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Alameda County
Environmental Health

Re: Updated Site Conceptual Model
Former Shell-Branded Service Station
15275 Washington Avenue
San Leandro, California

Dear Mr. Jerry Wickham:

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.

Sincerely,
Shell Oil Products US

A handwritten signature in black ink that reads "Denis L. Brown".

Denis L. Brown
Project Manager

UPDATED SITE CONCEPTUAL MODEL
FORMER SHELL-BRANDED SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

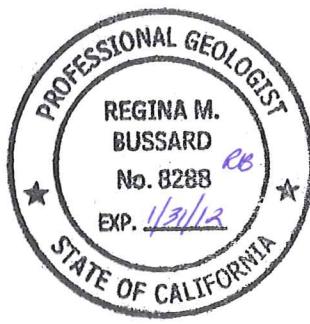
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Shell Oil Products US

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December 22, 2010

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1.0 INTRODUCTION

Delta Consultants (Delta), on behalf of Shell Oil Products US (Shell) has prepared this updated Site Conceptual Model (SCM) for the former Shell-branded service station located at 15275 Washington Avenue, San Leandro, California (site) (Figure 1). This updated SCM references the SCM included as an attachment to the *Soil Vapor Investigation Report* issued by Delta on October 7, 2008. The SCM provides a working hypothesis regarding the current and future distribution of petroleum hydrocarbons detected in soil and groundwater beneath the site.

The key elements of the SCM are:

- Site Location and Description
- Regional Hydrogeologic Setting
- Nature and Extent of the Petroleum Hydrocarbon Source(s)
- Contaminant Fate and Transport Characteristics
- Site Remediation
- Potential Exposure Pathways
- Potential Receptors

2.0 SITE LOCATION AND DESCRIPTION

The following sections provide a description of the site and surrounding area.

2.1 Site Location

The subject site is located in the northwest corner of the intersection of Washington Avenue and Lewelling Boulevard in San Leandro, California. (Figures 1 and 2). The site is designated by Alameda County Environmental Health Services (ACEHS) as Fuel Leak Case No. RO0000372. The Geotracker Global ID is T0600101226.

2.2 Site Description

The subject site, formerly a Shell-branded service station, is currently an automotive emissions testing facility (Speedy Smog Check) and tire repair facility (Big O Tire). The surrounding area is a mix of residential (primarily multi-family units) and commercial properties (Figure 3). The site is bounded on the west by a mobile home park, on the south by Lewelling Boulevard, on the east by Washington Avenue, and on the north by commercial buildings. An ARCO service station is located on the southwest corner of the intersection and is an open leaking underground fuel tank (LUFT) case.

2.3 Site Owner

The site property is currently owned by Mr. Frank Salel, Salel Enterprises, and is in care of Matthew Widener. The property is managed by Evans Management Services located at 871 38th Avenue, Santa Cruz, California 95062.

3.0 SITE GEOLOGIC/HYDROGEOLOGIC SETTING

3.1 Regional Geologic Setting

The site is located within the East Bay Plain Subbasin approximately two miles east of the edge of San Francisco Bay. (Figure 4). The East Bay Plain Subbasin is a northwest trending alluvial plain between foothills to the east and San Francisco Bay to the west. As mapped by E.J. Helley and others (1979), soils in the site vicinity consist of unconsolidated, irregularly interbedded clay, silt, sand, and gravel of Pleistocene and Holocene formations. Sediments become finer-grained near the edge of San Francisco Bay. A geologic map of the site vicinity is presented on Figure 4.

3.2 Regional Hydrogeologic Setting

The site is located in the central portion of the East Bay Plain Subbasin (Department of Water Resources [DWR] Bulletin 118). The East Bay Plain Subbasin aquifer system consists of unconsolidated sediments of Quaternary age with a cumulative thickness of approximately 1,000 feet (CRWQCB, 1999). Shallow aquifers are recharged by numerous creeks crossing the subbasin in a east-west or westward direction. Locally, streams discharge to San Francisco Bay. The total depth of domestic wells ranges from 32 to 525 feet below the ground surface (bgs) with an average of 206 feet bgs. Total depth of municipal and irrigation wells range from 29 to 630 feet bgs with an average of 191 feet bgs (DWR Bulletin 118). Groundwater flow is typically to the west toward San Francisco Bay. Water agencies in the area that actively monitor groundwater include East Bay Municipal Utility District (East Bay MUD) and Alameda County Flood Control and Water Conservation District.

A well survey conducted by Emcon in 1987 was updated by Enviros in April 1995 with similar results; no sensitive wells were identified within a half-mile radius of the site (Enviros, 1997). Delta performed a well survey in 2005 and TRC completed a well survey of the site area in 2006; in addition, Toxicem Management Systems, Inc. published a well survey map sometime after 2004 (date of issue unknown). The TRC survey identified 39 wells within approximately ½-mile radius of the site; 29 wells were classified as “irrigation”, six as “domestic”, one as “cathodic”, and three were of unknown use. The depth of irrigation wells ranged from 34 feet to 720 feet bgs; the depth of domestic wells ranged from 28 feet to 84 feet bgs. No municipal water supply wells were identified within the search radius. Historic well survey data are included as Appendix A.

3.3 Site Hydrogeologic Conditions

Sediments observed in borings consisted primarily of clay and silty clay to depths of approximately 25 feet bgs, with some samples containing fractures and root holes. Interbedded layers of silty sand and clayey sand were identified in borings S-2 through S-5 at depths of approximately 4 to 8 feet bgs, and in borings S-A through S-D to 12 feet bgs. Borings S-6 through S-19 also reported clay to total depths of between 20 and 25 feet bgs with shallow discontinuous interbeds of sand. Beneath the clay, silty sand and sand was encountered from approximately 25 feet to 40.5 feet bgs, the total depth explored. Confirmation soil borings SB-1 through SB-14 advanced in 2010 generally conformed to hydrogeologic conditions noted in earlier borings for various locations; two deeper borings (SB-2 and SB-3) reported alternating beds of clay and sand to 50 feet bgs. Copies of boring logs and well construction diagrams are provided as Appendix B. Hydrogeologic cross-sections are included as Appendix C.

Groundwater was first encountered in soil borings at depths ranging from approximately 4 to 20 feet bgs within clay deposits. Static groundwater is typically measured between 5 and 8 feet bgs. Enviros in 1997 concluded “the upper water-bearing zone appears to extend to a depth of approximately 6 feet to 20 feet bgs”. Water in this upper zone is most likely yielded from the discreet sandy interbeds and possibly from silty horizons in the predominantly clayey (CL and CH) matrix.” All groundwater monitoring wells are screened in this upper groundwater zone. Groundwater monitoring well construction information is contained in Appendix B.

Groundwater flow is predominantly to the west-southwest. Copies of selected groundwater contour maps are included in Appendix D. A step-test was performed at the site on March 27, 1990 using well SR-1. The well

dewatered after 52 minutes of pumping at a rate of 2 gallons per minute. Slug tests were performed in wells S-1, S-3, S-5, S-7, S-9, S-13, S-14, and S-16. Analysis of the slug test data indicated coefficient of permeability values ranging from 7.27 to 99.9 feet per day. GeoStrategies, Inc. (GSI) concluded “The wide range in values are most likely attributed to the heterogeneity of the clay (especially the complexity of the interbedded sandy horizons) in the subsurface as well as inherent well construction difficulties in low-permeable, fine grained aquifers where classic well design procedures fail” (GSI, 1990).

4.0 NATURE AND EXTENT OF SOURCE

The following sections describe the source(s) of the petroleum hydrocarbons that have been detected in soil and groundwater beneath and adjacent to the site.

4.1 Former USTs (1985-1987)

Elevated concentrations of total petroleum hydrocarbons as gasoline (TPH-g) were detected in groundwater in the first site groundwater monitoring wells installed in August 1985 (S-1 through S-4, Figure 2). Separate phase hydrocarbons (SPH) were detected in well S-3 (0.5 foot). Well S-3 was located west and downgradient of the site underground fuel storage tanks (USTs). In 1986, four borings (S-A through S-D) were drilled to obtain soil and groundwater samples in areas of potential petroleum hydrocarbons; waste oil tank (S-A) and USTs (S-B, SB-C, S-D, see attached figure in Appendix E). TPH-g was detected in the tank pit backfill at 1,700 milligrams per kilogram (mg/kg) and at the bottom of tank pit at 1,500 mg/kg (boring S-B). Soil analytical data are provided as Appendix E. Boring S-B was converted to a groundwater monitoring well. SPH (0.4 foot) was detected in well S-B. Wells S-B, S-2, and S-4 were destroyed in May 1987 during on-site construction activities.

4.2 Waste Oil Tank Replacement (1987)

The site waste oil tank was removed and replaced with a double-walled tank in June 1987. Soils were over-excavated to a depth of approximately 13 feet bgs and approximately 2 to 4 feet beyond the dimensions of the tank. Soil samples collected from beneath the waste oil tank contained 280 mg/kg TPH-g and 14 mg/kg benzene. The soil samples did not report measurable concentrations of total petroleum hydrocarbons as diesel (TPH-d) or any other volatile organic compounds (VOCs).

4.3 UST Replacements (1987)

The four fuel USTs were removed in June 1987 (Figure 2). A total of four soil samples were collected from the tank pit walls (Samples A through D). With the exception of sample D, which reported TPH-g at a concentration of 910 mg/kg, all other soil samples contained less than 100 mg/kg TPH-g (Kaprelian, 1987). Over-excavation was not practical due to the presence of underground utilities; approximately 500 cubic yards of material were removed from the site, and an additional 200 cubic yards were removed from trenches in the dispenser areas.

In 1987, three trenches were excavated away from the former tank pit area. The trenches were dug to a depth of approximately 8.5 feet bgs. TPH-g was detected in soil samples at from 100 mg/kg to 730 mg/kg (Kaprelian, 1987). Maps and soil data are included as Appendix E.

4.4 Additional Well Installations and Soil Gas Survey (1988-1991)

On October 4, 1988 a soil gas survey was performed by Tracer Research Corporation at fifteen offsite locations on Lewelling Boulevard and at the adjacent mobile home park (GSI, 1989), and seven monitoring wells (S-6 through S-12) were installed in November 1988 (Figure 2). Delta was unable to obtain the original sample results; a soil gas survey contour map appended to a groundwater monitoring report indicated soil gas samples reported TPH-g at concentrations ranging from 0.63 micrograms per liter (mg/L) to 5,800 mg/L, with highest concentrations in Lewelling Boulevard south of the site; the soil gas survey contour map is included as Appendix F. Groundwater samples collected from wells S-1 through S-12 reported TPH-g at concentrations ranging from 50 micrograms per liter ($\mu\text{g}/\text{L}$) to 70,000 $\mu\text{g}/\text{L}$ (S-3). In March 1989, groundwater monitoring wells S-13 through S-17 and recovery well SR-1 were installed, and well S-18 was installed in 1991 (Figure 2).

4.5 Groundwater Monitoring Data (1985 – 2010)

Groundwater monitoring reports dating back to 1985 indicate that levels of petroleum hydrocarbons have declined steadily over time due to natural attenuation and soil vapor extraction, with the exception of well S-9. Historically, the highest concentrations of TPH-g have been detected in groundwater samples from wells S-3 and S-5, located adjacent to the former fuel USTs and dispenser island, and S-9 in the down

gradient area to the west. TPH-g was greater than 10,000 µg/L in well S-3 from its installation in 1985 through January 2003. TPH-g concentrations persist in well S-9; the most recent monitoring data, including historic well concentrations, are included as Appendix G. In 1993, wells S-11 through S-15 were paved over by the City of San Leandro (Enviro, 1997).

Current groundwater TPH-g concentrations are reported at 81 µg/L and 7,900 µg/L in wells S-3 and S-9, respectively. Well S-9 has the only reported benzene concentration at 21 µg/L (Delta, October 2010).

4.6 Soil Gas Survey (1997)

In March 1997, a second soil gas survey was performed at the site and adjacent mobile home park property (Figure 2). Soil gas samples were collected using GeoProbe direct-push soil vapor sampling equipment at nine locations (SG-01 through SG-09). At five locations (SG-01, SG-02, SG-05, SG-06, and SG-09) soil vapor samples were collected at a depth of 4 feet bgs. At four locations (SG-03, SG-04, SG-07, and SG-08) soil vapor samples were collected at depths of 2 feet, 4 feet, and 6 feet bgs. An ambient air sample (AMB-01) was collected at a location between the service station and the mobile home park. Soil samples were collected at four locations; SG-03, SG-04, SG-07, and SG-08. On July 31, 1997, four additional soil gas sample points were installed (SG-10 through SG-13) in the northeastern portion of the site, with samples collected at 4 feet bgs.

The soil vapor analytical results for March 1997 are summarized in Tables 2 and 3, and the July 1997 soil gas results are included as Appendix F (Table 5 and Plate 2, benzene contour map). The highest TPH-g concentrations in soil gas were detected at locations SG-01 (100,000,000 micrograms per cubic meter [$\mu\text{g}/\text{m}^3$]) and SG-07 (130,000,000 $\mu\text{g}/\text{m}^3$). The highest benzene concentrations were detected in soil vapor samples SG-01 at 750,000 $\mu\text{g}/\text{m}^3$, SG-03 at 90,000 $\mu\text{g}/\text{m}^3$ and SG-07 at 450,000 $\mu\text{g}/\text{m}^3$.

The highest soil concentrations of TPH-g were detected in SG-03 at 4,200 mg/kg (4 to 6 feet bgs) and 3,600 mg/kg (6 to 8 feet bgs). The highest benzene concentration was detected at location SG-03 at 10 mg/kg (4 to 6 feet bgs).

4.7 Soil Gas Survey (2008)

In June 2008, Delta performed a post-remediation soil gas survey. Soil gas samples were collected from fourteen locations (P-10 through P-23); sample points P-10, P-11, P-12, and P-15 were located on the adjacent mobile home park. Soil vapor samples were collected at a depth of 5.5 feet bgs, just above the top of the saturated zone. TPH-g was detected at concentrations greater than 5,000,000 $\mu\text{g}/\text{m}^3$ at locations P-11, P-12, P-19, and P-21 through P-23 located in the western or downgradient portion of the site and adjacent mobile home park.. Benzene was detected at greater than 1,000 $\mu\text{g}/\text{m}^3$ at sample locations P-11, P-14, and P-21 through P-23. Soil vapor analytical data are summarized in a table included as Appendix F.

4.8 Groundwater Sampling Plan (2009)

In January 2009, Delta submitted a Groundwater Sampling work plan to Alameda County Health Care Services Agency (ACHCSA) per their request to revise the groundwater sampling method protocol. Further evaluation of purge versus no-purge sampling methods indicates there is no significant overall change in concentrations before and after January 1988. Delta had recommended that both purge and no-purge sampling be conducted at the next quarterly monitoring event for wells S-7, S-8, and S-9 in order to ensure that representative samples are collected using the current sampling protocol.

4.9 Soil Gas Survey (2009)

In September 2009, a soil gas investigation was performed at the site per the request of ACHCSA. Delta collected soil vapor samples from six locations, P-24 through P-29 (Figure 2). Soil gas samples were collected from three discreet depths at each location, 3 feet bgs, 5 feet bgs, and 8 feet bgs. Petroleum hydrocarbons were detected in fifteen of the soil vapor gas samples; TPH-g was detected at concentrations ranging from 46,000 $\mu\text{g}/\text{m}^3$ to 2,900,000 $\mu\text{g}/\text{m}^3$ (Appendix F). Benzene was detected in four soil vapor gas samples at concentrations ranging from 1.7 $\mu\text{g}/\text{m}^3$ to 1.9 $\mu\text{g}/\text{m}^3$. Methyl tert-butyl ether (MTBE) was not reported in any sample above the detection limit. Fifteen of the eighteen soil vapor gas samples reported

concentrations of the tracer gas 1,1-Difluoroethane, at levels that indicate a potential concern with sampling integrity. Concentrations were generally lower than previous sampling events, however the tracer gas concentrations indicate leaks in the sampling system may have resulted in dilute samples.

4.10 Horizontal SVE Well Installation and Pilot Test (2009)

In August 2009, Delta installed two horizontal soil vapor extraction (SVE) wells (ET-1 and ET-2; Figure 2) in 5-foot deep trenches to target residual hydrocarbons in the shallow vadose zone. The trenches are approximately 12 feet in length, and were screened 10 feet along the length of the trench.

After the installation of ET-1 and ET-2, Delta conducted the SVE pilot test to evaluate the effectiveness of SVE at the site. The pilot test consisted of one step test and one extended test on extraction well ET-1. Results of the testing indicate that SVE may be effective, but difficult to maintain. SVE vapor flow rates were 180 standard cubic feet per minute (scfm), the radius of influence was between approximately 23 to 33 feet, and mass removal rates were adequate (96.4 pounds per day [lb/day] for TPH-g and 0.05 lb/day for benzene). However, a rapid decline in inlet vapor concentrations, soil lithology, and the depth of impact suggested that system operation might be difficult to sustain.

4.11 Soil Gas Well Installations (2009)

In December 2009, nine soil gas wells were installed at the site and the adjacent property (Figure 2). Wells SVG-1 through SVG-3 were installed to a total depth of 8 feet bgs, and wells SVG-4 through SVG-9 were installed to a total depth of 8.5 feet bgs. The nested wells were constructed using 0.25-inch diameter Teflon® tubing and probes set at 3 feet, 5 feet, and 7.5 feet bgs. A 1-inch diameter Polyvinyl chloride (PVC) casing screened from 7 to 8 feet bgs with 0.010-inch machine-slotted well screen was installed within the vapor wells in order to take soundings to determine whether groundwater elevations are impacting the deeper vapor wells.

4.12 Source Material Assessment Work Plan (2010)

In February 2010, Delta submitted a work plan to ACHCSA proposing to advance up to 14 soil borings in the vicinity of the former UST tank pit in order to verify the remaining extent of impacted soil. Soil borings were proposed to a depth of approximately 10 feet bgs with the exception of two borings in the vicinity of the former UTS complex, which were proposed to be advanced to depths between 40 and 50 feet bgs.

4.13 Soil Gas Sampling (2010)

In March 2010, soil gas samples were collected from SVG wells SVG-1 through SVG-9, which were installed in December 2009. Soil gas samples were collected from depths of 3 feet at all wells and 5 feet bgs from all wells except SVG-4 and SVG-7. Delta was unable to collect soil gas samples from the deepest probes (7.5 feet bgs) due to elevated groundwater levels. TPH-g was detected in all samples at concentrations ranging from 28,000 µg/m³ to 110,000,000 µg/m³; benzene was detected in only one sample at a concentration of 21,000 µg/m³. Oxygenates MTBE and tert-butyl alcohol (TBA) were not detected in any samples. The TPH-g soil gas plume appears to be centered offsite, with the highest concentrations of TPH-g reported from samples collected at vapor well SVG-6 (in close proximity to monitoring well S-9, which is the center of the small dissolved-phase plume which persists at the site). The *Soil Vapor Sampling Report* was submitted on April 19, 2010 summarizing the March soil gas sampling activities; soil gas concentration tables and contour maps are included as Appendix F.

4.14 Confirmation Soil Borings (2010)

In June 2010, Delta advanced fourteen soil borings (SB-1 through SB-14). Two borings (SB-2 and SB-3) were advanced to 50 feet bgs; the remaining borings were advanced to between 12 and 16 feet bgs with the exception of SB-11, which was advanced to 24 feet bgs. The intent was to determine the vertical and lateral extent of remaining soil contamination in the vicinity of the former UST complex, former dispenser islands, and adjacent property.

Of the 27 samples submitted, TPH-g was detected in only eight samples ranging from 0.53 mg/kg (SB-2 at 12 feet bgs) to a maximum of 1,100 mg/kg (SB-12 at 8 feet bgs); all other samples reported no detectable concentration of TPH-g above the laboratory reporting limits. Diesel range organics (DRO) were detected in five of the 27 samples submitted for laboratory analysis, ranging from 7.3 mg/kg (SB-11 at 8 feet bgs) to a maximum of 110 mg/kg (SB-5 at 8 feet bgs); all other samples reported no detectable concentration of DRO above the laboratory reporting limits. Benzene was not detected in any soil sample above the laboratory detection limit. Ethylbenzene was reported in only one sample (SB-6 at 8 feet bgs) at a concentration of 0.0061 mg/kg. Toluene and total xylenes reported no detectable concentrations above the laboratory reporting limit for any soil samples. Analysis was run for the oxygenates MTBE, TBA, di-isopropyl ether (DIPE), ethyl tert-butyl ether (ETBE), tert-amyl methyl ether (TAME) and ethanol, as well as lead scavengers 1,2-dibromoethane (EDB) and 1,2-dichloroethane (EDC). No concentrations for any oxygenate or lead scavenger compounds were reported above the detection limits. Boring logs are provided as Appendix B and soil analytical data are included as Appendix E.

4.15 Soil Gas Sampling (2010)

In September 2010, Delta conducted a second (seasonal) soil gas sampling event for all SVG wells. A total of sixteen soil gas samples were collected. Soil gas samples were collected from each vapor well location from vapor probes at depths of 3 feet bgs; 5-foot samples were collected from wells SVG-2, SVG-5 and SVG-6; both 5-foot, and 7.5 foot samples were collected from wells SVG-8 and SVG-9. Delta was unable to collect the additional 5-foot and 7.5-foot samples due to elevated groundwater levels in those locations.

TPH-g was detected in all samples above the San Francisco Bay Region Regional Water Quality Control Board (RWQCB) Environmental Screening Levels (ESLs) for both residential and commercial land use with the exception of the 5-foot samples at SVG-9, which also reported a high concentration of the leak compound, likely compromising the sample results. Benzene was detected above the residential and commercial ESLs in six samples at various depths collected from nested wells SVG-1, SVG-2, SVG-5 and SVG-6, with a maximum reported concentration of 46,000 $\mu\text{g}/\text{m}^3$ (SVG-6 at 5-feet bgs). No toluene concentrations were reported above the laboratory reporting limits. Ethylbenzene was detected above the residential and commercial ESLs in four samples at various depths collected from nested wells SVG-2, SVG-5 and SVG-6, with a maximum reported concentration of 200,000 $\mu\text{g}/\text{m}^3$ (SVG-2 at 5-feet bgs). Total xylenes were reported above the residential and commercial ESLs in a single sample (SVG-2 at 5 feet bgs) at 44,000 $\mu\text{g}/\text{m}^3$. Oxygenates MTBE and TBA were not detected in any samples, although the reporting limits at two wells (SVG-2 and SVG-6) were elevated above the residential and commercial ESLs for MTBE due to sample dilution. As was noted from the earlier sampling event in March 2010, the TPH-g soil gas plume remains centered offsite with the highest contaminant concentrations reported in samples collected at SVG-6. Elevated sample concentrations correlate to the presence of offsite source material which has migrated through a permeable layer in near-surface soils. The fall soil gas sampling event indicates an average increase in results from the spring event for all contaminants, as well as increases in carbon dioxide (CO_2). Soil gas concentration tables and contour maps are included as Appendix F.

4.16 Residual Soils as On-Going Source

Depth to groundwater has varied historically from approximately 4 to 9 feet bgs but is typically between 6 and 8 feet bgs. Petroleum hydrocarbons are primarily concentrated in the dissolved phase and as soil gas in the subsurface permeable zones. The saturated clay soils beneath the USTs are anticipated to contain a small mass of petroleum hydrocarbons. Previous reports indicate that minimal over-excavation was performed during UST removal activities in 1987. An SVE system which operated at the site from 1998 to 1999 appears to have been effective in removing a substantial mass of petroleum hydrocarbons from shallow onsite soils. Declining TPH-g concentrations in groundwater samples from onsite wells coupled with confirmation soil boring results indicate a majority of TPH-g has been leached from onsite soils. However, there appears to be a smear zone cross- and down-gradient of the initial onsite source areas resulting from migration of dissolved-phase hydrocarbons; the remaining soil impacts were reported in the vicinity of confirmation borings SB-8 (onsite), and offsite borings SB-12 and SB-14 (Appendix E).

4.17 Summary

A release of gasoline from the former site USTs occurred sometime prior to 1985, when four monitoring wells were installed and petroleum impacts were noted in soil and groundwater; in addition, SPH was detected in well S-3. Oxygenates are not included in the chemicals of concern due to the age of the release, which has been confirmed in recent soil samples. A review of recent and historical soil data indicates that remaining soil impacts are primarily in onsite soils immediately down- and cross-gradient to the former dispenser island in the northern portion of the site, and in offsite soils to the west and southwest of the former source areas (former dispensers and UST complex). Only three samples reported TPH-g concentrations above the residential and commercial San Francisco Bay Region RWQCB ESLs. Only one sample reported DRO results above the residential and commercial ESLs, and none were reported above the ESL for motor oil. Due to the generally high groundwater levels at the site (typically averaging from 6 to 8 feet bgs), it is probable that leaks from the USTs were introduced directly into the saturated zone, which allowed contaminants to migrate down- and cross-gradient of source areas, including the dispenser islands.

The vertical extent of remaining soil contamination has been defined. Remaining soil impacts appear to be limited to the shallow vadose zone in the vicinity of onsite confirmation boring SB-8 and offsite borings SB-12 and SB-14, which would appear to be correlated to the leading edge of the dissolved-phase plume, and the upper water-bearing zone primarily in the vicinity of monitoring well S-9. With the exception of the two deeper borings at SB-2 and SB-3, all confirmation borings were advanced to a total depth where PID readings and observations indicated the absence of petroleum impacts to soil; bottom samples were collected from all boring locations. Soil analytical results are and included as Appendix E and summarized in Table 1.

Soil samples collected in 1997 (Enviro's, 1997) reported TPH-g results for samples collected on the subject property and adjacent property; a copy of the soil concentration map is included as Appendix E. A comparison of several soil samples collected in 2010 in proximity to samples collected in 1997 is provided below, and indicate that substantial degradation of soil impacts has occurred.

SOIL SAMPLE COMPARISON (1997 & 2010)				
Date Sampled	Sample Identification	Sample Depth	TPH-g (ppm)	Benzene (ppm)
1997	S-16	5 feet	1,100	3
2010	SB-7	10 feet	ND(<0.5)	ND(<0.005)
1997	S-9	4 feet	2,200	17
2010	SB-14	6 feet	290	ND(<0.5)
1997	S-8	4 feet	5,600	31
2010	SB-12	8 feet	1,100	ND(<2)

TPH-g = Total petroleum hydrocarbon as gasoline
ppm = Parts per milligram (equivalent to micrograms per kilogram [mg/kg])
ND = Not detected above the laboratory detection limit

Groundwater contamination is currently limited to a small localized plume around offsite well S-9, with decreasing impacts in onsite well S-3 approaching ESLs; all other wells are typically non-detected for all contaminants of concern. The prevailing groundwater flow direction at the site is to the southwest, with a hydraulic gradient of 0.01 feet per foot (ft/ft) or less. Historical groundwater monitoring data show stable groundwater elevations since 1988 between approximately 6 and 8 feet bgs, indicating that the smear zone is several feet thick at most. The dissolved-phase plume is comprised of weathered gasoline components and has stabilized in the vicinity of well S-9. Historical groundwater monitoring data are provided in Table 2.

The most recent soil gas data indicates that soil vapors persist in the shallow subsurface but appear to be confined within the shallow clay layer. Because the entire site and adjacent property are covered with asphalt, soil gas is not thought to be a current risk to residents.

5.0 FATE AND TRANSPORT CHARACTERISTICS

The following sections describe potential contaminant migration pathways for petroleum hydrocarbons. Plume migration and contaminant concentration trends are discussed.

5.1 Underground Utility Conduits

The exact location and depth information of utility trenches, both on-site and in the site vicinity, have not been determined, but utilities (including sewer) are known to exist onsite in the vicinity of the former UST complex (Kaprelian, 1987). Based on the documents in Delta files, a survey of nearby utilities for the purpose of a preferential pathway evaluation has not been performed.

5.2 Soil Migration Pathways

Soils beneath the site area are generally fine-grained and do not provide pathways for rapid spread of contaminants. Borings have encountered primarily clay to a depth of approximately 25 feet bgs. Alternating clays, silty sand and sand were found from approximately 25 feet bgs to 50 feet, the total depth explored. Boring logs with well construction details are provided as Appendix B.

5.3 Hydrogeologic Pathways

Migration of dissolved contaminants through clay soil appears to be limited since its release more than 20 years ago. TPH-g has migrated beyond well S-9 located approximately 50 feet downgradient and S-8 located approximately 70 feet downgradient. TPH-g is not detected in wells S-10 and S-13 located approximately 150 feet downgradient (Figure 2).

The groundwater flow direction beneath the site has consistently been to the west and southwest, at a gradient of approximately 0.01 ft/ft or less. Hydrogeologic cross-sections are included as Appendix C; historical groundwater contour maps are provided as Appendix D and data from the most recent monitoring event (third quarter 2010) are included as Appendix G.

The groundwater flow rate beneath the site can be approximated based on the hydraulic conductivity of the soil, groundwater flow gradient and effective soil porosity. The linear groundwater flow rate or velocity (V) can be calculated from the formula:

$$V = (K \times I)/N$$

where K = soil coefficient of hydraulic conductivity

I = groundwater gradient

N = effective soil porosity

The predominant soil type observed beneath the site was clay. Though slug tests were performed in 1990, the results were interpreted as reflecting the well sand pack rather than the surrounding soil. The average K for a clay is estimated in the range of 1×10^{-6} to 1×10^{-8} centimeters per second and the effective porosity at 45 percent (Freeze and Cherry, 1979). The site hydraulic gradient has been approximately 0.01 ft/ft. Using the above estimated parameters, a groundwater velocity of less than 1-foot feet per year is calculated.

The flow rate for TPH-g can also be estimated based on historic groundwater monitoring data. The TPH-g appears to have migrated approximately 100 feet since before 1985 when the first groundwater monitoring wells were installed (approximately 25 years ago). The resulting calculated flow rate is 4 feet per year which would be typical for a sandy silt rather than a clay. The discrepancy may be the result of secondary permeability consisting of fractures and root holes reported in some clay samples.

5.4 Contaminant Migration Model

It appears that a release occurred prior to 1985 from the former site USTs removed in 1987. The USTs were submerged below the top of the saturated zone at approximately 5 to 10 feet bgs. Petroleum hydrocarbons moved directly from the USTs into the groundwater, where they were dissolved and began migrating with

the groundwater to the west-southwest. By January 2008, dissolved petroleum hydrocarbons had migrated more than 100 feet down-gradient, and TPH-g was detected in well S-9 at 15,000 µg/L; the most recent monitoring results for S-9 reported TPH-g at 7,900 µg/L. The down-gradient limit of TPH-g in groundwater has been defined by offsite wells S-10, S-13, S-17 and S-18, which reported no detectable concentrations for any contaminants in the 2010 annual monitoring results. The dissolved-phase TPH-g plume and the TPH-g soil gas plume both appear to be centered offsite in the vicinity of monitoring well S-9.

An ARCO service station is located approximately 125 feet southeast of the site (Figure 3). The ARCO service station is cross-gradient from the site. The former Shell station does not appear to have any impact on the ARCO station.

5.5 Concentration Trends

Dissolved-phase TPH-g concentrations have declined over time. TPH-g concentrations in onsite well S-3, located immediately down-gradient of the former UST complex, have steadily declined from maximum concentrations reported in 1992 through 1994. Wells S-8 and S-9 are located approximately 75 feet and 50 feet, respectively, west and southwest of well S-3. TPH-g concentrations in well S-8 began increasing in 1991, reaching a maximum concentration of 2,300 µg/L in October 2002, which has since become a decreasing trend. TPH-g concentrations in well S-8 have been non-detected above the standard report limit for the last four monitoring events. TPH-g concentrations in well S-9 began to increase in late 1992, reaching a maximum concentration of 22,500 µg/L in July 2006, which has since become a decreasing trend. The most recent quarterly groundwater monitoring results (July 2010) reported a TPH-g concentration of 7,900 µg/L in well S-9. Results from the most recent monitoring event, including historical groundwater data, are included as Appendix G; TPH-g concentration graphs for wells S-3, S-8 and S-9 are presented as Appendix H.

6.0 SITE REMEDIATION

The site fuel USTs were removed and replaced in June 1987. Soils were over-excavated during removal of the waste oil tank to a depth of approximately 13 feet bgs and approximately 2 to 4 feet beyond the dimensions of the tank; the actual volume removed was not reported. Approximately 500 cubic yards of soil were removed from the tank pit and transported off site during removal of the four fuel USTs in 1987. An additional volume of approximately 200 cubic yards of soil were excavated from trenches in the dispenser areas.

A groundwater step test was performed at the site March 27, 1990 (GSI, 1990). Due to the low-yield nature of the aquifer, well SR-1 nearly dewatered after 52 minutes of pumping at an average flow rate of 2 gallons per minute (gpm). Slug tests were performed at wells S-1, S-3, S-5, S-7, S-9, S-10, S-13, S-14 and S-16 to estimate the hydraulic properties of the shallow aquifer. Low T- and K-values from the step test and slug tests suggested very slow transport of contaminants in groundwater beneath the site.

A total of approximately 1,410 pounds of vapor-phase hydrocarbons were removed by an SVE system which operated in 1998 and 1999. The system was shut down due to declining inlet concentrations and removed from the site in 2002 (Delta, June 2007).

An SVE pilot test was performed in 2009 using two 10-foot horizontal test wells (ET-1 and ET-2) in five-foot deep trenches. A total of approximately 119 lbs of TPH-g and 0.058 lbs of benzene were removed from Well ET-1 during a 29.5-hour period. A continuous test of approximately 21.5 hours was performed following a step test. The initial PID reading of 4,050 parts per million (ppm) at the beginning of the SVE step test fell steadily to a concentration of approximately 537 ppm at the conclusion of continuous testing (after a total of approximately 29.5 hours of operation). This was corroborated by the analytical vapor sample results of 4,100 parts per million by volume (ppmv) TPH-g and 2.1 ppmv benzene at the beginning of the pilot test, falling to 530 ppmv TPH-G and 0.25 ppmv benzene at the end of the test. Delta concluded that current inlet concentrations could not be sustained with regular operation of an *in situ* SVE system. Remediation operational and analytical data are included as Appendix I.

7.0 RISK-BASED CORRECTIVE ACTION EVALUATIONS

The following sections evaluate the various potential impacts to sensitive receptors from petroleum hydrocarbons detected in soil and groundwater.

7.1 Previous Risk-Based Corrective Action (RBCA) Evaluation

Weiss Associates, in December 1996, prepared a Tier I RBCA evaluation (Weiss, June 23, 1997). Tier I risk-based screening levels (RBSLs) were established for benzene, ethylbenzene, toluene, xylene, and MTBE using the “models and recommended parameters in the ASTM Standard.” A copy of the computer out-put is contained in Appendix J. Based on the Tier I RBCA evaluation, RBSLs were found to be exceeded for the following potentially complete pathways:

- Volatilization of benzene and toluene from subsurface soils (>3 feet depth) to indoor air;
- Volatilization of benzene from subsurface soils to outdoor air;
- Leaching of benzene and toluene from subsurface soils to groundwater;
- Volatilization of benzene from groundwater to indoor air;
- Ingestion of benzene contaminated groundwater.

Weiss Associates next completed a Tier II evaluation using site specific data. Weiss used a risk of 10^{-5} for carcinogenic chemicals and a hazard quotient of 1.0 for non-carcinogenic chemicals for residential land use. Site specific target levels (SSTL) were calculated. Comparison of representative benzene concentrations in the site soils and groundwater to the Tier 2 SSTLs indicated that SSTLs were exceeded for the following potentially complete pathways:

- Volatilization of benzene in soil to indoor air;
- Volatilization of benzene in the groundwater to indoor air;
- Ingestion of benzene in groundwater above drinking water standard (maximum contaminant limit - MCL).

The Weiss report concluded that there was a potential risk associated with indoor air quality at the site and adjacent mobile home park. As a result of these evaluations, a SVE system was installed at the site. The system operated from 1998 to 1999.

7.2 Environmental Screening Levels

Additional soil gas sampling was performed most recently in September 2010. Results of soil gas analysis indicated that TPH-g and benzene concentrations in soil and groundwater beneath the site and the adjacent mobile home park remained above RBSLs. The San Francisco Bay Region RWQCB ESLs were referenced in comparison with soil gas concentrations from wells installed in December 2009. The ESLs were designed for chemicals commonly found in soil and groundwater at sites where releases of chemicals have occurred, and are considered to be conservative values. Within noted limits, risks to human health and the environment can be considered to be insignificant at sites where concentrations of chemicals of concern do not exceed the respective ESLs, however the presence of chemicals of concern above the ESLs does not necessarily indicate that a significant risk exists at the site. The tables below compare site specific soil and groundwater concentrations for TPH-g and benzene with ESLs for various potential sensitive receptors.

Direct Soil Exposure Screening Levels	ESL Table	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds ESL?
Current Max. Shallow Soil Concentration Shallow soils (<3 meters) (June 2010)	N/A	1,100 (SB-12 at 8 feet)	ND (<2) (SB-12 at 8 feet)	N/A
Residential Exposure	K-1	110	0.12	Yes
Commercial/Industrial Worker Exposure	K-2	450	0.27	Yes
Construction/Trench Worker Exposure	K-3	4,200	12	No

Shallow Soil Gas (Vapor Intrusion Concerns)	ESL Table	TPH-g (ug/m³)	Benzene (ug/m³)	Exceeds ESL?
Maximum soil gas concentrations (September 2010)	N/A	160,000,000 (SG-6 at 5 feet)	46,000 (SG-6 at 5 feet)	N/A
Residential Land Use	E	10,000	84	Yes
Commercial/Industrial Land Use	E	29,000	280	Yes

Groundwater Screening Levels (Vapor Intrusion Concerns)	ESL Table	TPH-g (ug/L)	Benzene (ug/L)	Exceeds ESL/MCL?
Maximum Groundwater Concentrations (July 2010)	N/A	7,900 (S-9)	21 (S-9)	N/A
Residential Land Use	E-1	(use soil gas)	540	No
Commercial/Industrial Land Use	E-1	(use soil gas)	1,800	No
California Maximum Contaminant Level (MCL)	F-3	210	1.0	Yes

A comparison of September 2010 soil vapor samples and third quarter groundwater data with screening levels indicate ESLs are exceeded for direct exposure and indoor air inhalation beneath the site and adjacent mobile home park, based on concentrations alone. It should be noted that both properties (the former station site and the adjacent mobile home park) are covered in asphalt, so there is no direct exposure and limited volatilization to the atmosphere.

7.3 Delta 2008 RBCA Tier II Analysis

In September 2008, Delta prepared a Risk Based Corrective Action Plan (RBCA) for removal of petroleum hydrocarbon impacted soil at the above referenced site. The following assumptions were made:

- Chemicals of concern were identified as TPH-g (carbon range C-07 to C-08 aromatics) and benzene.
- Depth to groundwater of 6 feet bgs.
- Surface soils from 0 to 3 feet bgs (upper vadose zone).
- Subsurface soils from 3 to 6 feet bgs (lower vadose zone).
- Acceptable risk of 1×10^{-6} for carcinogenic chemicals and a target hazard quotient of 1.0 for non-carcinogenic chemicals
- Cleanup levels based on residential land use.
- Program default parameters were used for soil vapor migration and standard building construction.
- Johnson & Ettinger model was used for air migration calculations.

7.4 Calculations of SSTLs

Delta calculated site RBCA SSTLs using software produced by Groundwater Services, Inc. titled RBCA Tool Kit for Chemical Releases, Version 2.01. The RBCA program divides the subsurface into surface soils, subsurface soils, and groundwater. The program does not allow for analysis of impacted soils within the groundwater zone.

Cleanup levels or SSTLs were calculated for soil volatilization to indoor air, soil volatilization to outdoor air, inhalation for excavation workers with impacted soil, and groundwater volatilization to outdoor and indoor air. A copy of the program input and out-put tables and illustrations is provided as Appendix J.

Model output results are summarized below and compared to current and historic data where available; subsurface soils to 6 feet are based on a comparison to recent analytical data.

SSTLs Surface Soil (0 to 3.3 feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds SSTL?
Max. Surface Soil Concentrations (March 1997)	5.1	0.22	N/A
Soil volatilization to indoor air	>1,000	0.59	No
Direct contact: residential inhalation	330,000	450	No
Direct contact - Construction workers (inhalation)	1,000,000	26,000	No

SSTLs Subsurface Soil (3.3 to 6.0 feet)	TPH-g (mg/kg)	Benzene (mg/kg)	Exceeds SSTL?
Max. Subsurface Soil Concentrations (June 2010)	280	ND(<0.5)	N/A
Soil volatilization to indoor air	>1,000	0.59	No

SSTLs Groundwater (Volatilization to Indoor Air)	TPH-g (μ g/L)	Benzene (μ g/L)	Exceeds SSTL?
Max. Groundwater Concentrations (July 2010)	7,900	21	N/A
Groundwater volatilization to outdoor air (residential)	>65	1,800	No
Groundwater volatilization to indoor air (residential)	>65	2.7	Yes

> = Indicates risk-based target concentrations greater than constituent solubility

7.5 SSTL Evaluation

Delta's RBCA Tier II evaluation indicates that SSTLs are exceeded for subsurface soils for TPH-g and benzene volatilization to indoor air and for groundwater for benzene volatilization to indoor air beneath the site and adjacent mobile home park. However, it should be noted that persistent groundwater concentrations remain only in the vicinity of well S-9, which is an offsite well in a driveway at the mobile home park. Due to the raised construction of a typical mobile home and the asphalt cover on the entire property, a more site-specific risk evaluation should be performed to verify this risk pathway.

7.6 Impact to Drinking Water Supply Wells

Mulitple well surveys have been performed for the site; a review of DWR files was performed in 2006 by TRC to identify any wells within a ½-mile radius of the site. The well search did not identify any water supply wells within ½-mile of the site. A copy of the TRC well survey study and other, including the wells reported in the EDR report issued March 2010, are included as Appendix A.

8.0 SENSITIVE RECEPTOR SURVEY

8.1 Radius Report

As part of this Sensitive Receptor Survey, Delta reviewed the Environmental Data Resource (EDR) radius report for reported facilities within a ½-mile radius of the Site. The March 2010 EDR radius report (included as an attachment to the *First Quarter 2010 Soil Gas Investigation Report* issued April 19, 2010 by Delta) identified facilities within a ½-mile radius of the site, which are summarized below.

EDR MAP ID	Facility Name	Facility Address	Distance From Site	Direction From Site	Database Listings
F25	Caltrans District 4	600 Lewelling Blvd	0.158 miles	East	LUST, HIST UST, SWEEPS, HIST CORTESE
C5	Salel Automotive Service	15245 Washington Ave	0.083 miles	Northeast	HIST UST, SWEEPS
D19	Tosco Northwest Co No 11106	15199 Washington Ave	0.138 miles	North-Northeast	UST, SWEEPS
29	EBMUD South Area Service Center	589 Lewelling Blvd	0.239 miles	East	UST
A3	ARCO #00601	712 Lewelling Blvd	0.020 miles	East-Northeast	LUST (open), HIST UST, SWEEPS, HIST CORTESE,
B8	Greenhouse Plaza	699 Lewelling Blvd	0.092 miles	East-Northeast	LUST, HIST CORTESE
G28	Domingo Ronconi Property	15550 Washington Ave	0.213 miles	South-Southeast	LUST, HIST CORTESE
H30	Mahdi Mohammadian	15595 Washington Ave	0.260 miles	South-Southeast	LUST (open), HIST CORTESE
36	San Lorenzo School	15701 Lorenzo Ave	0.383 miles	South-Southeast	LUST, HIST CORTESE
I38	Roto Rooter Sewer Service	14985 Washington Ave	0.454 miles	North	LUST, HIST CORTESE
41	Chevron Station #5630	997 Grant Ave	0.482 miles	South-Southeast	LUST, HIST CORTESE
D14	Gasco	15201 Washington Ave	0.138 miles	North-Northeast	LUST (open), UST, HIST UST, SWEEPS, HIST CORTESE
34	Faria Brothers Hardware	519 Manor Blvd	0.375 miles	North	LUST, HIST CORTESE
35	Faith Fellowship Church	577 Manor Blvd	0.381 miles	North-Northwest	LUST
D19	BP	15199 Washington Ave	0.138 miles	North-Northeast	LUST, HIST UST, SWEEPS, HIST CORTESE
F21	Engine Research Company	610 E Lewelling Blvd	0.148 miles	East	UST
E10	Fire Station #5	637 Fargo Ave	0.128 miles	North	HIST UST

HIST UST = Historical Underground Storage Tank

HAZNET = Waste Information System

LUST = Leaking Underground Storage Tank

HIST CORTESE = Historical Cortese

SWEEPS UST = Statewide Environmental Evaluation and Planning System Underground Storage Tank

Delta identified the Arco facility (712 Lewelling Blvd), located east-northeast from the site, as an open environmental case under the oversight of the Alameda County Water District. Based on the number and locations of the documented facilities above and the documented extent of the petroleum hydrocarbon impacted groundwater plume at the site, Delta believes impact to any of the identified receptors in this report cannot be directly attributed to the release at the site.

8.2 EDR Well Search

Delta reviewed the EDR well search, which is included as part of the EDR radius report. The well search includes wells identified in the Federal United States Geological Service (USGS), Federal FRDS Public Water Supply System Information, and State Database Well Information. Three USGS water wells were identified within $\frac{1}{4}$ to $\frac{1}{2}$ -mile radius of the site. USGS well locations can be found on the Physical Setting Source Map in the EDR report. The EDR report is not included as an attachment to this report, but the well information portion has been appended to Appendix A. Delta conducted a well search through the DWR to identify wells not reported during the EDR search.

8.3 Well Search

As part of the sensitive receptor survey, Delta contacted the DWR to provide updated information for all wells within $\frac{1}{2}$ -mile of the site. The purpose of the search was to identify all water supply, domestic, municipal, and irrigation wells which have the potential to be affected by the petroleum hydrocarbon release at the site. Based on the information DWR provided, there are no sensitive wells located within a $\frac{1}{2}$ -mile radius of the site, which confirmed earlier well survey findings provided by Emcon, Toxicchem, Delta, and TRC.

8.4 Web-Based Receptor Search

Using various online mapping programs and search engines, Delta conducted a web-based search to identify any sensitive receptors (schools, churches, day care facilities, elderly care facilities, hospitals, surface water bodies, etc.) with $\frac{1}{2}$ -mile of the site which have the potential to be affected by the petroleum hydrocarbon release at the site. There are no hospitals or libraries within a $\frac{1}{2}$ -mile radius of the Site. Delta identified the following sensitive receptors during the web-based search (all distances are approximate):

- San Lorenzo Creek (293 yards south)
- Estudillo Canal (340 yards west)
- Lewelling Playground Park (250 yards west-northwest)
- Arroyo Swim Center (0.442 miles southwest)
- Chinese Christian School, 750 Fargo Street (260 yards northwest)
- Community Christian School, 562 Lewelling Boulevard (411 yards east)
- Arroyo High School, 15701 Lorenzo Avenue (0.442 miles south)
- Grant Elementary School, 879 Grant Avenue (0.497 miles southeast)

Based on the above identified receptors' distance and direction from the site, soil lithology at the site, and extent of hydrocarbon impact, the above receptors are not anticipated to be affected by the petroleum hydrocarbon release at the site.

9.0 SUMMARY

Delta prepared this updated SCM to describe the occurrence, migration, and fate of petroleum hydrocarbons identified beneath the site and down gradient adjacent property (Salel's Mobile Home Park). The following are the key observations and conclusions:

- A release of gasoline from the former site USTs appears to have occurred prior to March 1985.
- SPH was detected in well S-B near the former USTs in 1986 at a thickness of 0.4 feet. A petroleum hydrocarbon plume has migrated off site to the west-southwest beneath an adjacent mobile home park. The down-gradient extent of the plume has been defined (wells S-10, S-17, and S-18). Well S-9, located within the mobile home park, currently has the highest concentrations of TPH-g (7,900 µg/L) and benzene (21 µg/L) in groundwater. TPH-g concentrations in well S-9 appear to have peaked in 2005 and are currently decreasing. All other wells are currently reporting minimal or non-detected contaminant concentrations (Appendix G).
- The third quarter 2010 groundwater flow direction was to the south southwest with a flow gradient of approximately 0.01 feet per foot (Appendix G). Historical depth to groundwater typically occurs between approximately 6 and 8 feet bgs; monitoring wells are typically screened from 5 feet to 20 feet bgs (Appendix B).
- Site soils are generally clay and silty clay to a depth of approximately 25 feet bgs. Clay interbedded with silty sand and sand are found from approximately 25 feet to 50 feet bgs, the total depth explored (Appendix B).
- In June 2010, Delta advanced soil borings SB-1 through SB-14 to determine the vertical and lateral extent of remaining soil contamination at the site. TPH-g concentrations were detected in eight samples ranging from 0.53 mg/kg in SB-2 at 12 feet bgs to a maximum of 1,100 mg/kg in SB-12 at 8 feet bgs. DRO was detected in five of the 27 samples submitted at concentrations ranging from 7.3 mg/kg in SB-11 at 8 feet bgs to a maximum of 110 mg/kg in SB-5 at 8 feet bgs. Benzene was not detected in any soil sample above the laboratory detection limit. In general, significant attenuation of contaminant concentrations in soil were noted (Appendix E).
- An initial RBCA Tier I and II evaluation conducted by Weiss Associates in 1997 concluded there were potential risks associated with indoor air quality at the site and adjacent mobile home park. As a result of those evaluations, an SVE system was installed at the site and operated in 1998 and 1999. Approximately 1,410 pounds of vapor-phase hydrocarbons were removed by the SVE system. The system was shut down in 1999 due to low inlet concentrations, and was removed from the site in 2002 (Delta, June 2007). A more recent risk evaluation is summarized above and indicates a level of continuing risk for potential indoor intrusion, though soil and groundwater concentrations overall have decreased significantly (Appendix J).

10.0 RECOMMENDATIONS

Risk-based soil and groundwater cleanup assessments indicate that the current primary potential risk pathway is volatilization from subsurface soils, but based on historical and current site usage, indoor air intrusion does not appear to be a factor. Groundwater has attenuated to levels near or below the ESLs in all wells with the exception of offsite well S-9; concentrations in that well appear to have been declining since 2005, at which time the trend shifted from an increasing trend to a decreasing trend. Significant attenuation of contaminant concentrations in soil samples was noted during an investigation in June 2010. Delta recommends performing a detailed evaluation of site-specific risk factors and pathways using the most recent analytical data and site conditions, to be summarized in a report which will include recommendations to address any remaining potential risk pathways.

11.0 LIMITATIONS

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

12.0 REFERENCES

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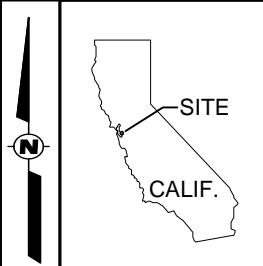
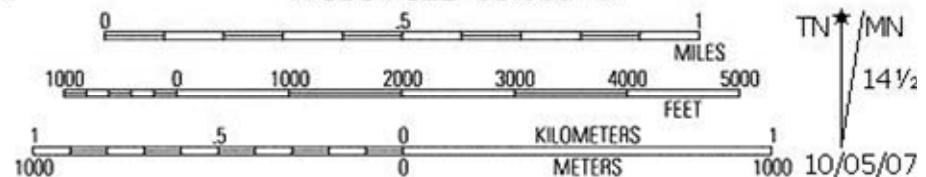
FIGURES

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122°09.000' W

WGS84 122°08.000' W



DELTA CONSULTANTS

SHELL OIL PRODUCTS US
FORMER SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

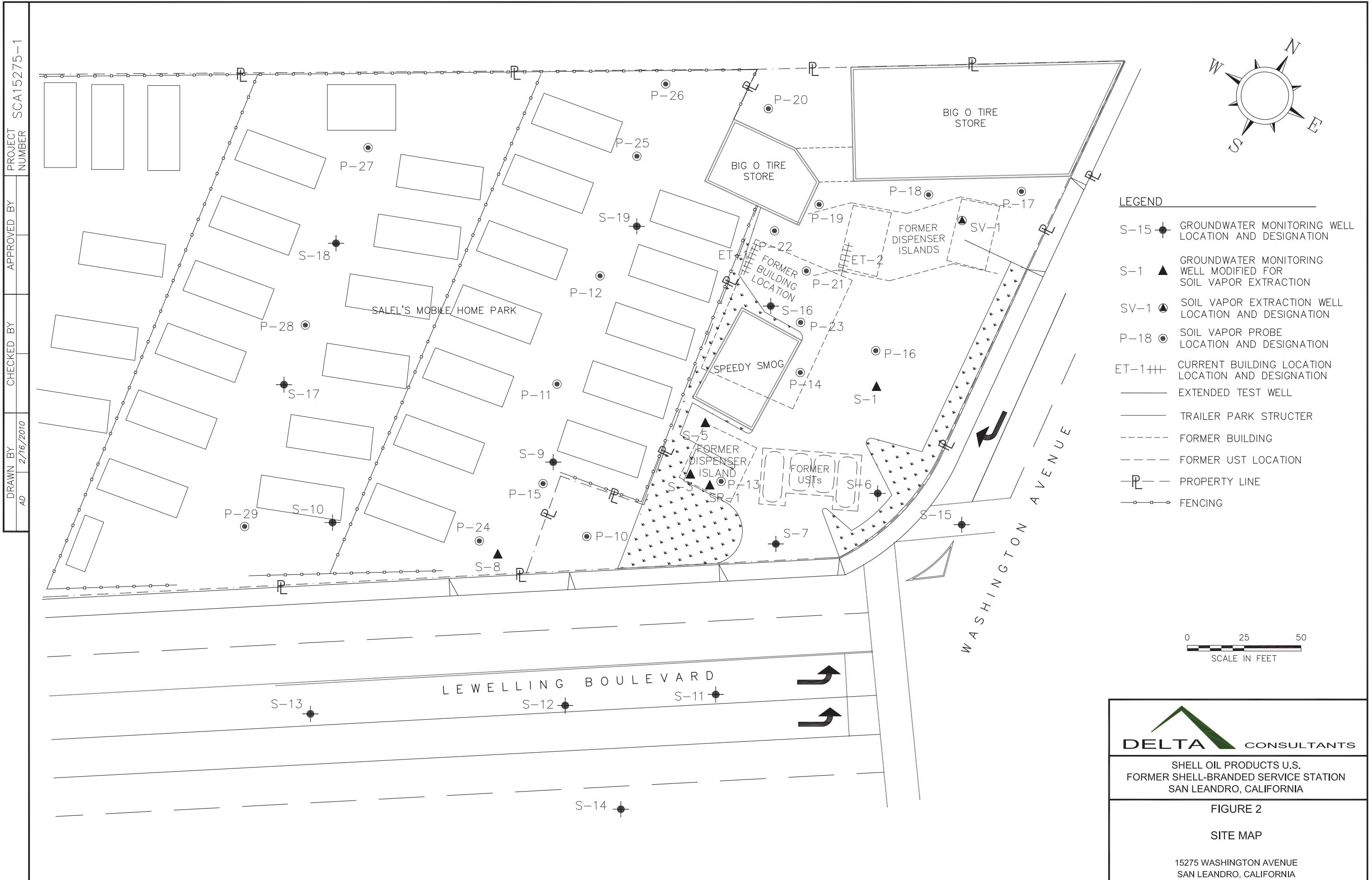


Figure 3 – Aerial Photograph of Site Area

Former Shell-branded Service Station

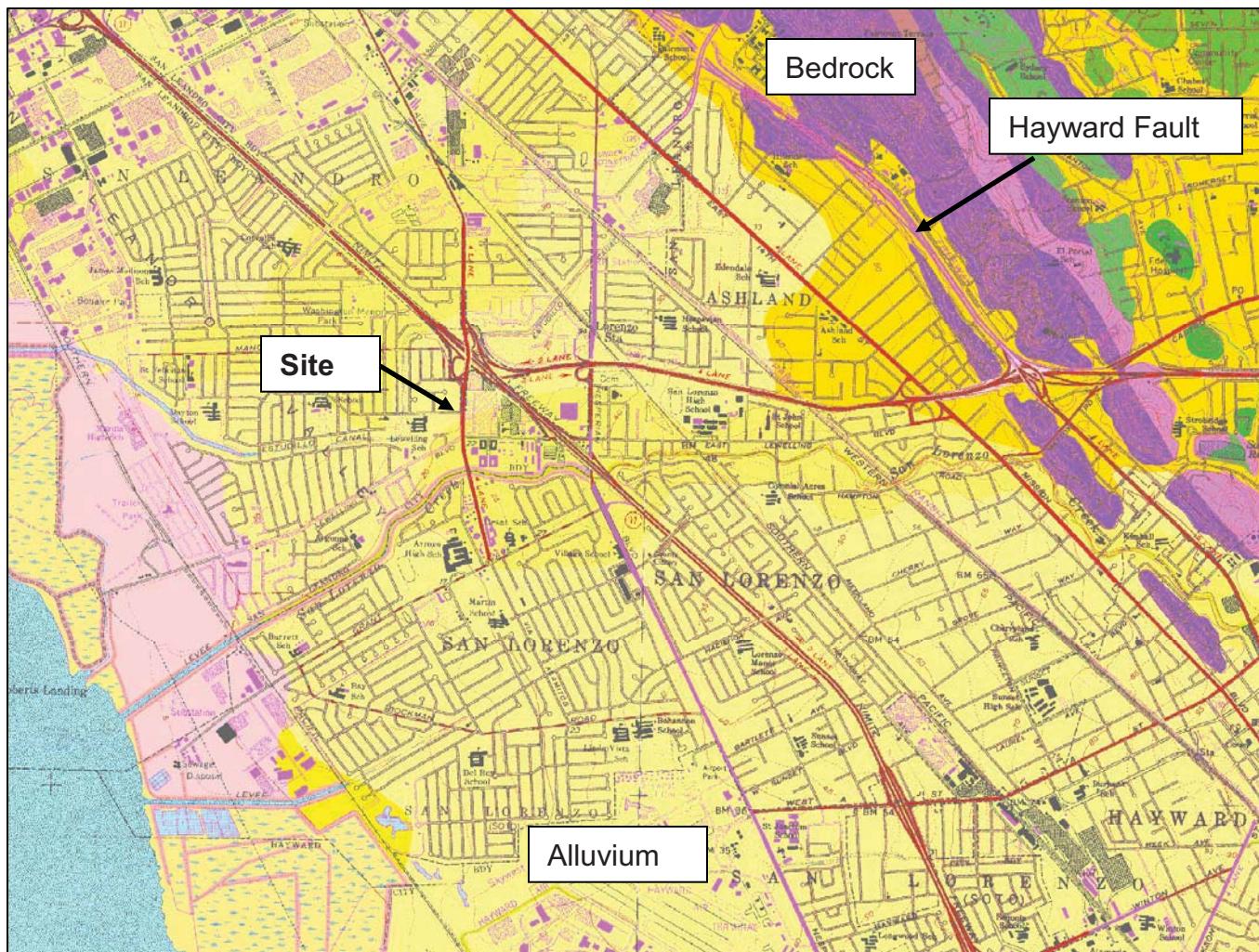
15275 Washington Boulevard

San Leandro, California



Figure 4 – Geologic Map

Former Shell-branded Service Station
15275 Washington Avenue
San Leandro, California



TABLES

TABLE 1
HISTORIC SOIL ANALYTICAL DATA

Former Shell Service Station
 15275 Washington Boulevard
 San Leandro, California

Sample Location	Sample Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)
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Soil Borings (Initial Well Installations)				
S-2	6/18/1985	7 - 8.5	<2	<0.1
S-3	6/18/1985	5 - 6.5	3,900	6
S-4	6/18/1985	5 - 6.5	3,100	<10

UST Borings				
S-B	8/15/1986	3.5 - 5	1,700	1.0
S-B	8/15/1986	11 - 12.5	1,500	5.6
S-B	8/15/1986	14 - 15.5	<5	<0.05
S-C	8/15/1986	3.5 - 5	310	<0.5
S-C	8/15/1986	7.5 - 9	<200	<0.2
S-C	8/15/1986	11.5 - 13	<5	<0.05
S-C	8/15/1986	14 - 15.5	300	1.6
S-C	8/15/1986	15.5 - 17	<5	<0.05
S-D	8/15/1986	3.5 - 5	<100	<0.1
S-D	8/15/1986	7 - 8.5	<5	<0.05
S-D	8/15/1986	11 - 12.5	<5	0.11
S-D	8/15/1986	14 - 15.5	<5	<0.05
UST Tank Removals (June 1987)				
Soil A	6/9/1987	sidewall	1.0	<0.1
Soil B	6/9/1987	sidewall	74	2.5
Soil C	6/9/1987	sidewall	31	<0.1
Soil D	6/9/1987	sidewall	910	7.4
Trench Samples (S) and Unknown Tank Sample (A) (December 1987)				
S-1	10/13/1987	8.5	260	10
S-2	10/13/1987	8.5	100	5.7
S-3	10/13/1987	8.5	730	3.9
A-1	11/16/1987	10.5	950	21

Well Installations (1988 to 1991)				
S-6	11/3/1988	4	510	2
S-6	11/3/1988	9	<5	<0.05
S-7	11/3/1988	4	55	<0.05
S-7	11/3/1988	9	12	0.06
S-8	11/3/1988	4	5,600	31
S-8	11/3/1988	9	26	0.24
S-8	11/3/1988	14	<5	0.1
S-8	11/3/1988	19	5	0.11
S-9	11/4/1988	4	2,200	17
S-9	11/4/1988	9	5	0.06
S-10	11/4/1988	9	5	0.06
S-11	11/4/1988	4	<5	<0.05
S-11	11/4/1988	9	<5	<0.05

TABLE 1
HISTORIC SOIL ANALYTICAL DATA

Former Shell Service Station
 15275 Washington Boulevard
 San Leandro, California

Sample Location	Sample Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)
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S-12	11/4/1988	4	35	0.49
S-12	11/4/1988	9	5	0.05
S-13	4/26/89	5	31	0.19
S-14	4/26/89	5	16	0.33
S-15	4/26/89	5	<5	<0.0005
S-16	4/25/89	5	1100	3
S-17	4/25/89	5	13	<0.0005
S-18	5/16/91	4.5	<1.0	<0.005

Soil Gas Probe Installations (March 1997)				
SG-3	5/5/97	0 to 4	23	0.26
SG-3	5/5/97	4 to 6	4,200	10
SG-3	5/5/97	6 to 8	3,600	6.3
SG-4	5/5/97	0 to 2	2.0	0.013
SG-4	5/5/97	2 to 4	9.0	0.055
SG-4	5/5/97	4 to 6	410	0.36
SG-4	5/5/97	6 to 8	140	<0.005
SG-7	5/6/97	0 to 2	5.1	0.22
SG-7	5/6/97	2 to 4	27	0.34
SG-7	5/6/97	4 to 6	26	0.31
SG-7	5/6/97	6 to 8	840	<0.005
SG-8	5/6/97	0 to 2	<1.0	<0.005
SG-8	5/6/97	2 to 4	<1.0	<0.005
SG-8	5/6/97	4 to 6	390	<0.005
SG-8	5/7/96	6 to 8	1,200	<0.005

Soil Gas Probe Installations (July 1997)				
SG-10	7/31/97	4	<1	<0.0050
SG-11	7/31/97	4	30	0.11
SG-12	7/31/97	4	7	<0.0050
SG-13	7/31/97	4	<1.0	<0.0050

Well Installation (1998)				
S-19	7/31/98	5	12	<0.0050
S-19	7/31/98	10	11	<0.0050
S-19	7/31/98	15	<1.0	<0.0050
S-19	7/31/98	20	<1.0	<0.0050

Soil Borings (06/2010)				
SB-1	06/21/10	16	ND< 0.5	ND< 0.005
SB-2	06/21/10	12	0.53	ND< 0.005
SB-2	06/21/10	50	ND< 0.5	ND< 0.005
SB-3	06/22/10	16	ND< 0.5	ND< 0.005
SB-3	06/22/10	50	ND< 0.5	ND< 0.005
SB-4	06/22/10	8	ND< 0.5	ND< 0.005

TABLE 1
HISTORIC SOIL ANALYTICAL DATA

Former Shell Service Station
 15275 Washington Boulevard
 San Leandro, California

Sample Location	Sample Date	Depth (feet)	TPH-g (mg/kg)	Benzene (mg/kg)
SB-4	06/22/10	12	ND< 0.5	ND< 0.005
SB-5	06/22/10	8	ND< 0.5	ND< 0.005
SB-5	06/22/10	12	ND< 0.5	ND< 0.005
SB-6	06/22/10	8	3.7	ND< 0.005
SB-6	06/22/10	12	0.95	ND< 0.005
SB-7	06/21/10	10	ND< 0.5	ND< 0.005
SB-7	06/21/10	14	ND< 0.5	ND< 0.005
SB-8	06/21/10	6	280	ND< 0.5
SB-8	06/21/10	14	ND< 0.5	ND< 0.005
SB-9	06/22/10	8	ND< 0.5	ND< 0.005
SB-9	06/22/10	12	ND< 0.5	ND< 0.005
SB-10	06/21/10	12	ND< 50	ND< 0.5
SB-10	06/21/10	16	ND< 0.5	ND< 0.005
SB-11	06/22/10	8	70	ND< 0.5
SB-11	06/22/10	24	ND< 0.5	ND< 0.005
SB-12	06/22/10	8	1,100	ND< 2
SB-12	06/22/10	12	ND< 0.5	ND< 0.005
SB-13	06/22/10	10	1.8	ND< 0.005
SB-13	06/22/10	12	ND< 0.5	ND< 0.005
SB-14	06/22/10	6	290	ND< 0.5
SB-14	06/22/10	12	ND< 0.5	ND< 0.005

Notes:

S-A through S-D data from Gettler-Ryan, Inc. Figure "Generalized Profile of Subsurface Tank Complex and Gasoline Concentrations Within Backfill Material"

S and SG data from Enviro (June 24, 1997, Plate 3)

ND = Not detected above the laboratory reporting limit (shown)

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-1	7/8/1985	520	NA	NA	NA	NA	NA	NA	21.55	NA	NA	NA	NA
S-1	9/6/1988	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	11/16/1988	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	8.01	13.54	NA	NA
S-1	2/27/1989	<50	0.5	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	5/4/1989	<50	1.0	<1	<1	<0.3	NA	NA	21.55	NA	NA	NA	NA
S-1	8/10/1989	<50	0.7	<1	<1	<0.3	NA	NA	21.55	7.93	13.62	NA	NA
S-1	10/10/1989	<50	<0.5	<1	<1	<0.3	NA	NA	21.55	8.09	13.46	NA	NA
S-1	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.55	7.73	13.82	NA	NA
S-1	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.55	7.91	13.64	NA	NA
S-1	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.55	7.72	13.83	NA	NA
S-1	10/18/1990	80	5	<0.5	<0.5	3.0	NA	NA	21.55	8.55	13.00	NA	NA
S-1	1/28/1991	<50	4.5	<0.5	<0.5	2.0	NA	NA	21.55	8.52	13.03	NA	NA
S-1	4/25/1991	80a	3.7	<0.5	0.7	2.0	NA	NA	21.55	7.18	14.37	NA	NA
S-1	7/9/1991	200	16	<0.5	1.3	5.8	NA	NA	21.55	8.22	13.33	NA	NA
S-1	10/8/1991	<50	2.3	<0.5	<0.5	<0.5	NA	NA	21.55	8.70	12.85	NA	NA
S-1	2/5/1992	160	8.9	<0.5	2.1	6.0	NA	NA	21.55	8.14	13.41	NA	NA
S-1	4/28/1992	<50	2.4	<0.5	<0.5	0.9	NA	NA	21.55	7.52	14.03	NA	NA
S-1	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.55	8.28	13.27	NA	NA
S-1	10/26/1992	57	3.0	1.6	1.4	1.7	NA	NA	21.55	8.74	12.81	NA	NA
S-1	1/14/1993	490	53	1.2	20	33	NA	NA	21.55	5.91	15.64	NA	NA
S-1	4/16/1993	240	20	<0.5	15	240	NA	NA	21.55	6.66	14.89	NA	NA
S-1	7/23/1993	<50	0.5	<0.5	<0.5	<0.5	NA	NA	21.55	7.53	14.02	NA	NA
S-1	10/27/1993	60	5.9	<0.5	2.5	1.7	NA	NA	21.55	8.20	13.35	NA	NA
S-1	1/27/1994	<50	2.1	<0.5	<0.5	0.63	NA	NA	21.55	7.26	14.29	NA	NA
S-1	5/5/1994	57	3.9	<0.5	1.9	1.9	NA	NA	21.27	7.38	13.89	NA	NA
S-1	7/26/1994	<50	2.2	<0.3	<0.3	<0.6	NA	NA	21.27	7.86	13.41	NA	NA
S-1	10/28/1994	<50	0.8	<0.3	<0.3	0.8	NA	NA	21.27	7.86	13.41	NA	NA
S-1	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.27	6.85	14.42	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-1	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.27	6.08	15.19	NA	NA
S-1	7/28/1995	60	2.2	<0.5	1.3	1.2	NA	NA	21.27	6.79	14.48	NA	NA
S-1	10/17/1995	60	2.6	<0.5	1.2	1.3	NA	NA	21.27	7.04	14.23	NA	NA
S-1	1/11/1996	<50	2.0	<0.5	<0.5	<0.5	<2	NA	21.27	6.40	14.87	NA	NA
S-1	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.27	5.84	15.43	NA	NA
S-1	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.27	6.50	14.77	NA	NA
S-1	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.27	7.31	13.96	NA	NA
S-1	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	6.7	NA	21.27	5.50	15.77	NA	NA
S-1	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.03	14.24	NA	NA
S-1	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.00	14.27	NA	NA
S-1	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.27	7.51	13.76	NA	NA
S-1	1/15/1998	420	16	<0.50	4.6	3.9	26	NA	21.27	5.43	15.84	NA	NA
S-1	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.27	5.55	15.72	NA	NA
S-1	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.33	6.38	14.95	NA	NA
S-1	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.33	7.48	13.85	NA	NA
S-1	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	2.53	NA	21.33	6.37	14.96	NA	NA
S-1	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.33	5.93	15.40	NA	NA
S-1	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.33	7.20	14.13	NA	NA
S-1	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.33	7.61	13.72	NA	NA
S-1	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	4.73	NA	21.33	7.76	13.57	NA	NA
S-1	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.33	6.35	14.98	NA	NA
S-1	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.33	7.05	14.28	NA	NA
S-1	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.33	6.51	14.82	NA	NA
S-1	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	21.33	7.49	13.84	NA	NA
S-1	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.33	6.85	14.48	NA	NA
S-1	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.33	7.65	13.68	NA	NA
S-1	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.33	7.84	13.49	NA	NA
S-1	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.33	6.16	15.17	NA	NA
S-1	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.33	6.57	14.76	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-1	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.33	7.52	13.81	NA	NA
S-1	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.33	7.99	13.34	NA	NA
S-1	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	5.6	21.33	6.46	14.87	NA	NA
S-1	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.33	6.18	15.15	NA	NA
S-1	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.33	7.38	13.95	NA	NA
S-1	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.33	7.87	13.46	NA	NA
S-1	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	6.90	14.43	NA	NA
S-1	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.33	7.83	13.50	NA	NA
S-1	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	5.68	15.65	NA	NA
S-1	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.33	6.35	14.98	NA	NA
S-1	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.33	6.05	15.28	NA	NA
S-1	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.33	7.12	14.21	NA	NA
S-1	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.33	6.75	14.58	NA	NA
S-1	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.33	7.73	13.60	NA	NA
S-1	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	21.33	6.10	15.23	NA	NA
S-1	8/4/2008	NA	NA	NA	NA	NA	NA	NA	21.33	7.76	13.57	NA	NA
S-1	1/8/2009	<50	0.57	<1.0	<1.0	<1.0	NA	NA	21.33	7.28	14.05	NA	NA
S-1	7/21/2009	NA	NA	NA	NA	NA	NA	NA	21.33	7.89	13.44	NA	NA
S-1	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.33	6.98	14.35	NA	NA
S-1	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	21.33	7.47	13.86	NA	NA

S-3	9/6/1988	96000	3400	9500	2700	17000	NA	NA	21.14	NA	NA	NA	NA
S-3	11/16/1988	70000	4600	8400	2500	13000	NA	NA	21.14	7.76	13.38	NA	NA
S-3	2/27/1989	32000	2400	3100	1500	6400	NA	NA	21.14	NA	NA	NA	NA
S-3	5/4/1989	47000	4400	300	2400	15000	NA	NA	21.14	NA	NA	NA	NA
S-3	8/10/1989	110000	5700	5700	3200	19000	NA	NA	21.14	7.92	13.22	NA	NA
S-3	10/10/1989	52000	4600	3300	2600	15000	NA	NA	21.14	8.00	13.14	NA	NA
S-3	1/25/1990	420000	5200	4100	6700	34000	NA	NA	21.14	7.54	13.60	NA	NA
S-3	4/18/1990	58000	3800	1400	2400	12000	NA	NA	21.14	7.74	13.40	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-3	7/23/1990	49000	3400	1800	2300	12000	NA	NA	21.14	7.55	13.59	NA	NA
S-3	10/18/1990	44000	3500	650	2400	11000	NA	NA	21.14	8.47	12.67	NA	NA
S-3	1/28/1991	64000	40900	570	1940	8090	NA	NA	21.14	8.38	12.76	NA	NA
S-3	4/25/1991	120000	3900	3600	2400	8900	NA	NA	21.14	6.91	14.23	NA	NA
S-3	7/9/1991	50000	3600	2300	1800	10000	NA	NA	21.14	8.07	13.07	NA	NA
S-3	10/8/1991	130000	3600	1000	2800	8400	NA	NA	21.14	8.61	12.53	NA	NA
S-3	2/5/1992	150000	2500	670	2700	10000	NA	NA	21.14	7.80	13.34	NA	NA
S-3	4/28/1992	120000	2200	1200	2000	5800	NA	NA	21.14	7.27	13.87	NA	NA
S-3	7/27/1992	190000	1400	<1250	<1250	3400	NA	NA	21.14	8.10	13.04	NA	NA
S-3	10/26/1992	950000	2000	8400	16000	36000	NA	NA	21.14	8.62	12.52	NA	NA
S-3	1/14/1993	41000	2700	2500	1800	6900	NA	NA	21.14	5.16	15.98	NA	NA
S-3	4/16/1993	40000	930	2800	1900	14000	NA	NA	21.14	7.18	13.96	NA	NA
S-3	7/23/1993	87000	1600	<5	1300	4000	NA	NA	21.14	7.34	13.80	NA	NA
S-3	10/27/1993	36000	2200	<500	1500	3200	NA	NA	21.14	8.03	13.11	NA	NA
S-3	1/27/1994	190000	3200	3100	4100	15000	NA	NA	21.14	6.79	14.35	NA	NA
S-3	5/5/1994	36000	1100	490	1600	4700	NA	NA	20.48	6.75	13.73	NA	NA
S-3	7/26/1994	18000	1039	170.5	845.4	967.5	NA	NA	20.48	7.30	13.18	NA	NA
S-3	10/28/1994	25869	467.9	294	546.2	343.3	NA	NA	20.48	8.36	12.12	NA	NA
S-3	1/2/1995	23000	850	260	900	2100	NA	NA	20.48	6.36	14.12	NA	NA
S-3	4/14/1995	33000	720	670	1600	6600	NA	NA	20.48	5.87	14.61	NA	NA
S-3	7/28/1995	12000	540	<10	580	780	NA	NA	20.48	6.33	14.15	NA	NA
S-3	10/17/1995	Well inaccessible	NA	NA	NA	NA	NA	NA	20.48	6.48	14.00	NA	NA
S-3	1/11/1996	16000	520	290	740	2600	<200	NA	20.48	5.80	14.68	NA	NA
S-3	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.48	5.00	15.48	NA	NA
S-3	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.48	5.93	14.55	NA	NA
S-3	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.48	6.73	13.75	NA	NA
S-3	1/9/1997	30000	420	330	1500	6300	<500	NA	20.48	4.72	15.76	NA	NA
S-3	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.63	13.85	NA	NA
S-3	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.18	14.30	NA	NA

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Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-3	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.48	6.83	13.65	NA	NA
S-3	1/15/1998	21000	300	51	770	2800	<100	NA	20.48	4.30	16.18	NA	NA
S-3 (D)	1/15/1998	14000	330	63	920	3400	<250	NA	20.48	NA	NA	NA	NA
S-3	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.48	4.37	16.11	NA	NA
S-3	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.48	5.47	15.01	NA	NA
S-3	10/20/1998	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	1/22/1999	40000	313	194	2200	8800	<40.0	NA	20.48	5.71	14.77	NA	NA
S-3	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.48	4.95	15.53	NA	NA
S-3	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.48	6.78	13.70	NA	NA
S-3	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.48	7.25	13.23	NA	NA
S-3	1/3/2000	39700	150	61.8	1690	7720	445	NA	20.48	7.46	13.02	NA	NA
S-3	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.48	5.64	14.84	NA	NA
S-3	7/12/2000	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.48	6.72	13.76	NA	NA
S-3	1/3/2001	25000	89.0	<50.0	1270	5180	<250	NA	20.48	7.14	13.34	NA	NA
S-3	4/24/2001	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.48	7.28	13.20	NA	3.2
S-3	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.48	7.64	12.84	NA	3.5
S-3	1/16/2002	Well inaccessible		NA	NA	NA	NA	NA	20.48	NA	NA	NA	NA
S-3	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.48	5.99	14.49	NA	3.8
S-3	7/11/2002	NA	NA	NA	NA	NA	NA	NA	20.48	7.21	13.27	NA	0.7
S-3	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.85	7.90	12.95	NA	e
S-3	1/23/2003	28000	60	13	970	3700	NA	<50	20.85	6.00	14.85	NA	0.3
S-3	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.85	5.34	15.51	NA	1.0
S-3	7/1/2003	NA	NA	NA	NA	NA	NA	NA	20.85	7.28	13.57	NA	1.0
S-3	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.85	7.63	13.22	NA	26.9
S-3	1/22/2004	3200	5.7	<2.5	16	320	NA	NA	20.85	6.53	14.32	NA	0.5
S-3	7/13/2004	Well inaccessible		NA	NA	NA	NA	NA	20.85	NA	NA	NA	NA
S-3	7/21/2004	3100	4.1	<2.5	10	130	NA	NA	20.85	7.64	13.21	NA	2.2

TABLE 2
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-3	1/20/2005	93	<0.50	<0.50	1.3	1.8	NA	NA	20.85	5.78	15.07	NA	0.8
S-3	7/19/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.85	6.35	14.50	NA	NA
S-3	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.85	5.55	15.30	NA	NA
S-3	7/25/2006	100	<1.00	<1.00	<1.00	<3.00	NA	NA	20.85	7.09	13.76	NA	NA
S-3	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.85	6.53	14.32	NA	NA
S-3	7/24/2007	590 g,h	0.99	<1.0	0.25 i	0.99 i	NA	NA	20.85	7.44	13.41	NA	NA
S-3	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	5.41	15.44	NA	NA
S-3	8/4/2008	76	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	6.62	14.23	NA	NA
S-3	1/8/2009	260	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	6.87	13.98	NA	NA
S-3	7/21/2009	90	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	7.64	13.21	NA	NA
S-3	07/21/2009 *	150	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	7.64	13.21	NA	NA
S-3	01/12/2010 *	130	0.83	<1.0	<1.0	<1.0	NA	NA	20.85	6.63	14.22	NA	NA
S-3	07/22/2010 *	81	<0.50	<1.0	<1.0	<1.0	NA	NA	20.85	7.29	13.56	NA	NA

S-5	1/8/1987	7800	380	510	NA	1000	NA	NA	21.41	NA	NA	NA	NA
S-5	9/6/1988	7000	2600	60	400	700	NA	NA	21.41	NA	NA	NA	NA
S-5	11/16/1988	3000	660	60	120	220	NA	NA	21.41	NA	NA	NA	NA
S-5	2/27/1989	5700	2000	220	260	320	NA	NA	21.41	NA	NA	NA	NA
S-5	5/4/1989	9000	3000	600	630	1700	NA	NA	21.41	NA	NA	NA	NA
S-5	8/10/1989	5100	1100	<50	270	400	NA	NA	21.41	8.28	13.13	NA	NA
S-5	10/10/1989	15000	3300	160	830	2200	NA	NA	21.41	8.32	13.09	NA	NA
S-5	1/25/1990	12000	2400	360	570	1400	NA	NA	21.41	8.20	13.21	NA	NA
S-5	4/18/1990	5200	1100	40	300	460	NA	NA	21.41	8.32	13.09	NA	NA
S-5	7/23/1990	5500	1300	140	320	730	NA	NA	21.41	8.03	13.38	NA	NA
S-5	10/18/1990	12000	3200	40	720	900	NA	NA	21.41	9.03	12.38	NA	NA
S-5	1/28/1991	2550	410	15	110	60	NA	NA	21.41	8.80	12.61	NA	NA
S-5	4/25/1991	67000	5100	3100	2800	11000	NA	NA	21.41	7.40	14.01	NA	NA
S-5	7/9/1991	4900	480	36	360	1000	NA	NA	21.41	8.52	12.89	NA	NA
S-5	10/8/1991	6600	370	7.0	190	380	NA	NA	21.41	9.00	12.41	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-5	2/5/1992	44000	4800	850	2700	8400	NA	NA	21.41	8.11	13.30	NA	NA
S-5	4/28/1992	33000	1400	320	1600	5200	NA	NA	21.41	7.70	13.71	NA	NA
S-5	7/27/1992	20000	2400	<25	1800	2300	NA	NA	21.41	8.52	12.89	NA	NA
S-5	10/26/1992	21000	1600	140	1500	2800	NA	NA	21.41	9.02	12.39	NA	NA
S-5	1/14/1993	54000	1900	1000	2700	16000	NA	NA	21.41	5.22	16.19	NA	NA
S-5	4/16/1993	42000	2000	1300	4300	18000	NA	NA	21.41	7.04	14.37	NA	NA
S-5	7/23/1993	46000	2500	2200	3400	11000	NA	NA	21.41	7.75	13.66	NA	NA
S-5	10/27/1993	6500	990	31	1100	1000	NA	NA	21.41	8.49	12.92	NA	NA
S-5	1/27/1994	34000	1800	580	2900	9700	NA	NA	21.41	7.04	14.37	NA	NA
S-5	5/5/1994	24000	670	70	1400	2700	NA	NA	21.03	7.20	13.83	NA	NA
S-5	7/27/1994	4700	193.6	33.1	332.3	281.2	NA	NA	21.03	7.72	13.31	NA	NA
S-5	10/28/1994	3200	167.3	18	238.7	104.5	NA	NA	21.03	7.82	13.21	NA	NA
S-5	1/2/1995	18000	1300	220	3400	10000	NA	NA	21.03	6.65	14.38	NA	NA
S-5	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.03	5.99	15.04	NA	NA
S-5	7/28/1995	25000	440	74	1700	4500	NA	NA	21.03	6.77	14.26	NA	NA
S-5 (D)	7/28/1995	25000	450	<50	1700	4600	NA	NA	21.03	NA	NA	NA	NA
S-5	10/17/1995	18000	360	24	1300	2200	NA	NA	21.03	7.00	14.03	NA	NA
S-5	1/11/1996	41000	420	180	1600	9500	<200	NA	21.03	6.22	14.81	NA	NA
S-5	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.03	5.44	15.59	NA	NA
S-5	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.03	6.41	14.62	NA	NA
S-5	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.03	7.19	13.84	NA	NA
S-5	1/9/1997	38000	130	43	160	6200	<125	NA	21.03	5.03	16.00	NA	NA
S-5 (D)	1/9/1997	36000	130	<50	160	5600	<250	NA	21.03	NA	NA	NA	NA
S-5	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.03	7.20	13.83	NA	NA
S-5	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.03	6.82	14.21	NA	NA
S-5	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.03	7.31	13.72	NA	NA
S-5	1/15/1998	49000	62	<50	93	4100	<250	NA	21.03	4.58	16.45	NA	NA
S-5	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.03	4.94	16.09	NA	NA
S-5	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.27	5.36	15.91	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-5	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.27	7.53	13.74	NA	NA
S-5	1/22/1999	2550	9.09	<0.500	1.93	112	4.40	NA	21.27	6.35	14.92	NA	NA
S-5	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.27	5.37	15.90	NA	NA
S-5	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.27	6.43	14.84	NA	NA
S-5	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.27	7.51	13.76	NA	NA
S-5	1/3/2000	3310	39.0	<10.0	293	21.7	<50.0	NA	21.27	7.78	13.49	NA	NA
S-5	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.27	6.15	15.12	NA	NA
S-5	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.27	7.05	14.22	NA	NA
S-5	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.27	6.00	15.27	NA	NA
S-5	1/3/2001	516	3.65	0.968	18.0	4.02	18.4	NA	21.27	7.48	13.79	NA	NA
S-5	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.27	6.58	14.69	NA	NA
S-5	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.27	7.60	13.67	NA	NA
S-5	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.27	7.94	13.33	NA	NA
S-5	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.27	5.88	15.39	NA	NA
S-5	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.27	6.27	15.00	NA	NA
S-5	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.27	7.53	13.74	NA	NA
S-5	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.27	8.11	13.16	NA	NA
S-5	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.27	6.22	15.05	NA	NA
S-5	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.27	5.48	15.79	NA	NA
S-5	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.27	7.32	13.95	NA	NA
S-5	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.27	7.91	13.36	NA	NA
S-5	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	6.68	14.59	NA	NA
S-5	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.27	8.17	13.10	NA	NA
S-5	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	5.30	15.97	NA	NA
S-5	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.27	6.35	14.92	NA	NA
S-5	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.27	5.83	15.44	NA	NA
S-5	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.27	7.35	13.92	NA	NA
S-5	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.27	6.82	14.45	NA	NA
S-5	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.27	7.70	13.57	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-5	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	5.83	15.44	NA	NA
S-5	8/4/2008	NA	NA	NA	NA	NA	NA	NA	21.27	8.04	13.23	NA	NA
S-5	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	7.21	14.06	NA	NA
S-5	7/21/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	8.03	13.24	NA	NA
S-5	07/21/2009 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	8.03	13.24	NA	NA
S-5	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.27	7.13	14.14	NA	NA
S-5	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	21.27	7.50	13.77	NA	NA
S-6	11/16/1988	50	0.7	<1	<1	<3	NA	NA	22.02	8.58	13.44	NA	NA
S-6	2/27/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	NA	NA	NA	NA
S-6	5/4/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	NA	NA	NA	NA
S-6	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	8.54	13.48	NA	NA
S-6	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.02	8.58	13.44	NA	NA
S-6	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	22.02	8.31	13.71	NA	NA
S-6	4/18/1990	<50	<0.5	0.6	<0.5	1.0	NA	NA	22.02	8.43	13.59	NA	NA
S-6	7/23/1990	<50	<0.5	0.9	<0.5	1.8	NA	NA	22.02	8.24	13.78	NA	NA
S-6	10/18/1990	<50	<0.5	0.7	<0.5	0.8	NA	NA	22.02	9.20	12.82	NA	NA
S-6	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	9.10	12.92	NA	NA
S-6	4/25/1991	<50	<0.5	<0.5	<0.5	0.7	NA	NA	22.02	7.74	14.28	NA	NA
S-6	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	8.81	13.21	NA	NA
S-6	10/8/1991	<50	0.7	<0.5	<0.5	<0.5	NA	NA	22.02	9.26	12.76	NA	NA
S-6	2/2/1992	NA	NA	NA	NA	NA	NA	NA	22.02	8.47	13.55	NA	NA
S-6	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	7.91	14.11	NA	NA
S-6	7/27/1992	NA	NA	NA	NA	NA	NA	NA	22.02	8.83	13.19	NA	NA
S-6	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	9.29	12.73	NA	NA
S-6	1/13/1994	NA	NA	NA	NA	NA	NA	NA	22.02	9.43	12.59	NA	NA
S-6	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	7.12	14.90	NA	NA
S-6	7/23/1993	NA	NA	NA	NA	NA	NA	NA	22.02	8.14	13.88	NA	NA
S-6	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.02	8.75	13.27	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-6	1/27/1994	NA	NA	NA	NA	NA	NA	22.02	7.87	14.15	NA	NA	
S-6	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.40	7.71	13.69	NA	NA
S-6	7/26/1994	NA	NA	NA	NA	NA	NA	21.40	8.10	13.30	NA	NA	
S-6	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.40	8.04	13.36	NA	NA
S-6	1/2/1995	NA	NA	NA	NA	NA	NA	21.40	7.07	14.33	NA	NA	
S-6	4/14/1995	<50	<0.5	1.3	<0.5	<0.5	NA	NA	21.40	6.29	15.11	NA	NA
S-6	7/28/1995	NA	NA	NA	NA	NA	NA	21.40	6.91	14.49	NA	NA	
S-6	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.40	7.20	14.20	NA	NA
S-6	1/11/1996	NA	NA	NA	NA	NA	NA	21.40	6.60	14.80	NA	NA	
S-6	1/22/2004	Unable to locate		NA	NA	NA	NA	NA	21.40	NA	NA	NA	NA

S-7	11/16/1988	100	5.1	15	2.0	13	NA	NA	21.47	8.24	13.23	NA	NA
S-7	2/27/1989	50	0.5	3.0	1.0	11	NA	NA	21.47	NA	NA	NA	NA
S-7	5/4/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	NA	NA	NA	NA
S-7	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	8.18	13.29	NA	NA
S-7	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.47	8.35	13.12	NA	NA
S-7	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.47	7.95	13.52	NA	NA
S-7	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.47	8.06	13.41	NA	NA
S-7	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.89	13.58	NA	NA
S-7	10/18/1990	<50	<0.5	0.5	0.5	4.1	NA	NA	21.47	8.83	12.64	NA	NA
S-7	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.77	12.70	NA	NA
S-7	4/25/1991	60	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.25	14.22	NA	NA
S-7	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.41	13.06	NA	NA
S-7	10/8/1991	NA	NA	NA	NA	NA	NA	NA	21.47	8.95	12.52	NA	NA
S-7	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.04	13.43	NA	NA
S-7	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.95	12.52	NA	NA
S-7	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.45	14.02	NA	NA
S-7	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	8.48	12.99	NA	NA
S-7	10/26/1992	570	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	9.95	11.52	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-7	1/14/1993	56	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	5.84	15.63	NA	NA
S-7	4/16/1993	110	28	<0.5	<0.5	1.8	NA	NA	21.47	6.38	15.09	NA	NA
S-7	7/23/1993	80	0.48	<0.5	<0.5	0.8	NA	NA	21.47	7.72	13.75	NA	NA
S-7	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.79	13.68	NA	NA
S-7	1/27/1994	70a	<0.5	<0.5	<0.5	<0.5	NA	NA	21.47	7.85	13.62	NA	NA
S-7	5/5/1994	92	2.1	<0.5	<0.5	<0.5	NA	NA	20.85	9.45	11.40	NA	NA
S-7	7/26/1994	88	<0.3	<0.3	<0.3	<0.6	NA	NA	20.85	7.64	13.21	NA	NA
S-7	10/28/1994	60	<0.3	0.5	<0.3	<0.6	NA	NA	20.85	7.68	13.17	NA	NA
S-7	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.85	6.95	13.90	NA	NA
S-7	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.85	5.82	15.03	NA	NA
S-7	7/28/1995	170	1.7	<0.5	<0.5	2.2	NA	NA	20.85	6.32	14.53	NA	NA
S-7	10/17/1995	100	<0.5	0.6	<0.5	<0.5	NA	NA	20.85	7.07	13.78	NA	NA
S-7	1/11/1996	80	0.6	<0.5	<0.5	<0.5	54	NA	20.85	6.10	14.75	NA	NA
S-7	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.14	14.71	NA	NA
S-7	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.40	14.45	NA	NA
S-7	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.85	6.70	14.15	NA	NA
S-7	1/9/1997	130	1.4	<0.50	<0.50	0.56	70	NA	20.85	5.25	15.60	NA	NA
S-7	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.85	7.15	13.70	NA	NA
S-7	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.85	6.67	14.18	NA	NA
S-7	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.85	7.26	13.59	NA	NA
S-7	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	39	NA	20.85	5.51	15.34	NA	NA
S-7	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.85	5.45	15.40	NA	NA
S-7	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.03	6.48	14.55	NA	NA
S-7	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.03	7.37	13.66	NA	NA
S-7	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	97.8	NA	21.03	6.21	14.82	NA	NA
S-7	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.03	5.30	15.73	NA	NA
S-7	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.03	7.12	13.91	NA	NA
S-7	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.03	7.54	13.49	NA	NA
S-7	1/3/2000	615	8.73	2.90	4.00	7.17	17.0	NA	21.03	7.73	13.30	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
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15275 Washington Boulevard
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-7	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.27	14.76	NA	NA
S-7	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.97	14.06	NA	NA
S-7	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.03	6.43	14.60	NA	NA
S-7	1/3/2001	460	6.68	<0.500	0.712	0.596	10.2	NA	21.03	7.27	13.76	NA	NA
S-7	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.03	6.75	14.28	NA	NA
S-7	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.03	7.55	13.48	NA	NA
S-7	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.03	7.80	13.23	NA	NA
S-7	1/16/2002	360	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.03	6.11	14.92	NA	NA
S-7	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.03	6.54	14.49	NA	NA
S-7	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.03	7.37	13.66	NA	NA
S-7	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.01	7.97	13.04	NA	NA
S-7	1/23/2003	160	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.01	6.45	14.56	NA	NA
S-7	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.01	6.14	14.87	NA	NA
S-7	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.01	7.28	13.73	NA	NA
S-7	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.01	7.78	13.23	NA	NA
S-7	1/22/2004	140	<0.50	<0.50	0.51	<1.0	NA	NA	21.01	6.93	14.08	NA	NA
S-7	7/13/2004	150	<0.50	<0.50	<0.50	<1.0	NA	17	21.01	7.88	13.13	NA	NA
S-7	1/20/2005	200 a	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	5.68	15.33	NA	NA
S-7	7/19/2005	140 a	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	6.18	14.83	NA	NA
S-7	1/27/2006	69.8	<0.500	<0.500	<0.500	<0.500	NA	NA	21.01	6.11	14.90	NA	NA
S-7	7/25/2006	78.6	<1.00	<1.00	<1.00	<3.00	NA	NA	21.01	7.01	14.00	NA	NA
S-7	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.01	6.70	14.31	NA	NA
S-7	7/24/2007	63 g,h	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.54	13.47	NA	NA
S-7	1/15/2008	160 g,h	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	6.08	14.93	NA	NA
S-7	8/4/2008	72	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.78	13.23	NA	NA
S-7	1/8/2009	210	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.12	13.89	NA	NA
S-7	7/21/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.78	13.23	NA	NA
S-7	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	6.83	14.18	NA	NA
S-7	07/22/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.01	7.20	13.81	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-8	11/16/1988	210	5.0	<1	1.0	5.0	NA	NA	20.72	7.76	12.96	NA	NA
S-8	2/27/1989	<50	2.4	<1	<1	<3	NA	NA	20.72	NA	NA	NA	NA
S-8	5/4/1989	<50	7.5	<1	2.0	<3	NA	NA	20.72	NA	NA	NA	NA
S-8	8/10/1989	<50	0.6	<1	<1	<3	NA	NA	20.72	7.79	12.93	NA	NA
S-8	10/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.72	7.84	12.88	NA	NA
S-8	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.72	7.47	13.25	NA	NA
S-8	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.72	7.59	13.13	NA	NA
S-8	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	7.49	13.23	NA	NA
S-8	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.44	12.28	NA	NA
S-8	1/28/1991	<50	55	0.5	<0.5	1.4	NA	NA	20.72	8.28	12.44	NA	NA
S-8	4/25/1991	130a	19	<0.5	1.3	1.1	NA	NA	20.72	6.72	14.00	NA	NA
S-8	7/9/1991	200	33	<0.5	1.8	2.8	NA	NA	20.72	7.98	12.74	NA	NA
S-8	10/8/1991	580	95	2.2	4.9	6.5	NA	NA	20.72	8.55	12.17	NA	NA
S-8	2/5/1992	90a	18	<0.5	6.2	1.8	NA	NA	20.72	7.50	13.22	NA	NA
S-8	4/28/1992	<50	5.9	<0.5	2.5	<0.5	NA	NA	20.72	7.14	13.58	NA	NA
S-8	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.06	12.66	NA	NA
S-8	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.72	8.58	12.14	NA	NA
S-8	1/14/1993	270	74	0.9	25	5.5	NA	NA	20.72	5.32	15.40	NA	NA
S-8	4/16/1993	1100	420	<0.5	200	20	NA	NA	20.72	5.76	14.96	NA	NA
S-8	7/23/1993	160	23	<0.5	1.2	1.5	NA	NA	20.72	7.29	13.43	NA	NA
S-8	10/27/1993	420	650	0.7	11	1.7	NA	NA	20.72	7.93	12.79	NA	NA
S-8	1/27/1994	290	65	<1	6.9	2.4	NA	NA	20.72	6.31	14.41	NA	NA
S-8	5/5/1994	120	13	<0.5	<0.5	<0.5	NA	NA	20.32	6.84	13.48	NA	NA
S-8	7/26/1994	115	12.2	1.3	<0.3	2.7	NA	NA	20.32	7.42	12.90	NA	NA
S-8	10/28/1994	733	75.9	3.2	4.9	4.2	NA	NA	20.32	7.56	12.76	NA	NA
S-8	1/2/1995	290	54	<0.5	10	<0.5	NA	NA	20.32	6.19	14.13	NA	NA
S-8	4/14/1995	230	68	<0.5	10	2.4	NA	NA	20.32	5.54	14.78	NA	NA
S-8	7/28/1995	290	44	<0.5	8.0	<0.5	NA	NA	20.32	6.28	14.04	NA	NA

TABLE 2
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-8	10/17/1995	190	24	<0.5	1.0	0.9	NA	NA	20.32	6.64	13.68	NA	NA
S-8	1/11/1996	400	85	1.1	13	3.4	2.3	NA	20.32	5.96	14.36	NA	NA
S-8	4/2/1996	300	110	0.7	4.9	0.9	<2	NA	20.32	5.21	15.11	NA	NA
S-8	7/9/1996	<50	5.4	<0.50	0.63	<0.50	<2.5	NA	20.32	6.05	14.27	NA	NA
S-8	10/10/1996	150	0.53	0.66	2.3	1.0	8.9	NA	20.32	6.83	13.49	NA	NA
S-8	1/9/1997	240	27	<0.50	2.4	<0.50	5.8	NA	20.32	4.51	15.81	NA	NA
S-8	4/8/1997	220	27	0.62	1.9	0.71	5.7	NA	20.32	6.50	13.82	NA	NA
S-8	7/21/1997	1200	140	2.8	21	5.0	27	NA	20.32	6.36	13.96	NA	NA
S-8 (D)	7/21/1997	1200	120	<2.0	19	3.9	25	NA	20.32	NA	NA	NA	NA
S-8	10/8/1997	690	92	1.4	25	2.0	<2.5	NA	20.32	6.83	13.49	NA	NA
S-8 (D)	10/8/1997	700	95	1.3	26	1.9	<2.5	NA	20.32	NA	NA	NA	NA
S-8	1/15/1998	460	110	1.0	3.4	1.7	<5.0	NA	20.32	4.30	16.02	NA	NA
S-8	4/14/1998	780	190	2.9	15	3.4	<2.5	NA	20.32	4.68	15.64	NA	NA
S-8	7/14/1998	1600	240	<5.0	36	<5.0	<25	NA	20.36	6.36	14.00	NA	NA
S-8	10/20/1998	700	55	<5.0	<5.0	<5.0	49	NA	20.36	6.91	13.45	NA	NA
S-8	1/22/1999	<50.0	5.83	<0.500	0.919	<0.500	<2.00	NA	20.36	5.97	14.39	NA	NA
S-8	4/8/1999	684	10.6	1.3	9.75	1.0	10.5	NA	20.36	5.01	15.35	NA	NA
S-8	7/23/1999	1540	86.5	5.20	5.30	6.35	<25.0	NA	20.36	6.61	13.75	NA	NA
S-8	10/26/1999	1680	116	<2.50	22.4	5.58	<12.5	NA	20.36	6.95	13.41	NA	NA
S-8	1/3/2000	Well inaccessible	NA	NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	4/14/2000	Well inaccessible	NA	NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	7/12/2000	Well inaccessible	NA	NA	NA	NA	NA	NA	20.36	NA	NA	NA	NA
S-8	11/1/2000	2300	118	12.4	51.7	<2.50	<12.5	NA	20.36	5.68	14.68	NA	NA
S-8	1/3/2001	263	4.34	0.620	<0.500	0.643	5.40	NA	20.36	6.95	13.41	NA	NA
S-8	4/24/2001	680	12	<0.50	0.86	<0.50	NA	<0.50	20.36	6.25	14.11	NA	NA
S-8	7/2/2001	330	2.5	<0.50	0.86	<0.50	NA	<5.0	20.36	7.00	13.36	NA	NA
S-8	11/2/2001	1300	71	0.84	14	1.7	NA	<5.0	20.36	7.44	12.92	NA	NA
S-8	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.36	5.67	14.69	NA	NA
S-8	4/1/2002	330	2.2	<0.50	<0.50	<0.50	NA	<5.0	20.36	5.99	14.37	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-8	7/11/2002	1400	55	0.83	5.3	0.71	NA	<5.0	20.36	6.94	13.42	NA	NA
S-8	10/28/2002	660	6.2	0.63	0.76	<0.50	NA	<0.50	20.36	7.50	12.86	NA	1.1
S-8	1/23/2003	1600	30	0.56	6.7	<0.50	NA	<5.0	20.36	5.99	14.37	NA	NA
S-8	4/30/2003	890	13	<0.50	0.59	<1.0	NA	<5.0	20.36	5.30	15.06	NA	NA
S-8	7/1/2003	1800	68	1.3	2.6	1.2	NA	<0.50	20.36	6.87	13.49	NA	1.0
S-8	10/8/2003	220	1.3	<0.50	<0.50	<1.0	NA	<0.50	20.36	7.27	13.09	NA	NA
S-8	1/22/2004	1000	6.7	<0.50	0.61	<1.0	NA	NA	20.36	6.50	13.86	NA	NA
S-8	7/13/2004	2000	100	1.7	5.7	<2.0	NA	<1.0	20.36	7.41	12.95	NA	NA
S-8	1/20/2005	380	4.3	<0.50	<0.50	<1.0	NA	NA	20.36	5.02	15.34	NA	NA
S-8	7/19/2005	120	1.2	<0.50	<0.50	<1.0	NA	NA	20.36	5.82	14.54	NA	NA
S-8	1/27/2006	494	2.42	<0.500	<0.500	<0.500	NA	NA	20.36	5.51	14.85	NA	NA
S-8	7/25/2006	382	2.05	<1.00	<1.00	<3.00	NA	NA	20.36	6.66	13.70	NA	NA
S-8	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36	6.13	14.23	NA	NA
S-8	7/24/2007	210 g,h	1.2	<1.0	<1.0	<1.0	NA	NA	20.36	6.92	13.44	NA	NA
S-8	1/15/2008	560 g,h	5.3	<1.0	0.31 i	<1.0	NA	NA	20.36	5.32	15.04	NA	NA
S-8	8/4/2008	200	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.98	13.38	NA	NA
S-8	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.62	13.74	NA	NA
S-8	7/21/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	7.10	13.26	NA	NA
S-8	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.34	14.02	NA	NA
S-8	07/22/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.78	13.58	NA	NA

S-9	11/16/1988	1400	69	3.0	52	180	NA	NA	20.96	7.78	13.18	NA	NA
S-9	2/27/1989	1600	240	4.0	130	180	NA	NA	20.96	NA	NA	NA	NA
S-9	5/4/1989	2600	470	10	240	480	NA	NA	20.96	NA	NA	NA	NA
S-9	8/10/1989	520	73	<10	40	<30	NA	NA	20.96	7.82	13.14	NA	NA
S-9	10/10/1989	380	82	<1	46	13	NA	NA	20.96	7.87	13.09	NA	NA
S-9	1/25/1990	750	140	1.2	69	75	NA	NA	20.96	7.41	13.55	NA	NA
S-9	4/18/1990	680	150	1.7	50	37	NA	NA	20.96	7.65	13.31	NA	NA
S-9	7/23/1990	490	94	1.2	32	24	NA	NA	20.96	7.58	13.38	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-9	10/18/1990	390	140	0.7	3.3	24	NA	NA	20.96	8.46	12.50	NA	NA
S-9	1/28/1991	1040	450	4.6	85	97	NA	NA	20.96	8.29	12.67	NA	NA
S-9	4/25/1991	5800	880	9.0	360	500	NA	NA	20.96	6.09	14.87	NA	NA
S-9	7/9/1991	1400	220	2.8	82	100	NA	NA	20.96	7.82	13.14	NA	NA
S-9	10/8/1991	890	960	<2.5	16	29	NA	NA	20.96	8.55	12.41	NA	NA
S-9	2/5/1992	950	240	<2.5	28	55	NA	NA	20.96	6.96	14.00	NA	NA
S-9	4/28/1992	1400a	290	3.0	100	81	NA	NA	20.96	6.76	14.20	NA	NA
S-9	7/27/1992	890	190	<2.5	66	68	NA	NA	20.96	8.10	12.86	NA	NA
S-9	10/26/1992	650	160	<2.5	63	89	NA	NA	20.96	8.53	12.43	NA	NA
S-9	1/13/1993	19000	2400	38	1700	2200	NA	NA	20.96	6.80	14.16	NA	NA
S-9	4/16/1993	10000	1500	<5	1100	990	NA	NA	20.96	6.28	14.68	NA	NA
S-9	7/23/1993	1100	400	<5	260	160	NA	NA	20.96	7.26	13.70	NA	NA
S-9	10/27/1993	2500	400	<5	190	110	NA	NA	20.96	8.00	12.96	NA	NA
S-9	1/27/1994	4800	990	16	630	490	NA	NA	20.96	5.96	15.00	NA	NA
S-9	5/5/1994	3700	480	<5	21	120	NA	NA	20.68	6.99	13.69	NA	NA
S-9	7/26/1994	1000	124.6	<0.3	35.8	28.6	NA	NA	20.68	7.56	13.12	NA	NA
S-9	10/28/1994	979	80.3	7.0	21.7	29.2	NA	NA	20.68	7.78	12.90	NA	NA
S-9	1/2/1995	3900	540	2.4	350	150	NA	NA	20.68	6.29	14.39	NA	NA
S-9	4/14/1995	5100	1000	<10	380	230	NA	NA	20.68	5.69	14.99	NA	NA
S-9	7/28/1995	4600	680	<10	120	47	NA	NA	20.68	6.61	14.07	NA	NA
S-9	10/17/1995	1600	150	<0.5	42	15	NA	NA	20.68	7.00	13.68	NA	NA
S-9	1/11/1996	6800	1100	12	720	95	24	NA	20.68	6.20	14.48	NA	NA
S-9	4/2/1996	6000	1300	8.3	430	99	49	NA	20.68	5.19	15.49	NA	NA
S-9 (D)	4/2/1996	6500	1200	8.3	410	90	<20	NA	20.68	NA	NA	NA	NA
S-9	7/9/1996	3400	680	6.7	54	31	<25	NA	20.68	6.43	14.25	NA	NA
S-9 (D)	7/9/1996	3300	730	<5.0	58	28	<25	NA	20.68	NA	NA	NA	NA
S-9	10/10/1996	6600	1200	<10	160	<10	70	NA	20.68	7.08	13.60	NA	NA
S-9 (D)	10/10/1996	6100	1000	<10	200	15	65	NA	20.68	NA	NA	NA	NA
S-9	1/9/1997	12000	1400	<25	1000	39	<125	NA	20.68	5.03	15.65	NA	NA

TABLE 2
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-9	4/8/1997	6600	920	10	230	26	150	NA	20.68	6.78	13.90	NA	NA
S-9	7/21/1997	7800	860	13	260	14	87	NA	20.68	6.77	13.91	NA	NA
S-9	10/8/1997	4600	320	<10	61	<10	28	NA	20.68	6.92	13.76	NA	NA
S-9	1/15/1998	9300	1000	<10	730	24	<50	NA	20.68	4.50	16.18	NA	NA
S-9	4/14/1998	12000	1200	<2.5	960	<2.5	<12	NA	20.68	4.35	16.33	NA	NA
S-9 (D)	4/14/1998	12000	1200	<2.5	930	<2.5	<12	NA	20.68	NA	NA	NA	NA
S-9	7/14/1998	12000	1700	<25	990	39	<125	NA	20.68	5.95	14.73	NA	NA
S-9 (D)	7/14/1998	11000	1800	<25	650	<25	<125	NA	20.68	NA	NA	NA	NA
S-9	10/20/1998	14000	1600	<25	560	<25	340	NA	20.68	7.03	13.65	NA	NA
S-9 (D)	10/20/1998	11000	1100	<10	230	<10	100	NA	20.68	NA	NA	NA	NA
S-9	1/22/1999	9900	1030	26.7	819	27.5	46.8	NA	20.68	6.01	14.67	NA	NA
S-9	4/8/1999	17900	1450	<50.0	1610	73.8	<500	NA	20.68	5.25	15.43	NA	NA
S-9	7/23/1999	12200	1020	<20.0	536	<20.0	<200	NA	20.68	6.71	13.97	NA	NA
S-9	10/26/1999	9580	1170	11.9	566	23.1	<50.0	NA	20.68	7.27	13.41	NA	NA
S-9	10/26/1999	9580	1170	11.9	566	23.1	<50.0	NA	20.68	7.27	13.41	NA	NA
S-9	1/3/2000	9660	689	<50.0	640	<50.0	<250	NA	20.68	7.47	13.21	NA	NA
S-9	4/14/2000	14000	1040	<50.0	1210	<50.0	<250	NA	20.68	5.75	14.93	NA	NA
S-9	7/12/2000	13200	1360	33.9	552	26.8	<100	NA	20.68	6.63	14.05	NA	NA
S-9	11/1/2000	9120	928	13.5	468	<10.0	<50.0	NA	20.68	5.50	15.18	NA	NA
S-9	1/3/2001	355	19.8	0.732	2.23	0.630	5.09	NA	20.68	7.11	13.57	NA	NA
S-9	4/24/2001	3500	300	1.7	150	1.7	NA	<1.0	20.68	6.30	14.38	NA	NA
S-9	7/2/2001	88	3.8	<0.50	<0.50	<0.50	NA	<5.0	20.68	8.18	12.50	NA	2.6
S-9	11/2/2001	210	9.5	<0.50	<0.50	<0.50	NA	<5.0	20.68	8.40	12.28	NA	16.4
S-9	1/16/2002	15000	520	4.9	580	7.1	NA	<20	20.68	5.71	14.97	NA	0.5
S-9	4/1/2002	15000	530	5.1	920	7.8	NA	<25	20.68	5.99	14.69	NA	3.0
S-9	7/11/2002	10000	520	5.3	97	5.8	NA	<25	20.68	6.99	13.69	NA	0.5
S-9	10/28/2002	11000	580	6.2	65	5.3	NA	<2.5	20.70	7.63	13.07	NA	1.0
S-9	1/23/2003	9300	400	5.6	320	6.5	NA	<5.0	20.70	5.96	14.74	NA	0.5
S-9	4/30/2003	180	4.2	<0.50	3.7	<1.0	NA	<5.0	20.70	5.20	15.50	NA	7.0

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S-9	7/1/2003	2200	71	0.94	6.4	<1.0	NA	<0.50	20.70	7.78	12.92	NA	0.9
S-9	10/8/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.70	7.38	13.32	NA	16.2
S-9	1/22/2004	1400	26	<1.0	14	12	NA	NA	20.70	6.51	14.19	NA	0.7
S-9	7/13/2004	1900	36	<1.0	2.0	<2.0	NA	<1.0	20.70	8.51	12.19	NA	17.1
S-9	1/20/2005	3600	60	1.2	50	<2.0	NA	NA	20.70	5.80	14.90	NA	0.4
S-9	7/19/2005	2800	42	1.4	18	<2.0	NA	NA	20.70	7.50	13.20	NA	NA
S-9	1/27/2006	16800	152	4.74	165	6.77	NA	NA	20.70	6.40	14.30	NA	NA
S-9	7/25/2006	22500	79.3	2.32	27.2	<3.00	NA	NA	20.70	6.92	13.78	NA	NA
S-9	1/4/2007	5800	82	3.2	110	<5.0	NA	NA	20.70	6.40	14.30	NA	NA
S-9	7/24/2007	8900 g,h	91	3.4 i	22	<10	NA	NA	20.70	7.19	13.51	NA	NA
S-9	1/15/2008	11,000 g,h	68	3.5 i	68	4.5 i	NA	NA	20.70	5.20	15.50	NA	NA
S-9	8/4/2008	8,200	50	2.6	12	3.6	NA	NA	20.70	7.38	13.32	NA	NA
S-9	1/8/2009	9,200	40	2.4	29	1.9	NA	NA	20.70	6.73	13.97	NA	NA
S-9	7/21/2009	6,200	26	1.6	7.5	1.3	NA	NA	20.70	7.28	13.42	NA	NA
S-9	07/21/2009 *	9,600	35	2.1	9.2	1.8	NA	NA	20.70	7.28	13.42	NA	NA
S-9	01/12/2010 *	15,000	39	<5.0	26	<5.0	NA	NA	20.70	6.14	14.56	NA	NA
S-9	07/22/2010 *	7,900	21	<5.0	19	<5.0	NA	NA	20.70	6.89	13.81	NA	NA

S-10	11/16/1988	330	0.5	<1	1.0	11	NA	NA	20.86	7.91	12.95	NA	NA
S-10	2/27/1989	140	<0.5	<3	2.0	6.0	NA	NA	20.86	NA	NA	NA	NA
S-10	5/3/1989	220	<0.5	1.0	2.0	7.0	NA	NA	20.86	NA	NA	NA	NA
S-10	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.86	7.94	12.92	NA	NA
S-10	10/9/1989	170	<0.5	<1	<1	<3	NA	NA	20.86	7.99	12.87	NA	NA
S-10	1/25/1990	<50	<0.5	<0.5	1.1	4.0	NA	NA	20.86	7.56	13.30	NA	NA
S-10	4/18/1990	<50	<0.5	0.9	<0.5	2.0	NA	NA	20.86	7.71	13.15	NA	NA
S-10	7/23/1990	590	<0.5	<0.5	1.9	19	NA	NA	20.86	7.64	13.22	NA	NA
S-10	10/18/1990	140	<0.5	0.7	<0.5	7.0	NA	NA	20.86	8.58	12.28	NA	NA
S-10	1/28/1991	<50	<0.5	<0.5	<0.5	0.5	NA	NA	20.86	8.35	12.51	NA	NA
S-10	4/25/1991	<50	<0.5	<0.5	1.1	0.8	NA	NA	20.69	6.91	13.78	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-10	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.14	12.55	NA	NA
S-10	10/8/1991	140	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.70	11.99	NA	NA
S-10	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	7.57	13.12	NA	NA
S-10	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	7.20	13.49	NA	NA
S-10	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.17	12.52	NA	NA
S-10	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.68	12.01	NA	NA
S-10	1/13/1993	88	<0.5	0.6	0.6	<0.5	NA	NA	20.69	3.78	16.91	NA	NA
S-10	4/16/1993	80	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	6.46	14.23	NA	NA
S-10	7/23/1993	<50	1.5	<0.5	0.7	2.7	NA	NA	20.69	7.38	13.31	NA	NA
S-10	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.69	8.09	12.60	NA	NA
S-10	1/27/1994	270	1.1	1.3	2.0	7.4	NA	NA	20.69	5.81	14.88	NA	NA
S-10	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.82	13.33	NA	NA
S-10	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.15	7.40	12.75	NA	NA
S-10	10/28/1994	<50	2.4	<0.3	0.5	0.8	NA	NA	20.15	7.62	12.53	NA	NA
S-10	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.13	14.02	NA	NA
S-10	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	5.60	14.55	NA	NA
S-10	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.44	13.71	NA	NA
S-10	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.15	6.85	13.30	NA	NA
S-10	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.15	6.08	14.07	NA	NA
S-10	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.15	5.21	14.94	NA	NA
S-10	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.15	6.20	13.95	NA	NA
S-10	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.15	6.92	13.23	NA	NA
S-10	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.15	4.64	15.51	NA	NA
S-10	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.15	5.82	14.33	NA	NA
S-10	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.15	6.48	13.67	NA	NA
S-10	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.15	5.48	14.67	NA	NA
S-10	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.15	3.01	17.14	NA	NA
S-10	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.15	4.30	15.85	NA	NA
S-10	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.15	5.84	14.31	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-10	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.15	6.89	13.26	NA	NA
S-10	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.15	6.00	14.15	NA	NA
S-10	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.15	4.41	15.74	NA	NA
S-10	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.15	6.48	13.67	NA	NA
S-10	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.15	7.07	13.08	NA	NA
S-10	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.15	7.27	12.88	NA	NA
S-10	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.15	5.75	14.40	NA	NA
S-10	7/12/2000	NA	NA	NA	NA	NA	NA	NA	20.15	6.17	13.98	NA	NA
S-10	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.15	5.63	14.52	NA	NA
S-10	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.15	6.89	13.26	NA	NA
S-10	4/24/2001	NA	NA	NA	NA	NA	NA	NA	20.15	6.20	13.95	NA	NA
S-10	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.15	6.80	13.35	NA	NA
S-10	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.15	7.40	12.75	NA	NA
S-10	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.15	5.66	14.49	NA	NA
S-10	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.15	5.63	14.52	NA	NA
S-10	7/11/2002	NA	NA	NA	NA	NA	NA	NA	20.15	6.72	13.43	NA	NA
S-10	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.14	7.50	12.64	NA	NA
S-10	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.14	5.97	14.17	NA	NA
S-10	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.14	5.24	14.90	NA	NA
S-10	7/1/2003	NA	NA	NA	NA	NA	NA	NA	20.14	6.82	13.32	NA	NA
S-10	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.14	7.06	13.08	NA	NA
S-10	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	6.50	13.64	NA	NA
S-10	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.14	7.49	12.65	NA	NA
S-10	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	5.09	15.05	NA	NA
S-10	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.14	6.00	14.14	NA	NA
S-10	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.14	5.61	14.53	NA	NA
S-10	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.14	6.61	13.53	NA	NA
S-10	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.14	6.29	13.85	NA	NA
S-10	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.14	6.82	13.32	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-10	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.14	5.33	14.81	NA	NA
S-10	8/4/2008	NA	20.14	6.65	13.49	NA	NA						
S-10	1/8/2009	120	<0.50	<1.0	<1.0	<1.0	NA	NA	20.14	6.61	13.53	NA	NA
S-10	7/21/2009	NA	20.14	7.06	13.08	NA	NA						
S-10	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.14	6.38	13.76	NA	NA
S-10	07/22/2010 *	NA	20.14	6.88	13.26	NA	NA						

S-11	11/16/1988	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.62	12.64	NA	NA
S-11	2/27/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	NA	NA	NA	NA
S-11	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	NA	NA	NA	NA
S-11	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.65	12.61	NA	NA
S-11	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	21.26	8.64	12.62	NA	NA
S-11	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.26	8.43	12.83	NA	NA
S-11	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.26	8.42	12.84	NA	NA
S-11	7/23/1990	<50	<0.5	0.6	<0.5	1.1	NA	NA	21.26	8.23	13.03	NA	NA
S-11	10/18/1990	<50	<0.5	<0.5	<0.5	0.5	NA	NA	21.26	9.20	12.06	NA	NA
S-11	1/28/1991	63	<0.5	3.3	0.9	7.0	NA	NA	21.26	9.13	12.13	NA	NA
S-11	4/25/1991	<50	<0.5	<0.5	0.8	<0.5	NA	NA	21.26	7.53	13.73	NA	NA
S-11	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	8.85	12.41	NA	NA
S-11	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	9.34	11.92	NA	NA
S-11	2/5/1991	NA	NA	NA	NA	NA	NA	NA	21.26	8.50	12.76	NA	NA
S-11	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	7.80	13.46	NA	NA
S-11	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	8.80	12.46	NA	NA
S-11	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	9.42	11.84	NA	NA
S-11	1/13/1993	NA	NA	NA	NA	NA	NA	NA	21.26	6.52	14.74	NA	NA
S-11	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.26	6.86	14.40	NA	NA
S-11	7/23/1993	NA	NA	NA	NA	NA	NA	NA	21.26	8.07	13.19	NA	NA
S-11	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	21.26	NA	NA	NA	NA
S-11	1/27/1994	NA	NA	NA	NA	NA	NA	NA	21.26	NA	NA	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-11	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	7.73	13.51	NA	NA
S-11	7/26/1994	NA	NA	NA	NA	NA	NA	NA	21.24	8.30	12.94	NA	NA
S-11	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.24	8.30	12.94	NA	NA
S-11	1/2/1995	NA	NA	NA	NA	NA	NA	NA	21.24	7.25	13.99	NA	NA
S-11	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	6.99	14.25	NA	NA
S-11	7/28/1995	NA	NA	NA	NA	NA	NA	NA	21.24	7.21	14.03	NA	NA
S-11	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.24	7.41	13.83	NA	NA
S-11	1/11/1996	NA	NA	NA	NA	NA	NA	NA	21.24	6.80	14.44	NA	NA
S-11	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	21.24	7.28	13.96	NA	NA
S-11	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.27	NA	NA	NA	NA
S-11	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	0.57	21.27	7.55	13.72	NA	NA

S-12	11/16/1988	50	3.5	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	2/27/1989	<50	0.8	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	21.05	NA	NA	NA	NA
S-12	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	21.05	8.32	12.73	NA	NA
S-12	10/9/1989	<50	<0.5	<1	<1	<1	NA	NA	21.05	8.32	12.73	NA	NA
S-12	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	21.05	8.18	12.87	NA	NA
S-12	4/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.05	13.00	NA	NA
S-12	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	7.92	13.13	NA	NA
S-12	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.90	12.15	NA	NA
S-12	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.54	12.51	NA	NA
S-12	4/25/1991	90	5.4	<0.5	1.1	0.7	NA	NA	21.05	7.08	13.97	NA	NA
S-12	7/9/1991	<50	2.9	<0.5	<0.5	<0.5	NA	NA	21.05	8.42	12.63	NA	NA
S-12	10/8/1991	50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.80	12.25	NA	NA
S-12	2/5/1992	50a	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.07	12.98	NA	NA
S-12	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.33	12.72	NA	NA
S-12	7/27/1992	94	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	8.55	12.50	NA	NA
S-12	10/26/1992	86	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	9.03	12.02	NA	NA

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S-12	1/14/1993	120	2.0	<0.5	<0.5	<0.5	NA	NA	21.05	6.38	14.67	NA	NA
S-12	4/16/1993	60	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	6.56	14.49	NA	NA
S-12	7/23/1993	90	<0.5	<0.5	<0.5	<0.5	NA	NA	21.05	7.76	13.29	NA	NA
S-12	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	21.05	NA	NA	NA	NA
S-12	1/27/1994	Well inaccessible		NA	NA	NA	NA	NA	21.05	NA	NA	NA	NA
S-12	5/5/1994	<50	2.0	<0.5	<0.5	<0.5	NA	NA	20.71	7.49	13.22	NA	NA
S-12	7/26/1994	128	<0.3	<0.3	<0.3	<0.6	NA	NA	20.71	7.92	12.79	NA	NA
S-12	10/28/1994	167	<0.3	<0.3	<0.3	<0.6	NA	NA	20.71	7.78	12.93	NA	NA
S-12	1/2/1995	50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	7.33	13.38	NA	NA
S-12	4/14/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	6.47	14.24	NA	NA
S-12	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	6.90	13.81	NA	NA
S-12	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.71	7.16	13.55	NA	NA
S-12	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	82	NA	20.71	6.65	14.06	NA	NA
S-12	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	45	NA	20.71	6.95	13.76	NA	NA
S-12	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	20.73	NA	NA	NA	NA
S-12	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	0.58	20.73	7.30	13.43	NA	NA

S-13	5/3/1989	150	4.9	4.0	2.0	14	NA	NA	20.57	NA	NA	NA	NA
S-13	8/10/1989	110	2.9	<1	<1	<3	NA	NA	20.57	8.00	12.57	NA	NA
S-13	10/9/1989	77	1.4	<1	<1	<3	NA	NA	20.57	7.95	12.62	NA	NA
S-13	1/25/1990	51	0.5	<0.5	<0.5	<1	NA	NA	20.57	7.79	12.78	NA	NA
S-13	4/18/1990	85	8.7	<0.5	<0.5	<1	NA	NA	20.57	7.73	12.84	NA	NA
S-13	7/23/1990	80	0.8	<0.5	<0.5	<0.5	NA	NA	20.57	7.63	12.94	NA	NA
S-13	10/18/1990	130	<0.5	<0.5	<0.5	<5	NA	NA	20.57	8.58	11.99	NA	NA
S-13	1/28/1991	<50	<0.5	0.9	1.2	1.0	NA	NA	20.57	8.39	12.18	NA	NA
S-13	4/25/1991	440a	3.8	<0.5	<0.5	0.6	NA	NA	20.57	7.00	13.57	NA	NA
S-13	7/9/1991	320a	0.6	<0.5	<0.5	<0.5	NA	NA	20.57	8.12	12.45	NA	NA
S-13	10/8/1991	310	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	8.69	11.88	NA	NA
S-13	2/5/1992	NA	NA	NA	NA	NA	NA	NA	20.57	7.62	12.95	NA	NA

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S-13	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.15	13.42	NA	NA
S-13	7/27/1992	NA	NA	NA	NA	NA	NA	NA	20.57	8.20	12.37	NA	NA
S-13	10/26/1992	180	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	8.73	11.84	NA	NA
S-13	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.57	5.06	15.51	NA	NA
S-13	4/16/1993	240	4.8	<0.5	1.3	<0.5	NA	NA	20.57	6.38	14.19	NA	NA
S-13	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.57	7.45	13.12	NA	NA
S-13	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-13	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-13	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.16	6.91	13.25	NA	NA
S-13	7/26/1994	NA	NA	NA	NA	NA	NA	NA	20.16	7.52	12.64	NA	NA
S-13	10/28/1994	368	<0.3	<0.3	<0.3	<0.6	NA	NA	20.16	7.68	12.48	NA	NA
S-13	1/2/1995	NA	NA	NA	NA	NA	NA	NA	20.16	6.37	13.79	NA	NA
S-13	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.16	5.81	14.35	NA	NA
S-13	7/28/1995	NA	NA	NA	NA	NA	NA	NA	20.16	6.73	13.43	NA	NA
S-13	10/17/1995	<50	1.0	<0.5	<0.5	<0.5	NA	NA	20.16	6.94	13.22	NA	NA
S-13	1/11/1996	NA	NA	NA	NA	NA	NA	NA	20.16	6.20	13.96	NA	NA
S-13	4/2/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.16	5.28	14.88	NA	NA
S-13	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.16	6.35	13.81	NA	NA
S-13	10/10/1996	<50	<0.50	<0.50	<0.50	<0.50	210	160	20.16	7.04	13.12	NA	NA
S-13	1/9/1997	NA	NA	NA	NA	NA	NA	NA	20.16	5.19	14.97	NA	NA
S-13	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	81	NA	20.16	6.62	13.54	NA	NA
S-13	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.16	6.76	13.40	NA	NA
S-13	10/8/1997	<50	<0.50	<0.50	<0.50	<0.50	110	NA	20.16	7.05	13.11	NA	NA
S-13	1/15/1998	NA	NA	NA	NA	NA	NA	NA	20.16	5.27	14.89	NA	NA
S-13	4/14/1998	<50	<0.50	<0.50	<0.50	<0.50	3.2	NA	20.16	5.24	14.92	NA	NA
S-13	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.16	5.48	14.68	NA	NA
S-13	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.16	7.08	13.08	NA	NA
S-13	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	92.2	NA	20.16	6.65	13.51	NA	NA
S-13	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.16	5.61	14.55	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-13	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.16	6.78	13.38	NA	NA
S-13	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.16	7.33	12.83	NA	NA
S-13	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.16	7.51	12.65	NA	NA
S-13	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.16	6.08	14.08	NA	NA
S-13	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.16	6.50	13.66	NA	NA
S-13	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.16	6.10	14.06	NA	NA
S-13	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	21.2	23.9	20.16	7.09	13.07	NA	NA
S-13	4/24/2001	Well inaccessible	NA	NA	NA	NA	NA	NA	20.16	NA	NA	NA	NA
S-13	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.16	7.13	13.03	NA	NA
S-13	11/2/2001	NA	NA	NA	NA	NA	NA	NA	20.16	7.38	12.78	NA	NA
S-13	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	5.9	20.16	6.02	14.14	NA	NA
S-13	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.16	6.26	13.90	NA	NA
S-13	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.16	7.00	13.16	NA	NA
S-13	10/28/2002	NA	NA	NA	NA	NA	NA	NA	20.19	7.70	12.49	NA	NA
S-13	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	110	20.19	6.41	13.78	NA	NA
S-13	4/30/2003	NA	NA	NA	NA	NA	NA	NA	20.19	6.12	14.07	NA	NA
S-13	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.19	7.65	12.54	NA	1.4
S-13	10/8/2003	NA	NA	NA	NA	NA	NA	NA	20.19	7.32	12.87	NA	NA
S-13	1/22/2004	<250	<2.5	<2.5	<2.5	<5.0	NA	NA	20.19	6.60	13.59	NA	NA
S-13	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.19	6.60	13.59	NA	e
S-13	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.19	6.56	13.63	NA	NA
S-13	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.19	6.15	14.04	NA	NA
S-13	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.19	6.42	13.77	NA	NA
S-13	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.19	7.51	12.68	NA	NA
S-13	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.19	6.85	13.34	NA	NA
S-13	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.19	7.39	12.80	NA	NA
S-13	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.19	6.00	14.19	NA	NA
S-13	8/4/2008	NA	NA	NA	NA	NA	NA	NA	20.19	7.46	12.73	NA	NA
S-13	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.19	6.71	13.48	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-13	7/21/2009	NA	NA	NA	NA	NA	NA	NA	20.19	7.26	12.93	NA	NA
S-13	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.19	6.25	13.94	NA	NA
S-13	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	20.19	7.01	13.18	NA	NA
S-14	5/3/1989	5300	750	400	200	800	NA	NA	20.44	NA	NA	NA	NA
S-14	8/10/1989	1800	540	140	42	50	NA	NA	20.44	7.58	12.86	NA	NA
S-14	10/9/1989	1000	360	60	20	30	NA	NA	20.44	7.62	12.82	NA	NA
S-14	1/25/1990	640	160	77	17	39	NA	NA	20.44	7.82	12.62	NA	NA
S-14	4/18/1990	1200	200	110	30	96	NA	NA	20.44	7.37	13.07	NA	NA
S-14	7/23/1990	5000	430	340	140	660	NA	NA	20.44	7.28	13.16	NA	NA
S-14	10/18/1990	1800	770	13	17	120	NA	NA	20.44	8.10	12.34	NA	NA
S-14	1/28/1991	720	200	36	21	78	NA	NA	20.44	8.04	12.40	NA	NA
S-14	4/25/1991	14000	930	430	250	970	NA	NA	20.44	6.40	14.04	NA	NA
S-14	7/9/1991	160	30	5.3	5	16	NA	NA	20.44	7.69	12.75	NA	NA
S-14	10/8/1991	5400	81	57	95	380	NA	NA	20.44	8.24	12.20	NA	NA
S-14	2/2/1992	NA	NA	NA	NA	NA	NA	NA	20.44	7.20	13.24	NA	NA
S-14	4/28/1992	2000	270	140	48	170	NA	NA	20.44	9.75	10.69	NA	NA
S-14	10/26/1992	920	33	12	25	88	NA	NA	20.44	8.32	12.12	NA	NA
S-14	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.44	5.07	15.37	NA	NA
S-14	4/16/1993	4500	1100	29	91	170	NA	NA	20.44	5.86	14.58	NA	NA
S-14	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.44	7.06	13.38	NA	NA
S-14	10/27/1993	Well inaccessible	NA	NA	NA	NA	NA	NA	20.44	NA	NA	NA	NA
S-14	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.44	NA	NA	NA	NA
S-14	5/5/1994	810	250	<2.5	9.4	19	NA	NA	19.99	6.48	13.51	NA	NA
S-14	7/26/1994	NA	NA	NA	NA	NA	NA	NA	19.99	7.04	12.95	NA	NA
S-14	10/28/1994	5385	290.6	85.8	49.7	186.2	NA	NA	19.99	7.07	12.92	NA	NA
S-14	1/2/1995	NA	NA	NA	NA	NA	NA	NA	19.99	5.95	14.04	NA	NA
S-14	4/14/1995	1600	40	4.7	11	20	NA	NA	19.99	5.22	14.77	NA	NA
S-14	7/28/1995	NA	NA	NA	NA	NA	NA	NA	19.99	6.21	13.78	NA	NA

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S-14	10/17/1995	1200	37	<0.5	7.8	11	NA	NA	19.99	6.30	13.69	NA	NA
S-14	1/11/1996	NA	NA	NA	NA	NA	NA	NA	19.99	5.70	14.29	NA	NA
S-14	7/21/1997	220	71	0.71	1.3	1.3	100	NA	19.99	6.14	13.85	NA	NA
S-14	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	20.01	NA	NA	NA	NA
S-14	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	55	20.01	6.20	13.81	NA	NA
S-15	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	NA	NA	NA	NA
S-15	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	8.48	13.74	NA	NA
S-15	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	22.22	8.46	13.76	NA	NA
S-15	1/25/1990	<50	<0.5	<1	<1	<1	NA	NA	22.22	8.34	13.88	NA	NA
S-15	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	22.22	8.45	13.77	NA	NA
S-15	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.22	14.00	NA	NA
S-15	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.11	13.11	NA	NA
S-15	1/28/1991	<50	<0.5	0.6	<0.5	0.8	NA	NA	22.22	9.13	13.09	NA	NA
S-15	4/25/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	7.83	14.39	NA	NA
S-15	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.93	13.29	NA	NA
S-15	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.26	12.96	NA	NA
S-15	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.60	13.62	NA	NA
S-15	4/28/1992	50	0.8	0.9	<0.5	1.4	NA	NA	22.22	8.09	14.13	NA	NA
S-15	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	8.83	13.39	NA	NA
S-15	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	9.31	12.91	NA	NA
S-15	1/14/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	22.22	6.64	15.58	NA	NA
S-15	4/16/1993	<50	0.6	1.0	<0.5	0.7	NA	NA	22.22	7.14	15.08	NA	NA
S-15	7/23/1993	<50	1.2	<0.5	<0.5	1.6	NA	NA	22.22	8.23	13.99	NA	NA
S-15	10/27/1993	Well inaccessible		NA	NA	NA	NA	NA	22.22	NA	NA	NA	NA
S-15	1/27/1994	Well inaccessible		NA	NA	NA	NA	NA	22.22	NA	NA	NA	NA
S-15	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.57	13.85	NA	NA
S-15	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.42	8.16	13.26	NA	NA
S-15	10/28/1994	<50	0.3	<0.3	<0.3	<0.6	NA	NA	21.42	7.87	13.55	NA	NA

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S-15	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.02	14.40	NA	NA
S-15	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.42	6.19	15.23	NA	NA
S-15	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	6.72	14.70	NA	NA
S-15	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.42	7.04	14.38	NA	NA
S-15	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	21.42	6.40	15.02	NA	NA
S-15	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.47	NA	NA	NA	NA
S-15	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	21.47	7.07	14.40	NA	NA
S-16	5/4/1994	380	44	3.0	2.0	<3	NA	NA	21.82	NA	NA	NA	NA
S-16	8/10/1989	<50	0.6	<1	<1	<3	NA	NA	21.82	8.36	13.46	NA	NA
S-16	10/10/1989	<5	<0.5	<1	<1	<3	NA	NA	21.82	8.23	13.59	NA	NA
S-16	1/25/1990	240	160	3.3	0.8	11	NA	NA	21.82	7.88	13.94	NA	NA
S-16	4/18/1990	<50	1.0	<0.5	<0.5	<1	NA	NA	21.82	8.19	13.63	NA	NA
S-16	7/23/1990	<50	1.1	<0.5	<0.5	<0.5	NA	NA	21.82	8.09	13.73	NA	NA
S-16	10/18/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.82	8.90	12.92	NA	NA
S-16	1/28/1991	<50	<0.5	0.6	<0.5	0.9	NA	NA	21.82	8.55	13.27	NA	NA
S-16	4/25/1991	60	21	0.5	3.2	4.8	NA	NA	21.82	7.48	14.34	NA	NA
S-16	7/9/1991	<50	1.0	<0.5	<0.5	<0.5	NA	NA	21.82	8.48	13.34	NA	NA
S-16	10/8/1991	50	17	1.4	1.2	5.5	NA	NA	21.82	8.95	12.87	NA	NA
S-16	2/5/1992	150	65	0.7	<0.5	8.4	NA	NA	21.82	8.20	13.62	NA	NA
S-16	4/28/1992	<50	13	<0.5	<0.5	<0.5	NA	NA	21.82	7.80	14.02	NA	NA
S-16	7/27/1992	510	130	<2.5	<0.5	21	NA	NA	21.82	8.29	13.53	NA	NA
S-16	10/26/1992	<50	<0.5	<0.5	<2.5	<0.5	NA	NA	21.82	9.02	12.80	NA	NA
S-16	1/13/1993	100	25	1.9	<0.5	8.4	NA	NA	21.82	5.78	16.04	NA	NA
S-16	4/16/1993	150	56	1.8	4.6	12	NA	NA	21.82	6.80	15.02	NA	NA
S-16	7/23/1993	<50	0.9	<0.5	<0.5	<0.5	NA	NA	21.82	7.67	14.15	NA	NA
S-16	10/27/1993	<50	1.5	<0.5	<0.5	<0.5	NA	NA	21.82	8.52	13.30	NA	NA
S-16	1/27/1994	140	85	<1	<1	13	NA	NA	21.82	7.20	14.62	NA	NA
S-16	5/5/1994	71	25	<0.5	<0.5	4.2	NA	NA	21.24	7.76	13.48	NA	NA

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S-16	7/26/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	21.24	7.84	13.40	NA	NA
S-16	10/28/1994	<50	11.5	<0.3	<0.3	1.8	NA	NA	21.24	7.97	13.27	NA	NA
S-16	1/2/1995	70	64	<0.5	<0.5	4.0	NA	NA	21.24	6.49	14.75	NA	NA
S-16	4/14/1995	NA	NA	NA	NA	NA	NA	NA	21.24	6.08	15.16	NA	NA
S-16	7/28/1995	<50	1.7	<0.5	<0.5	<0.5	NA	NA	21.24	7.00	14.24	NA	NA
S-16	10/17/1995	<50	4.6	<0.5	<0.5	<0.5	NA	NA	21.24	7.15	14.09	NA	NA
S-16	1/11/1996	80	17	0.7	<0.5	2.9	<2	NA	21.24	6.30	14.94	NA	NA
S-16	4/2/1996	NA	NA	NA	NA	NA	NA	NA	21.24	5.84	15.40	NA	NA
S-16	7/9/1996	NA	NA	NA	NA	NA	NA	NA	21.24	6.72	14.52	NA	NA
S-16	10/10/1996	NA	NA	NA	NA	NA	NA	NA	21.24	7.41	13.83	NA	NA
S-16	1/9/1997	80	18	<0.50	1.7	4.8	<2.5	NA	21.24	5.60	15.64	NA	NA
S-16	4/8/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.34	13.90	NA	NA
S-16	7/21/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.20	14.04	NA	NA
S-16	10/8/1997	NA	NA	NA	NA	NA	NA	NA	21.24	7.34	13.90	NA	NA
S-16	1/15/1998	650	160	2.7	8.7	62	<12	NA	21.24	4.79	16.45	NA	NA
S-16	4/14/1998	NA	NA	NA	NA	NA	NA	NA	21.24	5.27	15.97	NA	NA
S-16	7/14/1998	NA	NA	NA	NA	NA	NA	NA	21.24	6.32	14.92	NA	NA
S-16	10/20/1998	NA	NA	NA	NA	NA	NA	NA	21.24	6.94	14.30	NA	NA
S-16	1/22/1999	Well inaccessible	NA	NA	NA	NA	NA	NA	21.24	NA	NA	NA	NA
S-16	4/8/1999	NA	NA	NA	NA	NA	NA	NA	21.24	5.80	15.44	NA	NA
S-16	7/23/1999	NA	NA	NA	NA	NA	NA	NA	21.24	6.62	14.62	NA	NA
S-16	10/26/1999	NA	NA	NA	NA	NA	NA	NA	21.24	7.42	13.82	NA	NA
S-16	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	21.24	7.34	13.90	NA	NA
S-16	4/14/2000	NA	NA	NA	NA	NA	NA	NA	21.24	6.27	14.97	NA	NA
S-16	7/12/2000	NA	NA	NA	NA	NA	NA	NA	21.24	7.02	14.22	NA	NA
S-16	11/1/2000	NA	NA	NA	NA	NA	NA	NA	21.24	6.79	14.45	NA	NA
S-16	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	3.05	NA	21.24	7.18	14.06	NA	NA
S-16	4/24/2001	NA	NA	NA	NA	NA	NA	NA	21.24	6.85	14.39	NA	NA
S-16	7/2/2001	NA	NA	NA	NA	NA	NA	NA	21.24	7.51	13.73	NA	NA

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S-16	11/2/2001	NA	NA	NA	NA	NA	NA	NA	21.24	7.68	13.56	NA	NA
S-16	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.24	6.40	14.84	NA	NA
S-16	4/1/2002	NA	NA	NA	NA	NA	NA	NA	21.24	6.33	14.91	NA	NA
S-16	7/11/2002	NA	NA	NA	NA	NA	NA	NA	21.24	7.39	13.85	NA	NA
S-16	10/28/2002	NA	NA	NA	NA	NA	NA	NA	21.30	8.00	13.30	NA	NA
S-16	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	21.30	6.36	14.94	NA	NA
S-16	4/30/2003	NA	NA	NA	NA	NA	NA	NA	21.30	6.03	15.27	NA	NA
S-16	7/1/2003	NA	NA	NA	NA	NA	NA	NA	21.30	7.28	14.02	NA	NA
S-16	10/8/2003	NA	NA	NA	NA	NA	NA	NA	21.30	7.77	13.53	NA	NA
S-16	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	6.80	14.50	NA	NA
S-16	7/13/2004	NA	NA	NA	NA	NA	NA	NA	21.30	7.94	13.36	NA	NA
S-16	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	5.62	15.68	NA	NA
S-16	7/19/2005	NA	NA	NA	NA	NA	NA	NA	21.30	6.53	14.77	NA	NA
S-16	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	21.30	6.05	15.25	NA	NA
S-16	7/25/2006	NA	NA	NA	NA	NA	NA	NA	21.30	7.19	14.11	NA	NA
S-16	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	21.30	6.89	14.41	NA	NA
S-16	7/24/2007	NA	NA	NA	NA	NA	NA	NA	21.30	7.60	13.70	NA	NA
S-16	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	21.30	5.82	15.48	NA	NA
S-16	8/4/2008	NA	NA	NA	NA	NA	NA	NA	21.30	7.55	13.75	NA	NA
S-16	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.30	7.16	14.14	NA	NA
S-16	7/21/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.30	7.69	13.61	NA	NA
S-16	07/21/2009*	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.30	7.69	13.61	NA	NA
S-16	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	21.30	6.99	14.31	NA	NA
S-16	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	21.30	7.42	13.88	NA	NA

S-17	5/3/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	NA	NA	NA	NA
S-17	8/10/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	8.13	12.82	NA	NA
S-17	10/9/1989	<50	<0.5	<1	<1	<3	NA	NA	20.95	8.18	12.77	NA	NA
S-17	1/25/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.95	7.60	13.35	NA	NA

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S-17	4/18/1990	<50	<0.5	<0.5	<0.5	<1	NA	NA	20.95	7.95	13.00	NA	NA
S-17	7/23/1990	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.87	13.08	NA	NA
S-17	10/18/1990	390	10	62	22	110	NA	NA	20.95	8.71	12.24	NA	NA
S-17	1/28/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.54	12.41	NA	NA
S-17	4/25/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.15	13.80	NA	NA
S-17	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.24	12.71	NA	NA
S-17	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.86	12.09	NA	NA
S-17	2/5/1992	NA	NA	NA	NA	NA	NA	NA	20.95	7.74	13.21	NA	NA
S-17	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	7.41	13.54	NA	NA
S-17	7/27/1992	NA	NA	NA	NA	NA	NA	NA	20.95	8.34	12.61	NA	NA
S-17	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.87	12.08	NA	NA
S-17	1/13/1993	NA	NA	NA	NA	NA	NA	NA	20.95	3.43	17.52	NA	NA
S-17	4/16/1993	130	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	6.70	14.25	NA	NA
S-17	7/23/1993	NA	NA	NA	NA	NA	NA	NA	20.95	7.53	13.42	NA	NA
S-17	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.95	8.29	12.66	NA	NA
S-17	1/27/1994	NA	NA	NA	NA	NA	NA	NA	20.95	5.78	15.17	NA	NA
S-17	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.45	6.99	13.46	NA	NA
S-17	7/26/1994	NA	NA	NA	NA	NA	NA	NA	20.45	7.62	12.83	NA	NA
S-17	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.45	7.91	12.54	NA	NA
S-17	1/2/1995	NA	NA	NA	NA	NA	NA	NA	20.45	6.33	14.12	NA	NA
S-17	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.45	5.53	14.92	NA	NA
S-17	7/28/1995	NA	NA	NA	NA	NA	NA	NA	20.45	6.75	13.70	NA	NA
S-17	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.45	7.15	13.30	NA	NA
S-17	1/11/1996	NA	NA	NA	NA	NA	NA	NA	20.45	6.37	14.08	NA	NA
S-17	4/2/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.45	5.31	15.14	NA	NA
S-17	7/9/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.30	14.15	NA	NA
S-17	10/10/1996	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	7.80	12.65	NA	NA
S-17	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	4.80	15.65	NA	NA
S-17	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.83	13.62	NA	NA

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HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-17 (D)	4/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	NA	NA	NA	NA
S-17	7/21/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.78	13.67	NA	NA
S-17	10/8/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.80	13.65	NA	NA
S-17	1/15/1998	380	<0.50	<0.50	<0.50	0.94	<2.5	NA	20.45	2.91	17.54	NA	NA
S-17	4/14/1998	160	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	4.47	15.98	NA	NA
S-17	7/14/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	6.45	14.00	NA	NA
S-17	10/20/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.45	7.11	13.34	NA	NA
S-17	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.45	6.01	14.44	NA	NA
S-17	4/8/1999	145	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.45	4.69	15.76	NA	NA
S-17	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.45	6.60	13.85	NA	NA
S-17	10/26/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	6.68	13.77	NA	NA
S-17	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	7.20	13.25	NA	NA
S-17	4/14/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	5.88	14.57	NA	NA
S-17	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	6.45	14.00	NA	NA
S-17	11/1/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	5.45	15.00	NA	NA
S-17	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.45	7.22	13.23	NA	NA
S-17	4/24/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.45	6.10	14.35	NA	NA
S-17	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.95	13.50	NA	NA
S-17	11/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	7.50	12.95	NA	NA
S-17	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	5.76	14.69	NA	NA
S-17	4/1/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.02	14.43	NA	NA
S-17	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.45	6.97	13.48	NA	NA
S-17	10/28/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.44	7.60	12.84	NA	0.9
S-17	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.44	5.77	14.67	NA	NA
S-17	4/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	20.44	5.35	15.09	NA	NA
S-17	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.44	6.95	13.49	NA	1.1
S-17	10/8/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.44	7.01	13.43	NA	NA
S-17	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.44	6.57	13.87	NA	NA
S-17	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.36 f	7.71	12.65	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
S-17	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36 f	5.09	15.27	NA	NA
S-17	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.36	6.30	14.06	NA	NA
S-17	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.36	5.50	14.86	NA	NA
S-17	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.36	6.84	13.52	NA	NA
S-17	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.36	6.15	14.21	NA	NA
S-17	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.36	6.92	13.44	NA	NA
S-17	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	5.05	15.31	NA	NA
S-17	8/4/2008	NA	NA	NA	NA	NA	NA	NA	20.36	6.96	13.40	NA	NA
S-17	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.56	13.80	NA	NA
S-17	7/21/2009	NA	NA	NA	NA	NA	NA	NA	20.36	7.23	13.13	NA	NA
S-17	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.36	6.38	13.98	NA	NA
S-17	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	20.36	7.12	13.24	NA	NA
S-18	5/31/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	NA	NA	NA	NA
S-18	7/9/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.23	12.80	NA	NA
S-18	10/8/1991	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.84	12.19	NA	NA
S-18	2/5/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.67	13.36	NA	NA
S-18	4/28/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.40	13.63	NA	NA
S-18	7/27/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.38	12.65	NA	NA
S-18	10/26/1992	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.83	12.20	NA	NA
S-18	1/13/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	5.86	15.17	NA	NA
S-18	4/16/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	4.88	16.15	NA	NA
S-18	7/23/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	7.56	13.47	NA	NA
S-18	10/27/1993	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	21.03	8.30	12.73	NA	NA
S-18	1/27/1994	<50	1.9	<0.5	<0.5	<0.5	NA	NA	21.03	6.84	14.19	NA	NA
S-18	5/5/1994	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.05	13.52	NA	NA
S-18	7/26/1994	<500	<3	1.1	<0.3	1.8	NA	NA	20.57	7.62	12.95	NA	NA
S-18	10/28/1994	<50	<0.3	<0.3	<0.3	<0.6	NA	NA	20.57	8.01	12.56	NA	NA
S-18	1/2/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	6.26	14.31	NA	NA

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S-18	4/14/1995	NA	NA	NA	NA	NA	NA	NA	20.57	4.85	15.72	NA	NA
S-18	7/28/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	5.80	14.77	NA	NA
S-18	10/17/1995	<50	<0.5	<0.5	<0.5	<0.5	NA	NA	20.57	7.22	13.35	NA	NA
S-18	1/11/1996	<50	<0.5	<0.5	<0.5	<0.5	<2	NA	20.57	6.40	14.17	NA	NA
S-18	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.57	4.80	15.77	NA	NA
S-18	7/9/1996	NA	NA	NA	NA	NA	NA	NA	20.57	5.74	14.83	NA	NA
S-18	10/10/1996	NA	NA	NA	NA	NA	NA	NA	20.57	6.06	14.51	NA	NA
S-18	1/9/1997	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.57	4.70	15.87	NA	NA
S-18	4/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.62	13.95	NA	NA
S-18	7/21/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.94	13.63	NA	NA
S-18	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.88	13.69	NA	NA
S-18	1/15/1998	<50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.57	3.60	16.97	NA	NA
S-18	4/14/1998	NA	NA	NA	NA	NA	NA	NA	20.57	4.28	16.29	NA	NA
S-18	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.57	6.13	14.44	NA	NA
S-18	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.57	7.20	13.37	NA	NA
S-18	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<2.00	NA	20.57	6.00	14.57	NA	NA
S-18	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.57	4.95	15.62	NA	NA
S-18	7/23/1999	NA	NA	NA	NA	NA	NA	NA	20.57	6.03	14.54	NA	NA
S-18	10/26/1999	NA	NA	NA	NA	NA	NA	NA	20.57	7.39	13.18	NA	NA
S-18	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.57	7.54	13.03	NA	NA
S-18	4/14/2000	NA	NA	NA	NA	NA	NA	NA	20.57	4.41	16.16	NA	NA
S-18	7/12/2000	NA	NA	NA	NA	NA	NA	NA	20.57	5.31	15.26	NA	NA
S-18	11/1/2000	NA	NA	NA	NA	NA	NA	NA	20.57	6.42	14.15	NA	NA
S-18	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	3.67	NA	20.57	7.30	13.27	NA	NA
S-18	4/24/2001	NA	NA	NA	NA	NA	NA	NA	20.57	6.83	13.74	NA	NA
S-18	7/2/2001	NA	NA	NA	NA	NA	NA	NA	20.57	7.23	13.34	NA	NA
S-18	11/2/2001	Unable to locate		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
S-18	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.57	6.15	14.42	NA	NA
S-18	4/1/2002	NA	NA	NA	NA	NA	NA	NA	20.57	6.06	14.51	NA	NA

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Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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S-18	7/11/2002	NA	20.57	6.98	13.59	NA	NA						
S-18	10/28/2002	NA	20.63	7.66	12.97	NA	NA						
S-18	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.63	6.18	14.45	NA	NA
S-18	4/30/2003	NA	20.63	5.32	15.31	NA	NA						
S-18	7/1/2003	NA	20.63	7.20	13.43	NA	NA						
S-18	10/8/2003	NA	20.63	7.48	13.15	NA	NA						
S-18	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	6.74	13.89	NA	NA
S-18	7/13/2004	NA	20.63	7.87	12.76	NA	NA						
S-18	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	5.33	15.30	NA	NA
S-18	7/19/2005	NA	20.63	6.55	14.08	NA	NA						
S-18	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.63	5.89	14.74	NA	NA
S-18	7/25/2006	NA	20.63	7.10	13.53	NA	NA						
S-18	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.63	6.60	14.03	NA	NA
S-18	7/24/2007	NA	20.63	7.13	13.50	NA	NA						
S-18	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.63	5.25	15.38	NA	NA
S-18	8/4/2008	NA	20.63	7.85	12.78	NA	NA						
S-18	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.63	6.98	13.65	NA	NA
S-18	7/21/2009	NA	20.63	7.43	13.20	NA	NA						
S-18	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.63	6.67	13.96	NA	NA
S-18	07/22/2010 *	NA	20.63	7.31	13.32	NA	NA						

S-19	10/20/1998	<50	<0.50	<0.50	<0.50	<0.50	<0.50	<2.5	NA	20.11	6.41	13.70	NA	NA
S-19	1/22/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	90.6	NA	20.11	5.42	14.69	NA	NA
S-19	4/8/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.11	4.61	15.50	NA	NA
S-19	7/23/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<5.00	NA	20.11	5.86	14.25	NA	NA
S-19	10/26/1999	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	6.28	13.83	NA	NA
S-19	1/3/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	6.62	13.49	NA	NA
S-19	4/14/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	4.31	15.80	NA	NA
S-19	7/12/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	5.46	14.65	NA	NA

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S-19	11/1/2000	<50.0	<0.500	<0.500	<0.500	<0.500	<2.50	NA	20.11	5.05	15.06	NA	NA
S-19	1/3/2001	<50.0	<0.500	<0.500	<0.500	<0.500	9.61	NA	20.11	6.00	14.11	NA	NA
S-19	4/24/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.11	5.58	14.53	NA	NA
S-19	7/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	6.34	13.77	NA	3.4
S-19	11/2/2001	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	6.57	13.54	NA	3.4
S-19	1/16/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.05	15.06	NA	0.5
S-19	4/1/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.13	14.98	NA	3.3
S-19	7/11/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.11	5.50	14.61	NA	0.5
S-19	10/28/2002	<50	<0.50	<0.50	<0.50	<0.50	NA	<0.50	20.10	6.35	13.75	NA	0.6
S-19	1/23/2003	<50	<0.50	<0.50	<0.50	<0.50	NA	<5.0	20.10	5.15	14.95	NA	0.3
S-19	4/30/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<5.0	20.10	4.90	15.20	NA	0.5
S-19	7/1/2003	<50	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.10	5.50	14.60	NA	1.7
S-19	10/8/2003	58	<0.50	<0.50	<0.50	<1.0	NA	<0.50	20.10	6.63	13.47	NA	0.4
S-19	1/22/2004	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	5.67	14.43	NA	0.6
S-19	7/13/2004	NA	NA	NA	NA	NA	NA	NA	20.10	6.82	13.28	NA	1.0
S-19	1/20/2005	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	4.75	15.35	NA	0.6
S-19	7/19/2005	NA	NA	NA	NA	NA	NA	NA	20.10	5.15	14.95	NA	NA
S-19	1/27/2006	<50.0	<0.500	<0.500	<0.500	<0.500	NA	NA	20.10	4.85	15.25	NA	NA
S-19	7/25/2006	NA	NA	NA	NA	NA	NA	NA	20.10	6.14	13.96	NA	NA
S-19	1/4/2007	<50	<0.50	<0.50	<0.50	<1.0	NA	NA	20.10	5.75	14.35	NA	NA
S-19	7/24/2007	NA	NA	NA	NA	NA	NA	NA	20.10	6.39	13.71	NA	NA
S-19	1/15/2008	<50 g	<0.50	<1.0	<1.0	<1.0	NA	NA	20.10	4.72	15.38	NA	NA
S-19	8/4/2008	NA	NA	NA	NA	NA	NA	NA	20.10	6.43	13.67	NA	NA
S-19	1/8/2009	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.10	6.18	13.92	NA	NA
S-19	7/21/2009	NA	NA	NA	NA	NA	NA	NA	20.10	6.67	13.43	NA	NA
S-19	01/12/2010 *	<50	<0.50	<1.0	<1.0	<1.0	NA	NA	20.10	6.14	13.96	NA	NA
S-19	07/22/2010 *	NA	NA	NA	NA	NA	NA	NA	20.10	5.73	14.37	NA	NA
SR-1	3/22/1989	5400	1100	230	350	1300	NA	NA	21.45	NA	NA	NA	NA

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SR-1	1/25/1990	2200	470	120	110	510	NA	NA	21.45	7.53	13.92	NA	NA
SR-1	4/18/1990	1000	130	47	47	220	NA	NA	21.45	8.17	13.28	NA	NA
SR-1	7/23/1990	3200	470	320	170	870	NA	NA	21.45	7.58	13.87	NA	NA
SR-1	10/18/1990	1300	280	6.6	110	130	NA	NA	21.45	8.81	12.64	NA	NA
SR-1	1/28/1991	110	120	12	51	110	NA	NA	21.45	8.37	13.08	NA	NA
SR-1	4/25/1991	NA	NA	NA	NA	NA	NA	NA	21.45	6.91	14.54	NA	NA
SR-1	7/9/1991	1400	200	27	130	340	NA	NA	21.45	8.11	13.34	NA	NA
SR-1	10/8/1991	980	79	1.5	44	52	NA	NA	21.45	8.63	12.82	NA	NA
SR-1	2/5/1991	3800	580	36	320	400	NA	NA	21.45	7.68	13.77	NA	NA
SR-1	4/28/1992	38000	1800	460	1900	750	NA	NA	21.45	7.27	14.18	NA	NA
SR-1	7/27/1992	NA	NA	NA	NA	NA	NA	NA	21.45	8.11	13.34	0.01	NA
SR-1	10/26/1992	1800	370	10	130	130	NA	NA	21.45	8.63	12.82	NA	NA
SR-1	1/13/1993	47000	1000	1100	1700	13000	NA	NA	21.45	5.46	15.99	NA	NA
SR-1	4/16/1993	25000	1700	430	2400	8300	NA	NA	21.45	6.28	15.17	NA	NA
SR-1	7/23/1993	33000	2400	2000	3800	14000	NA	NA	21.45	7.34	14.11	NA	NA
SR-1	10/27/1993	2300	340	<12.5	270	440	NA	NA	21.45	8.04	13.41	NA	NA
SR-1	1/27/1994	36000	2000	1700	3000	11000	NA	NA	21.45	6.68	14.77	NA	NA
SR-1	5/5/1994	43000	1500	130	2900	12000	NA	NA	20.57	6.81	13.76	NA	NA
SR-1	7/26/1994	13600	682.7	39.2	996.6	2516	NA	NA	20.57	7.38	13.19	NA	NA
SR-1	10/28/1994	8462	301.5	29.3	384.7	2019	NA	NA	20.57	7.48	13.09	NA	NA
SR-1	1/2/1995	13000	400	120	2500	10000	NA	NA	20.57	6.34	14.23	NA	NA
SR-1	4/14/1995	43000	690	370	2500	12000	NA	NA	20.57	5.29	15.28	NA	NA
SR-1	7/28/1995	35000	760	120	2300	8100	NA	NA	20.57	6.36	14.21	NA	NA
SR-1	10/17/1995	9700	310	12	610	1200	NA	NA	20.57	6.62	13.95	NA	NA
SR-1 (D)	10/17/1995	8300	230	9.6	680	840	NA	NA	20.57	NA	NA	NA	NA
SR-1	1/11/1996	18000	410	170	1200	4400	42	NA	20.57	5.66	14.91	NA	NA
SR-1 (D)	1/11/1996	17000	420	180	1100	4000	42	NA	20.57	NA	NA	NA	NA
SR-1	4/2/1996	NA	NA	NA	NA	NA	NA	NA	20.57	5.14	15.43	NA	NA
SR-1	7/9/1996	Well inaccessible	NA	NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
SR-1	10/10/1996	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	1/9/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	4/8/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	7/21/1997	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	10/8/1997	NA	NA	NA	NA	NA	NA	NA	20.57	6.94	13.63	NA	NA
SR-1	1/15/1998	8100	82	<25	36	2300	<125	NA	20.57	4.30	16.27	NA	NA
SR-1	4/14/1998	Well inaccessible		NA	NA	NA	NA	NA	20.57	NA	NA	NA	NA
SR-1	7/14/1998	NA	NA	NA	NA	NA	NA	NA	20.28	6.48	13.80	NA	NA
SR-1	10/20/1998	NA	NA	NA	NA	NA	NA	NA	20.28	6.61	13.67	NA	NA
SR-1	1/22/1999	Well inaccessible		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/8/1999	NA	NA	NA	NA	NA	NA	NA	20.28	0.97	19.31	NA	NA
SR-1	7/23/1999	Well dry		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	10/26/1999	Well dry		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/14/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	7/12/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	11/1/2000	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	1/3/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/24/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	7/2/2001	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	11/2/2001	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	1/16/2002	Well dry	NA	NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	4/1/2002	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	7/11/2002	Obstruction in well		NA	NA	NA	NA	NA	20.28	NA	NA	NA	NA
SR-1	10/28/2002	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	1/23/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	4/30/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	7/1/2003	Obstruction in well		NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA
SR-1	10/8/2003	Well dry	NA	NA	NA	NA	NA	NA	20.27	NA	NA	NA	NA

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
SV-1	04/15/1998 b	NA	NA	NA	NA	NA	NA	NA	NA	6.02	NA	NA	NA
SV-1	04/15/1998 c	NA	NA	NA	NA	NA	NA	NA	NA	7.15	NA	NA	NA
SV-1	03/18/2002 d	NA	NA	NA	NA	NA	NA	NA	21.31	NA	NA	NA	NA
SV-1	1/22/2004	3000	15	<2.5	34	11	NA	<2.5	21.31	6.67	14.64	NA	NA

Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method 8260B; prior to April 24, 2001, analyzed by EPA Method 8015.

BTEX = Benzene, toluene, ethylbenzene, xylenes by EPA Method 8260B; prior to April 24, 2001, analyzed by EPA Method 8020.

MTBE = Methyl tertiary butyl ether

TOC = Top of Casing Elevation

SPH = Separate-Phase Hydrocarbons

GW = Groundwater

DO = Dissolved Oxygen

ug/L = Parts per billion

MSL = Mean sea level

ppm = Parts per million

<n = Below detection limit

(D) = Duplicate sample

NA = Not applicable

Notes:

a = Chromatogram pattern indicated an unidentified hydrocarbon.

b = Pre-development sample

c = Post-development sample

d = Survey date only.

e = DO reading not taken.

f = TOC lowered 0.08 feet due to wellhead maintenance on June 3, 2004.

g = Analyzed by EPA Method 8015B (M).

TABLE 2
HISTORIC WELL CONCENTRATIONS
Former Shell-Branded Service Station
15275 Washington Boulevard
San Leandro, California

Well ID	Date	TPH-g (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 (feet)	GW Elevation (MSL)	SPH Thickness (feet)	DO Reading (ppm)
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Notes (cont.):

h = The sample chromatographic pattern for TPH does not match the chromatographic pattern of the specified standard. Quantitation of the unknown hydrocarbon(s) in the sample was based upon the specified standard.

i = Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.

Site surveyed March 18, 2002 by Virgil Chavez Land Surveying of Vallejo, CA.

* = Purge sample

APPENDIX A

WELL SURVEY DATA

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information								
	Boundary			Classification			Saturated hydraulic conductivity micro m/sec	Soil Reaction (pH)
Layer	Upper	Lower	Soil Texture Class	AASHTO Group	Unified Soil			
2	9 inches	33 inches	clay loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4	
3	33 inches	59 inches	silt loam	Silt-Clay Materials (more than 35 pct. passing No. 200), Silty Soils.	FINE-GRAINED SOILS, Silts and Clays (liquid limit less than 50%), Lean Clay	Max: 4 Min: 1.4	Max: 8.4 Min: 7.4	

LOCAL / REGIONAL WATER AGENCY RECORDS

EDR Local/Regional Water Agency records provide water well information to assist the environmental professional in assessing sources that may impact ground water flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile
State Database	1.000

FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS3235824	1/4 - 1/2 Mile NW
A2	USGS3235821	1/4 - 1/2 Mile East
A3	USGS3235820	1/4 - 1/2 Mile East
8	USGS3235993	1/2 - 1 Mile SSE
14	USGS3235992	1/2 - 1 Mile SW
16	USGS3235823	1/2 - 1 Mile East

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>

GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

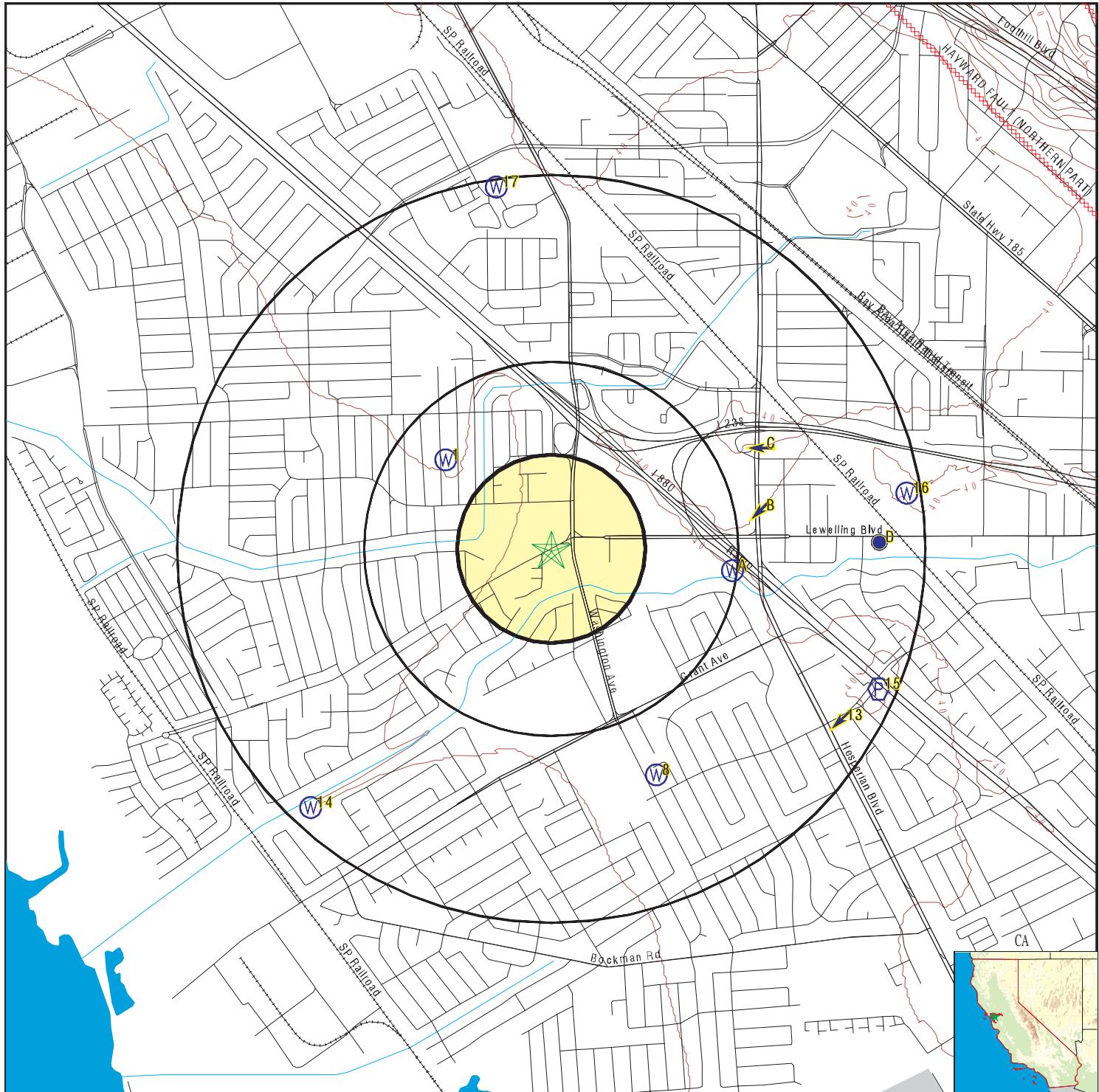
MAP ID	WELL ID	LOCATION
<u>15</u>	<u>CA1700563</u>	FROM TP 1/2 - 1 Mile ESE

Note: PWS System location is not always the same as well location.

STATE DATABASE WELL INFORMATION

MAP ID	WELL ID	LOCATION
<u>17</u>	<u>CADW20000038043</u>	FROM TP 1/2 - 1 Mile North

PHYSICAL SETTING SOURCE MAP - 2731037.2s



County Boundary

Major Roads

Contour Lines

Earthquake Fault Lines

Airports

Earthquake epicenter, Richter 5 or greater

Water Wells

Public Water Supply Wells

Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells

SITE NAME: 747 Lewelling Ave
ADDRESS: 747 Lewelling Ave
San Leandro CA 94579
LAT/LONG: 37.6862 / 122.1401

CLIENT: Delta Consultants
CONTACT: Abhik Dutta
INQUIRY #: 2731037.2s
DATE: March 29, 2010 12:41 pm

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID
Direction
Distance
Elevation

Database EDR ID Number

1			
NW			
1/4 - 1/2 Mile			FED USGS
Lower			USGS3235824
Agency cd:	USGS	Site no:	374123122083901
Site name:	003S003W12C001M		
Latitude:	374123	EDR Site id:	USGS3235824
Longitude:	1220839	Dec lat:	37.68965308
Dec lon:	-122.14524289	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	Not Reported
Location map:	SAN LEANDRO	Map scale:	Not Reported
Altitude:	18		
Altitude method:	Interpolated from topographic map		
Altitude accuracy:	10		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	San Francisco Bay. California. Area = 1200 sq.mi.		
Topographic:	Not Reported		
Site type:	Ground-water other than Spring	Date construction:	1958
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	106	Hole depth:	Not Reported
Source of depth data:	other reported		
Project number:	Not Reported		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

A2
East
1/4 - 1/2 Mile
Higher

FED USGS **USGS3235821**

Agency cd:	USGS	Site no:	374107122075301
Site name:	003S002W07E001M		
Latitude:	374107.20	EDR Site id:	USGS3235821
Longitude:	1220752.56	Dec lat:	37.68533333
Dec lon:	-122.13126667	Coor meth:	D
Coor accr:	1	Latlong datum:	NAD83
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	Not Reported
Location map:	SAN LEANDRO	Map scale:	24000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Altitude: 34.72
 Altitude method: Differential Global Positioning System (GPS)
 Altitude accuracy: 0.2
 Altitude datum: National Geodetic Vertical Datum of 1929
 Hydrologic: Not Reported
 Topographic: Flat surface
 Site type: Ground-water other than Spring Date construction: 20000101
 Date inventoried: 20000210 Mean greenwich time offset: PST
 Local standard time flag: Y
 Type of ground water site: Single well, other than collector or Ranney type
 Aquifer Type: Not Reported
 Aquifer: Not Reported
 Well depth: 540 Hole depth: 880
 Source of depth data: other reported
 Project number: 470653600
 Real time data flag: 0 Daily flow data begin date: 0000-00-00
 Daily flow data end date: 0000-00-00 Daily flow data count: 0
 Peak flow data begin date: 0000-00-00 Peak flow data end date: 0000-00-00
 Peak flow data count: 0 Water quality data begin date: 2000-02-10
 Water quality data end date: 2000-02-10 Water quality data count: 1
 Ground water data begin date: 2002-11-13 Ground water data end date: 2003-08-22
 Ground water data count: 2

Ground-water levels, Number of Measurements: 2

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
2003-08-22	46.10			2002-11-13	43.91

A3 **FED USGS** **USGS3235820**
East
1/4 - 1/2 Mile
Higher

Agency cd: USGS Site no: 374107122075201
 Site name: 003S002W07E002M
 Latitude: 374107.36 EDR Site id: USGS3235820
 Longitude: 1220752.45 Dec lat: 37.68537778
 Dec lon: -122.13123611 Coor meth: D
 Coor accr: 1 Latlong datum: NAD83
 Dec latlong datum: NAD83 District: 06
 State: 06 County: 001
 Country: US Land net: Not Reported
 Location map: SAN LEANDRO Map scale: 24000
 Altitude: 33.82
 Altitude method: Differential Global Positioning System (GPS)
 Altitude accuracy: 0.2
 Altitude datum: National Geodetic Vertical Datum of 1929
 Hydrologic: Not Reported
 Topographic: Flat surface
 Site type: Ground-water other than Spring Date construction: 19991222
 Date inventoried: 20000210 Mean greenwich time offset: PST
 Local standard time flag: Y
 Type of ground water site: Single well, other than collector or Ranney type
 Aquifer Type: Not Reported
 Aquifer: Not Reported
 Well depth: 540 Hole depth: 560
 Source of depth data: driller
 Project number: 470653600
 Real time data flag: 0 Daily flow data begin date: 0000-00-00
 Daily flow data end date: 0000-00-00 Daily flow data count: 0
 Peak flow data begin date: 0000-00-00 Peak flow data end date: 0000-00-00

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Peak flow data count: 0
 Water quality data end date: 0000-00-00
 Ground water data begin date: 2002-11-13
 Ground water data count: 1

Water quality data begin date: 0000-00-00
 Water quality data count: 0
 Ground water data end date: 2002-11-13

Ground-water levels, Number of Measurements: 1

Date	Feet below Surface	Feet to Sealevel
2002-11-13	42.89	

B4 East 1/2 - 1 Mile Higher	Site ID: 01-0126 Groundwater Flow: SW Shallow Water Depth: 9.73 Deep Water Depth: 15.29 Average Water Depth: Not Reported Date: 06/10/1996	AQUIFLOW	50309
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B5 East 1/2 - 1 Mile Higher	Site ID: 01-0126 Groundwater Flow: SW Shallow Water Depth: 13.5 Deep Water Depth: 25.0 Average Water Depth: Not Reported Date: 09/16/1986	AQUIFLOW	50310
--	--	-----------------	--------------

C6 ENE 1/2 - 1 Mile Higher	Site ID: 01-0328 Groundwater Flow: W Shallow Water Depth: 10.87 Deep Water Depth: 14.95 Average Water Depth: Not Reported Date: 09/06/1994	AQUIFLOW	52960
---	---	-----------------	--------------

C7 ENE 1/2 - 1 Mile Higher	Site ID: 01-0328 Groundwater Flow: W Shallow Water Depth: 14.5 Deep Water Depth: 15.0 Average Water Depth: Not Reported Date: 11/17/1992	AQUIFLOW	52959
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8 SSE 1/2 - 1 Mile Higher		FED USGS	USGS3235993
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Agency cd:	USGS	Site no:	374039122080201
Site name:	003S003W13A005M		
Latitude:	374039	EDR Site id:	USGS3235993
Longitude:	1220802	Dec lat:	37.67743129
Dec lon:	-122.13496474	Coor meth:	M
Coor accr:	F	Latlong datum:	NAD27
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	Not Reported
Location map:	San Leandro	Map scale:	24000

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Altitude: 23
 Altitude method: Interpolated from topographic map
 Altitude accuracy: 10
 Altitude datum: National Geodetic Vertical Datum of 1929
 Hydrologic: San Francisco Bay. California. Area = 1200 sq.mi.
 Topographic: Not Reported
 Site type: Ground-water other than Spring Date construction: 19900719
 Date inventoried: Not Reported Mean greenwich time offset: PST
 Local standard time flag: N
 Type of ground water site: Single well, other than collector or Ranney type
 Aquifer Type: Not Reported
 Aquifer: Not Reported
 Well depth: 90 Hole depth: 100
 Source of depth data: logs
 Project number: Not Reported
 Real time data flag: 0 Daily flow data begin date: 0000-00-00
 Daily flow data end date: 0000-00-00 Daily flow data count: 0
 Peak flow data begin date: 0000-00-00 Peak flow data end date: 0000-00-00
 Peak flow data count: 0 Water quality data begin date: 1998-12-09
 Water quality data end date: 1998-12-09 Water quality data count: 1
 Ground water data begin date: 0000-00-00 Ground water data end date: 0000-00-00
 Ground water data count: 0

Ground-water levels, Number of Measurements: 0

D9 East 1/2 - 1 Mile Higher	Site ID: 01-1714 Groundwater Flow: SW Shallow Water Depth: 13.82 Deep Water Depth: 19.28 Average Water Depth: Not Reported Date: 11/17/1993	AQUIFLOW	68802
D10 East 1/2 - 1 Mile Higher	Site ID: 01-1531 Groundwater Flow: NW Shallow Water Depth: 15.62 Deep Water Depth: 17.62 Average Water Depth: Not Reported Date: 10/08/1987	AQUIFLOW	52393
D11 East 1/2 - 1 Mile Higher	Site ID: 01-1531 Groundwater Flow: SW Shallow Water Depth: 13.37 Deep Water Depth: 22.18 Average Water Depth: Not Reported Date: 11/14/1994	AQUIFLOW	52391
D12 East 1/2 - 1 Mile Higher	Site ID: 01-1531 Groundwater Flow: SW Shallow Water Depth: 13.35 Deep Water Depth: 17.50 Average Water Depth: Not Reported Date: 09/01/1999	AQUIFLOW	52392

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID Direction Distance Elevation	Database	EDR ID Number
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13 ESE 1/2 - 1 Mile Higher	Site ID: 01-1298 Groundwater Flow: SW Shallow Water Depth: 9.4 Deep Water Depth: 11 Average Water Depth: Not Reported Date: 05/09/1996	AQUIFLOW	68791
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14 SW 1/2 - 1 Mile Lower	FED USGS	USGS3235992
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Agency cd:	USGS	Site no:	374034122090601
Site name:	003S003W13D007M		
Latitude:	374034.2	EDR Site id:	USGS3235992
Longitude:	1220906.6	Dec lat:	37.67616667
Dec lon:	-122.15183333	Coor meth:	D
Coor accr:	1	Latlong datum:	NAD83
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	Not Reported
Location map:	SAN LEANDRO, CA	Map scale:	24000
Altitude:	13.3		
Altitude method:	Differential Global Positioning System (GPS)		
Altitude accuracy:	0.2		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	Not Reported		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	200011
Date inventoried:	20020724	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	640	Hole depth:	1025
Source of depth data:	driller		
Project number:	967759600		
Real time data flag:	Not Reported	Daily flow data begin date:	Not Reported
Daily flow data end date:	Not Reported	Daily flow data count:	Not Reported
Peak flow data begin date:	Not Reported	Peak flow data end date:	Not Reported
Peak flow data count:	Not Reported	Water quality data begin date:	Not Reported
Water quality data end date:	Not Reported	Water quality data count:	Not Reported
Ground water data begin date:	Not Reported	Ground water data end date:	Not Reported
Ground water data count:	Not Reported		

Ground-water levels, Number of Measurements: 0

15 ESE 1/2 - 1 Mile Higher	FRDS PWS	CA1700563
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Pwsid:	CA1700563	Epa region:	09
State:	CA	County:	Not Reported
Pws name:	Lake County CSA 22 - Mt. Hannah		
Population Served:	88	Pwssvcconn:	35
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	1		
Facility name:	WELL 01 - INACTIVE		
Facility type:	Well	Treatment process:	hypochlorination, post
Treatment objective:	disinfection		
Contact name:	Mark Dellinger		
Original name:	Lake County CSA 22 - Mt. Hannah		
Contact phone:	7072630119	Contact address1:	230A Main Street
Contact address2:	Not Reported		
Contact city:	Lakeport		
Contact zip:	95453		
 Pwsid:	CA1700563	Epa region:	09
State:	CA	County:	Not Reported
Pws name:	Lake County CSA 22 - Mt. Hannah		
Population Served:	88	Pwssvcconn:	35
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	3		
Facility name:	TREATMENT PLANT - WELL 02		
Facility type:	Treatment_plant	Treatment process:	hypochlorination, post
Treatment objective:	disinfection		
Contact name:	Mark Dellinger		
Original name:	Lake County CSA 22 - Mt. Hannah		
Contact phone:	7072630119	Contact address1:	230A Main Street
Contact address2:	Not Reported		
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PWS Source:	Groundwater		
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Status:	Active	Owner type:	Local_Govt
Facility id:	CA1700563001		
Facility name:	WELL 01 - INACTIVE		
Facility type:	Well	Treatment process:	hypochlorination, post
Treatment objective:	disinfection		
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GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

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State:	CA	County:	Not Reported
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Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	CA1700563002		
Facility name:	WELL 02		
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Treatment objective:	disinfection		
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Population Served:	88	Pwssvcconn:	35
PWS Source:	Groundwater		
Pws type:	CWS		
Status:	Active	Owner type:	Local_Govt
Facility id:	CA1700563003		
Facility name:	TREATMENT PLANT - WELL 02		
Facility type:	Treatment_plant	Treatment process:	hypochlorination, post
Treatment objective:	disinfection		
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Facility id:	1		
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Facility id:	CA1700563003		
Facility name:	TREATMENT PLANT - WELL 02		
Facility type:	Treatment_plant	Treatment process:	hypochlorination, post disinfection
Treatment objective:	disinfection		
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Treatment objective:	particulate removal		
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PWS Source:	Groundwater		
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Status:	Active	Owner type:	Local_Govt
Facility id:	CA1700563001		
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Contact phone:	7072630119	Contact address1:	230A Main Street
Contact address2:	Not Reported		
Contact city:	Lakeport		
Contact zip:	95453		
 PWS ID:	CA1700563		
Date Initiated:	Not Reported	Date Deactivated:	Not Reported
PWS Name:	LAKE COUNTY CSA 22 - MT. HANNAH LAKEPORT, CA 95453		
 Addressee / Facility:	System Owner/Responsible Party MT HANNAH MUTUAL 17153 VIA ALAMITOS SAN LORENZO, CA 94580		
Facility Latitude:	37 40 51	Facility Longitude:	122 07 23
City Served:	Not Reported		
Treatment Class:	Untreated	Population:	100

Violations information not reported.

16
East
1/2 - 1 Mile
Higher

FED USGS USGS3235823

GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Agency cd:	USGS	Site no:	374113122071901
Site name:	003S002W07G012M		
Latitude:	374118.1	EDR Site id:	USGS3235823
Longitude:	1220721.9	Dec lat:	37.68836111
Dec lon:	-122.12275	Coor meth:	D
Coor accr:	1	Latlong datum:	NAD83
Dec latlong datum:	NAD83	District:	06
State:	06	County:	001
Country:	US	Land net:	Not Reported
Location map:	HAYWARD	Map scale:	24000
Altitude:	35.7		
Altitude method:	Differential Global Positioning System (GPS)		
Altitude accuracy:	.2		
Altitude datum:	National Geodetic Vertical Datum of 1929		
Hydrologic:	San Francisco Bay. California. Area = 1200 sq.mi.		
Topographic:	Flat surface		
Site type:	Ground-water other than Spring	Date construction:	19910812
Date inventoried:	Not Reported	Mean greenwich time offset:	PST
Local standard time flag:	Y		
Type of ground water site:	Single well, other than collector or Ranney type		
Aquifer Type:	Not Reported		
Aquifer:	Not Reported		
Well depth:	595	Hole depth:	610
Source of depth data:	driller		
Project number:	470653600		
Real time data flag:	0	Daily flow data begin date:	0000-00-00
Daily flow data end date:	0000-00-00	Daily flow data count:	0
Peak flow data begin date:	0000-00-00	Peak flow data end date:	0000-00-00
Peak flow data count:	0	Water quality data begin date:	1999-11-15
Water quality data end date:	1999-11-15	Water quality data count:	1
Ground water data begin date:	2002-11-13	Ground water data end date:	2002-11-13
Ground water data count:	1		

Ground-water levels, Number of Measurements: 1

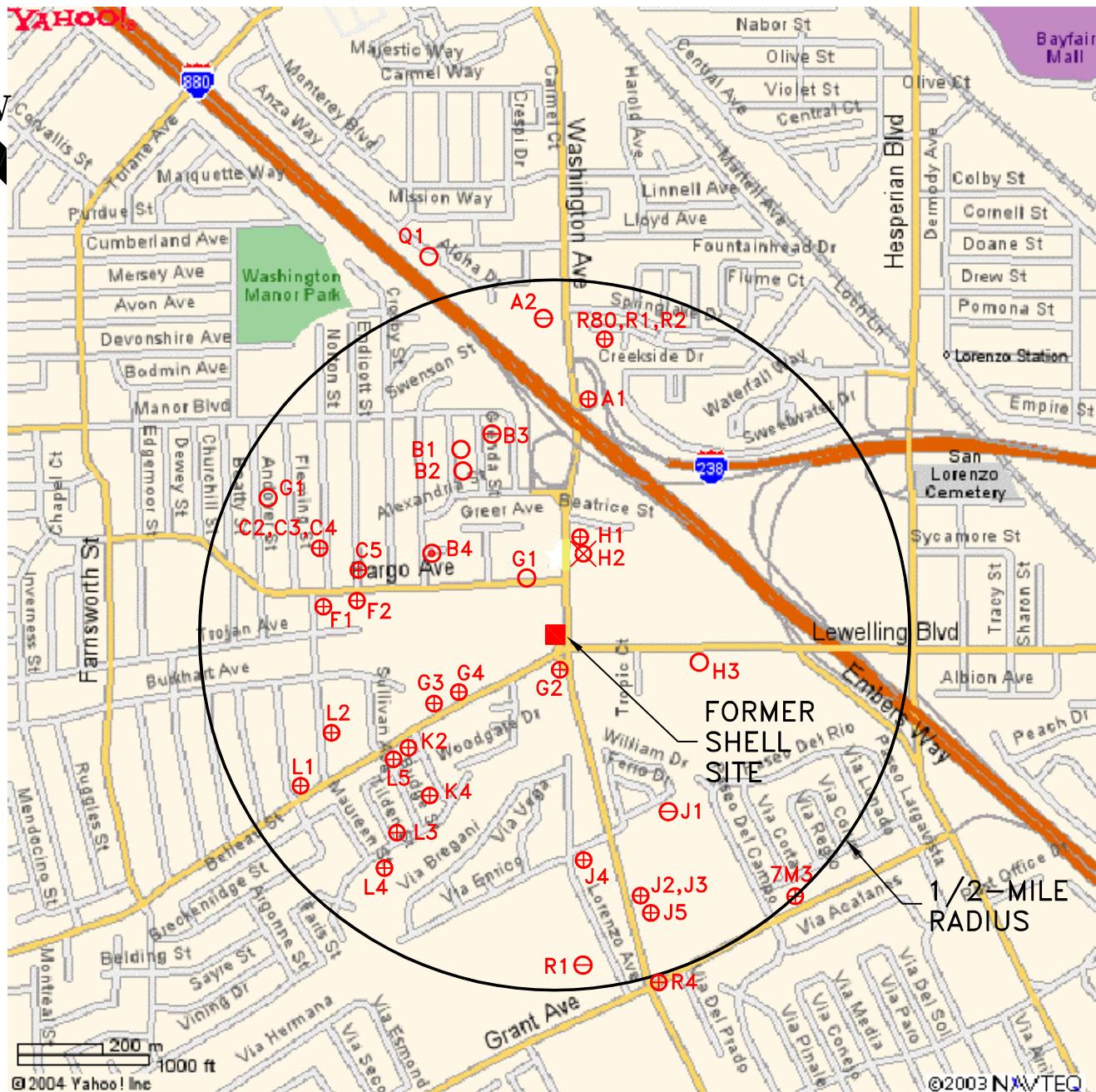
	Feet below Surface	Feet to Sealevel

2002-11-13	30.14	

17
North
1/2 - 1 Mile
Higher

CA WELLS CADW20000038043

Longitude:	122.1417
Latitude:	37.7003
Stwellno:	03S03W01G001M
Districtco:	7
Welluseco:	I
Countycode:	1
Gwcode:	200901
Site id:	CADW20000038043



Ref. EQ-75.1a/WELL SURVEY.DWG
Basemap from Yahoo Maps, July 2004

PREPARED BY



Former Shell-Branded Service Station
15275 Washington Avenue
San Leandro, California

SITE VICINITY AND WELL SURVEY MAP

FIGURE:
1
PROJECT:
EQ-75

Table 4
Well Location Details
 Shell-branded Service Station
 15275 Washington Avenue, San Leandro

Map Number	Well Number	Source of Information	Well Location	Approximate Distance and Direction from Site		Total Depth	Date Installed	Use
				(Feet)	ft.			
Q1	3S/3W -1Q1	DWR	No distances on log, see approximate location on map	3,000'NNW	84	1977		Domestic
R80	3S/3W -1R80	DWR	350'E of Washington St, 600'N of Nimitz Freeway	2,400'N	603	1961		Irrigation
R1	3S/3W -1Rx	EMCON	Washington Street	2,400'N	335	1936		Irrigation
R2	3S/3W -1Rx	EMCON	Washington Street	2,400'N	325	1936		Irrigation
H1	3S/3W -12H1	DWR/APWA	Washington Street	900'N	525	1957		Irrigation
H2	3S/3W -12H2	DWR/APWA	Washington Street	900'N	720	1947		Irrigation/Abandoned
H3	3S/3W -12xx	EMCON	Lewelling Street	900'E	75	1937		Domestic
J1	3S/3W -12J1	DWR	No distances on log, see approximate location on map	900-2,000'SSE	370	1940		NA
J2	3S/3W -12Jx	APWA	Washington Avenue	2,100'SSE	460	1964		Irrigation
J3	3S/3W -xxx	APWA	Washington Avenue	2,100'SSE	550	1948		Irrigation
J4	3S/3W -12J4	APWA	Lorenzo Avenue	1,800'S	80	1978		Irrigation
J5	3S/3W -12Jx	EMCON	Washington Avenue	2,100'SSE	350	1932		Irrigation
R1	3S/3W -12Rx	DWR	Grant Street, San Lorenzo	2,600'S	600	1955		NA
R4	3S/3W -12R4	APWA	Grant Avenue at Washington Avenue	2,600'S	38	1989		Irrigation
K2	3S/3W -12K2	APWA	Lewelling Street	1,400'WSW	42	NA		Irrigation
K4	3S/3W -12K4	APWA	Sedgeman Street	1,500'SW	30	1977		Irrigation
L1	3S/3W -12L1	APWA	Andover Street	2,300'SW	30	1977		Irrigation
L2	3S/3W -12L2	APWA	Norton Street	2,000'SW	30	1953		Irrigation
L3	3S/3W -12L3	APWA	Tilden Street	2,000'SW	30	1977		Irrigation
L4	3S/3W -12L4	APWA	Kramer Street	2,000'SW	30	1977		Irrigation
L5	3S/xx-xxxx	APWA	Lewelling Boulevard	1,500'WSW	211	1942		Irrigation
7M3	3S/2W -7M3	EMCON/DWR	Grant Avenue, San Lorenzo	2,600'SSE	31	1977		Domestic/Irrigation
G1	3S/3W -12Gx	EMCON/APWA	Fargo Avenue	500'NW	42	NA		Domestic
G2	3S/3W -12Gx	EMCON/APWA	Washington Avenue	<200'S	130	1920		Irrigation
G3	3S/3W -12xx	APWA	Lewelling Street	1,000'SW	120	1925		Irrigation

Table 4
Well Location Details
 Shell-branded Service Station
 15275 Washington Avenue, San Leandro

Map Number	Well Number	Source of Information	Well Location	Approximate Distance and Direction from Site		Total Depth ft.	Date Installed	Use
				(Feet)				
G4	3S/3W -12xx	EMCON	Lewelling Street	1,000'SW		150	1920	Irrigation
A1	3S/3W -12xx	EMCON	Location taken from Emcon map	1,900'NNE		545	1934	Irrigation?
A2	3S/3W -12xx	EMCON	Washington Avenue	2,400'N		60	1920	NA
B1	3S/3W -12Bx	APWA	Alexandria Avenue	1,500'NW		29	1977	Domestic
B2	3S/3W -12Bx	APWA	Alexandria Avenue	1,500'NW		28	1977	Domestic
B3	3S/3W -12Bx	APWA	Grenda Street	1,500'NW		28	1977	Domestic
B4	3S/3W -12Bx	APWA	Swenson Street at Swenson Court	1,100'WNW		122	1991	Other (Cathodic?)
C1	3S/3W -12Cx	APWA	Andover Street	2,400'WNW		34	1977	Irrigation
C2	3S/3W -12Cx	APWA	Norton Street	2,000'W		46	1977	Irrigation
C3	3S/3W -12Cx	APWA	Norton Street	2,000'W		40	1977	Irrigation
C4	3S/3W -12Cx	APWA	Norton Street	2,000'W		35	1977	Irrigation
C5	3S/3W -12Cx	APWA	Endicott Street	1,500'WNW		20	1977	Irrigation
F1	3S/3W -12F1	APWA	Norton Street	1,800'W		18	1952	Irrigation
F2	3S/3W -12Fx	APWA	Fargo Avenue	1,500'WNW		26	1977	Irrigation

NA = Information Not Available

DWR = Department of Water Resource

APWA = County of Alameda Public Works Agency

Table 5
Well Construction Details
 Shell-branded Service Station
 15275 Washington Avenue, San Leandro

Map Number	Total Depth	Depth to Water (ft. bgs)	Casing Type	Casing Diameter (in.)	Screen Interval (ft. bgs)	Gravel Pack Interval (ft. bgs)	Annular Seal Depth (ft. bgs)	Annular Seal Material	Well Construction Method	Driller's log Number	Pumping Test Rate (gpm)	Test Duration (hours)
Q1	84	12	PVC	6	64-84	NA	22	Sand/Grout	Auger	33438	10	6
R80	603	NA	Steel	30/12	Various from 112 to 576	600	65	NA	Rotary	62015	1160	55
H1	525	32	NA	12	341-354, 490-511	NA	NA	NA	NA	NA	NA	NA
H2	720	NA	NA	28/12	660-720	NA	NA	NA	NA	NA	NA	NA
H3	75	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
J1	370	NA	NA	12	275-358	NA	NA	NA	NA	NA	NA	NA
J2	460	NA	NA	12	NA	NA	NA	NA	NA	NA	750	NA
J3	550	NA	NA	12	NA	NA	NA	NA	NA	NA	750	NA
J4	80	9	NA	8	NA	NA	NA	NA	NA	NA	20	NA
J5	350	NA	NA	12	340-350	NA	NA	NA	NA	NA	NA	NA
R1	600	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
R4	38	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
K2	42	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
K4	30	13	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L1	22	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L2	30	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L3	30	12	NA	4	NA	NA	NA	NA	NA	NA	NA	6
L4	30	14	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
L5	211	14	NA	10	NA	NA	NA	NA	NA	NA	200	NA
7M3	31	10.5	NA	NA	10.5-31	NA	NA	NA	NA	NA	NA	NA
G1	42	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
G2	130	NA	NA	10	NA	NA	NA	NA	NA	NA	NA	NA
G3	120	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA
G4	150	NA	NA	12	NA	NA	NA	NA	NA	NA	NA	NA
A1	545	NA	NA	12	Various from 467-540	NA	NA	NA	NA	NA	NA	NA
A2	60	NA	NA	8	NA	NA	NA	NA	NA	NA	NA	NA
B1	28	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA

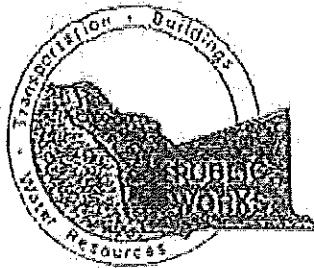
Table 5
Well Construction Details
 Shell-branded Service Station
 15275 Washington Avenue, San Leandro

Map Number	Total Depth	Depth to Water (ft. bgs)	Casing Type	Casing Diameter (in.)	Screen Interval (ft. bgs)	Gravel Pack Interval (ft. bgs)	Annular Seal Depth (ft. bgs)	Annular Seal Material	Well Construction Method	Driller's log Number	Pumping Test Rate (gpm)	Test Duration (hours)
B2	29	7	NA	4	NA	NA	NA	NA	NA	NA	15	NA
B3	28	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
B4	122	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
C1	34	8	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
C2	46	38	NA	5	NA	NA	NA	NA	NA	NA	NA	NA
C3	40	31	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
C4	35	2	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
C5	20	11	NA	4	NA	NA	NA	NA	NA	NA	NA	NA
F1	18	NA	NA	6	NA	NA	NA	NA	NA	NA	NA	NA
F2	26	NA	NA	4	NA	NA	NA	NA	NA	NA	NA	NA

NA = Information Not Available

ft. bgs = Feet below ground surface

gpm = Gallons per minute



COUNTY OF ALAMEDA
PUBLIC WORKS AGENCY
399 Elmhurst Street • Hayward, CA 94544-1395
(510) 670-5480
FAX (510) 670-5262

FAX TRANSMITTAL FAX TRANSMITTAL FAX TRANSMITTAL FAX TRANSMITTAL

DATE:

3-30-95

TO: ENVIROS
Box 259
SONOMA, CA 95476 (707) 939-2131
ATTN: GREG VAUGHN (707) 935-6649

FROM: Craig Johnson
(510) 670-5248

OF PAGES (INCLUDING COVER SHEET) 9

COMMENTS:

WELL SURVEY 5 MILE RADIUS FROM LEWELLING & WASHINGTON,
SAN LEANDRO.

Cover sheet, 1 map, 3 data, 4 explanation sheets.

If you do not receive the entire transmittal, or if it is illegible,
please call at (510) 670-5543

WELL INVENTORY FILE

Definitions and abbreviations for items listed in the well inventory file are as follows:

[WELLNO] Well number - Wells are numbered according to their location in the rectangular system of the Public Land Survey. The part of the number preceding the slash indicates the township; the part following the slash indicates the range and section number; the letter following the section number indicates the 40-acre subdivision; and the final digit is a serial number for wells in each 40-acre subdivision.

[DAT] Date - The month and year when drilling or boring was completed.

[ELEV] Surface elevation - The surface elevation of the well, if known, in feet above mean sea level. A zero designates an unknown elevation.

[TD] Total depth - The depth of the well. This usually designates the completed well depth. If the well has a well log available on file, then the total drilled depth of the well is given. The inventory does not show total depth data for geotechnical borings. This is because only one state well number is assigned to one boring at a site, and there are usually several borings of different depth.

[DTW] Depth to water - This category usually indicates the standing groundwater level in the well on the date of completion. The "depth to first water encountered" is recorded in the inventory when it is the only water level data reported on the well driller's report.

[FUSE] Use - The well use (or in the case of cathodic protection wells and geotechnical borings, the reason for the excavation) as indicated in the well driller's report or data sheets. A plus sign (+) after the well use indicates a well in the current ACFC & WCD monitoring network.

[ABN] Abandoned well - A well whose use has been permanently discontinued or which is in such a state of disrepair that no water can be produced. In the inventory, this may include wells which are covered or capped but not properly destroyed.

[DES] Destroyed well - A well that has been properly filled so that it cannot produce water nor act as a vertical conduit for the movement of groundwater.

[DOM] Domestic well - A water well which is used to supply water for the domestic needs of an individual residence or systems of four or less service connections or "hookups".

[INA] Inactive well - A well not routinely operating but capable of being made operable with a minimum of effort. Also called a "standby well".

[IND] Industrial well - A water well used to supply industry on an individual basis.

[IRR] Irrigation well - A water well used to supply water only for irrigation or other agricultural purposes. In the inventory, this category includes large capacity wells as well as small capacity wells for lawn irrigation.

[MON] Monitoring or observation well - Wells constructed for the purpose of observing or monitoring groundwater conditions. (see piezometer).

[MUN] Municipal well - A water well used to supply water for domestic purposes in systems subject to Chapter 7, Part 1, Division 5 of the California Health and Safety Code. Included are wells supplying public water systems classified by the Department of Health Services. (Also referred to as community water supply wells).

[PIE] Piezometer - A piezometer is a well specifically designated to measure the hydraulic head within a zone small enough to be considered a point as contrasted with a well that reflects the average head of the aquifer for the screened interval.

[STO] Stock - A water well used primarily for livestock.

[TES] Test well and test hole - A test well is constructed for the purpose of obtaining the information needed to design a well prior to its construction. Such wells are not to be confused with "test holes" which are temporary in nature (i.e., uncased excavations whose purpose is the immediate determination of existing geologic and hydrologic conditions). Test wells are cased and can be converted to observation or monitoring wells, and under certain circumstances, to production wells. In the inventory, "TES" includes both test wells and test holes.

[?] Unidentified use - This indicates water wells whose use could not be ascertained from the available well data.

[CAT] Cathodic protection well - Any artificial excavation constructed by any method for the purpose of installing equipment or facilities for the protection from

corrosion by electrochemical methods of metallic equipment (usually piping) in contact with the ground; commonly referred to as cathodic protection.

[GEO] Geotechnical boring - A temporary boring made to determine certain engineering properties of soils. An asterisk (*) indicates that the state well number assigned to the boring represents more than one boring at a particular site.

[LOG] Log - This category indicates whether a geologic record, or log, for the well or boring is available in the Agency's files. Abbreviations are as follows:

D - well driller's log
G - geotechnical boring log
E - electric (resistivity) log or other subsurface

geophysical logs.

[WQ] Water quality data available - This category indicates which wells have water quality data available in ACFC & WCD files. The numbers 1 through 9 signify the number of sets of water quality measurements available for that well. A plus sign (+) indicates that 10 or more sets of data are available. A "0" indicates that no data is available.

[WL] Water level data available - This category indicates which wells have water level data other than the data reported on the well driller's logs. The numbers 1 through 9 signify the number of water level measurements available. A plus sign (+) indicates that 10 or more measurements are available for that well.

A "0" indicates that no data is available.

[YLD] Yield - The maximum pumping rate in gallons per minute that can be supplied by a well without lowering the water level in the well below the pump intake. This data is taken from pump test data recorded in the driller's records. Some of the yield data reflects current production rates and does not reflect maximum yield values determined in a capacity test.

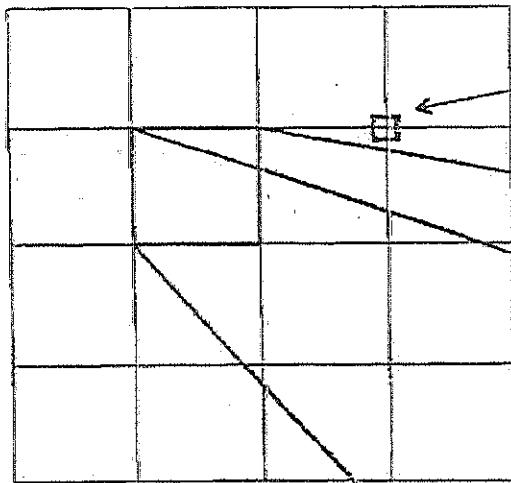
[DIA] Diameter - The diameter in inches of the main casing in a well. May also indicate the diameter of a hand-dug well. Diameter data is not recorded for geotechnical borings.

RANGE

3W 2W 1W 1E

T
O
W
N
S
H
I
P

1N
1S
2S
3S



MT. DIABLO

6	5	4	3	2	1
7	8	9	10	11	12
18	17	16	15	14	13
19	20	21	22	23	24
30	29	28	27	26	25
31	32	33	34	35	36

SECTION #
1 SQUARE MILE

QUARTER QUARTER
SECTION LETTER
40 ACRES

D	C	B	A
E	F	G	H
M	L	K	J
N	P	Q	R

WELL NUMBERING SYSTEM

1 SOUTH 2 WEST 22 N 5
1S/2W 22N5

.5 mile radius from Lewelling & Washington Ave. (Page 1)

WELL #	CITY	ADDRESS	OWNER	PHONE	USR	DR.DRTH	DIRN	TOT. DEPTH	DTW ST.	SCHV WL	ELEV	YIELD	LOG SQ	SL	DATA/ORGN	MARGIN
28/3W 12M 4	SLE	15275 WASHINGTON AVE	SHELL OIL CO.	O MON	04/83	3	26	8	0	0	0	0	D	0	0	L
28/3W 12M 5	SLE	15275 WASHINGTON AVE	SHELL OIL CO.	O MON	04/83	3	26	9	0	0	0	0	D	0	0	L
28/3W 12M 6	SLE	15275 WASHINGTON AVE	SHELL OIL CO.	O MON	04/83	3	26	9	0	0	0	0	D	0	0	L
28/3W 12M 7	SLE	15275 WASHINGTON AVE	SHELL OIL CO.	O MON	04/83	3	26	8	0	0	0	0	D	0	0	L
28/2W 7C 1	SLE	15275 WASHINGTON	STRUCTURE	O IRR	/35	10	270	0	37	0	0	0	2	0	0	L
28/2W 7B 2	SLE	15599 Neoperian Blvd	UNOCAL CORPORATION	O MON	4/91	2	20	12	37	25	0	0	2	2	2	D
28/2W 7B 3	SLE	15599 Neoperian Blvd	UNOCAL CORPORATION	O MON	4/91	2	23	11	36	25	0	0	1	1	1	D
28/2W 7B 4	SLE	15599 Neoperian Blvd	UNOCAL CORPORATION	O MON	4/91	2	25	16	37	21	0	0	1	1	1	D
28/2W 7B 5	SLE	15599 Neoperian Blvd	UNOCAL CORPORATION	O DES	2/91	10	43	0	0	0	0	7	0	0	0	D
28/2W 7B 6	SLE	15599 Neoperian Blvd	UNOCAL CORP	O MON	7/91	2	26	13	0	0	0	0	G	1	1	D
28/2W 7B 7	SLE	15599 Neoperian Blvd	UNOCAL CORP	O MON	7/91	2	26	13	0	0	0	0	G	1	1	D
28/2W 7B 8	SLE	15599 Neoperian Blvd	UNOCAL CORP	O MON	7/91	2	26	13	0	0	0	0	G	1	1	D
28/2W 7B 9	SLE	15599 Neoperian Blvd	UNOCAL CORP	O REC	4/92	6	30	17	0	0	0	0	G	1	1	D
28/2W 7B 10	SLE	15599 Neoperian Blvd	CHARLES GOMISLIES	O IRS	?	0	25	0	38	0	0	0	?	0	0	L
28/2W 7B 11	SLE	15599 NEPERIAN	FRANK MARTEL	O IRR	/55	4	27	0	44	0	0	0	7	0	0	L
28/2W 7B 12	SLE	15599 NEPERIAN ST	FRANC STATION	O MON	02/82	3	30	18	0	0	0	0	G	0	0	L
28/2W 7B 13	SLE	374 LEWELLING BLVD	HOT UNION U.S. DISTRICT	O IRR	5/51	14	616	20	42	22	250	D	1	0	L	
28/2W 7B 14	SLE	15275 WASHINGTON	CHEVRON USA	O MON	11/89	2	25	0	0	0	0	D	0	0	B	
28/2W 7B 15	SLE	15275 WASHINGTON	CHEVRON USA	O MON	11/89	2	25	0	0	0	0	D	0	0	Yea	
28/2W 7B 16	SLE	15275 WASHINGTON	CHEVRON USA	O MON	11/89	2	26	0	0	0	0	D	0	0	Yea	
28/2W 7B 17	SLE	644 VIA DIAZIO	LIVY	O IRR	?	4	22	0	22	0	0	0	?	0	0	M
28/2W 7B 18	SLE	LEWELLING	MCRO NURSERY	O IRR	/26	12	150	0	33	0	0	0	?	0	0	L
28/2W 7B 19	SLE	LEWELLING	M. SCOTTWOOD	O IRR	?	12	103	0	54	0	0	0	?	0	0	L
28/2W 7B 20	SLE	15275 WASHINGTON	MCAPPY'S MURGARY	O IRR+	/42	10	211	0	57	0	0	200	?	0	+	L
28/2W 7B 21	SLE	15275 WASHINGTON AVE	MONKIN VEGETABLE PRO.	O IRR	9/61	12	460	0	0	0	0	750	D	0	0	L
28/2W 7B 22	SLE	15275 WASHINGTON AVE	ROTO ROOTER	O TBS	4/86	3	29	9	0	0	0	0	D	0	0	L
28/2W 7B 23	SLE	15275 WASHINGTON AVE	ROTO ROOTER	O TBS	4/86	2	28	7	0	0	0	0	D	0	0	L
28/2W 7B 24	SLE	15275 WASHINGTON AVE	ROTO-ROOTER	O MON	2/91	4	21	10	0	0	0	0	D	0	0	D
28/2W 7B 25	SLE	15275 WASHINGTON AVE	ROTO-ROOTER	O MON	3/91	2	15	7	0	0	0	0	D	0	0	D
28/2W 7B 26	SLE	15275 WASHINGTON AVE	ROTO-ROOTER	O DON	3/91	5	200	30	0	0	0	0	25	D	0	0
28/2W 7B 27	SLE	15275 WASHINGTON AVE	TRAILER RENTAL CO.	O BEN	?	12	525	0	0	0	0	D	5	0	0	L
28/2W 7B 28	SLE	15275 WASHINGTON AVE	TRAILER RENTAL CO.	O CRT	1/76	0	65	0	0	0	0	D	0	0	0	L
28/2W 7B 29	SLE	15275 WASHINGTON AVE	TRAILER RENTAL CO.	O LNK	?	8	590	0	13	0	0	0	2	0	+	L
28/2W 7B 30	SLE	15275 WASHINGTON AVE	?	O IRR	?	0	0	0	0	0	0	0	?	0	0	L
28/2W 7B 31	SLE	15275 WASHINGTON	D. MARINO	O ?	/20	3	60	0	22	0	0	0	?	0	0	L
28/2W 7B 32	SLE	15275 WASHINGTON	TWIN NURSERY CORP	O IRR	/36	12	335	0	0	0	0	?	0	0	0	L
28/2W 7B 33	SLE	15275 WASHINGTON AVE	TWIN NURSERY CORP.	O DES	11/61	12	603	0	0	0	0	D	0	0	0	L
28/2W 7B 34	SLE	3514 W. 35TH AV	FAIR BROTHERS	O OCM	/30	10	120	0	20	0	0	?	2	0	0	L
28/2W 7B 35	SLE	15275 WASHINGTON	M. CARBONICK	O IRR	9/34	12	845	0	35	0	0	D	0	0	0	L
28/2W 7B 36	SLE	15275 WASHINGTON	M. RANTZES	O IRR	/48	4	32	0	0	0	0	?	0	0	0	L
28/2W 7B 37	SLE	15275 WASHINGTON ST	J. BOSTON	O IRR	7/73	4	29	8	0	0	0	0	D	0	0	L
28/2W 7B 38	SLE	15275 WASHINGTON ST	ROE SWARTHOUT	O IRR	5/77	4	28	7	0	0	0	0	15	D	0	L
28/2W 7B 39	SLE	15275 WASHINGTON ST	LYNN BATES	O IRR	5/77	4	28	8	0	0	0	0	D	0	0	L
28/2W 7B 40	SLE	15275 WASHINGTON	GREENHOUSE MARKET PLAZA	O MON	6/85	0	22	12	0	0	0	0	G	0	0	L
28/2W 7B 41	SLE	15275 WASHINGTON	GREENHOUSE MARKET PLAZA	O MON	6/85	0	22	7	0	0	0	0	G	0	0	L
28/2W 7B 42	SLE	15275 WASHINGTON	GREENHOUSE MARKET PLAZA	O MON	6/85	0	22	14	0	0	0	0	G	0	0	L
28/2W 7B 43	SLE	519 NANON AVE	PARIA BROTHERS HARDWARE	O MON	02/86	2	23	11	0	0	0	0	G	0	0	L
28/2W 7B 44	SLE	SWANSON ST & SWANSON Ct	POON	O OTH	12/91	0	222	0	0	0	0	0	D	0	0	D
28/2W 7B 45	SLE	15195 WASHINGTON AVE	SE OIL CO. NW-2	O MON	10/92	2	13	8	22	14	0	0	G	0	0	D
28/2W 7B 46	SLE	15195 WASHINGTON AVE	SE OIL CO. NW-3	O MON	10/92	2	15	6	22	16	0	0	G	0	0	D
28/2W 7B 47	SLE	15195 WASHINGTON AVE	SE OIL CO. NW-4	O MON	10/92	2	15	6	22	16	0	0	G	0	0	D
28/2W 7B 48	SLE	15195 WASHINGTON AVE	CITY OF SAN MATEO	O IRR	?	10	106	0	0	0	0	?	0	0	0	L
28/2W 7B 49	SLE	15195 WASHINGTON AVE	KRAF	O IRR	/47	6	75	0	0	0	0	?	0	0	0	L
28/2W 7B 50	SLE	15195 WASHINGTON AVE	MAULIN ALAMEDA	O IRR	7/77	4	34	8	0	0	0	0	U	0	0	L
28/2W 7B 51	SLE	15195 WASHINGTON AVE	O. CARLSON	O IRR	?	6	38	0	0	0	0	?	0	0	0	L
28/2W 7B 52	SLE	15195 WASHINGTON AVE	JOE ALAMEDA	O IRR	?	4	32	0	10	0	0	?	0	0	0	L
28/2W 7B 53	SLE	15080 SEDGWICK	O ?	O ?	0	0	0	0	0	0	0	0	?	0	0	L
28/2W 7B 54	SLE	15138 INVERNESS ST	RILLIANTY	O IRR	/52	6	16	0	0	0	0	?	0	0	0	L
28/2W 7B 55	SLE	15138 INVERNESS ST	L. BOTELHA	O IRR	/58	6	26	0	0	0	0	?	0	0	0	L
28/2W 7B 56	SLE	15165 NORTON ST	SHIRLEY ALRIGHT	O IRR	4/77	5	46	32	0	0	0	0	D	0	0	L
28/2W 7B 57	SLE	15177 NORTON ST	RICHARD ARMSTRONG	O IRR	4/77	4	46	31	0	0	0	0	D	0	0	L
28/2W 7B 58	SLE	15193 ENGLESTAD ST	JAN TIGBY	O IRR	6/77	4	29	11	0	0	0	0	D	0	0	L

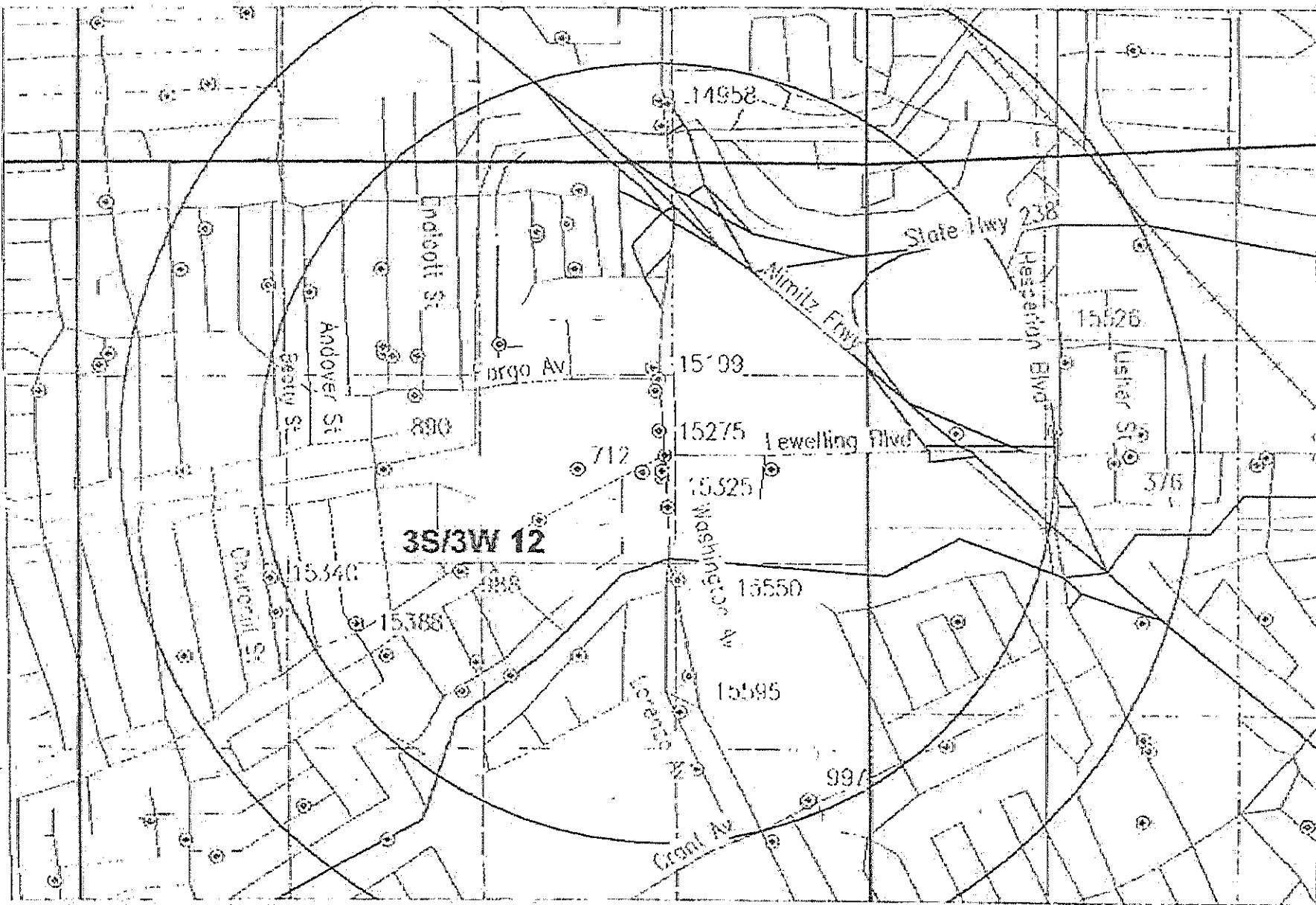
Yes
Yes
Yes

.5 mile radius from Lewelling & Washington Ave. (Page 2)

WELL #	CITY	ADDRESS	OWNER	PHONE	UGS	DR.	DATE	DIAH	TOT.DSMTH	DTW	ST.	ELEV	MA.	ELEV	YIELD	LOG	WQ	WL	DATA	GRN	MARGIN
3S/3W 12F 7	SLB	890 PARKER AVE	CHELSEA PRESBYTERIAN	0 IRR	7/77	4		26	0	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12F 8	SLB	15190 CEDAR ST	CHAL. COMPILATION	0 IRR	5/77	6		35	2	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 1	SLB	605 PARKER AVE	COOTIL OIL CORP	0 DOM	?	0		40	0	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 2	SLB	WASHINGTON & PARK AVE	COOTIL OIL CORP	0 MON	03/86	2		20	10	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 3	SLB	15275 WASHINGTON AVE	COOTIL OIL CORP	0 MON	12/86	4		20	7	22	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 4	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 5	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 6	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 7	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 8	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 9	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 10	SLB	15275 WASH. AVE.	COOTIL OIL	0 MON	11/86	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 11	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	04/89	3		24	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 12	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	05/89	3		24	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 13	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	05/89	3		24	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 14	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	05/89	3		24	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 15	SLB	15275 WASHINGTON AVE	COOTIL OIL	0 MON	05/89	3		24	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 16	SLB	15201 WASH. AVE.	DESERT PETROLEUM	0 MON	09/88	2		28	8D	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 17	SLB	15201 WASH. AVE.	DESERT PETROLEUM	0 MON	09/88	2		28	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 18	SLB	15201 WASH. AVE.	DESERT PETROLEUM	0 MON	09/88	2		29	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 19	SLB	15275 East Washington St.	Shell Oil Company	0 TEST	10/89	6		22	11	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 20	SLB	712 Lewelling Blvd.	ARCO	0 MON	8/90	2		41	6	10	4	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 21	SLB	712 Lewelling Blvd.	ARCO	0 MON	6/90	2		12	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 22	SLB	712 Lewelling Blvd.	ARCO Prod. Co.	0 MON	6/90	2		12	11	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 23	SLB	712 Lewelling Blvd	ARCO Prod. Co.	0 MON	5/91	4		18	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 24	SLB	712 Lewelling Blvd	ARCO Prod. Co.	0 MON	5/91	4		20	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 25	SLB	712 Lewelling Blvd	ARCO Prod. Co.	0 MON	5/91	4		16	0	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 26	SLB	712 Lewelling Blvd	ARCO Prod. Co.	0 MON	5/91	4		16	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 27	SLB	712 Lewelling Blvd	ARCO Prod. Co.	0 MON	5/91	4		16	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 28	SLB	15275 Washington Ave	Shell Oil Co.	0 TEST	5/91	5		15	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 29	SLB	15201 Washington Ave.	Arco Products Co.	0 MON	8/92	2		13	12	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 30	SLB	712 Lewelling Blvd.	ARCO MM-14	0 MON	3/93	2		11	6	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 31	SLB	712 Lewelling Blvd.	ARCO MM-13	0 MON	11/92	2		14	12	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 32	SLB	712 Lewelling Blvd.	ARCO #601 MM-11	0 MON	10/92	4		12	9	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12G 33	SLB	712 Lewelling Blvd.	ARCO #601 MM-12	0 MON	10/92	4		13	8	0	0	0	0	0	0	0	0	0	0	L	L
3S/3W 12B 1	SLB	15100 WASHINGTON AV	SAN LORENZO NURSERY	0 IRR	6/57	12		525	31	23	-2	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12B 2	SLB	15100 WASHINGTON AV	SAN LORENZO NURSERY	0 ABN	10/47	12		720	0	23	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 2	SLB	15275 WASHINGTON	MODERN VIGOROUS NURSERY	0 IRR	/32	12		360	0	24	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 3	SLB	15225 WASHINGTON	N. MANTELL GARDEN	0 IRR	/30	10		130	0	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 4	SLB	15400 LORENZO AVE	PRIMK FERRY	0 IRR	8/74	6		80	9	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 5	SLB	15595 WASHINGTON AVE	TEXACO	0 MON	08/86	2		15	11	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 6	SLB	15595 WASHINGTON AVE	TEXACO	0 MON	08/86	2		15	9	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12J 7	SLB	15595 WASHINGTON AVE	TEXACO	0 MON	08/86	2		16	12	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12K 1	SLB	915 LEWELLING ST	E. PIANETTA	0 IRR	/25	12		120	0	17	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12K 2	SLB	963 LEWELLING BLVD	M. JONES	0 IRR	?	6		42	0	12	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12K 4	SLB	15547 ANDOVER ST	RAGLE	0 IRR	/77	6		30	13	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12L 1	SLB	15168 ANDOVER ST	E. PIANETTA	0 IRR	/57	6		22	0	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12L 2	SLB	15161 BOSTON ST	BURKE	0 IRR	/63	6		30	0	6	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12L 3	SLB	15695 TILDEON ST	ROBERT PRIMO	0 IRR	3/77	4		30	12	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12L 4	SLB	1618 W. CLARENCE ST	ROBERT ELLIOTT	0 IRR	4/77	6		30	14	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12M 1	SLB	15511 PARADEGOULD ST	STRATMAP	0 IRR	/56	6		36	8	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12M 2	SLB	15501 PARADEGOULD ST	W. KOSENUKIST	0 IRR	?	6		30	0	9	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12M 4	SLB	15507 PARADEGOULD ST	WILLIAM HORNBL	0 IRR	5/77	6		24	7	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12P 1	SLB	TWIN PINES	KASZOLA	0 IRR	?	3		0	0	17	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12Q 1	SLB	15501 Lorenzo Ave.	Alvaro H.S. (Alvaro HSD)	0 PLS	1/91	2		20	0	8	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12Q 2	SLB	15701 Lorenzo Ave.	Alvaro H.S. (Alvaro HSD)	0 MON	1/91	2		25	11	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12Q 3	SLB	15701 Lorenzo Ave.	Alvaro H.S. (Alvaro HSD)	0 MON	1/91	2		25	11	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12R 2	SLB	14650 WASHINGTON	CORIO	0		0		0	0	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12R 4	SLB	917 GRANT AVE	TON CLEMENTS	0 IRR	12/89	8		36	0	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12R 5	SLB	917 Grant Ave.	Chevron USA	0 MON	3/90	4		35	10	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12R 6	SLB	917 Grant Ave.	Chevron USA	0 MON	11/90	2		28	12	0	0	0	0	0	0	0	0	0	0	Yes	Yes
3S/3W 12R 7	SLB	917 Grant Ave.	Chevron USA	0 MON	11/90	2		28	11	0	0	0	0	0	0	0	0	0	0	Yes	Yes

.5 mile radius from Lewelling & Washington Ave. (Page 3)

WELL #	CITY	ADDRESS	OWNER	PHONE	DR.	DATE	DIA#	TOT. DEPTH	WTW	ST.	ELBV	MR.	ELBV	YIELD	LOG NO	SL	DATA	ORGAN	MARGIN
38/3W 12R 8	SLZ	397 Grant Ave	Chevron USA	0 MON	11/90	2	27	22	0	0	0	D	0	0					
38/3W 12R 8	SLZ	397 Grant Ave	Chevron USA	0 MON	2/91	2	14	4	180	96	0	G	0	0					
38/3W 12R 9	SLZ	15704 Lawrence Ave.	SLE Unified School Dist.	0 MON	8/92	2	24	26	0	0	0	D	0	0					
38/3W 12R10	SLZ	15224 Nickle Blvd.	SLE Unified School Dist.	0 MON	8/92	2	25	14	0	0	0	D	0	0					
38/3W 12R11	SLZ	15222 Nickle Blvd.	SLE Unified School Dist.	0 MON	8/92	2	28	11	0	0	0	D	0	0					
38/3W 12R12	SLZ	15221 Nickle Blvd.	SLE Unified School Dist.	0 MON	8/92	2	28	5	0	0	0	D	0	0					
38/3W 12R13	SLZ	397 Grant Ave	Chevron USA C-6	0 MON	2/93	2	28	15	0	0	0	D	0	0					
38/3W 12S 1	SLZ	15550 Washington Av	NORTHERN VEGETABLE NURSERY	0 JRR	5/94	12	550	0	0	0	0	G	0	0					
38/3W 14A 2	SLZ	330 LORENZO HILL FIELD	UNICO	0 MUN	10/14	10	235	0	0	0	0	D	0	0			L		
38/3W 14B 1	SLZ	LEWELLING	TROJAN POWDER CO.	0 ABN	7	12	533	0	0	0	0	D	0	0			L		
38/3W 14C 4	SLZ	LEWELLING BLVD	LIVERMORE-AMADOR VALLEY	0 CAT	5/79	0	140	0	0	0	0	D	0	0			L		
38/3W 14F 1	SLZ	LEWELLING BLVD	TROJAN POWDER CO.	0 ABN	10/15	12	765	0	0	0	0	D	0	0			L		
38/3W 14G 1	SLZ	LEWELLING	TROJAN POWDER CO.	0 ABN	8/13	12	600	0	0	0	0	D	0	0			L		
38/3W 14G 2	SLZ	LEWELLING BLVD	TROJAN POWDER CO.	0 ABN	8/19	12	785	0	0	0	0	D	0	0			L		
38/3W 14H 3	SLZ	LEWELLING BLVD	TROJAN POWDER CO.	0 ABN	7	10	0	0	0	0	0	D	0	0			L		



.5 mile radius from Lewelling & Washington Ave.
03/30/1995

EMCON ASSOCIATES

WATER WELL SURVEY FORM 738-08.03

SHEET 1 OF 16

DND: 2/5/87

ENCON ASSOCIATES

WATER WELL SURVEY FORM

SHEET 4 OF 16

030:2/5/87

سازمان اسناد و کتابخانه ملی

WATER WELL DRILLING & PUMP

Wet & Dry Room Test - 100% - 100% - 100% - 100%

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EMCON WELL NUMBER	DATE DRILLED, DRILLER	WELL OWNER LISTED	STATUS IF KNOWN	WELL CONSTRUCTION DETAILS								EDITED DRILLER REPORTS
				TOT. DPTH (FT.)	COMP. DPTH (FT.)	PERF. INTER. (FT.)	SEAL DPTH (FT.)	CASE DIA. (IN.)	CASE MAT.	WAT. LEV. (FT.)	EST. Q (GPM)	
		Modern										
40	1932	Vegetable Western Well	Irrig. Nurserv 15550 Washington San Leandro	?	350	340-350		12			24	
41	1920	Gualco Swan	Irrig. 15325 Washington San Leandro	?	130			10			24	
42	1978	Perry Wood Cr.	Irrig. 15500 Lorenzo San Lorenzo	?	?							
43	1925	Planetta Nunes	Irrig. 915 Lewis San Lorenzo	?	120	100-120		12			17	
44		Jones Owner	Irrig. 983 Lewis San Lorenzo	?	42	30-42		6			17	
45		Raele	Irrig. 15547 Sedgeham San Leandro	?								
46	1957	Planetta Owner	Irrig. 15388 Andover San Leandro	?	22			6			21	

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WALK WELL SURVEI FURNIT

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Page 63/86

COLLECTOR'S

WATER WELL SURVEY FORM

SUMMER 1968 65 16

U.S. GOVT

EDITED
DRILLER REPORTS

**EDITED
DRILLER REPORTS**

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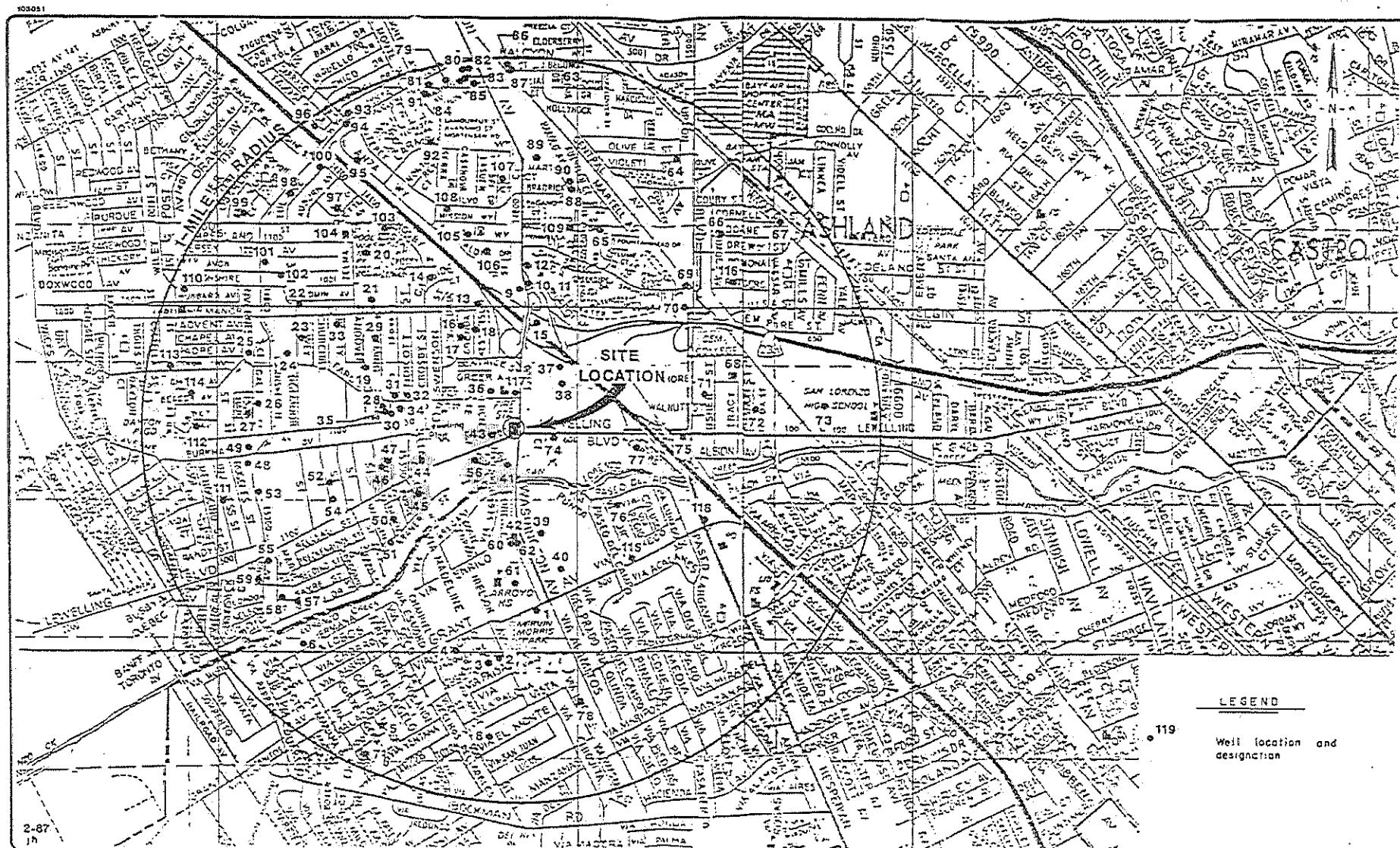
~ ~ ~ ~ ~

ENCON ASSOCIATES

WATER WELL SURVEY FORM

SHEET 16 OF 16

0:0:2/5/87



SCALE 0 1/2 1.0 MILES

GETTLER-RYAN INC.
SUBSURFACE HYDROGEOLOGIC INVESTIGATION
SHELL SERVICE STATION, 15275 WASHINGTON AVE.
SAN LORENZO, CALIFORNIA

WELL SURVEY MAP

FIGURE
I
PROJECT NO.
738-08.03

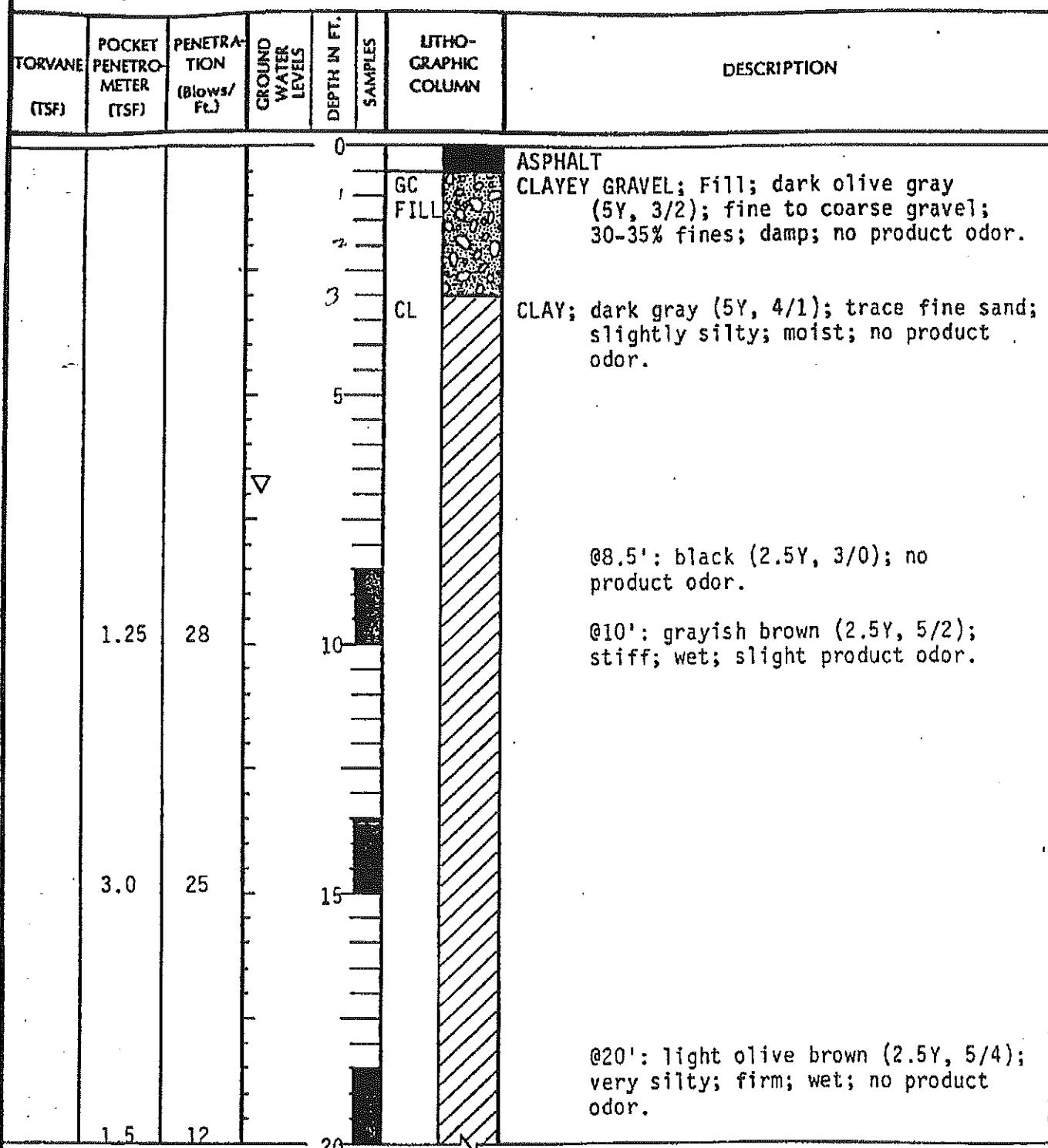
APPENDIX B
BORING LOGS

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01

BORING NO. S-1

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling , PAGE 1 OF 2
BY JB DATE 6/18/85 San Leandro SURFACE ELEV.



REMARKS Drilled using 8-inch continuous flight hollow-stem auger.
Converted to a 3-inch monitoring well, detailed on Plate C.



LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01

BORING NO. S-1

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, PAGE 2 OF 2

BY JB

DATE 6/18/85

San Leandro

SURFACE ELEV.

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
				20		XX	HOLE TERMINATED AT 21½ FEET.

REMARKS



PLATE B

WELL DETAILS



PROJECT NUMBER 738-08.01

PROJECT NAME Gettler-Ryan, Shell & Lewelling

COUNTY Alameda

WELL PERMIT NO. _____

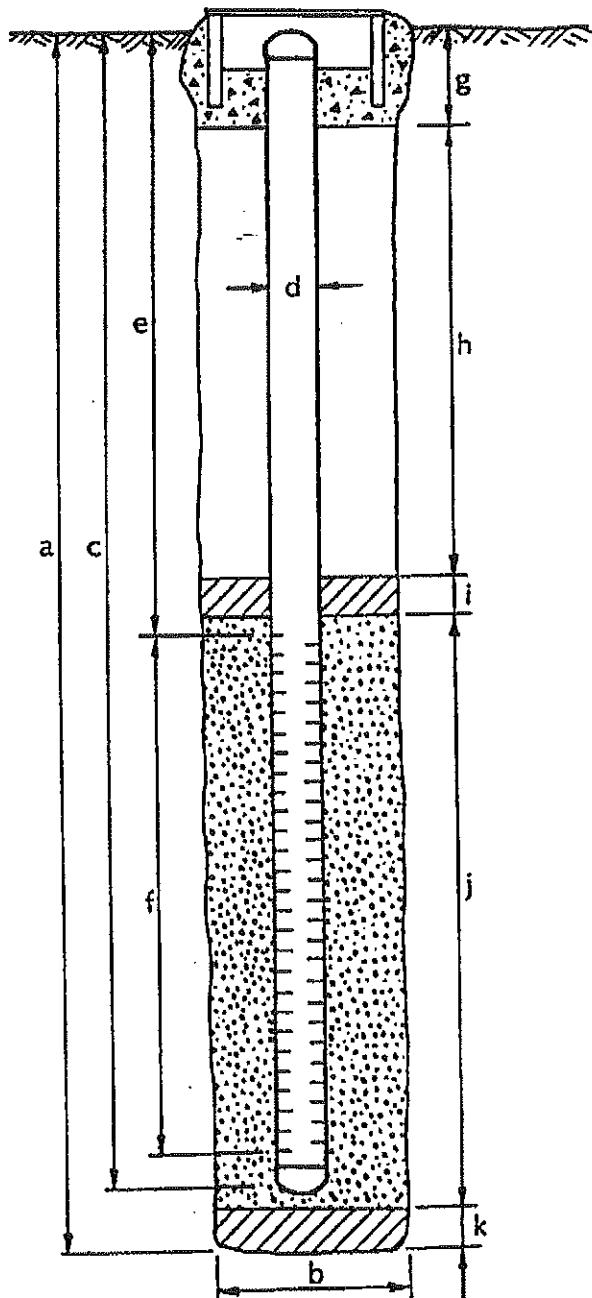
BORING / WELL NO. S-1

TOP OF CASING ELEV. _____

GROUND SURFACE ELEV. _____

DATUM _____

G-5 vault box (Std.)



EXPLORATORY BORING

- a. Total depth 21 $\frac{1}{2}$ ft.
- b. Diameter 8 in.
- Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

- c. Casing length 19 ft.
Material Schedule 40 PVC
- d. Diameter 3 in.
- e. Depth to top perforations 4 ft.
- f. Perforated length 15 ft.
Perforated interval from 4 to 19 ft.
Perforation type Machined Slot
Perforation size 0.020 inch
- g. Surface seal 1 ft.
Seal material Cement
- h. Backfill 2 ft.
Backfill material Cement
- i. Seal 1 $\frac{1}{2}$ ft.
Seal material Bentonite
- j. Gravel pack ($3\frac{1}{2}$ to 19') 15 $\frac{1}{2}$ ft.
Pack material 6 x 12 Monterey Sand
- k. Bottom seal 2 $\frac{1}{2}$ ft.
Seal material Bentonite 20-21 $\frac{1}{2}$
Compacted Clay 19-20

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01

BORING NO. S-2

PROJECT NAME Gettler-Ryan, Shell & Washington & Lewelling,
BY JB DATE 6/18/85 San Leandro PAGE 1 OF 1
GROUND SURFACE ELEV.

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ ft.)	GROUND WATER LEVELS	DEPTH IN FT. SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
				0	GC FILL CL	ASPHALT GRAVEL; Fill; 30% fines
				5	SM	CLAY; dark gray (5Y, 3/1); trace fine sand; slightly silty; moist; slight product odor.
2.0	32		▽	10	CL	SILTY SAND; very dark gray (5Y, 3/1); 50% fine sand; 50% silt; loose; wet; strong product odor.
				15		CLAY; black (2.5Y, 2/0); slightly silty; very stiff; very moist; slight product odor.
3.0	28			20		@13.5': grayish brown (2.5Y, 5/2); stiff; wet; no product odor.
1.75	15					@18.5': light brownish gray (2.5Y, 6/2); 40% silt; trace fine sand; stiff; wet; no product odor.
						HOLE TERMINATED AT 20 FEET.

REMARKS Drilled using 8-inch continuous flight hollow-stem auger.
Converted to 3-inch monitoring well, detailed on Plate E.



WELL DETAILS



PROJECT NUMBER 738-08.01

PROJECT NAME Gettler-Ryan, Shee ^e
Washington & Lewelling

COUNTY Alameda

WELL PERMIT NO. _____

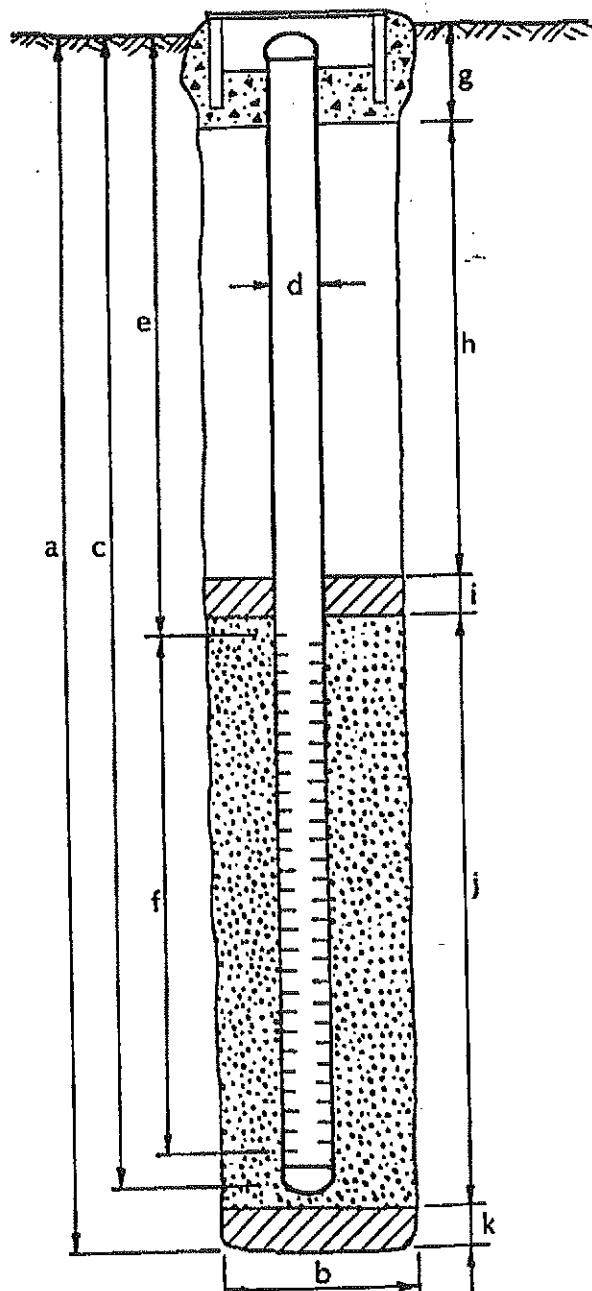
BORING / WELL NO. S-2

TOP OF CASING ELEV. _____

GROUND SURFACE ELEV. _____

DATUM _____

G-5 vault box (Std.)



EXPLORATORY BORING

- a. Total depth 20 ft.
b. Diameter 8 in.

Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

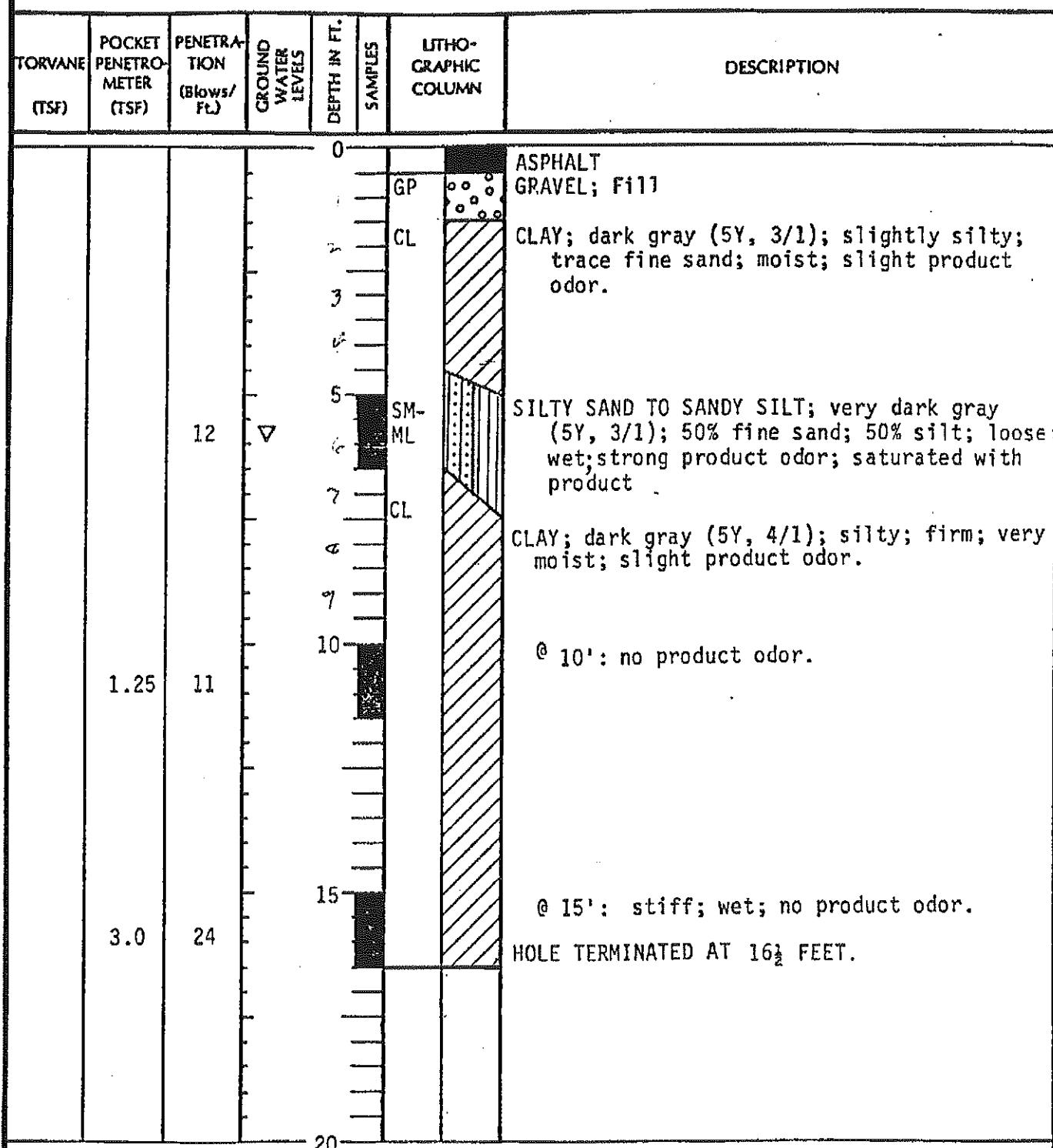
- c. Casing length 18½ ft.
Material Schedule 40 PVC
- d. Diameter 3 in.
- e. Depth to top perforations 4 ft.
- f. Perforated length 14½ ft.
Perforated interval from 4 to 18½ ft.
Perforation type Machined Slot
Perforation size 0.020 inch
- g. Surface seal 1 ft.
Seal material Cement
- h. Backfill 2 ft.
Backfill material Cement
- i. Seal ½ ft.
Seal material Bentonite
- j. Gravel pack (3½ to 18½') 15 ft.
Pack material 6 x 12 Monterey Sand
- k. Bottom seal 1½ ft.
Seal material Compacted clay

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.01

BORING NO. S-3

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling, PAGE 1 OF 1
BY JB DATE 6/18/85 San Leandro SURFACE ELEV.



REMARKS Drilled using 8-inch continuous flight hollow-stem auger.
Converted to 3-inch monitoring well, detailed on Plate G.



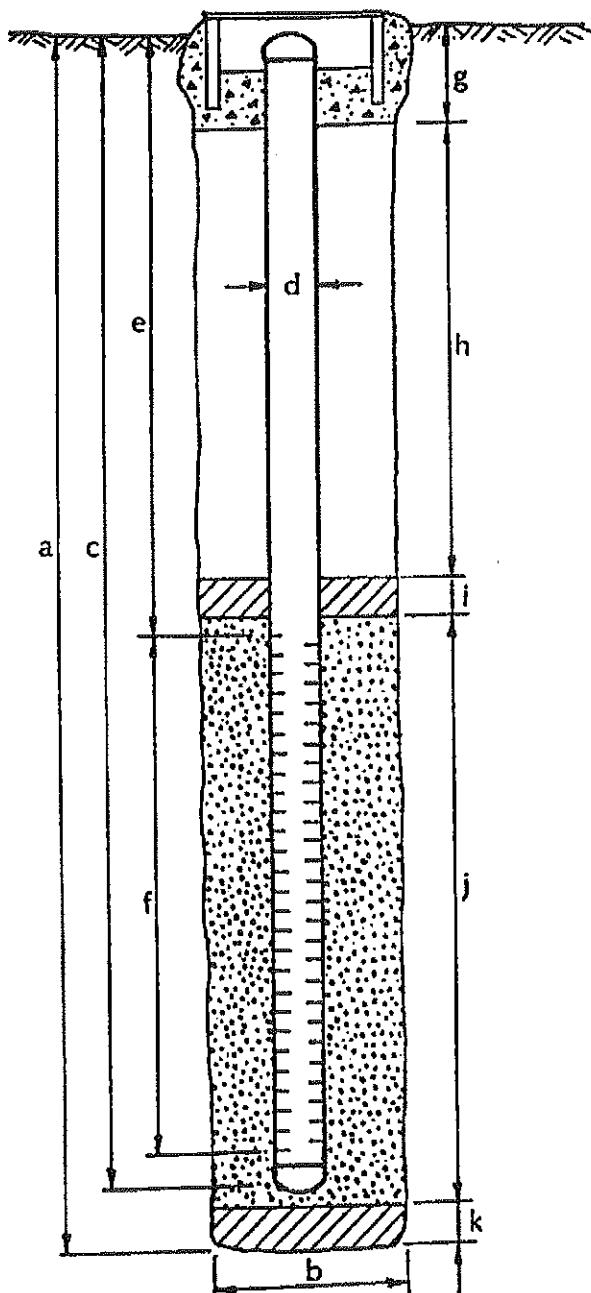
WELL DETAILS



PROJECT NUMBER 738-08.01
 PROJECT NAME Gettier-Ryan, Shell
 COUNTY Alameda
 WELL PERMIT NO. _____

BORING / WELL NO. S-3
 TOP OF CASING ELEV. _____
 GROUND SURFACE ELEV. _____
 DATUM _____

G-5 vault box (Std.)



EXPLORATORY BORING

- a. Total depth 16½ ft.
 b. Diameter 8 in.
 Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

- c. Casing length 16½ ft.
 Material Schedule 40 PVC
 d. Diameter 3 in.
 e. Depth to top perforations 4 ft.
 f. Perforated length 12½ ft.
 Perforated interval from 4 to 16½ ft.
 Perforation type Machined Slot
 Perforation size 0.020 inch
 g. Surface seal 1 ft.
 Seal material Cement
 h. Backfill 1 ft.
 Backfill material Cement
 i. Seal 1 ft.
 Seal material Bentonite
 j. Gravel pack (3 to 16½') 13½ ft.
 Pack material 6x12 Monterey Sand
 k. Bottom seal - ft.
 Seal material -

LOG OF EXPLORATORY BORING

PROJECT NUMBER

738-08.01

BORING NO. S-4

PROJECT NAME Gettler-Ryan, Shell @ Washington & Lewelling,

PAGE 1 OF 1

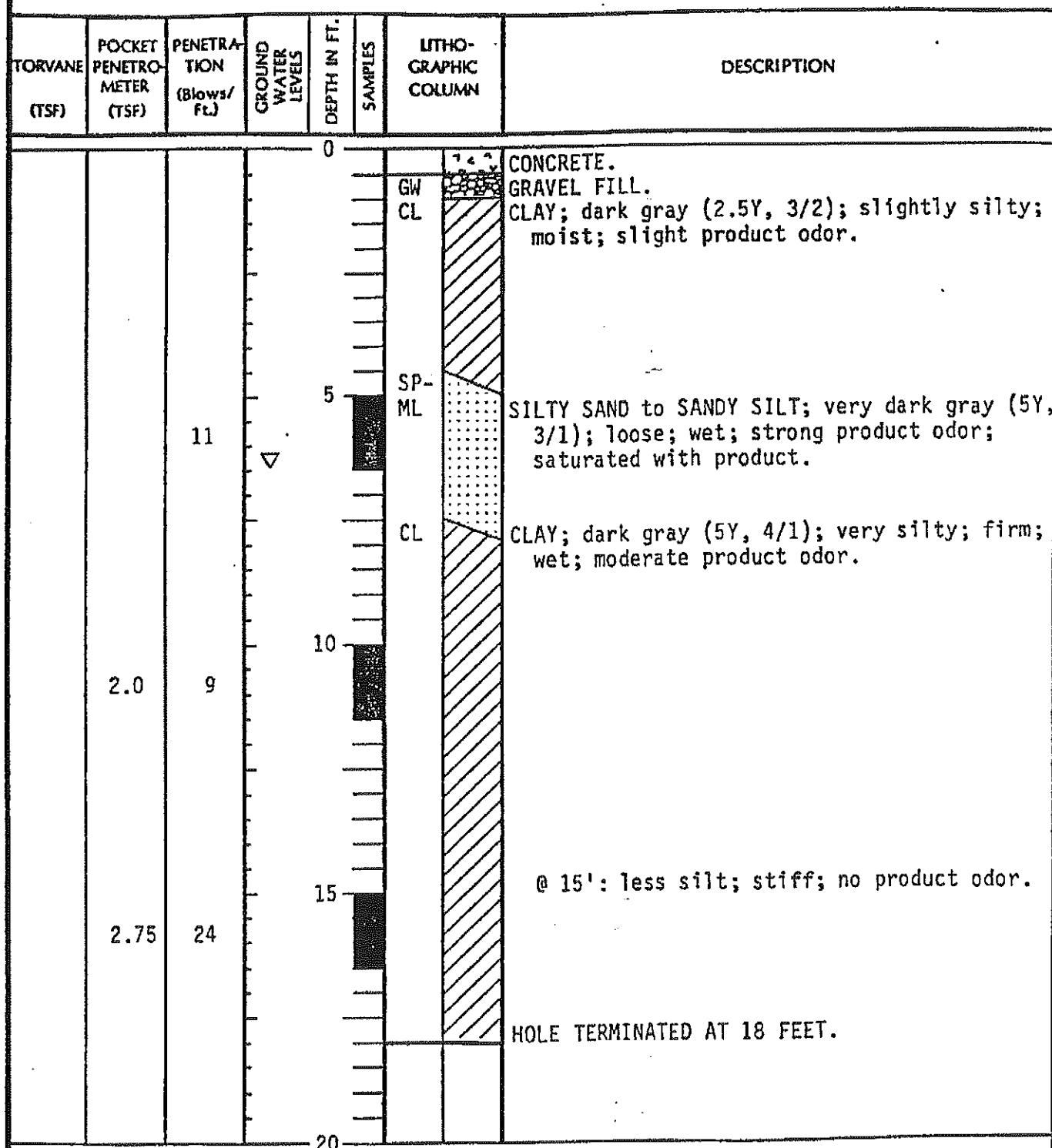
BY JDB

DATE

6/18/85

San Leandro

SURFACE ELEV.



REMARKS Drilled using 8-inch continuous flight hollow-stem auger.
converted to 3-inch monitoring well as detailed on Plate I.



WELL DETAILS



PROJECT NUMBER 738-08.01

Gettler-Ryan, Shell @ Washington & Lewelling

PROJECT NAME Alameda

COUNTY Alameda

WELL PERMIT NO. _____

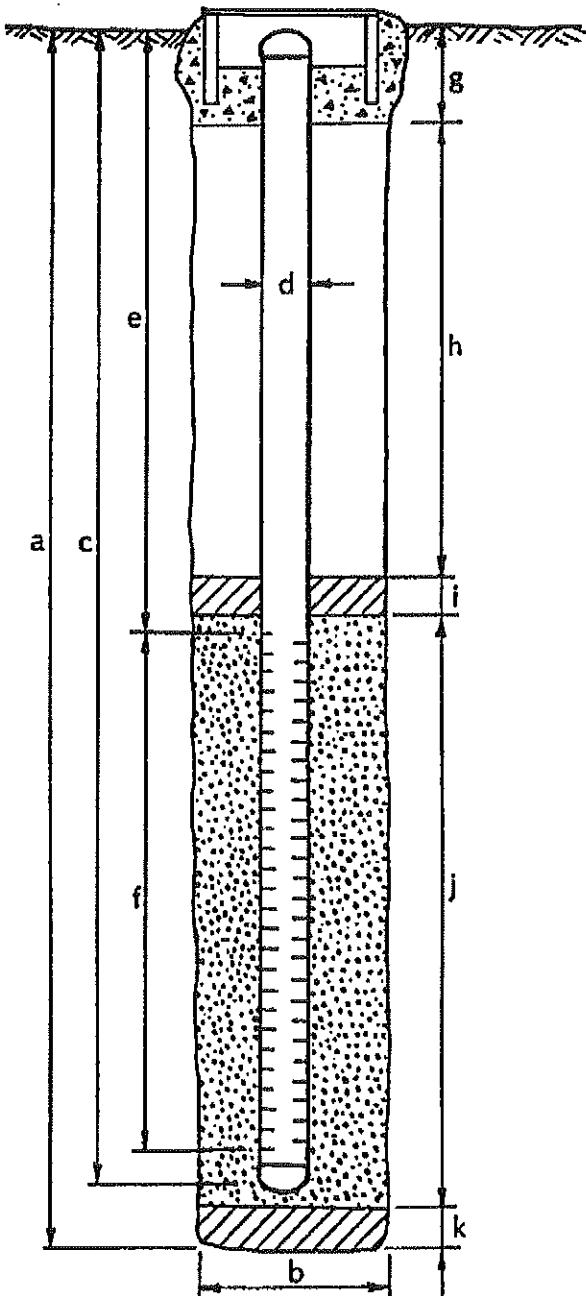
BORING / WELL NO. S-4

TOP OF CASING ELEV. _____

GROUND SURFACE ELEV. _____

DATUM _____

G-5 vault box (Std.)



EXPLORATORY BORING

- a. Total depth 18 ft.
- b. Diameter 8 in.
- Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

- c. Casing length 18 ft.
Material Schedule 40 PVC
- d. Diameter 3 in.
- e. Depth to top perforations 4 ft.
- f. Perforated length 14 ft.
Perforated interval from 4 to 18 ft.
Perforation type Machined Slot
Perforation size 0.020 inch
- g. Surface seal 1 ft.
Seal material Cement
- h. Backfill 1 ft.
Backfill material Cement
- i. Seal 1 ft.
Seal material Bentonite
- j. Gravel pack (3 to 18') 15 ft.
Pack material 6x12 Monterey Sand
- k. Bottom seal - ft.
Seal material -

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02

BORING NO. S-A

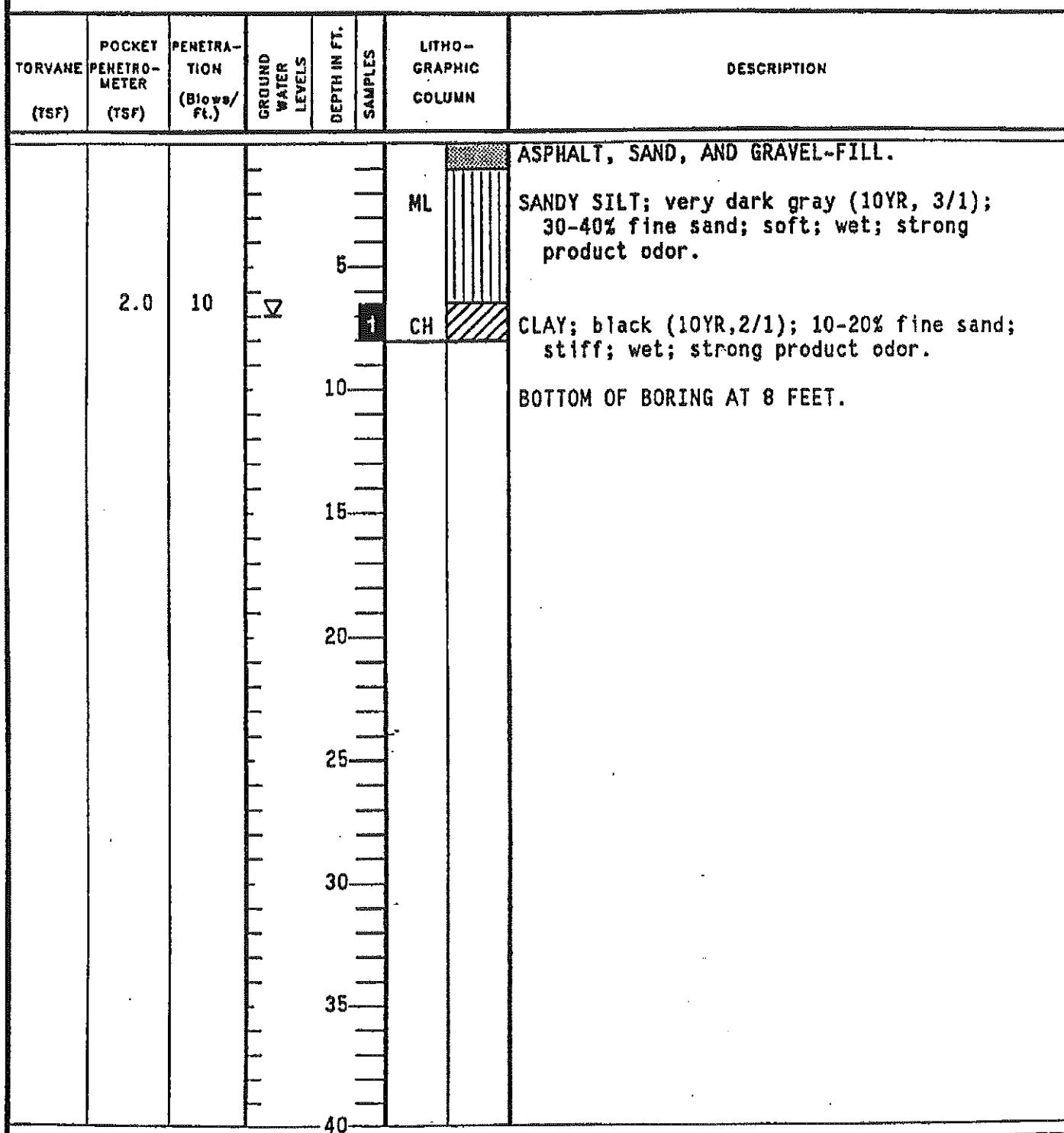
PROJECT NAME Gettler-Ryan, Shell, Lewelling Bl. & Washington Av. PAGE 1 OF 1

BY EBL

DATE 8/15/86

San Leandro

SURFACE ELEV. 22'



REMARKS

Drilled by 8-inch continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with cuttings to 1 foot; concrete to surface.

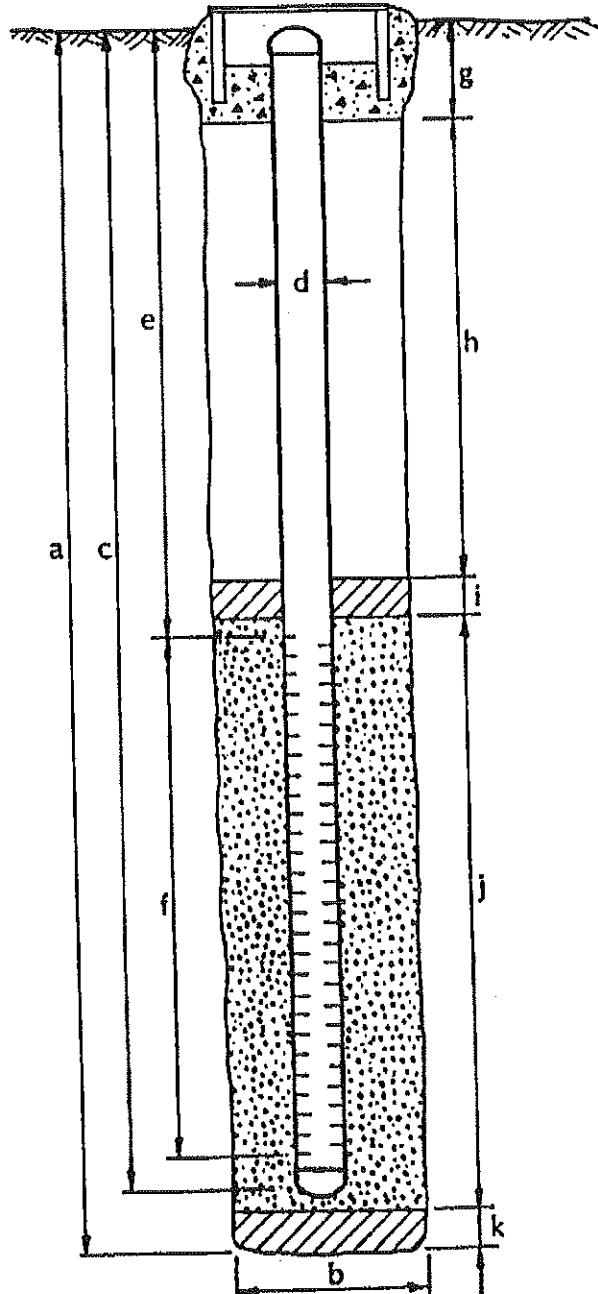
WELL DETAILS



PROJECT NUMBER 738-08.02
 PROJECT NAME G-R Shell, San Leandro
 COUNTY Alameda
 WELL PERMIT NO. _____

BORING / WELL NO. S-B
 TOP OF CASING ELEV. _____
 GROUND SURFACE ELEV. 22' MSL
 DATUM USGS

G-5 vault box (Std.)



EXPLORATORY BORING

- a. Total depth 15.5 ft.
- b. Diameter 8 in.
- Drilling method Hollow-Stem Auger

WELL CONSTRUCTION

- c. Casing length 15.5 ft.
Material Schedule 40 PVC
 - d. Diameter 3 in.
 - e. Depth to top perforations 1 ft.
 - f. Perforated length 14.5 ft.
Perforated interval from 14.5 to 1 ft.
Perforation type Machined Slot
Perforation size .020 inch
 - g. Surface seal 0.3 ft.
Seal material Bentonite
 - h. Backfill 0 ft.
Backfill material _____
 - i. Seal 0.7 ft.
Seal material Concrete
 - j. Gravel pack (13.9 to 1 Ft.) 12.9 ft.
Pack material Coarse Aquarium Sand
 - k. Bottom seal 0 ft.
Seal material _____
- Note: Borehole caved to 13.9 feet.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02

BORING NO. S-C

PROJECT NAME Gettler-Ryan, Shell, Lewelling Bl. & Washington Av. PAGE 1 OF 1

BY EBL

DATE 8/15/86

San Leandro

SURFACE ELEV. 22' ± MSL

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC- COLUMN	DESCRIPTION
							CONCRETE, SAND, and GRAVEL-FILL.
							SAND-FILL; dark gray (10YR, 4/1); < 10% fines; fine to coarse sand; loose; damp; strong product odor.
							CLAY-FILL; very dark gray (2.5Y, N3); 10-20% fine sand; soft; moist; strong product odor.
				4	1	SW	SAND-FILL; dark gray (10YR, 4/1); < 10% fines; fine to coarse sand; loose; wet; strong product odor.
					2	SW	
				10	3	CH	CLAY; very dark grayish brown (2.5Y, 3/2); 15-25% fine sand; stiff; wet; faint product odor.
1.5	13				4		@ 14': very stiff; faint product odor.
3.0	21			15	5		@ 15-1/2': stiff; moist; no product odor.
2.5				20			BOTTOM OF BORING AT 17 FEET.
				25			
				30			
				35			
				40			

REMARKS

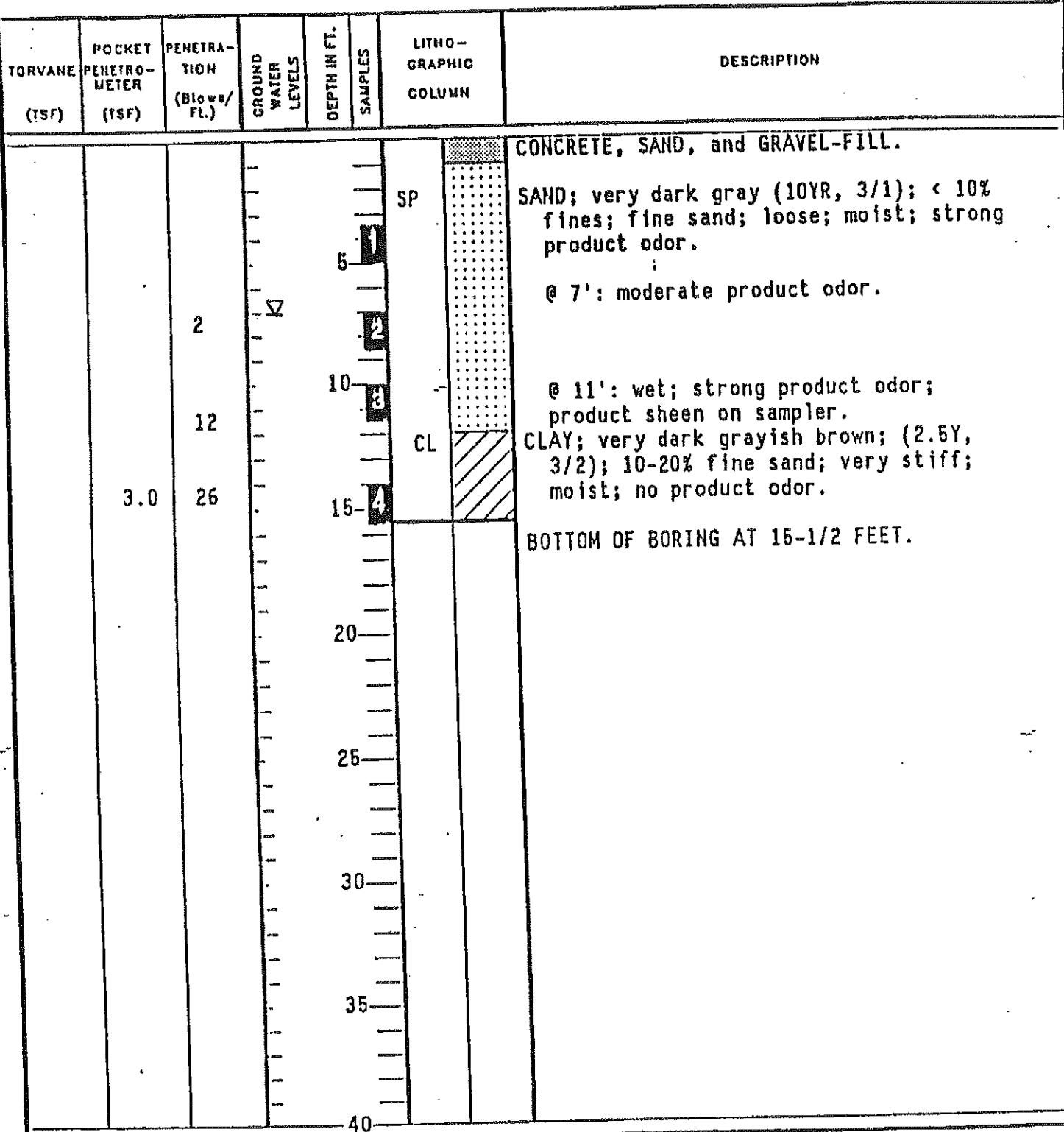
Drilled by 8-inch continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with Bentonite to 12 feet, cuttings to 1 foot, and concrete to surface.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.02

BORING NO. S-D

PROJECT NAME Gettler-Ryan, Shell, Lewelling Bl. & Washington Av. PAGE 1 OF 1
BY EBL DATE 8/15/86 BY San Leandro SURFACE ELEV. 22' ± MSL



REMARKS

Drilled by continuous-flight, hollow-stem auger; samples collected with 2-inch California modified split-spoon sampler. Boring backfilled with Bentonite to 12 feet, cuttings to 1 foot, and concrete to surface.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.03

BORING NO. S-5

PROJECT NAME Gettler-Ryan, Shell, Washington & Lewelling PAGE 1 OF 2
BY JDB DATE 12/24/86 SURFACE ELEV. 21.71'

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ Ft.)	GROUND WATER LEVELS	DEPTH IN FT. SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
					GP	ASPHALT GRAVEL-FILL; coarse baserock.
					CL	CLAY; dark gray (5Y, 4/1); 98-100% low- to moderate-plasticity fines; <2% fine sand; stiff; damp; no gasoline odor. @4': slight gasoline odor.
1.25	9			5	SC	CLAYEY SAND; dark gray (5Y, 4/1); 20-40% low-plasticity fines; 60-80% fine sand; loose; moist; slight to mod- erate gasoline odor.
				7	ML	SANDY SILT; dark gray (5Y, 4/1); 70-90% non-plastic fines; 10-30% fine sand; stiff; moderate gasoline odor.
1.5	17			10	CH- CL	CLAY; black (5Y, 2.5/1); 100% moderate- to high-plasticity fines; occasion- ally calcareous; stiff to very stiff; wet in voids; slight gasoline odor to 10 feet.
2.25	22			12	CH	
2.0	29			15	3	@14': gray (5Y, 5/1); 100% high-plas- ticity fines; very stiff; very moist; no gasoline odor. @19': abundant caliche disseminated; no gasoline odor.
				20	4	

REMARKS

Drilled with 8- and 12-inch continuous-flight, hollow-stem auger drilling
equipment. Converted to a 4-inch monitoring well as detailed on Plate B.

LOG OF EXPLORATORY BORING

PROJECT NUMBER 738-08.03

BORING NO. S-5

PROJECT NAME Gettler-Ryan, Shell, Washington & Lewelling PAGE 2 OF 2

BY JDB DATE 12/24/86

SURFACE ELEV. 21.71'

TORVANE (TSF)	POCKET PENETRO- METER (TSF)	PENETRA- TION (Blows/ Ft.)	GROUND WATER LEVELS	DEPTH IN FT.	SAMPLES	LITHO- GRAPHIC COLUMN	DESCRIPTION
				20			BOTTOM OF BORING AT 20.5 FEET
				25			
				30			
				35			
				40			

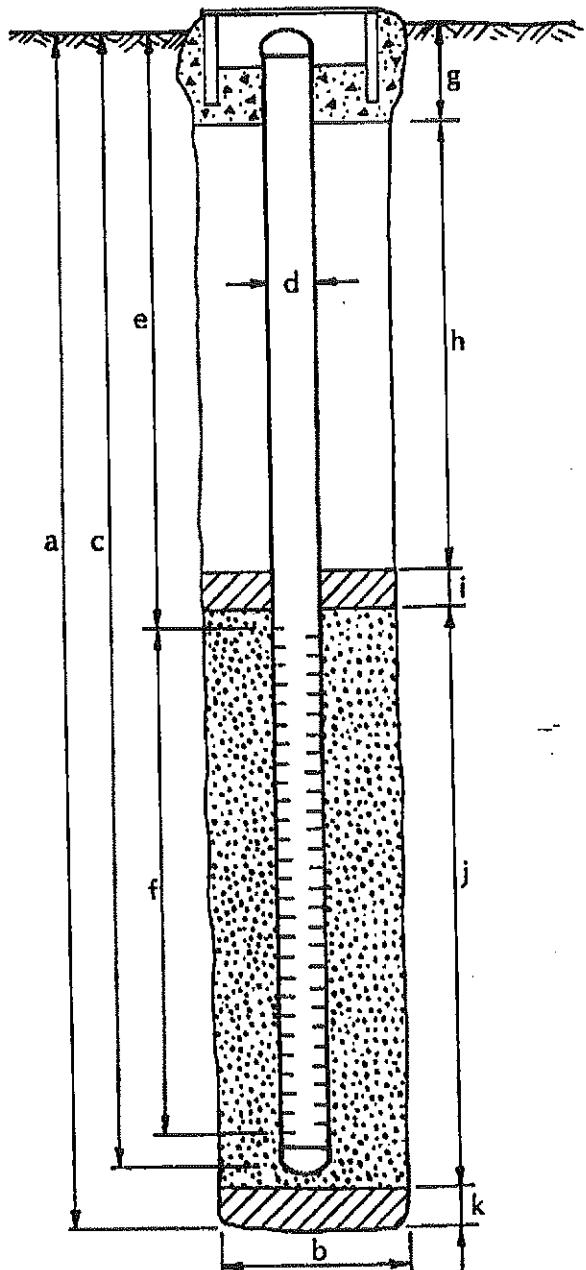
REMARKS

WELL DETAILS



PROJECT NUMBER 738-08.03 BORING / WELL NO. S-5
 PROJECT NAME Shell, Washington & Lewelling TOP OF CASING ELEV. 21.24'
 COUNTY Alameda San Leandro GROUND SURFACE ELEV. 21.71'
 WELL PERMIT NO. DATUM Project

G-5 vault box (Std.)



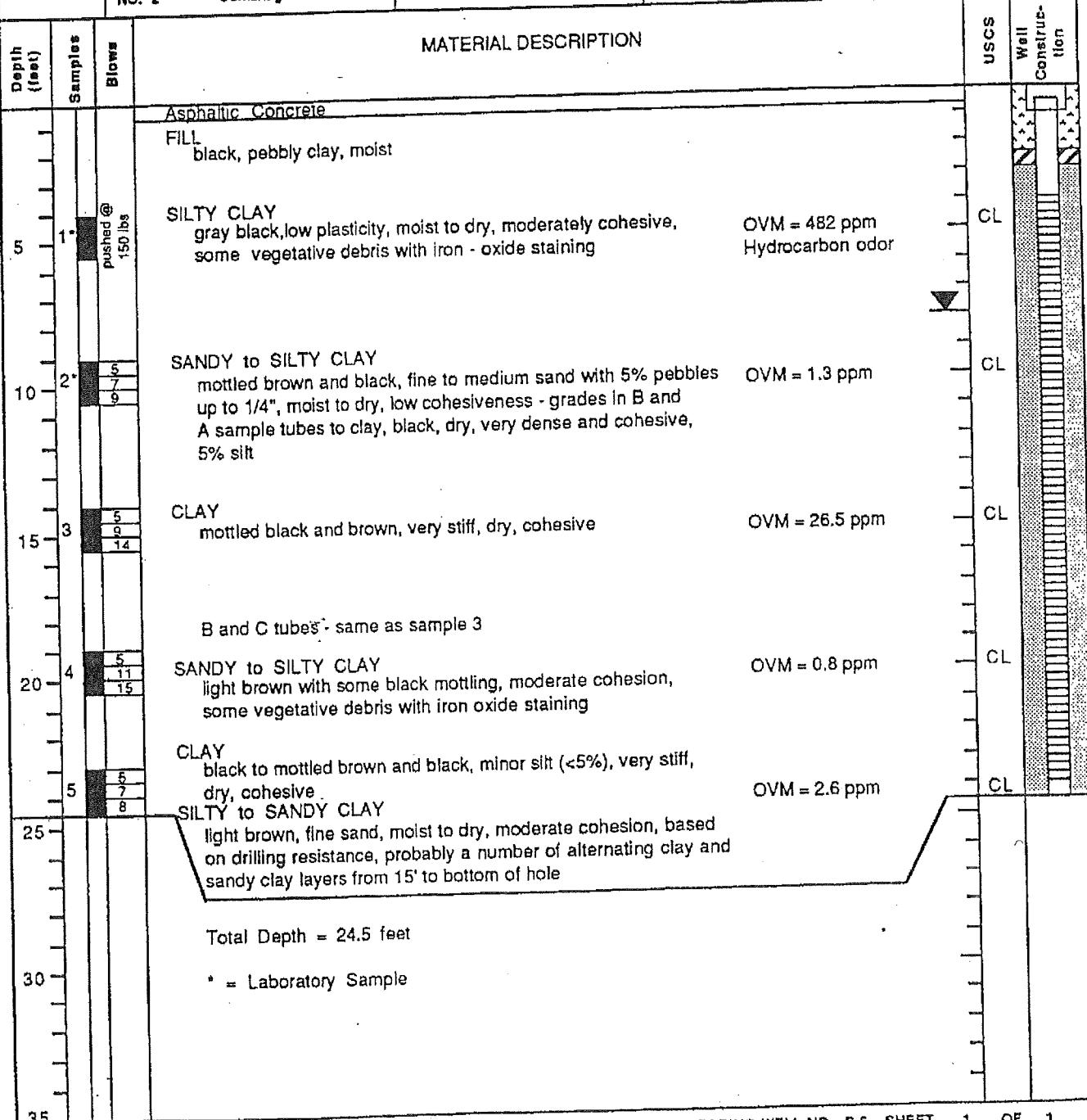
EXPLORATORY BORING

- a. Total depth 20 $\frac{1}{2}$ ft.
- b. Diameter 12 in.
- Drilling method Hollow-stem auger

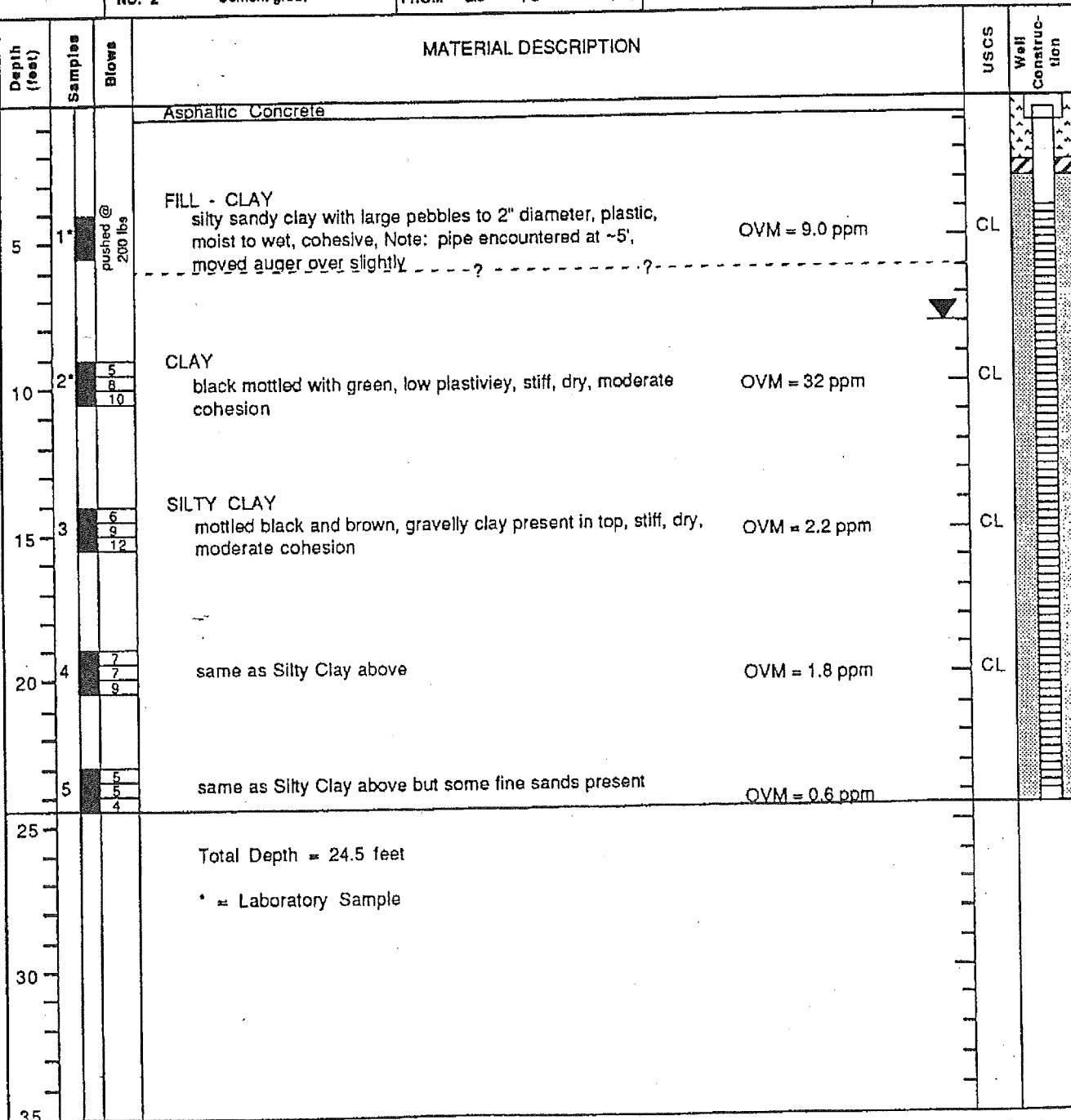
WELL CONSTRUCTION

- c. Casing length 18 $\frac{1}{2}$ ft.
Material schedule 40 PVC
- d. Diameter 4 in.
- e. Depth to top perforations 3 $\frac{1}{2}$ ft.
- f. Perforated length 15 ft.
Perforated interval from 18 $\frac{1}{2}$ to 3 $\frac{1}{2}$ ft.
Perforation type machined slot
Perforation size 0.020 inch
- g. Surface seal (1 - 0') 1 ft.
Seal material concrete
- h. Backfill (1 $\frac{1}{2}$ - 1') $\frac{1}{2}$ ft.
Backfill material concrete
- i. Seal (2 $\frac{1}{2}$ - 1 $\frac{1}{2}$ ') 1 ft.
Seal material bentonite
- j. Gravel pack (18 $\frac{1}{2}$ - 2 $\frac{1}{2}$ ') 16 ft.
Pack material 6x12 Monterey Sand
- k. Bottom seal (20 $\frac{1}{2}$ - 18 $\frac{1}{2}$ ') 2 ft.
Seal material compacted clay

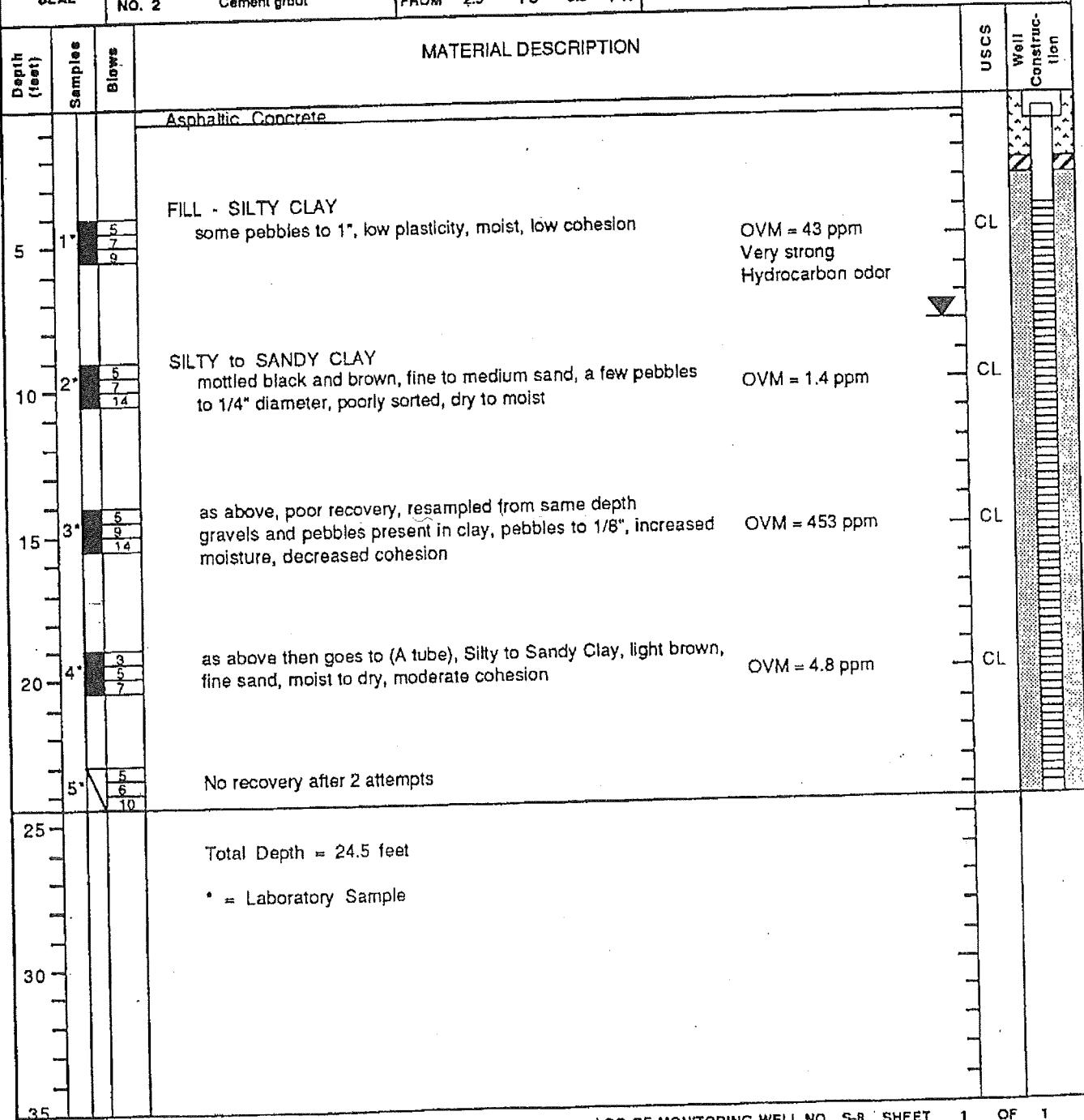
MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-6)			ELEVATION AND DATUM			
DRILLING AGENCY	Bay Land Drilling	DRILLER	DATE STARTED 11/3/88 DATE FINISHED			
DRILLING EQUIPMENT	CME - 55		COMPLETION DEPTH	24.5'	SAMPLER	Modified California
DRILLING METHOD	8" Hollow stem auger	DRILL BIT	CME Carbide	NO. OF SAMPLES	DIST. 5	UNDIST. 5
SIZE AND TYPE OF CASING	Sch 40 3" PVC	FROM	24.0 TO 0.5 FT.	WATER LEVEL	FIRST 8'	COMPL. 24 HRS.
TYPE OF PERFORATION	0.02"	FROM	24.0 TO 4.0 FT.	LOGGED BY: R. Siegel		CHECKED BY: M. Bonkowski
SIZE AND TYPE OF PACK	2/12 Monterey Sand	FROM	24.5 TO 3.0 FT.			
TYPE OF SEAL	NO. 1 1/2" Bentonite Pellets	FROM	3 TO 2.5 FT.			
	NO. 2 Cement grout	FROM	2.5 TO 0.5 FT.			



MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-7)				ELEVATION AND DATUM			
DRILLING AGENCY Bay Land Drilling		DRILLER Tom Mack		DATE STARTED 11/3/68		DATE FINISHED	
DRILLING EQUIPMENT CME - 55				COMPLETION 24.5'		SAMPLER	Modified California
DRILLING METHOD	8" Hollow stem auger	DRILL BIT	CME Carbide	NO. OF SAMPLES	DIST. 5	UNDIST.	5
SIZE AND TYPE OF CASING	Sch 40 3" PVC	FROM	24.0	TO 0.5 FT.	WATER LEVEL	FIRST -6'	COMPL. 24 HRS.
TYPE OF PERFORATION	0.02"	FROM	24.0	TO 4.0 FT.	LOGGED BY:		CHECKED BY:
SIZE AND TYPE OF PACK	2/12 Monterey Sand	FROM	24.5	TO 3.0 FT.	R. Siegel		M. Bonkowski
TYPE OF SEAL	NO. 1 Bentonite	FROM	3	TO 2.5 FT.			
	NO. 2 Cement grout	FROM	2.5	TO 0.5 FT.			



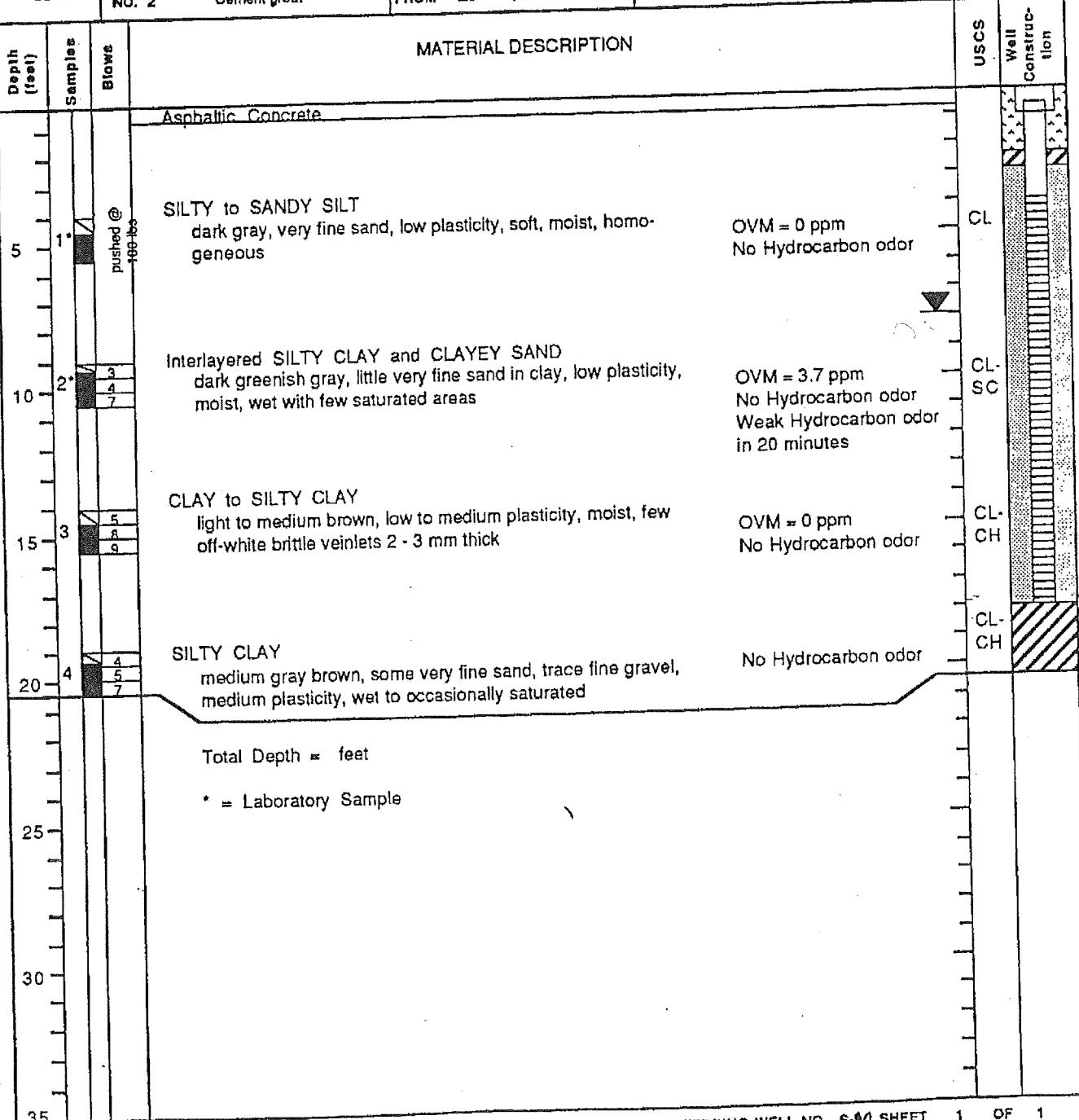
MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-8)				ELEVATION AND DATUM					
DRILLING AGENCY Bay Land Drilling		DRILLER Tom/Mack		DATE STARTED 11/3/88		DATE FINISHED			
DRILLING EQUIPMENT CME - 55				COMPLETION 24.5'		SAMPLER	Modified California		
DRILLING METHOD 8" Hollow stem auger				NO. OF SAMPLES	DIST. 5	UNDIST.	5		
SIZE AND TYPE OF CASING Sch 40 3" PVC		FROM 24.0	TO 0.5 FT.	WATER LEVEL	FIRST ~8'	COMPL.	24 HRS.		
TYPE OF PERFORATION 0.02"		FROM 24.0	TO 4.0 FT.	LOGGED BY:		CHECKED BY:			
SIZE AND TYPE OF PACK 2/12 Monterey Sand		FROM 24.5	TO 3.0 FT.	R. Siegel		M. Bonkowski			
TYPE OF SEAL	NO. 1	1/2" Bentonite Pellets	FROM 3	TO 2.5	FT.				
	NO. 2	Cement grout	FROM 2.5	TO 0.5	FT.				



MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-9)				ELEVATION AND DATUM				
DRILLING AGENCY Bay Land Drilling		DRILLER Tom/Mack		DATE STARTED 11/4/88		DATE FINISHED		
DRILLING EQUIPMENT CME - 55				COMPLETION DEPTH 18'		SAMPLER	Modified California	
DRILLING METHOD 8" Hollow stem auger		DRILL BIT	CME Carbide	NO. OF SAMPLES	DIST. 4	UNDIST.	—	
SIZE AND TYPE OF CASING Sch 40 3" PVC		FROM 18.0 TO 0.5 FT.		WATER LEVEL	FIRST 8' +/-	COMPL. 8.2	24 HRS.	
TYPE OF PERFORATION 0.02"		FROM 17.5 TO 4.0 FT.		LOGGED BY:		CHECKED BY:		
SIZE AND TYPE OF PACK 2/12 Monterey Sand		FROM 18 TO 3.0 FT.		G. Heyman		M. Bonkowski		
TYPE OF SEAL	NO. 1	1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.					
	NO. 2	Cement grout	FROM 2.5 TO surface FT.					
Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION				USCS	Wall Construction
			Asphaltic Concrete					
			FILL - SAND and GRAVEL					
			SILTY CLAY to CLAYEY SILT (cuttings) dark gray, little to some very fine sand, low to medium plasticity, moist to wet				Moderate Hydrocarbon odor	
5			SILTY CLAY to CLAYEY SILT dark gray, some very fine sand, low plasticity, soft, moist, homogeneous				OVM = 540 ppm Strong Hydrocarbon odor	CL
10			SANDY SILT to SANDY CLAY medium gray grading down to medium brown, very fine sand, low plasticity, wet, few vesicles less than 1 mm diameter, few root traces				OVM = 27 ppm Weak Hydrocarbon odor	CL
15			CLAY to SILTY CLAY medium gray brown to green brown, occasionally little very fine sand, little to some silt, medium plasticity, moist with wet to saturated areas adjacent to vesicles, few root fragments, few vesicles				OVM = 8 ppm No Hydrocarbon odor	CL-CH
20			CLAYEY SILT to SILTY CLAY medium gray brown, medium plasticity, firm, wet SANDY SILT to SILTY SAND light yellow brown, very fine sand, little to some clay, wet to saturated				OVM = 5 ppm No Hydrocarbon odor	CL-ML-SM
			Total Depth = 20.5 feet					
			* = Laboratory Sample					
25								
30								
35								

Pushed @ 150 lbs

MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-10)		ELEVATION AND DATUM			
DRILLING AGENCY Bay Land Drilling	DRILLER Tom Mack	DATE STARTED 11/4/88		DATE FINISHED	
DRILLING EQUIPMENT CME - 55		COMPLETION 18'		SAMPLER Modified California	DEPTH
DRILLING METHOD 8" Hollow stem auger	DRILL BIT CME Carbide	NO. OF SAMPLES	DIST. 4	UNDIST.	
SIZE AND TYPE OF CASING Sch 40 3" PVC	FROM 18.0 TO 0.5 FT.	WATER LEVEL	FIRST 8' +/-	COMPL. 7.1	24 HRS.
TYPE OF PERFORATION 0.02"	FROM 17.5 TO 4.0 FT.	LOGGED BY:		CHECKED BY:	
SIZE AND TYPE OF PACK 2/12 Monterey Sand	FROM 18 TO 3.0 FT.	G. Heyman		M. Bonkowski	
TYPE OF SEAL	NO. 1 1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.			
	NO. 2 Cement grout	FROM 2.5 TO surface FT.			



MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-11)				ELEVATION AND DATUM				
DRILLING AGENCY Bay Land Drilling		DRILLER Tom Mack		DATE STARTED 11/4/88		DATE FINISHED		
DRILLING EQUIPMENT CME - 55				COMPLETION DEPTH 24.5'		SAMPLER	Modified California	
DRILLING METHOD 8" Hollow stem auger		DRILL BIT	CME Carbide	NO. OF SAMPLES	DIST. 5	UNDIST.	5	
SIZE AND TYPE OF CASING Sch 40 3" PVC		FROM 24.5	TO 0.5 FT.	WATER LEVEL	FIRST 8'	COMPL. 7.6'	24 HRS.	
TYPE OF PERFORATION 0.02"		FROM 24.0	TO 4.0 FT.	LOGGED BY:		CHECKED BY:		
SIZE AND TYPE OF PACK 2/12 Monterey Sand		FROM 24.5	TO 3.5 FT.	G. Hayman		M. Bonkowski		
TYPE OF SEAL	NO. 1	1/2" Bentonite Pellets	FROM 3.5 TO 3.0 FT.					
	NO. 2	Cement grout	FROM 3.0 TO 0.5 FT.					
Depth (feet)	Sample #	Blows	MATERIAL DESCRIPTION				USCS	Well Construction
			Asphaltic Concrete and base rock					
5	1	pushed @ 175 lbs	SILTY to SANDY CLAY greenish gray, silt and very fine grained sand, content varies vertically, low plasticity, firm, moist, numerous vesicles less than 1 mm diameter				OVM = 110 ppm Moderate Hydrocarbon odor	CL
10	2	4 7 9	SILTY CLAY to CLAYEY SILT dark brown, little to some very fine sand, low plasticity, moist to wet, few vesicles				OVM = 0 ppm No Hydrocarbon odor	CL-ML
15	3	5 9 11	SILTY CLAY greenish brown, little to some very fine sand, medium plasticity, wet with saturated areas, gravel layers 1 - 2" thick from 16 - 18' (driller)				OVM = 0 ppm No Hydrocarbon odor	CL
20	4*	3 4 4	SILTY CLAY with interbedded CLAYEY SAND to SANDY CLAY Clay is grayish brown, medium plasticity, wet with saturated areas, sand is light yellow brown, very fine grained, loose, wet to saturated, up to 3" thick				OVM = 0.5 ppm No Hydrocarbon odor	CL-SC
25	5	4 7 8	SANDY CLAY to CLAYEY SAND layers are up to 5" thick, as above				No Hydrocarbon odor	CL
30			Total Depth = 24.5 feet					
35			* = Laboratory Sample					

MONITORING WELL LOCATION 15275 Washington Ave., San Leandro, CA (S-12)			ELEVATION AND DATUM					
DRILLING AGENCY Bay Land Drilling		DRILLER Tom Mack		DATE STARTED 11/4				
DRILLING EQUIPMENT CME - 55				DATE FINISHED		COMPLETION 24.5' SAMPLE Modified California		
DRILLING METHOD 8" Hollow stem auger		DRILL BIT CME Carbide		NO. OF SAMPLES 5		UNDIST. 5		
SIZE AND TYPE OF CASING Sch 40 3" PVC		FROM 24.0 TO 0.5 FT.		WATER LEVEL FIRST 8'		COMPL. 24 HRS.		
TYPE OF PERFORATION 0.02"		FROM 23.5 TO 3.5 FT.		LOGGED BY: G. Heyman		CHECKED BY: M. Bonkowski		
SIZE AND TYPE OF PACK 2/12 Monterey Sand		FROM 24.0 TO 3.0 FT.						
TYPE OF SEAL	NO. 1	1/2" Bentonite Pellets	FROM 3 TO 2.5 FT.					
	NO. 2	Cement grout	FROM 2.5 TO surface FT.					
Depth (feet)	Samples	Blows	MATERIAL DESCRIPTION				USCS	Well Construction
			Asphaltic Concrete					
5	1	pushed @ 200 lbs	CLAYEY SAND to SANDY CLAY grading down to SILTY CLAY TO CLAYEY SILT greenish gray at top with gray mottling in middle and bottom of sample, very fine sand, low plasticity, moist, generally homogeneous				OVM jumped to 190 ppm then settled at 120 ppm Weak Hydrocarbon odor	CL
10	2	4 5 7	SILTY CLAY dark brownish gray, some very fine sand, low plasticity, firm, moist to wet, few beds of clay, sand to 1/4" thick				OVM = 20 ppm Weak Hydrocarbon odor	CL
15	3	5 8 11	CLAY to SILTY CLAY medium grayish brown, some silt grading to silty clay, medium plasticity, wet homogeneous Driller indicates drilling through a series of 2 - 4" gravel layers from 16 - 19'				OVM = 0 ppm No Hydrocarbon odor	CL
20	4	3 4 5	CLAY to SANDY CLAY medium grayish brown, little to some very fine sand occasionally grading to sandy clay, low to medium plasticity, firm, saturated				No Hydrocarbon odor	CL
			CLAYEY SAND to SANDY CLAY medium yellow brown, very fine sand, saturated				OVM = 1 ppm No Hydrocarbon odor	
	5	4 5 7	SILTY CLAY to CLAYEY SILT medium yellow brown, up to some very fine sand, low to medium plasticity, saturated				OVM = 0 ppm No Hydrocarbon odor	CL
25			Total Depth = 24.5 feet					
30			* = Laboratory Sample					
35								

Field location of boring:

Project No.:	7615	Date:	4/26/89	Boring No.:
Client:	Shell			S-13
Location:	15275 Washington Ave/Lewelling			
City:	San Leandro			Sheet 1 of 2
Logged by:	DAF	Driller:	Bayland	

Casing installation data:

Drilling method: Hollow Stem Auger

Hole diameter: 8 inch

PID (ppm)	Blowst. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)
				1			
				2			
				3			
				4			
350	150	S&H	S-13-5'	5			
		push		6			
				7			
				8			
				9			
50	2	S&H	S-13-	10			
				11			
				12			
				13			
40	3	S&H	S-13-	14			
				15			
				16			
				17			
0	2	S&H	S-13-	18			
				19			
				20			

Top of Box Elevation: Datum:

Water Level	8.4'	7.3'	
Time	11:50am		
Date	4/26	5/10	

Description

PAVEMENT SECTION - 2 feet.

CLAY (CL)- dark gray (10YR 4/1); soft; damp; low plasticity; trace gravel; no chemical odor.

color change to dark olive gray (5Y 3/2); no chemical odor.

SILTY SAND (SM)- light olive brown (2.5Y 5/4); loose; damp; 20-30% silt; mottled brown; no chemical odor.

CLAY (CL)- dark olive gray (5Y 3/2), medium stiff; damp; low plasticity; trace gravel; rootholes; no chemical odor.

color change to very dark gray (5Y 3/1) mottled; organics present; no chemical odor.

becoming saturated at 17.5 feet.

SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated;

Remarks:

BORING NO.



GeoStrategies Inc.

JOB NUMBER
7615

REVIEWED BY AG/CEG
CMB/ceg/7615

DATE
5/89

REVISED DATE

REVISED DATE

S-13

Field location of boring:						Project No.: 7615	Date: 4/26/89	Boring No: S-13
Client: Shell						Location: 15275 Washington Ave/Lewelling		
City: San Leandro						Logged by: DAF	Driller: Bayland	Sheet 1 of 2
Casing installation data:								
Drilling method: Hollow Stem Auger						Top of Box Elevation:	Datum:	
Hole diameter: 8 inch						Water Level	8.4'	7.3'
P.D. (ftm)	Blowout or Pressure (psi)	Type of Sample	Sample Number	Depth (ft)	Sample	Well Detail	Soil Group Symbol (USCS)	Time Date Description
				1				
				2				
				3				
				4				
350	150	S&H	S-13-5'	5				CLAY (CL)- dark gray (10YR 4/1); soft; damp; low plasticity; trace gravel; no chemical odor.
		push		6				color change to dark olive gray (5Y 3/2); no chemical odor.
				7				
				8				
				9				
50	2	S&H	S-13-	10				
	3			11				
	6			12				
				13				
				14				
40	3	S&H	S-13-	15				
	5			16				
	7			17				
				18				
				19				
0	2	S&H	S-13-	20'				SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated;
	3							



GeoStrategies Inc.

BORING NO.

S-13

ITEM NUMBER

REVIEWED BY RG/CEG
Cmp ceg 1262

REVIEWED BY RG/CEG

DATE
5/89

REVISED DATE

REVISED DATE



GeoStrategies Inc.

BORING NO.

S-13

~~SEARCHED~~
SEARCHED
7615

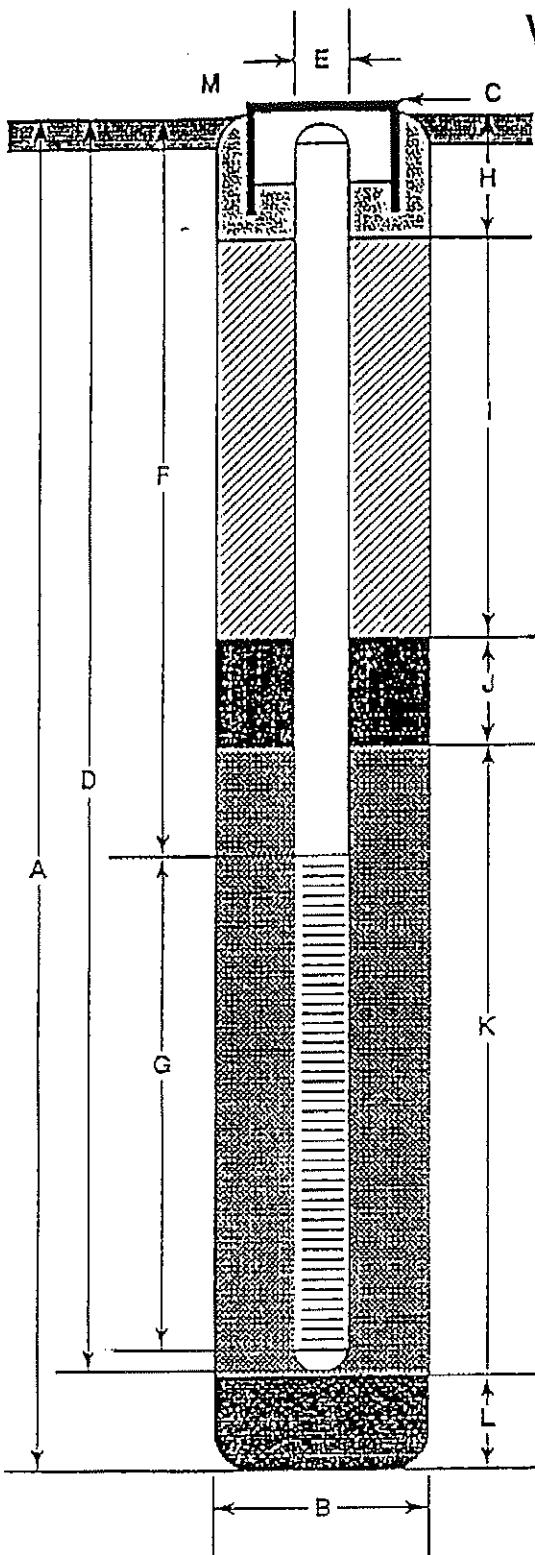
REVIEWED BY AGC/EG

DATE
5/89

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 24 ft.
- B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER
- C Top of Box Elevation 20.57 ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 23.5 ft.
Material SCH 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 4 ft.
- G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020
- H Surface Seal 2.5 ft.
Seal Material CONCRETE
- I Backfill _____ ft.
Backfill Material _____
- J Seal 0.5 ft.
Seal Material BENTONITE
- K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3
- L Bottom Seal _____ ft.
Seal Material _____
- M CHRISTY BOX



GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO.

S-13

JOB NUMBER
7615

REVIEWED BY RG/CEG
CLMP ceg 1262

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:							Project No.: 7615	Date: 4/26/89	Boring No.: S-14
Client: Shell									
Location: 15275 Washington Ave/Lewelling									
City: San Leandro							Sheet 1		
Logged by: DAF							Driller: Bayland	of 2	
Casing installation data:									
Drilling method: Hollow Stem Auger									
Hole diameter: 8 inch							Top of Box Elevation:		Datum:
PID (ppm)	Flow R. or Pressure (psf)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level 9'	
				1					
				2					
				3					
				4					
500	150	S&H	S-14-5'	5					
		push		6					
				7					
				8					
				9					
50	2	S&H	S-14-	10					
				11					
				12					
				13					
0	2	S&H	S-14-	14					
				15					
				16					
				17					
				18					
				19					
				20					
Remarks:									



GeoStrategies Inc.

BORING NO.

S-14

JOB NUMBER
7615

REVIEWED BY RG:CEG
CLIP CEG 1262

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:							Project No.: 7615	Date: 4/26/89	Boring No:
							Client: Shell		S-14
							Location: 15275 Washington Ave/Lewelling		
							City: San Leandro		Sheet 2
							Logged by: DAF	Driller: Bayland	of 2
							Casing installation data:		
Drilling method: Hollow Stem Auger									
Hole diameter: 8 inch							Top of Box Elevation:		Datum:
P/D (ft/min)	Slews/T. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Samples	Wet Detail	Soil Group USCS	Water Level	
								Time	Date
Description									
7				21				SANDY SILT (ML)- light yellowish brown (2.5Y 6/4); medium stiff; saturated; 30% very fine to fine sand; 5-10% clay; trace caliche nodules; mottled brown & black; no chemical odor.	
				22					
				23					
				24					
2	SPT			25				CLAY (CL)- grayish brown (2.5Y 5/2); medium stiff; damp; low plasticity; trace caliche nodules; no chemical odor	
2									
4								Bottom of boring 24.0 feet, sampled to 25.5 feet 4/26/89	
Remarks:									



GeoStrategies Inc.

BORING NO.

S-14

JOB NUMBER
7615

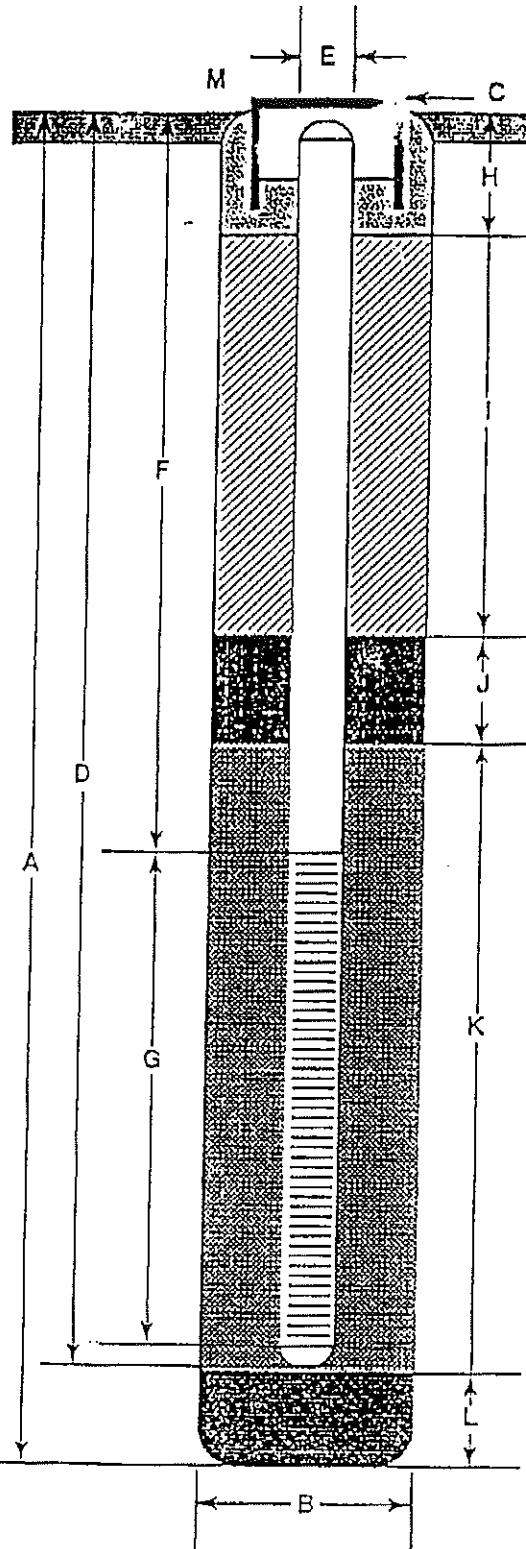
REVIEWED BY RG/CEG

DATE
5/89

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 24 ft.
- B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER
- C Top of Box Elevation 20.44 ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 23.5 ft.
Material SCH 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 4 ft.
- G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020
- H Surface Seal 2.5 ft.
Seal Material CONCRETE
- I Backfill _____ ft.
Backfill Material _____
- J Seal 0.5 ft.
Seal Material BENTONITE
- K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3
- L Bottom Seal _____ ft.
Seal Material _____
- M CHRISTY BOX



GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO.

S-14

JOB NUMBER
7615

REVIEWED BY PG/CEG
CMW/CEG/126Z

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:							Project No.: 7615	Date: 4/26/89	Boring No: S-15							
Client: Shell							Location: 15275 Washington Ave/Lewelling									
City: San Leandro							Sheet 1 of 2									
Logged by DAF							Driller: Bayland									
Casing installation data:																
Drilling method: Hollow Stem Auger							Top of Box Elevation: Datum:									
Hole diameter: 8 inch							Water Level 8.3'									
PDI (ppm)	Blowcount or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Wall Detail	Soil Group Symbol (NCS)	Time 2:25pm								
								Date 4/26/89	Description							
PAVEMENT SECTION - 2.5 feet.																
1																
2																
3																
CLAY (CL) - very dark grayish brown (2.5Y 3/2); medium stiff; damp; low plasticity; trace gravel.																
4																
55	150	S&H	S-15-5' push	5				SILTY CLAY (CL-ML) -olive (3Y 4/3); soft; damp; low plasticity; mottled brown.								
6																
7																
SILTY SAND (SM) -olive brown (2.5Y 4/4); loose; moist; poorly graded; trace clay.																
8																
9																
CLAY (CL) -very dark gray (5Y 3/1); stiff; damp; low plasticity; trace gravel; mottled brown; rootholes.																
10																
11																
12																
13																
14																
55	1	S&H	S-15-	14				becoming soft; 5% silt; trace caliche nodules at 14 feet.								
15																
16																
CLAY (CL) -olive gray (5Y 4/2); stiff; damp; low plasticity; mottled; trace caliche nodules.																
17																
18																
becoming saturated at 18.5 feet.																
19																
SILTY CLAY (CL-ML) -light olive brown (2.5Y 5/4); medium stiff; saturated; trace organics; trace caliche nodules.																
20																
Remarks:																



GeoStrategies Inc.

BORING NO.

S-15

JOB NUMBER
7615

REVIEWED BY PG/CEG
CJG/CEG 1262

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:								Project No.: 7615	Date: 4/26/89	Boring No.: S-15
								Client: Shell		
								Location: 15275 Washington Ave./Lewelling		
								City: San Leandro		Sheet 2
								Logged by: DAF	Driller: Bayland	of 2
								Casing installation date:		
								Top of Box Elevation:		Datum:
								Water Level		
								Time		
								Date		
								Description		
BID (ppm)	Blowout or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (ISCS)			
				21						
				22						
				23				CLAY (CL) - very dark gray (SY 3/1); medium stiff; damp; low plasticity.		
				24						
NM	1	SPT		25				SILTY CLAY (CL-ML) - light olive brown (2.5Y 5/4); medium stiff; damp; some sandy lenses.		
	3									
	5									
Bottom of boring 24.0 feet, Sampled to 25.5 feet 4/26/89										
Remarks:										



GeoStrategies Inc.

JOB NUMBER
7615

REVIEWED BY RG/CEG

DATE
5/89

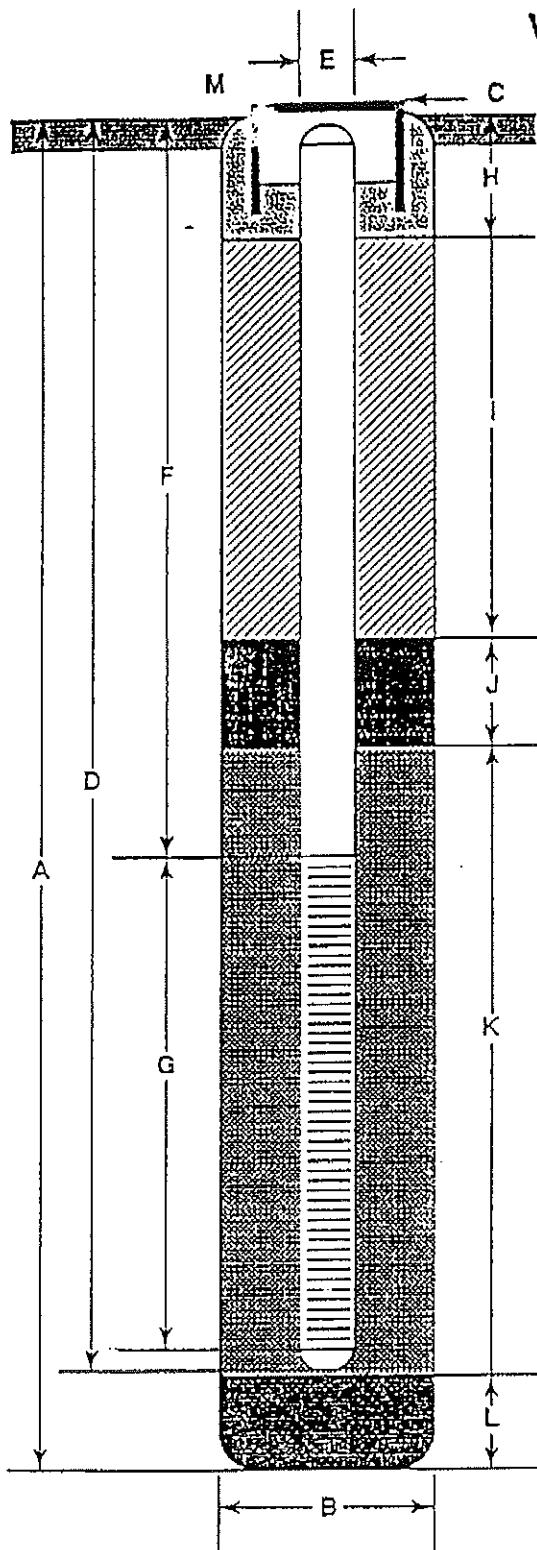
REVISED DATE

REVISED DATE

S-15

BORING NO.

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 24 ft.
- B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER
- C Top of Box Elevation 22.22 ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 23.5 ft.
Material SCH 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 4 ft.
- G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020
- H Surface Seal 2.5 ft.
Seal Material CONCRETE
- I Backfill _____ ft.
Backfill Material _____
- J Seal 0.5 ft.
Seal Material BENTONITE
- K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3
- L Bottom Seal _____ ft.
Seal Material _____
- M CHRISTY BOX



GeoStrategies Inc.

Well Construction Detail
Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO.

S-15

JOB NUMBER
7615

REVIEWED BY RGC/EG
CLIP CEG 126Z

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:							Project No.: 7615	Date: 4/25/89	Boring No: S-16
Client: Shell							Location: 15275 Washington Ave/Lewelling		
City: San Leandro							Sheet 1 of 2		
Logged by: DAF Drill: Bayland							Casing installation data:		
Drilling method: Hollow Stem Auger							Top of Box Elevation.		
Hole diameter: 8 inch							Datum:		
PID (ppm)	Bicarb. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Description	
				1				PAVEMENT SECTION - 2 feet.	
				2					
				3				CLAY WITH GRAVEL (CL) -dark grayish brown (10 YR 4/2); medium stiff; damp; 5% subrounded pebbles; slight mottling.	
				4					
560	150	S&H	S-16-5'	5				CLAY (CL) -dark grayish brown (10YR 4/2); medium stiff; moist; 5% silt; slight mottling; strong chemical odor.	
		push		6					
				7					
				8					
				9					
0	3	S&H	S-16-	10				CLAY (CL) -very dark grayish brown (10YR 3/2); stiff; damp; increasing silt; trace sand; root structures.	
	4			11					
	6			12					
				13					
				14					
0	3	S&H	S-16-	15				CLAY (CL) -grayish brown (10YR 5/2); stiff; damp; trace organics; mottled; root structures.	
	6			16					
	7			17					
				18					
				19					
0	3	S&H	S-16-	20				SANDY CLAY (CL) -pale brown (10YR 6/3); stiff; damp.	
	4								
Remarks:									



GeoStrategies Inc.

BORING NO.

S-16

JOB NUMBER
7615

REVIEWED BY RGCEG
Clip CEG 1262

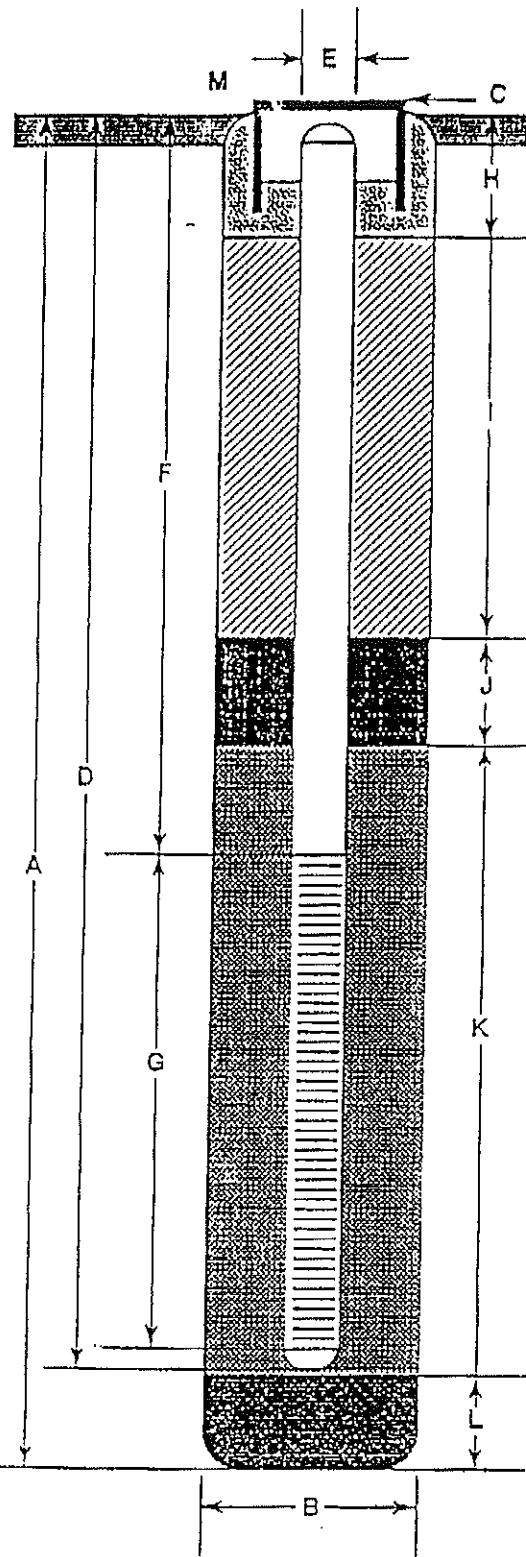
DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:						Project No.: 7615	Date: 4/25/89	Boring No:
Client: Shell								S-16
Location: 15275 Washington Ave/Lewelling								
City: San Leandro							Sheet 2	
Logged by: DAF						Driller: Bayland	of 2	
Casing installation data:								
Drilling method: Hollow Stem Auger						Top of Box Elevation:	Datum.	
Hole diameter: 8 inch						Water Level		
						Time		
						Date		
						Description		

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 24 ft.
- B Diameter of Boring 8 in.
Drilling Method HOLLOW STEM AUGER
- C Top of Box Elevation 21.82 ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 23.5 ft.
Material SCH 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 4 ft.
- G Perforated Length 20 ft.
Perforated Interval from 4 to 24 ft.
Perforation Type FACTORY SLOTTED
Perforation Size 0.020
- H Surface Seal 2.5 ft.
Seal Material CONCRETE
- I Backfill _____ ft.
Backfill Material _____
- J Seal 0.5 ft.
Seal Material BENTONITE
- K Gravel Pack 21 ft.
Pack Material LONESTAR 2/12 & #3
- L Bottom Seal _____ ft.
Seal Material _____
- M CHRISTY BOX



GeoStrategies Inc.

Well Construction Detail

Former Shell Service Station
15275 Washington Ave.
San Leandro

WELL NO.

S-16

JOB NUMBER
7615

REVIEWED BY RG/CIG
Clayp 6/4/1262

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring:							Project No.: 7615	Date: 4/25/89	Boring No:
							Client: Shell	S-17	
							Location: 15275 Washington Ave/Lewelling		
							City: San Leandro	Sheet 1	
							Logged by: DAF	Driller: Bayland	of 2
Casing installation data:									
Drilling method: Hollow Stem Auger									
Hole diameter: 8 inch							Top of Box Elevation:	Datum:	
PID (spn)	Blow # or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group (USCS)		
								Water Level	7.5'
								Time	12:50 pm
								Date	4/25/89
									Description
									PAVEMENT SECTION - 2 feet.
				1					
				2					
				3					SILTY SAND (SM) -very dark gray (5Y 3/1); loose; dry; >50% very fine to fine sand; trace clay.
				4					
12.5	150	S&H	S-17-5' push	5					SILTY CLAY (CL-ML) -dark greenish gray (SGY 4/1); medium stiff; damp; 5% very fine to fine sand; slight mottling - olive green & gray; moderate chemical odor.
				6					
				7					
				8					
				9					
0	3	S&H	S-17-	10					
				11					
				12					
				13					
				14					gravel up to 1 cm at 14 feet.
NM	2	SPT		15					
				16					
				17					
				18					
				19					
NM	2	SPT		20					
Remarks:									



GeoStrategies Inc.

BORING NO.

S-17

JOB NUMBER
7615

REVIEWED BY RCH/EG
Clip C64 1262

DATE
5/89

REVISED DATE

REVISED DATE



GeoStrategies Inc.

BOHIN3 NO.

S-17

JOB NUMBER
7615

REVIEWED BY RG CEG

DATE
5/89

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)								Project No.: 7615	Date: 10/27/89	Boring No:
								Client: Shell Oil Company		SR-1
								Location: 15275 Washington Avenue		
								City: San Leandro, California	Sheet 1	
								Logged by: M.J.J.	Driller: Bayland	of 3
Casing installation data:										
Drilling method: Hollow-Stem Auger								Pilot Boring		
Hole diameter: 8-inches								Top of Box Elevation: Datum:		
								Water Level	12.5	10.9
								Time		
								Date	10/27/89	10/27/89
								Description		
								PAVEMENT SECTION - 4 inches		
								FILL - Gravel (GW) - dark brown (10YR 3/3), damp, very loose.		
								FILL - Clay with Silt (CL) - black (5Y 2.5/1), damp, soft, high plasticity; < 5% coarse sand; strong chemical odor.		
								CLAY (CL) - black (2.5Y N3/2), damp, soft, medium plasticity; Interbeds of clayey sand (SP-SC); sand is very fine to fine; Interbeds occur as discrete units 3 to 5 inches thick; contain 10-20% fines; strong chemical odor.		

Field location of boring: (See Plate 2)							Project No.: 7615	Date: 10/27/89	Boring No:
							Client: Shell Oil Company		SR-1
							Location: 15275 Washington Avenue		
							City: San Leandro, California	Sheet 2 of 3	
							Logged by: M.J.J.	Driller: Bayland	
Casing Installation data:							Pilot Boring		
Drilling method: Hollow-Stem Auger							Top of Box Elevation:	Datum:	
Hole diameter: 8-inches							Water Level		
							Time		
							Date		
							Description		
PP (spn)	Blowout or Pressure (ps)	Type of Samples	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)		
80	4	S&H	SR1-20	20					
	6			21				CLAYEY SILT (ML-CL) - light olive brown (2.5Y 5/4), saturated, medium plasticity; 30% clay; 5% fine to medium sand; no chemical odor.	
				22					
				23					
				24				CLAY with SAND (CL) - olive gray (5Y 4/2), saturated, stiff, high plasticity; 20% very fine to fine sand; no chemical odor.	
66	3	S&H	SR1-30	25					
	6			26				SILT with SAND (ML) - light olive brown (2.5Y 5/4), saturated, stiff; 15% fine to medium sand; 20-30% clay; no chemical odor.	
				27					
				28					
				29				SAND with SILT (SP-SM) - light olive brown (5Y 4/2), fine sand, saturated, medium dense; well sorted; 10% silt; trace clay; laminae of silt 0.25 inches thick in shoe; iron oxide staining; no chemical odor.	
10	8	S&H	SR1-30	30					
	10			31					
				32					
				33					
				34				SILTY SAND (SM) - light olive brown (5Y 4/2), saturated, dense; very fine to medium sand; 15% silt; trace clay; no chemical odor.	
34	7	S&H	SR1-35	35					
	18			36					
				37					
				38					
				39				SAND (SP) - dark grayish brown (2.5Y 3/2), saturated, dense, very fine to medium sand; interbeds of fine	
Remarks:									



GeoStrategies Inc.

Log of Boring

BORING NO.

SR-1

JOB NUMBER
7615

REVIEWED BY PG/CEG
Cmp CEG 1262

DATE
11/89

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)							Project No.: 7615	Date: 10/27/89	Boring No:
							Client: Shell Oil Company		SR-1
							Location: 15275 Washington Avenue		
							City: San Leandro, California	Sheet 3	
							Logged by: M.J.J.	Drill: Bayland	of 3
							Casing Installation date:		
							Pilot Boring		
							Top of Box Elevation:	Datum:	
							Water Level		
							Time		
							Date		
							Description		
PD (feet)	Borehole diameter & Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Silty sand 0.5 to 3.0 inches thick; no chemical odor.		
8.2	13	S&H	SR1-40	40			Bottom of boring at 40.5 feet.		
	17			41			Bottom of sample at 40.5 feet, 10/27/89		
				42					
				43					
				44					
				45					
				46					
				47					
				48					
				49					
				50					
				51					
				52					
				53					
				54					
				55					
				56					
				57					
				58					
				59					
Remarks: Boring caved to 30 feet, Bentonite from 19 to 30 feet.									



GeoStrategies Inc.

Log of Boring

BORING NO.

SR-1

JOB NUMBER

7615

REVIEWED BY PG/CEG

CAMP REG 1A62

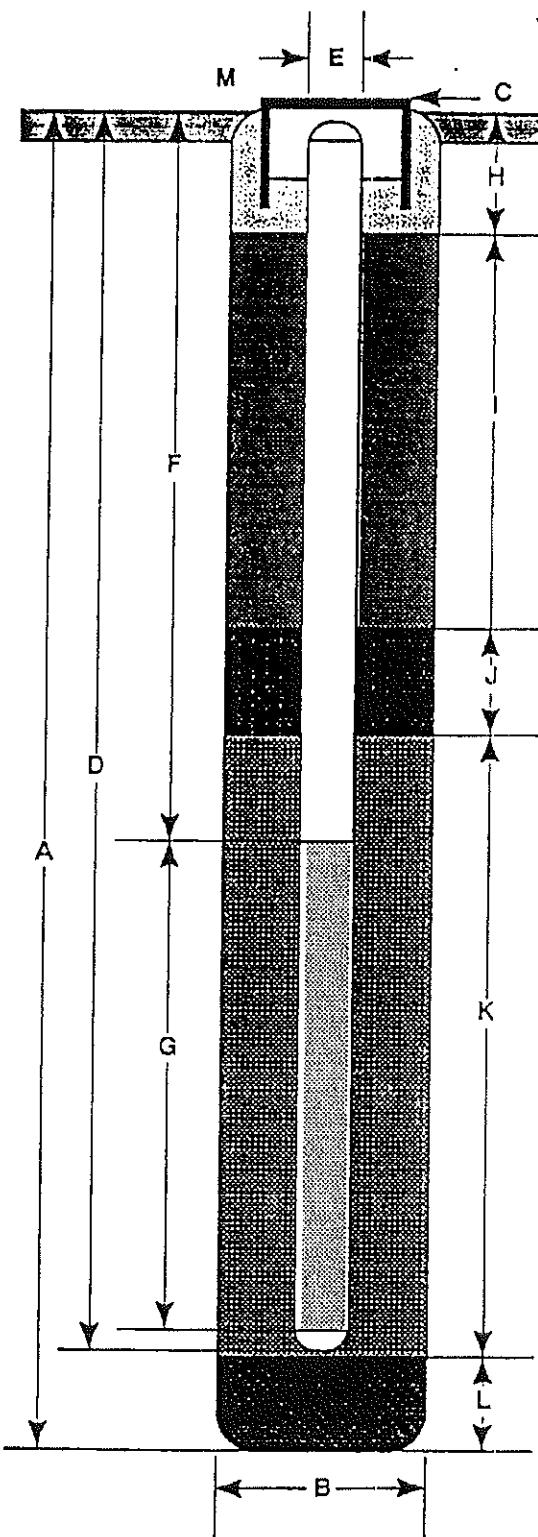
DATE

11/89

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 40.5 ft.
- B Diameter of Boring 20 in.
Drilling Method Bucket Auger
- C Top of Box Elevation
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 21 ft.
Material Schedule 40 PVC
- E Casing Diameter 6 in.
- F Depth to Top Perforations 6.5 ft.
- G Perforated Length 15 ft.
Perforated Interval from 6.5 to 21.5 ft.
Perforation Type Machine Slot
Perforation Size 0.020 in.
- H Surface Seal from 0.5 to 1.0 ft.
Seal Material concrete
- I Backfill from 1.0 to 4.5 ft.
Backfill Material cement
- J Seal from 4.5 to 5.5 ft.
Seal Material Bentonite
- K Gravel Pack from 5.5 to 21.5 ft.
Pack Material 2/12 Lonestar sand
- L Bottom Seal 21.5-30 ft.
Seal Material Bentonite
- M Christy Box

Note: 30 to 40.5 Native Material (slough)



GeoStrategies Inc.

Well Construction Detail

WELL NO.

SR-1

JOB NUMBER
7615

REVIEWED BY PG/CEG
Clay CEG/1262

DATE
10/89

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)							Project No.: 761502	Date: 05/16/91	Boring No: S-18		
							Client: Shell Oil Company				
							Location: 15275 Washington				
							City: San Leandro, California	Sheet 1 of 2			
							Logged by: E.C.F.	Driller: Bayland			
Casing Installation data:							(See Well Construction Detail)				
Drilling method: Hollow Stem Auger							Top of Box Elevation:	Datum:			
Hole diameter: 8-Inches							Water Level	7.5'	7.6'		
P.D. (ppm)	Blows/ft. or Pressure (psi)	Type of Sample	Sample Number	Depth (ft.)	Sample#	Well Depth	Soil Group Symbol (USCS)				
								Description			
				0				PAVEMENT SECTION - 0.33 feet			
				1				SAND (SP) - yellowish brown (10YR 5/4), medium dense, damp; 80% coarse to medium sand; 15% gravel; 5% fines (FILL).			
				2							
				3				SILT with SAND (ML) - very dark gray (7.5YR N3/), stiff, damp; 80% silt; 20% very fine sand (ALLUVIUM).			
				4							
	450	S&H		5							
0	450		S18-4.5	5							
	450			6							
				7				Soft drilling at 7.0 feet.			
				8				SILTY SAND (SM) - dark grayish brown (10YR 4/2), loose, 70% sand; 30% silt.			
				9							
				10				Increasing moisture and silt content with depth.			
				11							
				12							
				13							
				14							
				15				CLAY (CL) - gray brown (2.5Y 5/2), stiff, moist; trace fine sand with rootholes and vertical dark stains.			
				16							
				17							
				18							
				19							
Remarks:											
* Converted to equivalent Standard Penetration blows/ft.											

Log of Boring

BORING NO.



GeoStrategies Inc.

S-18

JOB NUMBER
761502

REVIEWED BY PG/CEG

DHP

DATE
05/91

REVISED DATE

REVISED DATE

Field location of boring: (See Plate 2)							Project No.: 761502	Date: 05/16/91	Boring No: S-18 Sheet 2 of 2
							Client: Shell Oil Company		
							Location: 15275 Washington		
							City: San Leandro, California		
							Logged by: E.C.F.	Driller: Bayland	
Casing installation data:									
Drilling method: Hollow Stem Auger									
Hole diameter: 8-Inches							Top of Box Elevation:	Datum:	
P.D. (ppm)	Blow/ft. or Pressure (ps)	Type of Sample	Sample Number	Depth (ft.)	Sample	Well Detail	Soil Group Symbol (USCS)	Water Level	
								Time	
		S&H		20				Date	
12			S18-20.5	21					
				22					
				23					
				24					
				25					
				26					
				27					
				28					
				29					
				30					
				31					
				32					
				33					
				34					
				35					
				36					
				37					
				38					
				39					



GeoStrategies Inc.

Log of Boring

BORING NO.

S-18

JOB NUMBER
761502

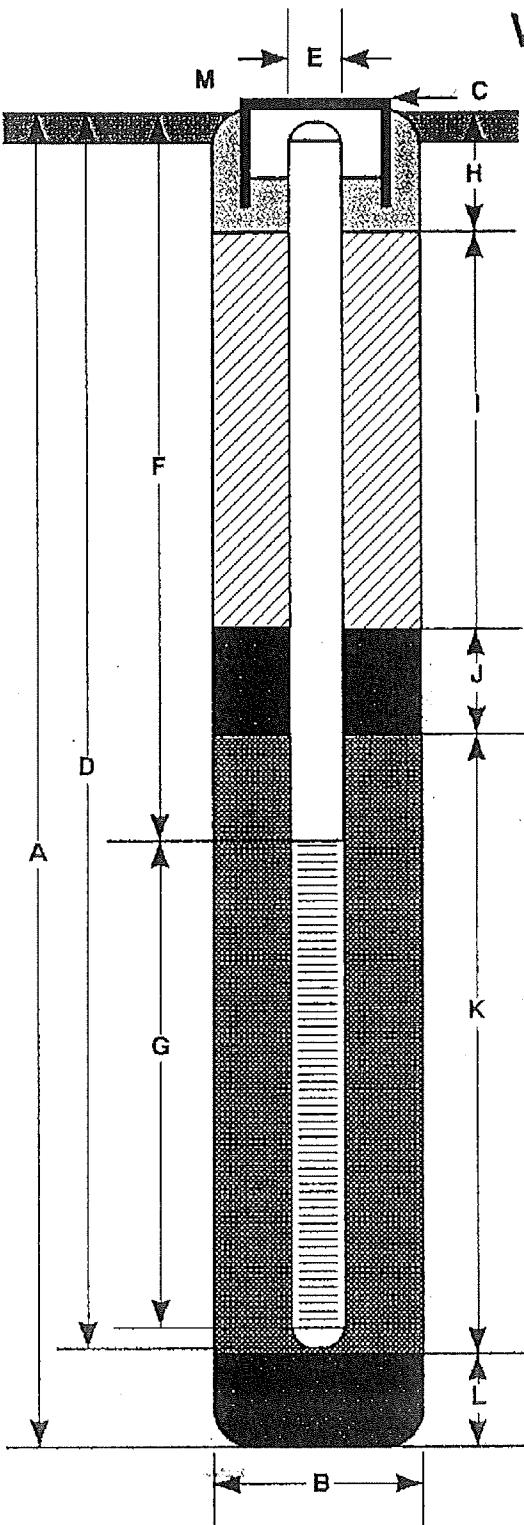
REVIEWED BY RG/CEG
DHP

DATE
05/91

REVISED DATE

REVISED DATE

WELL CONSTRUCTION DETAIL



- A Total Depth of Boring 19.0 ft.
- B Diameter of Boring 8 in.
Drilling Method Hollow Stem Auger
- C Top of Box Elevation _____ ft.
 Referenced to Mean Sea Level
 Referenced to Project Datum
- D Casing Length 18.0 ft.
Material Schedule 40 PVC
- E Casing Diameter 3 in.
- F Depth to Top Perforations 4 ft.
- G Perforated Length 12 ft.
Perforated Interval from 4 to 18 ft.
Perforation Type Machine Slotted
Perforation Size 0.02 in.
- H Surface Seal from 0 to 1.5 ft.
Seal Material Concrete
- I Backfill from 1.5 to 2 ft.
Backfill Material Concrete
- J Seal from 2 to 3 ft.
Seal Material Bentonite
- K Gravel Pack from 3 to 18 ft.
Pack Material 2/12 Lonestar Sand
- L Bottom Seal 1 ft.
Seal Material Bentonite
- M Underground vault with cover, cap and lock.

Note: Depths measured from initial ground surface.



GeoStrategies Inc.

Well Construction Detail

WELL NO.

S-18

JOB NUMBER
761502

REVIEWED BY PG/CEG
DHP

DATE
5/91

REVISED DATE

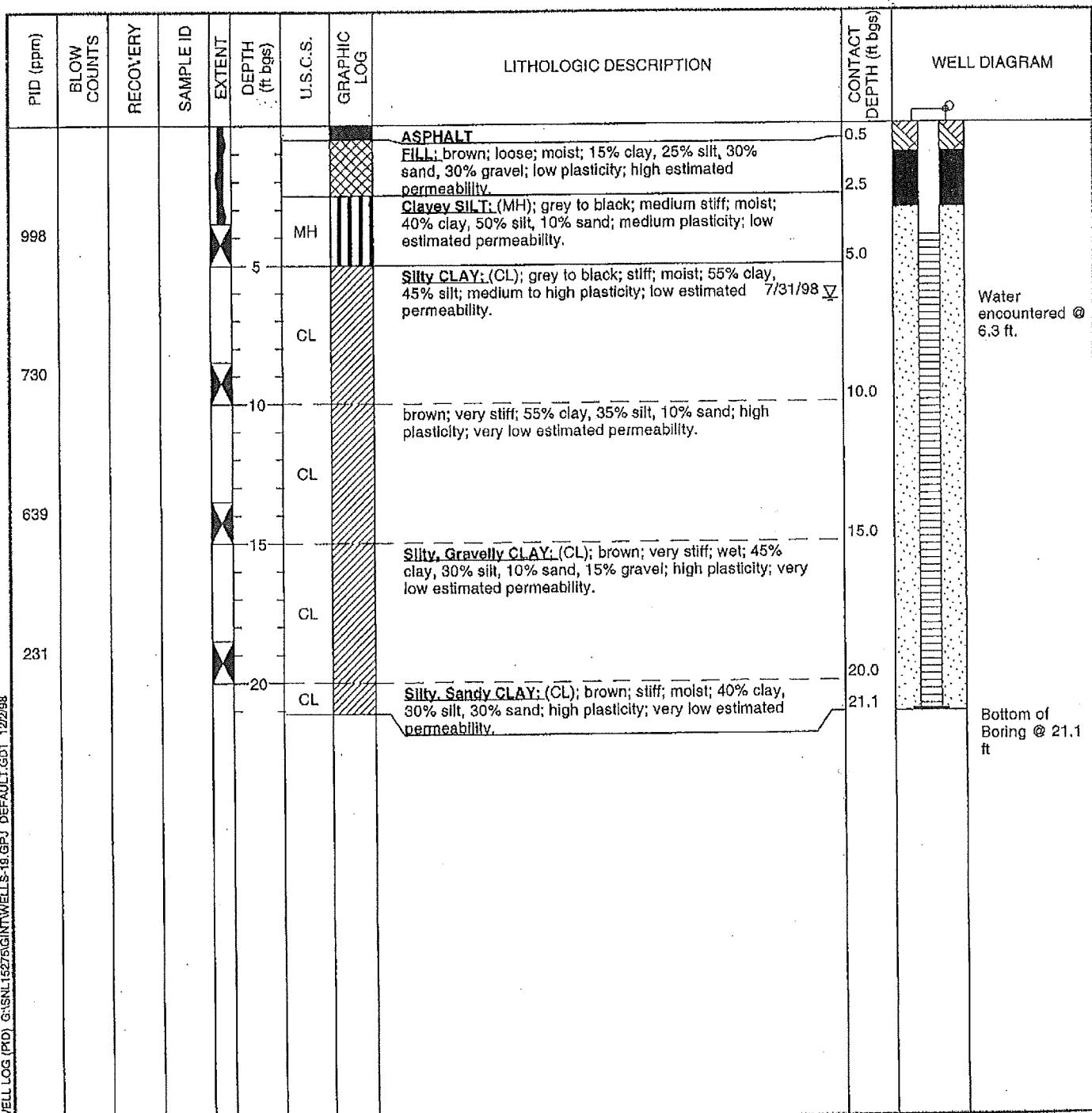
REVISED DATE



Cambria Environmental Technology, Inc.
1144 - 65th St.
Oakland, CA 94608
Telephone: (510) 420-0700
Fax: (510) 420-9170

BORING/WELL LOG

CLIENT NAME	Equilon Enterprises LLC	BORING/WELL NAME	S-19
JOB/SITE NAME	15275SNL	DRILLING STARTED	31-Jul-98
LOCATION	15275 Washington Avenue, San Leandro	DRILLING COMPLETED	31-Jul-98
PROJECT NUMBER	240-0933	WELL DEVELOPMENT DATE (YIELD)	NA
DRILLER	Gregg Drilling	GROUND SURFACE ELEVATION	NA
DRILLING METHOD	Hollow-stem auger	TOP OF CASING ELEVATION	NA
BORING DIAMETER	8"	SCREENED INTERVAL	4 to 21 ft bgs
LOGGED BY	J. Raggi	DEPTH TO WATER (First Encountered)	6.30 ft (31-Jul-98)
REVIEWED BY	D. Lunquist, PE	DEPTH TO WATER (Static)	
REMARKS	94 ft north of well S-9.		

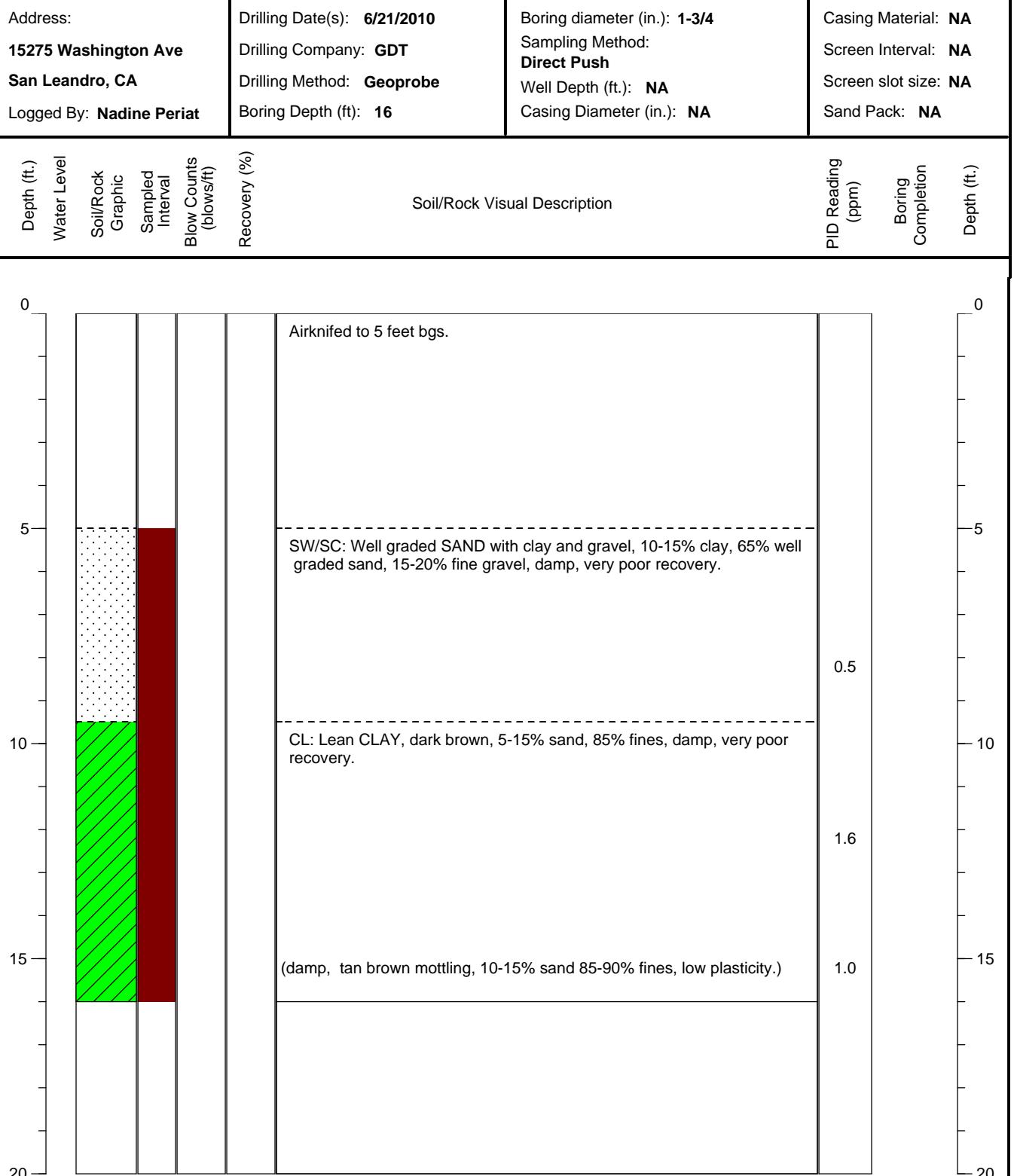




Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-1



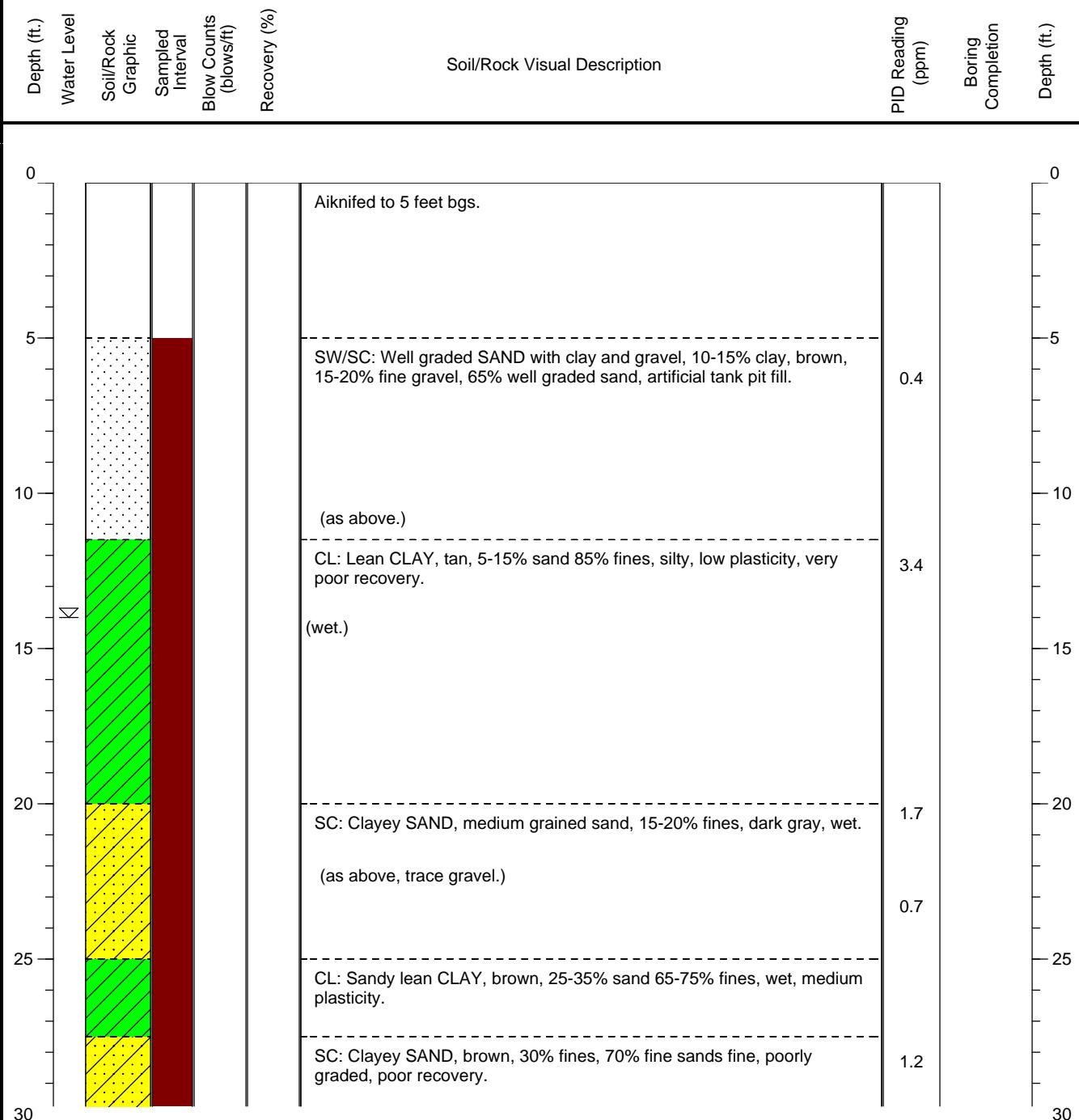


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-2

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/31/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 50	Boring diameter (in.): 1-3/4 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	--	---



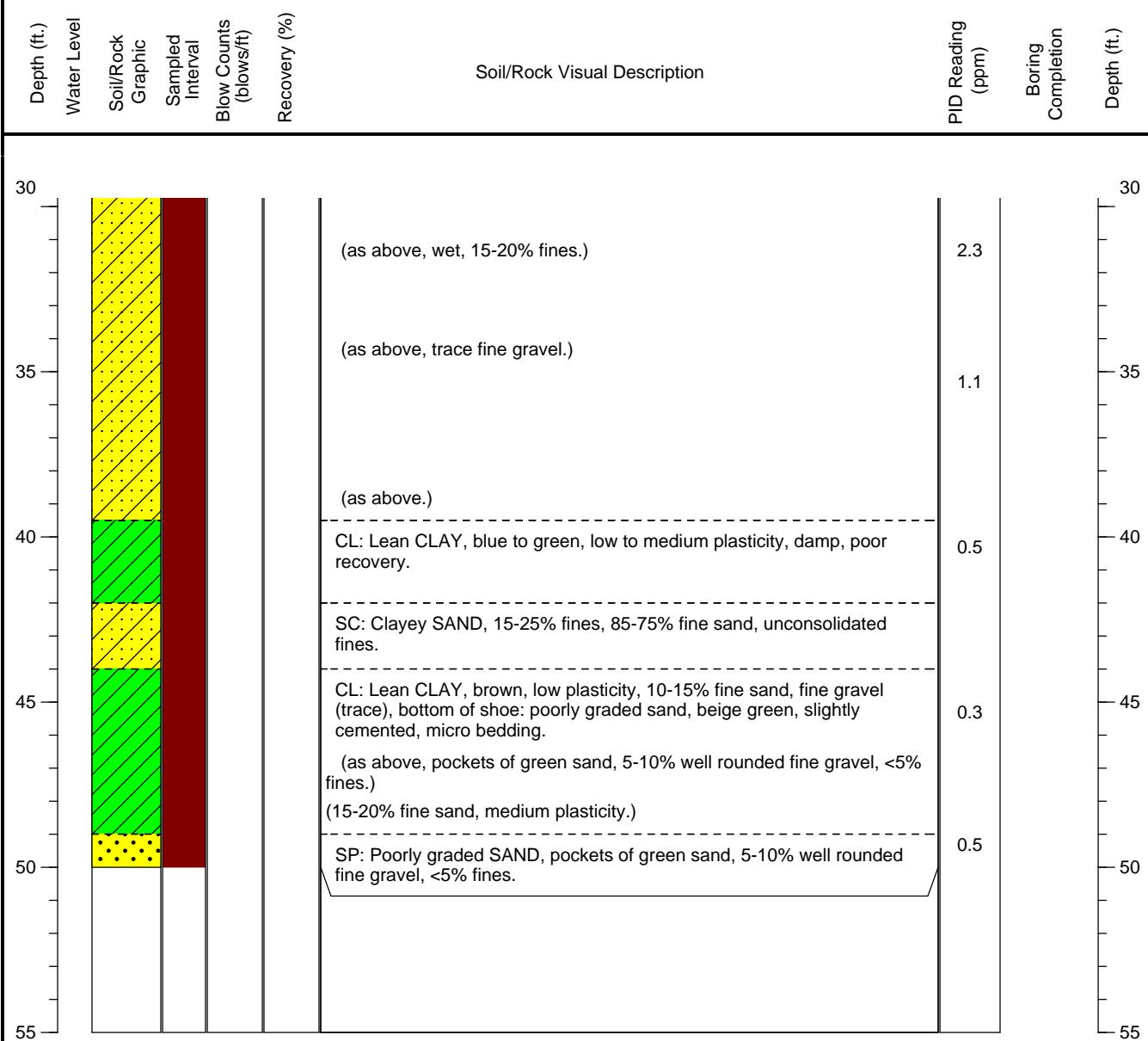


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-2

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/31/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 50	Boring diameter (in.): 1-3/4 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	--	---



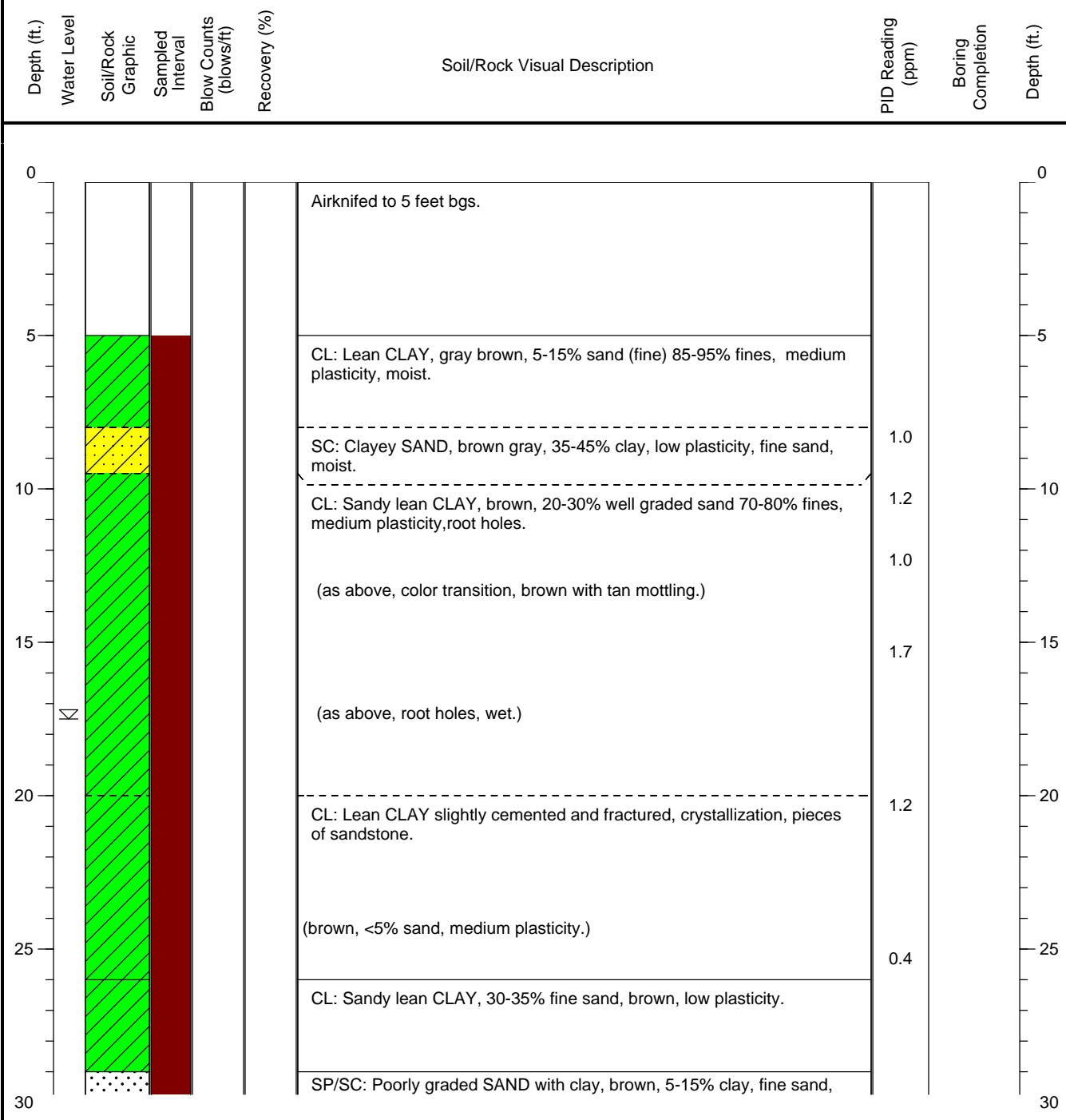


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-3

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/22/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 50	Boring diameter (in.): 1-3/4 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	--	---



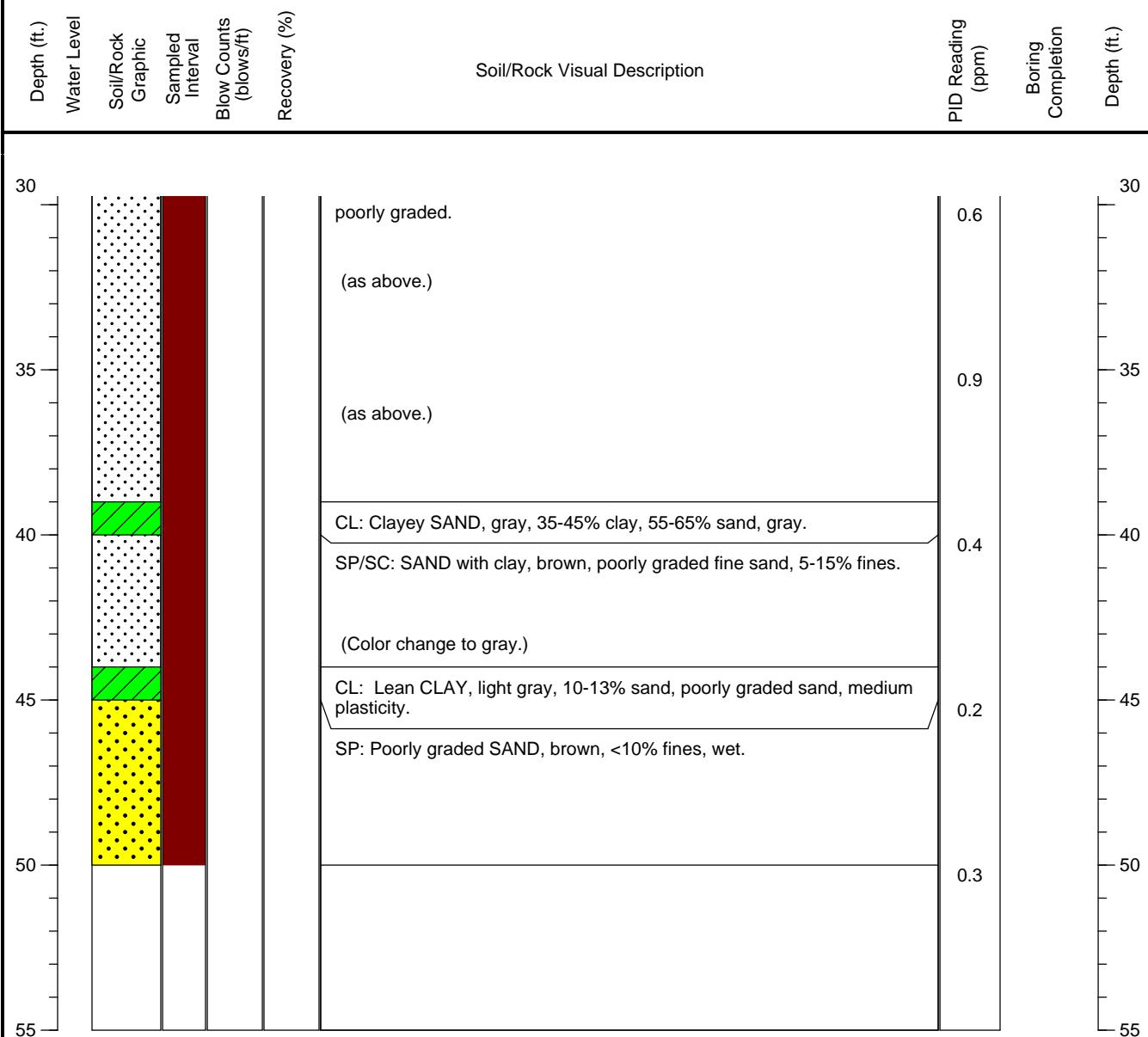


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-3

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/22/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 50	Boring diameter (in.): 1-3/4 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	--	---



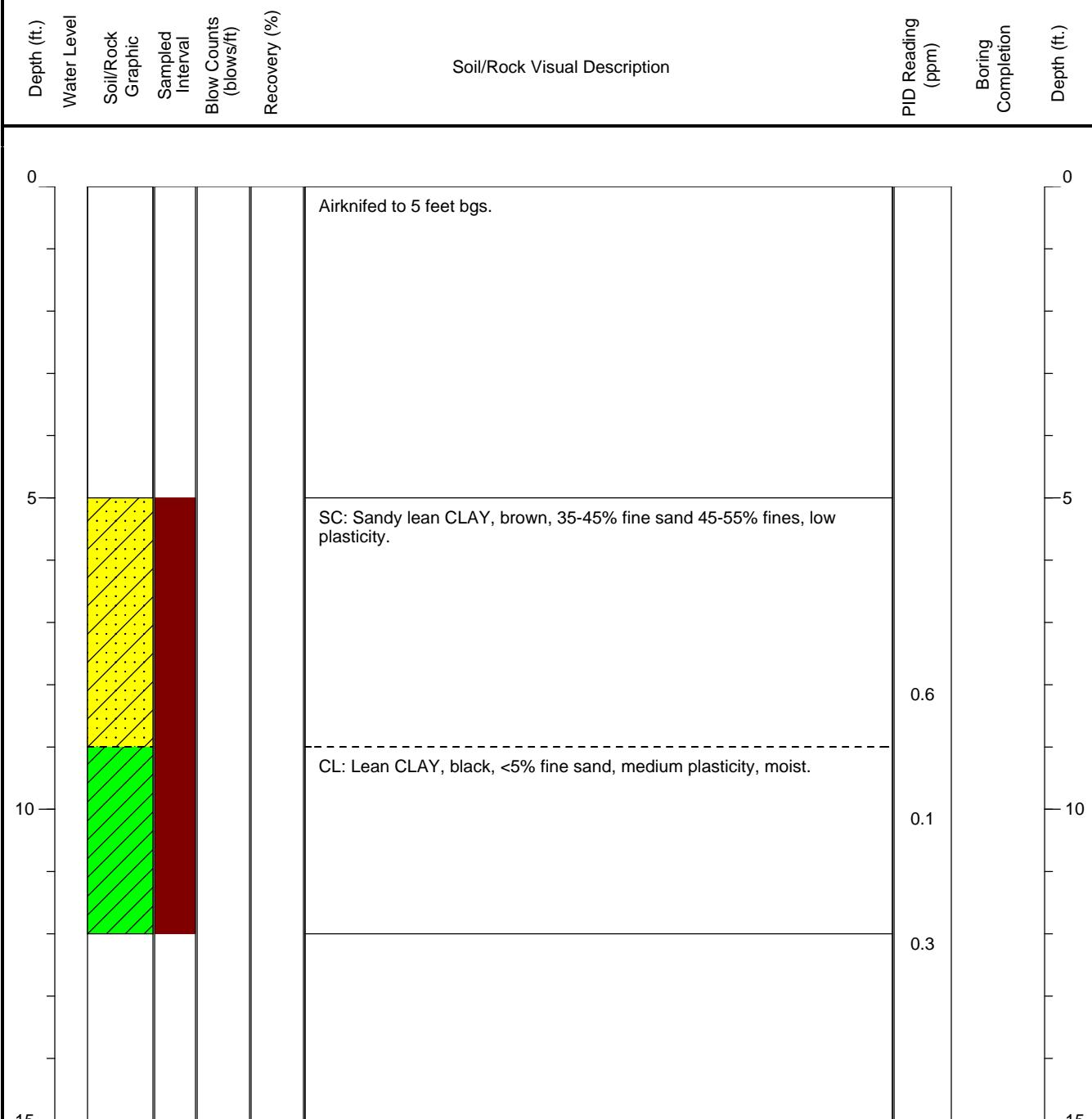


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-4

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/20/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 12	Boring diameter (in.): 1-3/4 Sampling Method: Direct Push Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	--	---

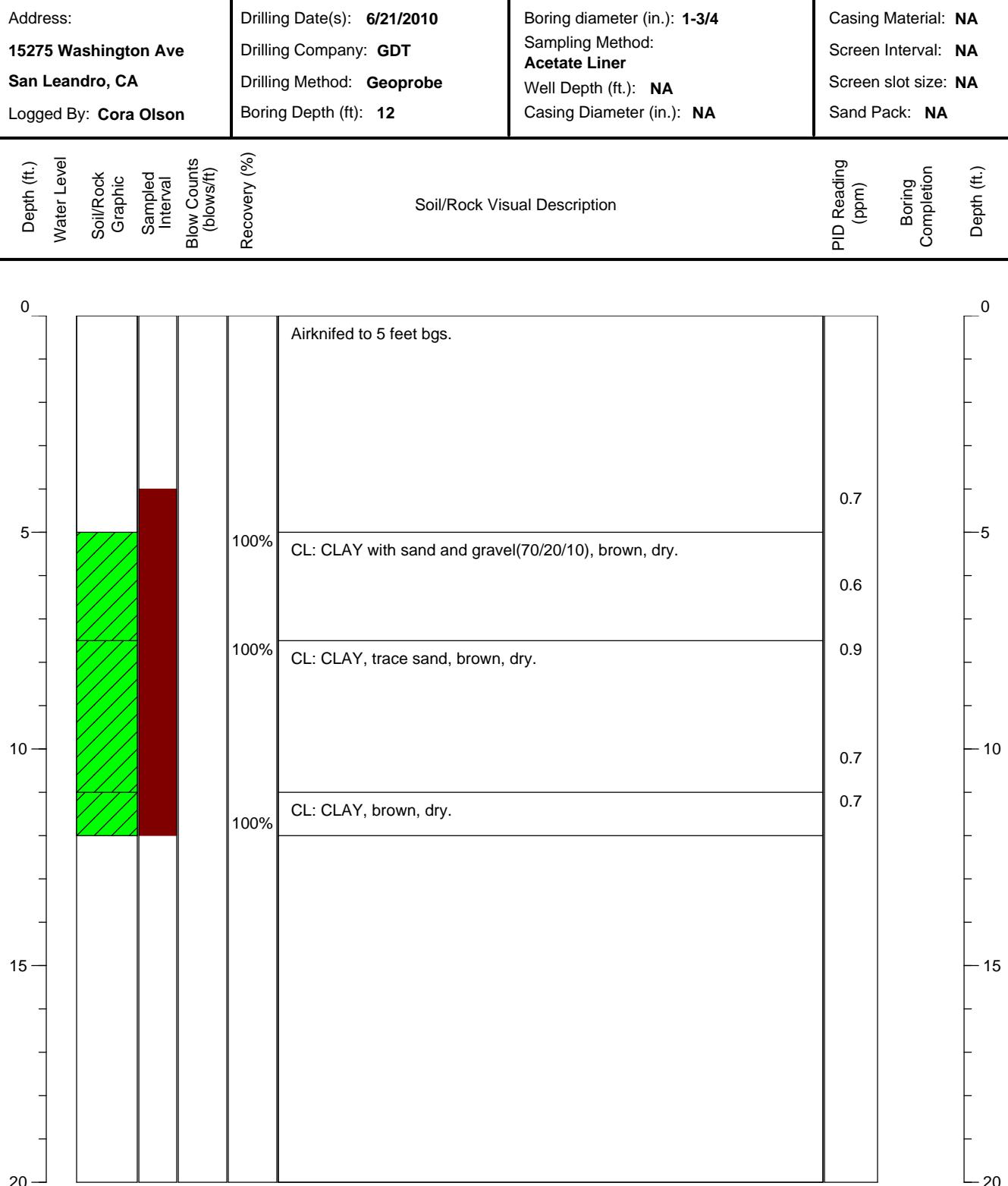




Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-5

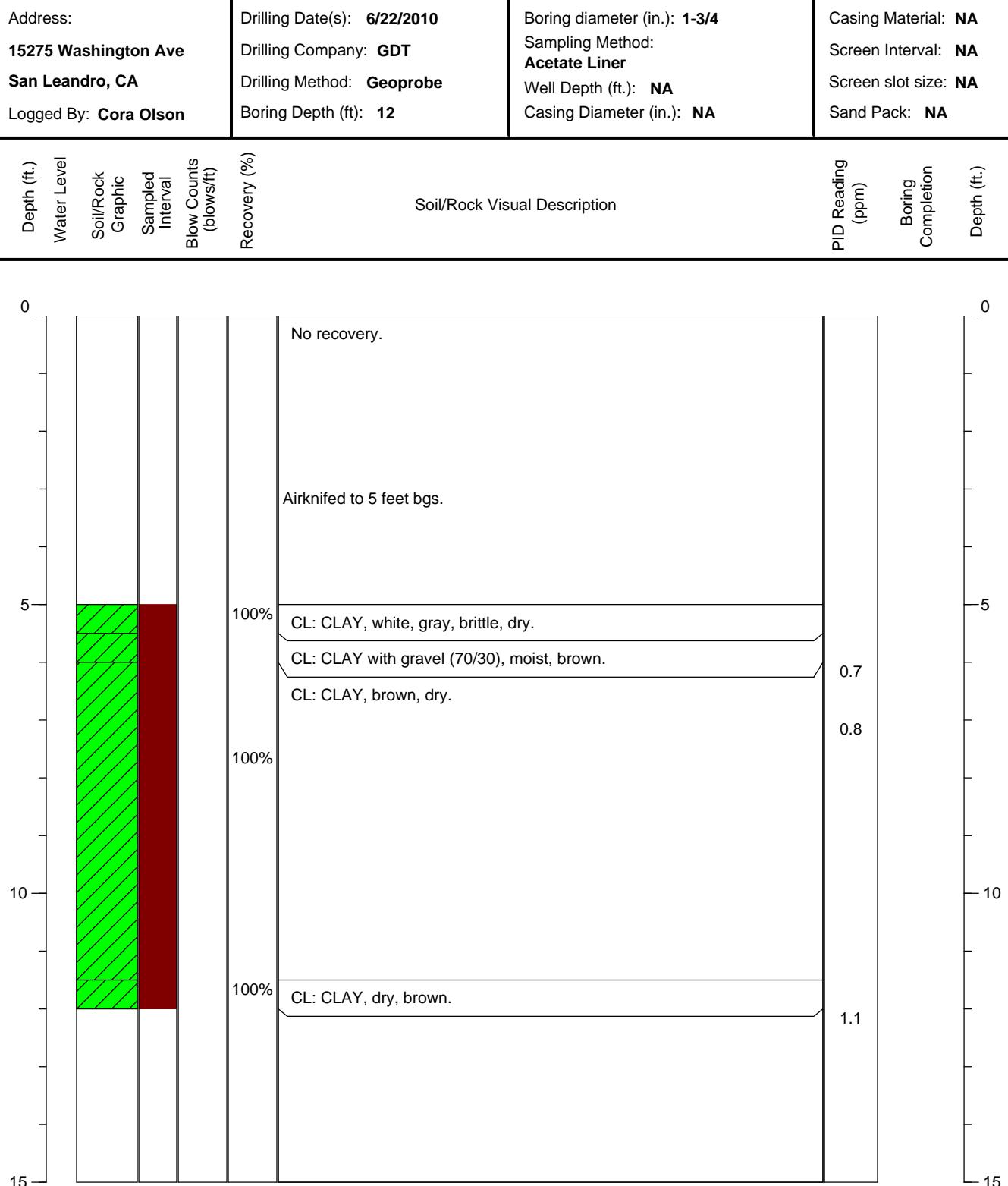




Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-6



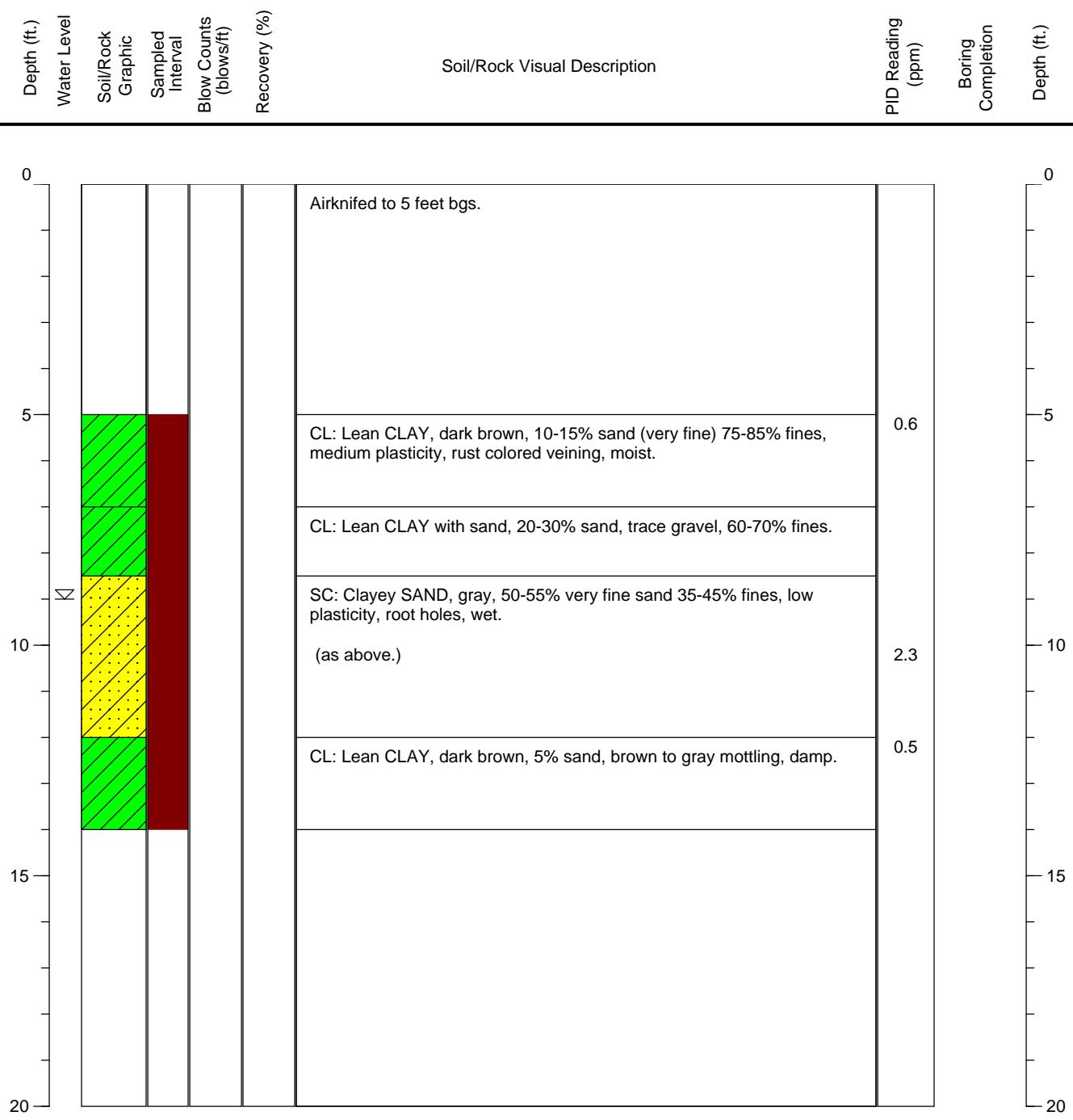


Client Shell Oil Products
Project Number SCA152751D

BORING LOG

**Boring No.
SB-7**

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/21/2010 Drilling Company: GDT Drilling Method: Geoprobe	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
Logged By: Nadine Periat	Boring Depth (ft): 14		



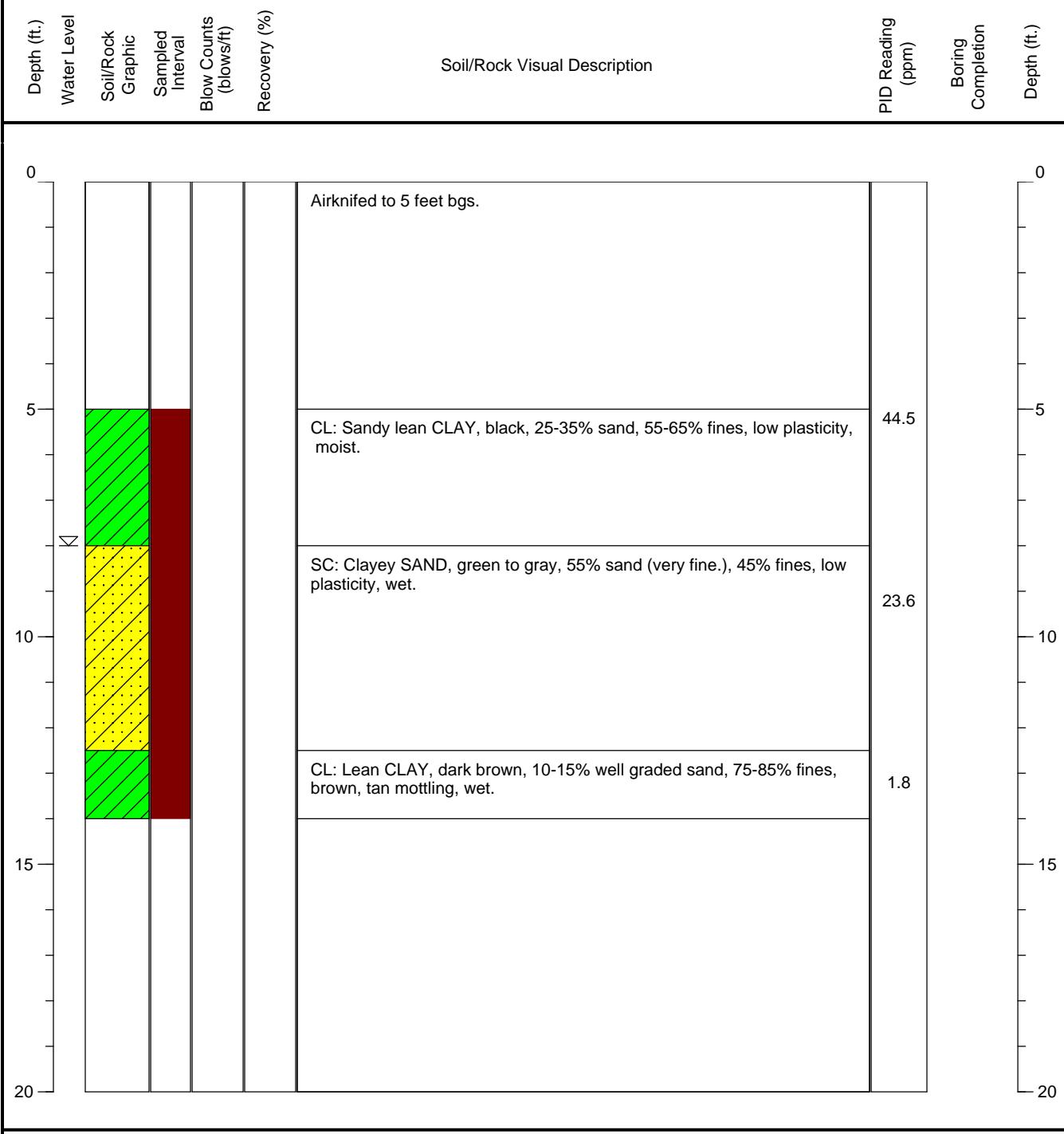


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-8

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/21/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 14	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---



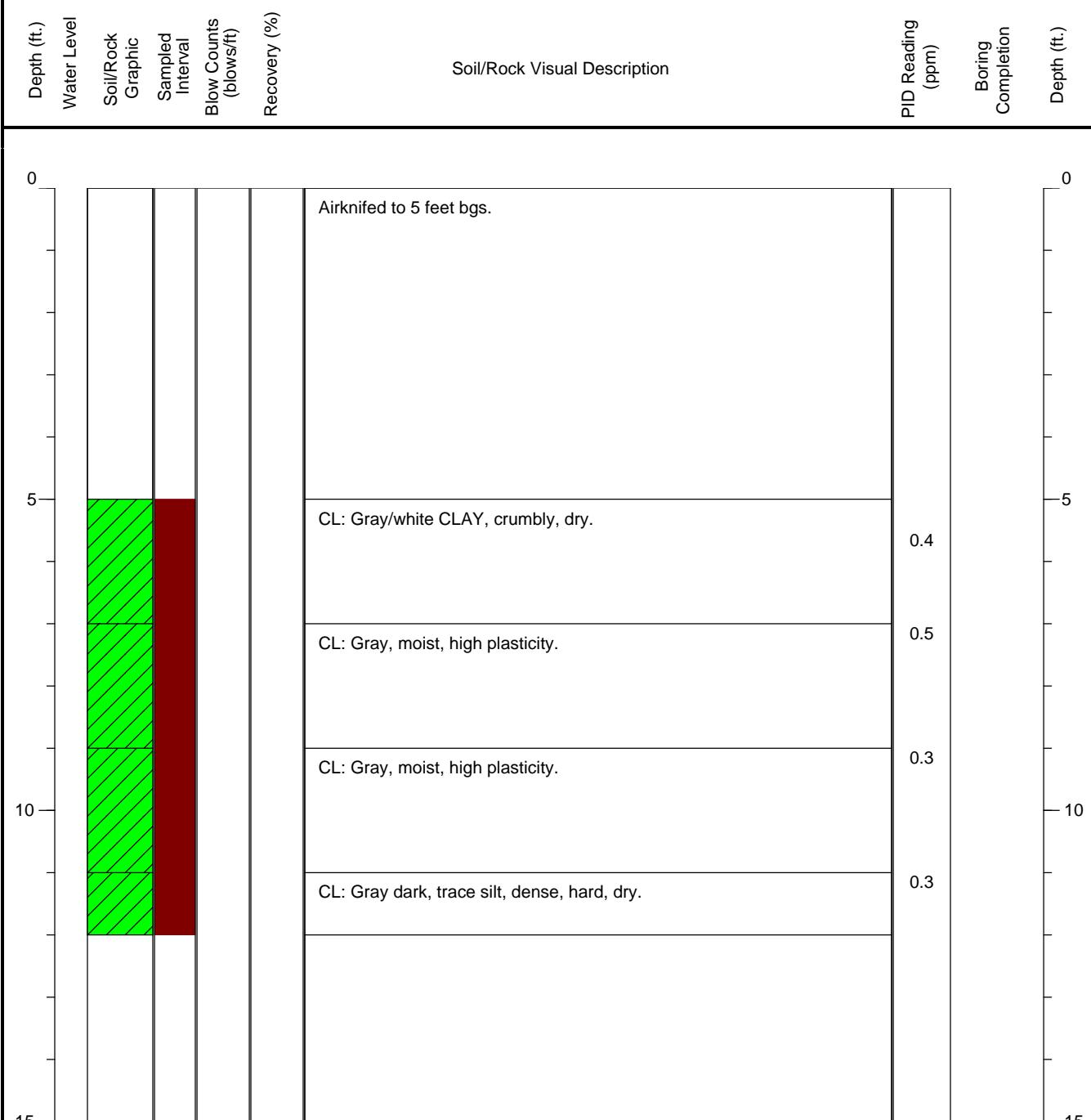


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-9

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/21/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 12	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---



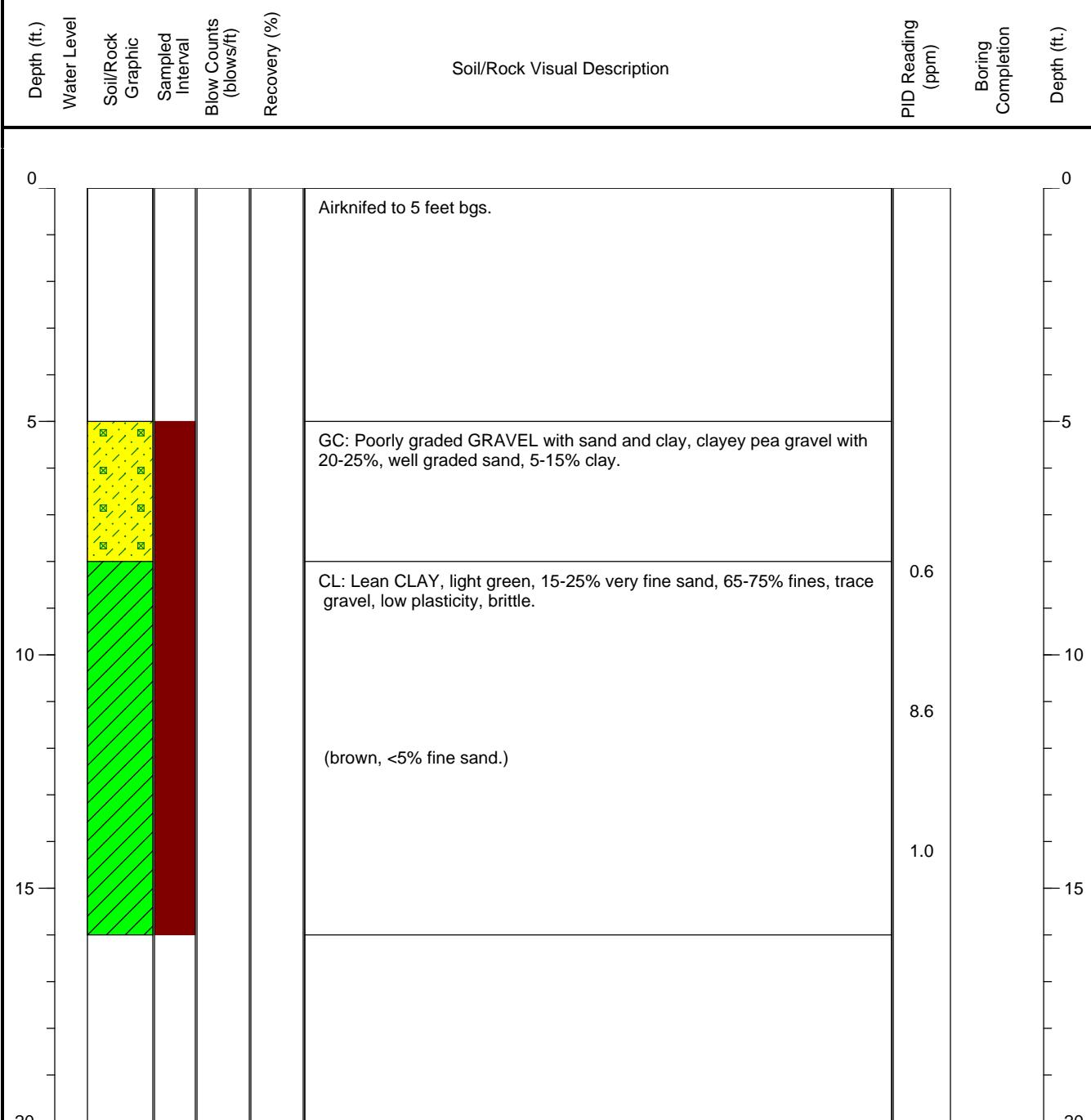


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-10

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/21/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 16	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---





BORING LOG

Client Shell Oil Products
Project Number SCA152751D

**Boring No.
SB-11**

Address:
15275 Washington Ave
San Leandro, CA

Logged By: **Nadine Periat**

Drilling Date(s): **6/22/2010**

ling Company: **GDT**

Sampling Method: **Geoprobe**

String Depth (ft): **24**

Boring diameter (in.): **1-3/4**

Sampling Method:

Well Depth (ft.): **NA**

Casing Diameter (in.): NA

Casing Material: NA

Screen Interval: **NA**

Screen slot size: **NA**

Sand Pack: **NA**

Depth (ft.)	Water Level	Soil/Rock Graphic	Sampled Interval	Blow Counts (blows/ft)	Recovery (%)	Soil/Rock Visual Description	PID Reading (ppm)	Boring Completion	Depth (ft.)
0						Airknifed to 5 feet bgs.			0
5						CL: Sandy lean CLAY, brown, 35% well graded sand 55-65% fines, low plasticity.	707		5
10						SC: Clayey SAND, green, 35-45% clay 55-65% fine sand, wet.	30.6		10
15	X					CL: Lean CLAY, brown.	183		15
20						SC: Clayey SAND, gray, 5-15% fines 75-85% sand, poorly graded fine sand, wet.	3.1		20
25						CL: Lean CLAY, brown with tan mottling, wet.	264		25
30						SC: Clayey SAND, green, 35-45% clay 45-55% sand, wet.			30
35						CL: Lean CLAY, tan, <5% fine sand, medium plasticity, damp.			35

The figure is a soil profile log. On the left, a vertical scale bar shows depths from 0 to 25 feet. The right side has a vertical scale bar from 0 to 35 feet. The central column contains soil descriptions and properties. At the top, it says "Airknifed to 5 feet bgs." Below this, there are seven distinct soil horizons. Each horizon is represented by a vertical column divided into three sections: a top section with diagonal hatching, a middle section with dotted patterns, and a bottom section with solid red color. To the left of the first horizon, there is a small 'X' symbol. To the right of each horizon, there is a PID reading value. The soil descriptions include: CL: Sandy lean CLAY, brown, 35% well graded sand 55-65% fines, low plasticity; SC: Clayey SAND, green, 35-45% clay 55-65% fine sand, wet; CL: Lean CLAY, brown; SC: Clayey SAND, gray, 5-15% fines 75-85% sand, poorly graded fine sand, wet; CL: Lean CLAY, brown with tan mottling, wet; SC: Clayey SAND, green, 35-45% clay 45-55% sand, wet; and CL: Lean CLAY, tan, <5% fine sand, medium plasticity, damp.

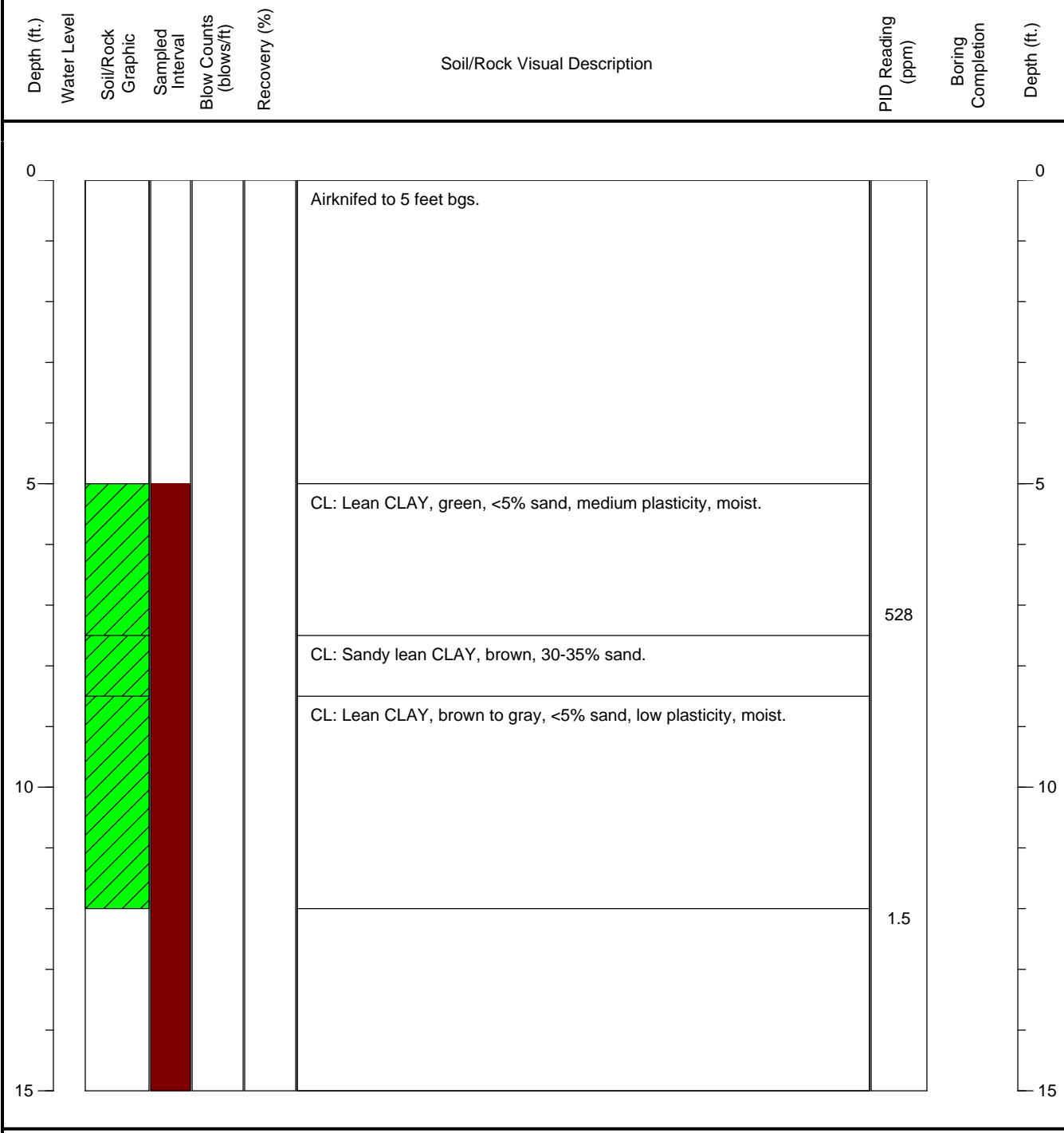


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-12

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/22/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 12	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---



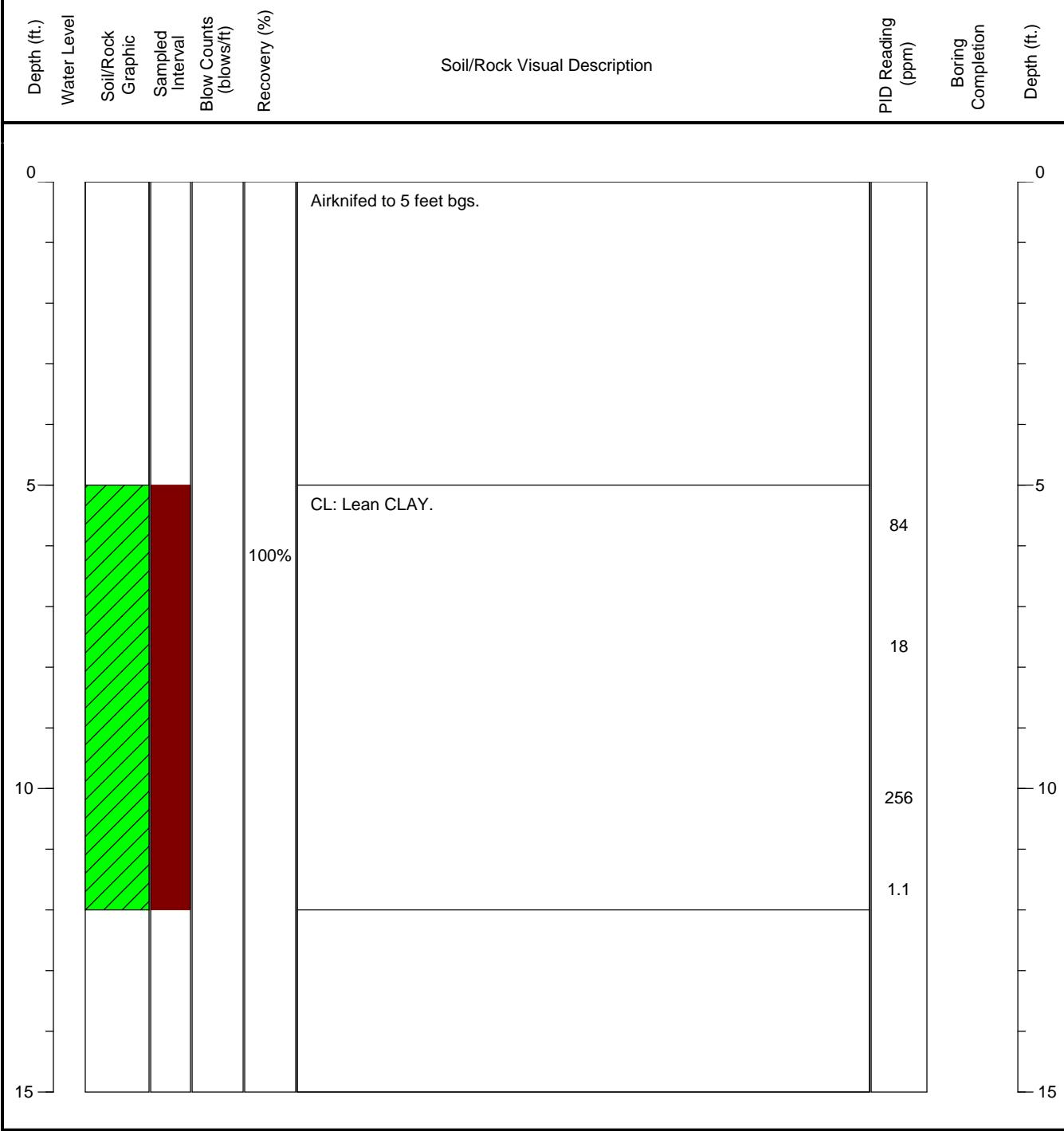


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-13

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/22/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 12	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---



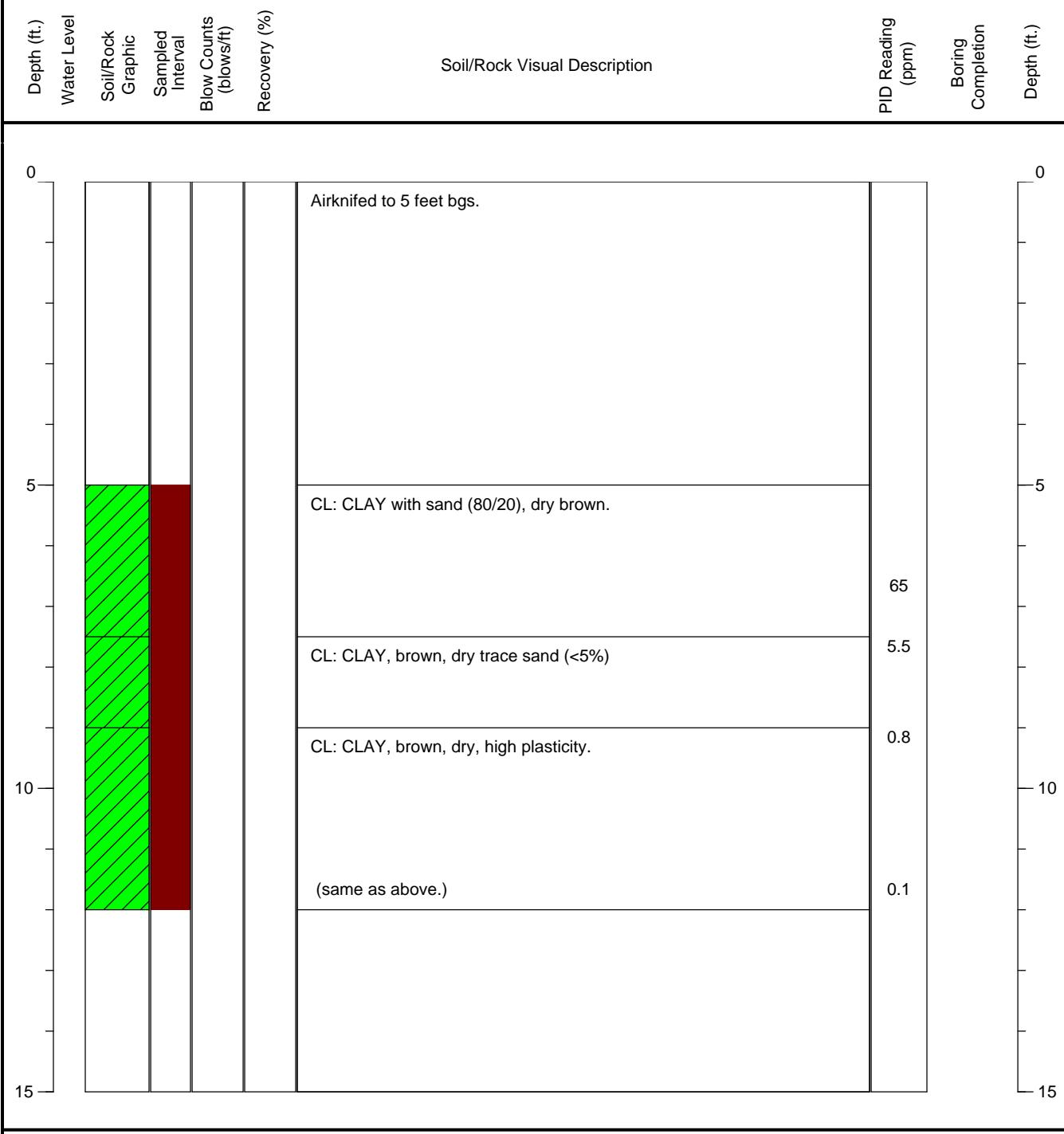


Client **Shell Oil Products**
Project Number **SCA152751D**

BORING LOG

Boring No.
SB-14

Address: 15275 Washington Ave San Leandro, CA	Drilling Date(s): 6/22/2010 Drilling Company: GDT Drilling Method: Geoprobe Boring Depth (ft): 12	Boring diameter (in.): 1-3/4 Sampling Method: Geoprobe Well Depth (ft.): NA Casing Diameter (in.): NA	Casing Material: NA Screen Interval: NA Screen slot size: NA Sand Pack: NA
---	--	---	---

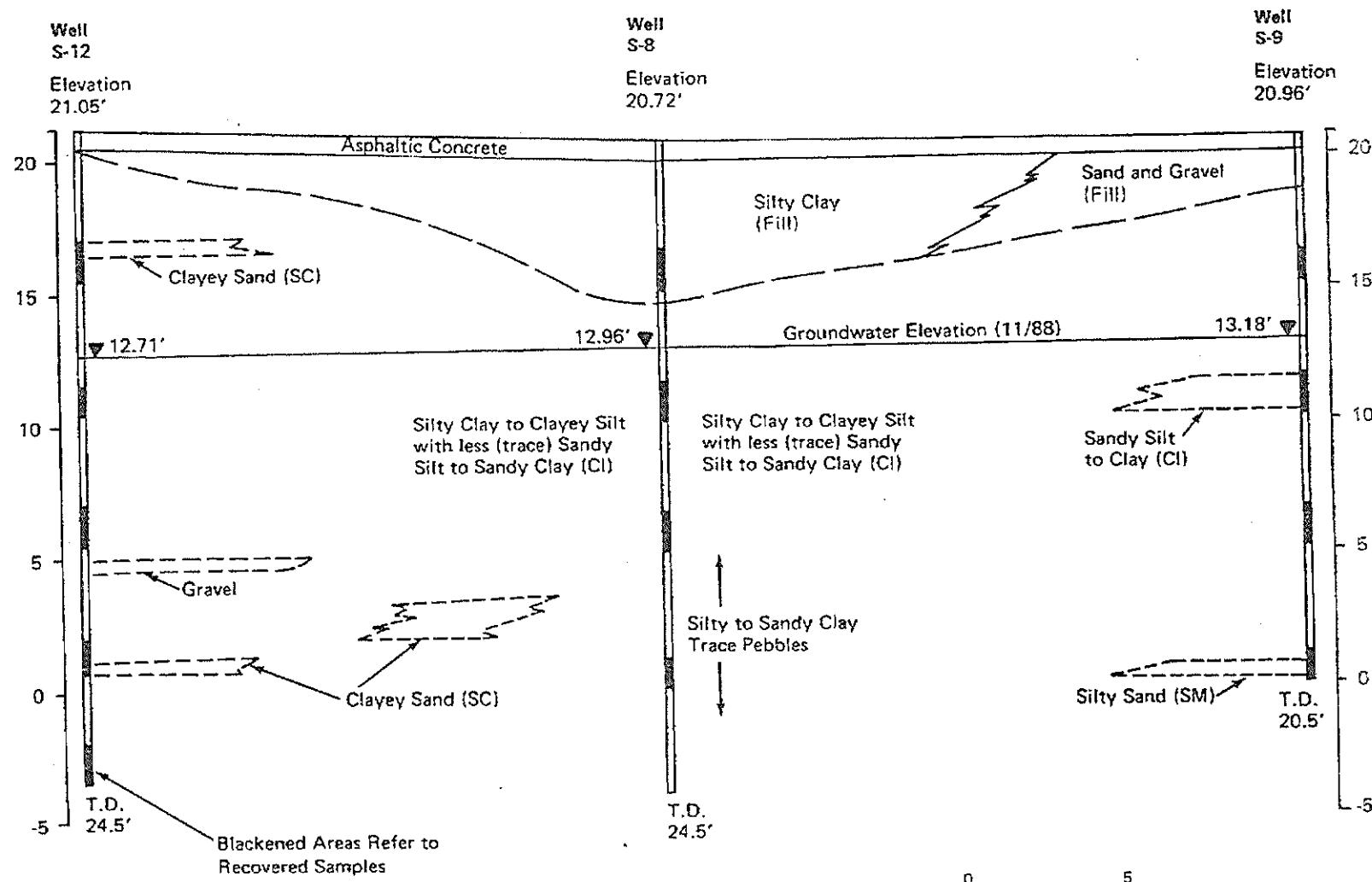


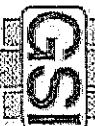
APPENDIX C
HYDROGEOLOGIC CROSS-SECTIONS

Project No.	Gettler Ryan
BB20011A	
Woodward-Clyde Consultants	

CROSS SECTION
SHELL SERVICE STATION
LEWELLING BLVD. AND WASHINGTON AVE.
SAN LEANDRO, CALIFORNIA

Figure
6





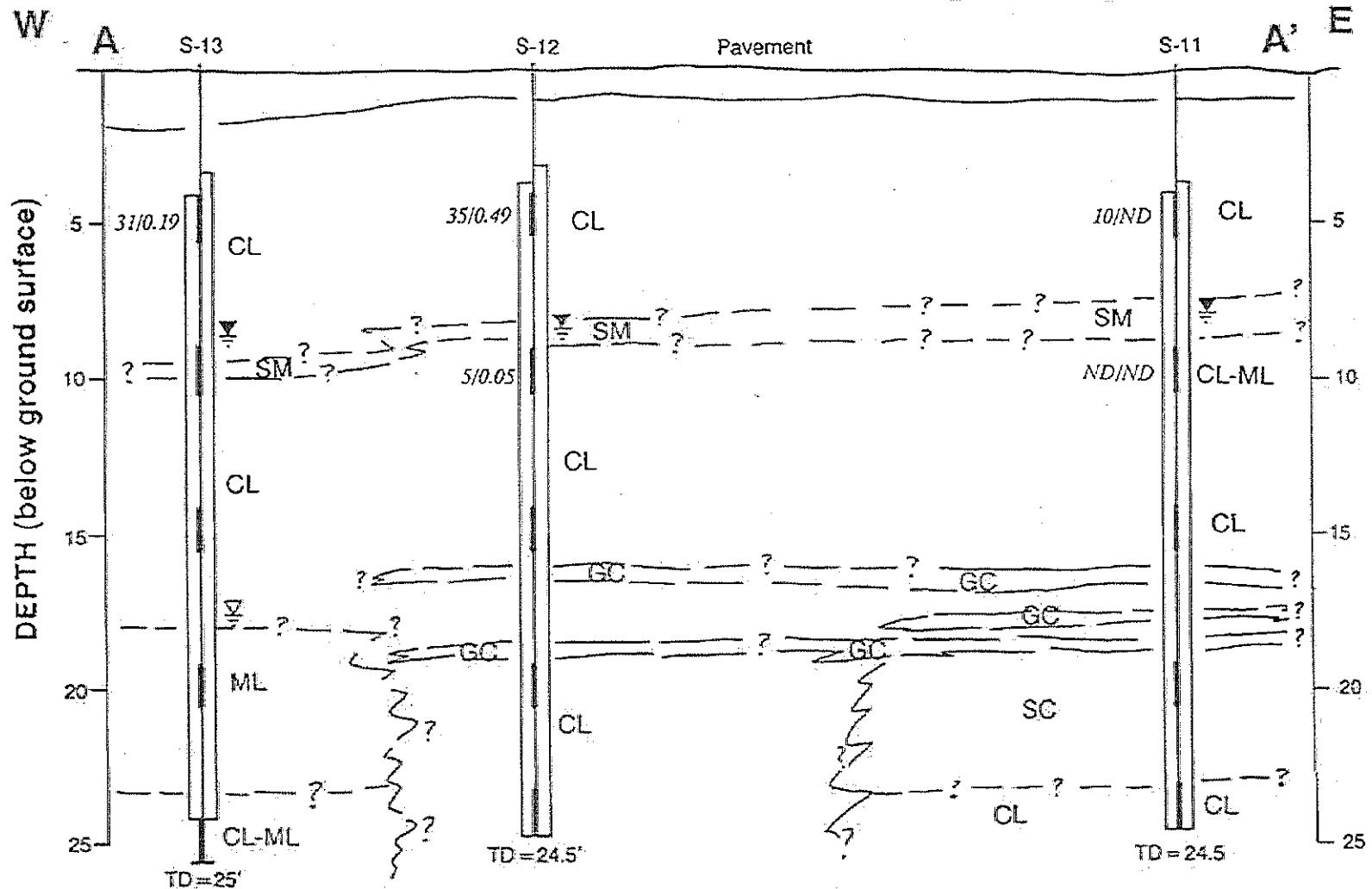
GeoStrategies Inc.

JOB NUMBER

7615

REVIEWED BY REGG

Oapp c&g 1/82

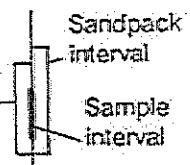


NOTE:

- 1) General Stratigraphic relationships are displayed. Additional horizontal and vertical variations may exist.
- 2) Refer to boring logs for descriptions of each soil type.

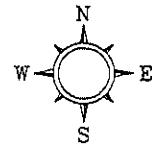
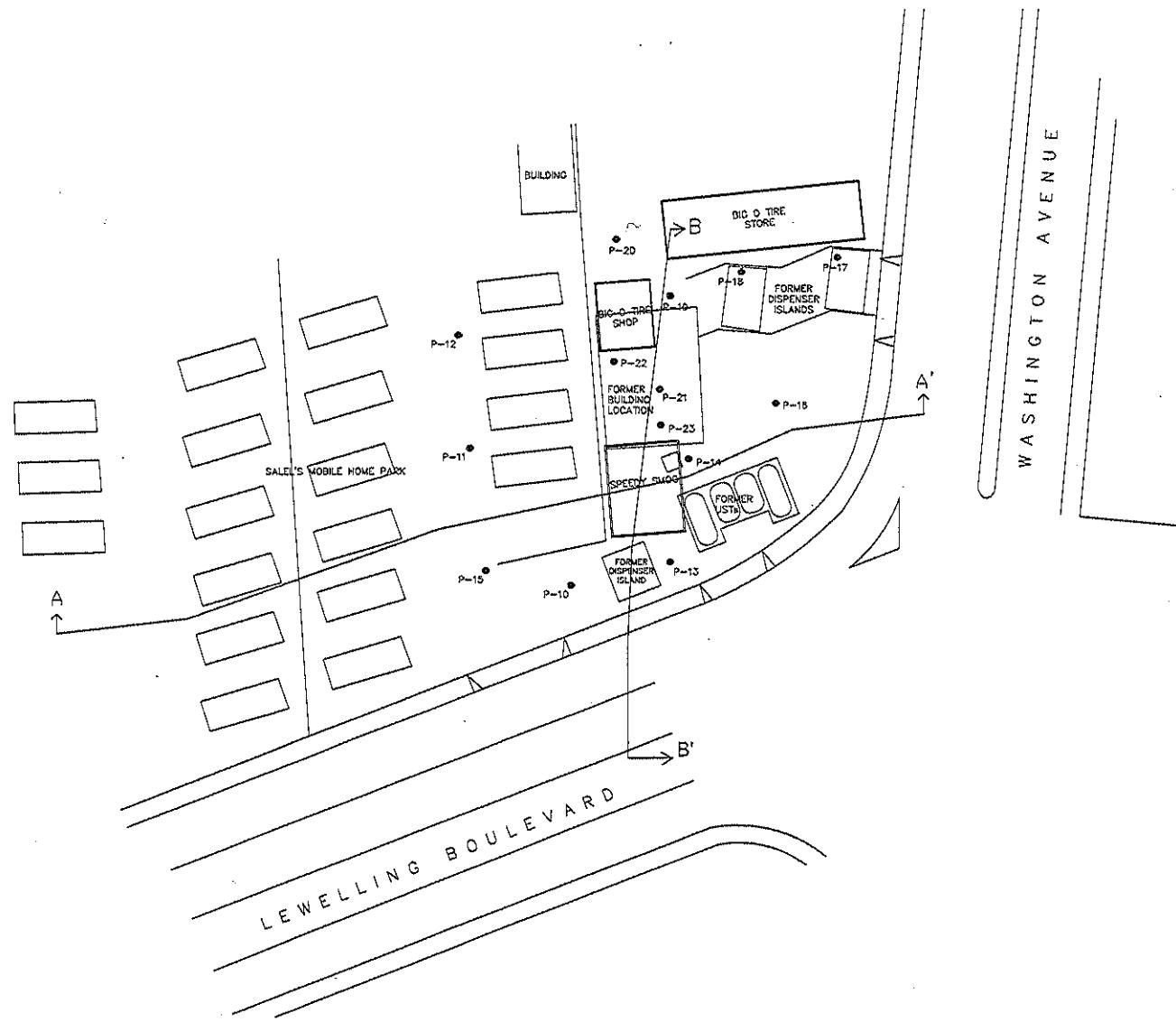
EXPLANATION

- 37/0.19 = TPH/Benzene concentrations (see laboratory analytical results)
 ▼ = First encountered groundwater level
 ▽ = Static water level (measurements taken 4/26/89)



Horz. Scale: 1" = 30'
 Vert. Scale: 1" = 5'

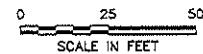
DRAWN BY CO CHECKED BY AD APPROVED BY 9/11/03 PROJECT NUMBER SCA15275-1



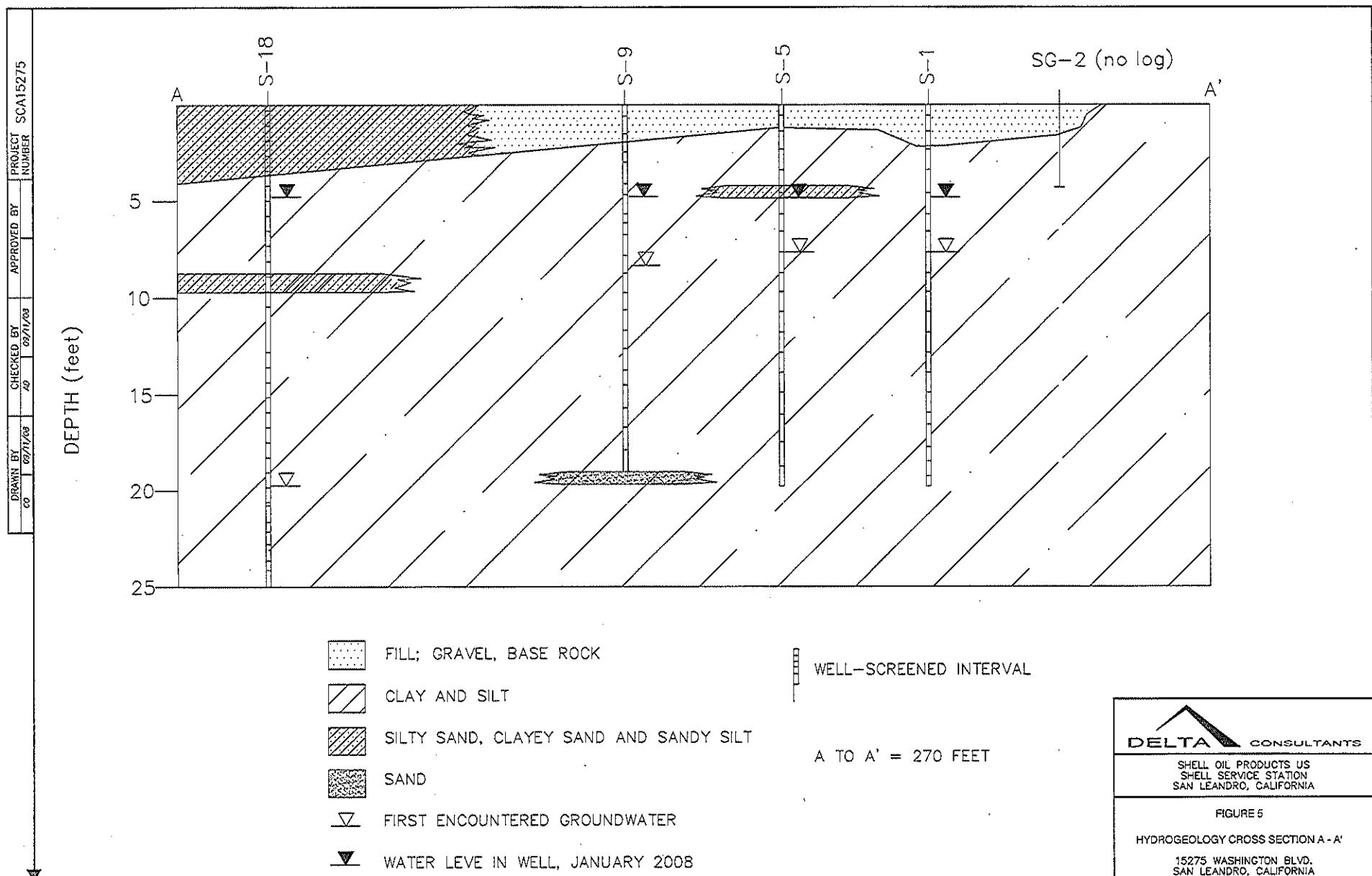
LEGEND

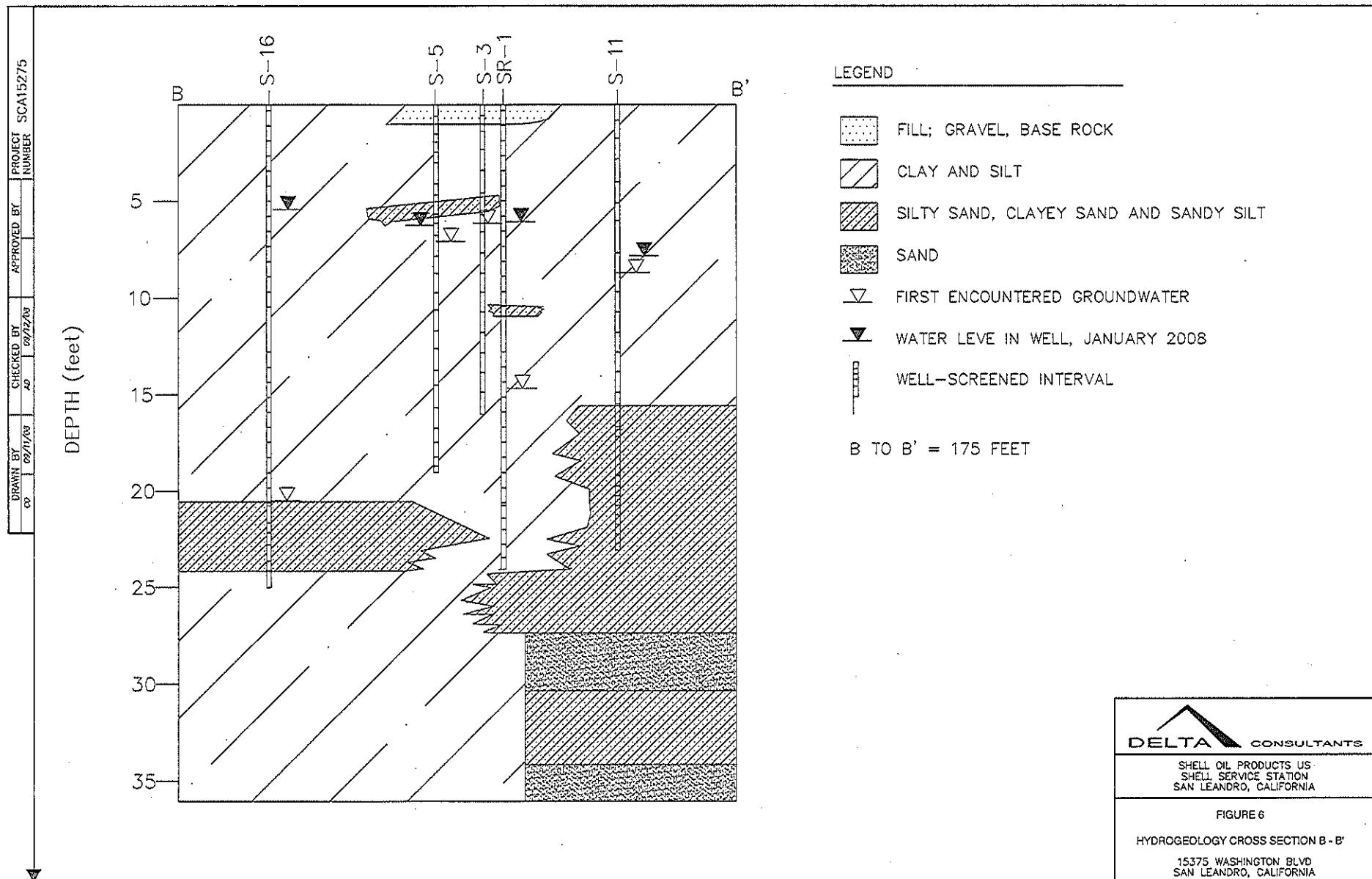
P-23 • SOIL VAPOR SAMPLE LOCATION

A'
HYDRO-GEOLOGIC
CROSS-SECTION

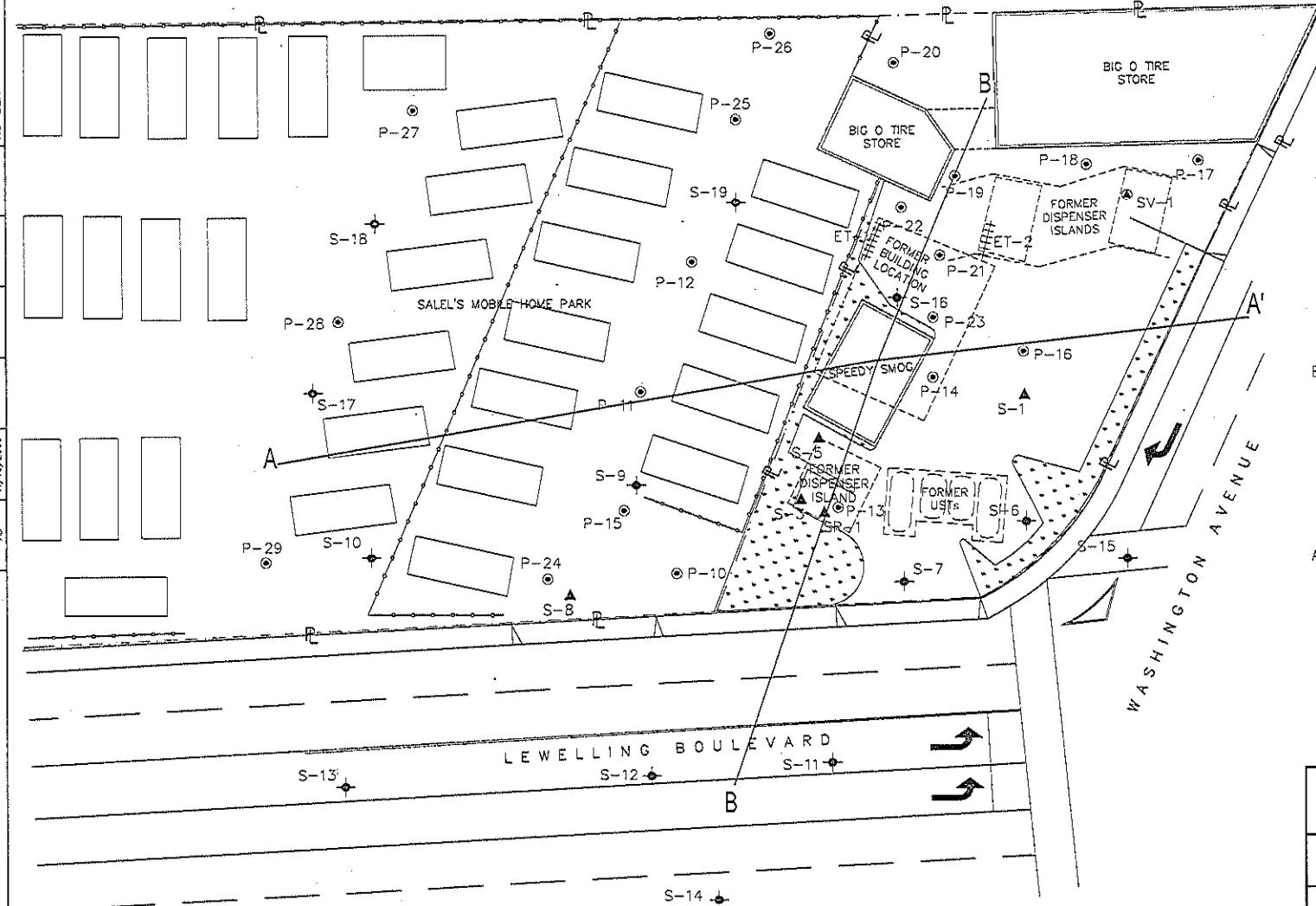


The site map features a large, stylized upward-pointing triangle at the top left. To its right, the word "DELTA" is written in a bold, sans-serif font. To the right of "DELTA", the word "CONSULTANTS" is written in a smaller, all-caps sans-serif font. Below this, centered, is the text "SHELL OIL PRODUCTS U.S.", "FORMER SHELL-BRANDED SERVICE STATION", and "SAN LEANDRO, CALIFORNIA".



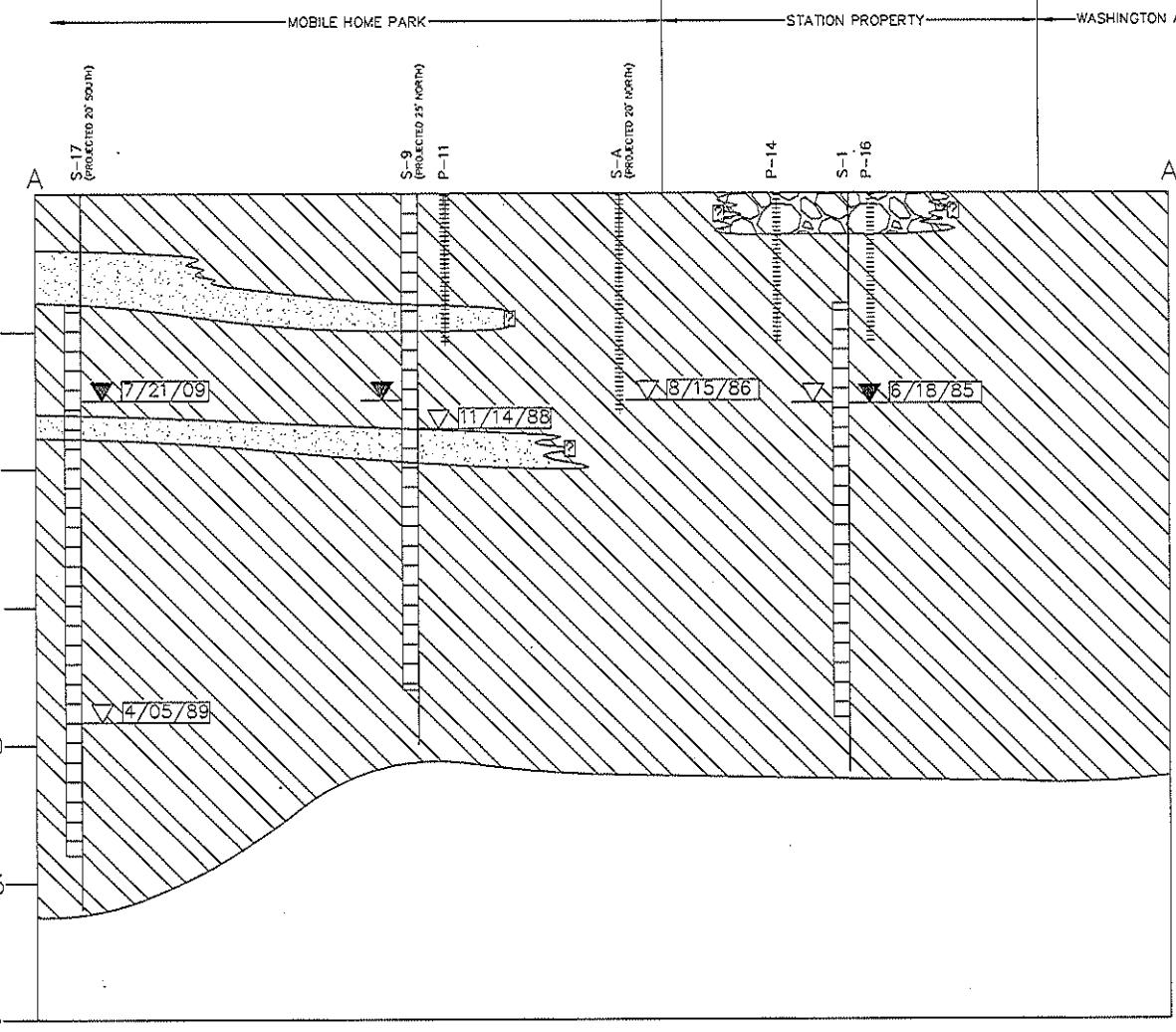


DRAWN BY J.D. APPROVED BY PROJECT SCA15275-1
NUMBER



DELTA CONSULTANTS
SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 2
SITE MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

DRAWN BY *[Signature]* 10/27/2009 CHECKED BY *[Signature]* APPROVED BY *[Signature]* PROJECT SCA15275 NUMBER



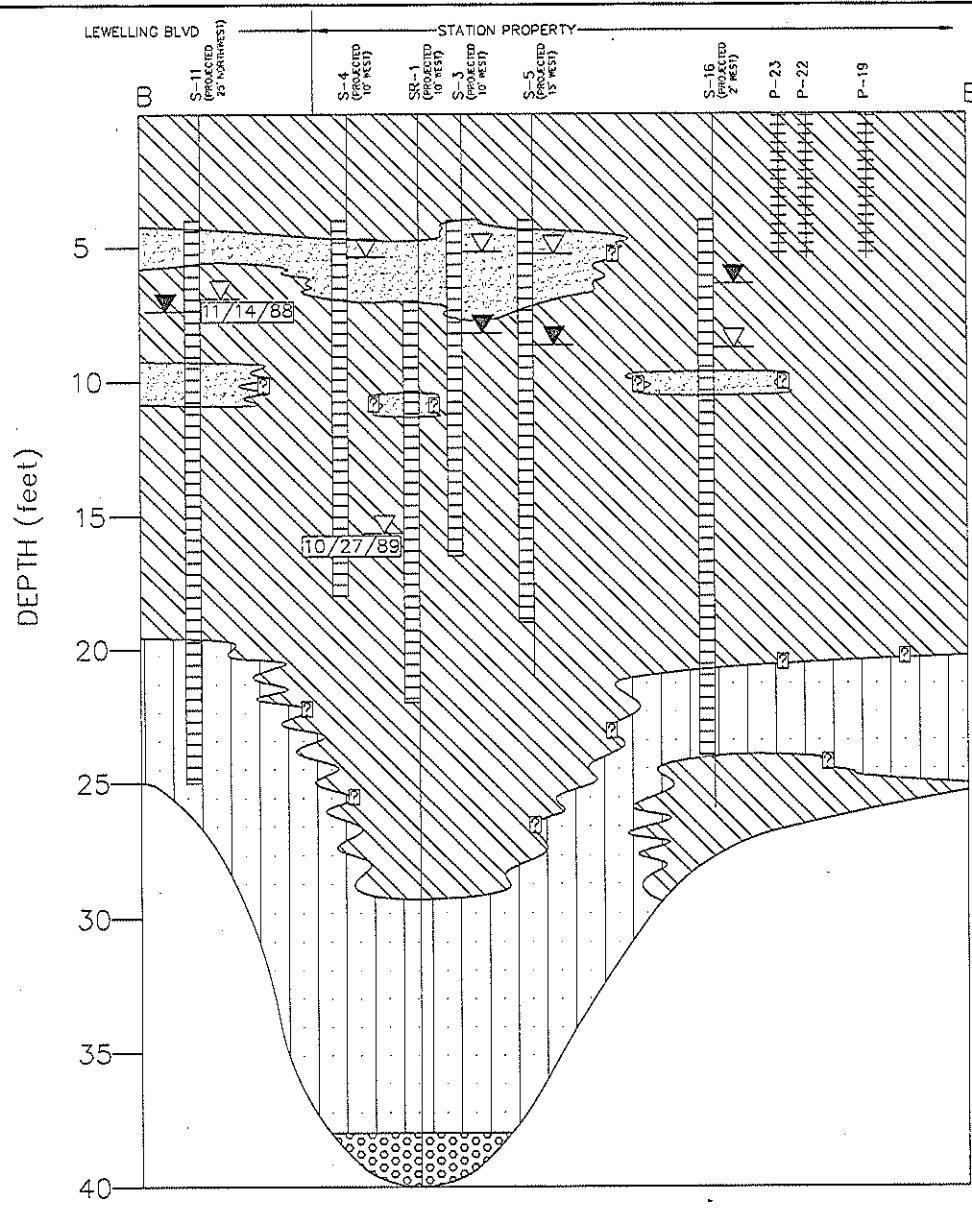
LEGEND

- CLAY AND SILT (CL, ML)
 - SILTY SAND AND SANDY SILT (SM/ML)
THIN BEDS OF SAND IN SILT
 - GRAVEL FILL
 - MONITORING WELL
 - SOIL BORING
 - FIRST ENCOUNTERED GROUNDWATER,
8/15/86
 - WATER LEVEL IN WELL,
7/21/09
- A TO A' = 360 FEET

0 40 80
HORIZONTAL SCALE IN FEET

DELTA CONSULTANTS
SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 3
HYDROGEOLOGY CROSS SECTION A - A'
15275 WASHINGTON BLVD.
SAN LEANDRO, CALIFORNIA

BORNE BY	CHEKED BY	APPROVED BY	PROJECT NUMBER
JD	11/17/2003		SCA15275



LEGEND

- CLAY AND SILT (CL, ML)
- SILTY SAND AND CLAYEY SAND (SM/ML)
THIN BEDS OF SAND IN SILT
- SILTY SAND AND CLAYEY SAND (ML/SC)
- SAND (SP)
- MONITORING WELL
- SOIL BORING
- FIRST ENCOUNTERED GROUNDWATER
- WATER LEVEL IN WELL
11/14/88
- B TO B' = 270 FEET

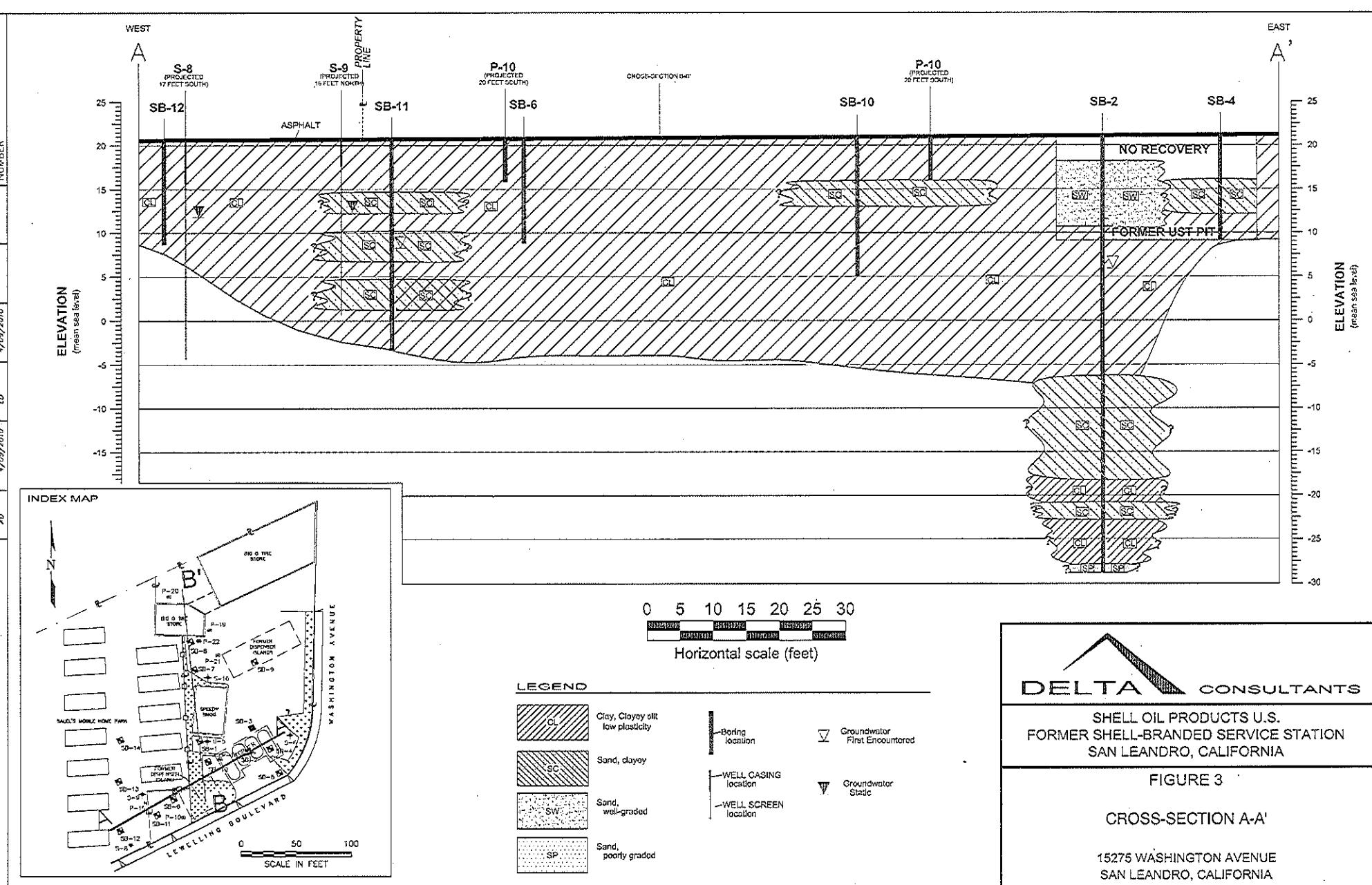
0 40 80
HORIZONTAL SCALE IN FEET

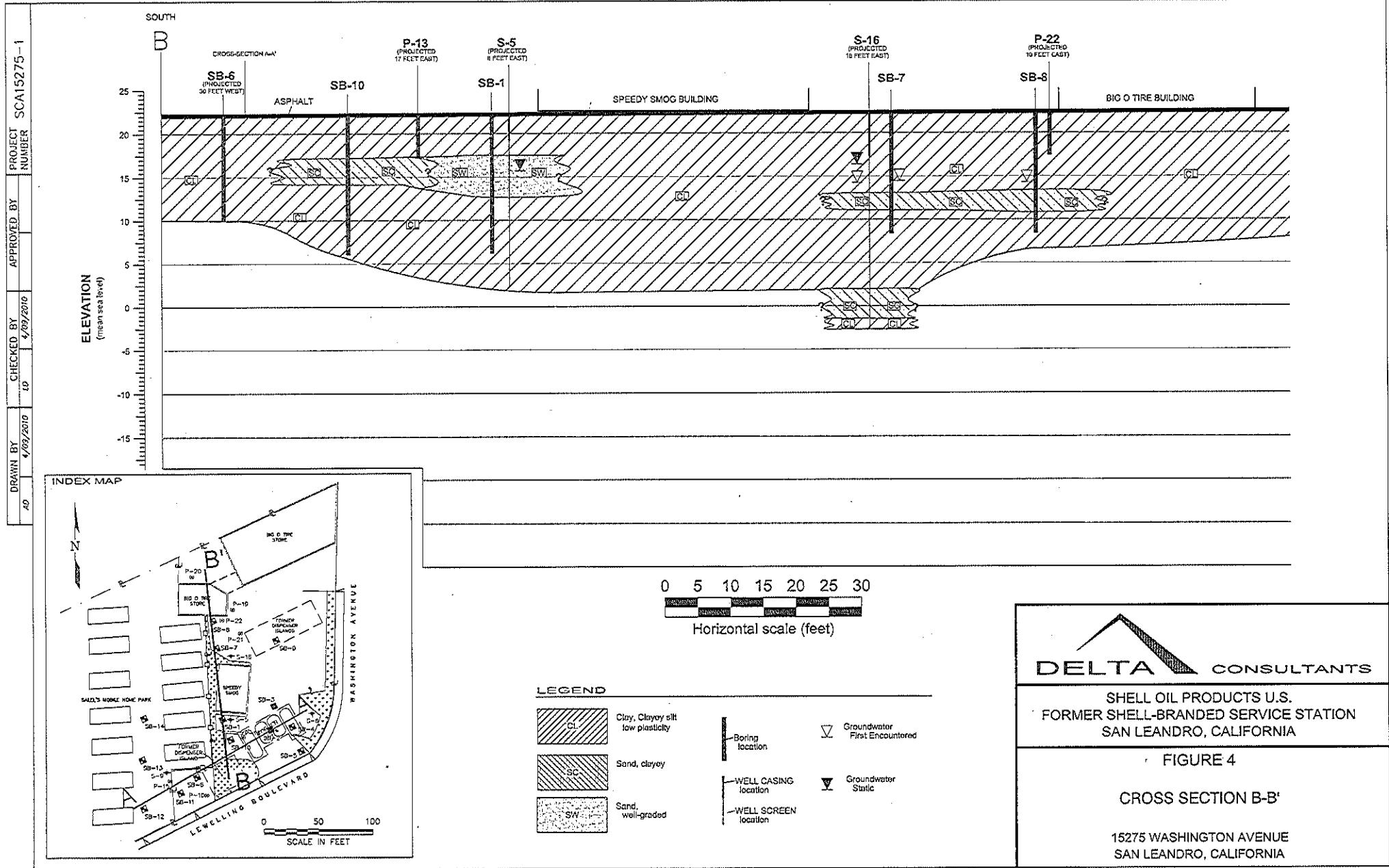
DELTA CONSULTANTS
SHELL OIL PRODUCTS US
SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 4
HYDROGEOLOGY CROSS SECTION B - B'
15375 WASHINGTON BLVD
SAN LEANDRO, CALIFORNIA

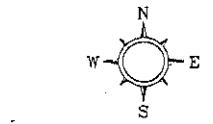
DRAWN BY *[Signature]* CHECKED BY *[Signature]* APPROVED BY *[Signature]* PROJECT SCA15275-1
Job #109-2010 Date 1/09/2010

PROJECT NUMBER





APPENDIX D
HISTORIC GROUNDWATER CONTOUR MAPS



LEGEND

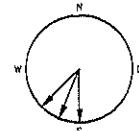
- S-6 ♦ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- S-1 ▲ GROUNDWATER MONITORING WELL MODIFIED FOR SOIL VAPOR EXTRACTION
- SV-1 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- P-16 (●) GROUNDWATER MONITORING WELL LOCATION (ARGO STATION)
- MW-1 (●) SOIL BORING/GROUNDWATER MONITORING WELL LOCATION (ARGO STATION)
- B-1 (●) SOIL GAS BORING/TEMPORARY VAPOR IMPLANT LOCATION (ARGO STATION)
- RW-1 (●) SOIL VAPOR EXTRACTION WELL LOCATION (ARGO STATION)
- (14.00) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (Ft./MSL)
- 14.00 - - - GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (Ft./MSL)
CONTOUR INTERVAL=0.25 FEET

◀→ APPROXIMATE GROUNDWATER DIRECTION
NG NOT GAUGED
- NOT USED IN CONTOURING
ANOMALOUS DATA

NOTES
ARGO STATION GROUNDWATER ELEVATION ADJUSTED BY 2.7 FEET

HISTORICAL GROUNDWATER FLOW DIRECTIONS

DATE	FLOW
1/22/2004	SW
1/27/2006	SW,SSW
7/25/2006	SW,SSW
1/4/2007	SW
7/24/2007	SSW
1/15/2008	S
8/4/2008	S,SSW
1/8/2009	SW
7/21/2009	SSW
1/12/2010	SSW
7/22/2010	SSW



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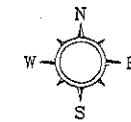
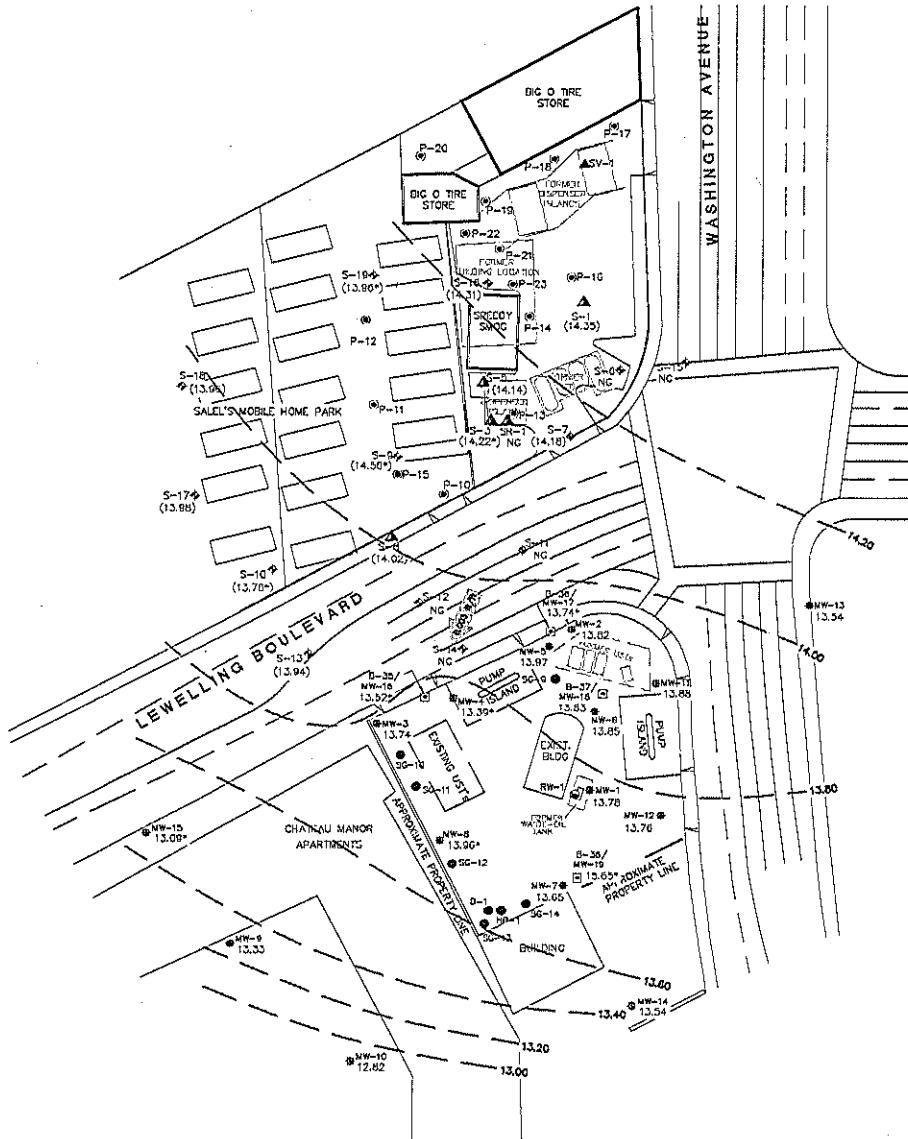
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP
7/22/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

DRAWN BY	3/15/2010	CHECKED BY		APPROVED BY		PROJECT NUMBER	SCA1527510
JFF							

SCALE IN FEET



LEGEND

- S-5 GROUNDWATER MONITORING
 WELL LOCATION AND
 DESIGNATION
 S-1 GROUNDWATER MONITORING
 WELL MODIFIED FOR SOIL
 VAPOR EXTRACTOR
 SV-1 SOIL VAPOR EXTRACTION
 WELL LOCATION AND
 DESIGNATION
 P-10 SOIL VAPOR SAMPLE
 LOCATION
 MW-1 GROUNDWATER MONITORING WELL
 LOCATION (ARCO STATION)
 B-3G/MW-10 SOIL DRILLING/GROUNDWATER
 MONITORING WELL LOCATION
 (ARCO STATION)
 B-1 SOIL SAMPLING /
 TEMPORARY VAPOR IMPLANT
 LOCATION (ARCO STATION)
 RW-1 SOIL VAPOR EXTRACTION WELL
 LOCATION (ARCO STATION)
 (14.05) GROUNDWATER ELEVATION IN
 FEET ABOVE MEAN SEA LEVEL
 (Ft./MSL)
 14.00 ----- GROUNDWATER CONTOUR IN
 FEET ABOVE MEAN SEA LEVEL
 (FT./MSL)
 CONTOUR INTERVAL = 0.20 FEET

14.00 ----- GROUNDWATER CONTOUR IN
FEET ABOVE MEAN SEA LEVEL
(FT./MSL)
CONTOUR INTERVAL-0.20 FEET

 APPROXIMATE GROUNDWATER
 DIRECTION
 NG NOT GAUGED
 - NOT USED IN CONTOURING
 ANOMALOUS DATA

NOTES

HISTORICAL GROUNDWATER FLOW DIRECTIONS	
DATE	FLOW
1/22/2004	SW
1/27/2006	S, SSW
7/25/2006	S, SSW
1/4/2007	SW
7/24/2007	SSW
1/15/2008	S
8/4/2008	S, SSW
1/8/2009	GW
7/21/2009	SSW
1/12/2010	SSW

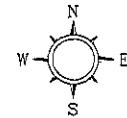
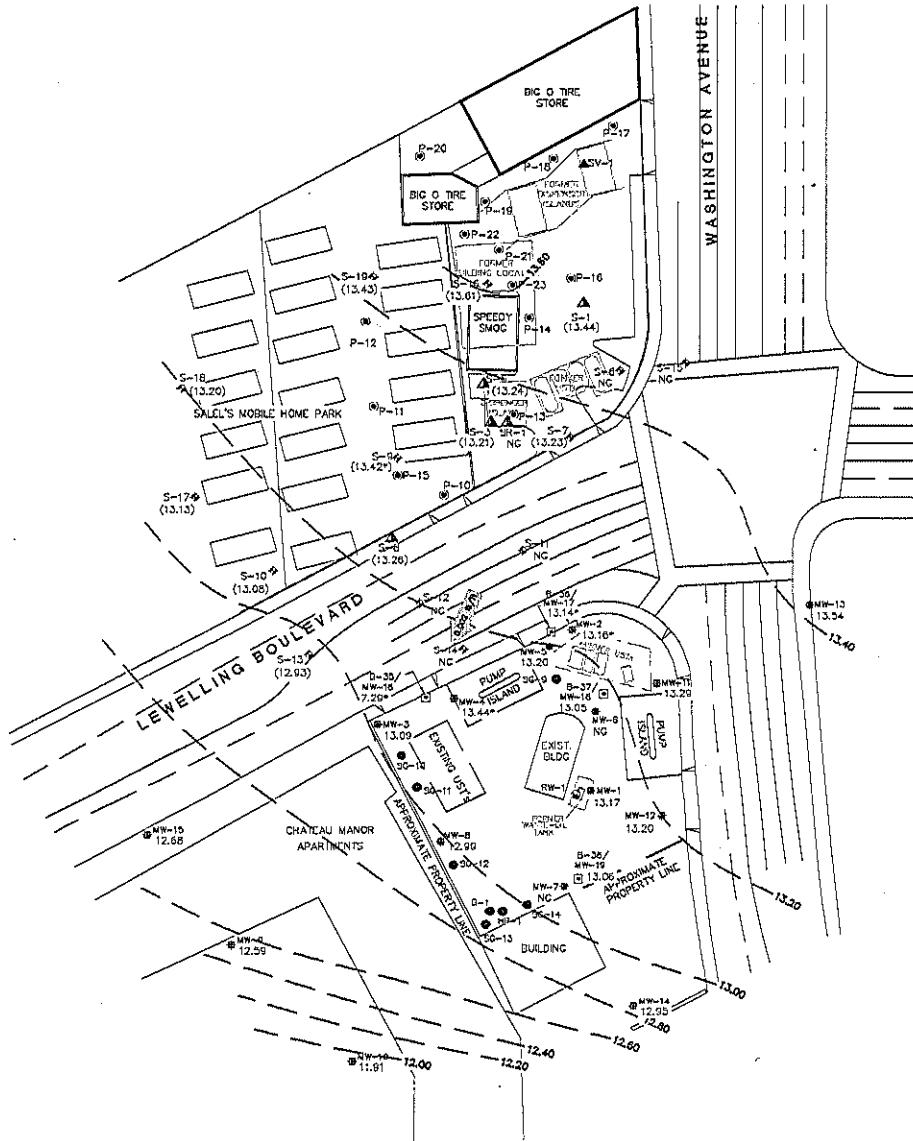
DELTA CONSULTANTS
SHELL OIL PRODUCTS
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2
GROUNDWATER ELEVATION CONTOUR
MAP
1/12/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

DRAWN BY JFF CHECKED BY APPROVED BY PROJECT NUMBER SCA152751A

Scale in feet



LEGEND

- S-6 ▲ GROUNDWATER MONITORING
WELL LOCATION AND
DESIGNATION

S-1 ▲ GROUNDWATER MONITORING
WELL MODIFIED FOR SOIL
VAPOR EXTRACTION

SV-1 ▲ SOIL VAPOR EXTRACTION
WELL, LOCATOR AND
DESIGNATION

P-16 (W) SOIL VAPOR SAMPLE
LOCATION

MW-1 # GROUNDWATER MONITORING WELL
LOCATION (ARCO STATION)

8-35/MW-18 [S] SOIL BORNE/GROUNDWATER
MONITORING WELL LOCATION
(ARCO STATION)

B-1 ◉ SOIL GAS BORNE/
TEMPORARY VAPOR IMPLANT
LOCATION (ARCO STATION)

RW-1 ◉ SOIL VAPOR EXTRACTION WELL
LOCATION (ARCO STATION)

(14.05) GROUNDWATER ELEVATION IN
FEET ABOVE MEAN SEA LEVEL
(FT./MSL)

14.00 -----
GROUNDWATER CONTOUR IN
FEET ABOVE MEAN SEA LEVEL
(FT./MSL)
CONTOUR INTERVAL=0.20 FEET

14.00 ————— GROUNDWATER CONTOUR IN
 FEET ABOVE MEAN SEA LEVEL
 (F.M.S.L.)
 CONTOUR INTERVAL=0.20 FEET
 APPROXIMATE GROUNDWATER
 DIRECTION
 NC NOT GAUCED
 * NOT USED IN CONTOURING
 ANOMALOUS DATA
 NOTES

HISTORICAL GROUNDWATER FLOW DIRECTIONS

DATE	FLOW
1/22/2004	SW
1/27/2006	SW,SSW
7/25/2006	SW,SSW
1/4/2007	SW
7/24/2007	SSW
1/15/2008	S
8/4/2008	S,SSW
1/8/2009	SW
7/21/2009	SW

DELTA CONSULTANTS

SHELL OIL PRODUCTS
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

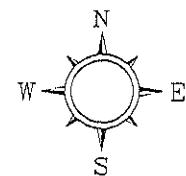
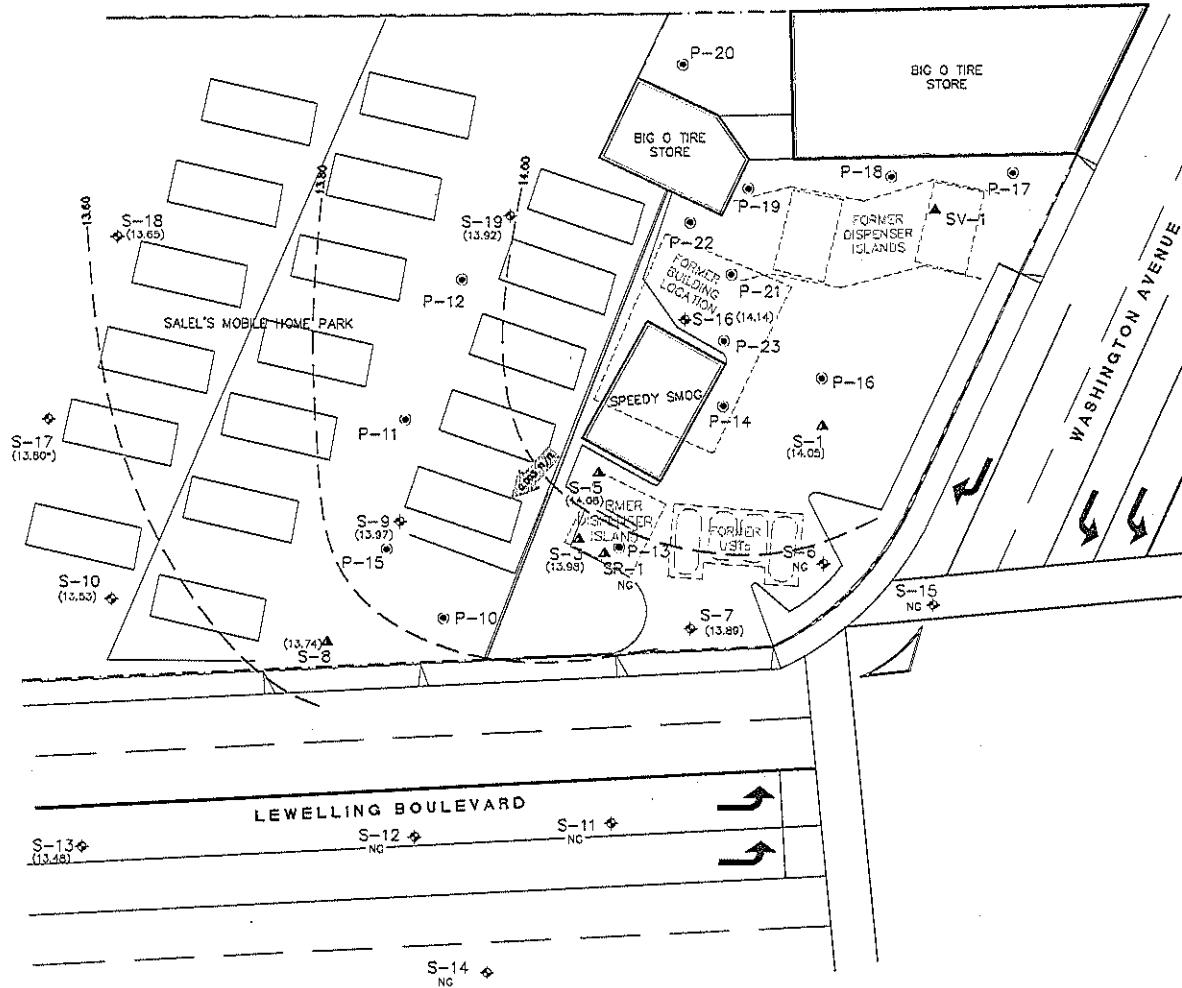
FIGURE 2
GROUNDWATER ELEVATION CONTOUR
MAP
7/21/2009

DRILLED BY APPROVED BY PROJECT NUMBER SCA152751A

J.F.

CHECKED BY

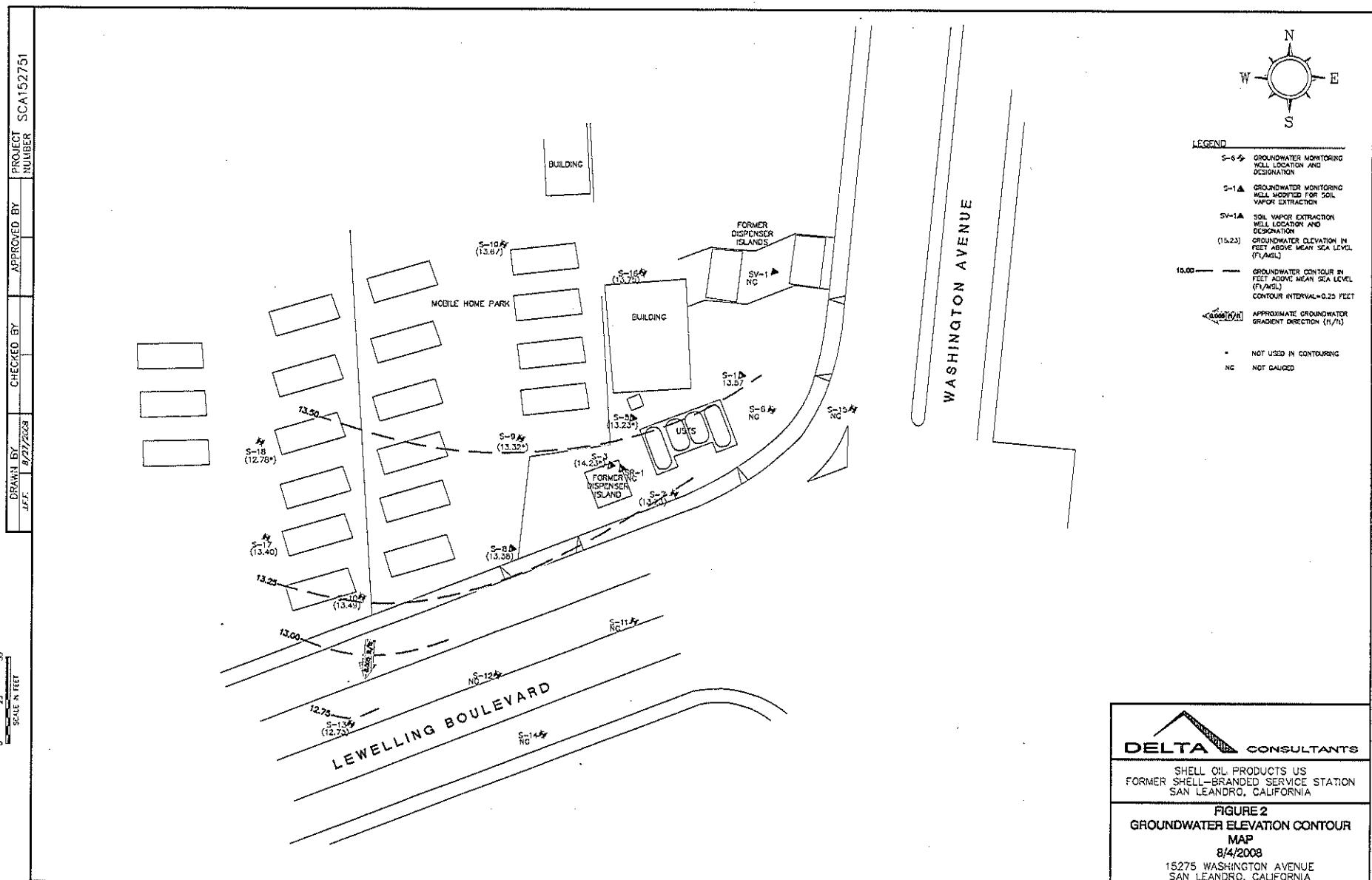
2/3/2009



LEGEND

- S-6 ♦ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- S-1 ▲ GROUNDWATER MONITORING WELL MODIFIED FOR SOIL VAPOR EXTRACTION
- SV-1 ▲ SOIL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- P-18 (●) SOIL VAPOR SAMPLE LOCATIONS
- (14.05) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (FT./MSL)
- GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (FT./MSL)
- CONTOUR INTERVAL=0.20 FEET
- ARROW R/W APPROXIMATE GROUNDWATER DIRECTION
- NG NOT GAUGED
- * NOT USED IN CONTOURING ANOMALOUS DATA

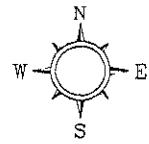
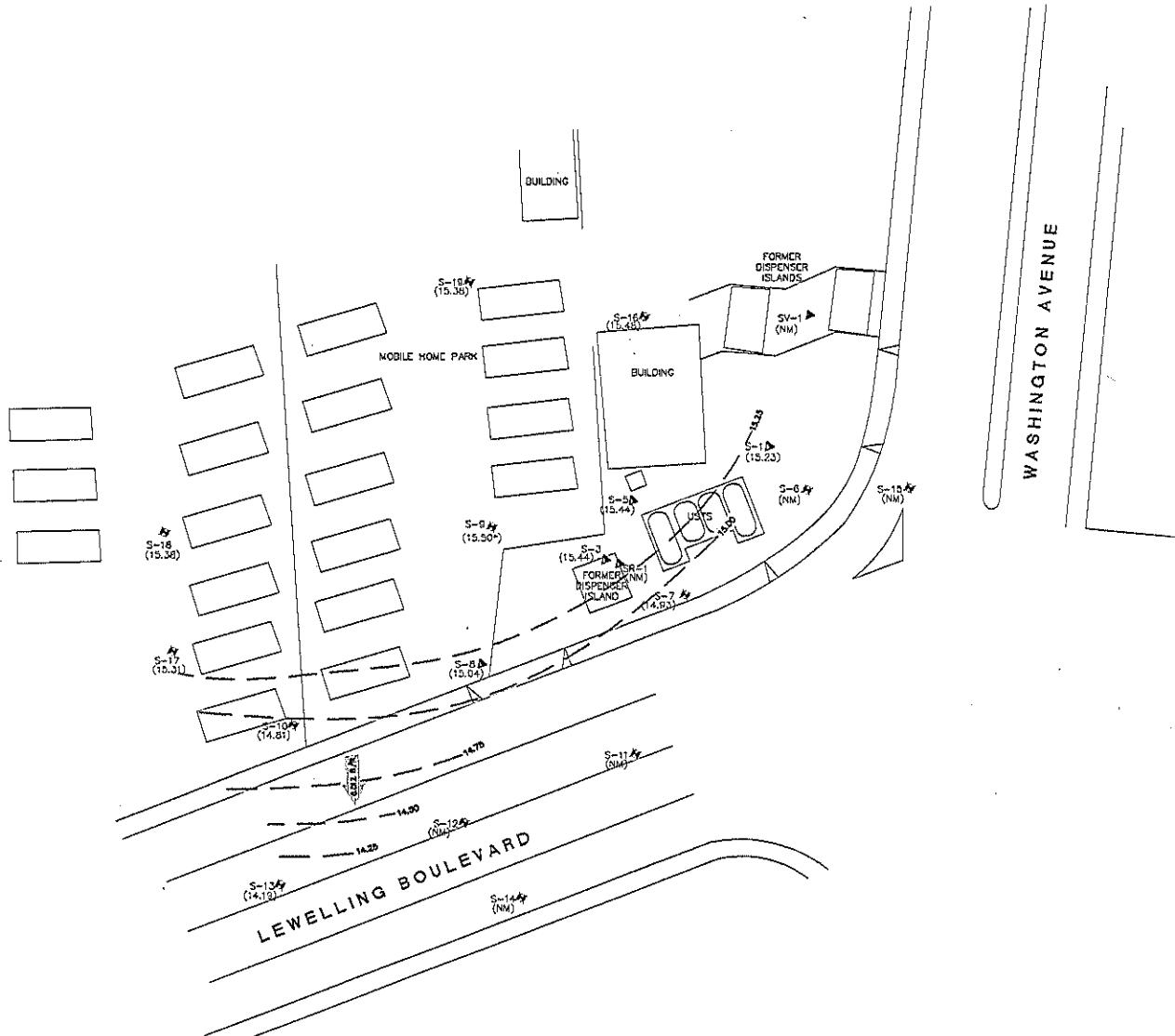
DELTA CONSULTANTS
SHELL OIL PRODUCTS
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA
FIGURE 2
GROUNDWATER ELEVATION CONTOUR MAP
1/8/2009
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



171_090620081115273 WASHDC01-1288-18-HC_2008 CMM Report from Sources (2007) WASHINGTON DC 2008 OAKLAND, FIGURE 2, 24-27/2008 12-062008 PPT

DRAWN BY JFF CHECKED BY 14/4/2008 APPROVED BY PROJECT NUMBER SCA152751

卷之三



LEGEND

- S-6 ▲ GROUNDWATER MONITORING
WELL LOCATION AND
DESIGNATION

S-1 ▲ GROUNDWATER MONITORING
WELL MODIFIED FOR SOIL
VAPOR EXTRACTION

SV-1▲ SOIL VAPOR EXTRACTION
WELL LOCATION AND
DESIGNATION

(15.23) GROUNDWATER ELEVATION
IN FEET ABOVE MEAN SEA LEVEL
(FT./MSL)

— GROUNDWATER CONTOUR IN
FEET ABOVE MEAN SEA LEVEL
(FT./MSL)
CONTOUR INTERVAL=0.10 FEET

 APPROXIMATE GROUNDWATER
GRADIENT DIRECTION (%) / (1)

(NN) NOT MEASURED

- NOT USED IN CONTOURING

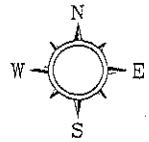
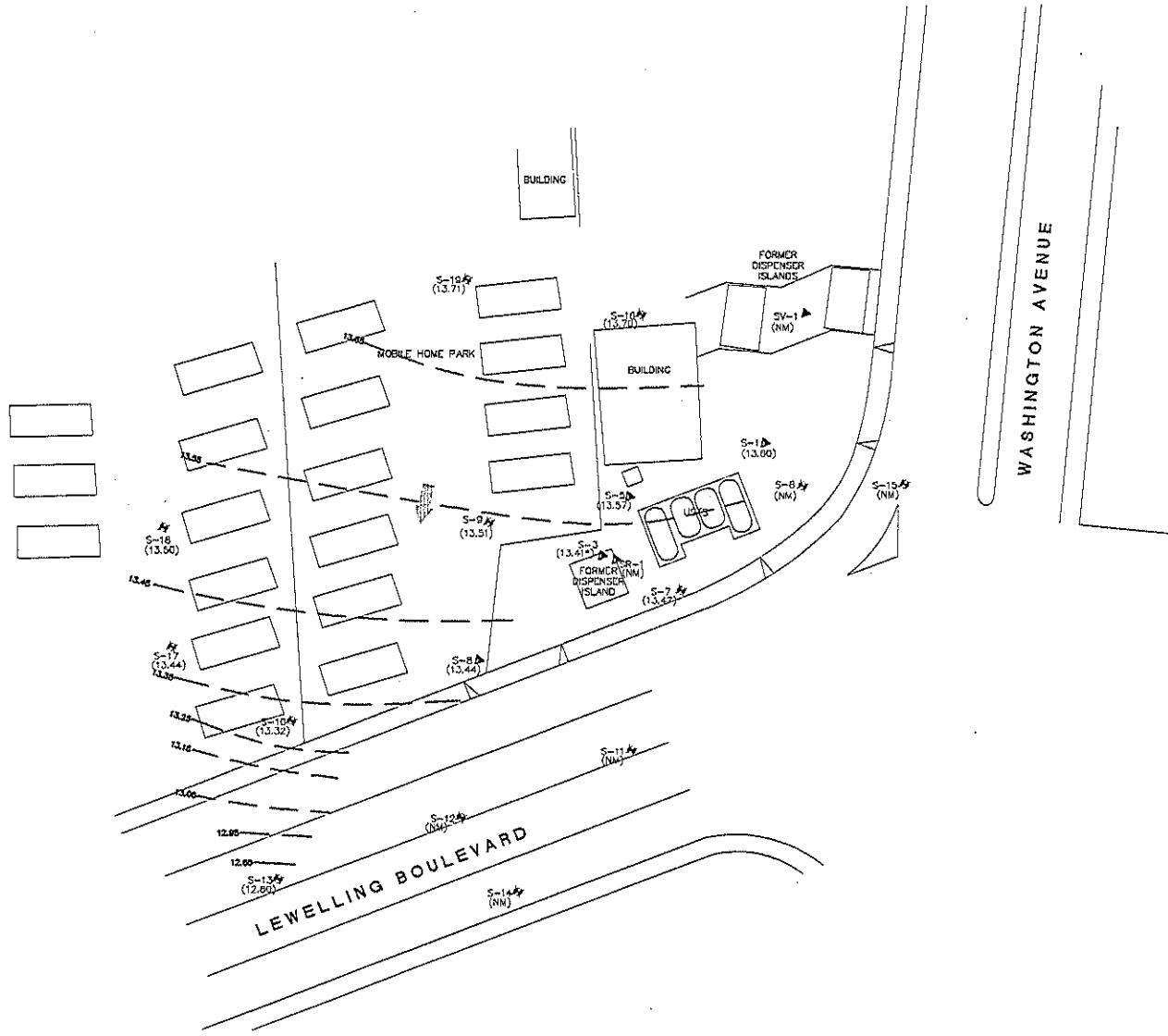
(NN) NOT MEASURED
- NOT USED IN CONTOURING

(NN) NOT

- NOT USED IN CONTOURING

DRAWN BY JFF CHECKED BY APPROVED BY PROJECT NUMBER SJ152751X

卷之三



LEGEND

- S-6-G GROUNDWATER MONITORING
 WELL LOCATION AND
 DESIGNATION

B-1-A GROUNDWATER MONITORING
 WELL MODIFIED FOR SOIL
 VAPOR EXTRACTION

SV-1-A SOIL VAPOR EXTRACTION
 WELL LOCATION AND
 DESIGNATION

(15-20) GROUNDWATER ELEVATION IN
 FEET ABOVE MEAN SEA LEVEL
 (FT./MSL)

GROUNDWATER CONTOUR IN
 FEET ABOVE MEAN SEA LEVEL
 (FT./MSL)
 CONTOUR INTERVAL=0.10 FEET



APPROPRIATE GROUNDWATER
 GRADIENT DIRECTION (ft/ft)

(NM) NOT MEASURED

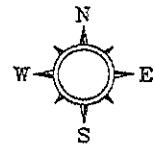
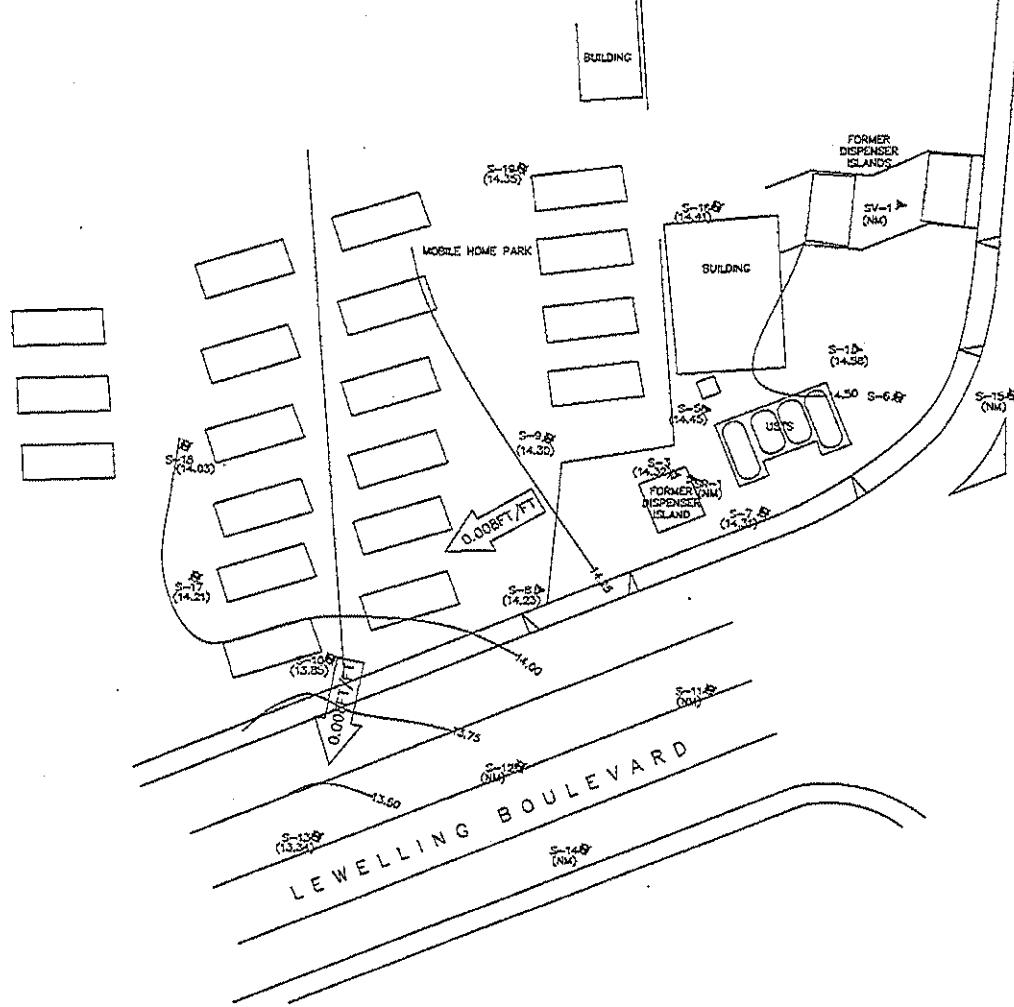
* NOT USED IN CONTOURING

DELTA CONSULTANTS

SHELL OIL PRODUCTS US
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 2
**GROUNDWATER ELEVATION CONTOUR
MAP**

1/24/2007
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



LEGEND

- S-1-Φ GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- S-1-Δ GROUNDWATER MONITORING WELL MODIFIED FOR COAL VAPOR EXTRACTION
- SV-1-Δ COAL VAPOR EXTRACTION WELL LOCATION AND DESIGNATION
- (14.00) GROUNDWATER ELEVATION IN FEET ABOVE MEAN SEA LEVEL (F.A.M.S.L.)
- 14.00 GROUNDWATER CONTOUR IN FEET ABOVE MEAN SEA LEVEL (F.A.M.S.L.) CONTOUR INTERVAL=0.05 FOOT
- 0.008FT/FT APPROPRIATE GROUNDWATER GRADIENT DIRECTION (F/A)
- (NM) NOT MEASURED

0 25 50
SCALE IN FEET

DELTA CONSULTANTS

SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1

GROUNDWATER ELEVATION CONTOUR MAP
JANUARY 4, 2007
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

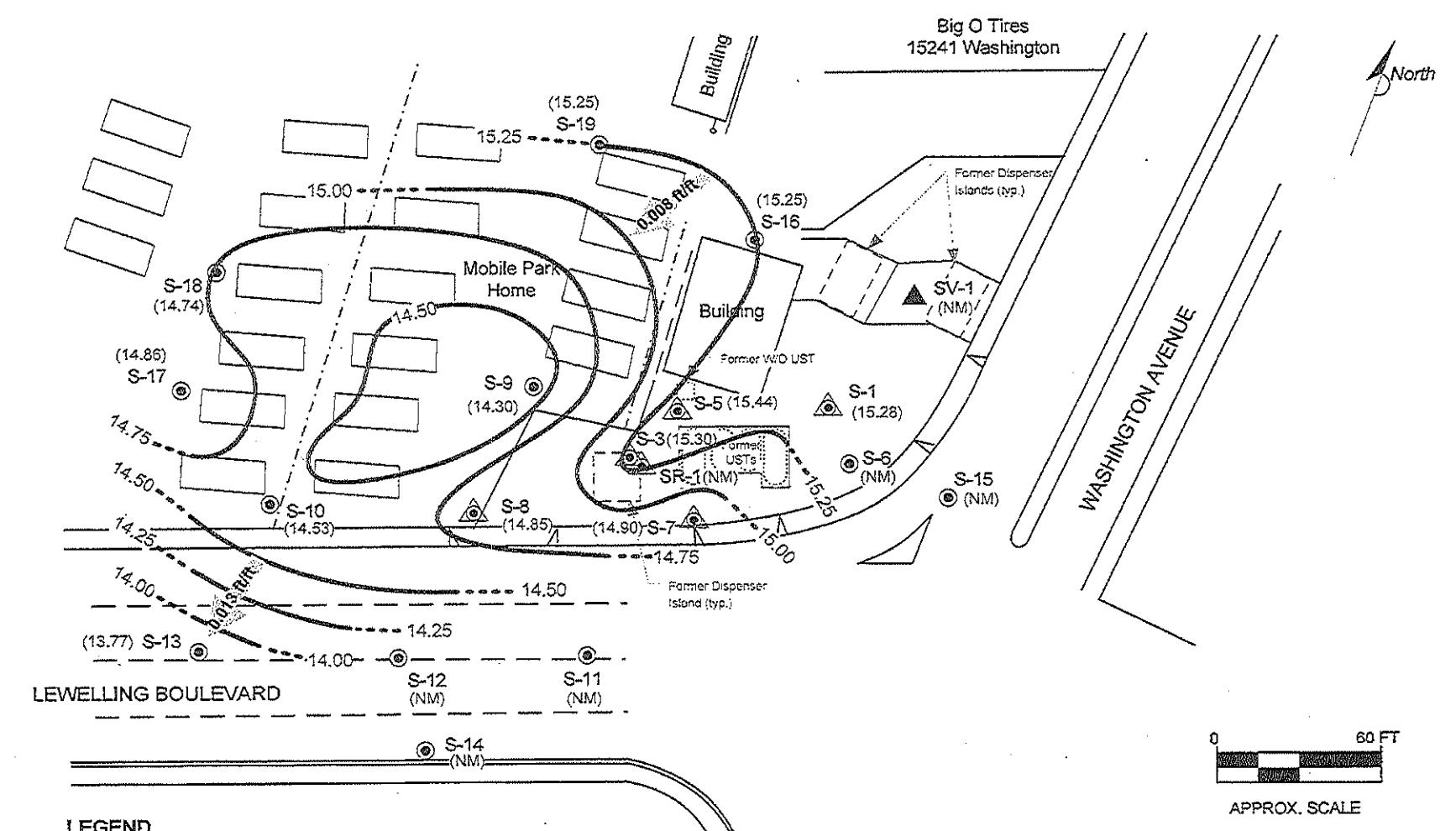
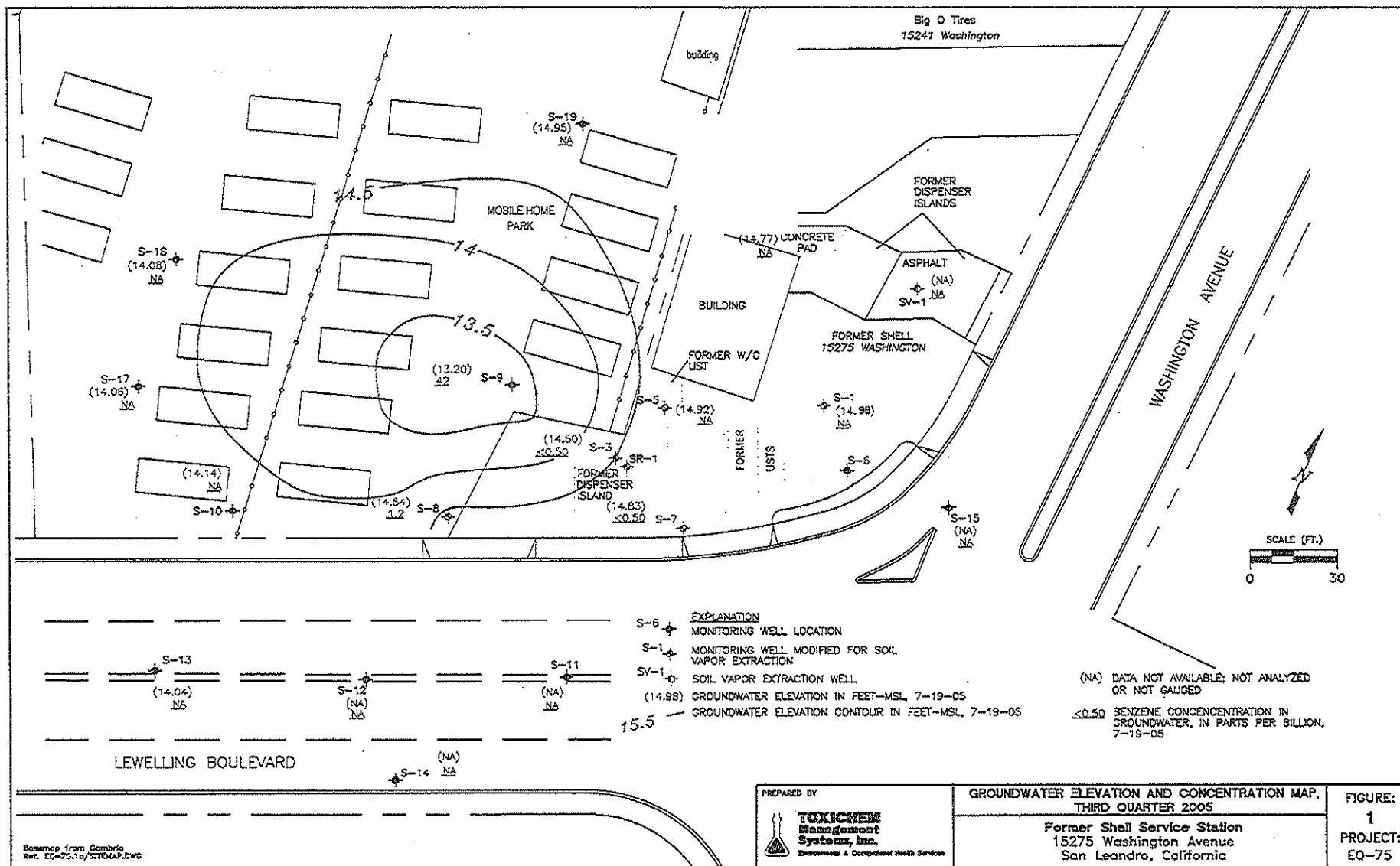


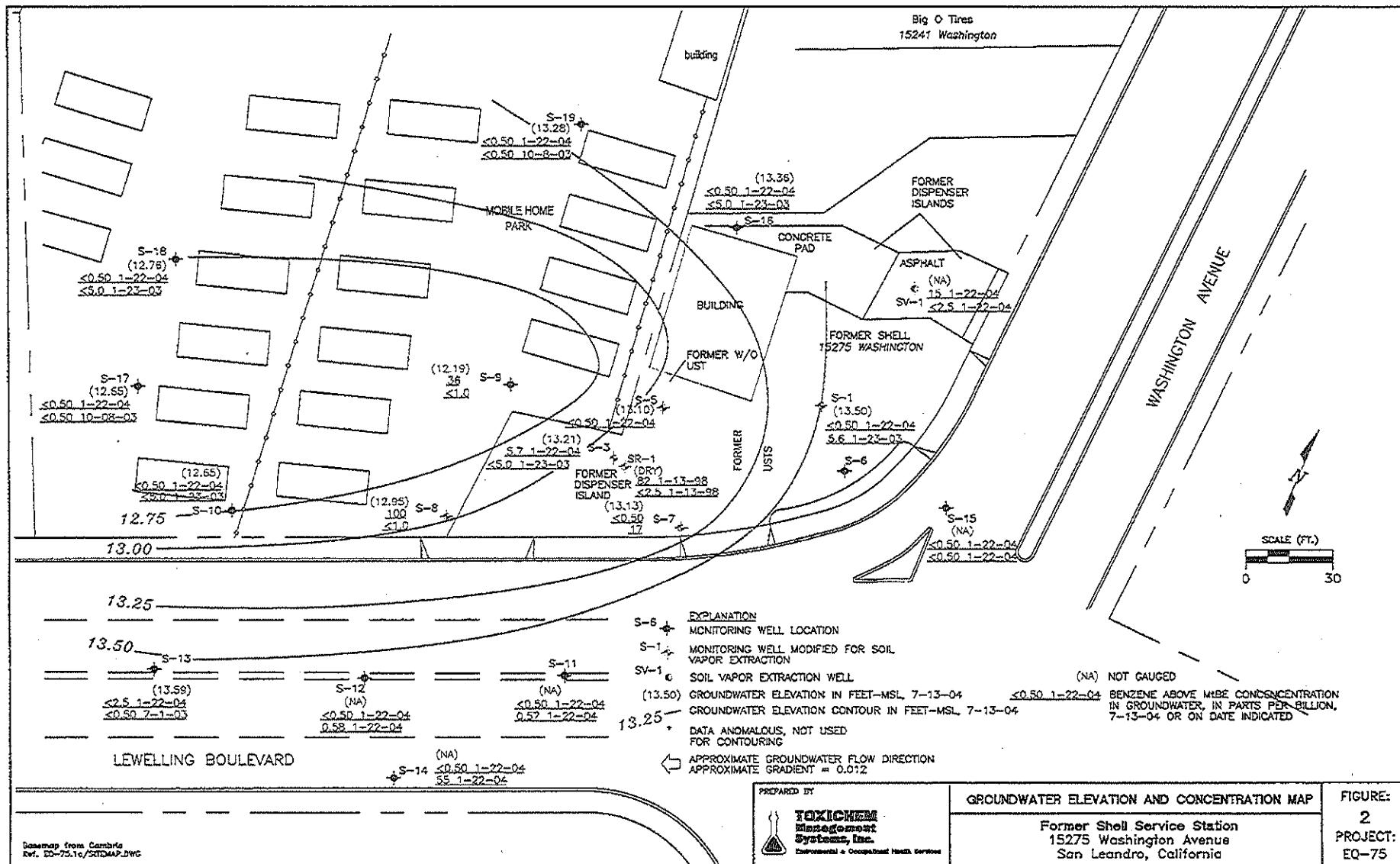
FIGURE 1
GROUNDWATER ELEVATION CONTOUR MAP,
JANUARY 27, 2006

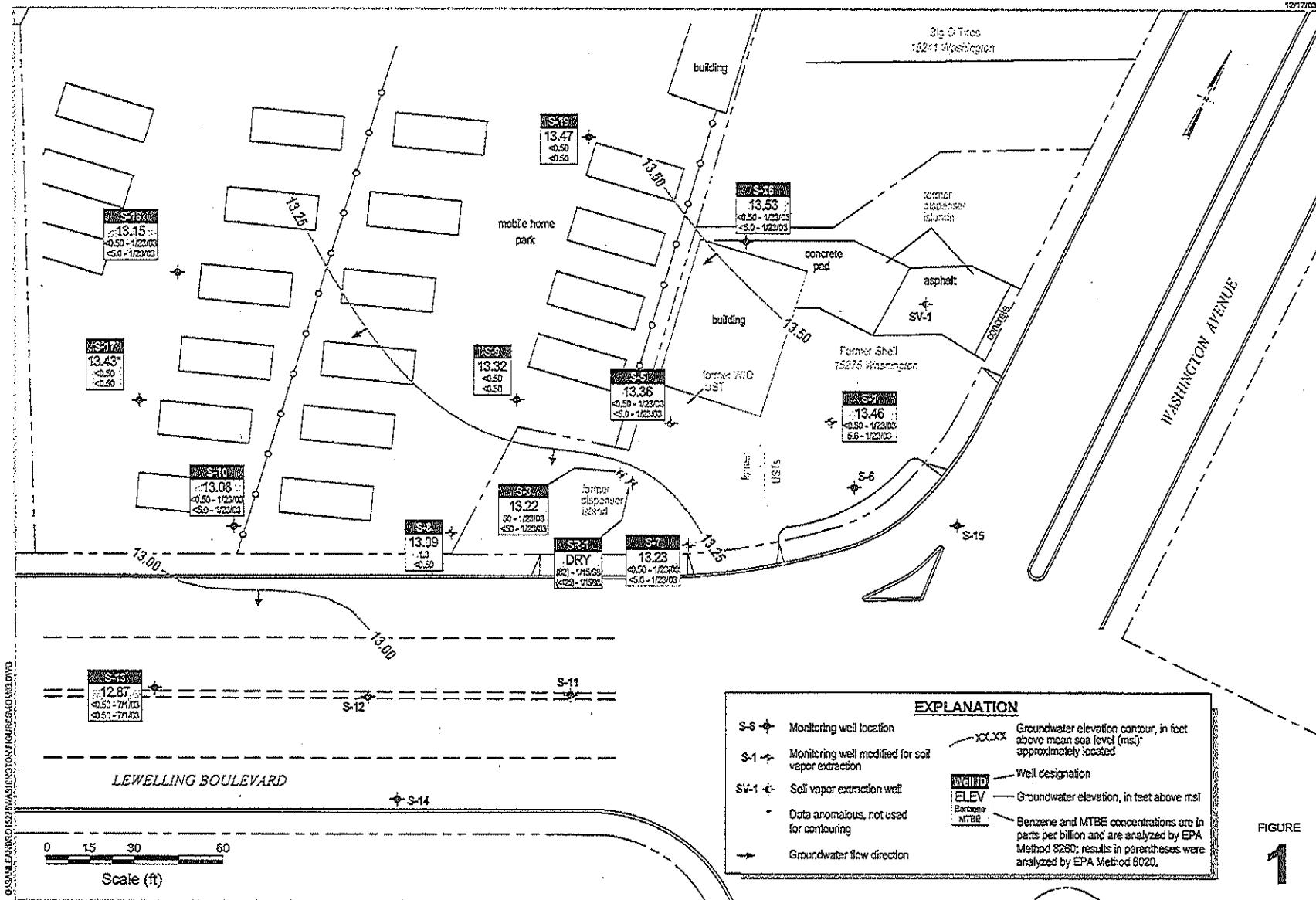
FORMER SHELL-BRANDED SERVICE STATION
15275 Washington Avenue
San Leandro, CA

PROJECT NO.	DRAWN BY
SJ15275-1.2006	JL 04/10/06
FILE NO.	PREPARED BY
SJ15275-1.2006	JL
REVISION NO.	REVIEWED BY
1	









Former Shell Service Station

115275 Washington Avenue
San Leandro, California
Telephone #970-88270

◎

CAMPBELL

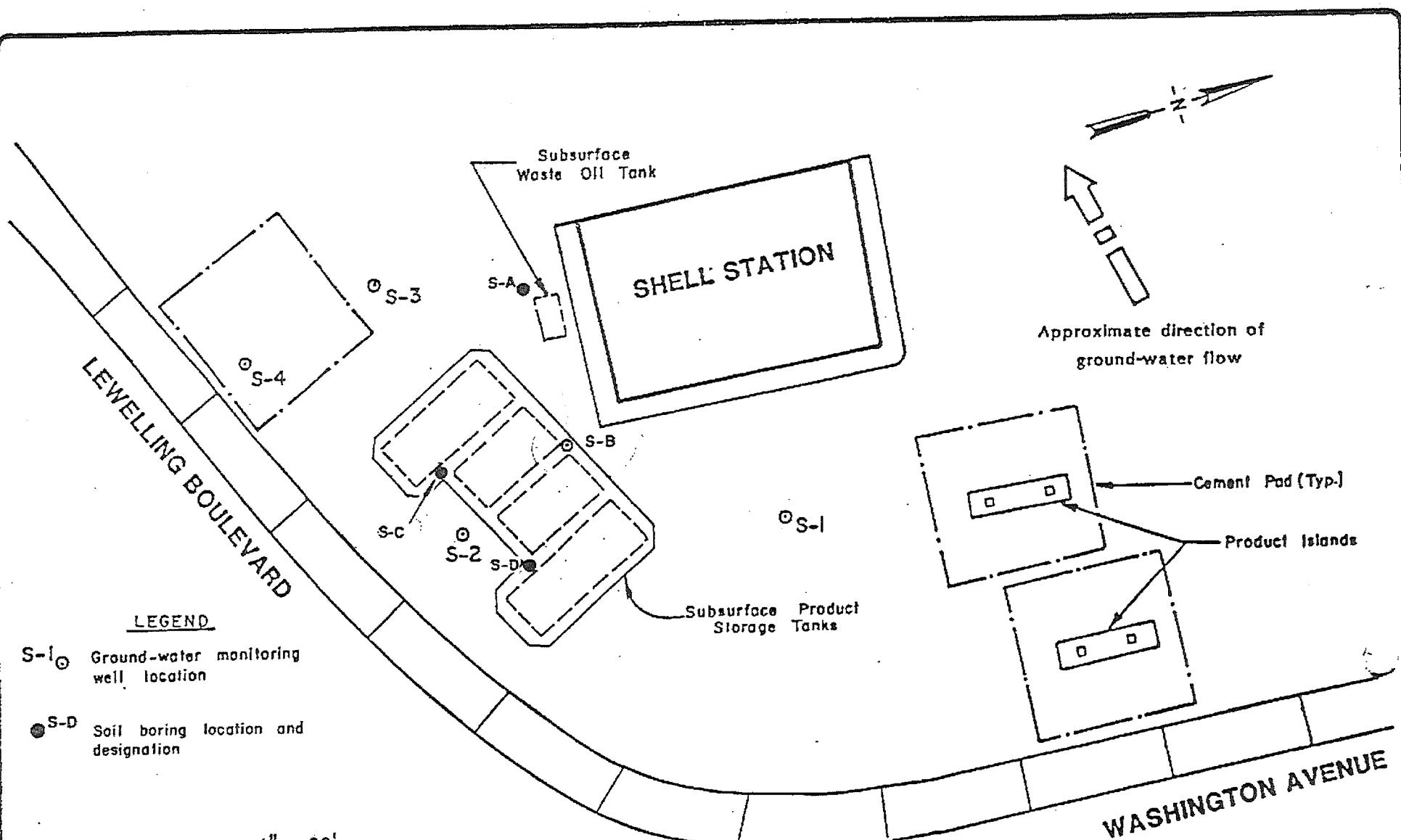
Groundwater Elevation Contour Map

Digitized by srujanika@gmail.com

FIGURE
1

APPENDIX E

SOIL ANALYTICAL DATA

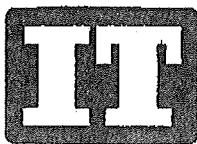


EMCON
Associates
San Jose, California

GETTLER-RYAN, INC.
SUBSURFACE HYDROGEOLOGIC INVESTIGATION
SHELL STATION, LEWELLING BLVD & WASHINGTON AVE.
SAN LEANDRO, CALIFORNIA

SITE PLAN

FIGURE
I
PROJECT NO.
738-08.02



July 23, 1985

Emcon Associates
90 Archer Street
San Jose, CA 95112

Reference: Shell Purchase Order MOH050908

ATTN: Erin Garner

Following are the results of our analyses for the presence of volatile hydrocarbons due to gasoline in three samples of soil received on June 27, 1985.

The samples were examined using the purge and trap technique. Final detection was by gas chromatography using a flame ionization detector as well as a photoionization detector and a Carbopack B/3% SP-1500 column.

nd = none detected

Lab. #	Identification	Sample	Results			
			Parts per Million (dry soil basis)			Xylene isomers and ethyl benzene
			Volatile Hydrocarbons Due to Gasoline (includes benzene, toluene and xylenes)	Benzene	Toluene	
29747	Job 738-8.1 15275 Washington San Leandro, 6/18/85	S-2 @ 7 - 8.5'	nd	nd	nd	nd
29748		S-3 @ 5 - 6.5'	900.	6.	170.	840.
29749		S-4 @ 5 - 6.5'	100.	nd*	18.	530.
Detection Limits			2.	0.1	0.1	0.4
				10.*		

Patricia L. Murphy
Patricia L. Murphy

PLM/jd

cc: Stan Roller
Shell Oil Company

Regional Office

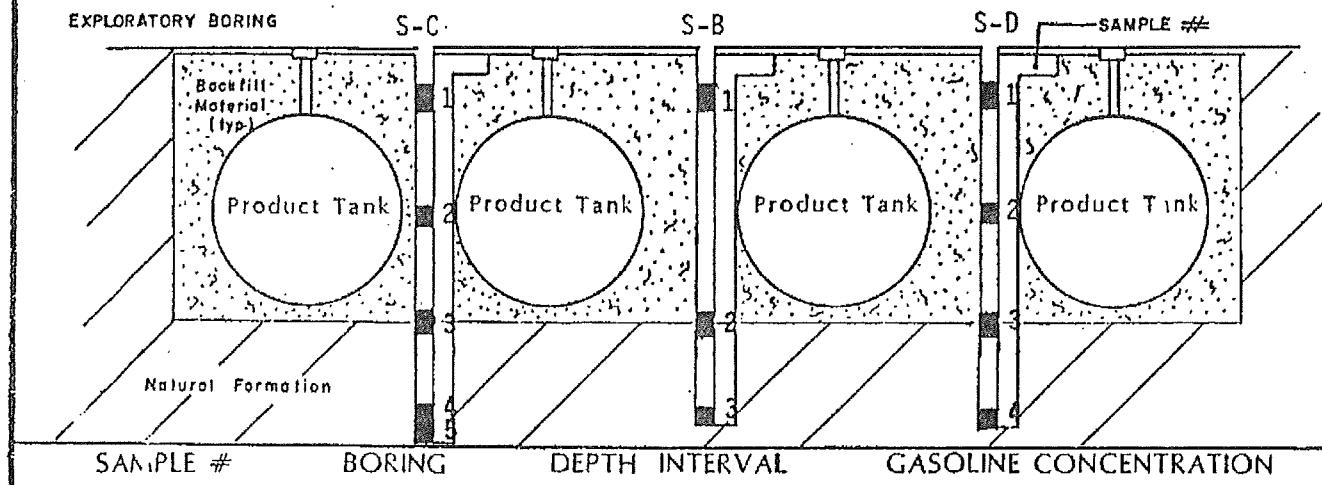
IT Corporation • 397 Mathew Street • Santa Clara, California 95050 • 408-727-4277

TABLE 1

Sample Identification	Depth Interval (in feet)	Gasoline Concentration (parts per million)
S-B	3-1/2 to 5	1,700
	11 to 12-1/2	1,500
	14 to 15-1/2	<5
S-C	3-1/2 to 5	310
	7-1/2 to 9	<200
	11-1/2 to 13	<5
	14 to 15-1/2	300
S-D	3-1/2 to 5	<100
	7 to 8-1/2	<5
	11 to 12-1/2	<5
	14 to 15-1/2	<5



GETTLER-RYAN, INC.

GENERALIZED PROFILE OF SUBSURFACE TANK COMPLEX
AND GASOLINE CONCENTRATIONS WITHIN BACKFILL MATERIALPROJECT NUMBER 738-08.02MAPVIEW DIMENSIONS 27' x 42'PROJECT NAME G-R Shell, San LeandroAPPROXIMATE DEPTH: 12 feetNUMBER OF TANKS IN COMPLEX 4

<u>1</u>	<u>S-B</u>	<u>3-1/2 to 5</u>	<u>1,700</u>
<u>2</u>	<u>S-B</u>	<u>11 to 12-1/2</u>	<u>1,500</u>
<u>3</u>	<u>S-B</u>	<u>14 to 15-1/2</u>	<u>nd*</u>
<u>1</u>	<u>S-C</u>	<u>3-1/2 to 5</u>	<u>310</u>
<u>2</u>	<u>S-C</u>	<u>7-1/2 to 9</u>	<u>nd¹</u>
<u>3</u>	<u>S-C</u>	<u>11-1/2 to 13</u>	<u>nd*</u>
<u>4</u>	<u>S-C</u>	<u>14 to 15-1/2</u>	<u>300</u>
<u>5</u>	<u>S-C</u>	<u>15-1/2 to 17</u>	<u>nd*</u>
<u>1</u>	<u>S-D</u>	<u>3-1/2 to 5</u>	<u>nd²</u>
<u>2</u>	<u>S-D</u>	<u>7 to 8-1/2</u>	<u>nd*</u>
<u>3</u>	<u>S-D</u>	<u>11 to 12-1/2</u>	<u>nd*</u>
<u>4</u>	<u>S-D</u>	<u>14 to 15-1/2</u>	<u>nd*</u>

nd = no detection.

* Detection limit = 5 parts per million.

1 Detection Limit = 200 ppm due to matrix interferences.

2 Detection limit = 100 ppm due to matrix interferences.

EMCON ASSOCIATES • CHEMICAL LABORATORIES

Analysis • Consultation • Research • Environmental Studies
State Approved Water Laboratory



CERTIFIED ANALYTICAL REPORT

Report to:

Gettier Ryan
1992 National Ave
Hayward, CA 94545

Project Number: 738-08-02

Location: SAN LEANDRO

Sample Type: SOIL

Units: mg/kg

Sample Designation:	SB-3.5-5	SB-11-12.5	SB-14-15.5	SC-3.5-5
Field Date:	08/15/86	08/15/86	08/15/86	08/15/86
Laboratory Number:	E86-0751	E86-0751	E86-0751	E86-0751
Benzene	1.0	5.6	<0.05	<0.5
Toluene	11	37	<0.1	<1
Xylenes and Ethylbenzene	97	130	<0.8	24
Volatile Hydrocarbons due to Gasoline	1700	1500	<5	310
Sample Designation:	SC-7.5-9	SC-11.5-13	SC-14-15.5	SC-15.5-17
Field Date:	08/15/86	08/15/86	08/15/86	08/15/86
Laboratory Number:	E86-0751	E86-0751	E86-0751	E86-0751
Benzene	<0.2 *	<0.05	1.6	<0.05
Toluene	<0.4 *	<0.1	5.1	<0.1
Xylenes and Ethylbenzene	<1.6 *	<0.4	28	<0.4
Volatile Hydrocarbons due to Gasoline	<200 *	<5	300	<5
Sample Designation:	SD-3.5-5	SD-7-8.5	SD-11-12.5	SD-14-15.5
Field Date:	08/15/86	08/15/86	08/15/86	08/15/86
Laboratory Number:	E86-0751	E86-0751	E86-0751	E86-0751
Benzene	<0.1 *	<0.05	0.11	<0.05
Toluene	<0.2 *	<0.1	<0.1	<0.1
Xylenes and Ethylbenzene	<0.8 *	<0.4	<0.4	<0.4
Volatile Hydrocarbons due to Gasoline	<100 *	<5	<5	<5

* Detection limit elevated due to sample matrix interference.

Page 1

Reported by:

Philip Murphy

Date:

9-10-86

1921 RINGWOOD AVENUE, SAN JOSE, CALIFORNIA 95131

TELEPHONE (408) 275-1444

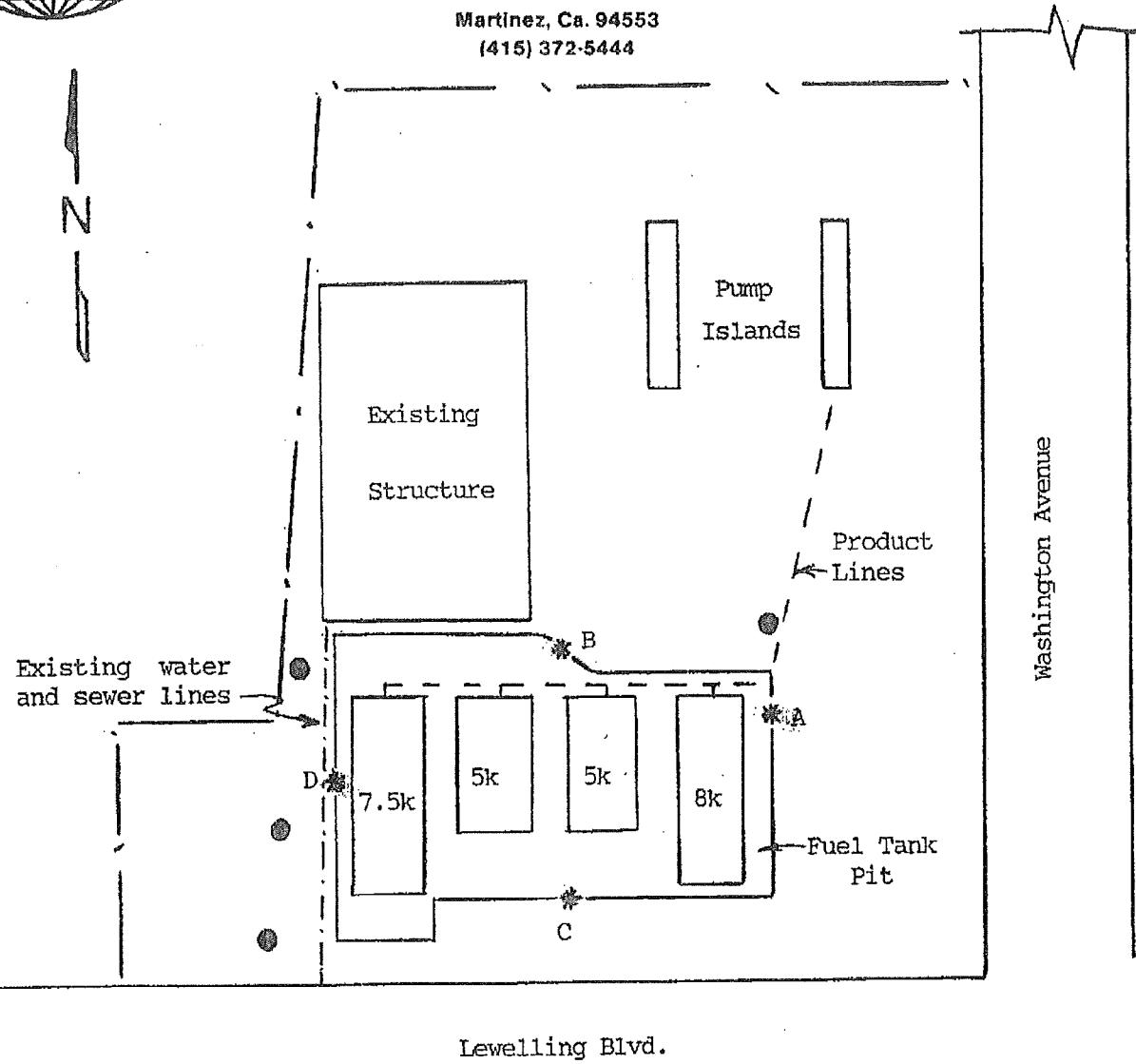
These results were obtained by following standard laboratory procedures; the liability of the corporation shall not exceed the amount paid for this report.



KAPREALIAN ENGINEERING, INC.

Consulting Engineers

535 Main Street
Martinez, Ca. 94553
(415) 372-5444



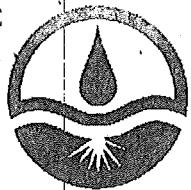
LOCATION PLAN

(not to scale)

- Existing monitoring well

- * soil sample location

SHELL SERVICE STATION
13275 Washington Avenue
San Leandro, CA



SEQUOIA Analytical Laboratory

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
535 Main Street, Suite 309
Martinez, CA 94553
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 06-11-87
Date Received: 06-11-87
Date Reported: 06-22-87

Sample Number

7060803

Sample Description

Soil A
Shell at Washington Avenue
in San Leandro, CA

ANALYSIS

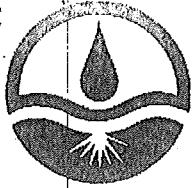
	<u>Detection Limit</u> ppm	<u>Sample Results</u> ppm
Total Hydrocarbons as Gasoline	1	1.0
Benzene	0.1	< 0.1
Toluene	0.1	< 0.1
Xylenes	0.1	< 0.1

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jao



SEQUOIA Analytical Laboratory

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
535 Main Street, Suite 309
Martinez, CA 94553
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 06-11-87
Date Received: 06-11-87
Date Reported: 06-22-87

Sample Number

7060804

Sample Description

Well B
Shell at Washington Avenue
in San Leandro, CA

ANALYSIS

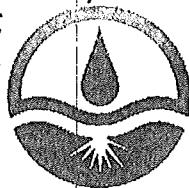
	<u>Detection Limit</u> ppm	<u>Sample Results</u> ppm
Total Hydrocarbons as Gasoline	1	74
Benzene	0.1	2.5
Toluene	0.1	1.1
Xylenes	0.1	3.7

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jao



SEQUOIA Analytical Laboratory

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
535 Main Street, Suite 309
Martinez, CA 94553
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 06-11-87
Date Received: 06-11-87
Date Reported: 06-22-87

Sample Number

7060805

Sample Description

Soil C
Shell at Washington Avenue
in San Leandro, CA

ANALYSIS

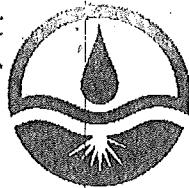
	<u>Detection Limit</u> ppm	<u>Sample Results</u> ppm
Total Hydrocarbons as Gasoline	1	31
Benzene	0.1	< 0.1
Toluene	0.1	0.69
Xylenes	0.1	1.2

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jab



SEQUOIA Analytical Laboratory

2549 Middlefield Road
Redwood City, CA 94063 • (415) 364-9222

Kaprealian Engineering, Inc.
535 Main Street, Suite 309
Martinez, CA 94553
Attn: Mardo Kaprealian, P.E.
President

Date Sampled: 06-11-87
Date Received: 06-11-87
Date Reported: 06-22-87

Sample Number

7060806

Sample Description

Soil D
Shell at Washington Avenue
in San Leandro, CA

ANALYSIS

	<u>Detection Limit</u> ppm	<u>Sample Results</u> ppm
Total Hydrocarbons as Gasoline	1	910
Benzene	0.1	7.4
Toluene	0.1	43
Xylenes	0.1	43

NOTE: Analysis was performed using EPA methods 5020 and 8015 with method 8020 used for BTX distinction.

SEQUOIA ANALYTICAL LABORATORY

Arthur G. Burton
Laboratory Director

jao

KEI-J87-063
December 7, 1987
Page 4

TABLE -1

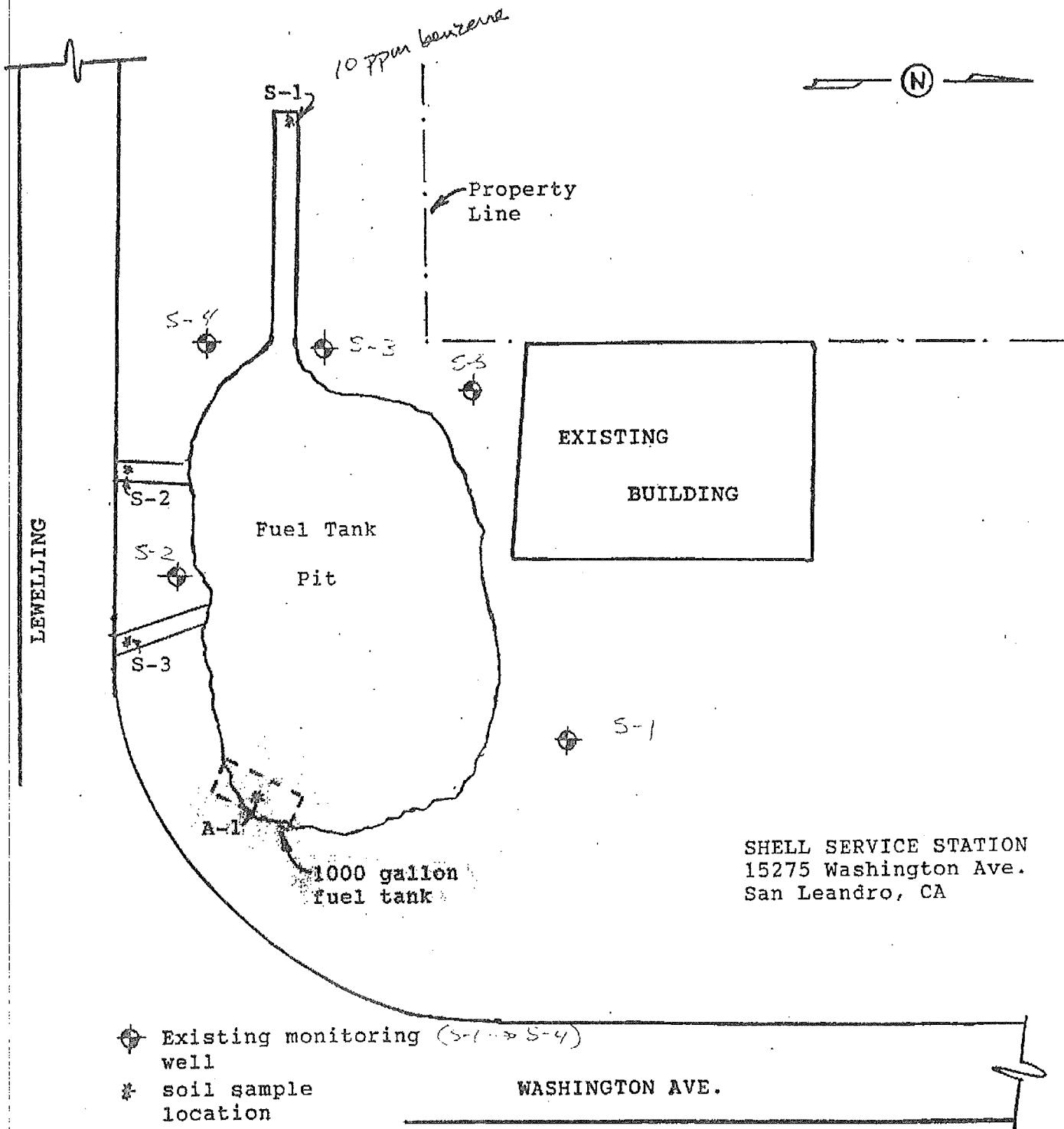
SUMMARY OF LABORATORY ANALYSES
(all results in parts per million)

<u>Sample Number</u>	<u>Date Sampled</u>	Total Petroleum Hydrocarbons	<u>Benzene</u>	<u>Toluene</u>	<u>Xylene</u>
		Hydrocarbons			
S-1	10-13-87	260	10	0.2	3.0
S-2		100	5.7	2.9	52
S-3		730	3.9	1.0	79
A-1*	11-16-87	950	21	1.4	17
Comp Q	9-03-87	850	5.1	14	33
Comp A*	11-25-87	1.3	<0.1	<0.1	0.2
Comp B*		1.5	<0.1	<0.1	0.4

* A-1 Ethylbenzene = 35 ppm
Comp A Ethylbenzene <0.1 ppm
Comp B Ethylbenzene <0.1 ppm



KAPREALIAN ENGINEERING, INC.
Consulting Engineers
P. O. BOX 913
BENICIA, CA 94510
(415) 878-0100 (707) 746-0915



SITE PLAN
1" = 20 ft.

TABLE 2

SOIL SAMPLE ANALYSIS DATA

BORING NO	SAMPLE DATE	ANALYSIS DATE	TPH (PPM)	BENZENE (PPM)	ETHYLBENZENE (PPM)	TOLUENE (PPM)	XYLENES (PPM)
S-13-5'	26-Apr-89	02-May-89	31.	0.19	0.6	0.2	0.3
S-14-5'	26-Apr-89	02-May-89	16.	0.33	0.3	0.1	1.6
S-15-5'	26-Apr-89	02-May-89	ND	ND	ND	ND	ND
S-16-5'	25-Apr-89	02-May-89	1,100.	3.	24.	12.	110.
S-17-5'	25-Apr-89	02-May-89	13.	ND	ND	ND	ND

TPH = Total Petroleum Hydrocarbons as Gasoline

PPM = parts per million

ND = None Detected

Note: 1. For chemical parameter detection limits, refer to I.T. laboratory reports i

Company: Shell Oil Company
 Date: 06/04/91
 Client Work ID: GR7615, 15275 Wash., S.Lndro

IT ANALYTICAL SERVICES
 SAN JOSE, CA

Work Order: T1-05-186

TEST NAME: Petroleum Hydrocarbons

SAMPLE ID: SP-18
 SAMPLE DATE: 05/16/91
 LAB SAMPLE ID: T105186-01
 SAMPLE MATRIX: solid
 RECEIPT CONDITION: cool

RESULTS in Milligrams per Kilogram:

	METHOD	EXTRACTION DATE	ANALYSIS DATE
BTEX	8020	05/28/91	05/30/91
Low Boiling Hydrocarbons	Mod. 8015	05/28/91	05/30/91

PARAMETER	DETECTION LIMIT	DETECTED
Low Boiling Hydrocarbons calculated as Gasoline	1.0	None
BTEX		
Benzene	0.005	None
Toluene	0.005	0.007
Ethylbenzene	0.005	None
Xylenes (total)	0.005	None

SURROGATES	% REC
1,3-Dichlorobenzene (Gasoline)	130.
1,3-Dichlorobenzene (BTEX)	122.

1. $\Gamma(\omega) \geq -10$

ENVIRONMENTAL DIVISION

Gottlieb - Ryan Inc.

Chain of Custody

COMPANY Shell Oil Company

JOB NO. 761502

JOB LOCATION 15275 Washington (WIC# 204-6852-1008) BNG Sac

CITY San heandro

PHONE NO. Draxler

AUTHORIZED John Werfel

DATE 5/16/81

P.O. NO.

~~RELINQUISHED BY:~~

RECEIVED

07.05

~~RElinquished by~~

RECEIVED BY:

REMOVED BY:

RECEIVED BY LIBRARIAN

DESIGNATED LABORATORY:

RECEIVED BY LIBRARIAN

REMARKS:

ITAS

DHS 4

137

REMARKS:

STANDARD TURN AROUNDS

DATE COMPLETED

5/16/91

FOREMAN

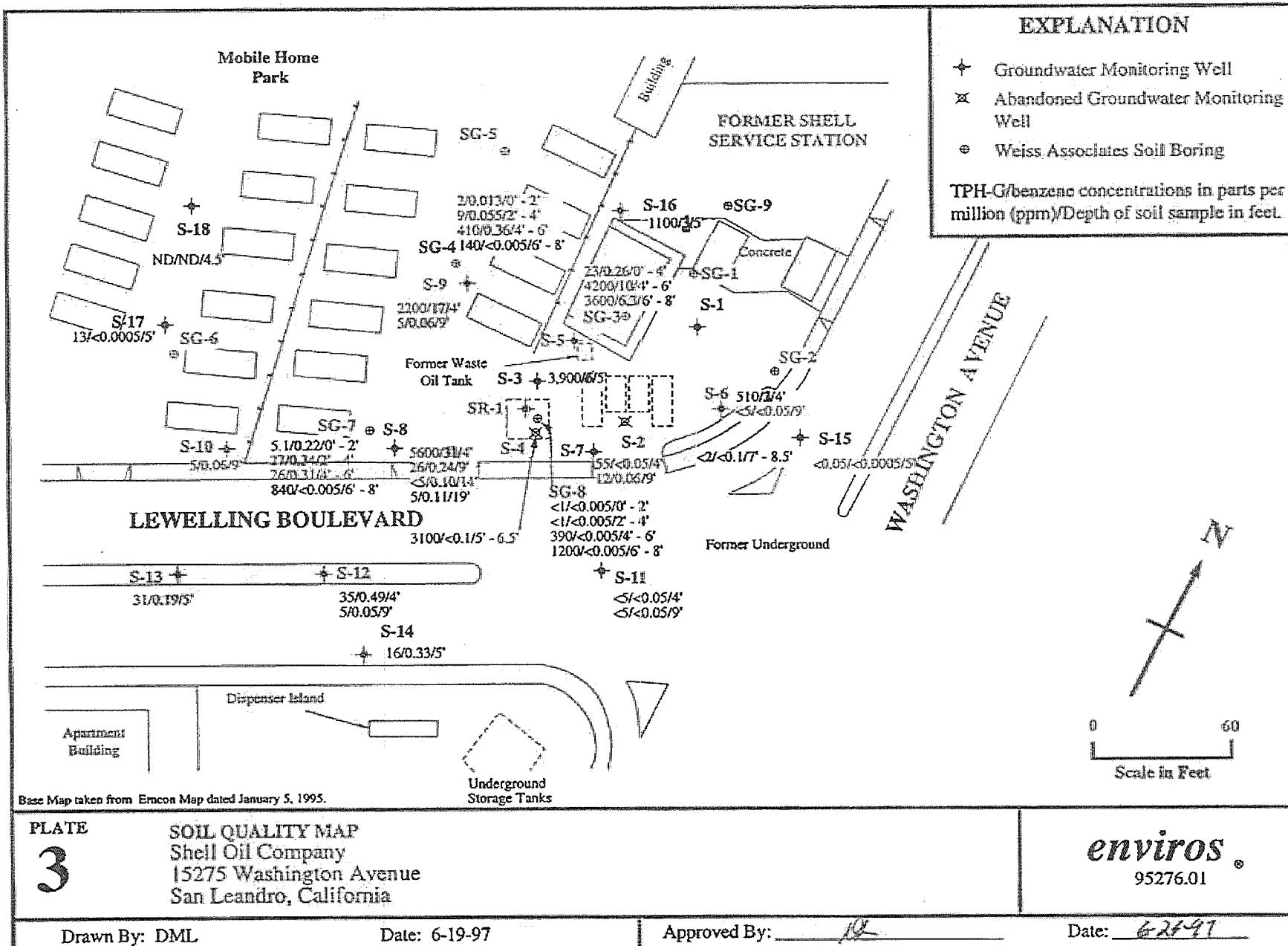


Table 4. Sequoia Analytical Soil Data

Former Shell Service Station, WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

WA Sample ID	Depth below ground surface sampled	Date sampled	Date Analyzed	TPH (C ₁ -Gas)	Benzene	Toluene	Ethylbenzene	Total Xylenes	Chromatogram Pattern
Soil Data									
SG-03-0-4 ft	0-4 ft	5/5/97	5/14/97	23,000	260	110	210	410	Gas/UH
SG-03-4-6 ft	4-6 ft	5/5/97	5/14/97	4,200,000	10,000	3,700	52,000	220,000	Gas
SG-05-5-8 ft	6-8 ft	5/5/97	5/14/97	3,600,000	6,300	5,900	47,000	190,000	Gas
SG-04-0-2 ft	0-2 ft	5/5/97	5/14/97	2,000	< 5	13	21	67	Gas
SG-04-2-4 ft	2-4 ft	5/5/97	5/14/97	9,000	55	23	150	470	Gas
SG-04-4-6 ft	4-6 ft	5/5/97	5/14/97	410,000	330	750	720	1,200	Gas/UH
SG-04-6-8 ft	6-8 ft	5/5/97	5/14/97	140,000	< 5	270	810	1,400	Gas
SG-07-0-2 ft	0-2 ft	5/6/97	5/15/97	5,100	220	7,7	670	170	Gas
SG-07-2-4 ft	2-4 ft	5/6/97	5/14/97	27,000	340	87	1,100	180	Gas
SG-07-4-6 ft	4-6 ft	5/6/97	5/15/97	25,000	310	< 5	650	120	Gas
SG-07-6-8 ft	6-8 ft	5/6/97	5/14/97	840,000	< 5	3,000	12,000	< 5	Gas
SG-08-0-2 ft	0-2 ft	5/6/97	5/14/97	< 1,000	< 5	< 5	< 5	< 5	NA
SG-08-2-4 ft	2-4 ft	5/6/97	5/14/97	< 1,000	< 5	< 5	< 5	< 5	Gas
SG-08-4-6 ft	4-6 ft	5/6/97	5/15/97	390,000	< 5	< 5	< 5	3,100	Gas/UH
SG-08-6-8 ft	6-8 ft	5/6/97	5/14/97	1,200,000	< 5	< 5	8,500	14,000	Gas

Averages 724,940 1,193 925 8,257 28,742

Fraction Organic Carbon (%)	Moisture (%)	Dry Bulk Density (g/cc)	Wet Bulk Density (g/cc)	Calculated from Dry Bulk Density	Gross Density - assumed
Other Laboratory Analyses					
1.3%	7%	1.8	1.9	2.65	
0.37%	15%	2.0	2.3	2.65	
0.30%	17%	2.1	2.5	2.65	
3.4%	1%	1.9	1.9	2.65	
1.2%	20%	2.0	2.4	2.65	
0.38%	19%	2.1	2.5	2.65	
2.8%	21%	2.1	2.5	2.65	
0.65%	3%	2.1	2.2	2.65	
0.69%	21%	1.8	2.2	2.65	
0.33%	25%	2.0	2.5	2.65	
0.28%	20%	2.2	2.6	2.65	
0.88%	15%	2.1	2.4	2.65	
0.82%	16%	1.7	2.0	2.65	
0.52%	25%	1.9	2.4	2.65	
0.26%	19%	2.1	2.5	2.65	

Comments
0-4' Gravel (GP), 4"-4' Sand & Gravel (SW) fill, slight odor
4'-6' Moist Clayey Silt w/ Gravel, slight odor
6'-8' Silty Sand, less moist, slight odor
0-6' Gravel, Asphalt, 6"-2' Clayey Sand, no odor
2"-4' Clayey Silt, no odor
4"-6' Clayey Silt, slight odor
6"-7' Clayey Sand, moist, slight odor, 7"-8' Clayey Silt, no odor
0-4' Asphalt, 4"-2' Clayey Silt, slight odor
2"-4' Clayey Silt, slight odor
4"-6' Clayey Silt, strong odor
6"-8' Clayey Sand, strong odor
0-4" Asphalt, 4"-2" Mortared Clayey Sand & Gravel, Wood frags. at 2"; no odor
2"-4' Clayey Sand, no odor
4"-6' Silty Sand, strong odor
6"-8' Silty Sand, strong odor

Notes: < - Below the method detection limit.

Chromatogram Pattern: Gas = Gasoline

Gas/UH = Gasoline & Unidentified Hydrocarbons >C8

TABLE 4
SOIL ANALYTICAL DATA
Shell Oil Products Company
15275 Washington Avenue
San Leandro, CA
WIC# 204-6852-1008

Sample Depth (ft)	Date Sampled	TPPH (mg/Kg)	B (mg/Kg)	T (mg/kg)	E (mg/Kg)	X (mg/Kg)	MTBE (mg/Kg)	Primary Soil Type (Unified Soil Class)	Comments
SG-10-4									
4	31-Jul-97	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	SM	
SG-11-4									
4	31-Jul-97	30	0.11	0.15	0.76	0.27	0.67	CL	
SG-12-4									
4	31-Jul-97	6.8	<0.0050	0.018	0.014	0.065	<0.025	CL	
SG-13-4									
4	31-Jul-97	<1.0	<0.0050	<0.0050	<0.0050	<0.0050	<0.025	CL	

Abbreviations:

<x = Not detected at detection limit of x



Sequoia
Analytical

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FAX (650) 364-9233
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FAX (707) 792-0342

Cambria
1144 65th St. Suite C
Oakland, CA 94608

Attention: John Riggli

Client Proj. ID: Shell 15275 Washington
Sample Descript: S-19(5')
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9808051-01

Sampled: 07/31/98
Received: 07/31/98
Extracted: 08/06/98
Analyzed: 08/12/98
Reported: 08/19/98

QC Batch Number: GC080698BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	12
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		>C8
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70 130	70
4-Bromofluorobenzene	60 140	74

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA/ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Sequoia
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Cambria
1144 65th St. Suite C
Oakland, CA 94608

Client Proj. ID: Shell 15275 Washington
Sample Descript: S-19(10')
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9808051-02

Sampled: 07/31/98
Received: 07/31/98
Extracted: 08/07/98
Analyzed: 08/10/98
Reported: 08/19/98

Attention: John Raggi
QC Batch Number: GC080798BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	11
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	0.0099
Xylenes (Total)	0.0050	0.012
Chromatogram Pattern:		C6-C12
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	80
4-Bromofluorobenzene	60	119

Analytics reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
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Sequoia
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Cambria
1144 65th St. Suite C
Oakland, CA 94608

Attention: John Rigg

Client Proj. ID: Shell 15275 Washington
Sample Descript: S-19(15')
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9808051-03

Sampled: 07/31/98
Received: 07/31/98
Extracted: 08/07/98
Analyzed: 08/12/98
Reported: 08/19/98

QC Batch Number: GC080798BTEXEXB
Instrument ID: GCHP01

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

Analytes reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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Sequoia
Analytical

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FAX (707) 792-0342

Cambridge
1144 65th St. Suite C
Oakland, CA 94608

Attention: John Riggli

Client Proj. ID: Shell 15275 Washington
Sample Descript: S-19(20')
Matrix: SOLID
Analysis Method: 8015Mod/8020
Lab Number: 9808051-04

Sampled: 07/31/98
Received: 07/31/98
Extracted: 08/06/98
Analyzed: 08/06/98
Reported: 08/19/98

QC Batch Number: GC080698BTEXEXB
Instrument ID: GCHP07

Total Purgeable Petroleum Hydrocarbons (TPPH) with BTEX and MTBE

Analyte	Detection Limit mg/Kg	Sample Results mg/Kg
TPPH as Gas	1.0	N.D.
Methyl t-Butyl Ether	0.025	N.D.
Benzene	0.0050	N.D.
Toluene	0.0050	N.D.
Ethyl Benzene	0.0050	N.D.
Xylenes (Total)	0.0050	N.D.
Chromatogram Pattern:		
Surrogates	Control Limits %	% Recovery
Trifluorotoluene	70	130
4-Bromofluorobenzene	60	140

Analyses reported as N.D. were not present above the stated limit of detection.

SEQUOIA ANALYTICAL - ELAP #1210

Peggy Penner
Project Manager

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TABLE 1
SOIL ANALYTICAL DATA - PETROLEUM HYDROCARBONS

Former Shell-Branded Service Station
15275 Washington Avenue, San Leandro, California

Sample Location	Sample Name	Sample Depth (feet)	Sample Date	TPH-g (mg/kg)	DRO (mg/kg)	TPH-mo (mg/kg)	Benzene (mg/kg)	Ethylbenzene (mg/kg)	Toluene (mg/kg)	Xylenes (mg/kg)
Analytical Method:				EPA 8260B	EPA 8015B	EPA 8015B Mod.	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
Residential ESL ² , non-drinking water (Shallow/Deep)				100 / 180	100 / 180	370 / 5,000	0.12 / 2.0	2.3 / 4.7	9.3 / 9.3	11 / 11
Residential ESL ¹ , potential drinking water (Shallow/Deep)				83 / 83	83 / 83	370 / 5,000	0.044 / 0.044	2.3 / 3.3	2.9 / 2.9	2.3 / 2.3
SB-1	SB-1@16'	16	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-2	SB-2@12'	12	06/21/10	0.53	31*	100	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-2@50'	50	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-3	SB-3@16'	16	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-3@50'	50	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-4	SB-4@8'	8	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-4@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-5	SB-5@8'	8	06/22/10	ND< 0.5	110*	320	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-5@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-6	SB-6@8	8	06/22/10	3.7	ND< 5	ND< 25	ND< 0.005	0.0061	ND< 0.005	ND< 0.005
	SB-6@12'	12	06/22/10	0.95	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-7	SB-7@10'	10	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-7@14'	14	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-8	SB-8@6'	6	06/21/10	280	13*	ND< 25	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5
	SB-8@14'	14	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-9	SB-9@8'	8	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-9@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-10	SB-10@12'	12	06/21/10	ND< 50	ND< 5	ND< 25	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5
	SB-10@16'	16	06/21/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-11	SB-11@8'	8	06/22/10	70	7.3*	ND< 25	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5
	SB-11@24'	24	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-12	SB-12@8'	8	06/22/10	1,100	ND< 5	ND< 25	ND< 2	ND< 2	ND< 2	ND< 2
	SB-12@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-13	SB-13@10'	10	06/22/10	1.8	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
	SB-13@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005
SB-14	SB-14@6'	6	06/22/10	290	9.1*	ND< 25	ND< 0.5	ND< 0.5	ND< 0.5	ND< 0.5
	SB-14@12'	12	06/22/10	ND< 0.5	ND< 5	ND< 25	ND< 0.005	ND< 0.005	ND< 0.005	ND< 0.005

Abbreviations and Notes:

TPH-g = Total Petroleum Hydrocarbons as gasoline

DRO = Diesel Range Organics

TPH-mo = Total Petroleum Hydrocarbons as Motor Oil

mg/kg = milligrams per kilogram

EPA = Environmental Protection Agency

ND = Not detected above laboratory method detection limits

ESLs = Environmental Screening Levels, San Francisco Bay Region Regional Water Quality Control Board, Interim Final - November 2007 (Revised May 2008)

1. ESL for current site usage, residential use where groundwater is not a potential source of drinking water; shallow soils (< 3 meters) [Table B] and deep soils (> 3 meters) [Table D]

2. ESL for residential use where groundwater is a potential source of drinking water; shallow soils (< 3 meters) [Table A] and deep soils (> 3 meters) [Table C]

* - The sample chromatograph pattern does not match the typical chromatograph pattern for diesel

TABLE 2
SOIL ANALYTICAL DATA - OXYGENATES AND LEAD SCAVENGERS

Former Shell-Branded Service Station
15275 Washington Avenue, San Leandro, California

Sample Location	Sample Name	Depth (feet)	Sample Date	MTBE (mg/kg)	TBA (mg/kg)	DIPE (mg/kg)	ETBE (mg/kg)	TAME (mg/kg)	Ethanol (mg/kg)	EDB (mg/kg)	EDC (mg/kg)
Analytical Method:				EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B	EPA 8260B
Residential ESL ² , non-drinking water (Shallow/Deep)				8.4 / 8.4	100 / 110	NA / NA	NA / NA	NA / NA	NA / NA	0.019 / 1.0	0.22 / 1.8
Residential ESL ¹ , potential drinking water (Shallow/Deep)				0.023 / 0.023	0.075 / 0.075	NA / NA	NA / NA	NA / NA	NA / NA	0.00033 / 0.00033	0.0045 / 0.0045
SB-1	SB-1@16'	16	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-2	SB-2@12'	12	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-2@50'	50	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-3	SB-3@16'	16	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-3@50'	50	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-4	SB-4@8'	8	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-4@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-5	SB-5@8'	8	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-5@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-6	SB-6@8	8	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-6@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-7	SB-7@10'	10	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-7@14'	14	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-8	SB-8@6'	6	06/21/10	ND< 0.5	ND< 5	ND< 1	ND< 1	ND< 1	ND< 50	ND< 0.5	ND< 0.5
	SB-8@14'	14	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-9	SB-9@8'	8	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-9@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-10	SB-10@12'	12	06/21/10	ND< 0.5	ND< 5	ND< 1	ND< 1	ND< 1	ND< 50	ND< 0.5	ND< 0.5
	SB-10@16'	16	06/21/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-11	SB-11@8'	8	06/22/10	ND< 0.5	ND< 5	ND< 1	ND< 1	ND< 1	ND< 50	ND< 0.5	ND< 0.5
	SB-11@24'	24	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-12	SB-12@8'	8	06/22/10	ND< 2	ND< 20	ND< 4	ND< 4	ND< 4	ND< 200	ND< 2	ND< 2
	SB-12@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-13	SB-13@10'	10	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
	SB-13@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005
SB-14	SB-14@6'	6	06/22/10	ND< 0.5	ND< 5	ND< 1	ND< 1	ND< 1	ND< 50	ND< 0.5	ND< 0.5
	SB-14@12'	12	06/22/10	ND< 0.005	ND< 0.05	ND< 0.01	ND< 0.01	ND< 0.01	ND< 0.5	ND< 0.005	ND< 0.005

Abbreviations and Notes:

MTBE - Methyl tert-butyl ether

EDC - 1,2-Dichloroethane

TBA - Tert-butyl alcohol

mg/kg - milligrams per kilogram

DIPE - Di-isopropyl ether

EPA = Environmental Protection Agency

ETBE - Ethyl tert-butyl ether

NA = Not applicable or not available

TAME - Tert-amyl methyl ether

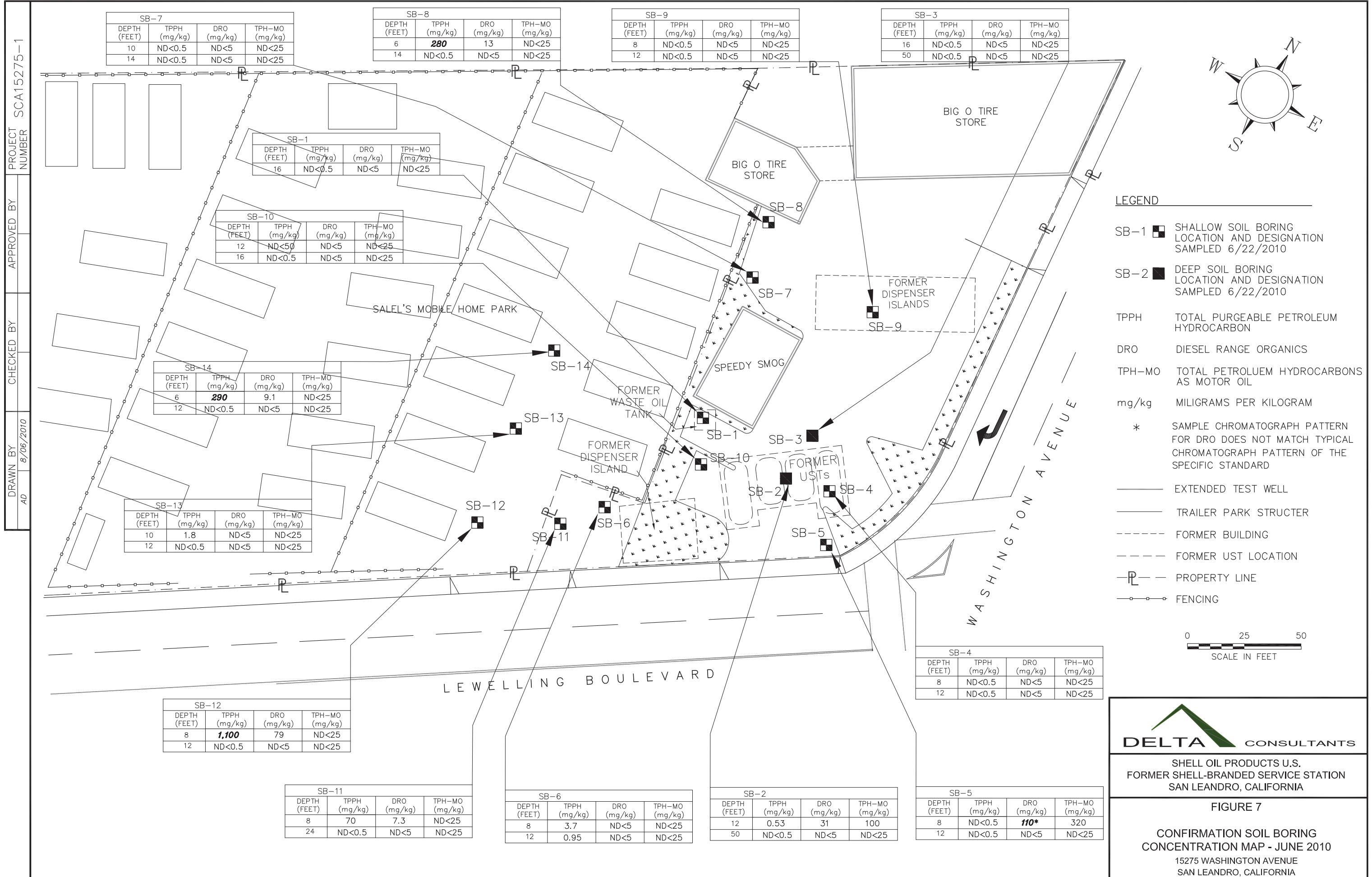
ND - Not detected above laboratory detection limits

EDB - 1,2-Dibromoethane

ESLs = Environmental Screening Levels, San Francisco Bay Region Regional Water Quality Control Board, Interim Final - November 2007 (Revised May 2008)

1. ESL for current site usage, residential use where groundwater is not a potential source of drinking water; shallow soils (< 3 meters) [Table B] and deep soils (> 3 meters) [Table D]

2. ESL for residential use where groundwater is a potential source of drinking water; shallow soils (< 3 meters) [Table A] and deep soils (> 3 meters) [Table C]



APPENDIX F
SOIL GAS ANALYTICAL DATA

TABLE 1
SOIL GAS ANALYTICAL DATA
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

Sample Location (depth, feet)	Date	TPH-g ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl-benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	TBA ($\mu\text{g}/\text{m}^3$)	Isopropanol ($\mu\text{g}/\text{m}^3$)
<i>Residential ESL¹</i>		10,000	84	63,000	980	21,000	9,400	NA	
<i>Commercial ESL¹</i>		29,000	280	180,000	3,300	58,000	31,000	NA	(Tracer compound)
SVG-1 (3.5')	09/09/10	15,000,000	3,400	ND(<2,400)	ND(<2,700)	ND(<5,400)	ND(<4,500)	ND(<3,800)	ND(<1,500)
SVG-2 (3')	09/09/10	17,000,000	32,000	ND(<19,000)	150,000	ND(<43,000)	ND(<36,000)	ND(<30,000)	ND(<12,000)
SVG-2 (5')	09/09/10	18,000,000	17,000	ND(<19,000)	200,000	44,000	ND(<36,000)	ND(<30,000)	ND(<12,000)
SVG-3 (3')	09/09/10	86,000	ND(<80)	ND(<94)	1,100	220	ND(<180)	ND(<150)	ND(<61)
SVG-4 (3')	09/09/10	50,000	ND(<16)	ND(<19)	610	160	ND(<36)	ND(<30)	ND(<12)
SVG-5 (3')	09/09/10	37,000,000	2,700	ND(<2,400)	9,300	ND(<5,400)	ND(<4,500)	ND(<3,800)	ND(<1,500)
SVG-5 (5')	09/09/10	32,000,000	ND(<4,800)	ND(<5,700)	ND(<6,500)	ND(<13,000)	ND(<11,000)	ND(<9,100)	ND(<3,700)
SVG-6 (3')	09/09/10	140,000,000	44,000	ND(<30,000)	ND(<35,000)	ND(<69,000)	ND(<58,000)	ND(<49,000)	ND(<20,000)
SVG-6 (5')	09/09/10	160,000,000	46,000	ND(<30,000)	ND(<35,000)	ND(<69,000)	ND(<58,000)	ND(<49,000)	ND(<20,000)
SVG-7 (3')	09/09/10	97,000	ND(<80)	ND(<94)	300	ND(<220)	ND(<180)	ND(<150)	ND(<61)
SVG-8 (3')	09/09/10	100,000	ND(<80)	ND(<94)	300	ND(<220)	ND(<180)	ND(<150)	ND(<61)
SVG-8 (5')	09/09/10	81,000	ND(<80)	ND(<94)	240	ND(<220)	ND(<180)	ND(<150)	ND(<61)
SVG-8 (7.5')	09/09/10	62,000	ND(<51)	ND(<60)	230	ND(<140)	ND(<120)	ND(<97)	ND(<39)
SVG-9 (3')	09/09/10	57,000	ND(<51)	ND(<60)	230	ND(<140)	ND(<120)	ND(<97)	ND(<39)
SVG-9 (5')	09/09/10	7,900	ND(<16)	32	32	ND(<43)	ND(<36)	ND(<30)	99
SVG-9 (7.5')	09/09/10	36,000	ND(<64)	ND(<75)	95	ND(<170)	ND(<140)	ND(<120)	ND(<49)

Abbreviations and Notes:

TPH-g - Total petroleum hydrocarbons as gasoline

MTBE - Methyl-tert butyl ether

TBA - Tert-butyl alcohol

$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter

ESL = Environmental Screening Levels, Regional Water Quality Control Board, San Francisco Bay Region, Interim Final (Revised May 2008)

ND - Not detected above shown detection limit

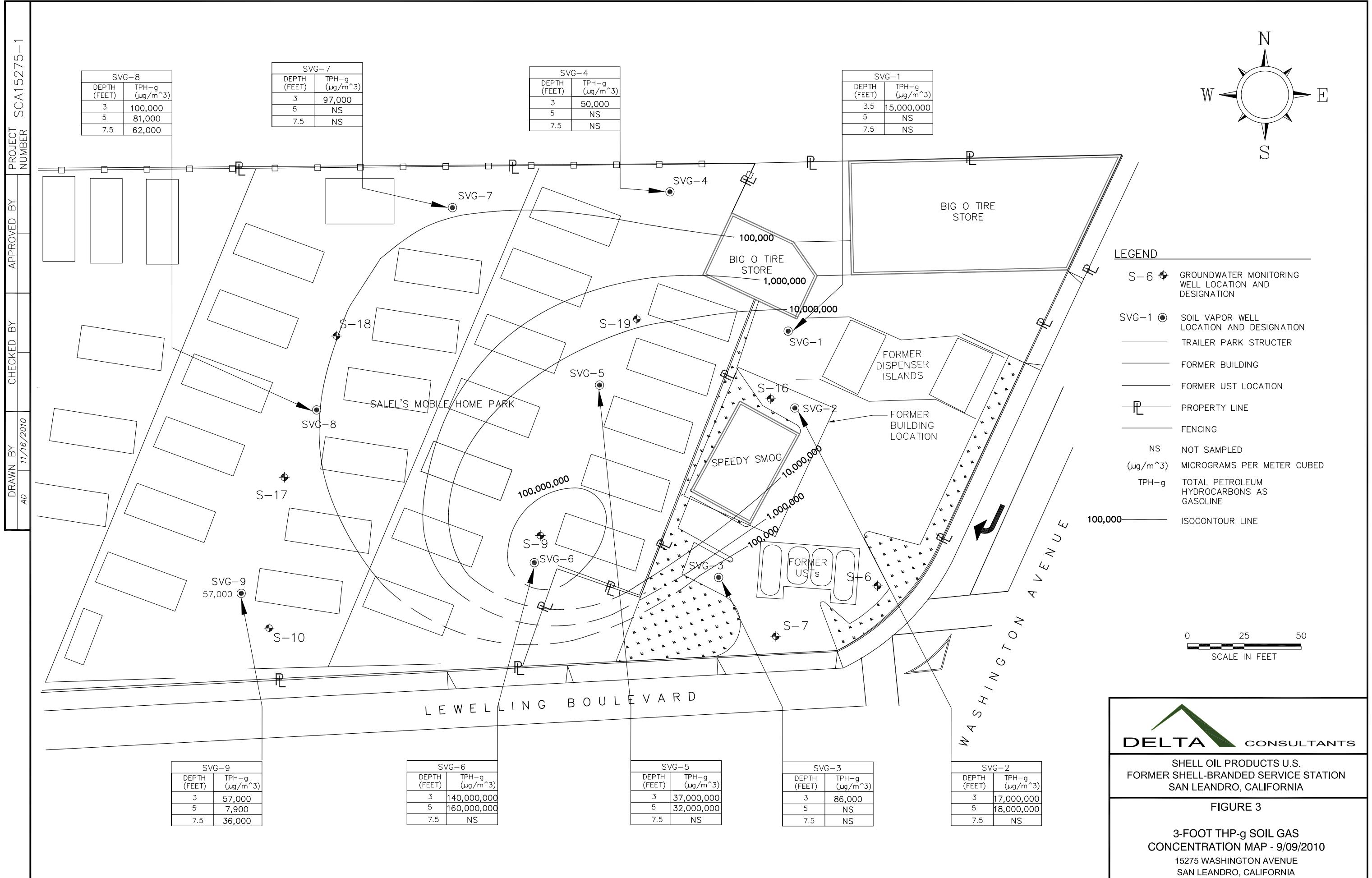
1. ESL Table E-2: Indoor Air and Soil Gas (Vapor Intrusion Concerns), Shallow soil gas

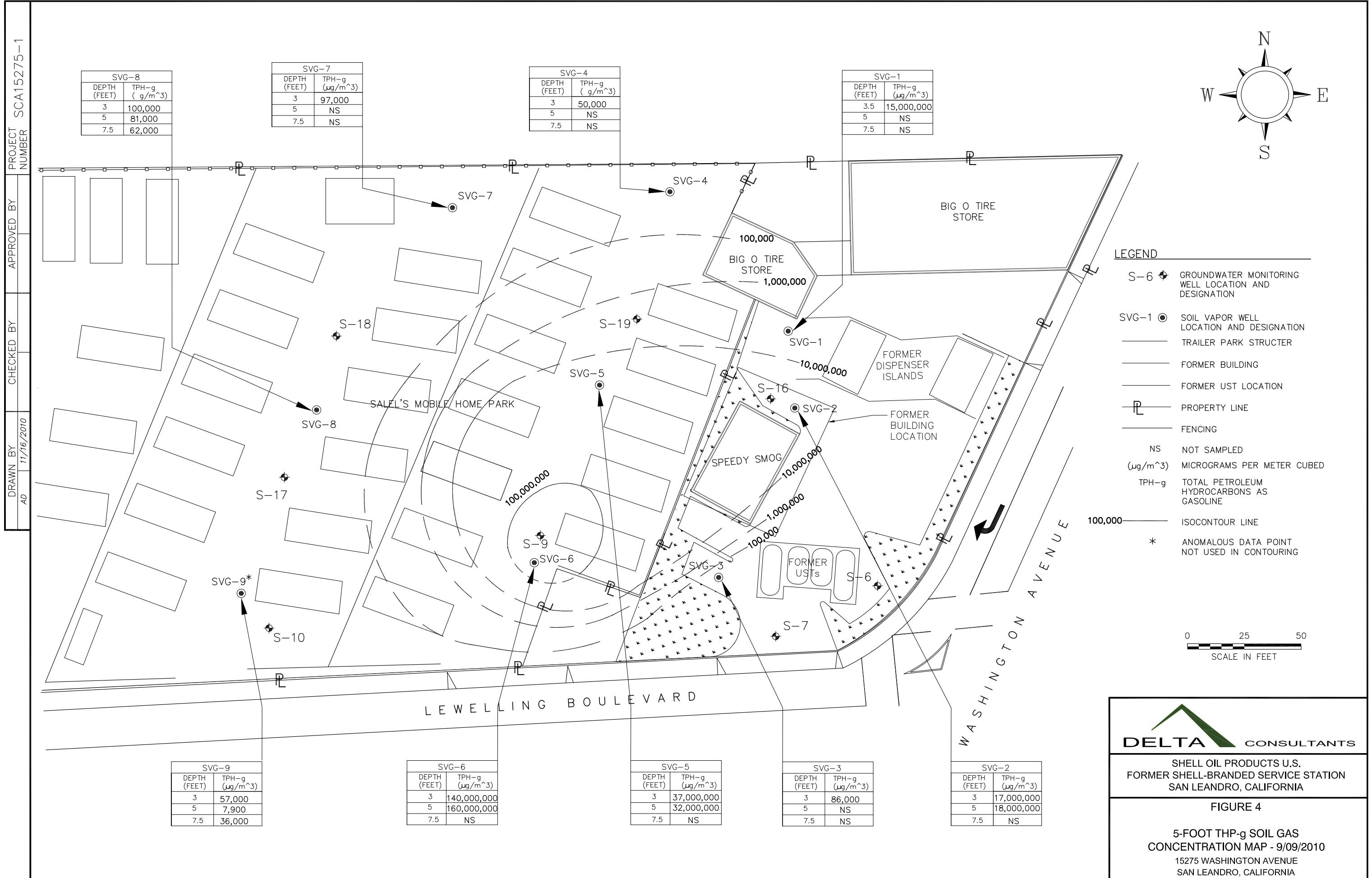
Results exceeding a referenced ESL limit are noted in italicized or bolded text, as appropriate (including non-detected samples with elevated reporting limits)

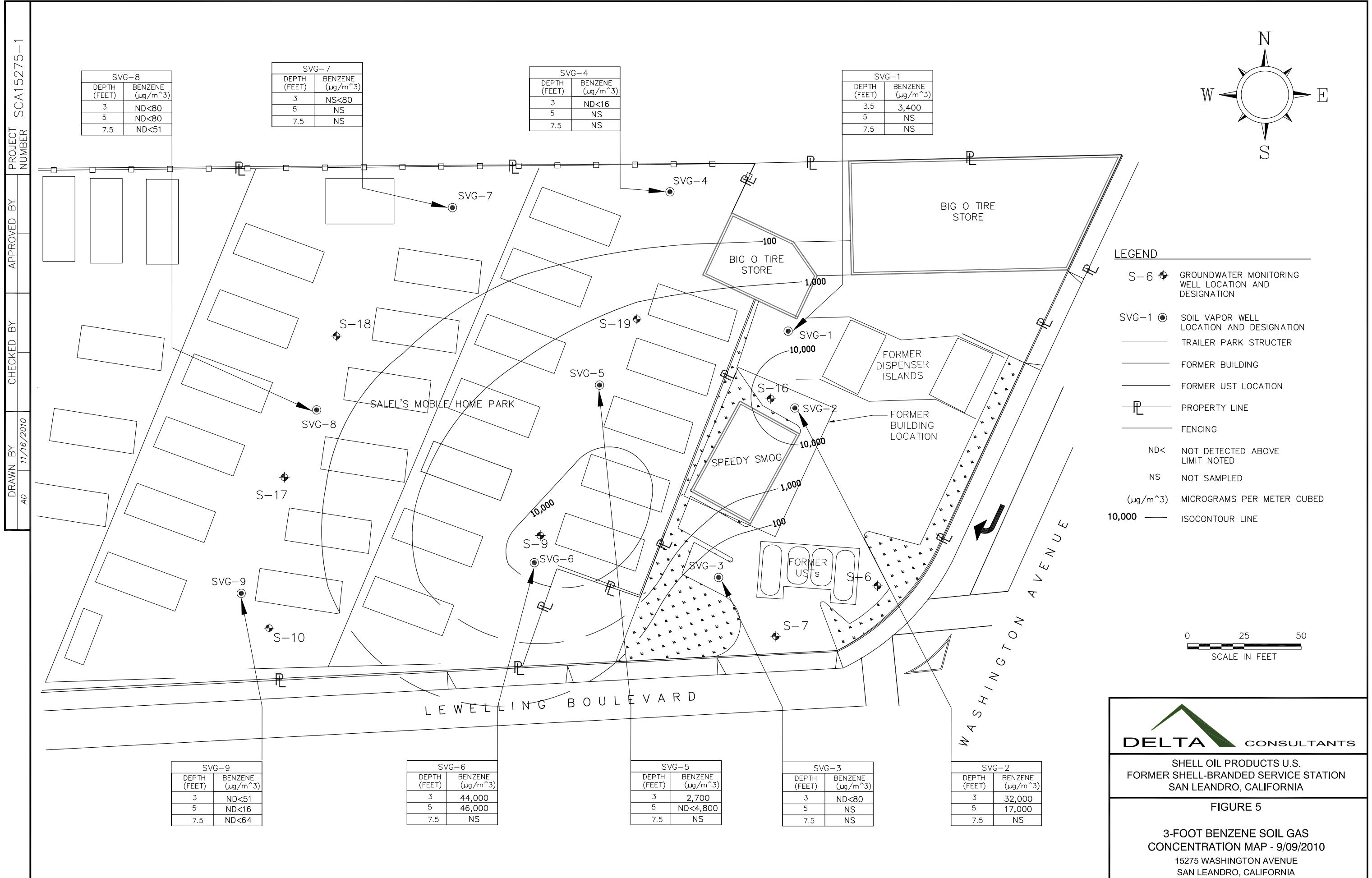
TABLE 2
BIOGENIC GAS ANALYTICAL DATA

Former Shell Service Station
15275 Washington Avenue
San Leandro, California

Sample Location (depth in feet)	Date	TPH-g ($\mu\text{g}/\text{m}^3$)	Methane (%v)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
SVG-1 (3.5')	09/09/10	15,000,000	NA	NA	NA
SVG-2 (3')	09/09/10	17,000,000	1.33	13.9	2.26
SVG-2 (5')	09/09/10	18,000,000	1.19	16.9	2.22
SVG-3 (3')	09/09/10	86,000	NA	NA	NA
SVG-4 (3')	09/09/10	50,000	NA	NA	NA
SVG-5 (3')	09/09/10	37,000,000	1.20	13.3	2.28
SVG-5 (5')	09/09/10	32,000,000	1.11	16.5	1.97
SVG-6 (3')	09/09/10	140,000,000	1.89	8.57	2.11
SVG-6 (5')	09/09/10	160,000,000	1.87	9.09	2.43
SVG-7 (3')	09/09/10	97,000	NA	NA	NA
SVG-8 (3')	09/09/10	100,000	ND<0.5	12.4	1.97
SVG-8 (5')	09/09/10	81,000	ND<0.5	12.6	1.97
SVG-8 (7.5')	09/09/10	62,000	ND<0.5	12.5	1.97
SVG-9 (3')	09/09/10	57,000	ND<0.5	15.1	7.01
SVG-9 (5')	09/09/10	7,900	ND<0.5	1.54	20.4
SVG-9 (7.5')	09/09/10	36,000	ND<0.5	16.8	5.52
Abbreviations and Notes:					
TPH-g - Total petroleum hydrocarbons as gasoline					
$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter					
%v = Percent by volume					
NA = Not analyzed					
ND< = Not detected above shown detection limit					
Note that samples for biogenic gas were not collected where only one sample point was available due to elevated groundwater levels in some of the wells.					







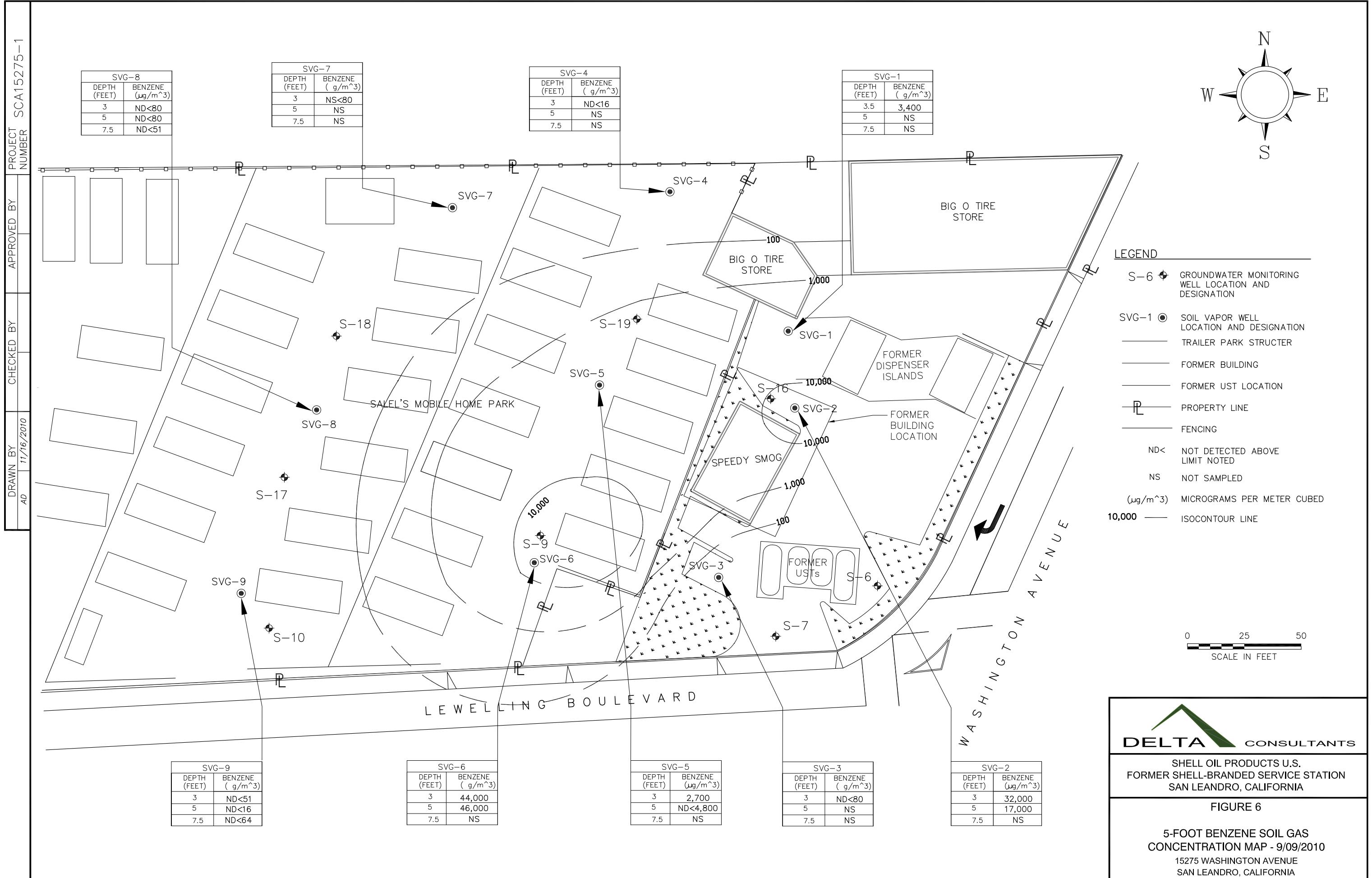


TABLE 1
SOIL GAS ANALYTICAL DATA

Sample Location (depth, feet)	Date	TPH-g ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl-benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	TBA ($\mu\text{g}/\text{m}^3$)	Isopropanol ($\mu\text{g}/\text{m}^3$)
SVG-1 (3')	03/18/10	8,700,000	ND(<8,000)	ND(<9,400)	11,000	ND(<22,000)	ND(<18,000)	ND(<15,000)	ND(<6,100)
SVG-1 (5')	03/18/10	8,200,000	ND(<8,000)	ND(<9,400)	ND(<11,000)	ND(<22,000)	ND(<18,000)	ND(<15,000)	ND(<6,100)
SVG-2 (3')	03/18/10	11,000,000	21,000	ND(<19,000)	62,000	ND(<43,000)	ND(<36,000)	ND(<30,000)	ND(<12,000)
SVG-2 (5')	03/18/10	7,500,000	ND(<8,000)	ND(<9,400)	54,000	ND(<22,000)	ND(<18,000)	ND(<15,000)	ND(<6,100)
SVG-3 (3')	03/18/10	39,000	ND(<51)	ND(<60)	460	230	ND(<120)	ND(<97)	ND(<39)
SVG-3 (5')	03/18/10	49,000	ND(<64)	ND(<75)	520	250	ND(<140)	ND(<120)	ND(<49)
SVG-4 (3')	03/18/10	28,000	ND(<16)	ND(<19)	420	250	ND(<36)	ND(<30)	100
SVG-5 (3')	03/18/10	27,000,000	ND(<32,000)	ND(<38,000)	ND(<43,000)	ND(<87,000)	ND(<72,000)	ND(<61,000)	ND(<25,000)
SVG-5 (5')	03/18/10	13,000,000	ND(<16,000)	ND(<19,000)	ND(<22,000)	ND(<43,000)	ND(<36,000)	ND(<30,000)	ND(<12,000)
SVG-6 (3')	03/18/10	110,000,000	ND(<130,000)	ND(<150,000)	ND(<170,000)	ND(<350,000)	ND(<290,000)	ND(<240,000)	ND(<98,000)
SVG-6 (5')	03/18/10	75,000,000	ND(<8,000)	ND(<9,400)	ND(<11,000)	ND(<22,000)	ND(<18,000)	ND(<15,000)	ND(<6,100)
SVG-7 (3')	03/18/10	170,000	ND(<160)	ND(<190)	ND(<220)	ND(<430)	ND(<360)	ND(<300)	ND(<120)
SVG-8 (3')	03/18/10	70,000	ND(<80)	ND(<94)	170	ND(<220)	ND(<180)	ND(<150)	ND(<61)
SVG-8 (5')	03/18/10	140,000	ND(<80)	ND(<94)	300	ND(<220)	ND(<180)	ND(<150)	210
SVG-9 (3')	03/18/10	67,000	ND(<80)	ND(<94)	250	ND(<220)	ND(<180)	ND(<150)	ND(<61)
SVG-9 (5')	03/18/10	55,000	ND(<64)	ND(<75)	220	ND(<170)	ND(<140)	ND(<120)	ND(<49)
Residential ESL¹		10,000	84	63,000	980	21,000	9,400	NA	
Commercial ESL¹		29,000	280	180,000	3,300	58,000	31,000	NA	

TABLE 2
BIOGENIC GAS ANALYTICAL DATA

Former Shell Service Station
 15275 Washington Avenue
 San Leandro, California

Sample Location (depth in feet)	Date	TPH-g ($\mu\text{g}/\text{m}^3$)	Carbon Dioxide (%v)	Oxygen + Argon (%v)
SVG-1 (3')	03/18/10	8,700,000	0.971	2.32
SVG-1 (5')	03/18/10	8,200,000	4.22	2.06
SVG-2 (3')	03/18/10	11,000,000	0.519	2.31
SVG-2 (5')	03/18/10	7,500,000	4.91	11.2
SVG-3 (3')	03/18/10	39,000	3.38	15.1
SVG-3 (5')	03/18/10	49,000	3.43	15.0
SVG-4 (3')	03/18/10	28,000	7.63	6.75
SVG-5 (3')	03/18/10	27,000,000	2.22	2.74
SVG-5 (5')	03/18/10	13,000,000	ND(<0.500)	21.5
SVG-6 (3')	03/18/10	110,000,000	3.64	2.36
SVG-6 (5')	03/18/10	75,000,000	6.36	2.27
SVG-7 (3')	03/18/10	170,000	0.816	16.7
SVG-8 (3')	03/18/10	70,000	8.28	2.12
SVG-8 (5')	03/18/10	140,000	7.93	2.45
SVG-9 (3')	03/18/10	67,000	10.7	4.25
SVG-9 (5')	03/18/10	55,000	10.4	4.27

Abbreviations and Notes:

$\mu\text{g}/\text{m}^3$ = Micrograms per cubic meter
 %v = Percent by volume
 ND = Not detected above shown detection limit

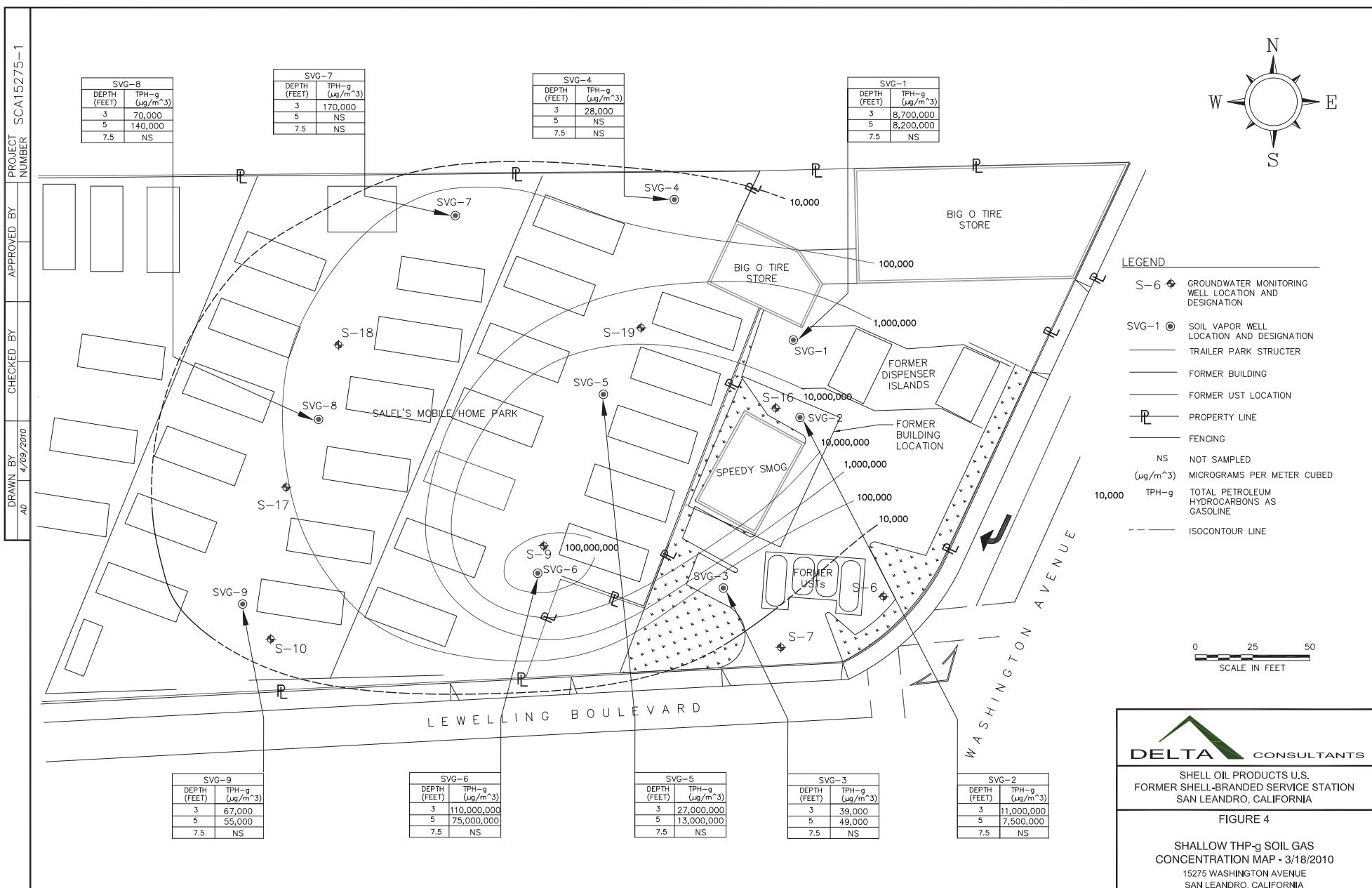


Table 1
Soil Vapor Sampling Analytical Data
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

Sample Location (depth, feet)	Date	TPH-g ($\mu\text{g}/\text{m}^3$)	Benzene ($\mu\text{g}/\text{m}^3$)	Toluene ($\mu\text{g}/\text{m}^3$)	Ethyl-benzene ($\mu\text{g}/\text{m}^3$)	Total Xylenes ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	TBA ($\mu\text{g}/\text{m}^3$)	1,1-difluoro-ethane ($\mu\text{g}/\text{m}^3$) ^a
P-24 (3)	09/23/09	160,000	1.9	25	ND<2.2	ND<8.7	ND<7.2	ND<15	570,000
P-24 (5)	09/23/09	340,000	ND<3.2	ND<38	ND<4.3	ND<17	ND<14	ND<30	1,000,000
P-24 (8)	09/23/09	48,000	1.7	ND<19	ND<2.2	ND<8.7	ND<7.2	ND<15	3,900,000
P-25 (3)	09/23/09	2,900,000	ND<64	ND<750	ND<87	ND<350	ND<7.2	ND<610	2,600,000
P-25 (5)	09/23/09	ND<5,700	ND<1.6	ND<19	ND<2.2	ND<8.7	ND<19	ND<15	4,300
P-25 (8)	09/23/09	ND<5,700	ND<1.6	ND<19	ND<2.2	ND<8.7	ND<7.2	ND<15	210
P-26 (3)	09/23/09	ND<5,700	1.8	21	ND<2.2	ND<8.7	ND<7.2	ND<15	28
P-26 (5)	09/23/09	610,000	ND<6.4	ND<75	ND<8.7	ND<35	ND<29	ND<61	1,300,000
P-26 (8)	09/23/09	2,600,000	ND<64	ND<750	ND<87	ND<350	ND<350	ND<610	4,800,000
P-27 (3)	09/24/09	410,000	ND<4.0	ND<47	ND<5.4	ND<22	ND<18	ND<38	710,000
P-27 (5)	09/24/09	120,000	ND<1.6	ND<19	ND<2.2	ND<8.7	ND<7.2	ND<15	14,000
P-27 (8)	09/24/09	570,000	ND<4.0	ND<47	ND<5.4	ND<22	ND<18	ND<38	860,000
P-28 (3)	09/24/09	1,200,000	ND<8.0	ND<94	ND<11	ND<43	ND<36	ND<76	2,200,000
P-28 (5)	09/24/09	58,000	1.8	ND<19	ND<2.2	ND<8.7	ND<7.2	ND<15	11,000
P-28 (8) ^b	09/24/09	270,000	ND<3.2	ND<38	ND<4.3	ND<17	ND<14	ND<30	42,000
P-29 (3)	09/24/09	1,200,000	ND<8.0	ND<94	ND<11	ND<43	ND<36	ND<76	2,000,000
P-29 (5)	09/24/09	660,000	ND<6.4	ND<75	ND<8.7	ND<35	ND<29	ND<61	1,300,000
P-29 (8) ^b	09/24/09	46,000	ND<1.6	ND<19	ND<2.2	ND<8.7	ND<7.2	ND<15	83,000

Abbreviations and Notes:

TPH-g - Total petroleum hydrocarbons as gasoline

MTBE - Methyl-tert butyl ether

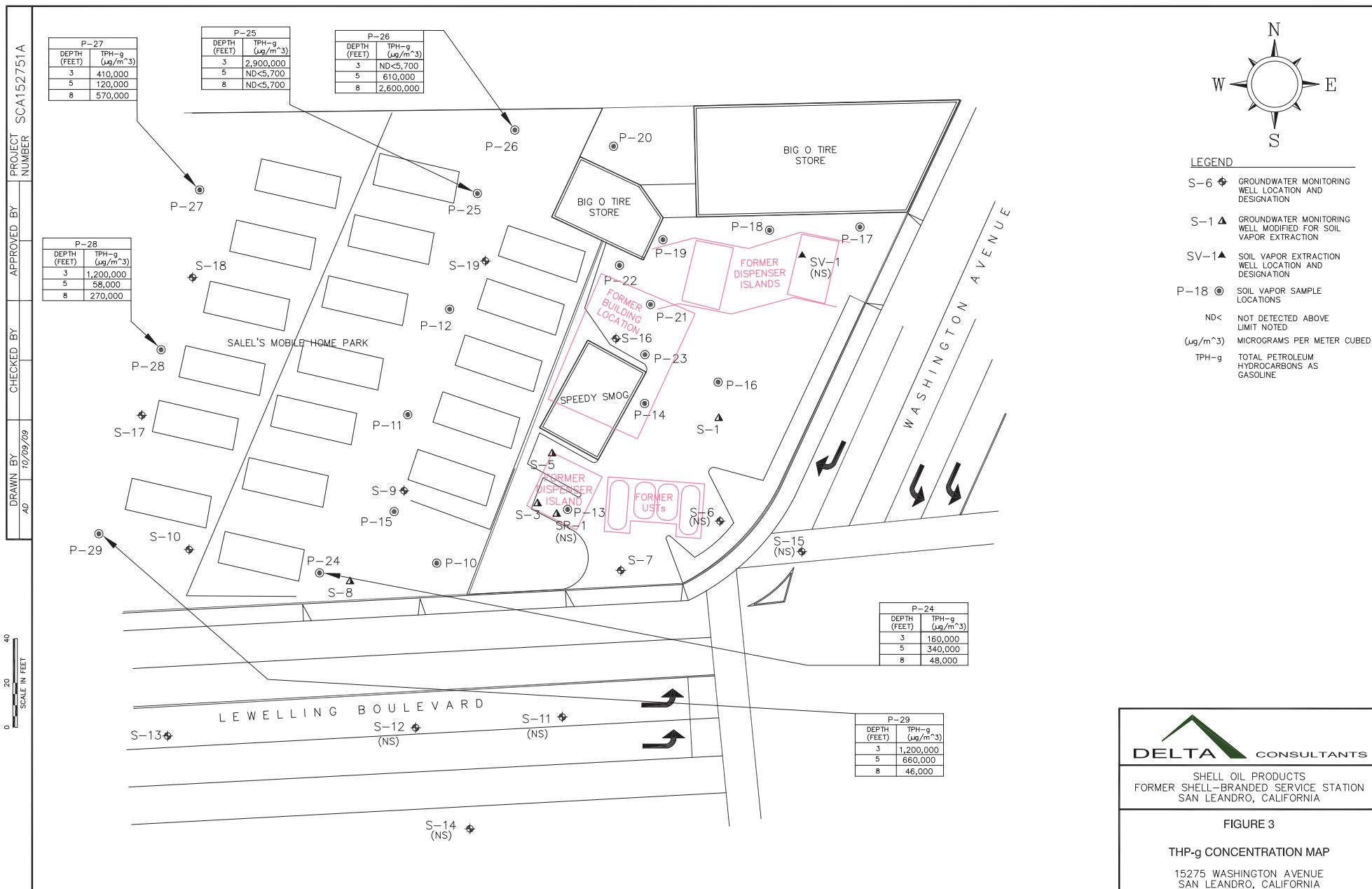
TBA - Tert-butyl alcohol

($\mu\text{g}/\text{m}^3$) - micrograms per cubic meter

ND - Not detected above shown detection limit

a. Concentrations exceeding 10,000 $\mu\text{g}/\text{m}^3$ generally indicate the presence of a leak

b. Dilution analysis was performed outside the recommended holding time for tracer gas compound (1,1-difluoroethane)



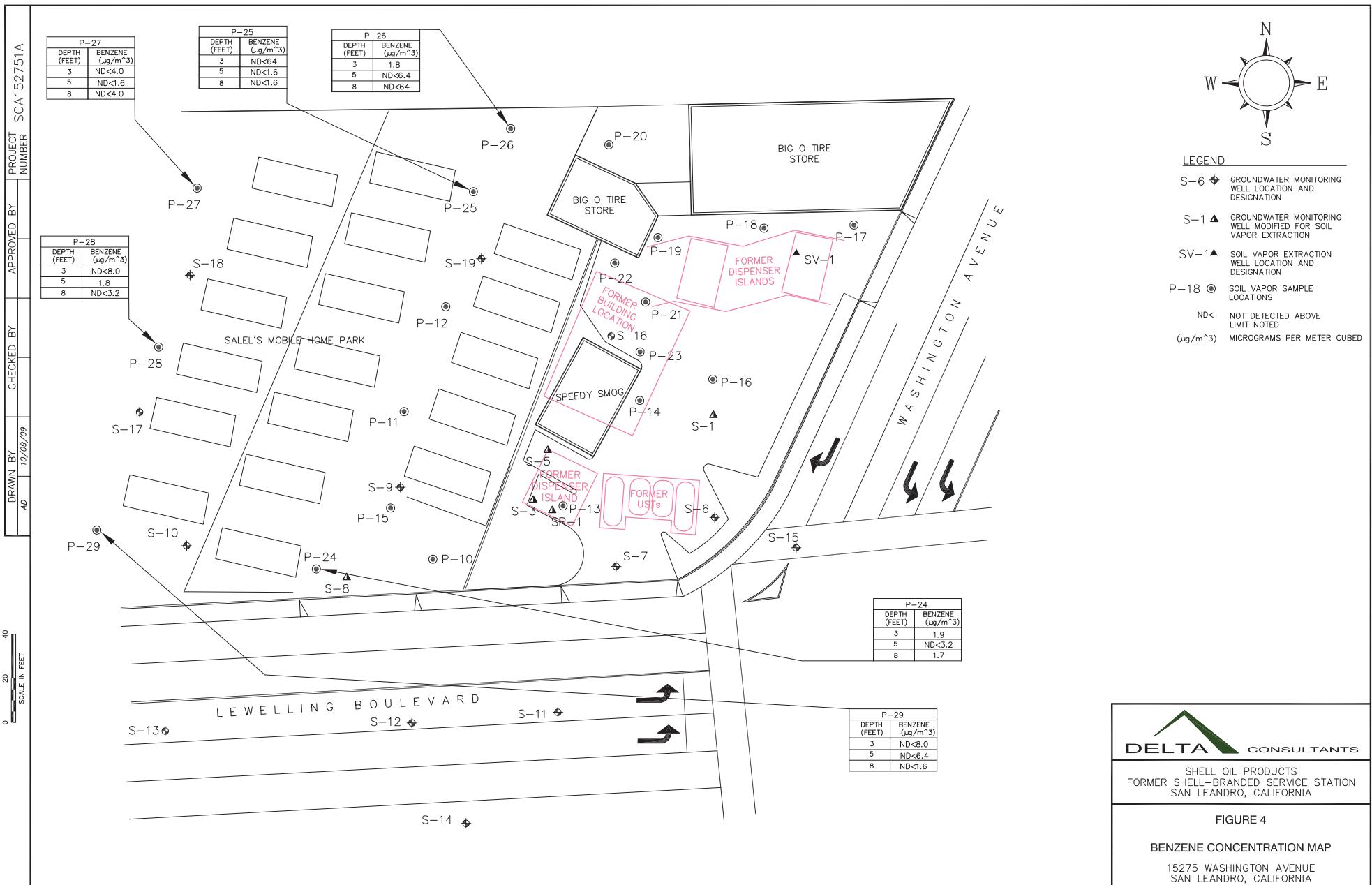


TABLE 1
SOIL VAPOR SAMPLING ANALYTICAL DATA
Former Shell Service Station
15275 Washington Boulevard
San Leandro, CA

Well ID	Date	Depth (feet)	TPH-g (ug/m3)	B (ug/m3)	T (ug/m3)	E (ug/m3)	X (ug/m3)	MTBE (ug/m3)	TBA (ug/m3)	2-Propanol
P-10	6/11/2008	5.5 ft	100,000	<2.7	14	3.9	11.8	<3.0	43	<8.2
P-11	6/11/2008	5.5 ft	8,000,000	1,100	240	<180	<180	<150	<520	<420
P-12	6/11/2008	5.5 ft	7,800,000	810	<630	<730	<730	<600	<5,100	<1,600
P-13	6/10/2008	5.5 ft	5,300	<2.5	5.6	<3.4	3.6	<2.8	<24	<7.8
P-14	6/10/2008	5.5 ft	2,100,000	1400	<130	4,700	280	<120	<1,000	<340
P-15	6/11/2008	5.5 ft	160,000	<54	<63	<73	<73	<60	<150	<160
P-16	6/10/2008	5.5 ft	130,000	<13	<15	26	<17	<14	<120	<120
P-17	6/10/2008	5.5 ft	450	<2.5	5.4	<3.4	3.6	<2.8	<23	<7.6
P-17D	6/10/2008	5.5 ft	1,100	<2.5	4.0	<3.4	<3.4	<2.8	<24	<7.8
P-18	6/10/2008	5.5 ft	13,000	3.2	6.0	<3.6	4.0	<3.0	36	<8.2
P-19	6/10/2008	5.5 ft	9,000,000	600	270	<180	<180	<150	<510	<410
P-20	6/10/2008	5.5 ft	26,000	<2.5	240	<3.4	<3.4	<2.8	55	27
P-20LD	6/10/2008	5.5 ft	26,000	<2.5	230	<3.4	<3.4	<2.8	52	29
P-21	6/10/2008	5.5 ft	8,200,000	6,400	280	27,000	3,500	<100	<340	<280
P-22	6/10/2008	5.5 ft	8,200,000	1,400	<320	14,000	<360	<300	<1,000	<820
P-23	6/10/2008	5.5 ft	6,500,000	12,000	190	46,000	25,120	<56	<190	<150
P-23LD	6/10/2008	5.5 ft	6,500,000	11,000	180	44,000	23,110	<56	<190	<150

Abbreviations:

TPH-g = Total petroleum hydrocarbons as gasoline by EPA Method T0-14/T0-15

BTEX = Benzene, toluene, ethylbenzene, total xylenes by EPA Method T0-14A/T0-15

MTBE = Methyl tert-butyl ether

TBA = Tert-butyl-alcohol

2-Propanol= Isopropyl alcohol

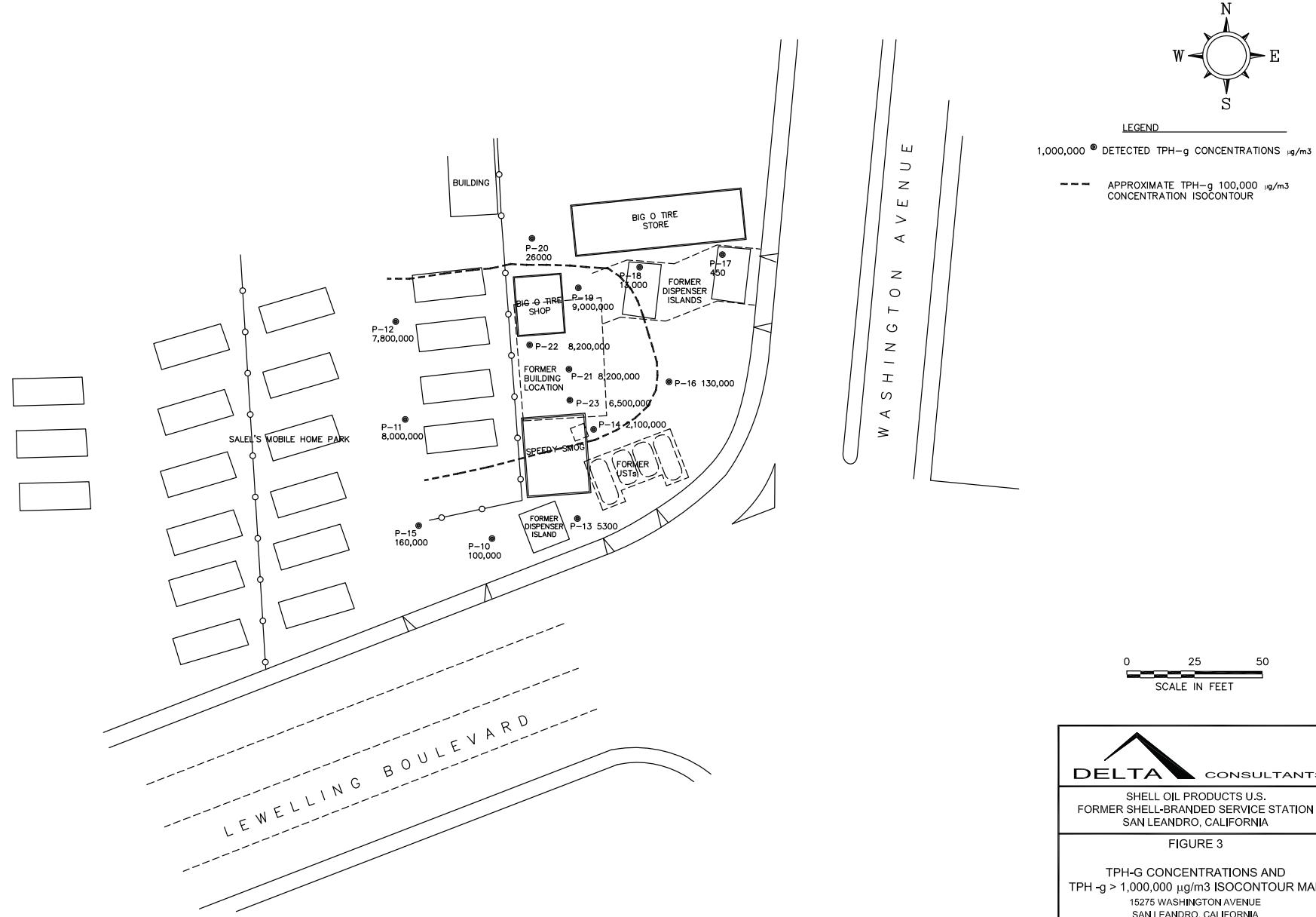
ug/m3 = Microgram per cubic meter

<n = Not detected, below method detection limit

D = Duplicate sample

LD = Lab duplicate

DRAWN BY AD CHECKED BY APPROVED BY PROJECT NUMBER SCA15275-1



DELTA CONSULTANTS
SHELL OIL PRODUCTS U.S.
FORMER SHELL-BRANDED SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 3
TPH-G CONCENTRATIONS AND
TPH-g $> 1,000,000 \mu\text{g}/\text{m}^3$ ISOCONTOUR MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

DRAWN BY AD CHECKED BY APPROVED BY PROJECT NUMBER SCA15275-1

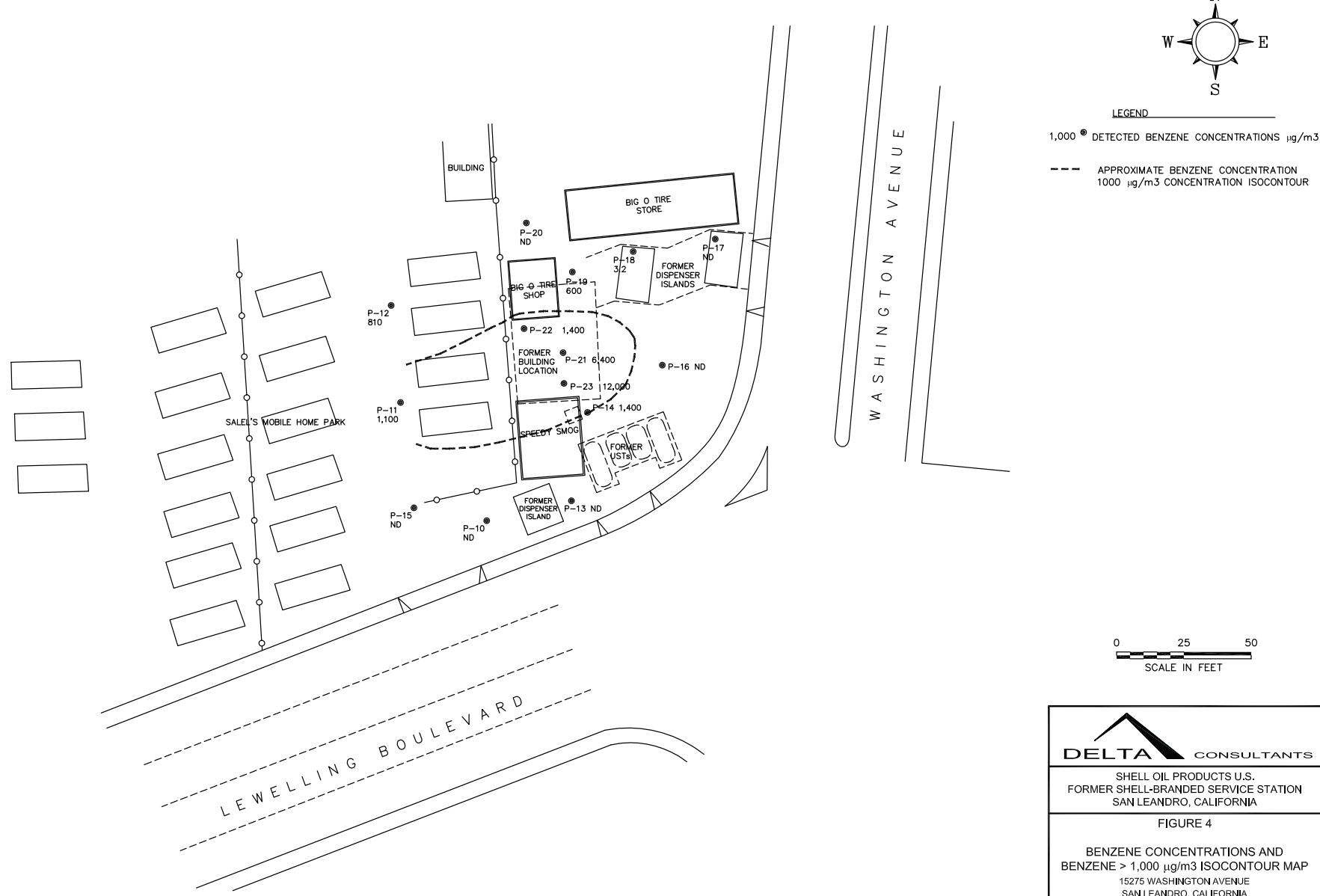


TABLE 5
SOIL GAS SURVEY ANALYTICAL DATA
 Shell Oil Products Company
 15275 Washington Avenue
 San Leandro, CA
 WIC# 204-6852-1008

Sample Depth (ft)	Date Sampled	TPPH ($\mu\text{g}/\text{m}^3$)	B ($\mu\text{g}/\text{m}^3$)	T ($\mu\text{g}/\text{m}^3$)	E ($\mu\text{g}/\text{m}^3$)	X ($\mu\text{g}/\text{m}^3$)	MTBE ($\mu\text{g}/\text{m}^3$)	Comments
SG-10-4 4	31-Jul-97	1700	<7.0	11	<9.6	22	11	"
SG-11-4 4	31-Jul-97	660	<6.7	<7.9	<9.0	<9.0	<7.5	
SG-12-4 4	31-Jul-97	5000	16	<8.3	13	22	29	
SG-13-4 4	31-Jul-97	5000	<71	<84	<97	<97	<81	

Abbreviations:

<x = Not detected at detection limit of x

NA = Not analyzed or not available

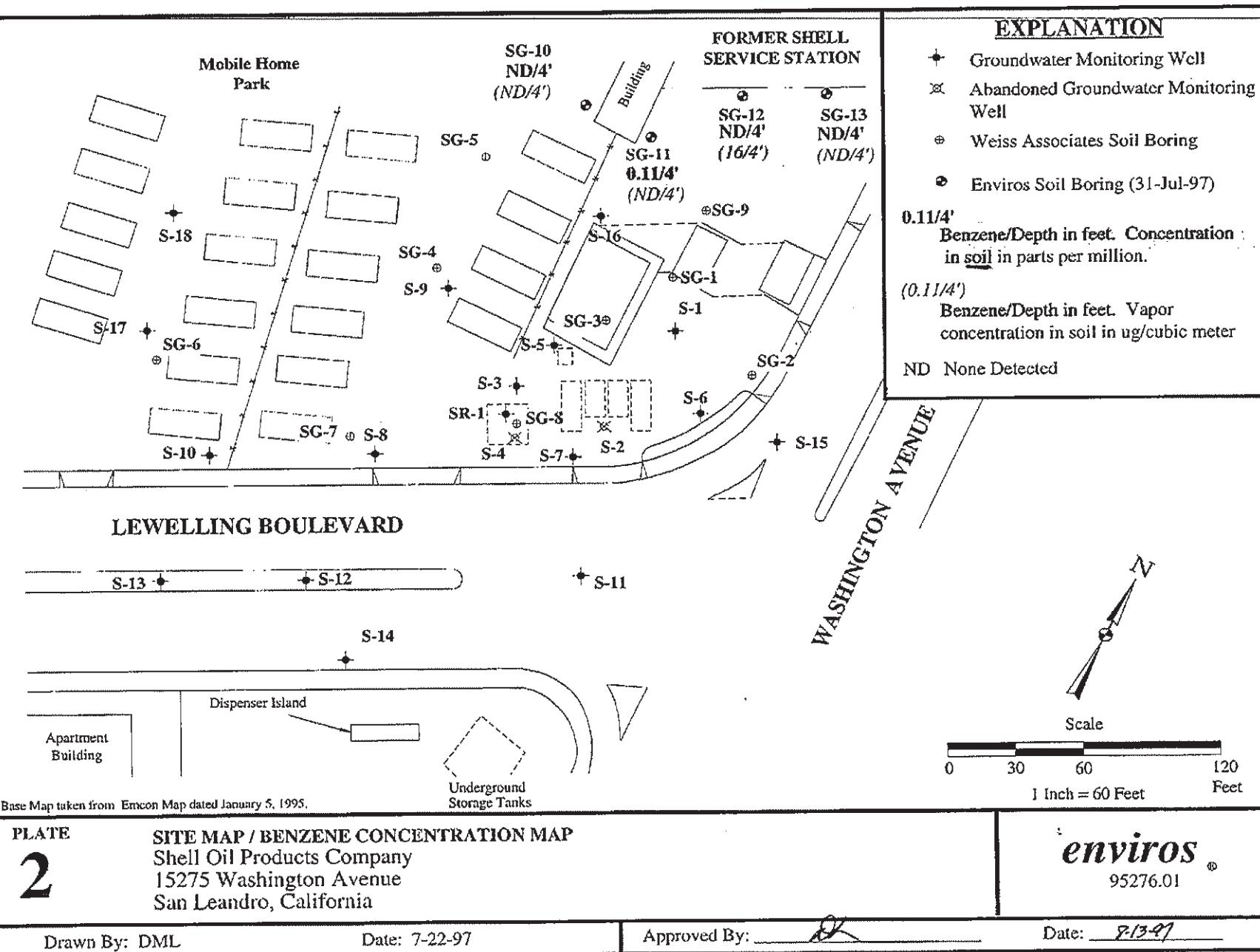


Table 1. Soil Vapor Survey Data

Former Shell Service Station, WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

WA Sample ID	Depth below ground surface sampled	Date sampled	Air Toxics ID	Date Analyzed	TTH (C ₄ -C ₈ gas)	MTBE	Acetone	Toluene	Thyophene	m,p-Xylene	InterPhase (C ₂ -C ₆ gas)	benzene	ethane	ethylbenzene	m- and p-xylene	t-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	Comments		
Air Toxics LTD Data (ug/m³)																							
SG-01-01	4 ft	5/4/93	97050718-02A	5/29/93	100,000,000	700,000	750,000	280,000	370,000	1,300,000	78,000,000	910,000	110,000	70,000	160,000	40,000	19.7%	3.9%	68.6%	7.8%	Good flow, light soil		
SG-02-01	2 ft	5/4/93	97050718-03A	5/29/93	45,000	73	250	< 1,000	250	880	< 5,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	< 0.2%	11.3%	79.5%	< 0.1%	No flow, sample collected at 2 ft		
SG-03-01	2 ft	5/4/93	97050718-04A	5/29/93	54,000,000	250,000	390,000	190,000	370,000	310,000	20,000,000	280,000	57,000	44,000	34,000	15,000	15.8%	3.8%	78.9%	1.6%	Good flow, gravel		
SG-03-02	4 ft	5/4/93	97050718-05A	5/29/93	33,000,000	150,000	230,000	110,000	210,000	330,000	3,700,000	< 1,000	12,000	7,400	4,300	< 1,000	1.6%	18.1%	80.3%	< 0.1%	Somewhat restricted flow		
SG-03-04	6 ft	5/4/93	97050718-05A	5/29/93	5,000,000	16,000	39,000	18,000	21,000	160,000	44,000,000	79,000	88,000	400,000	190,000	57,000	4.7%	16.4%	78.9%	< 0.1%	Somewhat restricted flow		
SG-04-01	2 ft	5/4/93	97050718-06A	5/29/93	220,000	310	< 200	150	1,700	3,200	110,000	1,500	< 1,000	< 1,000	< 1,000	< 1,000	0.7%	19.8%	79.4%	< 0.1%	Pretty good/medium flow		
SG-04-01	4 ft	5/4/93	97050718-07A	5/29/93	350,000	550	1,000	2,300	2,000	4,400	370,000	2,900	< 1,000	2,500	2,000	< 1,000	1.4%	19.2%	79.4%	< 0.1%	Medium flow		
SG-04-01	6 ft	5/4/93	97050718-09A	5/29/93	310,000	200	1,000	2,200	4,000	4,800	400,000	2,800	3,400	7,100	1,500	7,900	1.2%	19.5%	79.3%	< 0.1%	Medium flow		
SG-04-01 (dup)	6 ft	5/4/93	NA	NA	NA	NA	NA	NA	NA	NA	500,000	3,000	4,000	7,200	1,700	5,800	1.0%	19.2%	79.8%	< 0.1%	Very tight		
SG-05-01	4 ft	5/4/93	97050718-17A	5/29/93	8,700,000	6,200	23,000	22,000	75,000	130,000	26,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	0.3%	20.3%	79.4%	< 0.1%	Good flow		
SG-05-01	4 ft	5/4/93	97050718-16A	5/29/93	60,000	22	8	150	380	700	< 5,000	< 1,000	< 1,000	< 1,000	< 1,000	0.5%	19.9%	79.6%	< 0.1%	Good flow			
SG-01-02	2 ft	5/4/93	97050718-18A	5/29/93	330,000	220,000	210,000	230,000	110,000	200,000	700,000	38,000	1,400	14,000	< 1,000	< 1,000	0.9%	19.7%	79.4%	< 0.1%	Good flow		
SG-01-02	4 ft	5/4/93	97050718-11A	5/29/93	130,000,000	510,000	492,000	420,000	440,000	180,000	38,000,000	18,000	40,000	45,000	12,000	5,000	13.4%	9.5%	67.9%	9.3%	Good flow, high permeability		
SG-07-01	6 ft	5/4/93	97050718-12A	5/29/93	3,000,000	17,000	19,000	6,500	20,000	6,600	920,000	13,000	7,400	< 10,000	< 10,000	< 10,000	1.9%	18.7%	78.5%	1.0%	Low flow/very low permeability		
SG-07-01 (dup)	6 ft	5/4/93	97050718-12AA	5/29/93	3,400,000	19,000	21,000	7,300	22,000	7,500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Low flow/very low permeability		
SG-08-02	2 ft	5/4/93	97050718-13A	5/29/93	15,000	22	10	38	190	220	< 5,000	< 1,000	< 1,000	< 1,000	< 1,000	0.1%	20.6%	79.3%	< 0.1%	Good flow			
SG-08-02	4 ft	5/4/93	97050718-14A	5/29/93	7,100,000	3,200	45,000	46,000	44,000	62,000	2,400,000	< 1,000	64,000	7,400	10,000	4,300	12.6%	4.8%	82.7%	< 0.1%	Good flow		
SG-08-01	0 ft	5/4/93	97050718-15A	5/29/93	20,000,000	8,400	< 2000	130,000	140,000	291,000	1,000,000	< 1,000	35,000	3,500	5,000	5,800	0.3%	20.0%	79.7%	< 0.1%	Low flow, a little lighter than 2 ft and 4 ft depth		
SG-08-01 (dup)	6 ft	5/4/93	NA	5/29/93	NA	NA	NA	NA	NA	NA	1,100,000	< 1,000	36,000	4,000	5,700	5,800	0.2%	20.0%	79.8%	< 0.1%	Low flow, a little lighter than 2 ft and 4 ft depth		
SG-08-01	4 ft	5/4/93	97050718-18A	5/29/93	540,000	1,600	18,000	510	17,000	15,000	1,800,000	87,000	10,000	28,000	20,000	1,300	0.9%	20.0%	79.1%	< 0.1%	Pretty good flow		
AVERAGES																							
23,763,722 112,365 123,538 81,408 112,116 163,633 10,221,632 78,489 24,958 34,374 24,326 8,732 4.5% 16.0% 78.4% 1.1%																							
QA/QC Samples																							
AMB-01	5/4/93	97050718-01A	5/15/93	< 10,000	< 4,000	< 1,000	< 1,000	< 1,000	< 1,000	< 1,000	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Air Toxics Ambient Air Sample	
Ambient Air	5/4/93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	InterPhase Ambient Air Sample	
Ambient Air	5/5/93	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	InterPhase Ambient Air Sample	
Lab Blank	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Air Toxics Laboratory Blank	
Lab Blank	NA	97050718-20A	5/15/93	< 5,000	< 2,000	< 500	< 500	< 500	< 500	< 500	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Air Toxics Laboratory Blank	
Lab Blank	NA	97050718-20B	6/2/93	NA	< 4	< 3	< 4	< 4	< 4	< 4	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA	Air Toxics Laboratory Blank

(Samples collected March 1997)

Table 2. Soil Vapor Survey Data: Sorted by Depth
Former Shell Service Station WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

WA Sample ID	Depth below ground surface	Air Toxics LTD Data ($\mu\text{g}/\text{m}^3$)						InterPhase Data (%)				Comments
		pH (C ₆ as gas)	NA/SE	Benzene	Toluene	Ethylbenzene	n,p-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	
SG-02-2ft	2 ft	46,000	73	250	96	250	860	9.2%	11.3%	79.5%	< 0.1%	No flow, sample collected at 2 ft
SG-03-2ft	2 ft	54,000,000	260,000	390,000	190,000	370,000	310,000	15.8%	3.8%	78.9%	1.6%	Good flow, gravel
SG-04-2ft	2 ft	220,000	310	420	150	1,700	3,200	0.7%	19.8%	79.4%	< 0.1%	Pretty good/medium flow
SG-07-2ft	2 ft	62,000,000	330,000	220,000	210,000	230,000	110,000	0.9%	19.7%	79.4%	< 0.1%	Good flow
SG-08-2ft	2 ft	15,000	22	10	38	190	220	0.1%	20.6%	79.3%	< 0.1%	Good flow
Mean		23,256,200	118,881	122,136	80,057	120,428	84,860	5.3%	15.0%	79.3%	0.4%	
SG-01-4ft	4 ft	100,000,000	700,000	750,000	280,000	370,000	1,300,000	19.7%	3.9%	68.6%	7.8%	Good flow, tight soil
SG-03-4ft	4 ft	33,000,000	150,000	230,000	110,000	210,000	330,000	1.6%	18.1%	80.3%	< 0.1%	Somewhat restricted flow
SG-04-4ft	4 ft	350,000	550	1,000	2,300	2,600	4,400	1.4%	19.2%	79.4%	< 0.1%	
SG-05-4ft	4 ft	8,700,000	6,200	20,000	42,000	75,000	130,000	0.3%	20.3%	79.4%	< 0.1%	Very light
SG-06-4ft	4 ft	66,000	22	8	150	380	790	0.5%	19.9%	79.6%	< 0.1%	Good flow
SG-07-4ft	4 ft	130,000,000	510,000	450,000	420,000	440,000	180,000	13.4%	9.5%	67.9%	9.3%	Good flow, high permeability
SG-08-4ft	4 ft	7,100,000	3,200	15,000	45,000	44,000	62,000	12.6%	4.8%	82.7%	< 0.1%	Good flow
SG-09-4ft	4 ft	540,000	1,600	18,000	610	17,000	15,000	0.9%	20.0%	79.1%	< 0.1%	Pretty good flow
Mean		34,969,500	171,447	185,501	112,633	144,873	252,774	6.3%	14.5%	77.1%	2.2%	
SG-03-6ft	6 ft	5,000,000	16,000	39,000	18,000	71,000	190,000	4.7%	16.4%	78.9%	< 0.1%	Somewhat restricted flow
SG-04-6ft	6 ft	310,000	200	1,000	2,200	4,000	4,800	1.2%	19.5%	79.3%	< 0.1%	Medium flow
SG-04-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	1.0%	19.2%	79.8%	< 0.1%	Medium flow
SG-07-6ft	6 ft	3,000,000	17,000	19,000	6,500	20,000	6,600	1.9%	18.7%	78.5%	1.0%	Low flow/very low permeability
SG-07-6ft (dup)	6 ft	3,400,000	19,000	21,000	7,300	22,000	7,500	NA	NA	NA	NA	Low flow/very low permeability
SG-08-6ft	6 ft	20,000,000	8,400	49,000	130,000	140,000	290,000	0.3%	20.0%	79.7%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft depths
SG-08-6ft (dup)	6 ft	NA	NA	NA	NA	NA	NA	0.2%	20.0%	79.8%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft depths
Mean		6,342,000	12,120	25,800	32,800	51,400	99,780	1.6%	19.0%	79.3%	0.3%	

Notes: < - Below the method detection limit.

M - reported value may be biased due to apparent matrix interferences.

(Samples collected March 1997)

Table 3. Soil Vapor Survey Data: Sorted by Location

Former Shell Service Station WIC #204-6852-1008, 15275 Washington Avenue, San Leandro, California

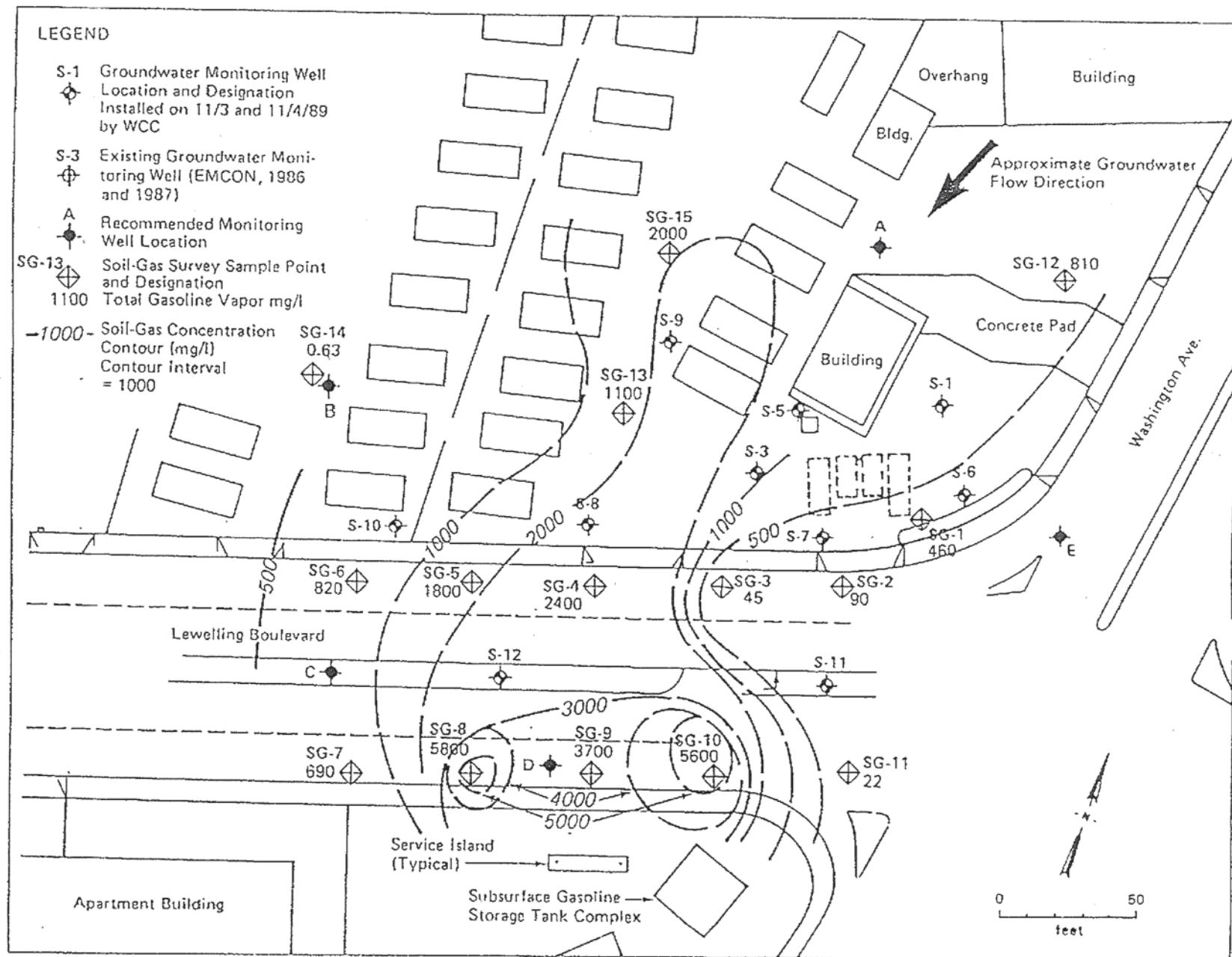
WA Sample ID	Depth below ground surface	Depth (C _t , as gas)	Air Toxics LTD Data (ug/m ³)						InterPhase Data (%)				Comments
			TPH	MTHF	Benzene	Toluene	Ethylbenzene	m,p-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	
SG-01-4ft	4 ft		100,000,000	700,000	750,000	280,000	370,000	1,300,000	19.7%	3.9%	68.6%	7.8%	Good flow, tight soil
SG-02-2ft	2 ft		46,000	73	250	96	250	880	9.2%	11.3%	79.5%	< 0.1%	No flow, sample collected at 2 ft
SG-03-2ft	2 ft		54,000,000	260,000	390,000	190,000	370,000	310,000	15.8%	3.8%	78.9%	1.6%	Good flow, gravel
SG-03-4ft	4 ft		33,000,000	150,000	230,000	110,000	210,000	330,000	1.6%	18.1%	80.3%	< 0.1%	Somewhat restricted flow
SG-03-6ft	6 ft		5,000,000	16,000	39,000	18,000	71,000	190,000	4.7%	16.4%	78.9%	< 0.1%	Somewhat restricted flow
SG-04-2ft	.2 ft		220,000	310	420	150	1,700	3,200	0.7%	19.8%	79.4%	< 0.1%	Pretty good/medium flow
SG-04-4ft	4 ft		350,000	550	1,000	2,300	2,600	4,400	1.4%	19.2%	79.4%	< 0.1%	
SG-04-6ft	6 ft		310,000	200	1,000	2,200	4,000	4,800	1.2%	19.5%	79.3%	< 0.1%	Medium flow
SG-04-6ft (dup)	6 ft		NA	NA	NA	NA	NA	NA	1.0%	19.2%	79.6%	< 0.1%	Medium flow
SG-05-4ft	4 ft		8,700,000	6,200	20,000	42,000	75,000	130,000	0.3%	20.3%	79.4%	< 0.1%	Very tight
SG-06-4ft	4 ft		66,000	22	8	150	380	790	0.5%	19.9%	79.6%	< 0.1%	Good flow
SG-07-2ft	2 ft		62,000,000	330,000	220,000	210,000	230,000	110,000	0.9%	19.7%	79.4%	< 0.1%	Good flow
SG-07-4ft	4 ft		130,000,000	510,000	450,000	420,000	440,000	180,000	13.4%	9.5%	67.9%	9.3%	Good flow, high permeability
SG-07-6ft	6 ft		3,000,000	17,000	19,000	6,500	20,000	6,600	1.9%	18.7%	78.5%	1.0%	Low flow/very low permeability
SG-07-6ft (dup)	6 ft		3,400,000	19,000	21,000	7,300	22,000	7,500	NA	NA	NA	NA	Low flow/very low permeability
SG-08-2ft	2 ft		15,000	22	10	38	190	220	0.1%	20.6%	79.3%	< 0.1%	Good flow
SG-08-4ft	4 ft		7,100,000	3,200	15,000	46,000	44,000	62,000	12.6%	4.8%	82.7%	< 0.1%	Good flow
SG-08-6ft	6 ft		20,000,000	8,400	49,000	130,000	140,000	290,000	0.3%	20.0%	79.7%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft dep
SG-08-6ft (dup)	6 ft		NA	NA	NA	NA	NA	NA	0.2%	20.0%	79.8%	< 0.1%	Low flow, a little tighter than 2 ft and 4 ft dep
SG-09-4ft	4 ft		540,000	1,600	18,000	610	17,600	15,000	0.9%	20.0%	79.1%	< 0.1%	Pretty good flow

Notes: < - Below the method detection limit.

M - reported value may be biased due to apparent matrix interferences.

(Sampled October 4, 1988 by Tracer Corporation)

Project No. 8820011A	Gettier · Ryan
Woodward-Clyde Consultants	



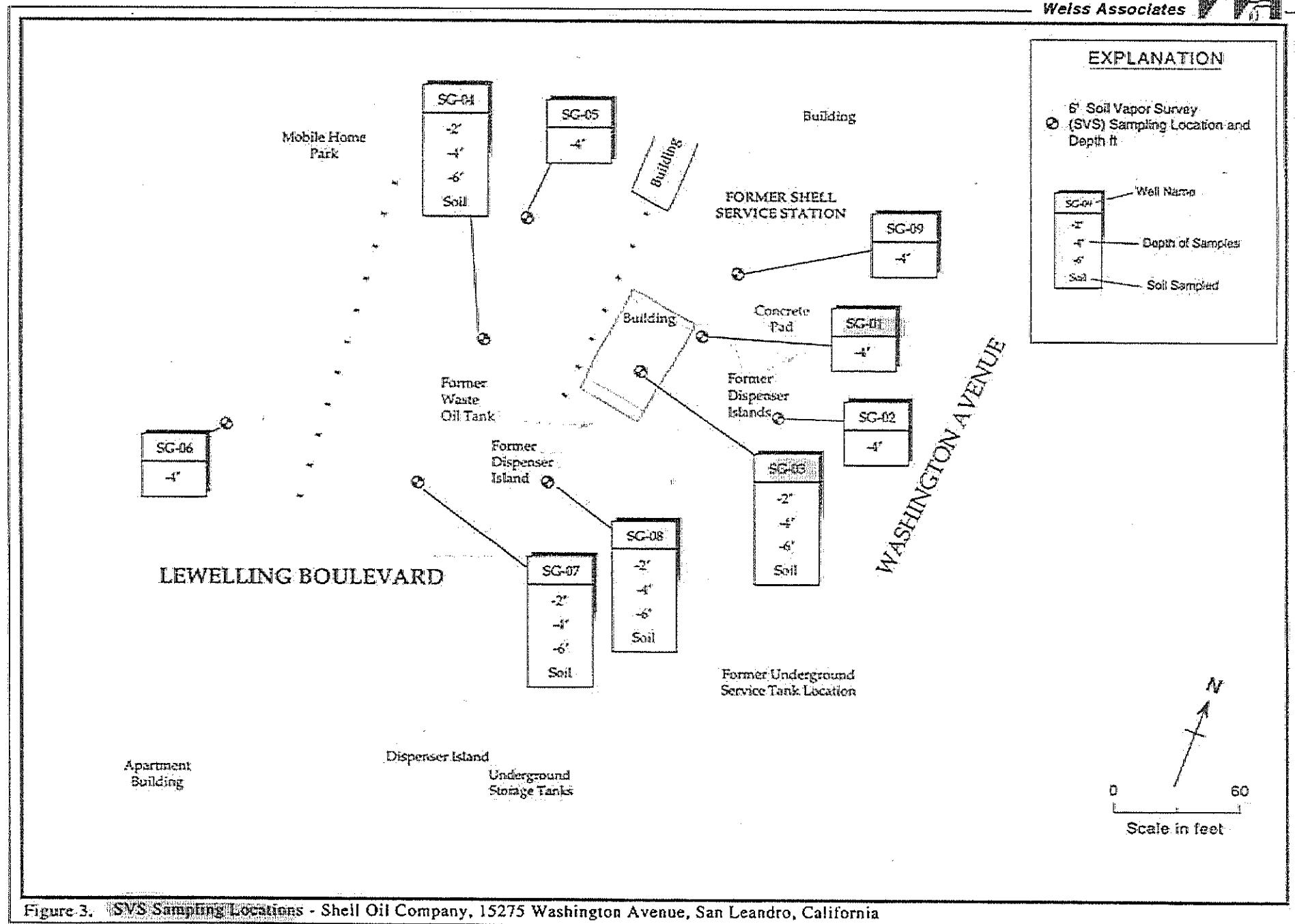


Figure 3. SVS Sampling Locations - Shell Oil Company, 15275 Washington Avenue, San Leandro, California

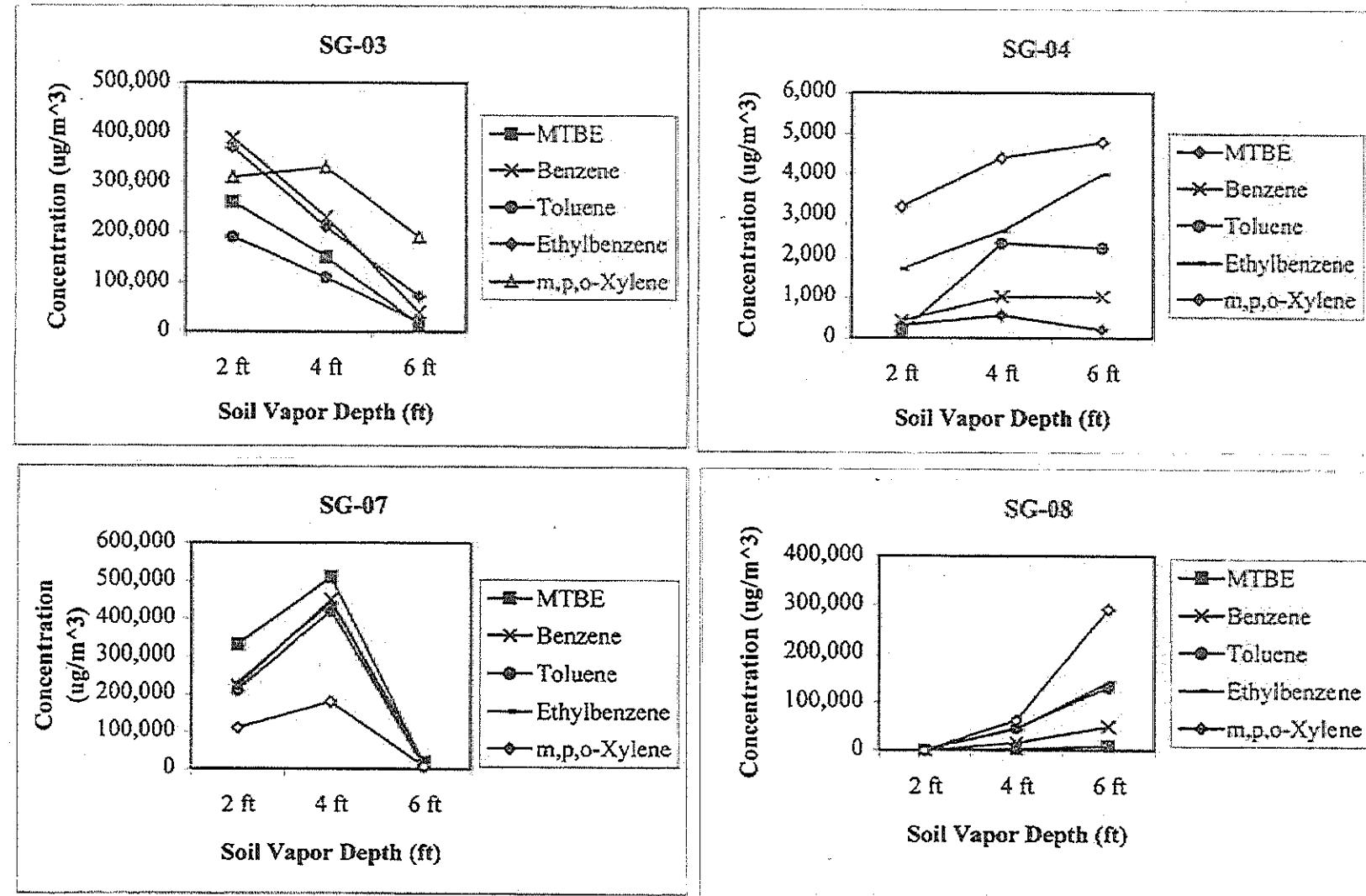


Figure 4. Benzene, Toluene, Ethylbenzene and Xylenes Soil Vapor Concentrations by Depth.

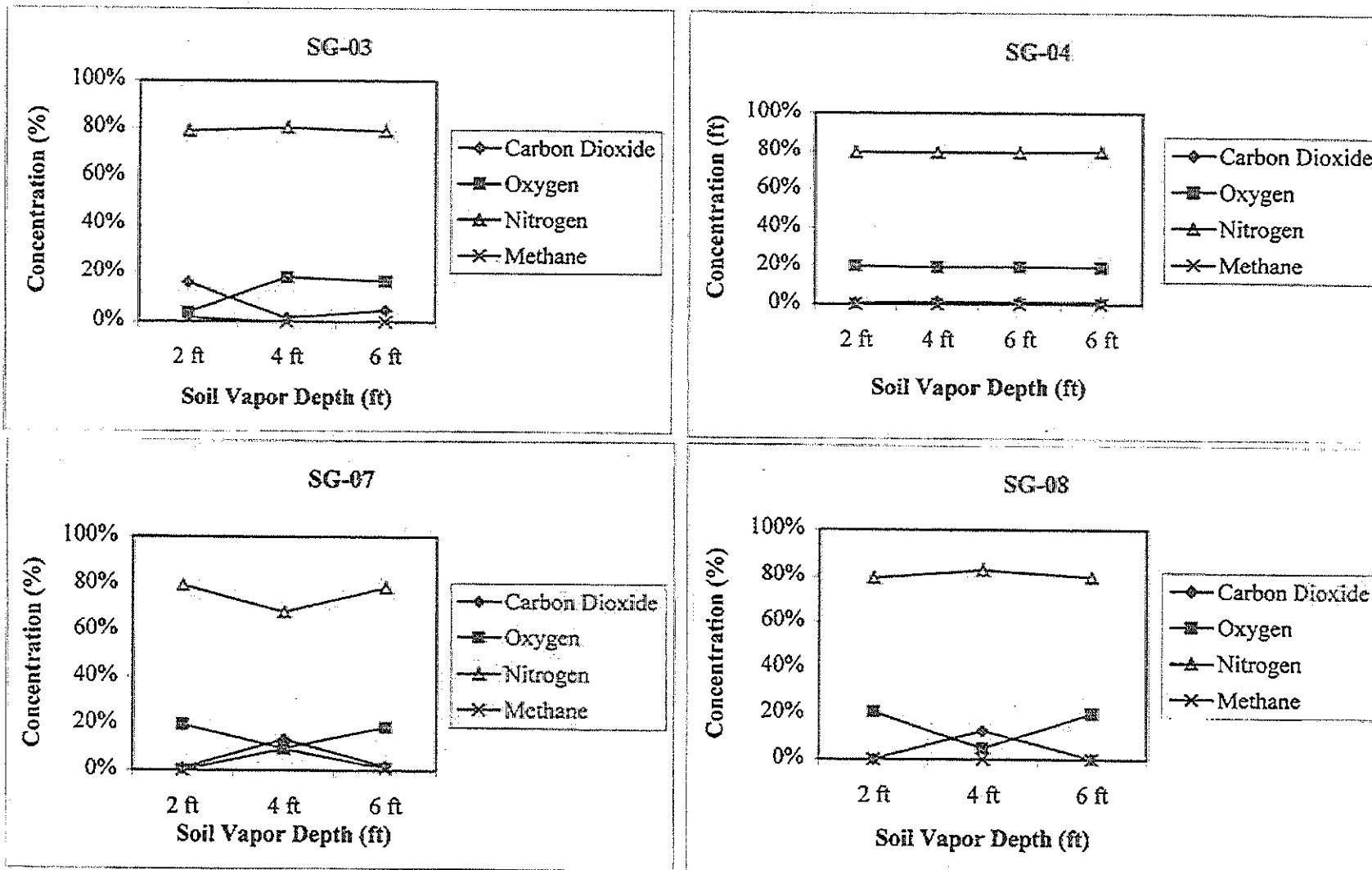


Figure 5. Carbon Dioxide, Oxygen, Nitrogen, and Methane Soil Vapor Concentrations by Depth.

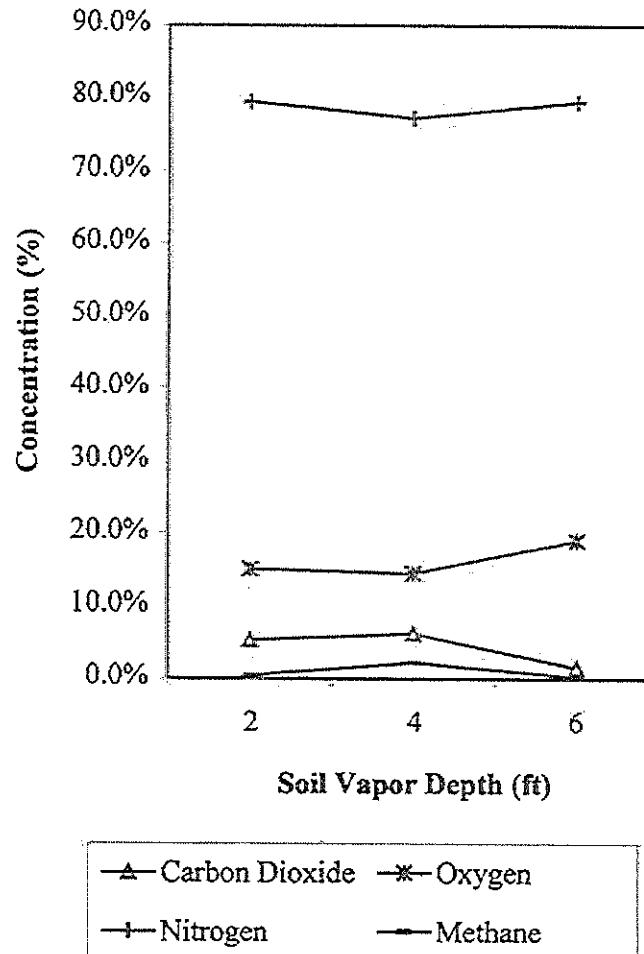
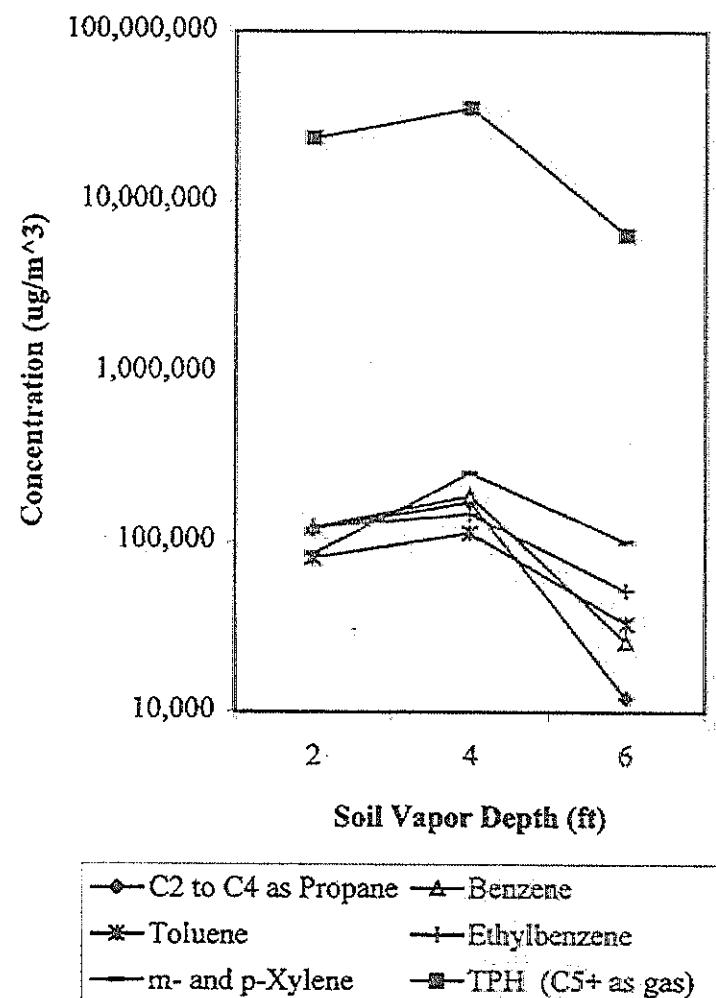


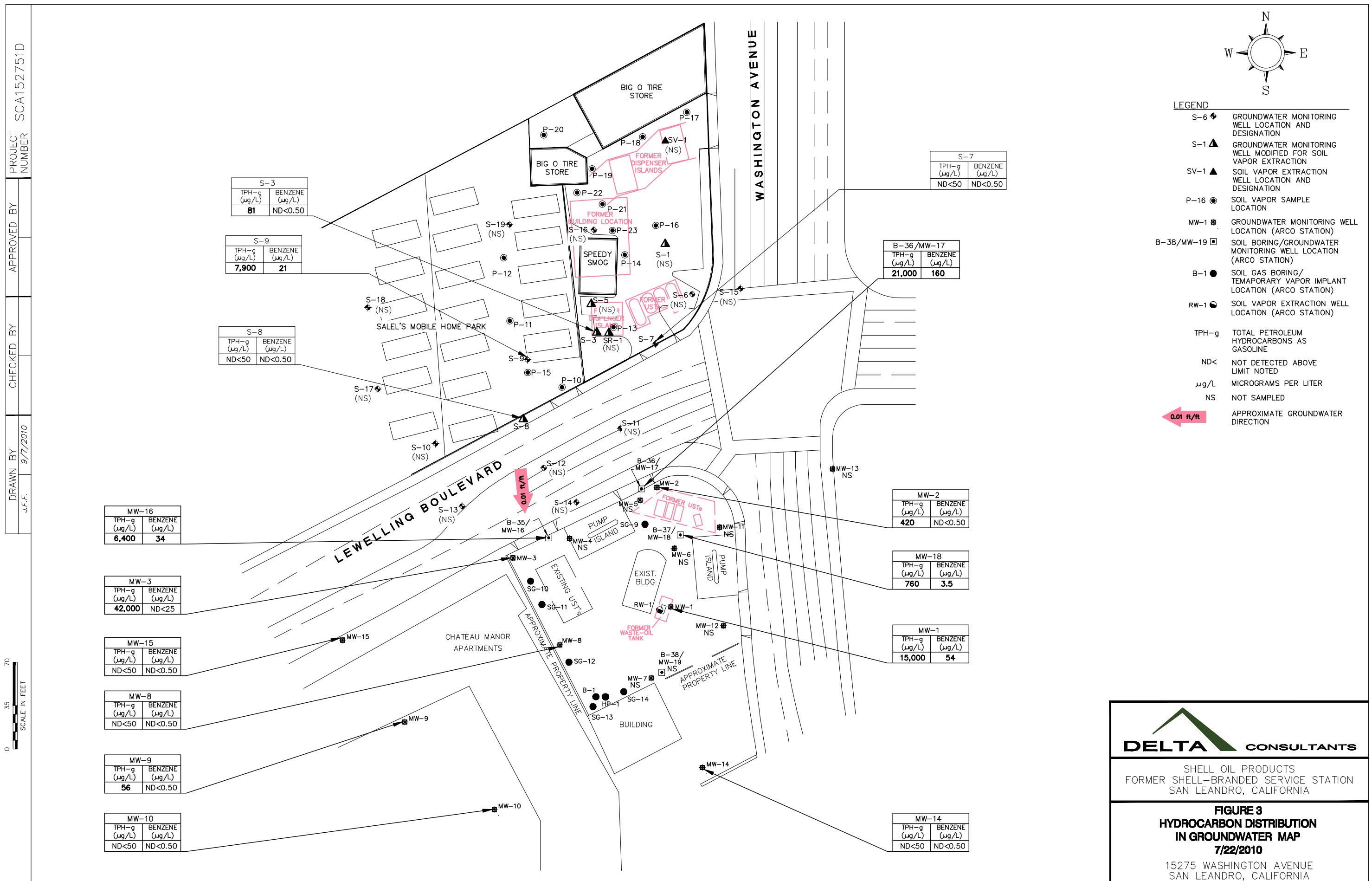
Figure 6. Average Site Concentrations by Depth - Former Shell Service Station, WIC#204-6852-1008, 15275 Washington Avenue, San Leandro, California

APPENDIX G

THIRD QUARTER 2010

GROUNDWATER MONITORING DATA

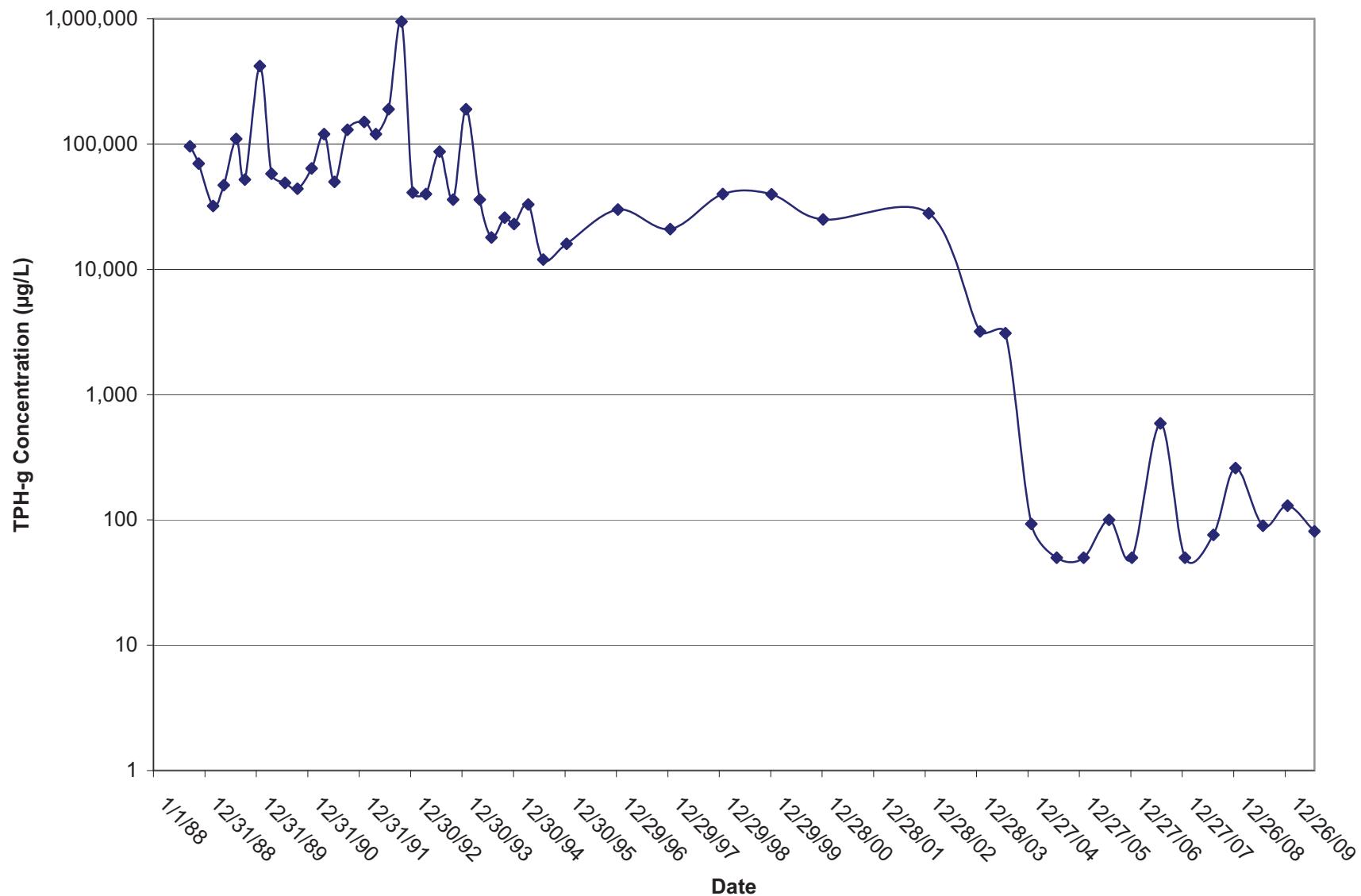




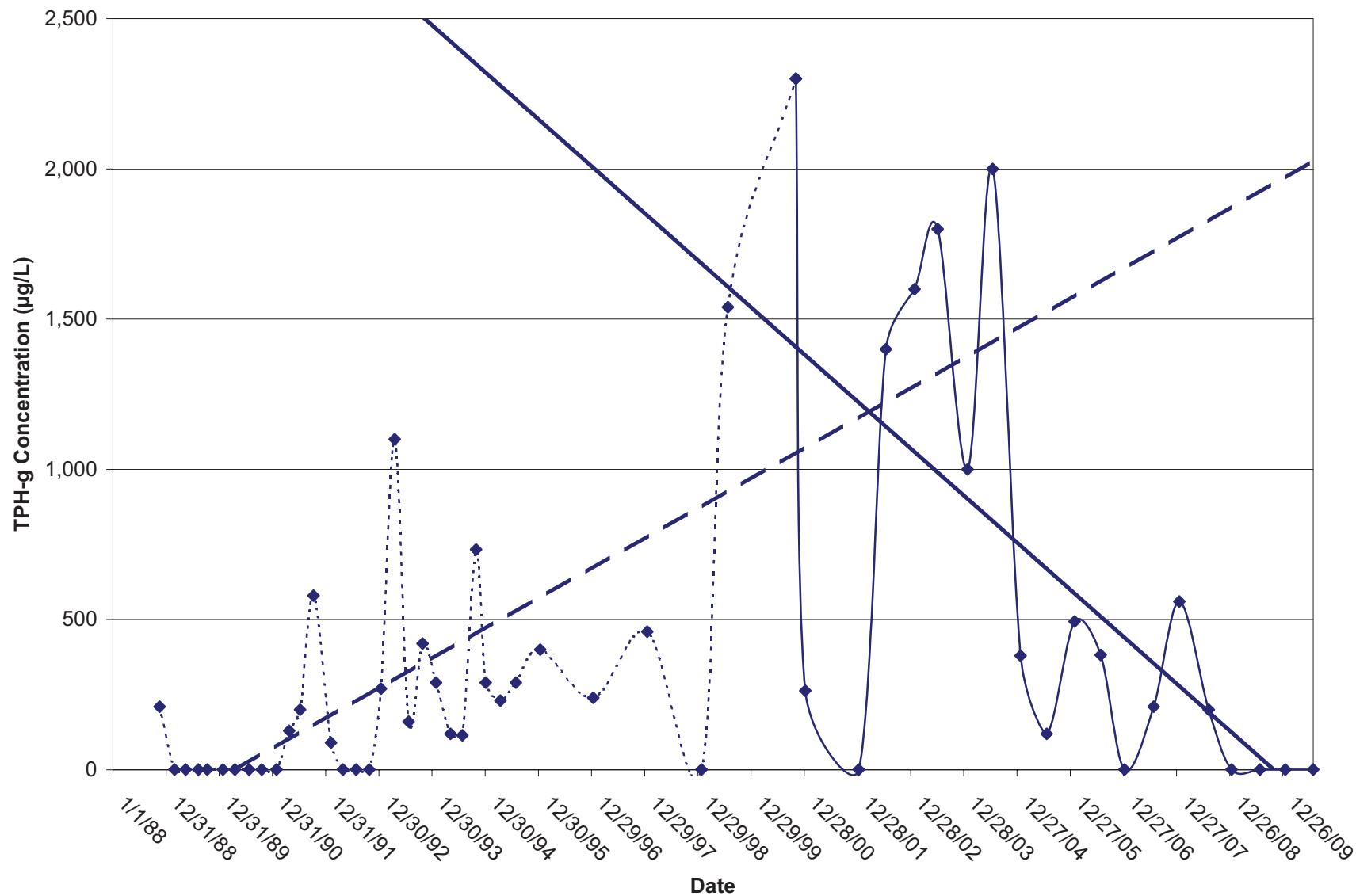
APPENDIX H

CONTAMINANT CONCENTRATION TRENDS

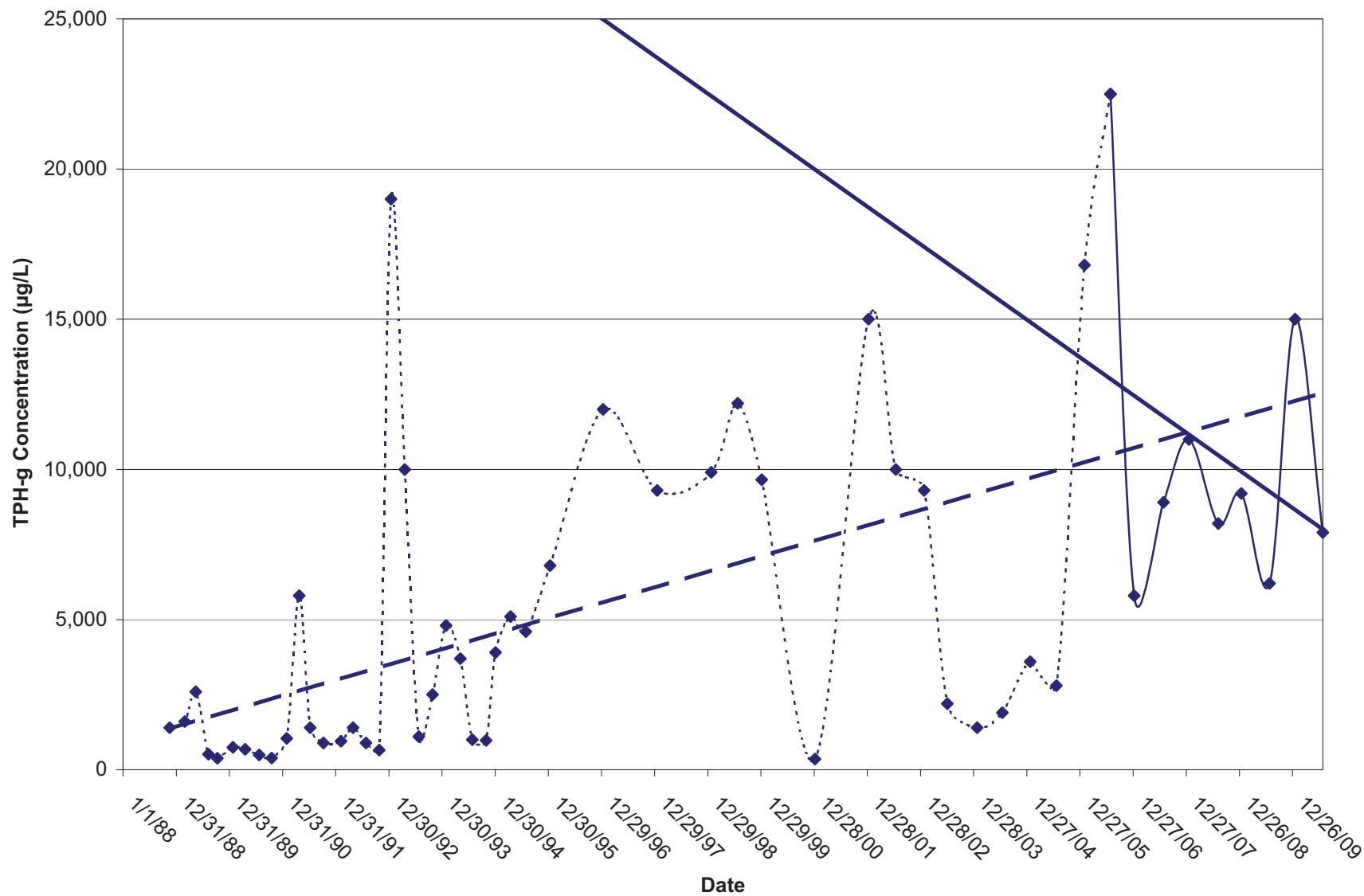
GRAPH 1
TPH-g CONCENTRATION TREND - WELL S-3
Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, California



GRAPH 2
TPH-g CONCENTRATION TRENDS - WELL S-8
Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, California



GRAPH 3
TPH-g CONCENTRATION TRENDS - WELL S-9
Former Shell-branded Service Station
15275 Washington Boulevard
San Leandro, California



APPENDIX I

REMEDIATION DATA

APPENDIX J

RBCA RISK EVALUATION STUDIES

Main Screen

1. Project Information

Site Name:	Former Shell-branded Service Station
Location:	15275 Washington Blvd., San Leandro, CA
Completed By:	LD
Date:	1-Sep-08
Job ID:	[redacted]

2. Which Type of RBCA Analysis?

Tier 1

 Risk-Based Screening Levels

Tier 2/3

 Site-Specific Target Levels

3. Calculation Options
Affects which input data are required

- Baseline Risks (Forward mode)**
- RBCA Cleanup Levels (Backward mode)**
- Individual Constituent Risk Goals Only
- Individual and Cumulative Risk Goals
- Apply Source Depletion Algorithm

Time to Future Exposure: [redacted] days

4. RBCA Evaluation Process

```

graph TD
    A[Prepare Input Data  
Data Complete? ( [ ] = yes, [ ] = no )] --> B[Exposure Pathways]
    B --> C[Constituents of Concern (COCs)]
    C --> D[Transport Models]
    D --> E[Soil Parameters]
    E --> F[GW Parameters]
    F --> G[Air Parameters]
  
```

Review Output

- Exposure Flowchart
- COC Chem. Parameters
- Input Data Summary
- User-Spec. COC Data...
- Transient Domenico Analysis...
- Baseline Risks...
- Cleanup Levels...

5. Commands and Options

New Site	Load Data...	Save Data As...	User Chemical Database
Set Units	Print Sheet	Print Report	Quit
Help			

Site Name: Former Shell-branded Service Station
 Location: 15275 Washington Blvd., San Leandro, CA
 Compl. By: LD

Job ID:
 Date: 1-Sep-08

Commands and Options

Main Screen

Print Sheet

Help

Apply Raoult's Law

Mole Fraction
in Source Material

Source Media Constituents of Concern (COCs)

Selected COCs

COC Select:	Sort List:
Add/Insert	Top
	MoveUp
Delete	Bottom
	MoveDown

Benzene
 TPH - Arom >C08-C10

Representative COC Concentration

Groundwater Source Zone

Enter Directly
 (mg/L)
 note

Soil Source Zone

Enter Directly
 (mg/kg)
 note

View Chemical Parameters

Transport Modeling Options

1. Vertical Transport, Surface Soil Column

Outdoor Air Volatilization Factors

- Surface soil volatilization model only
- Combination surface soil/Johnson & Ettinger models
- User-specified VF from other model

ASTM Model

3.28 (ft)

Enter VF Values

Indoor Air Volatilization Factors

- Johnson & Ettinger model for soil and groundwater volatilization
- Johnson & Ettinger for soil, Mass Flux model for groundwater
- User-specified VF from other model

Enter VF Values

Soil-to-Groundwater Leaching Factor

- ASTM Model
- Apply Soil Attenuation Model (SAM)
- Allow first-order biodecay
- User-specified LF from other model

Enter Decay Rates

Enter LF Values

Modeling Options

- Disable Mass Balance Limit
- Apply Dual Equilibrium Desorption Model

2. Lateral Air Dispersion Factor

- 3-D Gaussian dispersion model
- User-Specified ADF

Off-site 1

1.00E+0

Off-site 2

1.00E+0 (-)

Site Name: Former Shell-branded Service Station

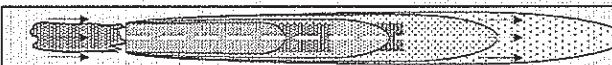
Job ID:

Location: 15275 Washington Blvd., San Leandro, CA

Date: 1-Sep-08

Compl. By: LD

3. Groundwater Dilution Attenuation Factor



Calculate DAF using Domenico Model

- Domenico equation with dispersion only (no biodegradation)
- Domenico equation first-order decay
- Modified Domenico equation using electron acceptor superposition

Enter Decay Rates

Enter Site Data

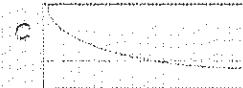
Biodegradation Category: NC (mpL)

User-Specified DAF Values

- DAF values from other model or site data

Enter DAF Values

4. Chemical Decay and Source Depletion



Enter Decay Rates

Enter Source Mass

5. Commands and Options

Main Screen**Print Sheet****Help**

Site-Specific Soil Parameters

1. Soil Source Zone Characteristics

Hydrogeology

Depth to water-bearing unit	6	(ft)
Capillary zone thickness	0.95144357	(ft)
Soil column thickness	5.04855643	(ft)

Affected Soil Zone

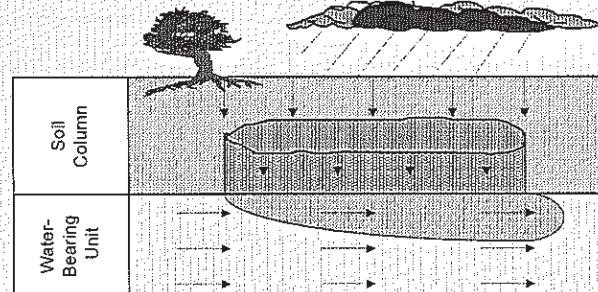
Depth to top of affected soils	0	(ft)
Depth to base of affected soils	6	(ft)

Length of affected soil parallel to assumed GW flow direction

Res/Com	Construction
2025	(ft ²)

Affected soil area

Length of affected soil parallel to assumed wind direction



Site Name: Former Shell-branded Service Station

Job ID:

Location: 15275 Washington Blvd., San Leandro, CA

Date: 1-Sep-08

Compl. By: LD

2. Surface Soil Column

Predominant USCS Soil Type

CL: Silty Clay

Calculate

Volumetric water content

Vadose Zone Capillary Fringe

0.34

0.35 (-)

0.02

0.01 (-)

0.36

(-)

1.7

(kg/L)

0.000283465

(ft/d)

1.08E-16

(ft²)

0.95144357

(ft)

Net Rainfall Infiltration

30 (in/yr)

Net infiltration estimate

or

Average annual precipitation

0 (in/yr)

Partitioning Parameters

Fraction organic carbon - entire soil column

0.01 (-)

Fraction organic carbon - root zone

0.01 (-)

Soil/water pH

6.8 (-)

3. Commands and Options

Main Screen

Use/Set Default
Values

Print Sheet

Set Units

Help

Site-Specific Groundwater Parameters

1. Water-Bearing Unit

Hydrogeology

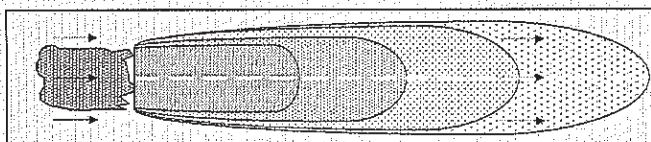
Groundwater Darcy velocity	1.0E-2 (ft/d)
Groundwater seepage velocity	5.0E-4 (ft/d)
or	<input type="button" value="Calculate"/>
Hydraulic conductivity	1.0E+0 (ft/d)
Hydraulic gradient	0.01 (-)
Effective porosity	20 (-)

Sorption

Fraction organic carbon-saturated zone	0.001 (-)
Groundwater pH	6.2 (-)

2. Groundwater Source Zone

Groundwater plume width at source	15 (ft)
Plume (mixing zone) thickness at source	6.56167979 (ft)
or	<input type="button" value="Calculate"/>
Saturated thickness	6.56167979 (ft)
Length of source zone	45 (ft)



Site Name: Former Shell-branded Service Station
Location: 15275 Washington Blvd., San Leandro, CA
Compl. By: LD

Job ID:
Date: 1-Sep-08

3. Groundwater Dispersion

Model:	ASTM Default	GW Ingestion	GW to Indoor Air
GW site 1	0	GW site 1	Off-site 1
GW site 2	0	Off-site 2	100 (ft)
Distance to GW receptors	<input type="button" value="Calculate"/>	50 (ft)	50 (ft)
Longitudinal dispersivity	0	10 (ft)	10 (ft)
Transverse dispersivity	0	1.65 (ft)	3.3 (ft)
Vertical dispersivity	0	0.25 (ft)	0.5 (ft)

4. Groundwater Discharge to Surface Water

GW site 1	N/A (ft)
GW site 2	0 (ft)
GW site 3	0 (ft)
GW site 4	0.0616 (ft/s)
Distance to GW/SW discharge point	
Plume width at GW/SW discharge	
Plume thickness at GW/SW discharge	
Surface water flowing at GW/SW discharge	

5. Commands and Options

Main Screen

Use/Set Default
Values

Print Sheet

Set Units

Help

Site-Specific Air Parameters

1. Outdoor Air Pathway

Dispersion in Air

Distance to offsite air receptor

Off-site 1	Off-site 2	(ft)
50	100	
↓	↓	
5.863729	11.25753	(ft)

4.005088	7.614947	(ft)
----------	----------	------

Horizontal dispersivity

Vertical dispersivity

Air Source Zone

Air mixing zone height

Ambient air velocity in mixing zone

Inverse mean cubic (Q/C term)

Particulate Emissions

Particulate Emission Factor

6.56167979	(ft)
7.381889764	(ft/s)

79.26	(m)
Model: ASTM Model	

2.1E-12 (kg/m^3)

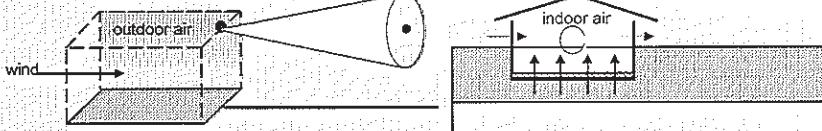
6.9E-14 (g/cm^2/s)

0.5 (J)

15.7480315 (J)

37.13910761 (J/s)

0.224 (-)



Site Name: Former Shell-branded Service Station

Location: 15275 Washington Blvd., San Leandro, CA

Compl. By: LD

Job ID:

Date: 1-Sep-08

2. Indoor Air Pathway

Building volume/area ratio

Foundation area

Foundation perimeter

Building air exchange rate

Depth to bottom of foundation slab

Convective air flow through cracks

Foundation thickness

Foundation crack fraction

Volumetric water content of cracks

Volumetric air content of cracks

Indoor/Outdoor differential pressure

Building Volume (ft^3)

Building Width Perpendicular to GM flow (ft)

Building Length Parallel to GM flow (ft)

Saturated Soil Zone Porosity (-)

Vertical Dispersivity (ft)

Groundwater Seepage Velocity (cm/s)

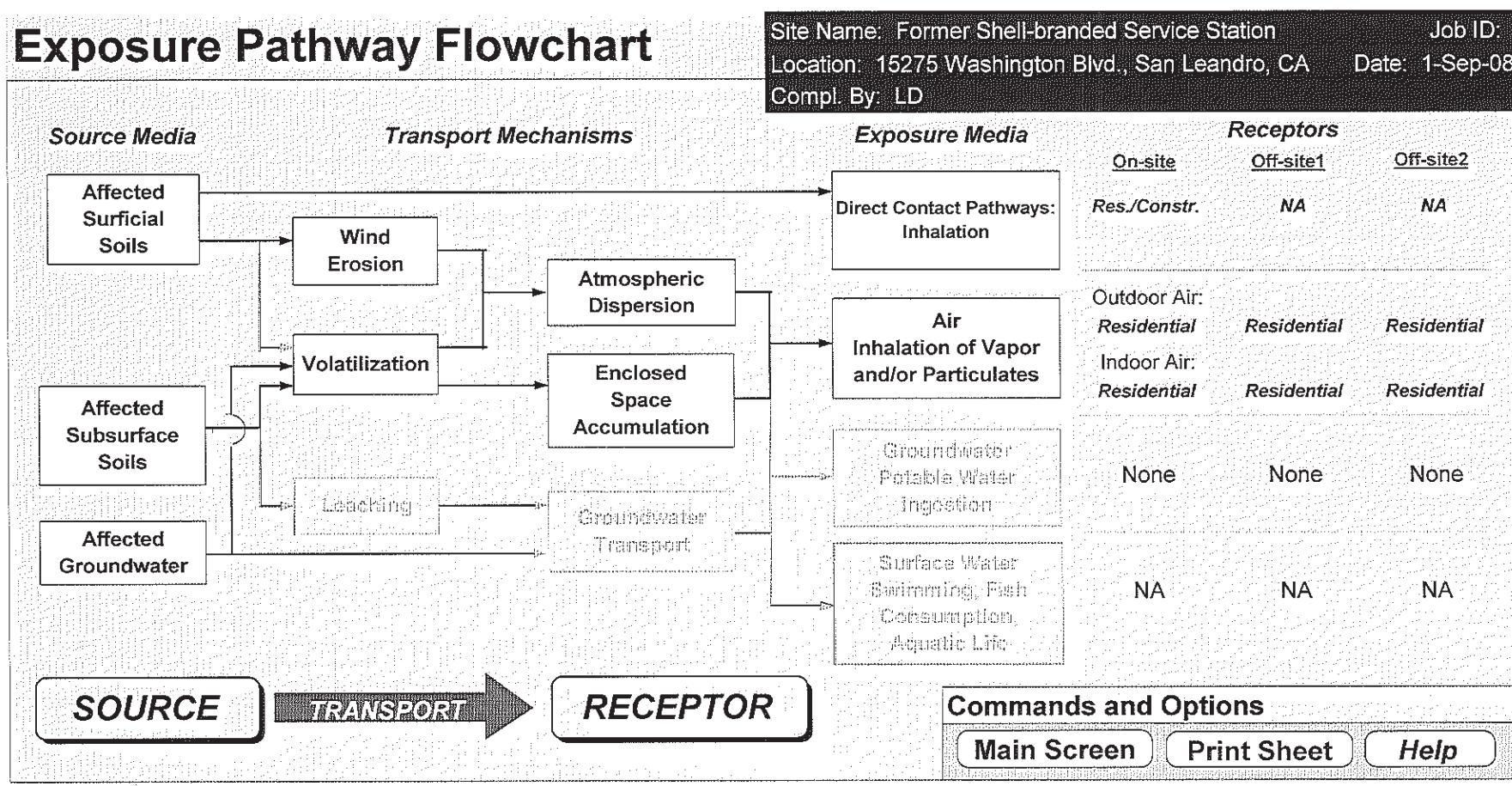
Wind Speed (ft/s)

Wind Direction (deg)

Wind Velocity (ft/s)

Wind Direction (deg)

Exposure Pathway Flowchart



RBCA SITE ASSESSMENT

Site Name: Former Shell-branded Service Station Site Location: 15275 Washington Blvd., San Leandro, CA	Completed By: LD Date Completed: 1-Sep-08	Job ID: 1 OF 1																																																																																
GROUNDWATER SSTL VALUES																																																																																		
Target Risk (Class A & B) 1.0E-6 Target Hazard Quotient 1.0E+0 Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)																																																																																		
<table border="1"> <thead> <tr> <th colspan="12">SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)</th> </tr> <tr> <th colspan="2"></th> <th colspan="3">Groundwater Ingestion / Discharge to Surface Water</th> <th colspan="3">Groundwater Volatilization to Indoor Air</th> <th colspan="3">Groundwater Volatilization to Outdoor Air</th> <th rowspan="2">Applicable SSTL (mg/L)</th> <th rowspan="2">SSTL Exceeded ? "x" if yes</th> <th rowspan="2">Required CRF Only if "yes" left</th> </tr> <tr> <th colspan="2">CONSTITUENTS OF CONCERN</th> <th rowspan="2">Representative Concentration (mg/L)</th> <th>On-site (0 ft)</th> <th>Off-site 1 (0 ft)</th> <th>Off-site 2 (0 ft)</th> <th>On-site (0 ft) Residential</th> <th>Off-site 1 (50 ft) Residential</th> <th>Off-site 2 (100 ft) Residential</th> <th>On-site (0 ft) Residential</th> <th>Off-site 1 (50 ft) Residential</th> <th>Off-site 2 (100 ft) Residential</th> </tr> </thead> <tbody> <tr> <td>71-43-2</td> <td>Benzene</td> <td>None</td> <td>None</td> <td>None</td> <td>2.7E+0</td> <td>7.4E+0</td> <td>2.4E+1</td> <td>>1.8E+3</td> <td>>1.8E+3</td> <td>>1.8E+3</td> <td>2.7E+0</td> <td><input type="checkbox"/></td> <td>NA</td> </tr> <tr> <td>T-ar0810</td> <td>TPH - Arom >C08-C10</td> <td></td> <td></td> <td></td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td>>6.5E+1</td> <td><input type="checkbox"/></td> <td>NA</td> </tr> <tr> <td>NA</td> <td>Total TPH mixture</td> <td>0.0E+0</td> <td>NA</td> <td>NA</td> <td>NA</td> <td>NC</td> <td>NC</td> <td>NC</td> <td>NC</td> <td>NC</td> <td>NC</td> <td><input type="checkbox"/></td> <td>NA</td> </tr> </tbody> </table>			SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)														Groundwater Ingestion / Discharge to Surface Water			Groundwater Volatilization to Indoor Air			Groundwater Volatilization to Outdoor Air			Applicable SSTL (mg/L)	SSTL Exceeded ? "x" if yes	Required CRF Only if "yes" left	CONSTITUENTS OF CONCERN		Representative Concentration (mg/L)	On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft) Residential	Off-site 1 (50 ft) Residential	Off-site 2 (100 ft) Residential	On-site (0 ft) Residential	Off-site 1 (50 ft) Residential	Off-site 2 (100 ft) Residential	71-43-2	Benzene	None	None	None	2.7E+0	7.4E+0	2.4E+1	>1.8E+3	>1.8E+3	>1.8E+3	2.7E+0	<input type="checkbox"/>	NA	T-ar0810	TPH - Arom >C08-C10				>6.5E+1	<input type="checkbox"/>	NA	NA	Total TPH mixture	0.0E+0	NA	NA	NA	NC	NC	NC	NC	NC	NC	<input type="checkbox"/>	NA						
SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)																																																																																		
		Groundwater Ingestion / Discharge to Surface Water			Groundwater Volatilization to Indoor Air			Groundwater Volatilization to Outdoor Air			Applicable SSTL (mg/L)	SSTL Exceeded ? "x" if yes	Required CRF Only if "yes" left																																																																					
CONSTITUENTS OF CONCERN		Representative Concentration (mg/L)	On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft) Residential	Off-site 1 (50 ft) Residential	Off-site 2 (100 ft) Residential	On-site (0 ft) Residential	Off-site 1 (50 ft) Residential				Off-site 2 (100 ft) Residential																																																																				
71-43-2	Benzene		None	None	None	2.7E+0	7.4E+0	2.4E+1	>1.8E+3	>1.8E+3	>1.8E+3	2.7E+0	<input type="checkbox"/>	NA																																																																				
T-ar0810	TPH - Arom >C08-C10				>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	>6.5E+1	<input type="checkbox"/>	NA																																																																					
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NC	NC	NC	NC	NC	NC	<input type="checkbox"/>	NA																																																																					
* = Chemical with user-specified data ">" indicates risk-based target concentration greater than constituent solubility value. NA = Not applicable. NC = Not calculated.																																																																																		

RBCA SITE ASSESSMENT

Site Name: Former Shell-branded Service Station	Completed By: LD	Job ID:																
Site Location: 15275 Washington Blvd., San Leandro, CA	Date Completed: 1-Sep-08																	
SURFACE SOIL (0 - 3.3 ft) SSTL VALUES		Target Risk (Class A & B) 1.0E-6 Target Hazard Quotient 1.0E+0																
		Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)																
SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)																		
CONSTITUENTS OF CONCERN		Representative Concentration	Soil Leaching to Groundwater Ingestion / Discharge to Surface Water			Soil Leaching to Groundwater/ Groundwater Volatilization to Indoor Air			Soil Vol. to Indoor Air		Surface Soil Particulates to Outdoor Air			Direct Contact Pathways: Inhalation		Applicable SSTL (mg/kg)	SSTL Exceeded? "■" if yes	Required CRF Only if "yes" left
			On-site (0 ft)	Off-site 1 (0 ft)	Off-site 2 (0 ft)	On-site (0 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)	Residential	Residential	Construction Worker	Residential	Off-site 1 (50 ft)	Off-site 2 (100 ft)	Residential			
71-43-2	Benzene	None	None	None	None	None	5.9E-1	>1.5E+3	>1.5E+3	>1.5E+3	4.5E+2	2.6E+4	5.9E-1	□	NA			
T-ar0810	TPH - Arom >C08-C10						>1.0E+3	>1.0E+3	>1.0E+3	>1.0E+3	3.3E+5	1.0E+6	3.3E+5	□	NA			
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NA	NA	NC	NC	NA	NC	NC	NC	NC	NC	□	NA	

* = Chemical with user-specified data

> indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.

RBCA SITE ASSESSMENT																	
Site Name: Former Shell-branded Service Station Site Location: 15275 Washington Blvd., San Leandro, CA		Completed By: LD Date Completed: 1-Sep-08		Job ID: 1 OF 1													
SUBSURFACE SOIL (3.3 - 6 ft) SSTL VALUES		Target Risk (Class A & B) 1.0E-6 Target Hazard Quotient 1.0E+0 Groundwater DAF Option: Domenico - No Decay (One-directional vert. dispersion)															
CONSTITUENTS OF CONCERN CAS No. Name Representative Concentration (mg/kg)		SSTL Results For Complete Exposure Pathways (Checked if Pathway is Complete)															
		<input type="checkbox"/> Soil Leaching to Groundwater Ingestion / Discharge to Surface Water			<input type="checkbox"/> Soil Leaching to Groundwater/ Groundwater Volatilization to Indoor Air			<input checked="" type="checkbox"/> Soil Vol. to Indoor Air		<input type="checkbox"/> Soil Volatilization to Outdoor Air			Applicable SSTL	SSTL Exceeded ?	Required CRF		
71-43-2	Benzene	None	None	None	None	None	On-site (0 ft)	On-site (50 ft)	On-site (100 ft)	Off-site 1 (50 ft)	Off-site 2 (100 ft)	Residential	Residential	Residential	Residential	"* if yes"	Only if "yes" left
	T-ar0810	TPH - Arom >C08-C10									5.9E-1	>1.0E+3					5.9E-1
NA	Total TPH mixture	0.0E+0	NA	NA	NA	NA	NA	NA	NA	NC	NC	NC	NC	NC	NC	□	NA
* = Chemical with user-specified data ">" indicates risk-based target concentration greater than constituent residual saturation value. NA = Not applicable. NC = Not calculated.																	

RBCA SUMMARY REPORT

SUMMARY REPORT

TIER 1 / TIER 2 RBCA SITE EVALUATION

FORMER SHELL SERVICE STATION
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

WIC #204-6852-1108

Weiss Associates, Emeryville, California

PREPARED BY

June 18, 1997

DATE ISSUED

REVIEWED BY


Steve Young

DATE 6/20/97

RBCA SUMMARY REPORT

Table of Contents

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates *Page 1 of 2*

TIER 1 / TIER 2 RBCA REPORT INDEX

= ENCLOSED

Tier 1 Tier 2

1.0 EXECUTIVE SUMMARY

1.2 Tier 2 Executive Summary Checklist	*	<input type="checkbox"/>	<input checked="" type="checkbox"/>
1.3 Executive Summary Discussion		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
1.4 Baseline Exposure Pathway Flowchart		<input type="checkbox"/>	<input type="checkbox"/> (u)
1.5 Comparison of Site Data to RBSLs/SSTLs - Commercial/Industrial Receptors		<input type="checkbox"/>	<input type="checkbox"/> (u)
1.6 Comparison of Site Data to RBSLs/SSTLs - Residential Receptors		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/> (u)

2.0 SITE HISTORY

2.1 Site Description		<input type="checkbox"/>	<input type="checkbox"/> (u)
2.2 Site Ownership & Activity Record		<input type="checkbox"/>	<input type="checkbox"/> (u)
2.3 Past Releases or Source Areas		<input type="checkbox"/>	<input type="checkbox"/> (u)
2.4 Summary of Current & Completed Site Activities		<input type="checkbox"/>	<input type="checkbox"/> (u)
2.5 Summary of Potential Near-Term Site Activities		<input type="checkbox"/>	<input type="checkbox"/> (u)

3.0 SITE ASSESSMENT INFORMATION

3.1 Regional Hydrogeologic Conditions		<input type="checkbox"/>	<input type="checkbox"/> (u)
3.2 Hydrogeologic Site Conditions		<input type="checkbox"/>	<input type="checkbox"/> (u)
3.3 Beneficial Use Summary		<input type="checkbox"/>	<input type="checkbox"/> (u)
3.4 Well Inventory Survey		<input type="checkbox"/>	<input type="checkbox"/> (u)
3.5 Ecological Assessment Summary		<input type="checkbox"/>	<input type="checkbox"/> (u)

4.0 BASELINE EXPOSURE ASSESSMENT

4.1 Site Classification Summary		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
4.2 Baseline Exposure Flowchart		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
4.3 Tier 2 Exposure Factor Checklist	*	<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
4.4 Tier 2 Exposure Pathway Screening	*		<input type="checkbox"/>
4.5 Tier 2 Exposure Scenarios & Risk Goals	*		<input type="checkbox"/>

5.0 SITE PARAMETERS

5.1 Site Parameter Checklist for RBSLs		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
5.2 Summary of Media Investigation and Chemical Analyses		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
5.3 Summary of Source Zone Characteristics		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
5.4 Surface Soil Concentration Data Summary		<input type="checkbox"/>	<input type="checkbox"/> (u)
5.5 Subsurface Soil Concentration Data Summary		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
5.6 Groundwater Concentration Data Summary		<input type="checkbox"/>	<input checked="" type="checkbox"/> (u)
5.7 Tier 2 Exposure Pathway Transport Parameters	*		<input type="checkbox"/>

6.0 TIER 1 RISK-BASED SCREENING LEVEL EVALUATION

6.1 Tier 1 RBSL Evaluation: Surface Soil		<input type="checkbox"/>	
6.2 Tier 1 RBSL Evaluation: Subsurface Soil		<input type="checkbox"/>	
6.3 Tier 1 RBSL Evaluation: Groundwater		<input type="checkbox"/>	

* = Required for Tier 2 Evaluation only

(u) = For Tier 2, update Tier 1 version as needed.

RBCA SUMMARY REPORT**Table of Contents**

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 2 of 2

TIER 1 / TIER 2 RBCA REPORT INDEX - *continued*

= **ENCLOSED**

Tier 1 Tier 2

7.0 NATURAL ATTENUATION FACTORS

7.1 Tier 2 NAF Calculation Methods & Results

*

8.0 TIER 2 SSTL EVALUATION

8.1 Surface Soil SSTL Values

*

8.2 Subsurface Soil SSTL Values

*

8.3 Groundwater SSTL Values

*

ATTACHMENTS

Figure 1 Site Location Map

* (u)

Figure 2 Extended Site Map

* (u)

Figure 3 Site Plan

* (u)

Figure 4 Site Photos

* (u)

Figure 5 Groundwater Plume Maps

*

Figure 6 Groundwater Elevation Map

* (u)

Figure 7 Soil Boring Location Map

* (u)

APPENDICES

Appendix A SSTL Calculations

* (u)

Appendix B SSTL Calculations

* (u)

Appendix C Well Screen Intervals

*

(SPECIFY)

* = *Required for Tier 2 Evaluation only*

(u) = *For Tier 2, update Tier 1 version as needed.*

RBCA SUMMARY REPORT

Worksheet 1.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 1

TIER 2 EXECUTIVE SUMMARY

TIER 2 SSTL CALCULATION/METHOD (■ OR □ TO SELECT)

SSTL Calculation Option

- Option 1: Site-Specific Screening Levels
- Option 2: Individual Constituent SSTL Values
- Option 3: Cumulative Constituent SSTL Values

NAF Calculation Method

- Fate and Transport Modeling:
- RBCA Spreadsheet System
- Other Model(s)
- Empirical NAF Calculation

SITE DATA/INVENTORY

Source Zone Investigation Complete:

- Surface Soil (e.g., < 3 ft BGS)
- Subsurface Soil (e.g., > 3 ft BGS)
- Groundwater

Exposure Pathway Information Compiled:

- Air Pathway
- Groundwater Pathway
- Soil Pathway
- Surface Water Pathway
- Land Use Classification (on-site and off-site)

TASKS COMPLETED

- Tier 1 Evaluation
- Tier 1 Interim Corrective Action
- Tier 2 Evaluation
- Tier 2 Interim Corrective Action
- Tier 2 Final Corrective Action
- Tier 3 Evaluation

CURRENT SITE CLASSIFICATION

Classification No.	Scenario Description	Prescribed Interim Action	Date Implemented
3	Shallow ground water and subsurface soils are impacted. There are no domestic drinking water wells within 1/2 mile.	Evaluate remedial alternatives to reduce site concentrations to or below SSTLs	Planned for 1998

TIER 2 CORRECTIVE ACTION CRITERIA

Affected Medium	Tier 2 SSTL Exceeded ?		Applicable Excess Risk Limits (specify values)				Other Applicable Exposure Limits <i>(Specify, if any)</i>
	Yes	No	Indiv. Risk	Total Risk	Hazard Index	Hazard Quotient	
• Surface Soil (< 3ft bgs)	<input type="checkbox"/>	<input type="checkbox"/>					
• Subsurface Soil (> 3ft bgs)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10^{-3}			1.0	
• Groundwater	<input checked="" type="checkbox"/>	<input type="checkbox"/>	10^{-5}			1.0	MCLs at POE

PROPOSED ACTION

- No Action:** Tier 2 SSTLs not exceeded. Apply for closure.
- Interim Corrective Action:** Address principal, near-term risks sources.
- Final Corrective Action:** Remediate/control site to meet Tier 2 criteria.
- Tier 3 Evaluation:** Improve baseline risk and SSTL estimates.

NOTE:

Rationale for proposed action documented on Worksheets 1.3 and 10.1-10.3.

ALL WORKSHEETS ENCLOSED IN THIS REPORT ARE IDENTIFIED ON THE TABLE OF CONTENTS FORM

RBCA SUMMARY REPORT**Worksheet 1.3**

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 2

EXECUTIVE SUMMARY

Instructions: Provide brief description of site history, hydrogeologic conditions, ecological assessment, possible exposure pathways, SSTL results, and the scope of work for proposed corrective action activity. Address proposed methods, implementation schedule, cost, and anticipated risk reduction at or near the site.

SITE DESCRIPTION AND HISTORY

Update Site History from Tier 1, if necessary

No update from Tier 1.

SITE ASSESSMENT INFORMATION**GEOLOGIC AND HYDROGEOLOGIC SUMMARY**

Update from Tier 1, if necessary

No update from Tier 1.

EXPOSURE ASSESSMENT**COMPLETE EXPOSURE PATHWAYS AND APPLICABLE RECEPTORS**

Identify those pathway/contaminant pairs to be evaluated at Tier 2 (exceeded Tier 1 criteria)

In Tier 1, potentially complete current and/or future exposure pathways for human exposure were identified as:

- Inhalation of indoor and outdoor air via volatilization from subsurface soils
- Inhalation of indoor and outdoor air via volatilization from ground water
- leachate to ground water from subsurface soils for ingestion
- ground water ingestion at a hypothetical point of exposure closest to the area of impact.

Residential receptors were considered in the evaluations as the future use of the site is not determined and there is a residential area located adjacent to the site. Pathways involving exposure to surface soil were not considered in the initial Tier 1 evaluations due to lack of field data. In May 1997, a soil vapor survey and soil sampling investigation was conducted to further evaluate site conditions and to collect data for exposure pathways that were not considered in Tier 1 evaluations. These data were used to reevaluate Tier 1 screening levels and to evaluate pathways involving exposure to surface soils.

Potentially complete current and/or future exposure pathways in the updated Tier 1 evaluation were identified as:

- Inhalation of indoor and outdoor air via volatilization from subsurface soils
- Inhalation of indoor and outdoor air via volatilization from ground water
- Inhalation, dermal contact and ingestion of vapors and particulates from surficial soils
- leachate to ground water from subsurface soils for ingestion
- ground water ingestion at a hypothetical point of exposure closest to the area of impact.

Worksheet 1.6 shows the comparison of previous and updated site characterization data to RBSLs. Worst-case concentrations of toluene, ethylbenzene and xylenes were below relevant Tier 1 RBSLs. Therefore the presence of these COCs in site soils and/or ground water is not believed to present a significant risk to human health or the environment. Worst-case benzene concentrations exceeded the conservative Tier 1 RBSLs for the following pathways, which are evaluated further in Tier 2:

- Inhalation of benzene vapors via volatilization from subsurface soils into buildings and to outdoor air
- Inhalation of benzene vapors via volatilization from ground water into buildings
- leachate of benzene to ground water from subsurface soils for ingestion
- Ingestion of benzene via ground water at nearest off-site hypothetical point of exposure.

Assuming that leachate to ground water is a potentially complete exposure pathway is a conservative approach, because the ground water analytical results do not indicate any significant change in concentrations due to leaching from soils. Ground water ingestion is also conservatively considered a potentially complete pathway and there are no known uses of shallow ground water in the area.

ECOLOGICAL ASSESSMENT SUMMARY

Update from Tier 1, if necessary

No update from Tier 1

RBCA SUMMARY REPORT

Worksheet 1.3

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 2 of 2

EXECUTIVE SUMMARY *continued*

REPRESENTATIVE TIER 2 SSTL EVALUATION

COMPARISON TO SOURCE MEDIA CONCENTRATIONS

For pathways evaluated at Tier 2, compare representative source concentrations to applicable SSTL values.

SSTLs were calculated for inhalation and ground water ingestion exposure pathways using site-specific parameter values and site-specific fate and transport modeling. SSTL calculations and site-specific parameter values are found in Appendices A and B of this Tier 2 evaluation report. Worksheet 1.6 shows the comparison between SSTLs and site soil and ground water concentrations. Site concentrations exceeded Tier 2 SSTLs for the following exposure pathways:

- Inhalation of benzene vapors via volatilization from subsurface soils into buildings.
- Inhalation of benzene vapors via volatilization from ground water into buildings.

QUALITATIVE UNCERTAINTY ASSESSMENT

Discuss uncertainty / conservatism of the site data and calculation methods used in deriving SSTL values.

In calculating the SSTLs for soils and ground water, only a few site-specific parameters were used in place of Tier 1 default values. These parameters are discussed in Appendices A and B, and in Worksheet 5.1. The site representative concentrations were conservatively selected based on maximum detected concentrations. In addition, conservative assumptions were made for estimating plume thickness in ground water, thickness of contaminated soils and for the location of a hypothetical water supply well in the shallow water-bearing zone.

PROPOSED CORRECTIVE ACTION

Describe rationale for proposed action (i.e., no action, interim action, final action, or tier upgrade), considering site classification and land use. Discuss basis for remedy selection, if applicable.

Based on the results of the Tier 2 analysis, an evaluation of remedial alternatives is proposed to reduce concentrations to or below SSTLs.

REFERENCE DOCUMENTS

List the document sources for the data cited in this report.

See Section 5.0 of the attached report.

RBCA SUMMARY REPORT

Tier 1 Worksheet 1.6

Site Name: Former Shell Service Station, WIC #204-6852-1108

Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By: Weiss Associates

Page 1 of 2

RESIDENTIAL RECEPTORS: COMPARISON OF PREVIOUS AND UPDATED SITE CHARACTERIZATION DATA TO RBSLS

Media	Exposure Pathway	Potentially Complete?	Benzene			Toluene			Ethylbenzene			Xylenes		
			RBSL ⁽¹⁾		Representative Concentration ⁽²⁾	RBSL ⁽³⁾		Representative Concentration ⁽²⁾	RBSL ⁽³⁾		Representative Concentration ⁽²⁾	RBSL ⁽³⁾		Representative Concentration ⁽²⁾
			Tier 1	Update		Tier 1	Update		Tier 1	Update		Tier 1	Update	
Soil (mg/kg)	Volatilization to Outdoor Air	Yes	0.79	31	10	RES ⁽⁴⁾	170	5.9	RES	280	52	RES	560	220
	Vapor Intrusion to Buildings	Yes	0.015	31	10	20.6	170	5.9	427	280	52	RES	560	220
	Surficial Soil (0-3 ft depth): Ingestion/Dermal/Inhalation	Yes	16.8	no data	0.34	13,300	no data	0.11	7,830	no data	1.1	145,000	no data	0.47
	Leachate to Ground Water for Ingestion	Yes	0.05	31	10	129	170	5.9	575	280	52	RES	560	220
Ground Water (mg/l)	Volatilization to Outdoor Air	Yes	31.9	0.86	0.99	>S ⁽⁵⁾	0.29	0.33	>S	1.5	1.5	>S	5.9	6.3
	Vapor Intrusion to Buildings	Yes	0.069	0.86	0.99	32.8	0.29	0.33	77.5	1.5	1.5	>S	5.9	6.3
	Ingestion	Yes	0.0085	0.86	0.99	7.3	0.29	0.33	3.65	1.5	1.5	73.0	5.9	6.3

Notes:

(1) The RBSLs used for benzene is based on a carcinogenic risk of 1 in 100,000 (10^{-5}), and corrected for the California cancer slope factor.

(2) Methodology for establishing representative COC concentrations shown on worksheets 5.3 - 5.6

(3) The RBSLs used for non-carcinogenic constituents of concern is a chronic hazard quotient of 1.0.

(4) RES = Selected risk level is not exceeded for pure compound present at any concentration in soil.

(5) >S = At pure component solubility (mg/l), selected risk level is not exceeded.

NA = Not applicable.

ND = Not detected

Boldface indicates exceedance on a potentially complete exposure pathway

RBCA SUMMARY REPORT

Tier 2 Worksheet 1.6

Site Name: Former Shell Service Station, WIC #204-6852-1108
 Site Location: 15275 Washington Avenue, San Leandro, California

Date Completed: June 18, 1997
 Completed By: Weiss Associates

Page 2 of 2

RESIDENTIAL RECEPTORS: COMPARISON OF SITE CHARACTERIZATION DATA TO SSTLs

Media	Exposure Pathway	Potentially Complete?	Benzene	
			SSTL ⁽¹⁾	Representative Concentration ⁽²⁾
Soil (mg/kg)	Volatilization to Outdoor Air	Yes	204	10
	Vapor Intrusion to Buildings	Yes	0.25	10
	Leachate to Ground Water for Ingestion	Yes	17	10
Ground Water (mg/l)	Vapor Intrusion to Buildings	Yes	0.86	1.4
	Ingestion	Yes	2.0	1.4

Notes:

(1) The SSTLs used for benzene is based on a carcinogenic risk of 1 in 100,000 (10^{-5}), and corrected for the California cancer slope factor.

(2) Methodology for establishing representative COC concentrations shown on worksheets 5.3 - 5.6

(3) The SSTLs used for non-carcinogenic constituents of concern is a chronic hazard quotient of 1.0.

(4) RES = Selected risk level is not exceeded for pure compound present at any concentration in soil.

(5) > S = At pure component solubility (mg/l), selected risk level is not exceeded.

NA = Not applicable.

ND = Not detected

Boldface indicates exceedance on a potentially complete exposure pathway

RBCA SUMMARY REPORT

Worksheet 4.1

Site Name: Former Shell Service Station, WIC #204-6852-1108

Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By: Weiss Associates

Page 1 of 1

RBCA SITE CLASSIFICATION SUMMARY

Instructions: Determine RBCA Site Classification using site classification flowcharts provided in Tier 1 RBCA Guidance Manual, as follows:

Evaluate available information on site soils, vapors, groundwater, surface water, and miscellaneous impacts using the corresponding flowcharts. Record two-digit site classification number for each medium. Record critical site classification scenario and initial response action in space provided. If there is more than one number within the lowest classification group (e.g., Class 2), record both (e.g., 2,I, 2,3).

Compare numerical values from individual media to identify critical site classification(s) (i.e., lowest values). As site evaluation progresses, update site classification as appropriate by repeating Steps 1 - 3, based upon additional site data or completion of corrective measure.

SITE STATUS		MEDIUM-SPECIFIC CLASSIFICATION VALUES					CRITICAL CLASSIFICATION(S)	
Date	Status Description	Soil	Ground-water	Vapor	Surface Water	Misc.	Classification No. and Scenario	Prescribed Initial Response
INITIAL CLASSIFICATION								
Aug 1996	Shallow soils and ground water impacted.	3	3	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Continue ground water monitoring, prepare workplan to collect soil vapor data. Perform Tier 2 evaluation No further action.
REVISED CLASSIFICATION								
Nov 1996	COC concentrations in soil and ground water exceed Tier 1 RBSLs.	3	3	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Continue ground water monitoring, prepare workplan to collect soil vapor data. Perform Tier 2 evaluation No further action.
June 1997	COC concentrations in soil exceed Tier 2 SSTLs	3	4	3	4	4	3. Potential for vapor migration, possible long-term threat to human or beneficial ground water use. 4. No potential threat to human health or beneficial ground water use.	Select remedial alternative to reduce soil concentration to/below SSTLs. No further action.

RBCA SUMMARY REPORT

Worksheet 4.2

Site Name: Former Shell Service Station, WIC #204-6852-1108
Site Location: 15275 Washington Avenue, San Leandro, California

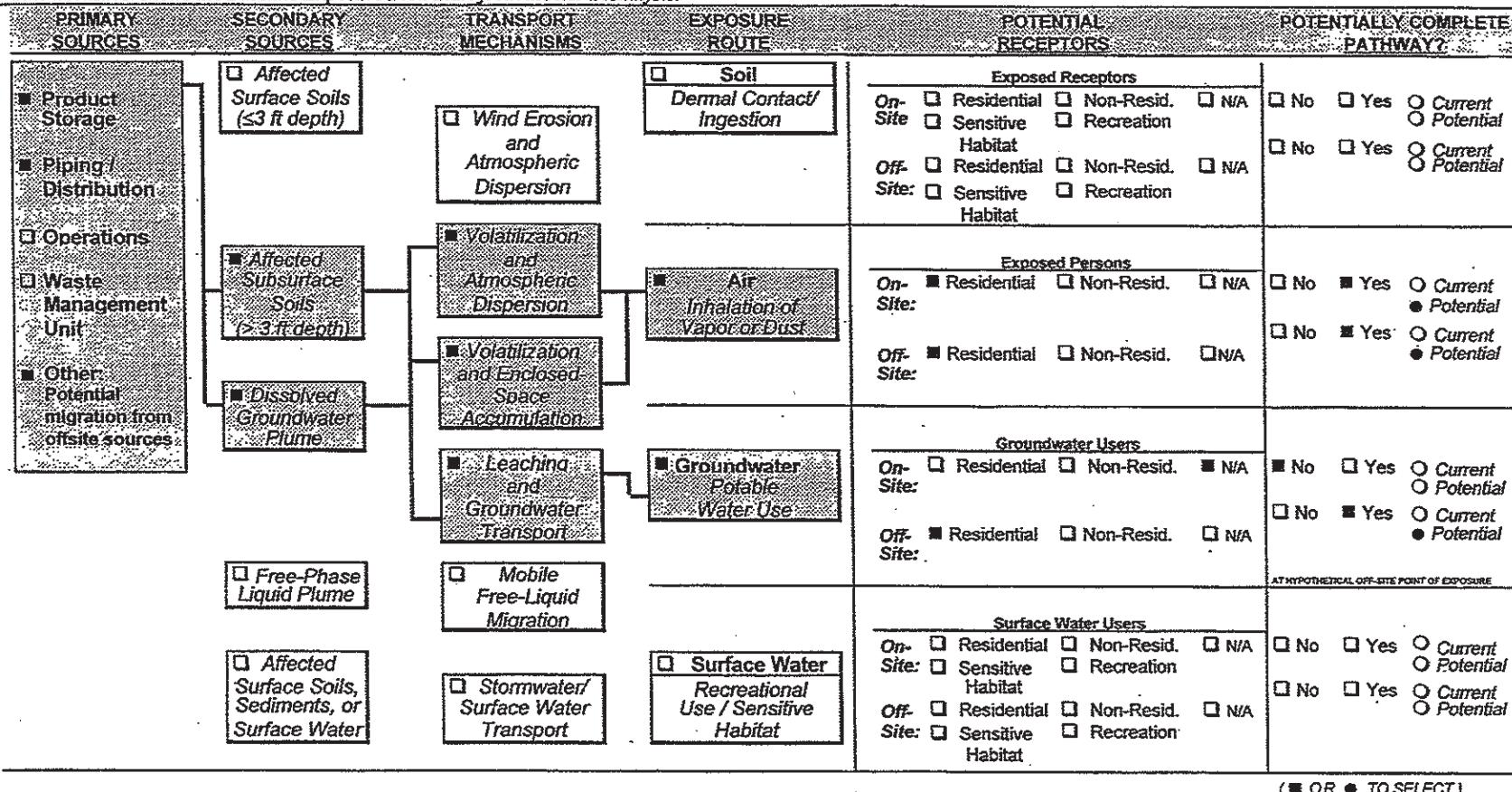
Date Completed: June 18, 1997

Completed By: Weiss Associates

Page 1 of 1

EXPOSURE FLOWCHART

This worksheet shows the Baseline Exposure Flowchart from the tier 1 Analysis.



(■ OR ● TO SELECT)

RBCA SUMMARY REPORT
Worksheet 4.3

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
 Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 1

EXPOSURE FACTOR CHECKLIST

Instructions: • *Tier 2 Evaluation: Indicate use of either a Reasonable Maximum Exposure (RME) factor or a site-specific exposure factor for both residential and commercial/industrial points of exposure (POEs), as appropriate for each exposure pathway. For Tier 2, data is required for Global Factors and for complete pathways only (see Worksheet 4.4).*

RESIDENTIAL POE		COMMERCIAL/INDUSTRIAL POE	
RME	Site-Specific	RME	Site-Specific
GLOBAL FACTORS (■ TO SELECT)			
AT _c Averaging time for carcinogens	<input checked="" type="checkbox"/> 70 yrs <input type="checkbox"/>	<input type="checkbox"/> 70 yrs <input checked="" type="checkbox"/>	<input type="checkbox"/>
Averaging time for non-carcinogens	<input checked="" type="checkbox"/> = ED <input type="checkbox"/>	<input type="checkbox"/> = ED <input checked="" type="checkbox"/>	<input type="checkbox"/>
BW Body weight -Adult	<input checked="" type="checkbox"/> 70 kg <input type="checkbox"/>	<input type="checkbox"/> 70 kg <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Child (1-6 yrs)	<input checked="" type="checkbox"/> 15 kg <input type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
ED Exposure duration	<input checked="" type="checkbox"/> 30 yrs <input type="checkbox"/>	<input type="checkbox"/> 25 yrs <input checked="" type="checkbox"/>	<input type="checkbox"/>
■ COMPLETE (provide data) ■ NOT COMPLETE (skip)			
EF Exposure frequency (inhalation)	<input checked="" type="checkbox"/> 350 dy/yr <input type="checkbox"/>	<input type="checkbox"/> 250 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/>
IR _{ai} Daily indoor inhalation rate	<input checked="" type="checkbox"/> 15 m ³ /dy (24-hr/dy) <input type="checkbox"/>	<input type="checkbox"/> 20 m ³ /dy (8-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/>
IR _{ao} Daily outdoor inhalation rate	<input checked="" type="checkbox"/> 20 m ³ /dy (24-hr/dy) <input type="checkbox"/>	<input type="checkbox"/> 20 m ³ /dy (8-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/>
POTABLE WATER USE EXPOSURE FACTORS (■ COMPLETE (provide data) ■ NOT COMPLETE (skip))			
EF Exposure frequency (ingestion/showering)	<input checked="" type="checkbox"/> 350 dy/yr <input type="checkbox"/>	<input type="checkbox"/> 250 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/>
IR _w Daily water ingestion rate	<input checked="" type="checkbox"/> 2 L/dy (24-hr/dy) <input type="checkbox"/>	<input type="checkbox"/> 1 L/dy (8-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/>
EP _{sh} Exposure period (showering)	<input checked="" type="checkbox"/> 12 min/dy <input type="checkbox"/>	<input type="checkbox"/> 12 min/da <input checked="" type="checkbox"/>	<input type="checkbox"/>
SA _w Skin surface area (showering)	<input checked="" type="checkbox"/> 0.86 m ² <input type="checkbox"/>	<input type="checkbox"/> 0.86 m ² <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Adult (70 kg)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
SOIL EXPOSURE FACTORS (■ COMPLETE (provide data) ■ NOT COMPLETE (skip))			
EF Exposure Frequency	■ COMPLETE (provide data) ■ NOT COMPLETE (skip)		
-Dermal Contact	<input type="checkbox"/> 350 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/> 40 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Soil ingestion	<input type="checkbox"/> 350 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/> 250 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/>
SA _s Skin surface area (soil contact)	■ COMPLETE (provide data) ■ NOT COMPLETE (skip)		
-Adult (18 to 31 yrs, 70 kg)	<input type="checkbox"/> 0.58 m ² <input checked="" type="checkbox"/>	<input type="checkbox"/> 0.58 m ² <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Child (1 - 17 yrs, 35 kg)	<input type="checkbox"/> 0.20 m ² <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
M Soil to skin adherence factor	<input type="checkbox"/> 1.0 mg/cm ² <input checked="" type="checkbox"/>	<input type="checkbox"/> 1.0 mg/cm ² <input checked="" type="checkbox"/>	<input type="checkbox"/>
IR _s Soil ingestion rate	■ COMPLETE (provide data) ■ NOT COMPLETE (skip)		
-Age-adjusted average	<input type="checkbox"/> 114 mg-yr/kg-dy <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Adult (7 to 31 yrs, 70 kg)	<input type="checkbox"/> 100 mg/dy (24-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/> 50 mg/dy (8-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Child (1 - 6 yrs, 15 kg)	<input type="checkbox"/> 200 mg/dy (24-hr/dy) <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
SURFACE WATER EXPOSURE FACTORS (■ COMPLETE (provide data) ■ NOT COMPLETE (skip))			
EF Exposure Frequency	■ COMPLETE (provide data) ■ NOT COMPLETE (skip)		
-Fish consumption	<input type="checkbox"/> 350 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Swimming	<input type="checkbox"/> 7 dy/yr <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
IR _f Daily fish intake rate	■ COMPLETE (provide data) ■ NOT COMPLETE (skip)		
-Freshwater	<input type="checkbox"/> 10 g/dy <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Saltwater	<input type="checkbox"/> 15 g/dy <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
SA _w Skin surface area (swimming)	<input type="checkbox"/> 0.86 m ² <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>
-Adult (70 kg)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
EP _{sw} Exposure period (swimming)	<input type="checkbox"/> 2.6 hrs/dy <input checked="" type="checkbox"/>	<input type="checkbox"/> NA <input checked="" type="checkbox"/>	<input type="checkbox"/>

Si: me: er S Serv tatic IC # 5852

Date completed:

June 10, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By:

Weiss Associates

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SELECTION OF EXPOSURE PATHWAYS FOR TIER 2 EVALUATION

Instructions: Exposure pathways selection of contaminant pairs for Tier 2 evaluation involves the following steps:

- 1) Identify potentially complete exposure pathways from Tier 1.
- 2) Identify those pathways for which one or more COCs exceed the Tier 1 RBSLs.
- 3) Fill in the COCs with RME concentrations exceeding the Tier 1 RBSLs.
- 4) Check yes for each pathway that is potentially complete and has one or more COCs whose RME concentrations exceed the Tier 1 RBSL.

Notes:

RBSL = Risk-Based Screening Level

POE = Point of Exposure

COC = Constituent of Concern

NM = Not Measured

PATHWAY	Potentially Complete Pathway?	Pathway Tier 1 RBSL Exceeded?	CONSTITUENTS		
			Identify COCs > Tier 1 RBSL	Evaluate at Tier 2:	
AIR EXPOSURE PATHWAYS (■ TO SELECT)					
1) Surface Soils: Vapor Inhalation and Dust Ingestion	<input type="checkbox"/> Current <input checked="" type="checkbox"/> Potential	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	None	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes - Current <input type="checkbox"/> Yes - Future
2) Subsurface Soils: Volatilization to Ambient Air	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Benzene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
3) Subsurface Soils: Volatilization to Enclosed Space	<input type="checkbox"/> Current <input checked="" type="checkbox"/> Potential	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Benzene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
4) Ground water: Volatilization to Ambient Air	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	None	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
5) Ground water: Volatilization to Enclosed Space	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Benzene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
GROUND WATER EXPOSURE PATHWAYS					
6) Soil: Leaching to Ground water: Ingestion	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Benzene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
7) Dissolved or Free-Phase Ground water Plume: Ingestion	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> NA	Benzene	<input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes - Current <input checked="" type="checkbox"/> Yes - Future
SOIL EXPOSURE PATHWAY					
8) Surface Soils: Dermal Contact/Ingestion	<input checked="" type="checkbox"/> Current <input type="checkbox"/> Potential	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> NA	None	<input checked="" type="checkbox"/> No	<input type="checkbox"/> Yes - Current <input type="checkbox"/> Yes - Future

NA = Not Applicable

RECA SUMMARY REPORT

Worksheet 5.1

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
 Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 1

SITE PARAMETER CHECKLIST FOR RISK-BASED SCREENING LEVELS

Instructions: For Tier 1 evaluation (generic screening levels), review specified default parameters (*) to ensure values are conservative for site. For Tier 2 Option 1 SSTL calculation (site-specific screening levels), provide site-specific values for sensitive parameters (§). Indicate parameter value used in evaluation by completing check box (■).

Note: * Confirm conservatism of these values for Tier 1 evaluation.

§ Provide site-specific measurement or estimate for Tier 2 evaluation.

		Default Value Used	Site-Specific Value Used
Soil Parameters			
soil type	■ sandy/clayey soil	<input type="checkbox"/>	*§
Θ_T	□ 0.38 (dim)	■ 0.25	§
Θ_{ws}	□ 0.12 (dim)	■ 0.04	§
Θ_{as}	□ 0.26 (dim)	■ 0.21	
Θ_{wcap}	■ 0.342 (dim)	<input type="checkbox"/>	
Θ_{acap}	■ 0.038 (dim)	<input type="checkbox"/>	
ρ_s	□ 1.7 g/cm ³	■ 2.0	§
foc	□ 0.01 (dim)	■ 0.01	§
L _s	□ 100 cm	■ 122	§
L _{gw}	□ 300 cm	■ 305	§
h _{cap}	■ 5 cm	<input type="checkbox"/>	
h _v	□ 295 cm	■ 300	
pH	■ 6.5	<input type="checkbox"/>	
Groundwater Parameters			
I	■ 30 cm/yr	<input type="checkbox"/>	§
V _{gw}	□ 82.0 ft/yr	■ 144	*§
δ_{gw}	■ 200 cm	<input type="checkbox"/>	*§
DF	■ 12.1	<input type="checkbox"/>	
Surface Parameters			
U _{air}	■ 225 cm/s	<input type="checkbox"/>	*§
δ_{air}	■ 200 cm	<input type="checkbox"/>	*§
A	■ 2250000 cm ²	<input type="checkbox"/>	
W	■ 1500 cm	<input type="checkbox"/>	§
d	■ 100 cm	<input type="checkbox"/>	§
P _e	■ 2.17E-10 g/cm ² ·s	<input type="checkbox"/>	§
Building Parameters			
L _{crack}	■ 15 cm	<input type="checkbox"/>	
η	■ 0.01 (dim)	<input type="checkbox"/>	
L _{b_r}	■ 200 cm	<input type="checkbox"/>	
L _{b_c}	■ 300 cm	<input type="checkbox"/>	
ER _r	□ 12 dy ⁻¹	<input type="checkbox"/>	
ER _c	■ 20 dy ⁻¹	<input type="checkbox"/>	

Discussion: Provide rationale for default parameter revision; discuss additional site-specific features of note; etc.

- Soil porosity, soil density, water and air contents were determined by soil property analysis of collected samples
- Depth to contaminated soil is 4 ft.
- Depth to ground water is 10 ft.

(continue on next page if needed)

RBCA SUMMARY REPORT
Worksheet 5.2

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
 Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 1

SUMMARY OF MEDIA INVESTIGATION & CHEMICAL ANALYSES

Site Media Analyzed (■ TO SELECT)						
	Ground-water	Surface Soil	Subsurf. Soil	Soil Vapor	Ambient Vapor	Surface Water
Applicable?	■	■	■	■	■	□
Sampled?	■	■	■	■	■	□
Chemical Analysis	EPA Analysis Method					
<i>Organic Chemicals</i>	8240 / 624	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Volatile Organics	■ ■	□ □	■ ■	□ □	□ □	□ □
Semi-Volatile Organics	□ □	□ □	□ □	□ □	□ □	□ □
Polynuclear Aromatic Hydrocarbons	□ □	□ □	□ □	□ □	□ □	□ □
Purgeable Aromatics	■ ■	■ ■	■ ■	■ ■	■ ■	□ □
Total Petroleum Hydrocarbons (GC)	■ ■	■ ■	■ ■	■ ■	■ ■	□ □
<i>Halogenated Organic Chemicals</i>	8010 / 601	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Halogenated Volatile Organics	■ □	□ □	□ □	□ □	□ □	□ □
Organochlorine & PCBs	□ □	□ □	□ □	□ □	□ □	□ □
<i>Inorganic Chemicals</i>	8080	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
Metals (Lead)	■ ■	□ □	■ ■	□ □	□ □	□ □
<i>Others</i>	6010 / 7xxx series	ana./det.	ana./det.	ana./det.	ana./det.	ana./det.
• <u>Organic Lead</u>	■ ■	□ □	■ ■	□ □	□ □	□ □
• <u>Total Oil and Grease</u>	□ □	□ □	□ □	□ □	□ □	□ □
• <u>E-Coli form (total and fecal)</u>	■ ■	□ □	■ ■	□ □	□ □	□ □
• <u>Chloride, nitrate, TDS</u>	■ ■	□ □	□ □	□ □	□ □	□ □
• <u>Physical Properties</u>	□ □	■ □	■ □	□ □	□ □	□ □

*ana. = chemical analyzed; *det. = chemical detected

DISCUSSION OF MEDIA INVESTIGATION & CHEMICAL ANALYSES

Items for discussion include: •Selection of sampled media •Selected analysis methods •Planned additional sampling

Items	Discussion
Soil	Soil samples from the waste oil tank area, the former UST area and from soil borings were analyzed for volatile organic carbons, purgeable aromatics, total petroleum hydrocarbons, organic lead, and total oil and grease prior to 1997.
Soil Vapor	Soil vapor samples were collected to define the extent of the source area in soils prior to 1997. A soil vapor profile survey was conducted in 1997 to assess the potential exposure due to vapors migrating to ground surface from soil and ground water beneath the site. Vapor samples were analyzed for BTEX compounds, MTBE, petroleum hydrocarbons, and gas constituents
Ground Water	Ground water monitoring has been conducted at the site since 1989 to determine the extent and migration of the hydrocarbon-impacted ground water. Additional water samples were collected in August 1996 and analyzed for E. Coliform (total and fecal), chloride, nitrate, total dissolved solids, and halogenated volatile organic carbons.
Surface and Sub-surface Soils	Soil samples were collected in 1997 to determine any impact to site soils. These soil samples were taken from across the site and analyzed for petroleum hydrocarbons, BTEX compounds, and physical properties.

RBCA SUMMARY REPORT**Worksheet 5.3**

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 1

SUMMARY OF SOURCE ZONE CHARACTERISTICS

Instructions: Provide information regarding presence and dimensions of affected soil and groundwater zones. For each affected medium, list constituents of concern (COCs) and representative concentration data on Worksheets 5.4 - 5.6. Reference figures and Sample #'s used to establish source are characteristics for each media

AFFECTED SURFACE SOILS (< 3 ft BGS) (1 TO SELECT)

<input type="checkbox"/> Present	<i>If present, complete the following⁽¹⁾:</i>
<input type="checkbox"/> Not Present	
<input checked="" type="checkbox"/> Not Measured	<ul style="list-style-type: none">• Maximum areal extent (ft²): _____• Width of affected zone (ft): _____ (Provide COC data on Worksheet 5.4)• Length of affected zone (ft): _____• Depth interval (ft, BGS): _____

(1) Surface soil concentrations did not exceed Tier 1 RBSLs.

AFFECTED SUBSURFACE SOILS (> 3 ft BGS)

<input checked="" type="checkbox"/> Present	<i>If present, complete the following⁽²⁾:</i>
<input type="checkbox"/> Not Present	
<input type="checkbox"/> Not Measured	<ul style="list-style-type: none">• Depth to top of affected soil (ft) (min. 3 ft, BGS): 4 (Provide COC data on Worksheet 5.5)• Depth to base of affected soil (ft, BGS): 10 (approx. 240 x 120 ft)• Maximum areal extent (ft²): 28,800

(2) The maximum extent of impacted soils was conservatively determined by the area enclosed in between wells S-9, S-10, S-11, S-12, S-15, and S-16. The area that encloses the western product Island, former waste oil tank and the former USTs is about 6,400 ft² (80 x 80 ft).

AFFECTED GROUNDWATER

<input checked="" type="checkbox"/> Present	<i>If present, complete the following⁽³⁾:</i>
<input type="checkbox"/> Not Present	
<input type="checkbox"/> Not Measured	<ul style="list-style-type: none">• Maximum areal extent (ft²): 57,600 (approx. 240 x 240 ft)• Length of plume (ft): 240 (Provide COC data on Worksheet 5.6)• Width of plume (ft): 240• Depth to top of affected water-bearing unit (ft, BGS): 10• Depth to base of plume (ft, BGS): 16

(3) The maximum areal extent of the impacted ground water was conservatively determined by the area enclosed by wells S-11, S-12, S-13, S-15, S-16, S-17, and S-18, which define the ND line.

OTHER SOURCE MEDIUM

<input type="checkbox"/> Present	<i>If present, describe nature of material and dimensions:</i>
<input checked="" type="checkbox"/> Not Present	

(Provide COC data on separate table)

R B C A S U M M A R Y R E P O R T

Worksheet 5.5

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
 Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates *Page 1 of 1*

SUBSURFACE SOIL CONCENTRATION DATA SUMMARY (>3 FT BGS)

Source of Data: Vadose Zone Characterization Report, June 1997, Weiss Associates.

Sample ID or Sample Set Used: SG-03, SG-04, and SG-07 at multiple depths

Worse Case Depth to Max. Impact 4 ft

Sample Date: May 5, 1997

Methodology for Establishing Representative Concentrations:

For site surface soils, the representative concentration selection is the Maximum of positively detected results from soil samples > 3 ft BGS within the known source area.

This method establishes a representative concentration appropriate to conservatively evaluate subsurface soil exposure pathways.

CONSTITUENTS DETECTED		ANALYTICAL METHOD		SAMPLE POPULATION		DETECTED CONCENTRATIONS			SELECTED REPRESENTATIVE CONC. (mg/kg)
		Method No.	Typical Detection Limit (mg/kg)	No. of Samples	No. of Detects	Max Conc. (mg/kg)	Mean Conc. (mg/kg)	UCL Conc. (mg/kg)	
71-43-2	Benzene	8010	0.005	8	4	10	4.2	NC	10

NC- Not Calculated.

R B C A S U M M A R Y R E P O R T**Worksheet 5.6**

Site Name: Former Shell Service Station, WIC #204-6852-1108

Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By: Weiss Associates

*Page 1 of 1***GROUNDWATER CONCENTRATION DATA SUMMARY**

Source of Data: Quarterly Monitoring data from July 9, 1996 to April 8, 1997

Sample ID or Sample Set Used: S-1 through S-18 and SR-1

Worse Case Depth to Max. Impact 6 ft

Sample Date: April 8, 1997

Methodology for Establishing Representative Concentrations:

The representative concentration in ground water is the [Arithmetic] Mean of the last 4 quarters of monitoring data for the most highly impacted [onsite/offsite] within the known source area.

This method establishes a representative concentration appropriate to conservatively evaluate ground water exposure pathways.

CONSTITUENTS DETECTED		ANALYTICAL METHOD		SAMPLE POPULATION		DETECTED CONCENTRATIONS			SELECTED REPRESENTATIVE CONC. (mg/Lg)
CAS No.	Name	Method No.	Typical Detection Limit (mg/Lg)	No. of Samples	No. of Detects	Max Conc. (mg/Lg)	Mean Conc. (mg/Lg)	UCL Conc. (mg/Lg)	
71-43-2	Benzene	8010	0.0005	25	15	1.4	0.45	NC	1.4

NC - Not Calculated.

RBCA SUMMARY REPORT

Worksheet 5.7

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
 Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 1 of 2

TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS

Instructions: For complete exposure pathways, provide site-specific values for transport parameters. In absence of direct measurements, default values may be selected for some parameters, as shown below. If no default value shown, site-specific value must be provided.

TRANSPORT PARAMETER	SITE-SPECIFIC VALUE (INPUT VALUE BELOW)	DEFAULT VALUE (■ TO SELECT)
AIR PARAMETERS		
δ_{air} Air mixing zone height (cm)		■ 200
U_{air} Ambient air velocity in mixing zone (cm/sec)		■ 225
P_e Soil particulate areal emission rate (g/cm ² -sec)		■ 2.17E-10
σ_y Transverse air dispersion coeff. (m)		■ 100
σ_z Vertical air dispersion coeff. (m)		■ 10
GROUNDWATER PARAMETERS		
δ_{gw} Groundwater mixing zone depth (cm)		■ 200
I Water infiltration rate (cm/yr)		■ 30
V_{gw} Groundwater Darcy velocity (ft/yr)	144	
K Saturated hydraulic conductivity (cm/sec)	0.0035	
i_{grad} Lateral groundwater flow gradient (dim)	0.004	
$(BC)_i$ Available biodegradation capacity of electron acceptors for constituent i		
x Distance to POE from point of maximum COC concentration in groundwater (ft)	180	
α_x Longitudinal groundwater dispersion coeff. (cm)		■ 10% of x
α_y Transverse groundwater dispersion coeff. (cm)		■ 33% of α_x
α_z Vertical groundwater dispersion coeff. (cm)		■ 5% of α_z
SOIL PARAMETERS		
Capillary zone thickness (cm)		■ 5
Vadose zone thickness (ft)	10 ft	
Soil bulk density (g/cm ³)	2.0	
Fraction organic carbon in soil leaching zone (dim)	0.01	
Fraction organic carbon in water-bearing unit (dim)		■ 0.001
Depth to groundwater (cm)	304.8	
Soil porosity (dim)	0.25	
Soil volumetric water content (dim)		
• Capillary zone		■ 0.342
• Vadose zone	0.04	□ 0.12
• Foundation crack		■ 0.12

RBCA SUMMARY REPORT**Worksheet 5.7**

Site Name: Former Shell Service Station, WIC #204-6852-1108 Date Completed: June 18, 1997
Site Location: 15275 Washington Avenue, San Leandro, California Completed By: Weiss Associates Page 2 of 2

TIER 2 EXPOSURE PATHWAY TRANSPORT PARAMETERS CONTINUED

TRANSPORT PARAMETER	SITE-SPECIFIC VALUE (INPUT VALUE BELOW)	DEFAULT VALUE (■ TO SELECT)	
		■	□
SOIL PARAMETERS (Continued)			
Soil volumetric air content (dim)			
Θ_{acap}	• Capillary zone	■ 0.38	□ 0.26
Θ_{as}	• Vadose zone	0.21	■ 0.26
Θ_{acrack}	• Foundation crack	■ 0.26	□ 0.26
d	Thickness of surficial soil zone (cm)	■ 100 cm	□ 100 cm
BUILDING PARAMETERS			
Comm/ Resid. Ind.			
L_b	Building volume/area ratio (cm)	■ 200	■ 300
ER	Building air exchange rate (dy ⁻¹)	■ 12	■ 20
L_{crack}	Foundation crack thickness (cm)	■ 15	□ 15
η	Foundation crack fraction	■ 0.01	□ 0.01

Additional Information:

RBCA SUMMARY REPORT

Worksheet 8.2

Site Name: Former Shell Service Station, WIC #204-6852-1108

Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By: Weiss Associates

Page 1 of 1

**SUBSURFACE SOIL SSTL VALUES (\geq 3 FT BGS) -
COMMERCIAL/INDUSTRIAL OR RESIDENTIAL RECEPTORS**

SSTL Calculation Option: HI TR (or HQ)

Option 1: Site-Specific Screening Level _____

Option 2: Individual Constituent Limits 10^{-6} and MCL _____

Option 3: Cumulative Constituent Limits _____

Instructions: Specify target risk limits upon which Tier 2 site-specific screening levels (SSTLs) are based. Identify exposure pathways evaluated at Tier 2 for site (■ = complete). Record site sample measurements for constituents of concern (COCs) and corresponding SSTL values for complete pathways. Identify minimum SSTL value for each COC. Note whether site concentration exceeds minimum SSTL value.

CONSTITUENTS OF CONCERN		REPRESENTATIVE CONC.	SSTL RESULTS FOR COMPLETE EXPOSURE PATHWAYS (■ IF COMPLETE)				
CAS No.	Name		(mg/kg)	(mg/kg)	(mg/kg)	(mg/kg)	SSTL Exceeded?
71-43-2	Benzene	10	17	204	0.25	0.25	■
							□
							□
							□
							□
							□
							□
							□
							□
							□
							□

- Note:
- 1) See Worksheet 4.3 for identification of Complete Pathways.
 - 2) See Worksheet 4.5 for applicable Exposure Scenarios and Risk Goals.
 - 3) See Worksheet 5.4 for derivation of Representative Concentration for each COC in surface soil source zone.

TR = Target risk limit for excess lifetime carcinogenic risk.

HQ = Hazard quotient for individual constituent non-carcinogenic effects.

HI = Hazard index for cumulative constituent non-carcinogenic effects.

RGS = Selected risk level not exceeded for pur compound present at any concentration in soil.

RBCA SUMMARY REPORT

Worksheet 8.2

Site Name: Former Shell Service Station, WIC #204-6852-1108

Date Completed: June 18, 1997

Site Location: 15275 Washington Avenue, San Leandro, California

Completed By: Weiss Associates

Page 1 of 1

GROUNDWATER SSTL VALUES

SSTL Calculation Option:

HI

TR (or HQ)

 Option 1: Site-Specific Screening Level Option 2: Individual Constituent Limits 10^5 and MCL Option 3: Cumulative Constituent Limits

Instructions: Specify target risk limits upon which Tier 2 site-specific screening levels (SSTLs) are based. Identify exposure pathways evaluated at Tier 2 for site (■ complete). Record site sample measurements for constituents of concern (COCs) and corresponding SSTL values for complete pathways. Identify minimum SSTL value for each COC. Note whether site concentration exceeds minimum SSTL value.

SSTL RESULTS FOR COMPLETE EXPOSURE PATHWAYS (■ IF COMPLETE)

CONSTITUENTS OF CONCERN		REPRESENTATIV CONC.	■ Grdwtr ingestion	□ Vol. to Ambient Air	■ Vol. to Indoor Air	Minimum Value	SSTL
CAS No.	Name		(mg/L)	(mg/L)	(mg/L)	(mg/L)	■ If yes
71-43-2	Benzene	1.4	2.0		0.86	0.86	■
							□
							□
							□
							□
							□
							□
							□
							□
							□
							□

Note: 1) See Worksheet 4.3 for identification of Complete Pathways.

2) See Worksheet 4.5 for applicable Exposure Scenarios and Risk Goals.

3) See Worksheet 5.6 for derivation of Representative Concentration for each COC in groundwater source zone.

TR = Target risk limit for excess lifetime carcinogenic risk.

HQ = Hazard quotient for individual constituent non-carcinogenic effects.

HI = Hazard index for cumulative constituent non-carcinogenic effects.

>S = At pure compound solubility, selected risk is not exceeded.

APPENDIX A

Parameters and calculations for evaluating exposure pathways via benzene volatilization from soil and ground water.

Parameters

The following soil properties were used in the calculations based on measurements for soil samples collected at the site.

Soil bulk density:	2,000 kg/m ³
Soil porosity:	0.25
Air content:	0.21
Water content:	0.04
Fraction organic carbon:	0.01

Following parameters were used in the calculation as site representative conditions.

Depth to contamination in soil:	4 ft.	Boring SG-03-4-6
Vertical thickness of contaminated soil:	6 ft.	4 ft to minimum ground water level at 10 ft.
Thickness of shallow aquifer:	10 ft.	Maximum thickness based on water levels.

ASTM default parameters were used for other variables.