.7	0.012	<0.001	0.009	0.002	--	--	--	--	--	--	--	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		←				*miligrams per kilogram (mg/kg)*								→
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
MW-20	01/16/12	5	<0.9	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-20	01/17/12	10	<1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-20	01/17/12	15	50	<0.026	<0.052	<0.052	<0.052	--	--	--	--	--	--	--	--
MW-20	01/17/12	19.5	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-20	01/17/12	25	1.2	<0.0005	0.007	0.041	0.13	--	--	--	--	--	--	--	--
MW-20	01/17/12	30	<1	<0.0005	<0.001	0.007	0.020	--	--	--	--	--	--	--	--
MW-20	01/17/12	35	<0.9	<0.0005	<0.001	0.004	0.014	--	--	--	--	--	--	--	--
MW-20	01/17/12	40	<0.9	<0.0005	0.003	0.012	0.038	--	--	--	--	--	--	--	--
MW-20	01/17/12	45	<1	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
2009 CRA Well Installation															
MW-10	06/24/09	10.5	48	<0.025	<0.051	0.094	<0.051	--	--	--	--	--	--	--	--
MW-10	06/24/09	15.5	1.7	0.001	0.006	0.16	0.12	--	--	--	--	--	--	--	--
MW-10	06/24/09	20.5	1.8	<0.0005	<0.001	0.005	0.001	--	--	--	--	--	--	--	--
MW-10	06/24/09	26	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-13	06/24/09	10.5	<1.0	<0.0005	<0.001	<0.001	<0.001	--	--	--	--	--	--	--	--
MW-13	06/25/09	15.5	8.7	<0.0005	<0.0009	<0.0009	<0.0009	--	--	--	--	--	--	--	--
MW-13	06/25/09	20.5	11	**0.18**	0.005	0.017	0.008	--	--	--	--	--	--	--	--
MW-13	06/25/09	25.5	**1,100**	**1.2**	**50**	**13**	**90**	--	--	--	--	--	--	--	--
MW-13	06/25/09	31	**150**	**0.22**	**8.1**	**3.5**	**22**	--	--	--	--	--	--	--	--
MW-13	06/25/09	36.5	52	**0.046**	0.85	0.30	1.8	--	--	--	--	--	--	--	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		← *miligrams per kilogram (mg/kg)* →												
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
MW-15	06/30/09	9.5	**5,200**	**4.5**	**44**	**55**	**260**	--	--	--	--	--	--	--	--
MW-15	06/30/09	14.5	**150**	0.003	0.014	0.065	0.24	--	--	--	--	--	--	--	--
MW-15	06/30/09	19.5	**6,400**	<0.50	**31**	**170**	**530**	--	--	--	--	--	--	--	--
MW-15	06/30/09	24.5	34	<0.025	0.12	0.23	0.94	--	--	--	--	--	--	--	--
MW-15	06/30/09	29.5	4.9	<0.0005	0.028	0.037	0.20	--	--	--	--	--	--	--	--
MW-15	06/30/09	34.5	**86**	<0.023	0.34	0.65	**3.0**	--	--	--	--	--	--	--	--
2007 - 2008 CRA Subsurface Investigation															
CPT1	11/21/07	5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT1	11/21/07	16	1.3	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT1	11/21/07	20	<1.0	**0.073**	0.002	0.001	<0.001	<0.0005	<0.019	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT1	11/21/07	30	59	**0.61**	2.8	0.42	**5.8**	<0.024	<0.97	<0.048	<0.048	<0.048	<0.048	<0.048	--
CPT1	11/21/07	37	16	0.004	0.056	0.039	0.30	<0.005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT1	11/21/07	41	**130**	0.043	1.1	0.52	**3.4**	<0.024	<0.97	<0.049	<0.049	<0.049	<0.049	<0.049	--
CPT1	11/21/07	45	1.8	0.004	0.059	0.018	0.13	<0.0005	<0.019	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT1	11/21/07	50	<1.0	0.0008	0.022	0.009	0.060	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	10.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	15.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	20.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	30.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		← *miligrams per kilogram (mg/kg)* →												
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
CPT2	11/19/07	35.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	40.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	45.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT2	11/19/07	50.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT3	04/07/08	19.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT4	07/18/08	23.5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.019	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT5	04/09/08	21.5	<1.0	<0.0005	<0.0009	<0.0009	<0.0009	<0.0005	<0.019	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	--
CPT6	11/19/07	5	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.021	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT6	11/20/07	25	<1.0	<0.0005	<0.001	<0.001	<0.001	<0.0005	<0.019	<0.001	<0.001	<0.001	<0.001	<0.001	--
CPT7	04/08/08	5	**510**	<0.026	<0.053	**3.6**	**16**	<0.026	<1.1	<0.053	<0.053	<0.053	<0.053	<0.053	--
CPT7	04/09/08	10.5	**1,700**	**2.5**	**20**	**14**	**70**	<0.025	<0.99	<0.050	<0.050	<0.050	<0.050	<0.050	--
CPT7	04/09/08	12	**510**	**0.28**	<0.050	2.8	1.4	<0.025	<1.0	<0.050	<0.050	<0.050	<0.050	<0.050	--
CPT7	04/09/08	17	**700**	**0.45**	**5.7**	**6.0**	**27**	<0.023	<0.92	<0.046	<0.046	<0.046	<0.046	<0.046	--
CPT7	04/09/08	20	**430**	**0.15**	**6.6**	**4.2**	**19**	<0.024	<0.97	<0.049	<0.049	<0.049	<0.049	<0.049	--
CPT7	04/09/08	25	53	0.039	1.6	2.4	**11**	<0.026	<1.0	<0.052	<0.052	<0.052	<0.052	<0.052	--
CPT7	04/09/08	30	82	**0.048**	0.60	0.50	2.2	<0.025	<0.98	<0.049	<0.049	<0.049	<0.049	<0.049	--
CPT7	04/09/08	35	16	<0.026	0.16	0.13	0.61	<0.026	<1.1	<0.053	<0.053	<0.053	<0.053	<0.053	--
CPT7	04/09/08	40	2.1	0.0007	0.031	0.049	0.24	<0.0005	<0.019	<0.0009	<0.0009	<0.0009	<0.0009	<0.0009	--
CPT7	04/09/08	42	3.7	0.005	0.037	0.046	0.20	<0.0005	<0.020	<0.001	<0.001	<0.001	<0.001	<0.001	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		← *miligrams per kilogram (mg/kg)* →												
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
CPT7	04/09/08	50.5	38	0.026	0.46	0.72	**3.3**	<0.026	<1.0	<0.051	<0.051	<0.051	<0.051	<0.051	--
CPT7	04/09/08	55	32	<0.026	0.52	0.83	**3.9**	<0.026	<1.0	<0.052	<0.052	<0.052	<0.052	<0.052	--
2001 KHM Vadose Zone Investigation															
GP-1	06/21/01	3.5	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-1	06/21/01	6	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-1	06/21/01	11	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	
GP-1	06/21/01	14.5	11**	<0.005	<0.005	<0.005	<0.010	<0.005	--	--	--	--	--	--	--
GP-3	06/21/01	3.5	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-3	06/21/01	7	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-3	06/21/01	10.5	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-4	06/21/01	3.5	<1.0**	<0.005	<0.005	<0.005	0.0097	<0.005	--	--	--	--	--	--	--
GP-4	06/21/01	6	<1.0**	<0.005	<0.005	<0.005	<0.005	<0.005	--	--	--	--	--	--	--
GP-4	06/21/01	14	27**	<0.005	<0.005	<0.005	<0.010	<0.005	--	--	--	--	--	--	--
1992 Weiss Extraction Well Installation															
B-1 (EW-1)	10/19/92	9.7	<1.0	<0.005*	<0.005*	<0.005*	<0.005*	--	--	--	--	--	--	--	--
B-1 (EW-1)	10/19/92	14.5	**1,200**	**6.6***	**21***	**15***	**50***	--	--	--	--	--	--	--	--
B-1 (EW-1)	10/19/92	24.7	3	0.017*	0.051*	0.050*	0.21*	--	--	--	--	--	--	--	--
B-1 (EW-1)	10/19/92	29.5	<1.0	<0.005*	<0.005*	<0.005*	<0.005*	--	--	--	--	--	--	--	--

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SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		← *miligrams per kilogram (mg/kg)* →												
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
B-2 (VE-1/SP-1	10/20/92	14.5	**1,000**	**7.1***	**22***	**13***	**56***	--	--	--	--	--	--	--	--
B-2 (VE-1/SP-1	10/20/92	16.7	**990**	**2.9***	**15***	**14***	**53***	--	--	--	--	--	--	--	--
B-2 (VE-1/SP-1	10/20/92	18.5	<1.0	0.007*	0.029*	<0.005*	<0.005*	--	--	--	--	--	--	--	--
1984-1989															
B3-15 (MW-A)	09/27/84	15	--	**27**	**190**	**86**	**310**	--	--	--	--	--	--	--	--
B4-15 (MW-B)	09/27/84	15	--	**0.15**	0.97	0.83	3.1	--	--	--	--	--	--	--	--
Bottom	06/26/85	--	3.2*	**0.58***	0.24*	0.40*	0.009*	--	--	--	--	--	--	--	ND
North	06/26/85	--	1.4*	<0.001*	<0.001*	<0.001*	<0.001*	--	--	--	--	--	--	--	ND
South	06/26/85	--	<0.01*	<0.001*	<0.001*	<0.001*	<0.001*	--	--	--	--	--	--	--	ND
East	06/26/85	--	1.3*	0.02*	0.02*	0.01*	0.01*	--	--	--	--	--	--	--	ND
West	06/26/85	--	<0.01*	<0.001	<0.001*	<0.001*	<0.001*	--	--	--	--	--	--	--	ND
MW-5C	11/11/86	14	2.1	0.030	0.025	--	0.070	--	--	--	--	--	--	--	--
MW-6B	11/11/86	10.5	<0.050	0.002	0.005	--	0.003	--	--	--	--	--	--	--	--
SB-1D	12/04/89	12.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
SB-1E	12/04/89	16	**1,500**	**4**	<3	**19**	**24**	--	--	--	--	--	--	--	--
SB-1F	12/04/89	21	5	<1	<3	<4	<15	--	--	--	--	--	--	--	--
SB-1G	12/04/89	27	31	<1	<3	<4	<15	--	--	--	--	--	--	--	--
SB-1H	12/04/89	32	**310**	**1**	**5**	<4	**15**	--	--	--	--	--	--	--	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		←				*miligrams per kilogram (mg/kg)*								→
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***
SB-2A	12/05/89	9.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
SB-2C	12/05/89	14.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
SB-2D	12/05/89	19.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
MW7C	12/05/89	10.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
MW7D	12/05/89	14.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
MW7F	12/05/89	19.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	
MW8C	12/05/89	10	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
MW8D	12/05/89	17.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--
MW8E	12/05/89	20.5	<1	<1	<3	<4	<15	--	--	--	--	--	--	--	--

TABLE 2

SOIL ANALYTICAL DATA
FORMER TEXACO STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethyl-benzene*	*Total Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*	*Other*
	ESL		*miligrams per kilogram (mg/kg)*												
Soil Leaching Screening Level (Drinking Water Sourse) Table G			***83***	***0.044***	***2.9***	***3.3***	***2.3***	***0.023***	***0.075***	***NE***	***NE***	***NE***	***0.0045***	***0.0003***	***--***
Soil Direct Exposure Construction/Trench Worker Table K-3			4200	12	650	210	420	2,800	320,000	***NE***	***NE***	***NE***	21	1.7	***--***

Notes:

Total petroleum hydrocarbons as fuel (TPH) analyzed by EPA method 8020 unless otherwise noted

Total petroleum hydrocarbons as gasoline (TPHg) analyzed by EPA method 8015B modified unless otherwise noted

Benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary-butyl ether (MTBE); t-butyl alcohol (TBA); di-isopropyl ether (DIPE); ethyl tertiary-butyl ether (ETBE); t-amyl methyl ether (TAME); 1,2-dichloroethane (1,2-DCA); 1,2-dibromoethane (EDB) by EPA method 8260B unless otherwise noted

Other = 1,2-Dichlorobenzene, 1,3-Dichlorobenzene, 1,4-Dichlorobenzene, Chlorobenzene

Environmental Screening Levels (ESLs) for commerical land use where groundwater is a current or potential drinking water source from *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater* presented by the California Regional Water Quality Control Board - San Francisco Bay Region Interim Final November 2007, revised May 2008.

NE = Not established

fbg = feet below grade

ND = Not detected above various laboratory method detection limits

* = Analyzed by EPA method 8020

**=TPHg analyzed by EPA method 8260B

<x = Not detected at reporting limit x

-- = Not analyzed/not applicable

TABLE 3

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

							HYDROCARBONS	*PRIMARY VOCS*			
Location	Date	*TOC*	*DTW*	*GWE*	*LNAPLT*	*LNAPL REMOVED*	*TPH-GRO*	*B*	*T*	*E*	*X*
	Units	*ft*	*ft*	*ft-amsl*	*ft*	*gallons*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*
MW-9 [2]	08/24/2010	523.14	13.58	509.56	-	-	3,500	6	8	180	79
MW-9 [2]	01/31/2011	523.14	12.31	510.83	-	-	68	<0.5	<0.5	3	<0.5
MW-9 [2]	08/09/2011	523.14	12.01	511.13	-	-	54	<0.5	<0.5	<0.5	<0.5
MW-9 [2]	02/09/2012	523.14	13.05	510.09	-	-	5,300	6	7	250	120
MW-9 [2, 5]	**05/10/2012**	**523.14**	**12.52**	**510.62**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
MW-10 [3]	08/24/2010	523.25	13.07	510.18	-	-	1,300	<0.5	<0.5	2	<0.5
MW-10 [3]	01/31/2011	523.25	11.92	511.33	-	-	250	<0.5	<0.5	<0.5	<0.5
MW-10 [3]	08/09/2011	523.25	11.85	511.40	-	-	300	<0.5	<0.5	<0.5	<0.5
MW-10 [3]	02/09/2012	523.25	12.62	510.63	-	-	140	<0.5	<0.5	<0.5	<0.5
MW-10 [3, 5]	**05/10/2012**	**523.25**	**12.26**	**510.99**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
MW-11 [2]	08/24/2010	523.42	13.80	509.62	-	-	2,000 J	6	2	9	5
MW-11 [2]	01/31/2011	523.42	12.35	511.07	-	-	790	1	<0.5	5	3
MW-11 [2]	08/09/2011	523.42	12.06	511.36	-	-	130	<0.5	<0.5	0.9	<0.5
MW-11 [2]	02/09/2012	523.42	13.06	510.36	-	-	220	<0.5	<0.5	<0.5	<0.5
MW-11 [2, 5]	**05/10/2012**	**523.42**	**12.58**	**510.84**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
MW-12 [3]	08/24/2010	523.12	12.84	510.28	-	-	18,000	210	650	330	1,900
MW-12 [3]	01/31/2011	523.12	12.47	510.65	-	-	9,600	64	180	180	400
MW-12 [3]	08/09/2011	523.12	12.19	510.93	-	-	9,000	71	140	170	580
MW-12 [3]	02/09/2012	523.12	13.11	510.01	-	-	8,700	85	130	170	590
MW-12 [3, 5]	**05/10/2012**	**523.12**	**12.71**	**510.41**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

TABLE 3

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

							HYDROCARBONS	*PRIMARY VOCS*			
Location	Date	*TOC*	*DTW*	*GWE*	*LNAPLT*	*LNAPL REMOVED*	*TPH-GRO*	*B*	*T*	*E*	*X*
	Units	*ft*	*ft*	*ft-amsl*	*ft*	*gallons*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*
MW-13 [3]	08/24/2010	520.88	13.69	507.19	-	-	13,000	810	710	76	660
MW-13 [3]	01/31/2011	520.88	12.21	508.67	-	-	22,000	1,600	1,600	270	1,600
MW-13 [3]	08/09/2011	520.88	11.91	508.97	-	-	12,000	1,200	820	120	710
MW-13 [3]	02/09/2012	520.88	12.83	508.05	-	-	18,000	1,600	3,700	370	2,200
MW-13 [3, 5]	**05/10/2012**	**520.88**	**12.44**	**508.44**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
MW-14 [2]	08/24/2010 [1,**]	520.88	10.36	510.75	0.29	0.00	-	-	-	-	-
MW-14 [2]	01/31/2011 [1,**]	520.88	9.96	511.12	0.25	0.00	-	-	-	-	-
MW-14 [2]	08/09/2011 [1,**]	520.88	9.67	511.35	0.17	0.00	-	-	-	-	-
MW-14 [2]	02/09/2012 [1,**]	520.88	10.69	510.46	0.34	0.00	-	-	-	-	-
MW-14 [2, 5]	**05/10/2012 [1,**]**	**520.88**	**10.18**	**510.91**	**0.26**	**0.00**	**-**	**-**	**-**	**-**	**-**
MW-15 [4]	08/24/2010	520.87	10.81	510.06	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-15 [4]	01/31/2011	520.87	9.86	511.01	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-15 [4]	08/09/2011	520.87	9.56	511.31	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-15 [4]	02/09/2012	520.87	10.44	510.43	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-15 [4, 5]	**05/10/2012**	**520.87**	**10.05**	**510.82**	**-**	**-**	**-**	**-**	**-**	**-**	**-**
MW-16 [3]	08/24/2010	520.50	11.07	509.43	-	-	68	<0.5	<0.5	<0.5	<0.5
MW-16 [3]	01/31/2011	520.50	9.99	510.51	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-16 [3]	08/09/2011	520.50	9.59	510.91	-	-	66	<0.5	<0.5	<0.5	<0.5
MW-16 [3]	02/09/2012	520.50	10.62	509.88	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-16 [3, 5]	**05/10/2012**	**520.50**	**10.18**	**510.32**	**-**	**-**	**-**	**-**	**-**	**-**	**-**

TABLE 3

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

							HYDROCARBONS	*PRIMARY VOCS*			
Location	Date	*TOC*	*DTW*	*GWE*	*LNAPLT*	*LNAPL REMOVED*	*TPH-GRO*	*B*	*T*	*E*	*X*
	Units	*ft*	*ft*	*ft-amsl*	*ft*	*gallons*	µg/L	µg/L	µg/L	µg/L	µg/L
MW-17 [3]	02/07/2012	524.81	14.50	510.31	-	-	-	-	-	-	-
MW-17 [3]	02/09/2012	524.81	14.58	510.23	-	-	<50	<0.5	<0.5	<0.5	<0.5
MW-17 [3]	**05/10/2012**	**524.81**	**14.10**	**510.71**	**-**	**-**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
MW-18 [2]	02/07/2012	522.40	12.01	510.39	-	-	-	-	-	-	-
MW-18 [2]	02/09/2012	522.40	12.06	510.34	-	-	12,000	200	1,300	68	2,200
MW-18 [2]	**05/10/2012**	**522.40**	**11.60**	**510.80**	**-**	**-**	**6,700**	**220**	**390**	**380**	**720**
MW-19 [2]	02/07/2012	522.63	12.30	510.33	-	-	-	-	-	-	-
MW-19 [2]	02/09/2012	522.63	12.39	510.24	-	-	6,700	4	<3	18	35
MW-19 [2]	**05/10/2012**	**522.63**	**11.92**	**510.71**	**-**	**-**	**1,500**	**<0.5**	**<0.5**	**0.7**	**0.9**
MW-20 [2]	02/07/2012	520.28	9.60	510.68	-	-	-	-	-	-	-
MW-20 [2]	02/09/2012	520.28	9.68	510.60	-	-	9,100	3	94	200	600
MW-20 [2]	**05/10/2012**	**520.28**	**9.32**	**510.96**	**-**	**-**	**3,900**	**<5**	**28**	**42**	**230**
QA	08/24/2010	-	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5
QA	01/31/2011	-	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5
QA	08/09/2011	-	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5
QA	02/09/2012	-	-	-	-	-	<50	<0.5	<0.5	<0.5	<0.5
QA	**05/10/2012**	**-**	**-**	**-**	**-**	**-**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

TABLE 3

GROUNDWATER MONITORING AND SAMPLING DATA
FORMER TEXACO SERVICE STATION 211253
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

							HYDROCARBONS	*PRIMARY VOCS*			
Location	Date	*TOC*	*DTW*	*GWE*	*LNAPLT*	*LNAPL REMOVED*	*TPH-GRO*	*B*	*T*	*E*	*X*
	Units	*ft*	*ft*	*ft-amsl*	*ft*	*gallons*	*µg/L*	*µg/L*	*µg/L*	*µg/L*	*µg/L*

Abbreviations and Notes:

TOC = Top of casing

DTW = Depth to water

GWE = Groundwater elevation

(ft-amsl) = Feet above mean sea level

ft = Feet

µg/L = Micrograms per Liter

TPH-GRO = Total petroleum hydrocarbons - gasoline range organics

VOCS = Volatile organic compounds

B = Benzene

T = Toluene

E = Ethylbenzene

X = Xylenes (Total)

-- = Not available / not applicable

<x = Not detected above laboratory method detection limit

J = Estimated concentration

* TOC elevations were surveyed on July 22, 2009, by Morrow Surveying. Vertical datum is NAVD 88 from GPS Observations.

** GWE was corrected for the presence of LNAPL; correction factor: [(TOC - DTW) + (LNAPLT x 0.80)].

1 Not sampled due to the presence of LNAPL.

2 Shallow well

3 Intermediate well

4 Deep well

5 Sampled semi-annually during the first and third quarters

TABLE 4

GROUNDWATER ANALYTICAL DATA
FORMER TEXACO STATION (CHEVRON SITE #211253)
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*
			← *Reported in micrograms per liter (µg/L)* →											
ESLs for Final Screening Levels where Groundwater is a Potential or Current Drinking Water Resource (Table F-1a)			***100***	***1.0***	***40***	***30***	***20***	***5.0***	***12***	***NE***	***NE***	***NE***	***0.5***	***0.05***
ESLs for Potential Vapor Intrusion Into Buildings Comercial/Industrial (Table E-1a)			***Uses soil gas***	***1,800***	***530,000***	***170,000***	***160,000***	***80,000***	***Uses soil gas***	***NE***	***NE***	***NE***	***690***	510
First Semi-Annual 2011 Groundwater Monitoring and Sampling Event														
MW-9	1/31/2011	5-15 ***	68	<0.5	3	<0.5	<0.5	--	--	--	--	--	--	--
MW-10	1/31/2011	22-27 ***	**250**	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-11	1/31/2011	5-15 ***	**790**	**1**	<0.5	5	3	--	--	--	--	--	--	--
MW-12	1/31/2011	22-27 ***	**9,600**	**64**	**180**	**180**	**400**	--	--	--	--	--	--	--
MW-13	1/31/2011	32-37 ***	**22,000**	**1,600**	**1,600**	**270**	**1,600**	--	--	--	--	--	--	--
MW-14	1/31/2011	5-15 ***			**Not Sampled due to LNAPL**			--	--	--	--	--	--	--
MW-15	1/31/2011	42-47 ***	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
MW-16	1/31/2011	25-30 ***	<50	<0.5	<0.5	<0.5	<0.5	--	--	--	--	--	--	--
CRA 2007 - 2008 Subsurface Investigation														
CPT1	11/26/2007	16	**1,700**	**7**	**110**	21	**140**	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT1	11/26/2007	24	**160,000**	**4,200**	**20,000**	**1,700**	**15,000**	<25	<100	<25	<25	<25	<25	<25
CPT1	11/26/2007	34	**30,000**	**1,500**	**1,600**	**710**	**2,900**	<2	<8	<2	<2	<2	<2	<2
CPT2	11/20/2007	16	<50	0.6	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT2	11/20/2007	24	**2,000**	<0.5	<0.5	0.6	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT2	11/20/2007	34	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	**4**
CPT3	4/7/2008	26	**1,500**	**1**	**1**	<0.5	1	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT3	4/7/2008	40	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT3	4/7/2008	50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT4	7/14/2008	24	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT4	7/14/2008	48	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5

TABLE 4

GROUNDWATER ANALYTICAL DATA
FORMER TEXACO STATION (CHEVRON SITE #211253)
930 SPRINGTOWN BOULEVARD
LIVERMORE, CALIFORNIA

Sample ID	*Date*	*Depth (fbg)*	*TPHg*	*Benzene*	*Toluene*	*Ethylbenzene*	*Xylenes*	*MTBE*	*TBA*	*DIPE*	*ETBE*	*TAME*	*1,2-DCA*	*EDB*
			Reported in micrograms per liter (µg/L)											
ESLs for Final Screening Levels where Groundwater is a Potential or Current Drinking Water Resource (Table F-1a)			***100***	***1.0***	***40***	***30***	***20***	***5.0***	***12***	***NE***	***NE***	***NE***	***0.5***	***0.05***
ESLs for Potential Vapor Intrusion Into Buildings Comercial/Industrial (Table E-1a)			***Uses soil gas***	***1,800***	***530,000***	***170,000***	***160,000***	***80,000***	***Uses soil gas***	***NE***	***NE***	***NE***	***690***	510
CPT5	4/9/2008	28	**200**	0.5	6.0	6.0	**31**	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT5	4/9/2008	38	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT5	4/9/2008	45	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT6	11/19/2007	32	94	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT6	11/20/2007	48	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<2	<0.5	<0.5	<0.5	<0.5	<0.5
CPT7	4/8/2008	13	**3,600**	**21**	25	**47**	**110**	<0.5	<2	<0.5	<0.5	<0.5	<0.5	**0.8**
CPT7	4/9/2008	43	**11,000**	**3**	**270**	**490**	**2,100**	<1	<5	<1	<1	<1	<1	<1
1985 GTI Hydrocarbon Investigation														
MW-A	8/1/1985	--	**184,000***	**8,950****	**54,300****	**13,700****	**52,100****	--	--	--	--	--	--	--
MW-B	8/1/1985	--	**29,400***	**2,590****	**12,300****	**2,880****	**10,100****	--	--	--	--	--	--	--
MW-1	8/1/1985	--	10*	ND**	4**	2**	8**	--	--	--	--	--	--	--
MW-2	8/1/1985	--	**390***	**9****	9**	3**	6**	--	--	--	--	--	--	--
MW-3	8/1/1985	--	**1,340***	**20****	4**	1**	**26****	--	--	--	--	--	--	--

Notes:

Total petroleum hydrocarbons as gasoline (TPHg) analyzed by EPA Method 8015B modified unless otherwise noted

Benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary-butyl ether (MTBE); t-butyl alcohol (TBA); di-isopropyl ether (DIPE); ethyl tertiary-butyl ether (ETBE); t-amyl methyl ether (TAME); 1,2-dichloroethane (1,2-DCA); 1,2-dibromoethane (EDB)

ESL's = Environmental Screening Levels for groundwater that is a current or potential drinking water source (commercial/industrial land use) from Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater Interim Final November 2

* =Reported as C4-C12 Aliphatic Hydrocarbons analyzed by EPA Method 602

**= Analyzed by EPA Method 602

fbg = feet below grade

<x = Not detected at reporting limit x

ND = Not detected above various laboratory method detection limits

NE= Not Established

-- = Not analyzed/not applicable

APPENDIX A

REGULATORY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

April 30, 2012

Ms. Roya Kambin
Chevron Environmental Management Company
6101 Bollinger Canyon Road, 5th Floor
San Ramon, CA 94583-5186
(Sent via E-mail to: RKLG@chevron.com)

Mr. Ken Hilliard
Environmental Services
7-Eleven, Inc.
One Arts Plaza, 1722 Routh St., Suite 1000
Dallas, TX 75201

Subject: Case File Review for Fuel Leak Case No. RO0000189 and GeoTracker Global ID T0600101353, Chevron #21-1253/Texaco, 930 Springtown Boulevard, Livermore, CA 94550

Dear Ms. Kambin and Mr. Hilliard:

Alameda County Environmental Health (ACEH) staff has reviewed the fuel leak case file for the above-referenced site, including the documents entitled, "*Subsurface Investigation Report*," dated March 22, 2012 and "*First Quarter 2012 Groundwater Monitoring and Sampling Report*," dated March 22, 2012. The "*Subsurface Investigation Report*," which was prepared on Chevron's behalf by Conestoga-Rovers & Associates, presents the results from installation of four monitoring wells and a geophysical survey. One off-site well that was proposed for downgradient delineation was not installed. The Report recommends preparation of a Feasibility Study/Corrective Action Plan.

We request that you submit a Draft Feasibility Study/Corrective Action Plan no later than July 6, 2012. Public participation is a requirement for the Corrective Action Plan (CAP) process. Therefore, we request that you submit a Draft CAP for ACEH review. Upon ACEH approval of the Draft CAP, potentially affected members of the public who live or own property in the surrounding area of the proposed remediation described in the Draft CAP will be notified of the proposed remedial action. Public comments on the proposed remediation will be accepted for a 30-day period. We request that you perform the proposed work and send us the reports described below.

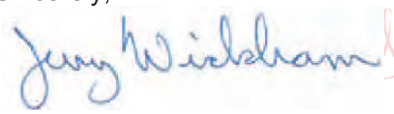
TECHNICAL REPORT REQUEST

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

- **July 6, 2012** – Draft Feasibility Study/Corrective Action Plan
- **30 days following end of quarter** – Quarterly Groundwater Monitoring Report

If you have any questions, please call me at 510-567-6791 or send me an electronic mail message at jerry.wickham@acgov.org. Online case files are available for review at the following website: http://www.acgov.org/aceh/index.htm. If your email address does not appear on the cover page of this notification, ACEH is requesting you provide your email address so that we can correspond with you quickly and efficiently regarding your case.

Sincerely,



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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Danielle Stefani, Livermore Pleasanton Fire Department, 3560 Nevada St, Pleasanton, CA 94566 (*Sent via E-mail to: dstefani@lpfire.org*)

Colleen Winey (QIC 8021), Zone 7 Water Agency, 100 North Canyons Pkwy, Livermore, CA 94551 (*Sent via E-mail to: cwiney@zone7water.com*)

Kiersten Hoey, Conestoga-Rovers & Associates, 5900 Hollis Street, Suite A, Emeryville, CA 94608 (*Sent via E-mail to: khoey@craworld.com*)

Donna Drogos, ACEH (*Sent via E-mail to: donna.drogos@acgov.org*)
Jerry Wickham, ACEH (*Sent via E-mail to: jerry.wickham@acgov.org*)

GeoTracker, eFile

Attachment 1

Responsible Party(ies) Legal Requirements / Obligations

REPORT REQUESTS

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.waterboards.ca.gov/water_issues/programs/ust/electronic_submittal/).

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.

Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC)	**REVISION DATE:** July 20, 2010
	ISSUE DATE: July 5, 2005
	PREVIOUS REVISIONS: October 31, 2005; December 16, 2005; March 27, 2009; July 8, 2010
SECTION: Miscellaneous Administrative Topics & Procedures	**SUBJECT:** Electronic Report Upload (ftp) Instructions

The Alameda County Environmental Cleanup Oversight Programs (LOP and SLIC) require submission of all reports in electronic form to the county's ftp site. Paper copies of reports will no longer be accepted. The electronic copy replaces the paper copy and will be used for all public information requests, regulatory review, and compliance/enforcement activities.

REQUIREMENTS

- **Please do not submit reports as attachments to electronic mail.**
- Entire report including cover letter must be submitted to the ftp site as **a single portable document format (PDF) with no password protection**.
- 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)

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 deh.loptoxic@acgov.org
   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, Safari, and Firefox browsers will not open the FTP site as they are NOT being supported at this time.
   b) Click on Page located on the Command bar on upper right side of window, and then scroll down to Open FTP Site in Windows Explorer.
   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 deh.loptoxic@acgov.org notify us that you have placed a report on our ftp site.
   b) Copy your Caseworker on the e-mail. Your Caseworker's e-mail address is the entire first name then a period and entire last name @acgov.org. (e.g., firstname.lastname@acgov.org)
   c) The subject line of the e-mail must start with the RO# followed by **Report Upload**. (e.g., Subject: RO1234 Report Upload) If site is a new case without an RO#, use the street address instead.
   d) If your document meets the above requirements and you follow the submission instructions, you will receive a notification by email indicating that your document was successfully uploaded to the ftp site.

APPENDIX B

SITE HISTORY

PREVIOUS ENVIRONMENTAL INVESTIGATION AND REMEDIATION
FORMER TEXACO 211253
930 SPRINGTOWN BOULEVARD, LIVERMORE, CALIFORNIA

1984 Initial Investigation

In September 1984, J.H. Kleinfelder and Associates (Kleinfelder) discovered approximately 1-inch of light non-aqueous phase liquid (LNAPL) adjacent to the underground storage tanks (USTs) during an initial investigation. It appears that Kleinfelder installed monitoring wells MW-A and MW-B in September 1984. No additional information was located by CRA.

1985 Hydrocarbon Investigation and UST/Product Line Removal

In May through July 1985, Groundwater Technology Incorporated (GTI) installed monitoring wells MW-1 through MW-3 around the UST pit to assess the extent of hydrocarbons detected by Kleinfelder. On June 26, 1985, GTI collected soil samples beneath the USTs and product lines during the decommissioning of the Texaco station including UST and product line removal. GTI conducted a ½-mile well survey through the Alameda Flood Control and Water Conservation District. Eight wells were identified north, east, and south of the site. Additional information is available in GTI's August 1985 *Hydrocarbon Investigation Report*.

1985 Monitoring Well Installation

In September 1985, GTI installed well MW-4. Additional information is available in GTI's September 17, 1985 Untitled Report.

1986 Monitoring Well Installation

In November 1986, GTI installed wells MW-5 and MW-6. Additional information is available in GTI's March 23, 1987 *Status Report*.

1989 Additional Site Assessment

In December 1989, GTI advanced soil borings SB-1 and SB-2 and installed monitoring wells MW-7 and MW-8. More information available in GTI's April 10, 1990 *Report of Additional Environmental Site Assessment.*

1991 Soil Vapor Extraction (SVE) Pilot Test

In July 1991, GTI conducted a SVE pilot test. The radius of vacuum influence was calculated as less than 30 feet. At a flow rate of 100 cubic feet per minute, the hydrocarbon removal rate from MW-5 was calculated to be 135 pounds/day. More information is available in GTI's September 12, 1991 *Work Plan for Soil and Groundwater Remediation*.

1993 Extraction Well Installation and Feasibility Testing

In October 1992, Weiss Associates (WA) installed groundwater extraction well EW-1, vapor extraction well VE-1, and air sparge well SP-1. In November 1992, WA conducted a 24 hour aquifer test using EW-1. Groundwater was extracted at an average flow rate of 7.85 gallons per minute (gpm). The average aquifer transmissivity was estimated to be 3,400 gallons per day per foot. Although most of the monitoring wells are screened over a length of 20 feet, boring logs indicate that the more permeable, sandy gravel zone is 15 feet thick. Using this thickness, an average hydraulic conductivity value of 225 gpd/ft^2 (0.021 ft/min), and a specific storage of 0.001 ft^{-1} are estimated for this aquifer. WA also conducted a vapor extraction test on vapor extraction well VE-1, groundwater extraction well EW-1, and existing monitoring wells MW-A, MW-B and MW-5. The hydrocarbon mass removal rate ranged between 0.3 and 127 pounds/day total petroleum hydrocarbons as gasoline. WA conducted an air sparging test from the air sparge well SP-1 and vapor extraction wells VE-1, and concluded that air sparging with vapor extraction would effectively remove hydrocarbons from saturated sediments. Additional information is available in WA's January 5, 1993 *Extraction Well Installation and Feasibility Testing.*

1994 Remediation System Start-Up

In November 1994, GTI started operation of a 100 cfm King Buck/Hasstech MMC-5a catalytic oxidizer SVE\Air Sparge system. The system was connected to wells MW-A, MW-B, MW-3, MW-5, VE-1, and SP-1. The system operated intermittently through August 1995, when it was shutdown due low hydrocarbon removal rates. Additional information including system diagrams, startup testing, sampling activities and laboratory analytical data are available in GTI's March 10, 1995 *Remediation System Start-up/Air Monitoring and Sampling Report.*

1996 Well Destruction Report

In February 1996, Kaprealian Engineering Incorporated (KEI) destroyed wells MW-6 and MW-7. Additional information is available in KEI's January 22, 1996 *Report of Destruction of Monitoring Wells.*

1997 Tier 2 Risk Based Corrective Action Analysis

In December 1997, KEI submitted a summary of the input parameters to be used for a subsequent Tier 2 Risk-Based Corrective Action (RBCA) analysis, including subsurface soil and groundwater sample analytic results. KEI modeled BTEX concentrations and concluded no onsite Site-Specific Target Levels were exceeded for any of the pathways modeled. Additional information available in KEI's October 31, 1997 *Risk-Based Corrective Action Analysis*.

2001 RBCA Vadose Zone Investigation and RBCA Analysis

In August 2001, KHM Environmental Management (KHM) submitted an addendum to the previous RBCA in response to an ACEH email requesting an evaluation of risk to a "Residential Setting" and risk associated with potential vapor intrusion to the onsite building. In June 2001, KHM advanced geoprobe borings GP-1 through GP-4. Borings GP-1 and GP-3 were advanced adjacent to groundwater monitoring wells with the highest hydrocarbon concentrations (MW-A and MW-B), GP-2 was advanced outside of the UST complex area, and GP-4 was advanced on the east side of the former UST complex. Borings GP-1, GP-3, and GP-4 were first advanced to 3 fbg for collection of a vadose zone soil gas samples, then advanced to first encountered groundwater at approximately 15 fbg. KHM concluded the only potential pathway of exposure for a residential setting was vapor intrusion; however because no benzene was detected in vadose zone soil gas, there was no risk to human health or the environment. Additional information is available in KHM's August 13, 2001 *Vadose Zone Investigation and Risk-Based Correction Action (RBCA) Analysis.*

2001 Closure Request

In December 2001, KHM submitted a case closure request under the direction of ACEH. KHM concluded all hydrocarbon sources had been removed, the SVE system adequately removed hydrocarbons from the vadose zone, the dissolved hydrocarbons were defined and limited in extent, and no sensitive receptors were at risk. Additional information is available in KHM's December 10, 2001 letter requesting closure.

2002 Case Closure

ACEH's March 2002 letter stated the Regional Water Quality Control Board (RWQCB) concurred with ACEH's recommendation for case closure, and all wells must be destroyed prior to issuing a "Remedial Action Completion" letter.

2002 Well Destruction

In December 2002, KHM destroyed onsite and offsite wells MW-1 through MW-5, MW-A, MW-B, EW-1, VE-1, and SP-1 by pressure grouting. Additional information is available in KHM's January 7, 2003 *Well Destructions – MW-1 through MW-5, MW-8, MW-A, MW-B, EW-1, VE-1 and SP-1.*

2007/2008 Subsurface Investigation

By January 2007, no "Remedial Action Completion" letter had been issued by ACEH or the RWQCB. In a letter dated January 31, 2007, ACEH requested horizontal and vertical delineation of the hydrocarbon plume, preferential pathway evaluation, and well decommissioning documentation. In 2007 and 2008, to address the ACEH's technical comments and re-evaluate the site for closure, Conestoga-Rovers & Associates (CRA) advanced cone penetration testing

(CPT) borings CPT1 through CPT7 both on and offsite. Additional information is available in CRA's August 13, 2008 *Subsurface Investigation Report.*

2009 Altamont Pipeline Excavation

In 2009, the Zone 7 water agency installed the Altamont pipeline along the northern boundary of the site property. According to conversations with the water agency, an excavation approximately 6 feet wide by 15 feet deep was advanced removing approximately 240 cubic yards of soil. According to the water agency, no further details regarding this excavation are available.

2009 Monitoring Well Installation

In July 2009, CRA installed monitoring wells MW-9 through MW-16 to delineate dissolved hydrocarbon concentrations. The monitoring wells were installed at three different levels: shallow wells MW-9, MW-11, and MW-14, intermediate wells MW-10, MW-12, MW-13, and MW-16, and deep well MW-15. Additional information is available in CRA's August 19, 2009 *Monitoring Well Installation Report.*

2012 Monitoring Well Installation

In January 2012, CRA installed onsite monitoring wells MW-17, MW-18, MW-19, and MW-20. The offsite monitoring well, proposed in the sidewalk on the south side of Springtown Boulevard, could not be installed. During borehole clearance, pea gravel was encountered at 4.5 fbg which likely indicated the presence of an underground utility, and the well could not be safely installed. There was no alternative location due to the adjacent Altamont Pipeline and electrical utilities in the surrounding area. CRA also conducted a preferential pathway study and an onsite geophysical survey to search for a potential secondary onsite source. No UST that could be a secondary source was identified beneath the site during the geophysical survey. It does not appear any underground utilities are acting as preferential pathways for offsite hydrocarbon migration. Details are available in CRA's March 22, 2012 *Subsurface Investigation Report.*

APPENDIX C

HISTORICAL BORING AND WELL LOGS

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling Log

Well Number 1

Project Texaco/Livermore Owner Southland Corp.

Location Springtown&Lassen Project Number 20-4051

Date Drilled 6-20-85 Total Depth of Hole 25 ft. Diameter 7.5 in.

Surface Elevation ____ Water Level, Initial ____ 24-hrs. 11.68

Screen: Dia. 4-inch Length 20-feet Slot Size .020 in.

Casing: Dia. 4-inch Length 5-feet Type PVC

Drilling Company Sierra Pacific Drilling Method H.S. Auger

Driller Lynn Pera Log by Cori Condon

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes Blow Counts	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
1					Asphalt and fill sand and gravel.
2					Brown sandy clay, damp, no odor.
6					Brown-green fine sand with subangular white gravels, damp, no odor.
7.5					Brown-green silty fine sand, stiff, damp, no odor.
10					Brown-green silty fine sand with rounded cobbles and gravels, moist, no odor.
12					Cobbles and gravels in fine sand, moist, no odor.
15		11-12-24	#1 ▽		Gray brown fine sand and silt, less cobbles and pea size gravels, moist, no odor.
20		12-18-18	#2		Gray-brown coarse sand, wet, no odor.
25					Gray-brown coarse sand, wet, no odor, contact with brown sandy clay.
					Drilled 25 feet Cased 20 feet slotted, 5 feet blank Aquarium sand to 3 feet Cement seal to surface Finish with steel manhole

02100144

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling Log

Well Number 2

Project Texaco/Livermore Owner Southland Corp.

Location Springtown & Lassen Project Number 20-4051

Date Drilled 6-20-85 Total Depth of Hole 24 ft. Diameter 7.5 in.

Surface Elevation ____ Water Level, Initial ____ 24-hrs. 10.30

Screen: Dia. 4-inch Length 20-feet Slot Size .020 in.

Casing: Dia. 4-inch Length 4-feet Type PVC

Drilling Company Sierra Pacific Drilling Method H.S. Auger

Driller Lynn Pera Log by Cori Condon

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes Blow Counts	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
1					Asphalt and fill.
					Red-brown clayey sand, occasional gravel, damp, no odor.
9.5					
10		21-33-35	#3		Gray sand and gravel, wet, no odor.
15		9-25-25	#4		Gray sand and gravel, grading to cobbles, wet, very slight gas odor.
20		14-56+	Lost Sample		Gray sand and gravel, wet, slight gas odor, contact with sandy clay.
25					Drilled 25 feet Cased 20 feet slotted, 4 feet blank Aquarium sand to 3 feet Cement seal to surface Finished with steel manhole.

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling Log

Well Number 3

Project Texaco/Livermore Owner Southland Corp

Location Springtown & Lassen Project Number 20-4051

Date Drilled 6-20-85 Total Depth of Hole 24 ft. Diameter 7.5 in

Surface Elevation ____ Water Level, Initial ____ 24-hrs. 11.59

Screen: Dia. 4-inch Length 20-feet Slot Size .020 in

Casing: Dia. 4-inch Length 4-feet Type PVC

Drilling Company Sierra Pacific Drilling Method H.S. Auger

Driller Lynn Pera Log by Cori Condon

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes Blow Counts	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
1					Asphalt and fill.
					Light brown sandy clay with occasional gravel, damp, no odor.
7					Light brown sandy clay with occasional gravel, moist, gasoline odor.
10		13-27-37	# 5		Gray sand and gravel, wet, slight gasoline odor.
15		6-9-19	# 6		Gray sand and gravel, wet, slight gas odor, contact with sandy clay.
20		5-7-12	# 7		Mottled sandy clay, moist, slight gasoline odor.
25		8-22-25	# 8		Gray sand, wet, no odor.
26.5					Drilled 25 feet Cased 20 feet slotted, 4 feet blank Aquarium sand to 3 feet Cement seal to surface Finished with steel manhole

GROUNDWATER TECHNOLOGY

Division of Oil Recovery Systems, Inc.

Drilling Log

Well Number 4

Project Texaco/Livermore Owner Texaco U.S.A., Inc.

Location Springtown/Bluebell Project Number 20-4051

Date Drilled 9/10/85 Total Depth of Hole 25-ft. Diameter 7.5-ft.

Surface Elevation _____ Water Level, Initial 10-ft. 24-hrs. 10.49

Screen: Dia. 3-in. Length 20-ft. Slot Size .020-in.

Casing: Dia. 3-in. Length 5-ft. Type PVC

Drilling Company Sierra Pacific Drilling Method Hollow Stem Auger

Driller Lynn Pera Log by C. Condon

Sketch Map

Notes

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
0					Dark brown silty clay, occasional gravel, damp, no odor.
1					
2					
3					Light brown sandy silt, damp, no odor.
4					
5					
6					
7					Light brown sandy clay, moist, no odor.
8					
9					
10		3-6-7	1		Light brown coarse sandy clay, wet, no odor.
11					
12					
13					
14					
15					
16					
17					Drilled 27 feet
18					Sand Pack to 4 feet
19					Bentonite and Cement Seal to Surface, Finished with Steel Locking Casing
20					
21					
22					
23					
24					
25					

02100144

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS

Monitoring Well 5

Drilling Log

Project Texaco/Livermore Owner Texaco U.S.A.

Location 930 Springton Blvd Project Number 20-4051

Date Drilled 11/10/86 Total Depth of Hole 30 ft Diameter 7.5 in.

Surface Elevation ____ Water Level, Initial 12 ft. 24-hrs. ____

Screen: Dia. 2 in. Length 25 ft. Slot Size .020 in.

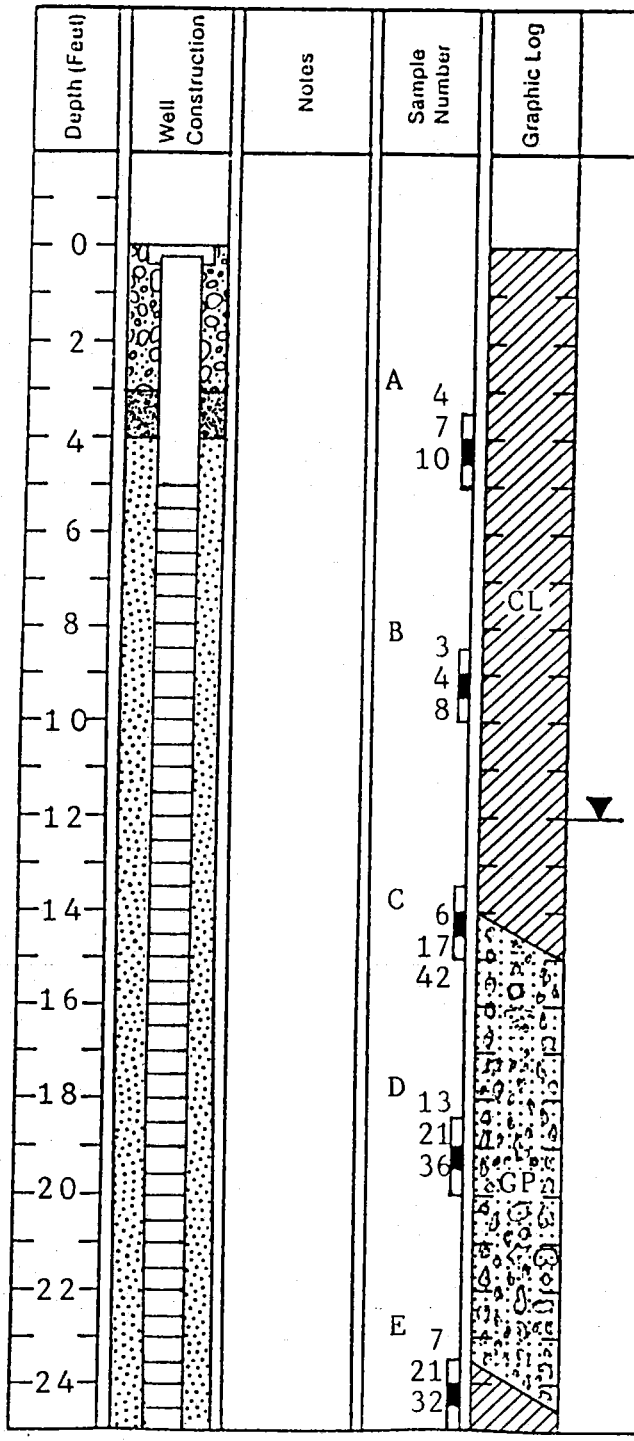
Casing: Dia. 2 in. Length 5 ft. Type PVC

Drilling Company Sierra Pacific Drilling Method hollow stem auger

Driller M. Isom Log by M. Winters

Sketch Map

Notes



Description/Soil Classification

Brown, silty clay, (some gravel and sand, very stiff, moist, no odor).

(Increase in sand, light brown color).

(Decrease in sand, increase in moisture).

(Increase in sand and silt, organics).

11/10/86 (1000)

Multi-colored, fine to coarse gravel, (some sand, poorly sorted, very dense, wet, moderate product odor).

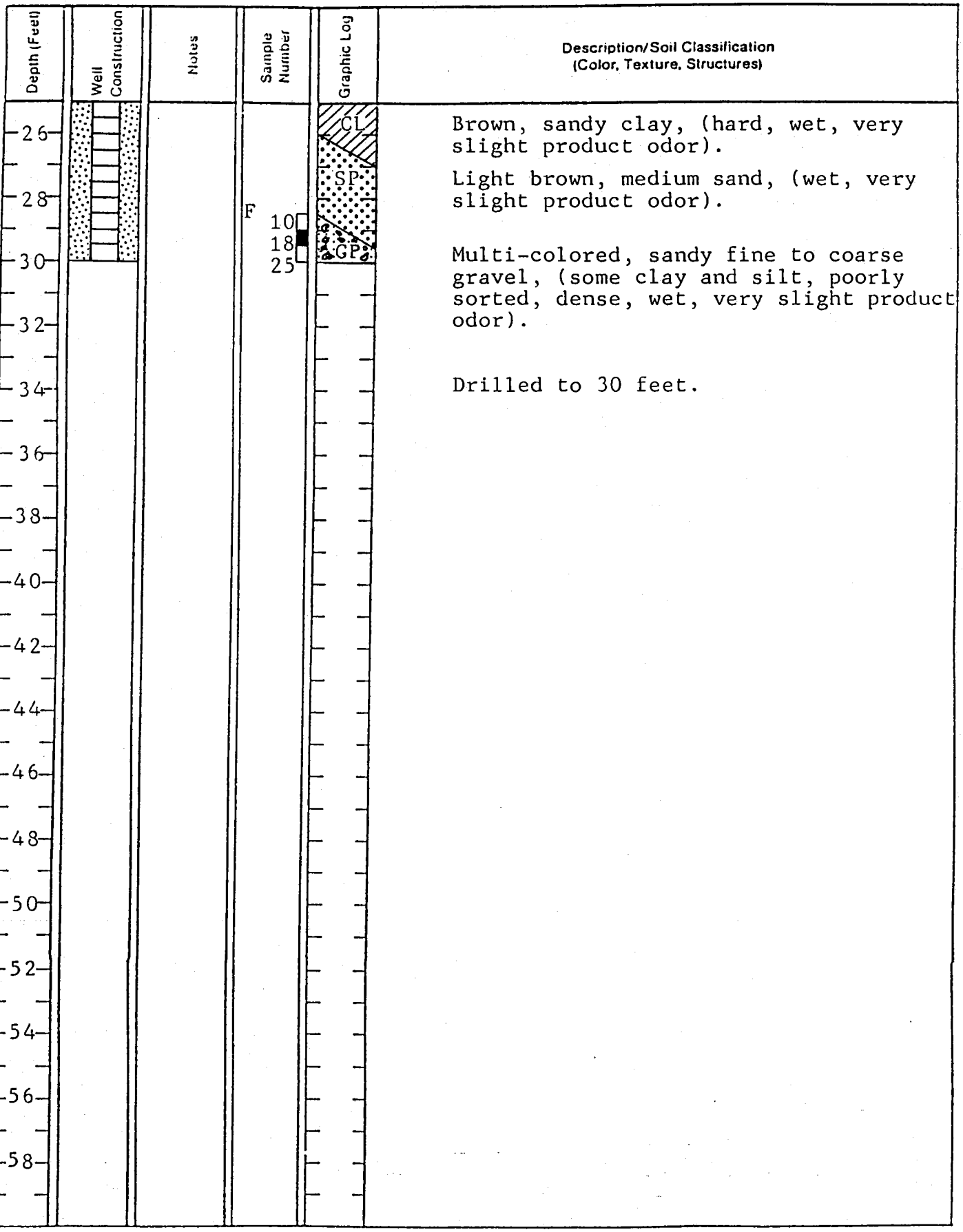
(Slight product odor).

02100144

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS

Monitoring Well 5

Drilling Log



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GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS

Monitoring Well 6

Drilling Log

Project Texaco/Livermore Owner Texaco U.S.A.

Location 930 Springton Blvd. Project Number 20-4051

Date Drilled 11/10/86 Total Depth of Hole 25 ft Diameter 7.5 in.

Surface Elevation ____ Water Level, Initial 13 ft. 24-hrs. ____

Screen: Dia. 2 in. Length 20 ft. Slot Size .020 in.

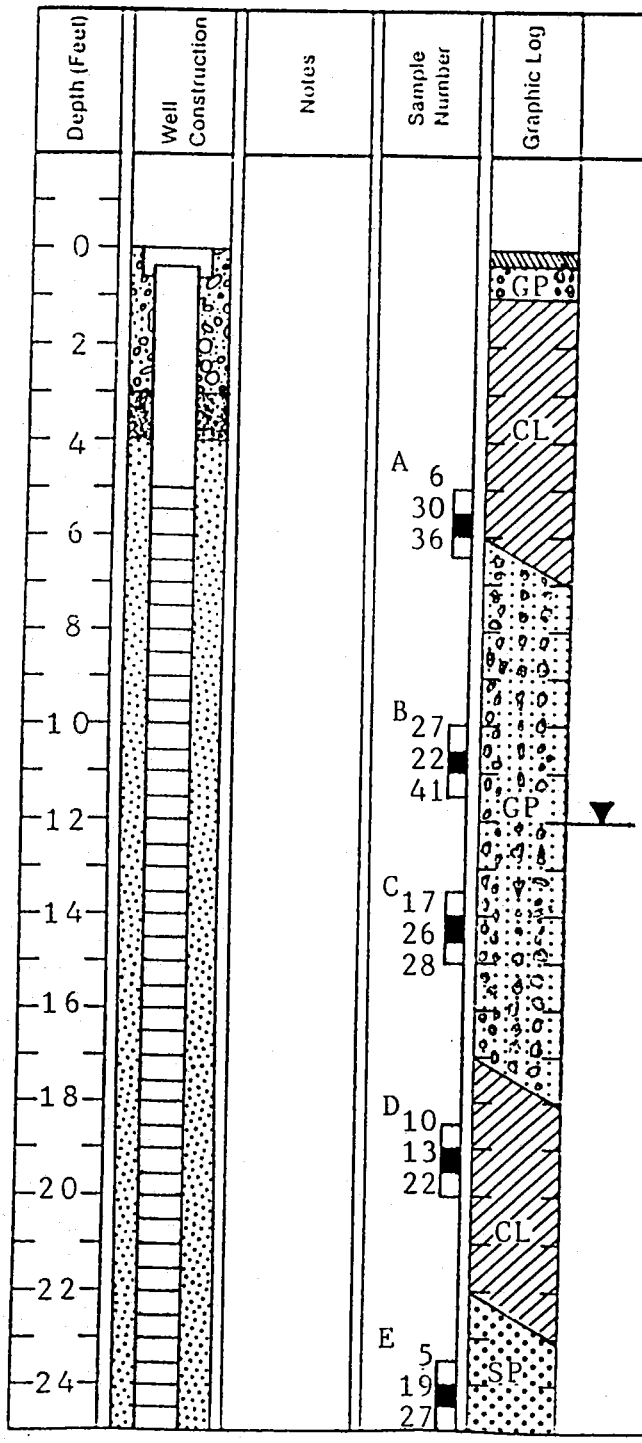
Casing: Dia. 2 in. Length 5 ft. Type PVC

Drilling Company Sierra Pacific Drilling Method hollow stem auger

Driller M. Isom Log by M. Winters

Sketch Map

Notes



Description/Soil Classification

Asphalt

Brown, sandy gravel fill, (slightly moist, very slight product odor).

Brown, silty clay, (some gravel and sand, very stiff, moist, no odor).

(Light brown color)

Multi-colored, sandy fine to coarse gravel,(some clay and sand, poorly sorted, very dense, moist, no odor).

11/10/86 (1530)

(Decrease in sand and clay, wet).

Brown, sandy clay, (some silt, hard, wet, no odor).

Light brown, medium sand, (dense, wet, no odor).

Drilled to 25 feet.

02100144

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 7

Project Texaco/Livermore Owner Texaco Refining and Marketing
Location Livermore Project Number 203 150 4051
Date Drilled 12/5/89 Total Depth of Hole 25 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 13 ft 24-hour ____
Screen: Dia. 4 in Length 20 ft Slot Size 0.020 in
Casing: Dia. 4 in Length 5 ft Type Sch. 40 PVC
Drilling Company Sierra Pacific Drilling Method hollow stem auger
Driller Chris DeSocio Log by Steve Kranyak
Geologist/Engineer ABStorm License No. R64394

Sketch Map

SEE SITE MAP

Notes

Continuously sampled

Depth (Feet)	Well Construction	PID (ppm)	Sample	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0		0			3 inches asphalt over 2 inches aggregate base
2				CL	Brown gravelly, silty, sandy clay (soft, slightly moist, no product odor)
4		0			
6			A		Brown sandy, silty, gravelly clay (stiff, slightly moist, stiff, no product odor)
8		0		CL	(grades more stiff)
10		0	B		(grades light brown and tan)
12			C		
14		0			▼ Encountered water 12/5/89 (15:30 hours) (grades wet)
16			D		Brown and black mottled sandy, silty, clayey gravel (loose, wet, no product odor)
18		0	E	GC	(grades coarser)
20		0	F		
22					
24		0			End of drilling, installed monitoring well to 25

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Monitoring Well 8

Project Texaco/Livermore Owner Texaco Refining and Marketing
Location Livermore Project Number 203 150 4051
Date Drilled 12/6/89 Total Depth of Hole 25 ft Diameter 10.5 in
Surface Elevation ____ Water Level Initial 15 ft 24-hour ____
Screen: Dia. 4 in Length 20 ft Slot Size 0.02 in
Casing: Dia. 4 in Length 5 ft Type ____
Drilling Company ____ Drilling Method hollow stem auger
Driller Chris DeSocio Log by Steve Kranyak
Geologist/Engineer AB Stam License No. R64394

Sketch Map

SEE SITE MAP

Notes

Continuously sampled

Depth (Feet)	Well Construction	PID (ppm)	Sample	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					6 inches grass and roots
2		0		CL	Tan silty clay with trace gravels (stiff, moist, no product odor)
4		0			
6		0	A		(grades with no gravels)
8		0	B		
10		0	C	SM	Brown fine sand with trace clay, wilt and gravel
12					(grades with cobbles)
14		0			▼ Encountered water 12/6/89 (15:00 hours)
16				SC	Tan, silty, clayey sand (medium dense, wet, no product odor)
18		0	D		
20		0	E		
22					
24		0			End of drilling, installed monitoring well

Conestoga-Rovers & Associates
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-9
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	24-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	24-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.43 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	523.14 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	5 to 15 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	11.0 ft (24-Jun-09) ▽
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	13.00 ft (23-Jul-09) ▼
REMARKS	Hand cleared to 8 fbg. Log is based on well MW-10.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
				0	ML		**Clayey SILT with gravel:** Dark Brown; damp; moderate plasticity.		Portland Type I/II
								3.0	Bentonite Seal
							Sandy SILT: Light brown; damp; low plasticity.		
				5					
					ML				
				10					Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
							▽		
7							▼	13.0	
					SW		**Gravely SAND (F to C):** Dark Grey; wet; non-plastic.		
				15				15.0	Bottom of Boring @ 15 ft

WELL LOG (PID) I:\CHEVRON\0600-\060058~1\0603E2~1\060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-10
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	24-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	24-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.21 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	522.76 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	22 to 27 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	15.0 ft (24-Jun-09)
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	12.59 ft (23-Jul-09)
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	DEPTH (ft bgs)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
			0		**Sandy GRAVEL (Fill):** Grey; damp; non-plastic.	
				ML	**SILT with sand (F):** Brown; damp; low plasticity.	3.0
			5		**Clayey SILT:** Brown; damp; moderate plasticity.	5.0
6		MW-10-10.5	10	ML	Grades to sandy silt @ 13 fbg.	
111		MW-10-15.5	15		**Gravelly SAND (M):** Grey; wet; non-plastic.	15.0
12		MW-10-20.5	20	SP		
			25		**SAND (F to M):** Grey; wet; non-plastic.	24.5
8		MW-10-26		SW		27.0

WELL DIAGRAM: Portland Type I/II; Bentonite Seal; Monterey Sand #2/12; 4"-diam., 0.010" Slotted Schedule 40 PVC; Bottom of Boring @ 27 ft

WELL LOG (PID) I:\CHEVRON\0600-\060058-\10603E2-\1060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-11
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	24-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	24-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.81 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	523.25 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	5 to 15 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	14.0 ft (24-Jun-09) ▽
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	13.05 ft (23-Jul-09) ▼
REMARKS	Hand cleared to 8 fbg. Log based on well MW-13		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	Portland Type I/II
					GM		**Sandy silty GRAVEL (Fill):** Dark grey; damp; non-plastic.	1.5	
					CL		**Silty CLAY with gravel:** Grey; damp; low plasticity.	3.0	Bentonite Seal
				5	ML		**Sandy SILT:** Grey; damp; low plasticity.		
				10	SW		**Gravelly SAND (F to C):** Grey; wet; non-plastic. ▼ ▽	9.0	Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
				15				15.0	Bottom of Boring @ 15 ft

WELL LOG (PID) I:\CHEVRON\0600-\060058~1\0603E2~1\060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

Conestoga-Rovers & Associates
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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-12
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	25-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	25-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.88 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	523.42 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	22 to 27 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	10.0 ft (25-Jun-09) ▽
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	13.03 ft (23-Jul-09) ▼
REMARKS	Hand cleared to 8 fbg. Log based on MW-13.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
					GP		**ASPHALT**	0.5	
							Sandy GRAVEL: Dark grey; damp; non-plastic.	1.5	
					CL		**Silty CLAY with gravel:** Grey; damp; low plasticity.	3.0	
				5	ML		**Sandy SILT with clay:** Grey; damp; low plasticity.		
				10			**Gravelly SAND (F to C):** Grey; wet; non-plastic. ▽ ▼	10.0	Portland Type I/II
				15	SW				
				20			**SAND (M):** Grey; wet; non-plastic.	20.0	Bentonite Seal
				25	SP			27.0	Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
									Bottom of Boring @ 27 ft

WELL LOG (PID) I:\CHEVRON\0600-\060058-\10603E2-\1060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-13
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	25-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	25-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.61 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	523.12 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	32 to 37 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	15.0 ft (25-Jun-09)
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	12.75 ft (23-Jul-09)
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	SAMPLE ID	DEPTH (ft bgs)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
			GP	**ASPHALT**	0.5
				Sandy GRAVEL: Dark brown; damp; non-plastic.	1.5
			CL	**Silty CLAY with gravel:** Dark brown; damp; low plasticity.	3.0
		5	ML	**Sandy SILT with clay:** Brown; damp; low plasticity.	
	MW-13-10.5	10		**Gravelly SAND (F to C):** Grey; wet; non-plastic.	10.0
69	MW-13-15.5	15	SW		
130	MW-13-20.5	20		**SAND (M):** Brown; wet; non-plastic.	20.0
2470	MW-13-25.5	25	SP		
559	MW-13-31	30			
		35			

WELL DIAGRAM: Portland Type I/II; Bentonite Seal; Monterey Sand #2/12 4"-diam.,

WELL LOG (PID) I:\CHEVRON\0600--\060058~1\0603E2~1\060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-13
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	25-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	25-Jun-09

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PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
237		MW-13-36.5					Grades to gravelly sand @ 35 fbg.	37.0	0.010" Slotted Schedule 40 PVC Bottom of Boring @ 37 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-14
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	29-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	29-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	521.20 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	520.88 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	5 to 15 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	13.0 ft (29-Jun-09) ▽
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	10.40 ft (23-Jul-09) ▼
REMARKS	Hand cleared to 8 fbg. Log based on well MW-15.		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
							ASPHALT	0.5	
							Sandy GRAVEL (Fill): Dark grey, damp, non-plastic	1.5	Portland Type I/II Bentonite Seal
							Sandy SILT: Grey, damp, low plasticity.		
				5	ML				
								8.0	
							Silty SAND (M): Dark grey, damp, non-plastic. ▼		Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
				10	SM		▽		
				15				15.0	Bottom of Boring @ 15 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-15
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	30-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	30-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	521.25 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	520.87 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	41.5 to 46.5 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	14.5 ft (30-Jun-09)
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	10.33 ft (23-Jul-09)
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	DEPTH (ft bgs)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)
				GW	**ASPHALT**	0.5
				GW	**Sandy GRAVEL (Fill):** Dark grey; damp; non-plastic.	1.5
					Sandy SILT: Light grey ; damp; low plasticity.	
481				ML		
1278			5			
847						8.0
1505	3 5 6	MW-15-9.5	10	SM	**Silty SAND (F):** Grey; compact; moist; non-plastic.	
490						14.5
756	35 35 50	MW-15-14.5	15	SW	**SAND (F to C):** Dark grey; very dense; wet; non-plastic.	
1185	7 15 18	MW-15-19.5	20	SM	**Silty SAND (F):** Grey; dense; wet; non-plastic.	19.0
490	4 9 12	MW-15-24.5	25	ML	**Sandy SILT:** Light grey; very stiff; damp; low plasticity.	24.0
53	4 6 8	MW-15-29.5	30	SM	**Silty SAND (F to C):** Grey; compact; wet; non-plastic.	28.5
	6 8 11		35			

WELL DIAGRAM: Portland Type I/II

WELL LOG (PID) I:\CHEVRON\0600-\060058~\10603E2~1\060058-BORING LOGS.GPJ DEFAULT.GDT 8/11/09

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-15
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	30-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	30-Jun-09

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PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
		MW-15-34.5							
23	14 28 36			40	SW		**Gravely SAND (F to C):** Grey; very dense; wet; non-plastic.	38.5	Bentonite Seal
	8 12 16			45					Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
								47.0	
							Flowing sands reduced boring depth and prohibited well placement @ bottom of well.		Bottom of Boring @ 47 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-16
JOB/SITE NAME	Former Chevron Station 21-1253	**DRILLING STARTED**	29-Jun-09
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	29-Jun-09
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	23-Jul-09
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	521.08 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	520.50 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVAL**	25 to 30 ft bgs
LOGGED BY	B.Yifru	**DEPTH TO WATER (First Encountered)**	21.0 ft (29-Jun-09)
REVIEWED BY	Brandon S. Wilken P.G. #7564	**DEPTH TO WATER (Static)**	10.63 ft (23-Jul-09)
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
				0			**ASPHALT**	0.5	
							Sandy GRAVEL (Fill): Dark grey; damp; non-plastic.	1.0	
							Silty SAND (M): Brown; damp; non-plastic.		
				5	SM				
								8.0	
							Sandy SILT: Light brown; damp; low plasticity.		
				10					Portland Type I/II
				15	ML				
				20					Bentonite Seal
								23.0	
							Silty SAND (M): Light brown; wet; non-plastic.		
				25	SM				Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
								28.5	
					SW		**SAND (F to C):** Grey; wet; non-plastic.		
				30			Grades to gravelly sand @29.5 fbg.	30.0	Bottom of Boring @ 30 ft

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-17
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	19-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	19-Jan-12
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	07-Feb-12
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	525.37 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	524.81 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVALS**	32 to 37 fbg
LOGGED BY	A Renshaw/G. Wolf	**DEPTH TO WATER (First Encountered)**	15.00 fbg (19-Jan-12)
REVIEWED BY	B. Wilken, PG# 7564	**DEPTH TO WATER (Static)**	14.50 fbg (07-Feb-12)
REMARKS	Utility cleared to 8 fbg by Air Knife		

PID (ppm)	BLOW COUNTS	SAMPLE ID	DEPTH (fbg)	U.S.C.S.	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
					ASPHALT	0.5
					FILL: Gravel Brown; dry; non-plastic.	2.0
					SILT: Brown; dry; moderate plasticity.	
					@ 3 fbg: Thin layer of white SILT	
0		MW-17 @5	5	ML		
			10		@ 10 fbg: Brown; moist	
0		MW-17 @10.5				
			15			15.0
1.4		MW-17 @15.5		GM	**Silty GRAVEL:** Grey; wet; fine sand; small gravel; non-plastic.	
			20			20.0

WELL DIAGRAM: Portland Type I/II

WELL LOG (PID) I:\CHEVRON\0600--\060058~1\10642FB~1\060058-BORING LOGS.GPJ DEFAULT.GDT 2/24/12

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-17
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	19-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	19-Jan-12

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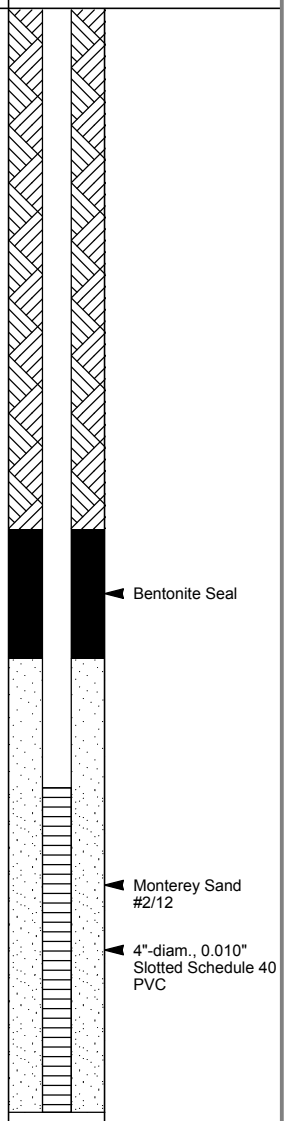
PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)
0		MW-17 @20.5					**SAND with gravel:** Grey; wet; fine sand; small gravel; non-plastic.	
0		MW-17 @25.5		25	SW		@ 25 fbg: Brown	
0		MW-17 @30.5		30	ML		**Sandy SILT:** Yellow brown; moist; fine sand; non-plastic.	30.0
0		MW-17 @36.5		35	SW		**SAND:** Grey; wet; fine sand; non-plastic.	35.0 37.0

WELL DIAGRAM



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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-18
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	16-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	18-Jan-12
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	07-Feb-12
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	522.84 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	522.40 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVALS**	5 to 15 fbg
LOGGED BY	A. Renshaw/G Wolf	**DEPTH TO WATER (First Encountered)**	15.00 fbg (18-Jan-12) ▽
REVIEWED BY	B. Wilken, PG# 7564	**DEPTH TO WATER (Static)**	12.01 fbg (07-Feb-12) ▼
REMARKS	Utility cleared to 8 fbg by Air Knife		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT	0.5	Flush-grade 12" well box
							FILL: Gravel Brown; dry; pea gravel; non-plastic.		Portland Type I/II
							@ 3 fbg: Same, with construction debris; small copper pipe; brick fragments.	4.0	Bentonite Seal
							Sandy SILT: Grey; moist; fine sand; moderate plasticity.		
341		MW-18 @5		5	ML				
				10			**Silty SAND:** Green grey; moist; fine sand; non-plastic.	10.0	Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
250		MW-18 @11			SM				
								15.0	
330		MW-18 @15		15	SW		**SAND with gravel:** Grey; wet; fine sand; small gravel; non-plastic.		Monterey Sand #2/12
				20				20.0	

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-18
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	16-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	18-Jan-12

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
71		MW-18 @20			GW		**Gravel with sand:** Brown; wet; small gravel; non-plastic.		
650		MW-18 @25		25			**SAND with gravel :** Grey; wet; fine sand; small gravel; non-plastic.	25.0	Bentonite Seal
135		MW-18 @31		30	SW				
383				35			@ 35 fbg: Grey; wet; decreasing gravel; fine sand; small gravel; non-plastic.	35.0	Bottom of Boring @ 35 fbg

WELL LOG (PID) I:\CHEVRON\0600-\060058~1\0642FB~1\060058-BORING LOGS.GPJ DEFAULT.GDT 2/24/12

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-19
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	17-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	18-Jan-12
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	07-Feb-12
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	523.04 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	522.63 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVALS**	5 to 15 fbg
LOGGED BY	S. Patterson/ G Wolf	**DEPTH TO WATER (First Encountered)**	15.00 fbg (18-Jan-12)
REVIEWED BY	B. Wilken, PG# 7564	**DEPTH TO WATER (Static)**	12.30 fbg (07-Feb-12)
REMARKS	Utility cleared to 8 fbg by Air Knife		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							Landscaped turf FILL	1.0	Flush-grade 12" well box; Portland Type I/II; Bentonite Seal
							SILT with sand: Brown; moist; fine-to-coarse sand; low to moderate plasticity.		
1.2		MW-19 @5		5	ML		@ 5 fbg: Tan; dry; non-plastic.		
2.4		MW-19 @10		10	CL		**CLAY:** Tan; moist; moderate plasticity.	10.0	Monterey Sand #2/12; 4"-diam., 0.010" Slotted Schedule 40 PVC
90		MW-19 @15		15	SM		**Silty SAND:** Green grey; wet; fine sand; non-plastic.	15.0	Monterey Sand #2/12
				20				20.0	

WELL LOG (PID) I:\CHEVRON\0600--\060058~1\0642FB~1\060058-BORING LOGS.GPJ DEFAULT.GDT 2/24/12

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-19
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	17-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	18-Jan-12

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
53		MW-19 @20			GM		**Silty GRAVEL:** Grey; wet; fine sand; small gravel; non-plastic.	25.0	Bentonite Seal
41		MW-19 @25		25	SW		**SAND:** Brown; wet; fine sand; non-plastic.	31.5	
23.5		MW-19 @30		30					Bottom of Boring @ 31.5 fbg

WELL LOG (PID) I:\CHEVRON\0600-\060058~1\0642FB~1\060058-BORING LOGS.GPJ DEFAULT.GDT 2/24/12

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BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-20
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	16-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	17-Jan-12
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	07-Feb-12
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	520.72 ft above msl
DRILLING METHOD	Hollow-stem auger	**TOP OF CASING ELEVATION**	520.28 ft above msl
BORING DIAMETER	10-inches	**SCREENED INTERVALS**	5 to 15 fbg
LOGGED BY	A. Renshaw	**DEPTH TO WATER (First Encountered)**	15.00 fbg (17-Jan-12) ▽
REVIEWED BY	B. Wilken, PG# 7564	**DEPTH TO WATER (Static)**	9.60 fbg (07-Feb-12) ▼
REMARKS	Utility cleared to 8 fbg by Air Knife		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
							ASPHALT: Underlain by base rock.	0.5	Flush-grade 12" well box
							FILL: Gravel Light brown; dry; coarse gravel; non-plastic. @ 1 fbg: Fabric matting.	2.0	Portland Type I/II
							Sandy SILT: Light Brown; dry; fine sand; low to moderate plasticity.		Bentonite Seal
0.9		MW-20 @5		5			@ 5 fbg: Moist.		
					ML				
1.1		MW-20 @10		10					Monterey Sand #2/12 4"-diam., 0.010" Slotted Schedule 40 PVC
35		MW-20 @15		15					
							GRAVEL with sand: Grey; wet; fine sand; fine to coarse gravel; non-plastic.	16.0	
					GW				
							Clayey GRAVEL: Grey; wet; non-plastic.	19.0	
4.3		MW-20		20					

Continued Next Page

Conestoa-Rovers & Associates, Inc.
5900 Hollis Street, Suite A
Emeryville, CA 94608
Telephone: Telephone: 510-420-0700
Fax: Fax: 510-420-9170

BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-20
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	16-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	17-Jan-12

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
		@19.5			GC				Bentonite Seal
50.1		MW-20 @25		25			**Sandy SILT:** Light brown; wet; fine sand; small gravel; non-plastic.	25.0	
4.1		MW-20 @30		30			@ 30 fbg: Brown; moist; decreasing gravel; low plasticity.		
7.4		MW-20 @35		35	ML		@ 35 fbg: Moist; increasing clay; moderate plasticity.		Portland Type I/II
3.2		MW-20 @40		40					

Continued Next Page

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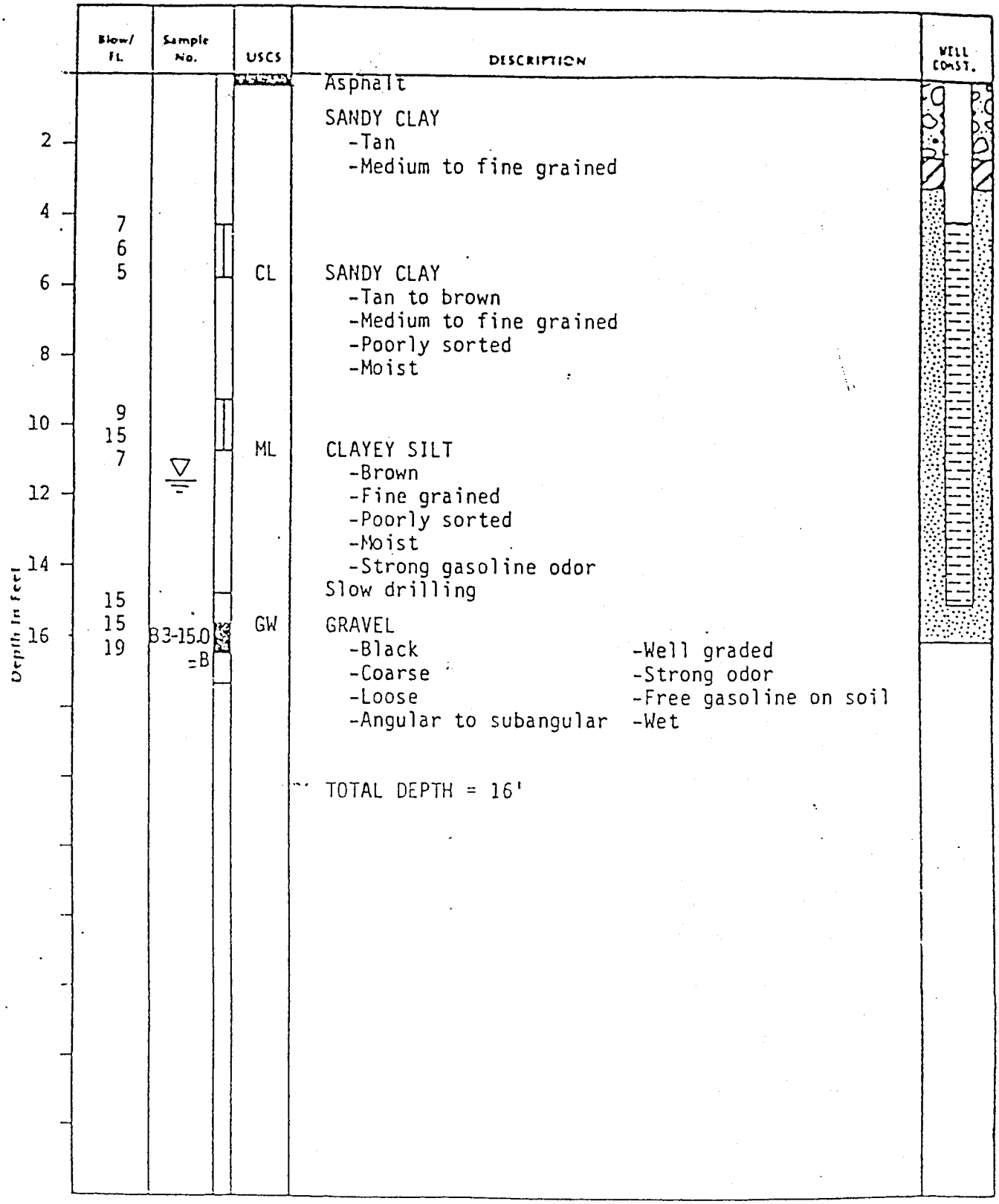
BORING / WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	MW-20
JOB/SITE NAME	Former Chevron Station 211253	**DRILLING STARTED**	16-Jan-12
LOCATION	930 Springtown Blvd., Livermore, California	**DRILLING COMPLETED**	17-Jan-12

Continued from Previous Page

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (fbg)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (fbg)	WELL DIAGRAM
9.5		MW-20 @45		45	SW		**SAND:** Brown; wet; fine sand; non-plastic.	45.0 45.5	Bottom of Boring @ 45.5 fbg

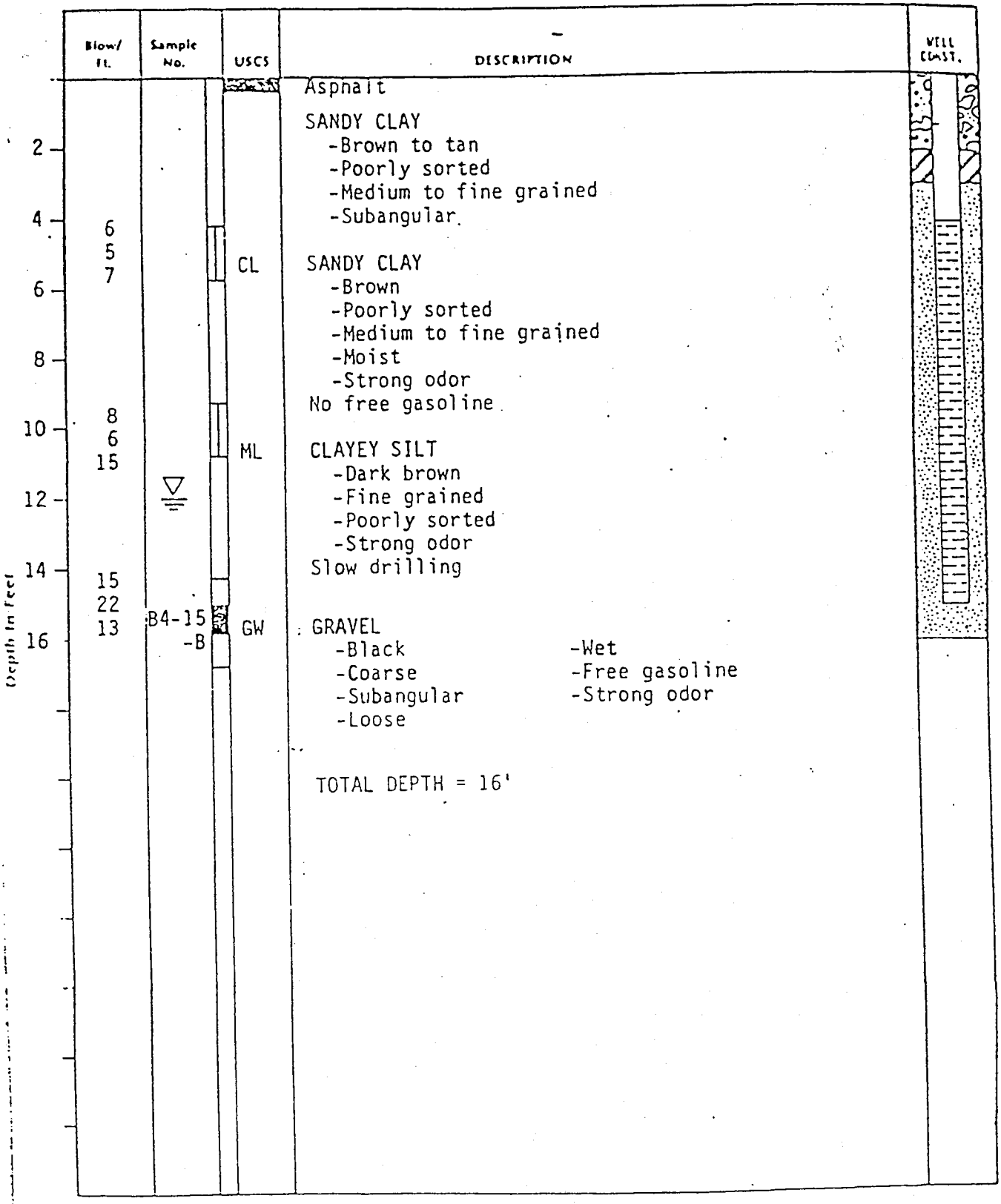


H KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. B-1423-1

PROPOSED 7-11 STORE
SPRINGTOWN BLVD. AND LASSEN RD.
LIVERMORE, CA
LOG OF BORING NO. B-3
(MW-A)

PLATE
3



H KLEINFELDER & ASSOCIATES
GEOTECHNICAL CONSULTANTS • MATERIALS TESTING

PROJECT NO. B-1423-1

PROPOSED 7-11 STORE
SPRINGTOWN BLVD. AND LASSEN RD
LIVERMORE, CA
LOG OF BORING NO. B-4
(MW-B)

PLATE
4

Conestoga-Rovers & Associates
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Emeryville, CA 94608
Telephone: 510-420-0700
Fax: 510-420-9170

BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT1
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	21-Nov-07
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	21-Nov-07
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Robert C. Foss, PG#7445	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		CPT1-5		5	ML		**SILT with clay:** Light brown; loose; 90% silt, 10% clay; moist; moderate plasticity, low estimated permeability. @ 6 fbg asphalt debris	8.0	Portland Type I/II
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT2
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	19-Nov-07
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	19-Nov-07
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Robert C. Foss, PG#7445	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		CPT2-5		5	ML		**SILT with clay and sand:** Light brown; loose; 80% silt, 10% clay, 10% fine grained sand; moist; low plasticity, low estimated permeability.		Portland Type I/II
							@ 6 fbg asphalt with baserock	8.0	
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

WELL LOG (PID) I:\CHEVRON\211253-11BORING-11211253 BORING LOGS.GPJ DEFAULT.GDT 7/15/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT3
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	07-Apr-08
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	07-Apr-08
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	I. Hull	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Robert C. Foss, PG#7445	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0					ML		**SILT with clay and sand:** Light brown; firm; damp; 75% silt, 15% clay, 10% medium grained sand; low to moderate plasticity; low estimated permeability.		Portland Type I/II Cement
				5			@5 fbg: one foot thick hard layer		
								8.0	
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT4
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	14-Jul-08
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	14-Jul-08
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	I. Hull	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	Brandon S. Wilken, PG # 7564	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0					ML		**Sandy SILT:** Light brown; dry; 60% silt, 40% coarse to fine grained sand; low plasticity; medium estimated permeability.		
				5			@ 7 fbg silt increases to 70%; sand decreases to 30%.	8.0	Portland Type I/II
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

WELL LOG (PID) I:\CHEVRON\211253~1\BORING~1\211253 BORING LOGS.GPJ DEFAULT.GDT 7/15/08

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT5
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	08-Apr-08
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	08-Apr-08
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	I. Hull	**DEPTH TO WATER (First Encountered)**	NA ▽
REVIEWED BY	Robert C. Foss, PG#7445	**DEPTH TO WATER (Static)**	NA ▼
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0					ML		**SILT with clay and sand**:Dark brown; firm; damp; 80% silt, 10% clay, 10% fine grained sand; low plasticity; low estimated permeability. @3 fbg color changes to light brown		Portland Type I/II Cement
				5				8.0	
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

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BORING/WELL LOG

CLIENT NAME	Chevron Environmental Management Company	**BORING/WELL NAME**	CPT6
JOB/SITE NAME	Former Texaco Station #211253	**DRILLING STARTED**	19-Nov-07
LOCATION	930 Springtown Boulevard, Livermore, CA	**DRILLING COMPLETED**	20-Nov-07
PROJECT NUMBER	060058	**WELL DEVELOPMENT DATE (YIELD)**	NA
DRILLER	Gregg Drilling & Testing, Inc. (C57 #485165)	**GROUND SURFACE ELEVATION**	Not Surveyed
DRILLING METHOD	Hand Auger	**TOP OF CASING ELEVATION**	NA
BORING DIAMETER	3 Inches	**SCREENED INTERVAL**	NA
LOGGED BY	Jeremy Gekov	**DEPTH TO WATER (First Encountered)**	NA
REVIEWED BY	Robert C. Foss, PG#7445	**DEPTH TO WATER (Static)**	NA
REMARKS	Hand cleared to 8 fbg		

PID (ppm)	BLOW COUNTS	SAMPLE ID	EXTENT	DEPTH (ft bgs)	U.S.C.S.	GRAPHIC LOG	LITHOLOGIC DESCRIPTION	CONTACT DEPTH (ft bgs)	WELL DIAGRAM
0		CPT6-5		5	ML		**SILT with gravel and sand** Light brown; dry; 80% silt, 10% gravel up to 1/4", 10% fine grained sand; moderate plasticity, low estimated permeability.	8.0	Portland Type I/II
							(See CPT log for continuation)		Bottom of Boring @ 8 ft

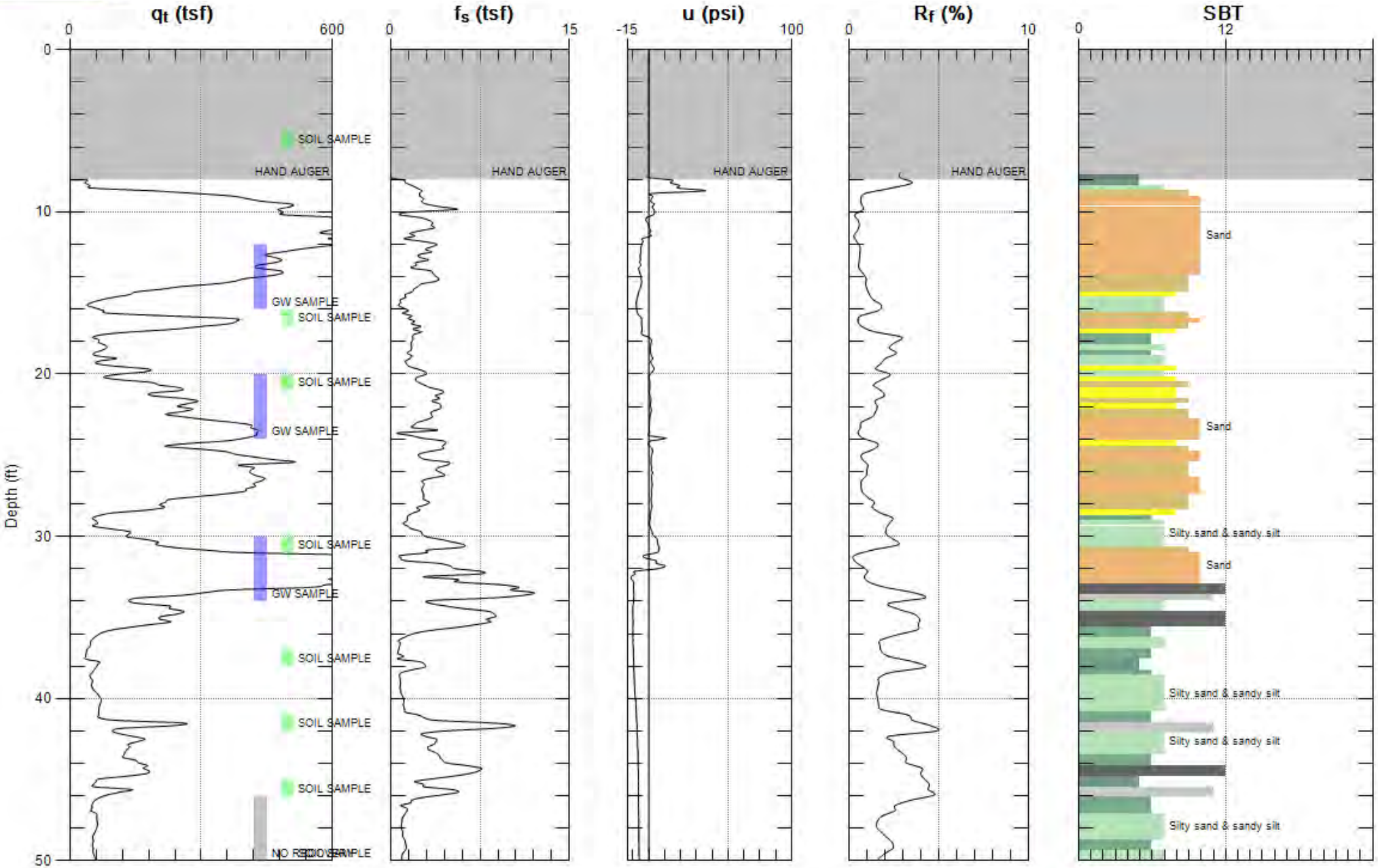
WELL LOG (PID) I:\CHEVRON\211253~1\BORING~1\211253 BORING LOGS.GPJ DEFAULT.GDT 7/15/08

GREGG

CRA

Site: 21-1253, 930 SPRINGTWN Engineer: C.EVANS

Sounding: CPT-01 Date: 11/21/2007 09:23



Max. Depth: 50.033 (ft)

Avg. Interval: 0.328 (ft)

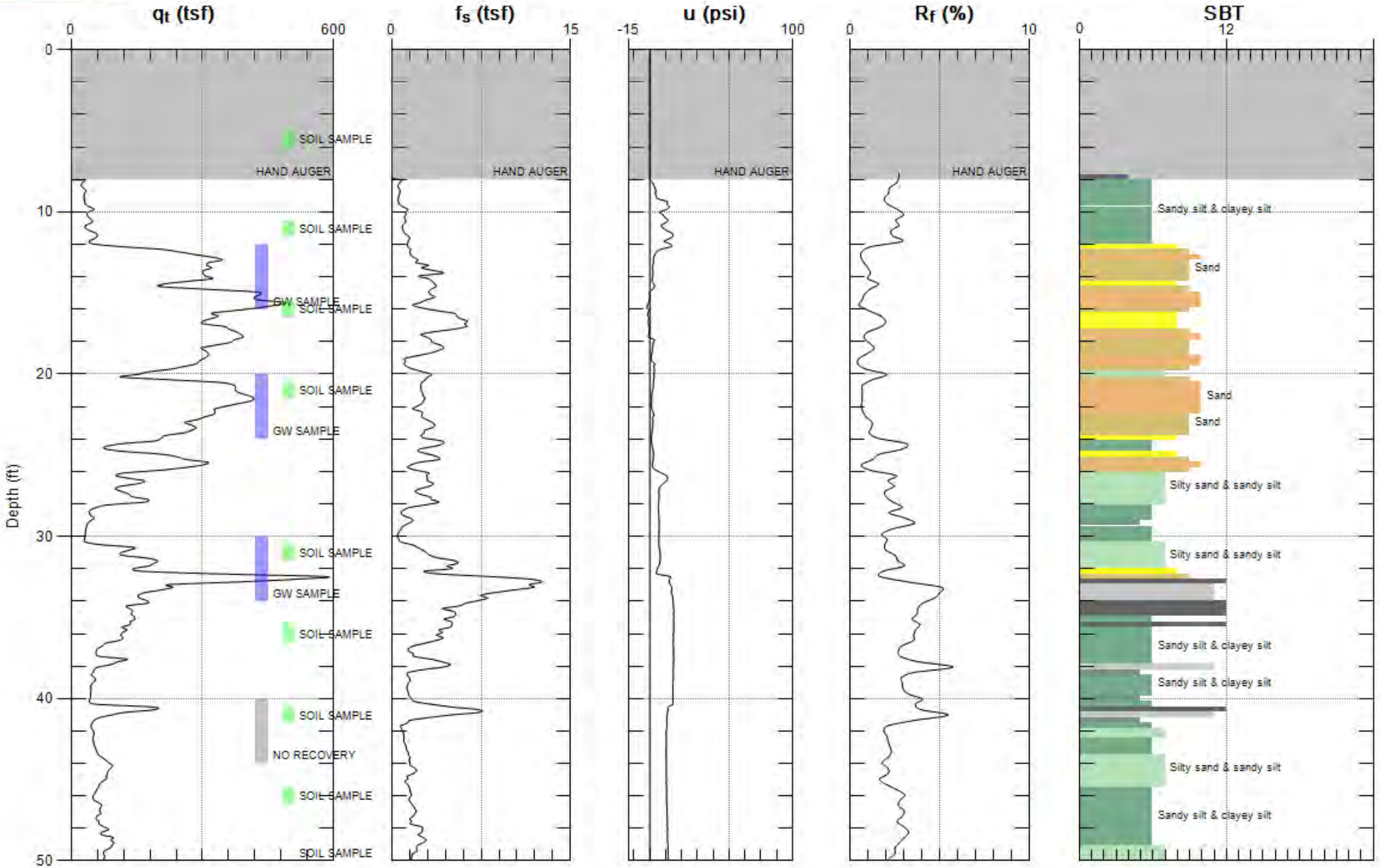
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: 21-1253, 930 SPRINGTOWN Engineer: C.EVANS

Sounding: CPT-02 Date: 11/19/2007 10:26



Max. Depth: 50.197 (ft)

Avg. Interval: 0.328 (ft)

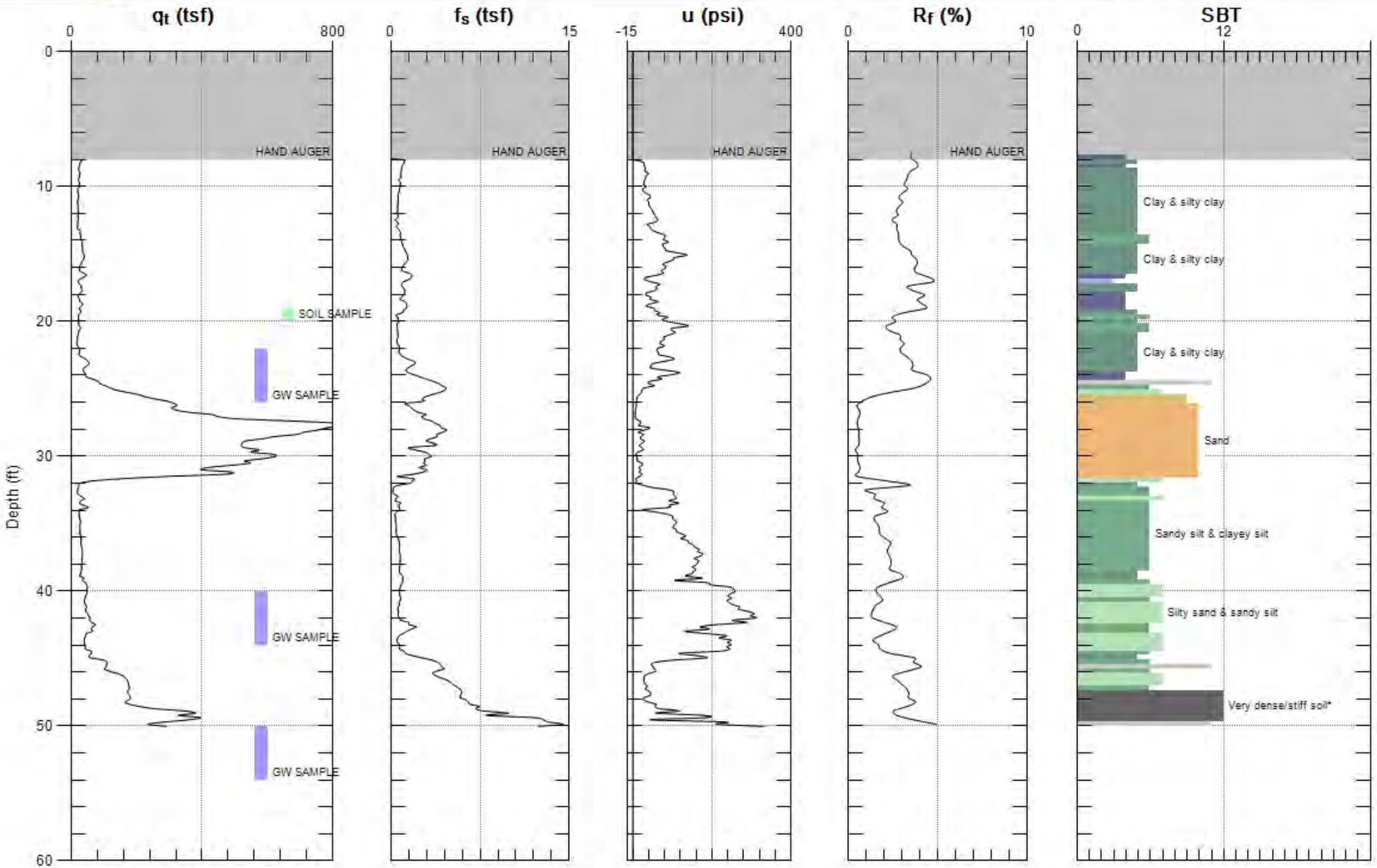
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: FMR TEXACO 21-1253
Sounding: CPT-03

Engineer: C.EVANS
Date: 4/7/2008 08:59



Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

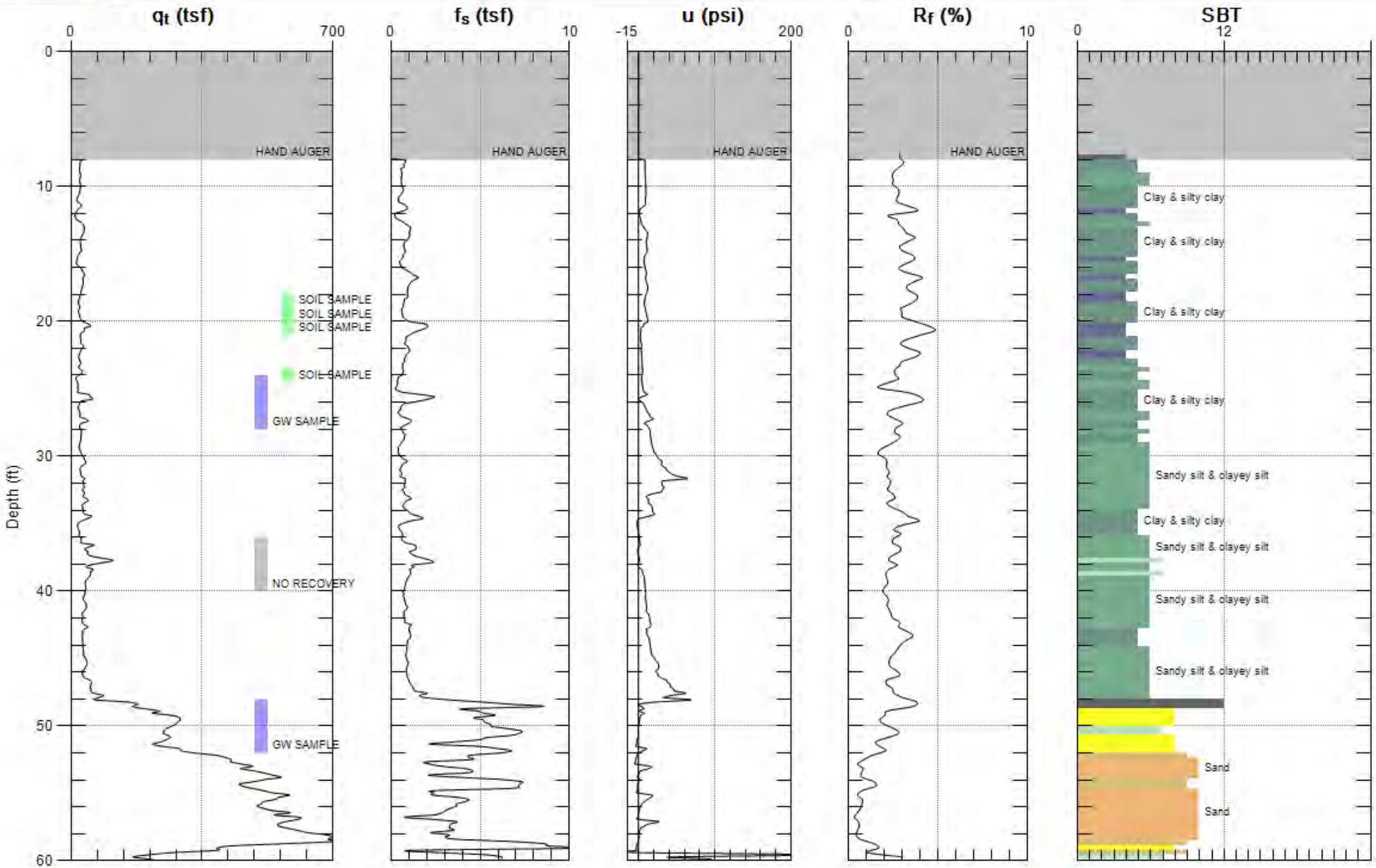
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: LIVERMORE
Sounding: CPT4

Engineer: I.HULL
Date: 7/14/2008 06:41



Max. Depth: 60.039 (ft)
Avg. Interval: 0.328 (ft)

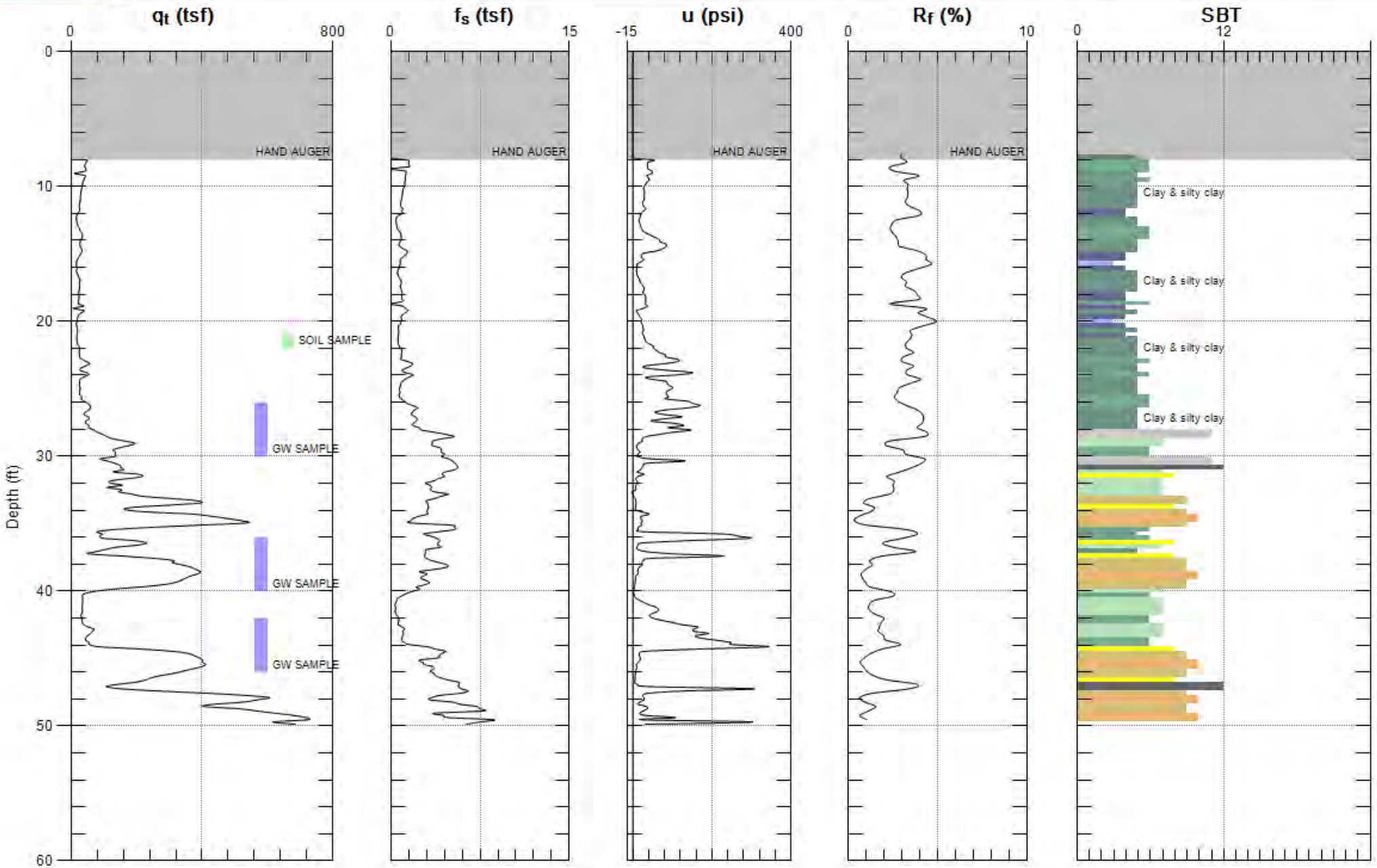
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: FMR TEXACO 21-1253
Sounding: CPT-05

Engineer: C.EVANS
Date: 4/8/2008 01:12



Max. Depth: 49.869 (ft)
Avg. Interval: 0.328 (ft)

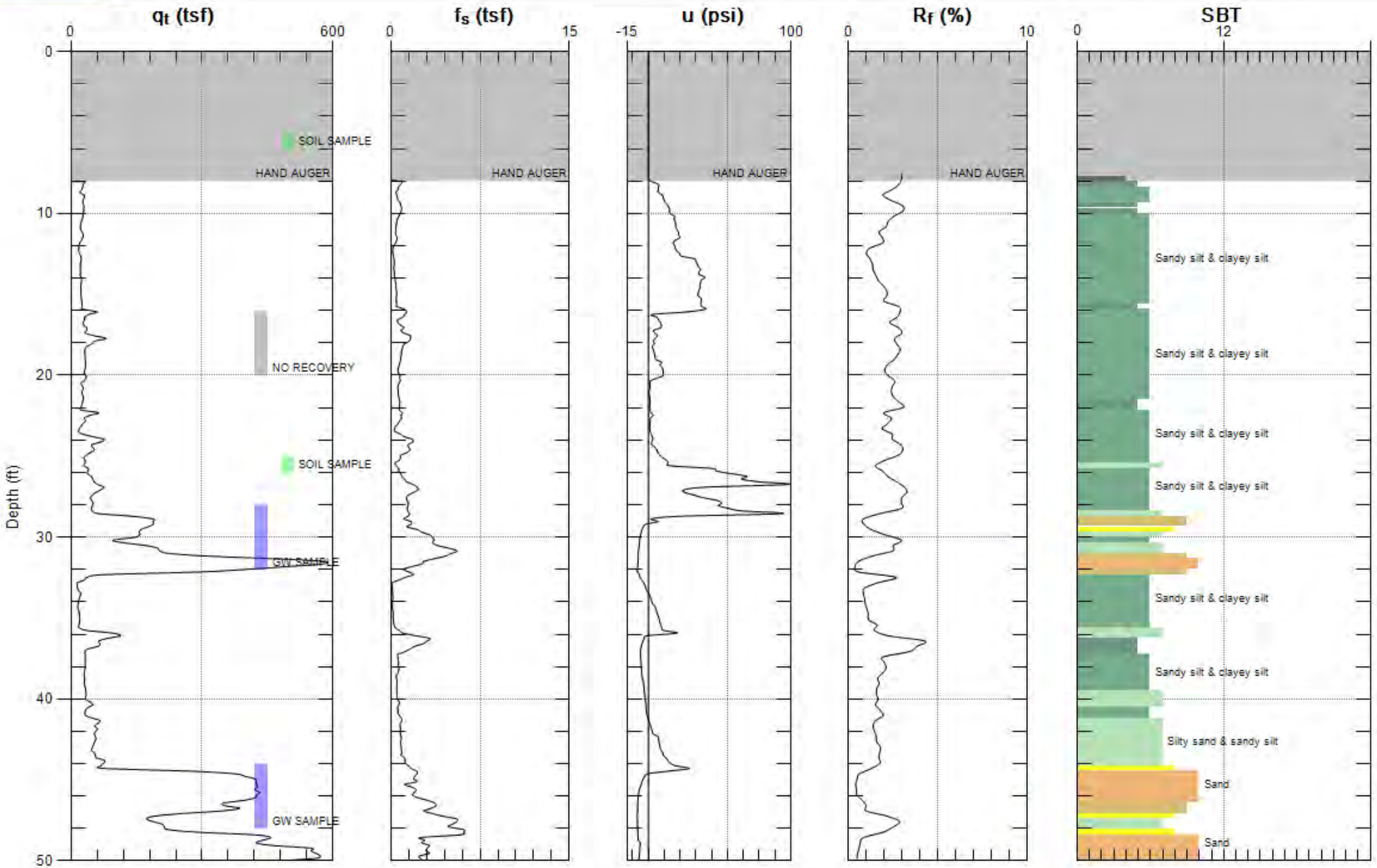
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: 21-1253, 930 SPRINGTOWN Engineer: C.EVANS

Sounding: CPT-06 Date: 11/20/2007 07:49



Max. Depth: 50.033 (ft)
Avg. Interval: 0.328 (ft)

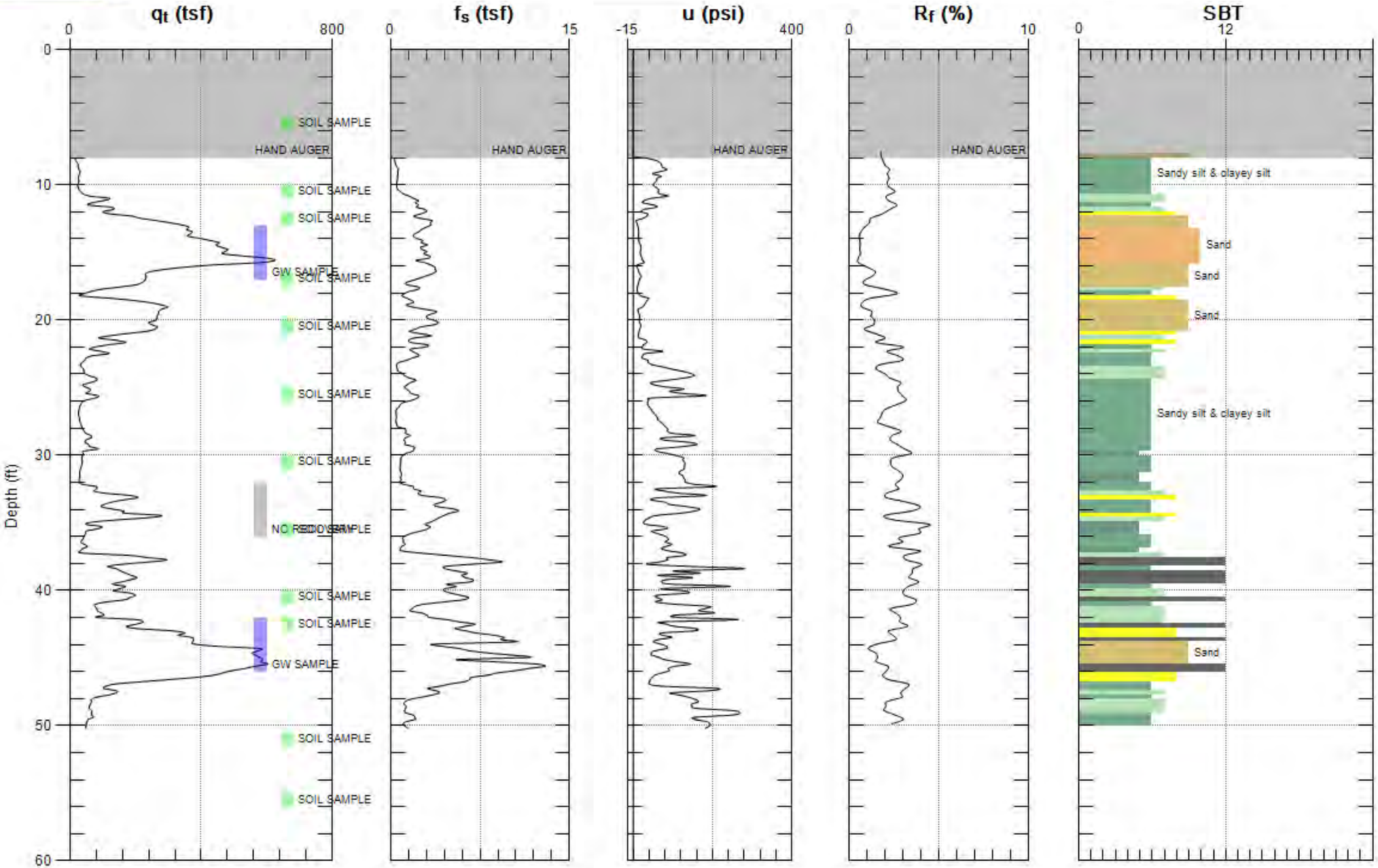
SBT: Soil Behavior Type (Robertson 1990)

GREGG

CRA

Site: FMR TEXACO 21-1253
Sounding: CPT-07

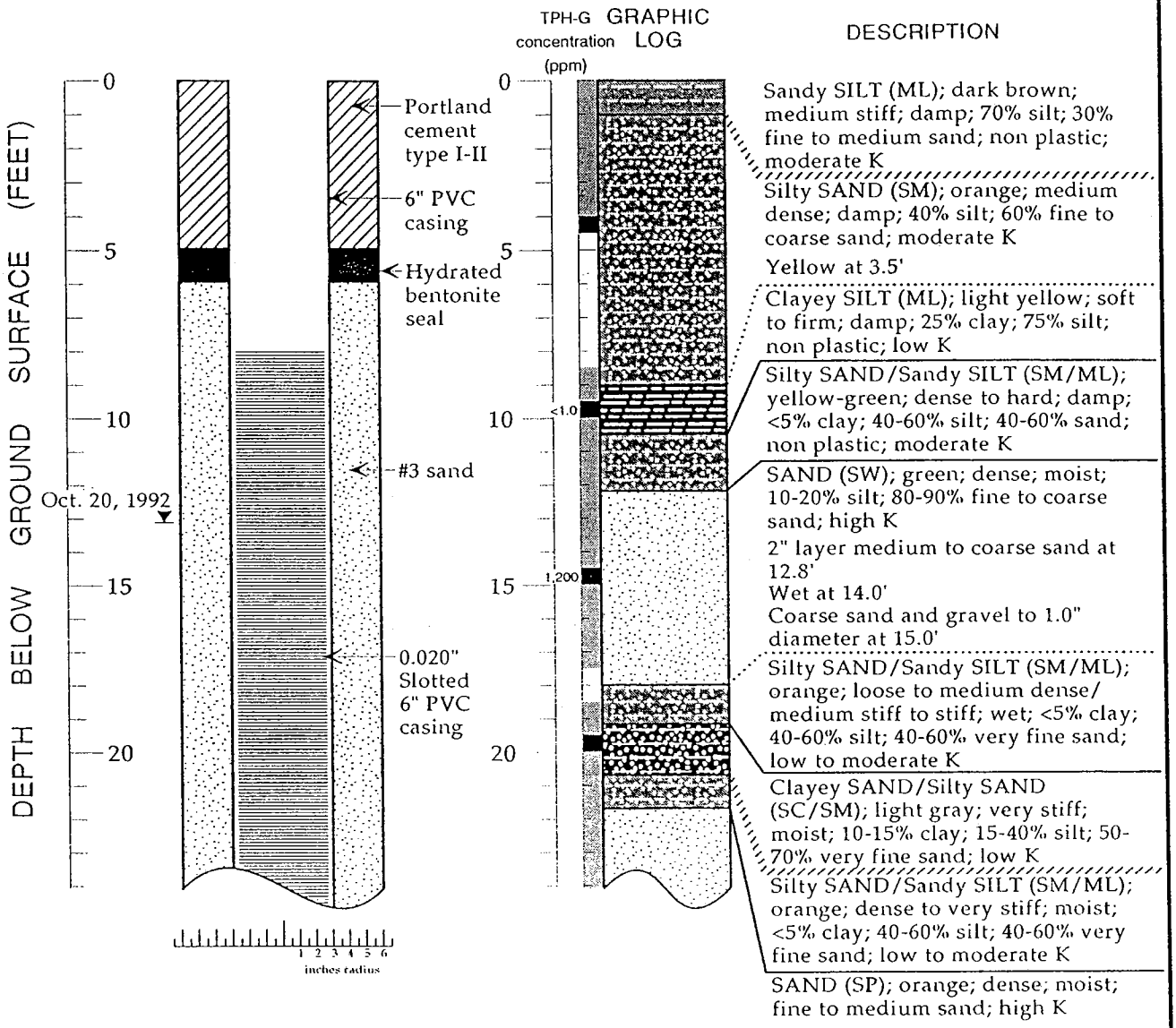
Engineer: C.EVANS
Date: 4/8/2008 08:01



Max. Depth: 50.197 (ft)
Avg. Interval: 0.328 (ft)

SBT: Soil Behavior Type (Robertson 1990)

WELL EW-1 (B-1)



EXPLANATION

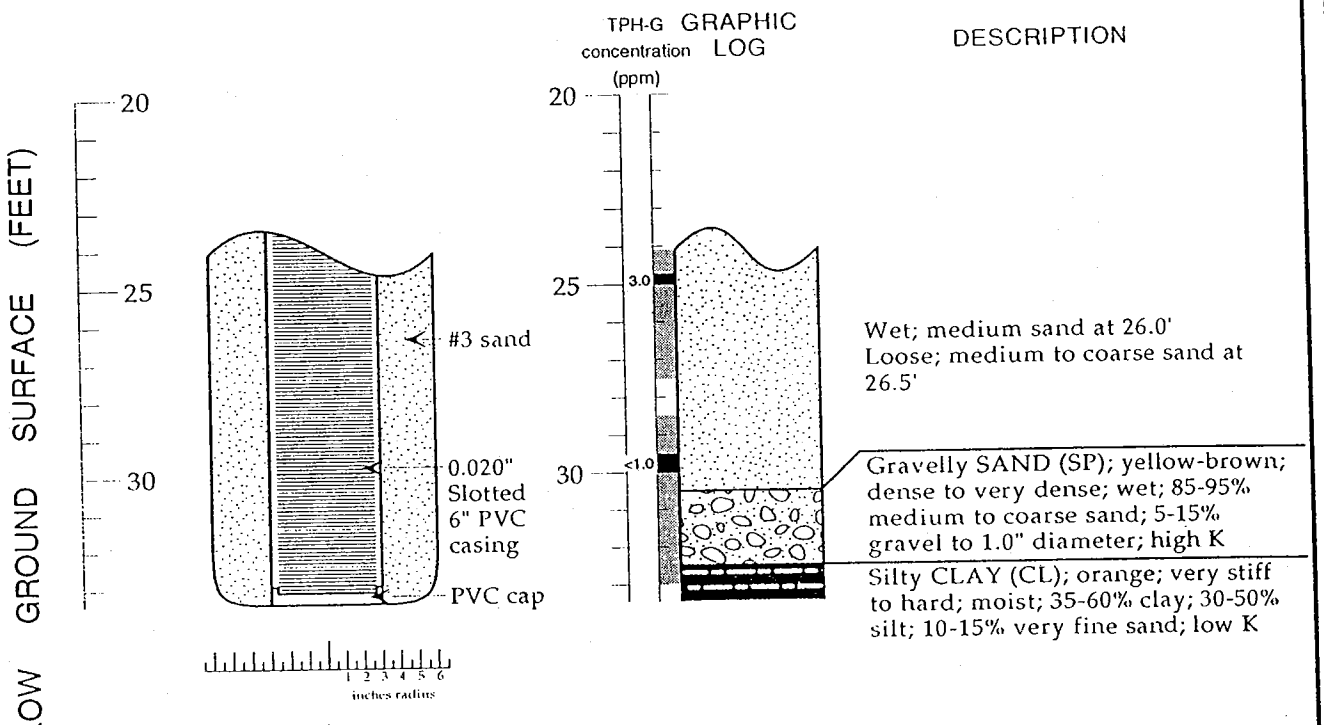
- ▼ Water level during drilling (date)
- ▽ Water level (date)
- ——····—— Contact (dotted where approximate)
- —?—?— Uncertain contact
- //////// Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Eric Anderson
Supervisor: Joseph P. Theisen; CEG 1645
Drilling Company: HEW Drilling, East Palo Alto, CA
License Number: C57-384167
Driller: Tomas Jaime
Drilling Method: 6" and 12" O.D. hollow-stem auger
Date Drilled: October 19-20, 1992
Well Head Completion: Temporary, traffic-rated vault
Type of Sampler: Split barrel (1.5", 2", 2.5" ID)
Ground Surface Elevation: Approximately 520 feet above mean sea level
TPH-G: Total petroleum hydrocarbon as gasoline in soil by EPA Method 5030 with GC/FID

Boring Log and Well Construction Details - Well EW-1 (B-1) - Former Texaco Service Station, 930 Springtown Boulevard, Livermore, California

1/5.93

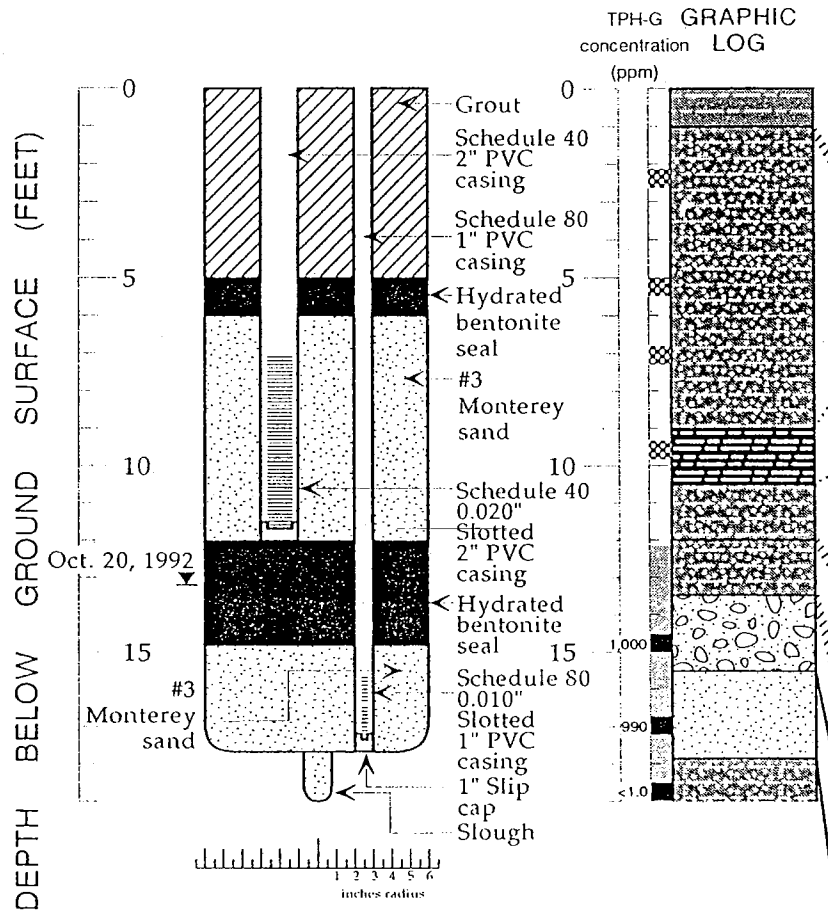
WELL EW-1 (B-1) (cont.)



Boring Log and Well Construction Details - Well EW-1 (B-1) - Former Texaco Service Station, 930 Springtown Boulevard, Livermore, California

1/5/93

WELL VE-1/SP-1 (B-2)



EXPLANATION

- Water level during drilling (date)
- Water level (date)
- Contact (dotted where approximate)
- Uncertain contact
- Gradational contact
- Location of recovered drive sample
- Location of drive sample sealed for chemical analysis
- Cutting sample
- K = Estimated hydraulic conductivity

Logged By: Eric Anderson
Supervisor: Joseph P. Theisen; CEG 1645
Drilling Company: HEW Drilling, East Palo Alto, CA
License Number: C57-384157
Driller: Tomas Jaime
Drilling Method: 6" and 12" O.D. hollow-stem auger
Date Drilled: October 20, 1992
Well Head Completion: Temporary, traffic-rated vault
Type of Sampler: Split barrel (1.5", 2", 2.5" ID)
Ground Surface Elevation: Approximately 520 feet above mean sea level
TPH-G: Total petroleum hydrocarbon as gasoline in soil by EPA Method 5030 with GC/FID

Boring Log and Well Construction Details - Well VE-1/SP-1 (B-2) - Former Texaco Service Station, 930 Sprintown Boulevard, Livermore, California

1/5.33

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Soil Boring 1

Project Texaco/Livermore Owner Texaco Refining and Marketing
Location Livermore Project Number 203 150 4051
Date Drilled 12/4/89 Total Depth of Hole 32 ft Diameter 7.5 in
Surface Elevation ____ Water Level Initial 14.5 ft 24-hour ____
Screen: Dia. ____ Length ____ Slot Size ____
Casing: Dia. ____ Length ____ Type ____
Drilling Company Sierra Pacific Drilling Method hollow stem auger
Driller Chris DeSocio Log by Jan Prasil
Geologist/Engineer ____ License No. ____

Sketch Map

SEE SITE MAP

Notes
Continuously sampled

Depth (Feet)	Well Construction	PID (ppm)	Sample	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					2 inches asphalt
2				CL	Brown sandy, silty clay (soft, moist, no product odor)
4					(grades yellow, less sandy, less moist)
6		0	A		
8					(grades yellow-green with gravels)
10		5	B		(grades more sandy) (grades with slight product odor)
12		3	C D		
14					▼ Encountered water 12/4/90 (12:00 hours)
16		120	30 50 E 28	GC	Grey clayey, coarse gravel (wet, dense, strong product odor)
18					
20		84		SM	Grey clayey, coarse gravel (wet, dense, strong product odor)
22		115 160	F 15 15 15	GC	
24		140			

GROUNDWATER TECHNOLOGY, INC.
OIL RECOVERY SYSTEMS

Soil Boring 1

Drilling Log

Depth (Feet)	Well Construction	Notes	Sample Number	Graphic Log	Description/Soil Classification (Color, Texture, Structures)
26		140			(grades black, sandy)
28		80 75	G	SM	(grades with increasing product odor)
30		280			(grades more clayey, less sandy)
32		80	H	CL	Yellow sandy clay (wet, medium stiff, moderate product odor) End of drilling, backfilled with concrete)
34					
36					
38					
40					
42					
44					
46					
48					
50					
52					
54					
56					
58					

02100144

Drilling Log

GROUNDWATER TECHNOLOGY, INC.

Soil Boring 2

Project Texaco/Livermore Owner Texaco Refining and Marketing
Location Livermore Project Number 203 150 4051
Date Drilled 12/5/89 Total Depth of Hole 25 ft Diameter 7.5 in
Surface Elevation ____ Water Level Initial 15 ft 24-hour ____
Screen: Dia. ____ Length ____ Slot Size ____
Casing: Dia. ____ Length ____ Type ____
Drilling Company Sierra Pacific Drilling Method hollow stem auger
Driller Chris DeSocio Log by Steve Kranyak
Geologist/Engineer AB Shown License No. RG 4394

Sketch Map

SEE SITE MAP

Notes
Continuously sampled

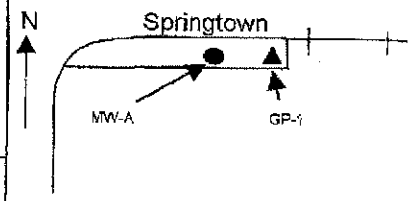
Depth (Feet)	Well Construction	PID (ppm)	Sample	Graphic Log	Description/Soil Classification (Color, Texture, Structure)
0					3 inches asphalt over 2 inches aggregate base
2		0		CL	Tan and brown silty clay with some very fine sand (soft, moist, no product odor)
4					
6		0		SM	Greyish tan clayey, silty, fine sand with trace gravels (loose, wet, slight product odor)
8		0			Dark brown gravel with little clay, silt, and sand (loose, moist, no product odor)
10		0	A B	GM	
12		0			
14		0	C		▼ Encountered water 12/5/90 (12:00 hours)
16					(grades brown)
18		0			
20		0	D		Light brown silty, sandy clay with some pebbles (stiff, wet, no product odor)
22		0		SC	
24		0	E		End of drilling, backfilled with concrete

KHM
ENVIRONMENTAL MANAGEMENT INCORPORATED

PROJECT NO:	C80-000930	CLIENT:	Equiva
LOGGED BY:	Janet Yantis	LOCATION:	6/21/01
DRILLER:	Vironex	DATE DRILLED:	930 Springtown
DRILLING METHOD:	Hyd. Push	HOLE DIAMETER:	2 in.
SAMPLING METHOD:	Continuous	HOLE DEPTH:	16 ft.
CASING TYPE:		WELL DIAMETER:	NA
SLOT SIZE:		WELL DEPTH:	NA
GRAVEL PACK:		CASING STICKUP:	NA

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

LOCATION MAP



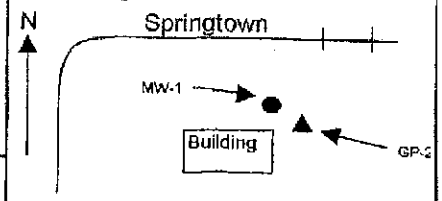
ELEVATION	NORTHING	EASTING

Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Time	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
					0				Grass
		Moist			1			SC/CL	Clayey Sand/Sandy Clay, olive gray; roots; no odors
					2			SM	Gravel; fine gravel; 5% fines
		Dry			3			SM	Silty Sand; olive yellow; ~20% non-plastic fines, ~80% fine to medium sand; minor root holes; occasional MnO stains; dry; no odors
				7:30	4			GP	Gravel; fine gravel; 5% fines
					5				
				7:40	6			SM	Silty Sand; olive yellow; ~20% non-plastic fines, ~80% fine to medium sand; minor root holes; occasional MnO stains; dry; no odors
		Moist			7				
					8				
					9			SC	Silty Gravel with Sand; light yellowish brown; ~30% non-med. Plasticity fines, ~30% fine to medium sand, ~40% fine gravel; npo
					10				
				7:50	11			SC	Clayey Sand; Pale Yellow; 30% med./ plastic. Fines; 70% fine to medium sand;
		Very Moist			12			SC	Clayey Sand with Gravel; olive; ~25% non-med. plastic. fines (increase in plasticity) ~75% fine to coarse sand; occasional gray mottling;occasional caliche coating and nodules; common MnO coating occasional FeO stains;
					13				
					14			SC/CL	Sandy Clay/Clayey Sand; moderate Odors
				8:10	15				
		Wet			16			SP	Poorly Graded Sand with Gravel; gray; <5% fines; fine to coarse sand with occasional gravel; wet; moderate odors
					17				
					18				
					19				
					20				
					21				
					22				

KHM
ENVIRONMENTAL MANAGEMENT INCORPORATED

PROJECT NO:	C80-000930	CLIENT:	Equiva	BORING/WELL NO:	GP 2
LOGGED BY:	Yantis	LOCATION:	6/21/01	PAGE	1 OF 1
DRILLER:	Vironex	DATE DRILLED:	930 Springtown		
DRILLING METHOD:	Push	HOLE DIAMETER:	2 in.		
SAMPLING METHOD:	Continuous	HOLE DEPTH:	8 ft.		
CASING TYPE:		WELL DIAMETER:			
SLOT SIZE:		WELL DEPTH:			
GRAVEL PACK:		CASING STICKUP:			
ELEVATION		NORTHING		EASTING	

LOCATION MAP

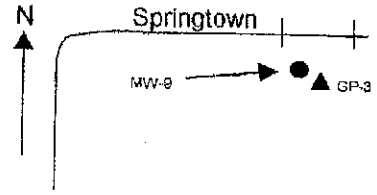


Well Completion: Backfill / Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Penetration (blows/6")	Depth (feet)	Sample: Recovery / Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Damp			1–3		GW	Poorly Graded Gravel with Sand; Light olive brown; ~40% fine to coarse sand & ~60% gravel
					3–5		CL	Gravelly lean clay with sand; olive brown; ~45% medium pl. fines, ~20% fine to coarse sand, ~35% gravel; gravel is subamngular; abundant small caliche nodules; common rootholes; damp; no odors
					5–7		CL	Sandy lean clay; olive grey; 60% med. Plast. Fines, 40% fine sand, rare gravel; common tiny calicke vensovice
					7–8		ML	Sandy silt; ~60% non-plastic, ~40% fine sand; damp to moist; no odors
					9–22			

KHM
ENVIRONMENTAL MANAGEMENT INCORPORATED

PROJECT NO:	C80-000930	CLIENT:	Equiva	BORING/WELL NO:	GP-3
LOGGED BY:	Janet Yantis	LOCATION:	6/21/01	PAGE	1 OF 1
DRILLER:	Vironex	DATE DRILLED:	930 Springtown		
DRILLING METHOD:	Push	HOLE DIAMETER:	2 in.		
SAMPLING METHOD:	Continuous	HOLE DEPTH:	12 ft.		
CASING TYPE:		WELL DIAMETER:	NA		
SLOT SIZE:		WELL DEPTH:	NA		
GRAVEL PACK:		CASING STICKUP:	NA		
ELEVATION		NORTHING		EASTING	

LOCATION MAP

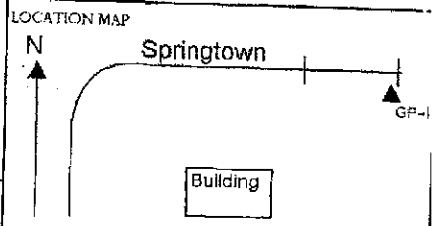


Well Completion (Backfill / Casing)	Static Water Level	Moisture Content	PID Reading (ppm)	Time	Depth (feet)	Sample Recovery	Sample Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Dry			1			SM	Silty Sand with gravel; light yellow brown; ~20% fines; ~50% fine to coarse sand; 30% gravel; dry; no odors
				10:00	2				
		Damp			3				
					4			CL	Sandy lean Clay; light olive brown; 60% medium plastic fines, 40% fine to coarse sand; occasional root holes; damp no odors; @ 4 feet roots
					5				
					6			CL-SC	Sandy clay/Clayey sand ~45-55% low to medium plastic fines, 45-55% fine to coarse sand; occasional cliché veins; occasional FeO stains
				10:10	7				
		Damp			8			CL	Sandy lean Clay with gravel; ~30% medium plastic fines, 40% fines to coarse sand, 30% gravel to 1/2 inch; damp; no odors
					9				
				10:20	10			GM	Silty Gravel with sand; dark gray; ~15% low to medium plastic fines, 30% fine to coarse sand, 55% gravel; occasional caliche nodules; very moist; moderate odors
		Wet			11				
					12			GW	Well graded Gravel with sand; dark gray; ~10% medium plastic fines, 80% fine to coarse sand, 10% gravel; wet; moderate odors
					13				
					14				Depth to Water ~ 12 feet; moderate product odors
					15				
					16				
					17				
					18				
					19				
					20				
					21				
					22				

KHM
ENVIRONMENTAL MANAGEMENT INCORPORATED

PROJECT NO:	080-000930	CLIENT:	Equiva	BORING/WELL NO:	GP-4
LOGGED BY:	Janet Yantis	LOCATION:	6/21/01	PAGE	1 OF 1
DRILLER:	Vironex	DATE DRILLED:	930 Springtown		
DRILLING METHOD:	Hyd. Push	HOLE DIAMETER:	2 in.		
SAMPLING METHOD:	Continuous	HOLE DEPTH:	16 ft.		
CASING TYPE:		WELL DIAMETER:	NA		
SLOT SIZE:		WELL DEPTH:	NA		
GRAVEL PACK:		CASING STICKUP:	NA		
ELEVATION		NORTHING		EASTING	

LOCATION MAP



Well Completion: Backfill / Casing	Static Water Level	Moisture Content	PID Reading (ppm)	Time	Depth (feet)	Sample: Recovery / Interval	Soil Type	LITHOLOGY / DESCRIPTION
		Damp to dry			1–2		SC	Clayey Sand with gravel; light to olive brown; ~20% medium plasticity fines, ~45% fine to coarse sand, 35% fine gravel; occasional roots
				8:50	3–5		SC	Clayey Sand; light olive brown; ~35% medium plasticity fines, ~65% fine to coarse sand; occasional caliche veins; small root holes; occasional Mn stains; damp; no odors
					5–6		GW	Well Graded Gravel with clay and sand
		Damp-Moist		9:00	6–7		GC	Clayey Gravel with sand; ~<10% medium plasticity fines, 25% fine to coarse sand, 65% gravel; sub-angular; damp to dry; no odor
					8–9		CL	Sandy lean Clay; light olive brown; 70% medium plasticity fines, 30% fine to medium sand,; pervasive caliche coatings; occasional MnO stains; damp to moist; no odors
		Moist		9:10	10–12		SM	Silty Sand; light olive brown; 40% non to low plasticity fines, 60% fine to medium sand; at ~ 10 feet; occasional caliche nodules to 1/2 inch; moist
					12–14		SC	Clayey Sand; ~45% low to medium plasticity fines, 55% fine to medium sand; caliche absent; occasional gray mottling; occasional FeO stains; no odors; very moist
					14–15		GW	well graded Gravel with Sand
				9:15	15–16		GW	Gravel with Sand; dark gray; 0% fines; sand coarsening downward; wet; strong odors
					16–22			

APPENDIX D

HISTORICAL GROUNDWATER DATA

Table 1

Groundwater Monitoring Data and Analytical Results

Former Texaco Service Station #211253

930 Springtown Boulevard

Livermore, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW-9										
07/23/09[1]	523.14	13.00	510.14	0.00	0.00	5,200	4	5	310	100
11/09/09	523.14	12.70	510.44	0.00	0.00	240	4	4	2	5
02/22/10	523.14	11.93	511.21	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5
05/24/10	**523.14**	**12.22**	**510.92**	**0.00**	**0.00**	**6,200**	**9**	**5**	**470**	**110**
MW-10										
07/23/09[1]	522.76	12.59	510.17	0.00	0.00	16,000	220	440	440	660
11/09/09	522.76	12.30	510.46	0.00	0.00	2,800	1	2[3]	30	30
02/22/10	522.76	11.52	511.24	0.00	0.00	3,600	9	2	61	10
05/24/10	**522.76**	**11.82**	**510.94**	**0.00**	**0.00**	**3,000**	**12**	**3**	**110**	**22**
MW-11										
07/23/09[1]	523.25	13.05	510.20	0.00	0.00	5,400	25	28	62	66
11/09/09	523.25	12.73	510.52	0.00	0.00	1,100	3	0.6[3]	2	2
02/22/10	523.25	11.96	511.29	0.00	0.00	1,400	2	<0.5	5	0.9
05/24/10	**523.25**	**12.27**	**510.98**	**0.00**	**0.00**	**1,700**	**1**	**<0.5**	**10**	**0.6**
MW-12										
07/23/09[1]	523.42	13.03	510.41**	0.02	5.01[2]	48,000	340	3,100	1,300	7,600
11/09/09	523.42	12.78	510.64	0.00	0.00	18,000	290	560	22	3,100
02/22/10	523.42	12.13	511.29	0.00	0.00	14,000	190	590	310	1,400
05/24/10	**523.42**	**12.38**	**511.04**	**0.00**	**0.00**	**17,000**	**150**	**530**	**320**	**1,400**
MW-13										
07/23/09[1]	523.12	12.75	510.37	0.00	0.00	52,000	760	6,200	980	13,000
11/09/09	523.12	12.51	510.61	0.00	0.00	12,000	340	1,300	16	1,700
02/22/10	523.12	11.87	511.25	0.00	0.00	13,000	630	600	22	960
05/24/10	**523.12**	**12.10**	**511.02**	**0.00**	**0.00**	**15,000**	**950**	**670**	**130**	**790**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Texaco Service Station #211253

930 Springtown Boulevard

Livermore, California

WELL ID/ DATE	TOC* (ft.)	DTW (ft.)	GWE (msl)	SPHT (ft.)	SPH REMOVED (gallons)	TPH-GRO (µg/L)	B (µg/L)	T (µg/L)	E (µg/L)	X (µg/L)
MW-14										
07/23/09[1]	520.88	10.40	510.48	0.00	0.00	8,400	230	460	180	670
11/09/09	520.88	10.11	510.77	0.00	0.00	23,000	1,800	1,900	750	2,600
02/22/10	520.88	9.37	511.51	0.00	0.00	48,000	3,600	7,900	2,100	9,400
05/24/10	**520.88**	**9.88**	**511.25****	**0.31**	**0.00**	**NOT SAMPLED DUE TO THE PRESENCE OF SPH**				**--**
MW-15										
07/23/09[1]	520.87	10.33	510.54	0.00	0.00	2,500	6	17	16	320
11/09/09	520.87	10.18	510.69	0.00	0.00	20,000	110	590	370	4,900
02/22/10	520.87	9.48	511.39	0.00	0.00	66	<0.5	3	1	6
05/24/10	**520.87**	**9.83**	**511.04**	**0.00**	**0.00**	**70**	**1**	**8**	**1**	**8**
MW-16										
07/23/09[1]	520.50	10.63	509.87	0.00	0.00	430	0.6	<0.5	<0.5	<0.5
11/09/09	520.50	10.31	510.19	0.00	0.00	180	<0.5	<0.5	<0.5	<0.5
02/22/10	520.50	9.63	510.87	0.00	0.00	<50	<0.5	<0.5	<0.5	<0.5
05/24/10	**520.50**	**9.88**	**510.62**	**0.00**	**0.00**	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**
QA										
07/23/09	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5
11/09/09	--	--	--	--	--	<50	<0.5	1[4]	<0.5	<0.5
02/22/10	--	--	--	--	--	<50	<0.5	<0.5	<0.5	<0.5
05/24/10	--	--	--	--	--	**<50**	**<0.5**	**<0.5**	**<0.5**	**<0.5**

Table 1

Groundwater Monitoring Data and Analytical Results

Former Texaco Service Station #211253
930 Springtown Boulevard
Livermore, California

EXPLANATIONS:

TOC = Top of Casing
(ft.) = Feet
DTW = Depth to Water
GWE = Groundwater Elevation
SPHT = Separate Phase Hydrocarbon Thickness
(msl) = Mean Sea Level
TPH = Total Petroleum Hydrocarbons
GRO = Gasoline Range Organics
B = Benzene
T = Toluene
E = Ethylbenzene
X = Xylenes
-- = Not Measured/Not Analyzed
QA = Quality Assurance/Trip Blank
(µg/L) = Micrograms per liter

* TOC elevations were surveyed on July 22, 2009, by Morrow Surveying. Vertical datum is NAVD 88 from GPS Observations.

** GWE has been corrected due to the presence of SPH; correction factor: [(TOC - DTW) + (SPHT x 0.80)].

ANALYTICAL METHODS:

TPH-GRO analyzed by EPA Method 8015
BTEX analyzed by EPA Method 8260

[1] Well development preformed.

[2] Product + water removed.

[3] The Laboratory report indicates the result reported for toluene in this sample may be attributed to trace amounts of toluene recently found in HCl preserved vials from the manufacturer. The trip blank associated with this sample had a trace toluene detection of 1 ug/l. Please refer to the letter accompanying the lab report for further explanation.

[4] The Laboratory report indicates the result reported for toluene in this trip blank may be attributed to trace amounts of toluene recently found in HCl preserved vials from the manufacturer. Please refer to the letter accompanying the lab report for further explanation.

Table 1
CUMULATIVE GROUNDWATER MONITORING SUMMARY
(in feet)

Former Texaco Service Station
930 Springtown Boulevard
Livermore, California

WELL I.D.	DATE MONITORED	WELL ELEVATION	DEPTH TO WATER	WATER TABLE ELEVATION	COMMENTS
MW-A	03/27/90	519.85	12.55	507.30	
	06/25/90		12.58	507.27	
	09/21/90		12.75	507.10	
	01/10/91		13.28	506.57	
	04/04/91		12.12	507.73	
	07/12/91		12.95	506.90	
	10/04/91		13.98	505.87	trace SP
MW-B	03/27/90	518.16	10.62	0.00	
	06/25/90		10.68	507.48	
	09/21/90		10.76	507.40	
	01/10/91		11.06	507.10	
	04/04/91		10.04	508.12	
	07/12/91		10.91	507.25	
	10/04/91		11.82	506.34	trace SP
MW-1	03/27/90	520.76	13.20	507.56	
	06/25/90		13.22	507.54	
	09/21/90		13.39	507.37	
	01/10/91		13.80	506.96	
	04/04/91		12.70	508.06	
	07/12/91		13.55	507.21	
	10/04/91		14.52	506.24	
MW-2	03/27/90	518.45	10.86	507.59	
	06/25/90		10.91	507.54	
	09/21/90		11.34	507.11	
	01/10/91		11.66	506.79	
	04/04/91		10.61	507.84	
	07/12/91		11.48	506.97	
	10/04/91		12.35	506.10	
MW-3	03/27/90	519.30	11.84	507.46	
	06/25/90		11.85	507.45	
	09/21/90		12.37	506.93	
	01/10/91		12.84	506.46	
	04/04/91		11.71	507.59	
	07/12/91		12.54	506.76	
	10/04/91		13.47	505.83	
MW-4	03/27/90	518.75	11.43	507.32	
	06/25/90		11.55	507.20	
	09/21/90		11.79	506.96	
	01/10/91		12.02	506.73	
	04/04/91		10.72	508.03	
	07/12/91		11.78	506.97	
	10/04/91		12.30	506.45	

GROUNDWATER TECHNOLOGY, INC.

Table 1 (continued)

WELL I.D.	DATE MONITORED	WELL ELEVATION	DEPTH TO WATER	WATER TABLE ELEVATION	COMMENTS
MW-5	03/27/90	520.50	13.17	507.33	
	06/25/90		13.18	507.32	
	09/21/90		13.79	506.71	
	01/10/91		14.33	506.17	
	04/04/91		13.26	507.24	
	07/12/91		14.14	506.36	
	10/04/91		14.96	505.54	
MW-6	03/27/90	522.26	15.04	507.22	
	06/25/90		15.03	507.23	
	09/21/90		15.40	506.86	
	01/10/91		16.31	505.95	
	04/04/91		15.19	507.07	
	07/12/91		NA	NA	
	10/04/91		16.90	505.36	
MW-7	03/27/90	522.17	9.41	512.76	
	06/25/90		9.22	512.95	
	09/21/90		8.38	513.79	
	01/10/91		9.07	513.10	
	04/04/91		7.59	514.58	
	07/12/91		9.26	512.91	
	10/04/91		10.53	511.64	
MW-8	03/27/90	524.04	16.15	507.89	
	06/25/90		16.90	507.14	
	09/21/90		17.56	506.48	
	01/10/91		18.03	506.01	
	04/04/91		17.01	507.03	
	07/12/91		17.82	506.22	
	10/04/91		18.70	505.34	

NOTES:
SP = Separate-phase petroleum hydrocarbons
NA = Not Available

GMSTAB1.WK1

Table 2
CUMULATIVE LABORATORY ANALYSES OF GROUNDWATER
(in parts per billion [ppb])

Former Texaco Service Station
930 Springtown Boulevard
Livermore, California

WELL I.D.	DATE SAMPLED	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH-G
MW-A	03/27/90	SP	SP	SP	SP	SP
	06/25/90	2,700	4,000	2,600	6,500	39,000
	09/21/90	1,400	1,900	1,800	4,200	30,000
	01/10/91	1,900	3,700	2,600	8,300	50,000
	04/04/91	950	1,100	1,300	2,900	31,000
	07/12/91	2,000	4,200	4,600	13,000	100,000
	10/04/91	SP	SP	SP	SP	SP
MW-B	03/27/90	SP	SP	SP	SP	SP
	06/25/90	28	230	87	260	5,400
	09/21/90	150	1,700	1,200	3,700	45,000
	01/10/91	47	1,300	770	3,100	35,000
	04/04/91	4	10	22	19	2,300
	07/12/91	88	1,800	390	1,300	18,000
	10/04/91	SP	SP	SP	SP	SP
MW-1	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	ND	ND	3	16	390
	10/04/91	1	ND	ND	ND	ND
MW-2	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	14
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	ND	ND	ND	ND	ND
	10/04/91	0.3	ND	ND	ND	ND
MW-3	03/27/90	1	ND	ND	ND	1,100
	06/25/90	0.03	ND	ND	ND	340
	09/21/90	ND	ND	ND	ND	96
	01/10/91	ND	ND	ND	ND	110
	04/04/91	4	ND	0.6	0.9	630
	07/12/91	2	ND	ND	1	230
	10/04/91	0.5	2	ND	0.5	360
MW-4	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	ND	ND	ND	ND	ND
	10/04/91	0.6	ND	ND	ND	ND

Table 2 (continued)

WELL I.D.	DATE SAMPLED	BENZENE	TOLUENE	ETHYL-BENZENE	XYLENES	TPH-G
MW-5	03/27/90	230	32	420	250	5,100
	06/25/90	160	8	140	42	2,000
	09/21/90	98	2	120	5	2,100
	01/10/91	48	2	87	9	1,900
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	13	ND	18	1	850
	10/04/91	240	13	34	14	2000
MW-6	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	3
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	NS	NS	NS	NS	NS
	10/04/91	0.3	ND	ND	ND	ND
MW-7	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	ND	ND	ND	ND	ND
	07/12/91	NS	NS	NS	NS	NS
	10/04/91	NS	NS	NS	NS	NS
MW-8	03/27/90	ND	ND	ND	ND	ND
	06/25/90	ND	ND	ND	ND	ND
	09/21/90	ND	ND	ND	ND	ND
	01/10/91	ND	ND	ND	ND	ND
	04/04/91	NS	NS	NS	NS	NS
	07/12/91	NS	NS	NS	NS	NS
	10/04/91	NS	NS	NS	NS	NS
MDL		0.3	0.3	0.3	0.5	10

NOTES:
MDL = Method Detection Limit
ND = Non-detectable concentration (below MDL)
TPH-G = Total petroleum hydrocarbons-as-gas
SP = Separate-phase petroleum hydrocarbons
NS = Not sampled

LABTAB2.WK1

WELL CONCENTRATIONS
Former Texaco Service Station
930 Springtown Boulevard
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-A	01/02/1992	NA	NA	NA	NA	NA	NA	NA	520.10	13.61	506.49
MW-A	04/02/1992	27000	1200	570	1700	2300	NA	NA	520.10	12.44	507.66
MW-A	07/21/1992	57000	1500	1800	2700	7100	NA	NA	520.10	13.35	506.75
MW-A	10/09/1992	56000	2900	2600	4600	12000	NA	NA	520.10	12.92	507.18
MW-A	01/11/1993	NA	NA	NA	NA	NA	NA	NA	520.10	11.78	508.32
MW-A	05/05/1993	NA	NA	NA	NA	NA	NA	NA	520.10	11.39	508.71
MW-A	08/09/1993	NA	NA	NA	NA	NA	NA	NA	520.10	12.80	507.30
MW-A	10/14/1993	NA	NA	NA	NA	NA	NA	NA	520.10	13.48	506.62
MW-A	01/24/1994	1400000	6900	2100	15000	38000	NA	NA	520.10	12.74	507.36
MW-A	05/31/1994	48000	1200	900	1900	4200	NA	NA	520.10	12.28	507.82
MW-A	08/31/1994	24000	140	120	830	1500	NA	NA	520.10	13.20	506.90
MW-A	11/02/1994	15000	230	360	1100	1800	NA	NA	520.10	13.15	506.95
MW-A	02/20/1995	12000	290	330	570	1300	NA	NA	520.10	11.71	508.39
MW-A	05/09/1995	1200	6.1	5.9	12	15	NA	NA	520.10	12.37	507.73
MW-A	08/21/1995	9600	85	140	250	860	160	NA	520.10	11.37	508.73
MW-A	10/20/1995	360	5.2	7.9	15	43	NA	NA	520.10	12.04	508.06
MW-A	02/07/1996	6100	130	180	320	840	NA	NA	520.10	10.11	509.99
MW-A	04/30/1996	410	1.2	0.67	1.2	1.5	NA	NA	520.10	10.28	509.82
MW-A	08/14/1996	3000	65	75	170	460	57	NA	520.10	10.82	509.28
MW-A	11/22/1996	6300	100	170	310	710	64	NA	520.10	10.97	509.13
MW-A	02/14/1997	8100	140	180	700	1600	<300	NA	520.10	10.00	510.10
MW-A	05/23/1997	24000	340	520	1600	3800	<2000	NA	520.10	11.36	508.74
MW-A	07/25/1997	440	<0.5	<0.5	<0.5	<0.5	<30	NA	520.10	11.66	508.44
MW-A	10/31/1997	3700	21	48	200	430	35	NA	520.10	11.56	508.54
MW-A	02/06/1998	1500	2.1	4.4	55	77	<30	NA	520.10	9.00	511.10
MW-A	05/19/1998	32000	310	380	1800	3700	1300	NA	520.10	9.85	510.25

WELL CONCENTRATIONS
Former Texaco Service Station
930 Springtown Boulevard
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-A	07/31/1998	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	520.10	10.04	510.06
MW-A	11/04/1998	15000	86	180	960	1800	<50	<50	520.10	11.09	509.01
MW-A	11/11/1999	1010	4.72	<2.50	26.1	59.9	87.6	<0.500	520.10	11.39	508.71
MW-A	04/03/2000	12800	23.8	54.9	704	1070	242	NA	520.10	10.41	509.69
MW-A	10/16/2000	4810	51.6	<20.0	251	434	108	<10.0	520.10	11.59	508.51
MW-A	06/28/2001	1100	1.2	2.4	51	64	NA	<0.50	520.10	12.13	507.97
MW-A	10/22/2001	15000	24	38	1000	980	NA	<5.0	520.10	12.74	507.36
MW-A	**01/04/2002**	**9100**	**4.1**	**6.5**	**450**	**360**	**NA**	**<20**	**520.10**	**10.83**	**509.27**
MW-B	01/02/1992	NA	NA	NA	NA	NA	NA	NA	518.05	11.27	506.78
MW-B	04/02/1992	1900	ND	39	24	35	NA	NA	518.05	10.18	507.87
MW-B	07/21/1992	16000	180	1600	270	1100	NA	NA	518.05	11.27	506.78
MW-B	10/09/1992	38000	490	8300	1400	5100	NA	NA	518.05	11.64	506.41
MW-B	01/11/1993	NA	NA	NA	NA	NA	NA	NA	518.05	9.65	508.40
MW-B	05/05/1993	NA	NA	NA	NA	NA	NA	NA	518.05	9.28	508.77
MW-B	08/09/1993	NA	NA	NA	NA	NA	NA	NA	518.05	11.02	507.03
MW-B	10/14/1993	NA	NA	NA	NA	NA	NA	NA	518.05	11.34	506.71
MW-B	01/24/1994	23000	110	1700	600	1900	NA	NA	518.05	10.54	507.51
MW-B	05/31/1994	13000	780	310	370	1400	NA	NA	518.05	10.19	507.86
MW-B	08/31/1994	35000	160	2800	1000	4500	NA	NA	518.05	10.98	507.07
MW-B	11/02/1994	2500	170	3200	1100	4700	NA	NA	518.05	10.90	507.15
MW-B	02/20/1995	10000	46	1400	330	1200	NA	NA	518.05	9.47	508.58
MW-B	05/09/1995	4100	9.1	47	26	30	NA	NA	518.05	10.58	507.47
MW-B	08/21/1995	4000	9.6	110	120	270	98	NA	518.05	9.34	508.71
MW-B	10/20/1995	9300	35	1300	370	1300	NA	NA	518.05	9.83	508.22
MW-B	02/07/1996	8900	33	700	110	360	NA	NA	518.05	7.85	510.20
MW-B	04/30/1996	5500	17	460	120	400	NA	NA	518.05	8.02	510.03

WELL CONCENTRATIONS
Former Texaco Service Station
930 Springtown Boulevard
Livermore, CA

Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-B	08/14/1996	9000	<5	260	120	320	<300	NA	518.05	8.66	509.39
MW-B	11/22/1996	560000	56	2400	1600	5500	<3000	NA	518.05	8.70	509.35
MW-B	02/14/1997	4600	5.2	110	72	210	<300	NA	518.05	7.75	510.30
MW-B	05/23/1997	34000	75	1700	590	2100	1800	NA	518.05	9.05	509.00
MW-B	07/25/1997	39000	250	5200	1600	5900	<800	NA	518.05	9.37	508.68
MW-B	10/31/1997	36000	130	2600	1200	4800	<800	NA	518.05	9.29	508.76
MW-B	02/06/1998	4800	10	120	72	200	<80	NA	518.05	6.68	511.37
MW-B	05/19/1998	25000	200	900	410	1600	570	NA	518.05	7.57	510.48
MW-B	07/31/1998	580	<0.5	<0.5	<0.5	<0.5	14	NA	518.05	8.03	510.02
MW-B	11/04/1998	24000	150	1400	850	2400	<50	<66	518.05	8.85	509.20
MW-B	11/11/1999	685	7.22	14.7	6.10	17.8	<12.5	NA	518.05	9.03	509.02
MW-B	04/03/2000	9250	106	477	346	1320	231	<1.00a	518.05	8.14	509.91
MW-B	10/16/2000	1280	14.5	13.8	13.3	38.8	26.5	NA	518.05	9.42	508.63
MW-B	06/28/2001	16000	29	550	470	1700	NA	<2.5	518.05	9.81	508.24
MW-B	10/22/2001	7000	20	400	330	1100	NA	<20	518.05	10.44	507.61
MW-B	**01/04/2002**	**10000**	**11**	**240**	**280**	**1100**	**NA**	**<20**	**518.05**	**8.46**	**509.59**
MW-1	01/02/1992	16	6	ND	ND	ND	NA	NA	520.61	14.11	506.50
MW-1	04/02/1992	ND	ND	ND	ND	ND	NA	NA	520.61	12.98	507.63
MW-1	07/21/1992	<50	3.2	<0.5	<0.5	<0.5	NA	NA	520.61	13.92	506.69
MW-1	10/09/1992	<50	8.5	<0.5	<0.5	<0.5	NA	NA	520.61	14.25	506.36
MW-1	01/11/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	12.30	508.31
MW-1	05/05/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	11.88	508.73
MW-1	08/09/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	13.63	506.98
MW-1	10/14/1993	440	16	2.9	2.9	11	NA	NA	520.61	13.91	506.70
MW-1	01/24/1993	NA	NA	NA	NA	NA	NA	NA	520.61	13.12	507.49
MW-1	05/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	12.74	507.87

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-1	08/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	13.68	506.93
MW-1	11/02/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	13.48	507.13
MW-1	02/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	12.02	508.59
MW-1	05/09/1995	450	22	25	23	100	NA	NA	520.61	12.83	507.78
MW-1	08/21/1995	58	<0.5	1.5	1.8	4.5	<10	NA	520.61	11.93	508.68
MW-1	10/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	12.40	508.21
MW-1	02/07/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	520.61	10.42	510.19
MW-1	04/30/1996	NA	NA	NA	NA	NA	NA	NA	520.61	10.48	510.13
MW-1	08/14/1996	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	520.61	11.18	509.43
MW-1	11/22/1996	NA	NA	NA	NA	NA	NA	NA	520.61	11.10	509.51
MW-1	02/14/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	520.61	10.25	510.36
MW-1	05/23/1997	NA	NA	NA	NA	NA	NA	NA	520.61	11.48	509.13
MW-1	07/25/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	520.61	11.99	508.62
MW-1	10/31/1997	NA	NA	NA	NA	NA	NA	NA	520.61	11.74	508.87
MW-1	02/06/1998	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	520.61	9.27	511.34
MW-1	05/19/1998	NA	NA	NA	NA	NA	NA	NA	520.61	10.51	510.10
MW-1	07/31/1998	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	520.61	10.41	510.20
MW-1	11/04/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	520.61	11.32	509.29
MW-1	11/11/1999	82.5	6.35	7.08	4.76	10.9	3.13	1.08	520.61	11.54	509.07
MW-1	04/03/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	520.61	10.65	509.96
MW-1	10/16/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	520.61	11.91	508.70
MW-1	06/28/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	0.65	520.61	12.37	508.24
MW-1	10/22/2001	<50	<0.50	<0.50	<0.50	0.55	NA	<5.0	520.61	12.90	507.71
MW-1	**01/04/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**520.61**	**11.02**	**509.59**
MW-2	01/02/1992	ND	ND	ND	ND	ND	NA	NA	518.29	11.96	506.33
MW-2	04/02/1992	ND	ND	ND	ND	ND	NA	NA	518.29	10.89	507.40

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-2	07/21/1992	NA	NA	NA	NA	NA	NA	NA	518.29	11.55	506.74
MW-2	05/31/1994	NA	NA	NA	NA	NA	NA	NA	518.29	10.37	507.92
MW-2	08/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.29	11.16	507.13
MW-2	11/02/1994	NA	NA	NA	NA	NA	NA	NA	518.29	11.07	507.22
MW-2	02/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.29	9.66	508.63
MW-2	05/09/1995	NA	NA	NA	NA	NA	NA	NA	518.29	10.14	508.15
MW-2	08/21/1995	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	518.29	9.58	508.71
MW-2	10/20/1995	NA	NA	NA	NA	NA	NA	NA	518.29	9.91	508.38
MW-2	02/07/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.29	8.00	510.29
MW-2	04/30/1996	NA	NA	NA	NA	NA	NA	NA	518.29	8.21	510.08
MW-2	08/14/1996	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.29	8.88	509.41
MW-2	11/22/1996	NA	NA	NA	NA	NA	NA	NA	518.29	8.88	509.41
MW-2	02/14/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.29	7.92	510.37
MW-2	05/23/1997	NA	NA	NA	NA	NA	NA	NA	518.29	9.25	509.04
MW-2	07/25/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.29	9.51	508.78
MW-2	10/31/1997	NA	NA	NA	NA	NA	NA	NA	518.29	9.30	508.99
MW-2	02/06/1998	<50	<0.5	<0.5	<0.5	1.4	<30	NA	518.29	6.88	511.41
MW-2	05/19/1998	NA	NA	NA	NA	NA	NA	NA	518.29	8.35	509.94
MW-2	07/31/1998	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	518.29	8.14	510.15
MW-2	11/04/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	518.29	9.00	509.29
MW-2	11/11/1999	65.8	6.34	7.04	4.71	10.8	3.21	1.04	518.29	9.19	509.10
MW-2	04/03/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	518.29	8.31	509.98
MW-2	10/16/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	518.29	9.36	508.93
MW-2	06/28/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	518.29	9.88	508.41
MW-2	10/22/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	518.29	10.54	507.75
MW-2	**01/04/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**518.29**	**8.63**	**509.66**

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Well ID	Date	TPPH (ug/L)	B (ug/L)	T (ug/L)	E (ug/L)	X (ug/L)	MTBE 8020 (ug/L)	MTBE 8260 (ug/L)	TOC (MSL)	Depth to Water (ft.)	GW Elevation (MSL)
MW-3	01/02/1992	340	0.4	ND	ND	ND	NA	NA	519.60	12.87	506.73
MW-3	04/02/1992	160	5	ND	0.3	0.5	NA	NA	519.60	11.97	507.63
MW-3	07/21/1992	260	1.7	<0.5	<0.5	<0.5	NA	NA	519.60	12.60	507.00
MW-3	10/09/1992	88	<0.5	<0.5	<0.5	<0.5	NA	NA	519.60	12.93	506.67
MW-3	01/11/1993	130	<0.5	<0.5	<0.5	<0.5	NA	NA	519.60	11.16	508.44
MW-3	05/05/1993	340	1.8	<0.5	1.3	<0.5	NA	NA	519.60	10.72	508.88
MW-3	08/09/1993	610	18	<0.5	2.4	0.9	NA	NA	519.60	12.34	507.26
MW-3	10/14/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	519.60	12.71	506.89
MW-3	01/24/1994	320	3.5	<0.5	<0.5	<0.5	NA	NA	519.60	12.03	507.57
MW-3	05/31/1994	830	11	12	5.0	1.2	NA	NA	519.60	11.54	508.06
MW-3	08/31/1994	660	2	<0.5	1	<0.5	NA	NA	519.60	12.60	507.00
MW-3	11/02/1994	1500	260	36	34	76	NA	NA	519.60	12.16	507.44
MW-3	02/20/1995	410	1.2	1.9	1.4	2.2	NA	NA	519.60	11.05	508.55
MW-3	05/09/1995	730	23	43	21	95	NA	NA	519.60	11.97	507.63
MW-3	08/21/1995	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	519.60	7.60	512.00
MW-3	10/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	519.60	11.46	508.14
MW-3	02/07/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	519.60	9.42	510.18
MW-3	04/30/1996	NA	NA	NA	NA	NA	NA	NA	519.60	9.60	510.00
MW-3	08/14/1996	<50	<0.5	0.60	<0.5	<0.5	<30	NA	519.60	10.24	509.36
MW-3	11/22/1996	NA	NA	NA	NA	NA	NA	NA	519.60	10.34	509.26
MW-3	02/14/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	519.60	9.38	510.22
MW-3	05/23/1997	NA	NA	NA	NA	NA	NA	NA	519.60	10.67	508.93
MW-3	07/25/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	519.60	11.11	508.49
MW-3	10/31/1997	NA	NA	NA	NA	NA	NA	NA	519.60	10.86	508.74
MW-3	02/06/1998	63	1.5	2.8	0.77	8.6	<30	NA	519.60	8.41	511.19
MW-3	05/19/1998	NA	NA	NA	NA	NA	NA	NA	519.60	9.40	510.20
MW-3	07/31/1998	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	519.60	9.04	510.56

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MW-3	11/04/1998	230	11	7.2	7.6	33	18	14	519.60	10.45	509.15
MW-3	11/11/1999	569	103	47.1	14.1	29.6	521	604	519.60	10.73	508.87
MW-3	04/03/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	519.60	9.78	509.82
MW-3	10/16/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	519.60	10.97	508.63
MW-3	06/28/2001	110	<0.50	<0.50	0.56	1.8	NA	1.8	519.60	11.49	508.11
MW-3	10/22/2001	190	1.4	1.3	1.2	7.7	NA	<5.0	519.60	12.08	507.52
MW-3	**01/04/2002**	**<50**	**<0.50**	**<0.50**	**<0.50**	**<0.50**	**NA**	**<5.0**	**519.60**	**10.18**	**509.42**
MW-4	01/02/1992	ND	ND	ND	ND	ND	NA	NA	518.79	12.22	506.57
MW-4	04/02/1992	ND	ND	ND	ND	ND	NA	NA	518.79	11.03	507.76
MW-4	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	12.36	506.43
MW-4	10/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	12.40	506.39
MW-4	01/11/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	10.72	508.07
MW-4	05/05/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	10.21	508.58
MW-4	08/09/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	12.25	506.54
MW-4	10/14/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	12.58	506.21
MW-4	01/24/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	11.72	507.07
MW-4	05/31/1994	NA	NA	NA	NA	NA	NA	NA	518.79	11.29	507.50
MW-4	08/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	12.00	506.79
MW-4	11/02/1994	NA	NA	NA	NA	NA	NA	NA	518.79	11.96	506.83
MW-4	02/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	10.42	508.37
MW-4	05/09/1995	NA	NA	NA	NA	NA	NA	NA	518.79	11.22	507.57
MW-4	08/21/1995	<50	<0.5	<0.5	<0.5	<0.5	<10	NA	518.79	10.51	508.28
MW-4	10/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	10.86	507.93
MW-4	02/07/1996	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	518.79	8.93	509.86
MW-4	04/30/1996	NA	NA	NA	NA	NA	NA	NA	518.79	9.03	509.76
MW-4	08/14/1996	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.79	9.84	508.95

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MW-4	11/22/1996	NA	NA	NA	NA	NA	NA	NA	518.79	9.73	509.06
MW-4	02/14/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.79	8.85	509.94
MW-4	05/23/1997	NA	NA	NA	NA	NA	NA	NA	518.79	10.15	508.64
MW-4	07/25/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.79	10.61	508.18
MW-4	10/31/1997	NA	NA	NA	NA	NA	NA	NA	518.79	10.36	508.43
MW-4	02/06/1998	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	518.79	7.46	511.33
MW-4	05/19/1998	NA	NA	NA	NA	NA	NA	NA	518.79	8.91	509.88
MW-4	07/31/1998	<50	<0.5	<0.5	<0.5	<0.5	<2.5	NA	518.79	8.99	509.80
MW-4	11/04/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	518.79	10.08	508.71
MW-4	11/11/1999	83.6	6.50	7.52	4.31	9.59	<2.50	NA	518.79	9.81	508.98
MW-4	04/03/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	518.79	9.24	509.55
MW-4	10/16/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	518.79	10.49	508.30
MW-4	06/28/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	518.79	10.82	507.97
MW-4	10/22/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	518.79	11.45	507.34
MW-4	**01/04/2002**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**NA**	**518.79**	**9.43**	**509.36**
MW-5	01/02/1992	1800	74	41	84	94	NA	NA	521.19	14.56	506.63
MW-5	04/02/1992	ND	ND	ND	ND	ND	NA	NA	521.19	13.58	507.61
MW-5	07/21/1992	1000	69	16	40	31	NA	NA	521.19	13.77	507.42
MW-5	10/09/1992	3400	890	51	110	110	NA	NA	521.19	14.09	507.10
MW-5	01/11/1993	15000	460	110	900	370	NA	NA	521.19	12.24	508.95
MW-5	05/05/1993	4500	160	19	280	110	NA	NA	521.19	11.90	509.29
MW-5	08/09/1993	2300	180	19	130	80	NA	NA	521.19	13.35	507.84
MW-5	10/14/1993	2200	160	27	90	64	NA	NA	521.19	13.89	507.30
MW-5	01/24/1994	2600	69	11	65	25	NA	NA	521.19	13.32	507.87
MW-5	05/31/1994	3100	130	64	140	120	NA	NA	521.19	12.75	508.44
MW-5	08/31/1994	600	20	2.9	14	7.1	NA	NA	521.19	14.34	506.85

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MW-5	11/02/1994	2300	68	18	52	54	NA	NA	521.19	14.22	506.97
MW-5	02/20/1995	12000	130	<30	240	138	NA	NA	521.19	12.78	508.41
MW-5	05/09/1995	2500	57	60	54	37	NA	NA	521.19	13.41	507.78
MW-5	08/21/1995	11000	91	28	140	120	<100	<100	521.19	12.32	508.87
MW-5	10/20/1995	2300	38	3.8	28	19	NA	NA	521.19	13.28	507.91
MW-5	02/07/1996	1800	35	8.1	37	20	NA	NA	521.19	11.31	509.88
MW-5	04/30/1996	NA	NA	NA	NA	NA	NA	NA	521.19	11.52	509.67
MW-5	08/14/1996	3500	130	22	170	47	71	NA	521.19	12.03	509.16
MW-5	11/22/1996	3500	160	15	190	28	<200	NA	521.19	12.22	508.97
MW-5	02/14/1997	2900	150	54	330	68	<300	NA	521.19	11.20	509.99
MW-5	05/23/1997	10000	170	98	380	68	<200	NA	521.19	12.55	508.64
MW-5	07/25/1997	2700	110	<0.5	33	<0.5	<30	NA	521.19	12.93	508.26
MW-5	10/31/1997	NA	NA	NA	NA	NA	NA	NA	521.19	12.78	508.41
MW-5	02/06/1998	67	<0.5	<0.5	<0.5	<0.5	<30	NA	521.19	10.26	510.93
MW-5	05/19/1998	4200	120	25	360	76	510	NA	521.19	11.12	510.07
MW-5	07/31/1998	270	<0.5	<0.5	<0.5	<0.5	<2.5	NA	521.19	11.79	509.40
MW-5	11/04/1998	2800	120	14	590	140	<25	<10	521.19	12.33	508.86
MW-5	11/11/1999	1220	40.5	22.8	16.4	6.22	<12.5	NA	521.19	12.64	508.55
MW-5	04/03/2000	5060	130	20.8	281	30.6	74.1	NA	521.19	11.64	509.55
MW-5	10/16/2000	2070	35.4	33.6	114	57.6	50.1	NA	521.19	12.82	508.37
MW-5	06/28/2001	1500	15	2.5	74	5.5	NA	<0.50	521.19	13.40	507.79
MW-5	10/22/2001	2400	37	2.9	75	7.3	NA	<5.0	521.19	13.99	507.20
MW-5	**01/04/2002**	**3400**	**8.9**	**1.2**	**22**	**13**	**NA**	**<5.0**	**521.19**	**12.13**	**509.06**
MW-6	01/02/1992	23	ND	0.3	0.6	3	NA	NA	522.18	16.64	505.54
MW-6	04/02/1991	ND	ND	ND	ND	ND	NA	NA	522.18	15.61	506.57
MW-6	07/21/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	15.53	506.65

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MW-6	10/09/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	15.69	506.49
MW-6	08/09/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	14.50	507.68
MW-6	10/14/1993	NA	NA	NA	NA	NA	NA	NA	522.18	NA	NA
MW-6	01/24/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	15.09	507.09
MW-6	05/31/1994	NA	NA	NA	NA	NA	NA	NA	522.18	14.64	507.54
MW-6	08/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	15.32	506.86
MW-6	11/02/1994	NA	NA	NA	NA	NA	NA	NA	522.18	15.32	506.86
MW-6	02/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	522.18	14.07	508.11
MW-6	05/09/1995	NA	NA	NA	NA	NA	NA	NA	522.18	14.30	507.88
MW-6	10/20/1995	NA	NA	NA	NA	NA	NA	NA	522.18	14.31	NA
MW-6	07/25/1997	NA	NA	NA	NA	NA	NA	NA	522.18	NA	NA
MW-7	01/02/1992	NA	NA	NA	NA	NA	NA	NA	522.19	11.17	511.02
MW-7	04/02/1992	ND	ND	ND	ND	ND	NA	NA	522.19	10.34	511.85
MW-7	07/21/1992	NA	NA	NA	NA	NA	NA	NA	522.19	9.02	513.17
MW-7	05/31/1994	NA	NA	NA	NA	NA	NA	NA	522.19	9.42	512.77
MW-7	08/31/1994	NA	NA	NA	NA	NA	NA	NA	522.19	6.84	515.35
MW-7	11/02/1994	NA	NA	NA	NA	NA	NA	NA	522.19	6.48	515.71
MW-7	02/20/1995	NA	NA	NA	NA	NA	NA	NA	522.19	7.71	514.48
MW-7	05/09/1995	NA	NA	NA	NA	NA	NA	NA	522.19	7.65	514.54
MW-7	08/21/1995	NA	NA	NA	NA	NA	NA	NA	522.19	7.83	514.36
MW-7	10/20/1995	NA	NA	NA	NA	NA	NA	NA	522.19	8.61	513.58
MW-7	07/25/1997	NA	NA	NA	NA	NA	NA	NA	522.19	NA	NA
MW-8	01/02/1992	12000	32	980	200	760	NA	NA	524.03	18.42	505.61
MW-8	04/02/1992	ND	ND	ND	ND	ND	NA	NA	524.03	17.39	506.64
MW-8	07/21/1992	NA	NA	NA	NA	NA	NA	NA	524.03	14.02	510.01

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MW-8	05/31/1994	NA	NA	NA	NA	NA	NA	NA	524.03	19.65	504.38
MW-8	08/31/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	524.03	17.40	506.63
MW-8	11/02/1994	NA	NA	NA	NA	NA	NA	NA	524.03	17.38	506.65
MW-8	02/20/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	524.03	15.99	508.04
MW-8	05/09/1995	NA	NA	NA	NA	NA	NA	NA	524.03	16.54	507.49
MW-8	08/21/1995	<50	<0.5	<0.5	0.67	0.62	<10	NA	524.03	15.77	508.26
MW-8	10/20/1995	NA	NA	NA	NA	NA	NA	NA	524.03	16.24	507.79
MW-8	02/07/1996	<50	7.0	<0.5	<0.5	<0.5	NA	NA	524.03	14.42	509.61
MW-8	04/30/1996	61	9.6	<0.5	<0.5	<0.5	NA	NA	524.03	14.65	509.38
MW-8	08/14/1996	<50	0.73	<0.5	<0.5	<0.5	<30	NA	524.03	15.08	508.95
MW-8	11/22/1996	120	5.9	2.2	2.4	8.3	<30	NA	524.03	15.35	508.68
MW-8	02/14/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	524.03	14.32	509.71
MW-8	05/23/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	524.03	13.35	510.68
MW-8	07/25/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	524.03	16.05	507.98
MW-8	10/31/1997	<50	<0.5	<0.5	<0.5	<0.5	<30	NA	524.03	15.86	508.17
MW-8	02/06/1998	180	17	<0.5	<0.5	6.0	<30	NA	524.03	13.62	510.41
MW-8	05/19/1998	<50	4.9	<0.5	<0.5	<0.5	<2.5	NA	524.03	14.23	509.80
MW-8	07/31/1998	140	<0.5	<0.5	<0.5	<0.5	<2.5	NA	524.03	14.95	509.08
MW-8	11/04/1998	<50	1.2	100	1.9	7.8	<2.5	NA	524.03	15.42	508.61
MW-8	11/11/1999	<50.0	<0.500	<0.500	<0.500	<0.500	3.70	<0.500	524.03	15.74	508.29
MW-8	04/03/2000	87.7	10.8	<0.500	<0.500	<0.500	<2.50	NA	524.03	14.76	509.27
MW-8	10/16/2000	237	11.3	<0.500	<0.500	0.544	7.93	NA	524.03	15.91	508.12
MW-8	06/28/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	29	524.03	16.49	507.54
MW-8	10/22/2001	<50	<0.50	<0.50	<0.50	2.0	NA	<5.0	524.03	16.98	507.05
MW-8	**01/04/2002**	**290**	**1.3**	**<0.50**	**<0.50**	**<0.50**	**NA**	**<5.0**	**524.03**	**15.29**	**508.74**

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Abbreviations:

TPPH = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8015.

BTEX = benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to June 28, 2001, analyzed by EPA Method 8020.

MTBE = Methyl-tertiary-butyl ether

TOC = Top of Casing Elevation

GW = Groundwater

ug/L = Parts per billion

msl = Mean sea level

ft = Feet

<n = Below detection limit

(D) = Duplicate sample

NA = Not applicable

ND = Not detected at or above the minimum quantitation limits.

Notes:

a = Sample analyzed outside of EPA recommended holding time.

For the event on April 3, 2000, the lab confirmed MTBE by 8260 for well MW-B instead of well MW-A.