Shell Oil Products US

November 17, 2010

Re: Third Quarter 2010 Soil Gas Investigation Report
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

Denis L. Brown
Project Manager

20945 S. Wilmington Avenue, Carson, CA 90810 P: (559) 645-9306; F: (559) 645-5643

November 17, 2010
Delta Project SCA152751D
SAP: 129460

Mr. Jerry Wickham
Alameda County Health Care Services Agency
1131 Harbor Bay Parkway, Suite 250
Alameda, California 94502-6577

RE: THIRD QUARTER 2010
SOIL GAS INVESTIGATION REPORT
Former Shell-Branded Service Station
15275 Washington Avenue
San Leandro, California

DELTA

Dear Mr. Wickham:

On behalf of Equilon Enterprises LLC *dba* Shell Oil Products US (Shell), Delta Consultants (Delta) has prepared this *Third Quarter 2010 Soil Gas Investigation Report* for work completed at the site referenced above. Delta conducted the second round of soil gas sampling September 9, 2010; the initial sampling event occurred March 18, 2010. The vapor wells were installed in December 2009 and were constructed in accordance with the work plan dated May 29, 2009, which was approved by Alameda County Health Care Services Agency (ACHCSA) in a letter dated November 3, 2009 (Appendix A). A second round of sampling was approved in a letter from ACHCSA dated September 13, 2010.

SITE DESCRIPTION AND BACKGROUND

The subject site is located on the northwest corner of the intersection of Washington Avenue and Lewelling Boulevard in San Leandro (Figure 1). The subject site, formerly a Shell-branded service station, is currently an automotive emission testing facility (*Speedy Smog Check*), with a tire service center (*Big O Tires*) to the immediate north; site details are shown on Figure 2. The area is a mix of residential and commercial properties; a mobile home park is located adjacent to the western site boundary. An active Arco service station is in operation across Lewelling Boulevard at the southwest corner of the intersection, and is currently an open leaking underground fuel tank (LUFT) case; semiannual groundwater monitoring and sampling at the subject site is performed in cooperation with the ARCO station monitoring schedule. Soil vapor samples for the subject site have been collected previously on and near the site in 1988, 1997, 2008, 2009, and 2010.

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HISTORICAL LAND USE

Delta obtained an Environmental Data Resource (EDR) report in order to assess and evaluate the environmental risk associated with the adjacent property located at 747 Lewelling Boulevard, San Leandro. The report included aerial photographs dating from 1939 to 2005, which indicate the area underwent substantial development between 1946 and 1958 (the 1946 photograph displays structures or trailers on the target property). The EDR report identifies the target property as Salel Automotive Services, and reported four underground storage tanks (USTs) associated with the site, two 5,000-gallon unleaded fuel tanks, one 7,500-gallon premium fuel tank, and one 8,000-gallon diesel fuel tank. The LUFT case at the subject site was opened in 1985 and the tanks were reportedly removed in 1987. The report indicates the tanks were owned by Shell, and the four USTs removed in 1987 under the supervision of Kaprealian Engineering, Inc. matched the size of those tanks but did not identify the fuel associated with each tank. A review of the Sanborn library produced no fire insurance maps for the target neighboring property (747 Lewelling).

There are a number of LUFT cases within one-quarter mile of the site: one to the north (up-gradient), two to the east (cross-gradient), and one to the south (down-gradient).

SOIL GAS INVESTIGATION

The following sections describe work completed during soil gas sample collection on September 9, 2010. Delta collected soil gas samples using Tedlar® bags from all nine well locations (SVG-1 through SVG-9), which are shown on Figure 2. Soil gas sample collection was attempted from three discrete depths at each well location: 3 feet below ground surface (bgs), 5 feet bgs, and 7.5 feet bgs. The presence of groundwater in the well did not allow for sample collection from the 5-foot wells at SVG-1, SVG-3, SVG-4, and SVG-7, or from the 7.5-foot wells at SVG-1 through SVG-7 . All samples were collected in accordance with the approved work plan dated May 29, 2009 and Department of Toxic Substances Control (DTSC) guidance documents. Guidelines for soil gas collection using Tedlar® bags are provided as Appendix B.

Leak Test

Delta field staff continually applied the vapor leak tracer compound isopropanol (IPA) during sample collection in order to evaluate the integrity of the sample collection manifold. IPA was applied to cotton swabs and then placed in the vicinity of all tubing joints within the sampling manifold. The laboratory analytical results for IPA were used to determine the air-tightness of the sampling manifold. Tracer gas results are included in Table 1.

Vapor Purging

Prior to sample collection, a pump was used to purge three casing volumes of air from the sample tubing (dead air volume) in order to remove stagnant vapor from within the sample tubing and equipment with minimal subsurface air influence, in accordance with DTSC guidelines. The purge time for one casing volume was calculated based on the volume of the tubing and annular space in the well and the flow rate.

Soil Vapor Gas Sample Collection

Samples were collected following the completion of leak testing and purging. During sample collection, a Tedlar® bag was attached inside a Pelican® 1200 case that is air- and water-tight. Tubes extending from either side of the airtight case were connected at one end to a pump set at a flow rate of approximately 200 milliliters per minute, and connected at the other end to Teflon tubing connected in turn to the soil gas probe. After

turning on the pump a vacuum was created within the box, allowing a sample to be collected in the Tedlar® bag. When the Tedlar® bag was filled to capacity, the pump was turned off and the valve to the Tedlar® bag was closed. Approximately one liter of soil gas was collected from each vapor probe location. Delta was unable to obtain soil gas samples from the following locations due to high groundwater elevations: SVG-1, SVG-3, SVG-4, and SVG-7 at 5 feet bgs and SVG-1 through SVG-7 at 7.5 feet bgs.

Soil Vapor Gas Analytical Results

Tedlar® sample bags were submitted within 24 hours of sample collection to Calscience Environmental Laboratories, Inc., a California state-certified laboratory, under proper chain-of-custody documentation. Samples were analyzed for total petroleum hydrocarbon calculated as gasoline (TPH-g) by Environmental Protection Agency (EPA) Method TO-3M, and benzene, toluene, ethylbenzene and total xylenes (BTEX compounds), methyl tert-butyl ether (MTBE), tert-butyl alcohol (TBA) and the leak test compound IPA by EPA Method 8260. In addition, select samples were analyzed for methane, carbon dioxide, and oxygen by ASTM D-1946 in order to evaluate vertical attenuation; these biogenic gases were not analyzed for where only one sample point was accessible. Vapor results for compounds of concern were compared to Table E-2, shallow soil gas screening levels for evaluation of potential vapor intrusion concerns, from the *Interim Final Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, issued November 2007 (revised May 2008) by the California Regional Water Quality Control Board, San Francisco Bay Region. Certified analytical reports with chain-of-custody documentation are included as Appendix C and summarized in Tables 1 and 2. Historic soil vapor analytical results are included as Appendix D, and Table E-2 environmental screening levels (ESLs) are included as Appendix E.

Soil vapor gas analytical results for all compounds of concern are summarized in Table 1. A review of the soil gas results concludes the following:

- TPH-g was detected in all soil gas samples at concentrations ranging from 7,900 micrograms per cubic meter (µg/m^3) in SVG-9 at 5 feet bgs, to 160,000,000 µg/m^3 in SVG-6 at 5 feet bgs. With the exception of the sample from SVG-9 at 5 feet bgs, all reported concentrations were above both the residential and commercial ESLs of 10,000 and 29,000 µg/m^3, respectively. The results reported for the 5-foot sample at SVG-9 are not thought to be representative based on the IPA and the oxygen results, which suggest ambient air was introduced to the sample through air leaks. TPH-g soil gas concentration maps showing isocontours for 3-foot and 5-foot bgs samples are included on Figures 3 and 4, which indicate the center of the soil gas plume is offsite in the vicinity of vapor well SVG-6, and in close proximity to the remaining localized dissolved-phase plume at monitoring well S-9.
- Benzene was detected in samples collected from wells SVG-1, SVG-2, SVG-5 and SVG-6 at concentrations above both the commercial and residential ESLs, ranging from 2,700 µg/m^3 in SVG-5 at 3 feet bgs to 46,000 µg/m^3 in SVG-6 at 5 feet bgs. One benzene result (SVG-5 at 5 feet bgs) reported no detectable concentration above an elevated reporting limit of 4,800 µg/m^3; reporting limits on various component compounds are elevated by dilution for certain samples due to high levels of non-target hydrocarbons. Following a discussion with the laboratory, future samples should be submitted with a specific request on the chain-of-custody to run multiple dilutions on compounds of concern in order to obtain a quantitative result where higher petroleum concentrations are present in the sample. All other samples reported no detectable concentration at reporting limits ranging from 16 to 80 µg/m^3, which are

below both the residential and commercial ESL of 84 and 280 µg/m^3, respectively. Benzene soil gas concentration maps for samples collected at 3 feet and 5 feet bgs are included on Figures 5 and 6.

- Toluene was reported in only one sample, SVG-9 at 5 feet bgs at 32 µg/m^3; all other samples reported no detectable concentration at detection limits ranging from 19 to 30,000 µg/m^3. No sample results exceeded either the residential or commercial ESL for toluene, including elevated non-detected results.
- Ethylbenzene was detected in all samples from all wells except SVG-1 and SVG-6, which all had elevated reporting limits. Concentrations ranged from 32 µg/m^3 in SVG-9 at 3 feet bgs to 200,000 µg/m^3 in SVG-2 at 5 feet bgs; samples collected from both SVG-6 probes, the 5-foot probe in SVG-5, and the 3-foot probe in SVG-1 were reported as non-detected at reporting limits ranging from 2,700 µg/m^3 (SVG-1) to 35,000 µg/m^3 (SVG-6). Three results and three elevated non-detects exceeded the commercial ESL; one additional result and one additional non-detect exceeded the residential ESL.
- Total xylenes were detected in two shallow samples (SVG-3 and SVG-4) and in one 5-foot sample (SVG-2) at concentrations ranging from 160 µg/m^3 in SVG-4 at 3 feet bgs to 44,000 µg/m^3 in SVG-2 at 5 feet bgs; all other samples reported no detectable concentration at reporting limits ranging from 43 to 69,000 µg/m^3. Two non-detect results (SVG-6 at 3-feet and 5-feet) exceeded the commercial ESL; one result (SVG-2) exceeded the residential ESL of 21,000 µg/m^3, along with one additional non-detect with an elevated reporting limit. All other results reported concentrations below either ESL or non-detects at reporting limits below either ESL.
- Oxygenates MTBE and TBA were not detected in any samples; detection limits ranged from 36 µg/m^3 to 58,000 µg/m^3 for MTBE and from 30 µg/m^3 to 49,000 µg/m^3 for TBA. Four sample results from two locations (SVG-2 and SVG-6) reported non-detectable results at elevated reporting limits exceeding both the residential and commercial ESLs.
- The tracer compound IPA was detected in only one soil gas sample, SVG-9 at 5 feet bgs, at a concentration of 99 µg/m^3. Petroleum concentrations for this sample are considered to have possibly been compromised due to air leaks.

In addition to the contaminant and tracer analyses, samples were analyzed for biogenic gases methane, carbon dioxide, and oxygen in order to evaluate vertical attenuation and determine whether the subsurface environment in relation to existing areas of contamination is aerobic or anaerobic. Bacteria that consume hydrocarbons generate carbon dioxide under aerobic conditions and methane under anaerobic conditions. These biogenic gases are often the largest magnitude components in the entire soil gas mixture. In general, the longer the pollution is present in the subsurface environment, the higher the resultant biogenic gas levels. Carbon dioxide is generated by the aerobic biodegradation of all types of organic materials; the presence of a concentrated petroleum source such as gasoline causes a concentrated buildup of carbon dioxide in the subsurface environment. Carbon dioxide is typically generated at the top, edges, and bottom of the contaminant mass where oxygen dominates.[1]

Carbon dioxide and oxygen results are summarized in Table 2; Graphs 1 and 2 show sample results for each biogenic gas expressed as percent by volume (%v) in comparison to the TPH-g values reported for each

[1] Victor T. Jones, III and Patrick N. Agostino, "Case Studies of Anaerobic Methane Generation at a Variety of Hydrocarbon Fuel Contaminated Sites", November 11-13, 1998, National Ground Water Association 1998 Petroleum Hydrocarbons and Organic Chemicals in Ground Water: Prevention, Detection, and Remediation, Houston, TX.

sample at depths of 3 feet bgs and 5 feet bgs, respectively. The results are inconclusive, but the slight increase in methane concentrations at SVG-6 suggest a slightly anaerobic environment in the presence of high concentrations of TPH-g. It is clear that the anomalous results at SVG-9 at 5 feet bgs, which reflects an oxygen concentration representative of atmospheric conditions, that the seal failed and ambient air infiltrated the sample (which also reported the lowest TPH-g concentration).

CONCLUSIONS AND RECOMMENDATIONS

Soil gas samples were collected at each vapor well location from vapor probes at depths of 3, 5, and 7.5 feet bgs, with the exception of wells in locations of higher groundwater levels. Samples were analyzed for petroleum compounds to evaluate the potential for indoor air intrusion from vapors in shallow offsite soils. The highest contaminant concentrations were reported at SVG-6, which is in close proximity to monitoring well S-9 in the center of the localized dissolved-phase plume which persists at the site. TPH-g was detected in all samples above the ESLs for both residential and commercial land use with the exception of SVG-9 at 5 feet bgs, which is thought to be a dilute result. The maximum TPH-g concentration reported was 160,000,000 µg/m^3 (38,400 parts per million by volume [ppmv]) in sample SVG-6 at 5 feet bgs. Benzene was detected above the residential and commercial ESLs in six samples with a maximum of 46,000 µg/m^3 (14 parts per million by volume) in sample SVG-6 at 5 feet bgs. Oxygenates MTBE and TBA were not detected in any samples. Elevated sample concentrations indicate the presence of offsite source material which is believed to have migrated off site through a permeable layer in near-surface soils. Breathing zone measurements taken during sample collection reported no discernable concentrations.

The third quarter soil gas sample results are similar to the first quarter 2010 sample results, though reporting higher concentrations in general (most likely due to seasonal variation). Analysis of the methane concentrations indicate subsurface conditions may be slightly anaerobic at the center of the remaining source material, but are otherwise somewhat inconclusive.

On June 21 and 22, 2010, Delta advanced fourteen soil borings to evaluate the vertical and lateral extent of remaining soil contamination in the vicinity of the former underground storage tank (UST) tank pit, dispenser islands, and adjacent property. The vertical extent of remaining soil contamination has been defined; remaining soil impacts appear to be confined to the top 12 feet of the soil column. The lateral extent of soil impacts appear to be distributed along the property line between the subject site and the mobile home park, and are primarily offsite to the west of the property boundary. A soil concentration map from the June 2010 field event is included on Figure 7.

Based on the stability of the small localized groundwater plume and limited distribution of remaining soil impacts, Delta recommends long-term monitoring at the site, including annual vapor sampling during the summer/fall season when concentrations appear to be at their highest. Multiple dilutions should be requested on the chain-of-custody in order to obtain quantitative results for gasoline components (such as benzene) where high concentrations are present in the sample. In addition, Delta recommends submittal of an updated Site Conceptual Model.

REMARKS

The recommendations contained in this document represent Delta's professional opinions based upon the currently available information and are arrived at in accordance with currently acceptable professional standards. This document 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 document were performed. This document is intended only for the use of Delta's Client and anyone else specifically listed on this document. 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 document.

This site is included in a portfolio of sites which have been transitioned to a new consultant, Conestoga-Rovers and Associates (CRA); the project manager, Peter Schaefer, can be reached directly at (510) 420-3319. Future comments should be directed to Shell and CRA. If you have any questions or comments regarding this report, please contact Suzanne McClurkin-Nelson (Delta Project Manager) at (408) 826-1875 or Denis Brown (Shell Manager) at (707) 865-0251.

Sincerely,
Delta Consultants, Inc.

Abhik Dutta
Senior Staff Geologist

Suzanne McClurkin-Nelson
Senior Project Manager

PROFESSIONAL GEOLOGIST
REGINA M. BUSSARD
No. 8288
EXP. 1/31/12
STATE OF CALIFORNIA

Regina Bussard, P.G.
Senior Project Specialist

cc: Denis Brown, Shell Oil Products US
Mike Bakaldin, San Leandro Fire Department, San Leandro
Robert Guilford Salel Enterprises c/o Matthew Widener, Evan's Management Services, Santa Cruz
Johnny Vierra, Big O Tire, San Leandro

ATTACHMENTS:

Figure 1 – Site Location Map
Figure 2 – Site Layout with Soil Gas Well Locations
Figure 3 – 3-Foot TPH-g Soil Gas Concentration Map – 9/09/2010
Figure 4 – 5-Foot TPH-g Soil Gas Concentration Map – 9/09/2010
Figure 5 – 3-Foot Benzene Soil Gas Concentration Map – 9/09/2010
Figure 6 – 5-Foot Benzene Soil Gas Concentration Map – 9/09/2010
Figure 7 – Confirmation Soil Boring Concentration Map – June 2010
Graph 1 – Soil Gas Concentrations Compared to Attenuation Factors – 3-foot Samples
Graph 2 – Soil Gas Concentrations Compared to Attenuation Factors – 5-foot Samples
Table 1 – Soil Gas Analytical Data
Table 2 – Biogenic Gas Analytical Data
Appendix A - Alameda County Health Care Services Agency Correspondence
Appendix B – Guidelines for Soil Gas Collection in Tedlar® Bags
Appendix C – Certified Analytical Reports with Chain-of-Custody Documentation
Appendix D – Historical Soil Vapor Data
Appendix E – Table E-2 – RWQCB Shallow Soil Gas Environmental Screening Levels for Evaluation of Potential Vapor Intrusion Concerns

FIGURES

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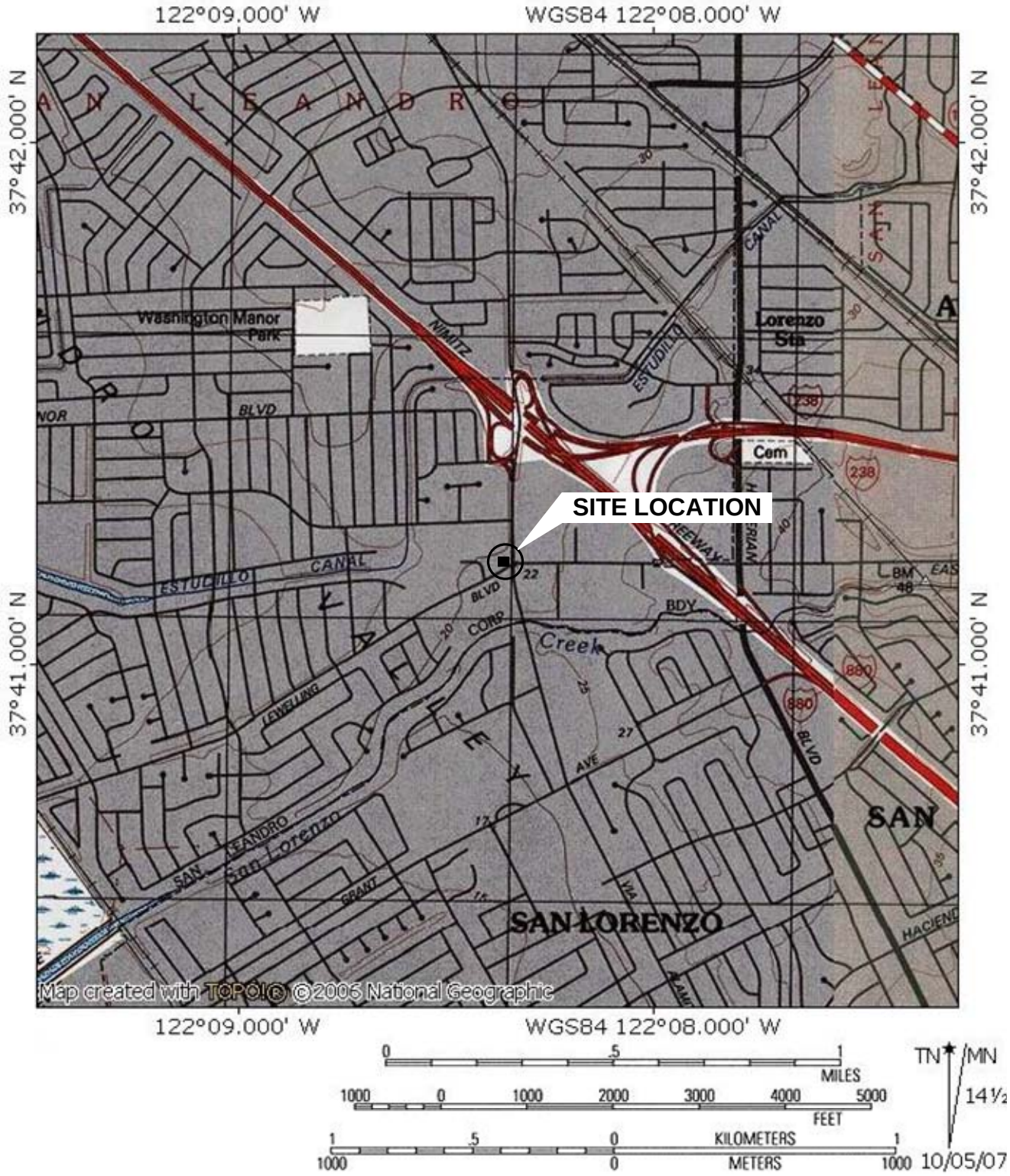

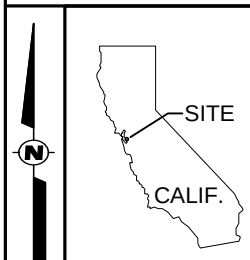

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SHELL OIL PRODUCTS US
FORMER SHELL SERVICE STATION
SAN LEANDRO, CALIFORNIA

FIGURE 1
SITE LOCATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

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N

W E

S

SVG-4

SVG-7

BIG O TIRE STORE

BIG O TIRE STORE

S-18

S-19

SVG-1

FORMER DISPENSER ISLANDS

SVG-5

S-16

SVG-8

SALEL'S MOBILE HOME PARK

SVG-2

FORMER BUILDING LOCATION

SPEEDY SMOG

S-17

S-9

SVG-6

SVG-3

FORMER USTs

S-6

SVG-9

S-7

S-10

LEWELLING BOULEVARD

WASHINGTON AVENUE

LEGEND

S-6 GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION

SVG-1 SOIL VAPOR WELL LOCATION AND DESIGNATION

TRAILER PARK STRUCTER

FORMER BUILDING

FORMER UST LOCATION

PROPERTY LINE

FENCING

0 25 50

SCALE IN FEET

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SAN LEANDRO, CALIFORNIA

FIGURE 2

SITE LAYOUT WITH
SOIL GAS WELL LOCATIONS

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

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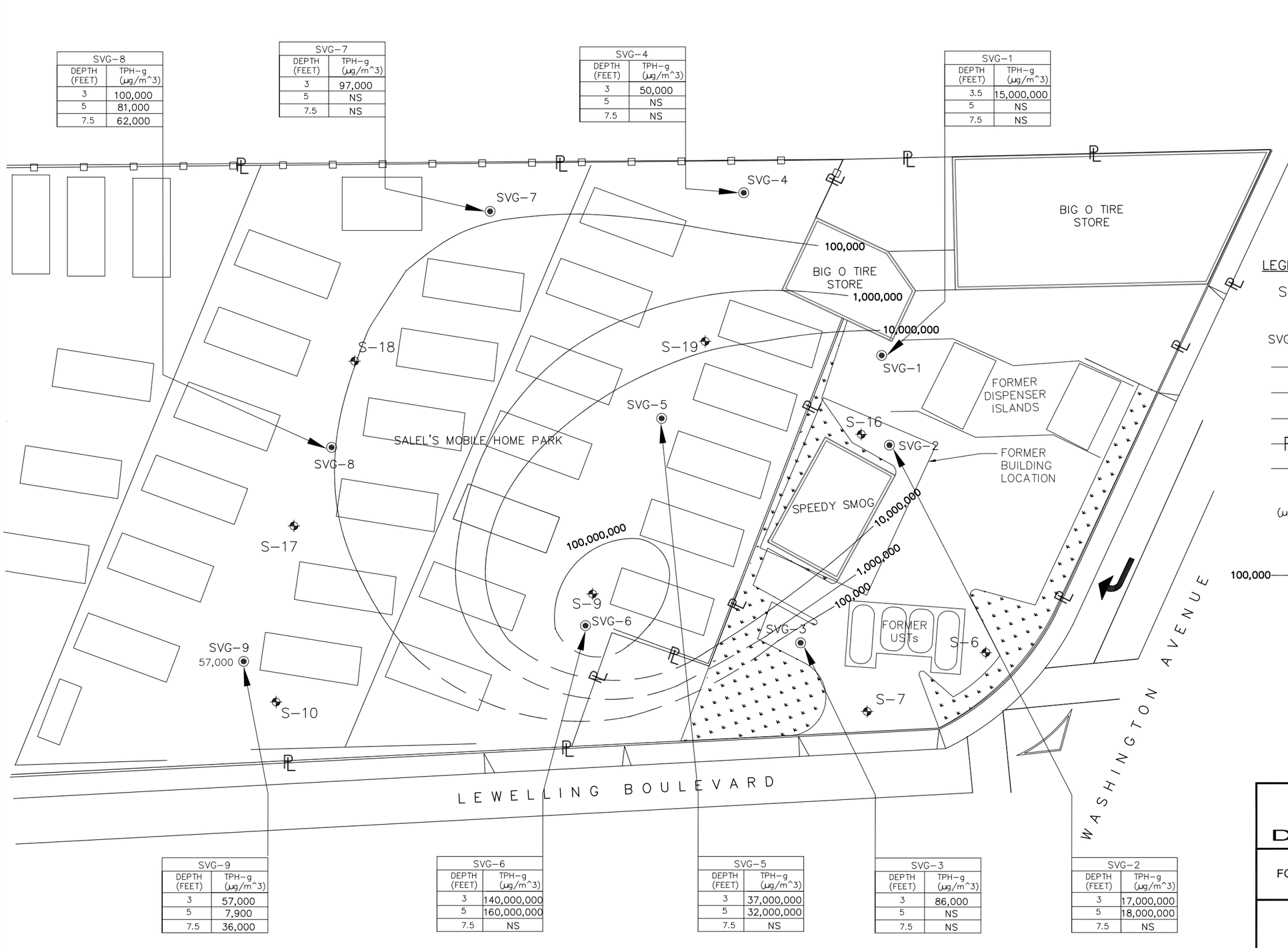
SVG-8	
DEPTH (FEET)	TPH-g (µg/m^3)
3	100,000
5	81,000
7.5	62,000

SVG-7	
DEPTH (FEET)	TPH-g (µg/m^3)
3	97,000
5	NS
7.5	NS

SVG-4	
DEPTH (FEET)	TPH-g (µg/m^3)
3	50,000
5	NS
7.5	NS

SVG-1	
DEPTH (FEET)	TPH-g (µg/m^3)
3.5	15,000,000
5	NS
7.5	NS



LEGEND

- S-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SVG-1 — SOIL VAPOR WELL LOCATION AND DESIGNATION
- TRAILER PARK STRUCTER
- FORMER BUILDING
- FORMER UST LOCATION
- PROPERTY LINE
- FENCING
- NS — NOT SAMPLED
- (µg/m^3) — MICROGRAMS PER METER CUBED
- TPH-g — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- 100,000 — ISOCONTOUR LINE

0 25 50
SCALE IN FEET

SVG-9	
DEPTH (FEET)	TPH-g (µg/m^3)
3	57,000
5	7,900
7.5	36,000

SVG-6	
DEPTH (FEET)	TPH-g (µg/m^3)
3	140,000,000
5	160,000,000
7.5	NS

SVG-5	
DEPTH (FEET)	TPH-g (µg/m^3)
3	37,000,000
5	32,000,000
7.5	NS

SVG-3	
DEPTH (FEET)	TPH-g (µg/m^3)
3	86,000
5	NS
7.5	NS

SVG-2	
DEPTH (FEET)	TPH-g (µg/m^3)
3	17,000,000
5	18,000,000
7.5	NS

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SAN LEANDRO, CALIFORNIA

FIGURE 3

3-FOOT THP-g SOIL GAS CONCENTRATION MAP - 9/09/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

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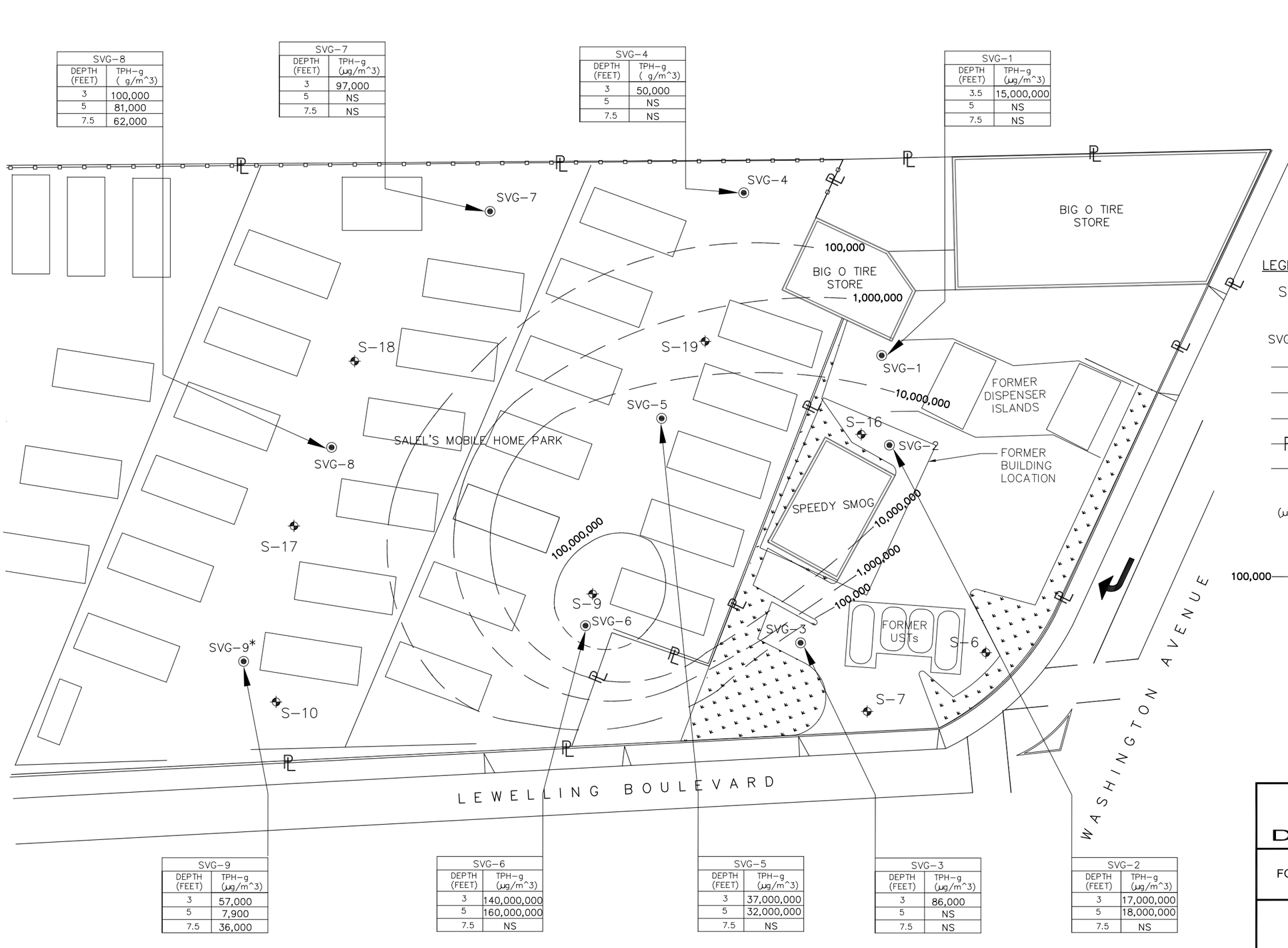
SVG-8	
DEPTH (FEET)	TPH-g (g/m^3)
3	100,000
5	81,000
7.5	62,000

SVG-7	
DEPTH (FEET)	TPH-g (µg/m^3)
3	97,000
5	NS
7.5	NS

SVG-4	
DEPTH (FEET)	TPH-g (g/m^3)
3	50,000
5	NS
7.5	NS

SVG-1	
DEPTH (FEET)	TPH-g (µg/m^3)
3.5	15,000,000
5	NS
7.5	NS



LEGEND

- S-6 — GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
- SVG-1 — SOIL VAPOR WELL LOCATION AND DESIGNATION
- TRAILER PARK STRUCTER
- FORMER BUILDING
- FORMER UST LOCATION
- PROPERTY LINE
- FENCING
- NS — NOT SAMPLED
- (µg/m^3) — MICROGRAMS PER METER CUBED
- TPH-g — TOTAL PETROLEUM HYDROCARBONS AS GASOLINE
- 100,000 — ISOCONTOUR LINE
- * — ANOMALOUS DATA POINT NOT USED IN CONTOURING

0 25 50
SCALE IN FEET

SVG-9	
DEPTH (FEET)	TPH-g (µg/m^3)
3	57,000
5	7,900
7.5	36,000

SVG-6	
DEPTH (FEET)	TPH-g (µg/m^3)
3	140,000,000
5	160,000,000
7.5	NS

SVG-5	
DEPTH (FEET)	TPH-g (µg/m^3)
3	37,000,000
5	32,000,000
7.5	NS

SVG-3	
DEPTH (FEET)	TPH-g (µg/m^3)
3	86,000
5	NS
7.5	NS

SVG-2	
DEPTH (FEET)	TPH-g (µg/m^3)
3	17,000,000
5	18,000,000
7.5	NS

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SHELL OIL PRODUCTS U.S.
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SAN LEANDRO, CALIFORNIA

FIGURE 4

5-FOOT THP-g SOIL GAS CONCENTRATION MAP - 9/09/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

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SVG-8	
DEPTH (FEET)	BENZENE (µg/m^3)
3	ND<80
5	ND<80
7.5	ND<51

SVG-7	
DEPTH (FEET)	BENZENE (µg/m^3)
3	NS<80
5	NS
7.5	NS

SVG-4	
DEPTH (FEET)	BENZENE (µg/m^3)
3	ND<16
5	NS
7.5	NS

SVG-1	
DEPTH (FEET)	BENZENE (µg/m^3)
3.5	3,400
5	NS
7.5	NS

N

W E

S

SVG-7

SVG-4

SVG-8

SVG-1

SVG-2

SVG-5

SVG-6

SVG-3

SVG-9

S-18

S-19

S-16

S-17

S-9

S-10

S-7

S-6

BIG O TIRE STORE

BIG O TIRE STORE

FORMER DISPENSER ISLANDS

FORMER BUILDING LOCATION

FORMER USTs

SALEL'S MOBILE HOME PARK

SPEEDY SMOG

100

1,000

10,000

LEWELLING BOULEVARD

WASHINGTON AVENUE

LEGEND

S-6 ⊕	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SVG-1 ◉	SOIL VAPOR WELL LOCATION AND DESIGNATION
——	TRAILER PARK STRUCTER
——	FORMER BUILDING
——	FORMER UST LOCATION
PL	PROPERTY LINE
——	FENCING
ND<	NOT DETECTED ABOVE LIMIT NOTED
NS	NOT SAMPLED
(µg/m^3)	MICROGRAMS PER METER CUBED
10,000 ——	ISOCONTOUR LINE

0 25 50

SCALE IN FEET

SVG-9	
DEPTH (FEET)	BENZENE (µg/m^3)
3	ND<51
5	ND<16
7.5	ND<64

SVG-6	
DEPTH (FEET)	BENZENE (µg/m^3)
3	44,000
5	46,000
7.5	NS

SVG-5	
DEPTH (FEET)	BENZENE (µg/m^3)
3	2,700
5	ND<4,800
7.5	NS

SVG-3	
DEPTH (FEET)	BENZENE (µg/m^3)
3	ND<80
5	NS
7.5	NS

SVG-2	
DEPTH (FEET)	BENZENE (µg/m^3)
3	32,000
5	17,000
7.5	NS

DELTA CONSULTANTS

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

FIGURE 5

3-FOOT BENZENE SOIL GAS CONCENTRATION MAP - 9/09/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

APPROVED BY

CHECKED BY

DRAWN BY AD 11/16/2010

SVG-8	
DEPTH (FEET)	BENZENE (µg/m^3)
3	ND<80
5	ND<80
7.5	ND<51

SVG-7	
DEPTH (FEET)	BENZENE (g/m^3)
3	NS<80
5	NS
7.5	NS

SVG-4	
DEPTH (FEET)	BENZENE (g/m^3)
3	ND<16
5	NS
7.5	NS

SVG-1	
DEPTH (FEET)	BENZENE (g/m^3)
3.5	3,400
5	NS
7.5	NS

N

W E

S

SVG-7

SVG-4

SVG-8

SVG-1

SVG-5

SVG-2

SVG-9

SVG-6

SVG-3

S-18

S-19

S-16

S-17

S-9

S-10

S-7

S-6

BIG O TIRE STORE

BIG O TIRE STORE

FORMER DISPENSER ISLANDS

FORMER BUILDING LOCATION

FORMER USTs

SPEEDY SMOG

SALEL'S MOBILE HOME PARK

100

1,000

10,000

10,000

1,000

100

10,000

LEWELLING BOULEVARD

WASHINGTON AVENUE

LEGEND

S-6 ⊕	GROUNDWATER MONITORING WELL LOCATION AND DESIGNATION
SVG-1 ◉	SOIL VAPOR WELL LOCATION AND DESIGNATION
———	TRAILER PARK STRUCTER
———	FORMER BUILDING
———	FORMER UST LOCATION
PL	PROPERTY LINE
———	FENCING
ND<	NOT DETECTED ABOVE LIMIT NOTED
NS	NOT SAMPLED
(µg/m^3)	MICROGRAMS PER METER CUBED
10,000 ———	ISOCONTOUR LINE

0 25 50

SCALE IN FEET

SVG-9	
DEPTH (FEET)	BENZENE (g/m^3)
3	ND<51
5	ND<16
7.5	ND<64

SVG-6	
DEPTH (FEET)	BENZENE (g/m^3)
3	44,000
5	46,000
7.5	NS

SVG-5	
DEPTH (FEET)	BENZENE (µg/m^3)
3	2,700
5	ND<4,800
7.5	NS

SVG-3	
DEPTH (FEET)	BENZENE (g/m^3)
3	ND<80
5	NS
7.5	NS

SVG-2	
DEPTH (FEET)	BENZENE (µg/m^3)
3	32,000
5	17,000
7.5	NS

DELTA CONSULTANTS

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

FIGURE 6

5-FOOT BENZENE SOIL GAS CONCENTRATION MAP - 9/09/2010

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

PROJECT NUMBER SCA15275-1

APPROVED BY

CHECKED BY

DRAWN BY AD 11/16/2010

SB-7			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
10	ND<0.5	ND<5	ND<25
14	ND<0.5	ND<5	ND<25

SB-8			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
6	***280***	13	ND<25
14	ND<0.5	ND<5	ND<25

SB-9			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	ND<0.5	ND<5	ND<25
12	ND<0.5	ND<5	ND<25

SB-3			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
16	ND<0.5	ND<5	ND<25
50	ND<0.5	ND<5	ND<25

SB-1			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
16	ND<0.5	ND<5	ND<25

SB-10			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
12	ND<50	ND<5	ND<25
16	ND<0.5	ND<5	ND<25

SB-14			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
6	***290***	9.1	ND<25
12	ND<0.5	ND<5	ND<25

SB-13			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
10	1.8	ND<5	ND<25
12	ND<0.5	ND<5	ND<25

SB-12			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	***1,100***	79	ND<25
12	ND<0.5	ND<5	ND<25

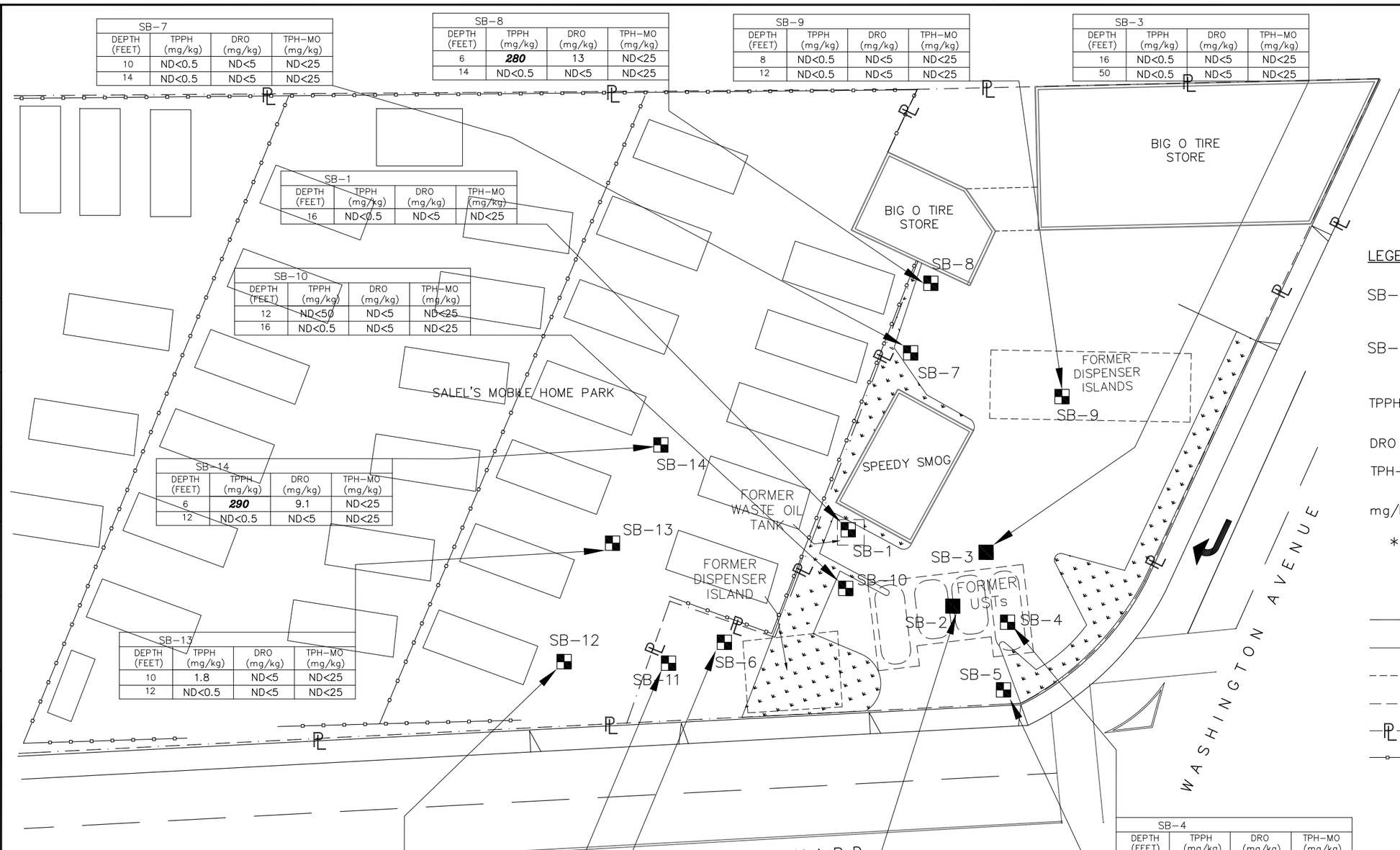
SB-11			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	70	7.3	ND<25
24	ND<0.5	ND<5	ND<25

SB-6			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	3.7	ND<5	ND<25
12	0.95	ND<5	ND<25

SB-2			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
12	0.53	31	100
50	ND<0.5	ND<5	ND<25

SB-4			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	ND<0.5	ND<5	ND<25
12	ND<0.5	ND<5	ND<25

SB-5			
DEPTH (FEET)	TPPH (mg/kg)	DRO (mg/kg)	TPH-MO (mg/kg)
8	ND<0.5	***110****	320
12	ND<0.5	ND<5	ND<25



LEGEND

SB-1 ■ SHALLOW SOIL BORING LOCATION AND DESIGNATION SAMPLED 6/22/2010

SB-2 ■ DEEP SOIL BORING LOCATION AND DESIGNATION SAMPLED 6/22/2010

TPPH TOTAL PURGEABLE PETROLEUM HYDROCARBON

DRO DIESEL RANGE ORGANICS

TPH-MO TOTAL PETROLUEM HYDROCARBONS AS MOTOR OIL

mg/kg MILIGRAMS PER KILOGRAM

* SAMPLE CHROMATOGRAPH PATTERN FOR DRO DOES NOT MATCH TYPICAL CHROMATOGRAPH PATTERN OF THE SPECIFIC STANDARD

——— EXTENDED TEST WELL

——— TRAILER PARK STRUCTER

- - - - - - FORMER BUILDING

— — — — FORMER UST LOCATION

—PL— — PROPERTY LINE

—▫—▫— FENCING

0 25 50

SCALE IN FEET

DELTA CONSULTANTS

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

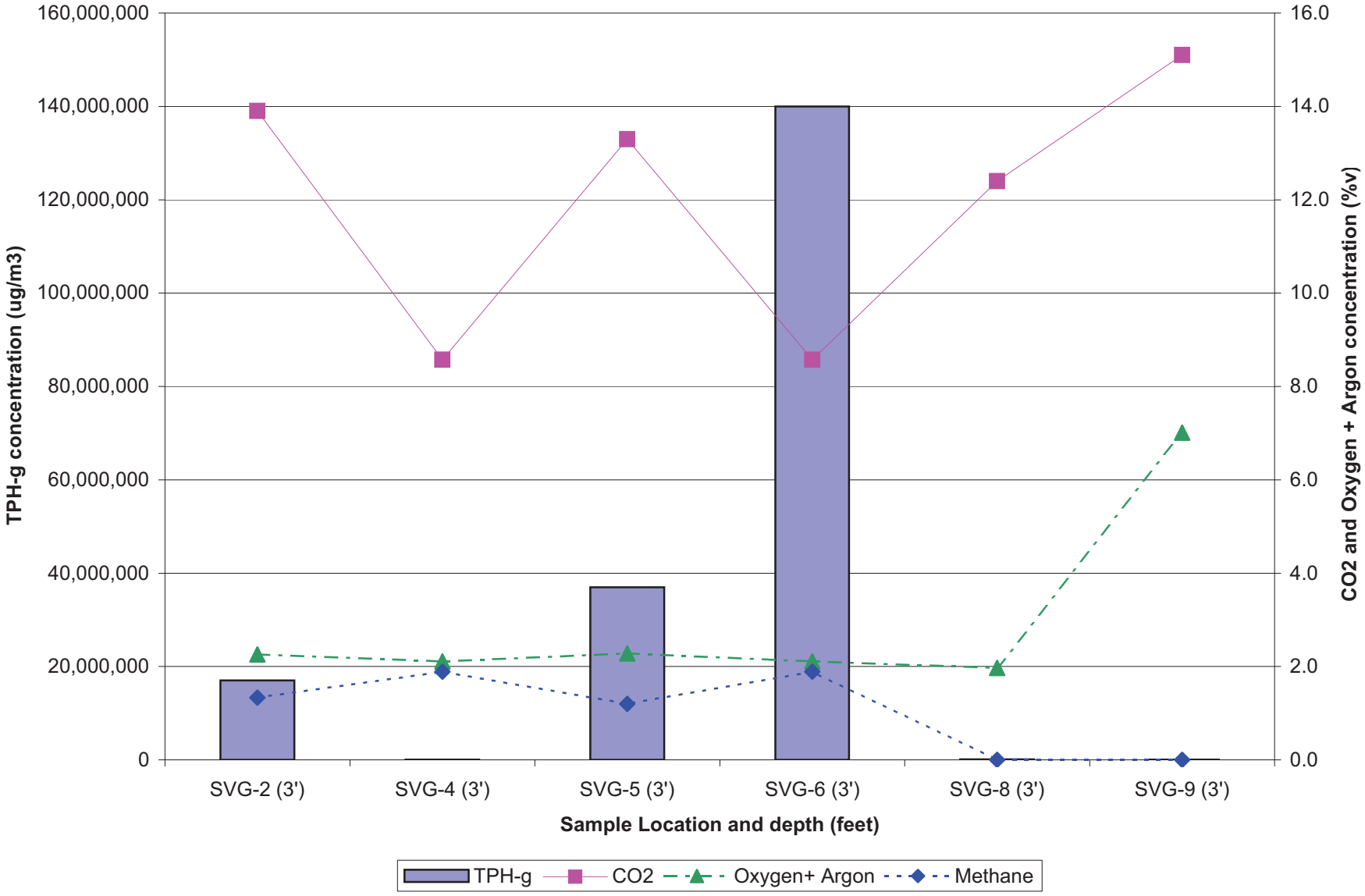
FIGURE 7

CONFIRMATION SOIL BORING CONCENTRATION MAP - JUNE 2010

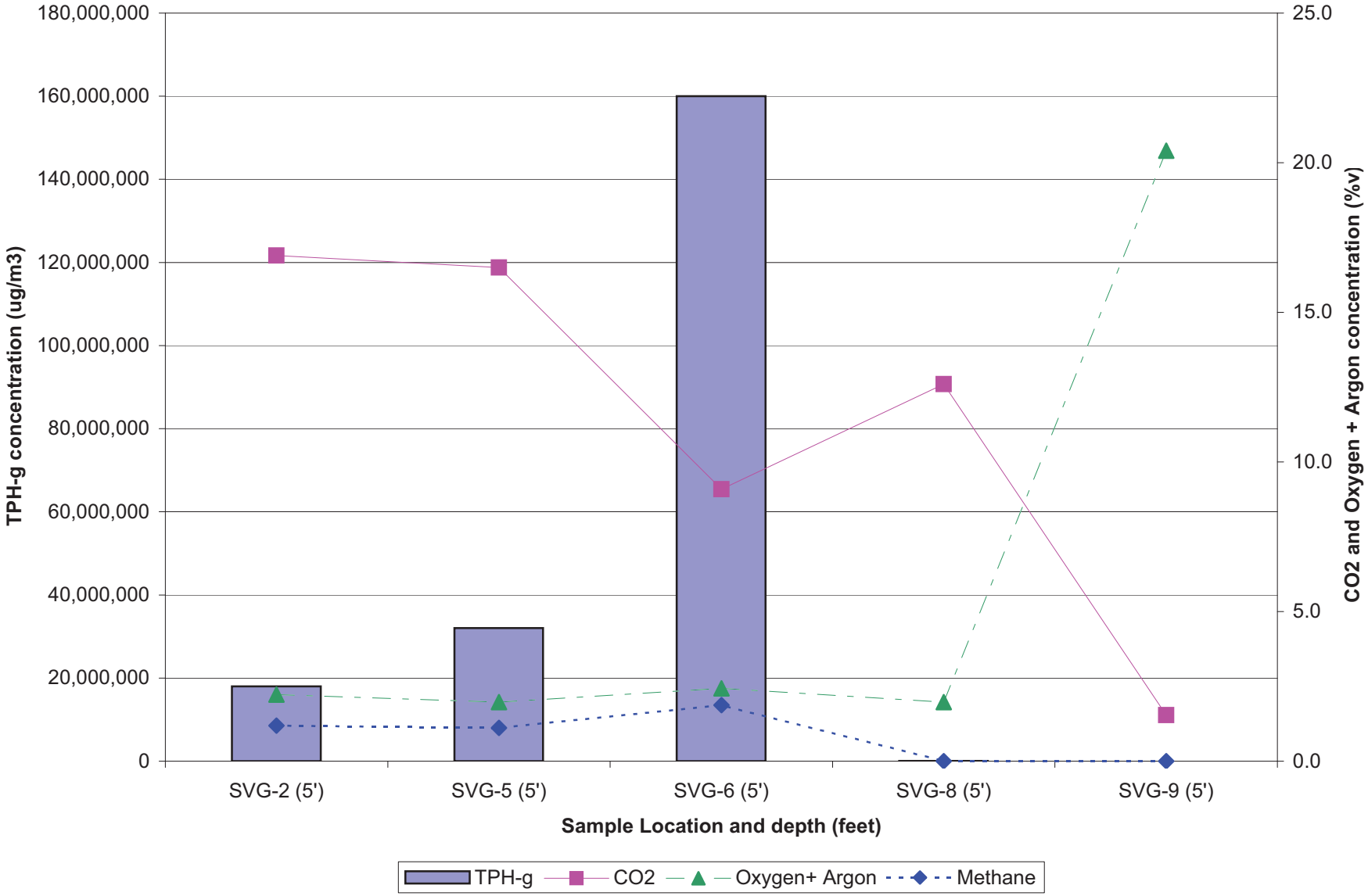
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

GRAPHS

GRAPH 1
SOIL GAS CONCENTRATIONS COMPARED TO ATTENUATION FACTORS - 3-FOOT SAMPLES
Former Shell Service Station
15275 Washington Avenue, San Leandro, California



GRAPH 2
SOIL GAS CONCENTRATIONS COMPARED TO ATTENUATION FACTORS - 5-FOOT SAMPLES
Former Shell Service Station
15275 Washington Avenue, San Leandro, California



TABLES

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

Sample Location (depth, feet)	Date	TPH-g ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Isopropanol ($\mu g/m^3$)
Residential ESL [1]		*10,000*	*84*	*63,000*	*980*	*21,000*	*9,400*	*NA*	*(Tracer compound)*
Commercial ESL [1]		**29,000**	**280**	**180,000**	**3,300**	**58,000**	**31,000**	**NA**	
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
$\mu g/m^3$ = 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 ($\mu g/m^3$)	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
$\mu g/m^3$ = 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.

APPENDIX A

ALAMEDA COUNTY HEALTH CARE SERVICES AGENCY CORRESPONDENCE

ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Acting Director

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

November 3, 2009

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

Mr. Frank Salel
Salel Enterprises
P.O. Box 5099
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0000372 and Geotracker Global ID T0600101226, Shell#129460, 15275 Washington Avenue, San Leandro, CA 94579

Dear Mr. Brown and Mr. Salel:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site, including the recent report entitled, "*2009 Off-site Soil Vapor Investigation Report*," dated October 16, 2009, prepared on Shell's behalf by Delta Consultants, Inc. (Report). The Report presents the results from soil vapor sampling in an off-site area to evaluate the potential for vapor intrusion. TPHg was detected in 15 of the 18 soil vapor samples collected and benzene was detected in four soil vapor samples. The tracer gas 1,1-difluoroethane, was detected in all soil vapor samples at concentrations ranging from 28 to 4,800,000 micrograms per cubic meter.

Based on the detections of tracer gas, the Report recommends a repeated sampling event using fixed soil vapor sampling probes. The proposed locations and the use of fixed sampling probes are acceptable. The probes are to be constructed in accordance with the requirements in the joint DTSC and Los Angeles Regional Water Quality Control Board Advisory - Active Soil Gas Investigations (2003) and must be constructed such that each discrete vertical sampling interval is isolated from the surface and other sampling intervals.

We have also reviewed the recent report entitled, "*Third Quarter 2009 Semi-Annual Groundwater Monitoring Report*," dated October 28, 2009. The "*Third Quarter 2009 Semi-Annual Groundwater Monitoring Report*," dated October 28, 2009 recommends that prior to sampling, all monitoring wells be purged of three casing volumes with stabilization of water quality parameters before sample collection. We concur with this recommendation for future groundwater sampling at the site.

We request that you perform the proposed work and send us the reports described below.

TECHNICAL REPORT REQUEST

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

- **November 19, 2009** – SVE Pilot Report
- **February 16, 2010** – Soil Vapor Sampling Report
- **April 9, 2010** – Semi-Annual Groundwater Monitoring Report – First Quarter 2010
- **October 8, 2010** – Semi-Annual Groundwater Monitoring Report – Third Quarter 2010

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

If you have any questions, please call me at 510-567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

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

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Suzanne McClurkin-Nelson, Delta Environmental, 312 Piercy Road, San Jose, CA 95138

Regina Bussard, Delta Environmental, 312 Piercy Road, San Jose, CA 95138

Donna Drogos, ACEH
Jerry Wickham, ACEH
Geotracker, File

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

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

REQUIREMENTS

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

Additional Recommendations

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

Submission Instructions

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

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

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

Suzanne McClurkin-Nelson

From: Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]
Sent: Wednesday, January 20, 2010 8:26 AM
To: Suzanne McClurkin-Nelson
Cc: Regina Bussard; denis.l.brown@shell.com; Scott Pearson
Subject: ROE: 15275 Washington, San Leandro - Request deadline extension

Hi Suzanne,

I concur in delaying the sampling until conditions return to more normal in order to collect representative data. In order to allow for possible continued rainfall and delays in sampling, the schedule for report submittal for the above referenced case is extended to April 19, 2010.

Regards,
Jerry Wickham
Alameda County Environmental Health

_____
From: Suzanne McClurkin-Nelson [SMcClurkin-Nelson@deltaenv.com]
Sent: Tuesday, January 19, 2010 6:30 PM
To: Wickham, Jerry, Env. Health
Cc: Suzanne McClurkin-Nelson; Regina Bussard; denis.l.brown@shell.com; Scott Pearson
Subject: 15275 Washington, San Leandro - Request deadline extension

Hello Jerry;

Delta has installed nine vapor wells as was recommended in our 2009 Offsite Soil Vapor Gas Investigation Report dated October 16, 2009. The wells were completed December 28 and 29, 2009; however, we were unable to schedule sampling of the wells prior to the current storm system traveling through California. Based on DTSC guidance, for any rainfall equal or greater to 0.5 inch, we must delay sampling a minimum of 5 days following cessation of rainfall. This storm is currently projected to last at least through Saturday based on the current 5-day forecast. We will try to schedule a tentative sampling event at the end of January or early February, but we will not be able to get analytical data back and complete a vapor sampling report by February 16, 2010 as has been requested due to the postponement of sampling.

We request an extension to the report deadline of approximately 30 days, or March 19, 2010; please let us know if that is acceptable.

Thanks!

Suzanne McClurkin-Nelson | Senior Project Manager | North American Operations Delta Consultants, an Oranjewoud N.V. Company Direct +1 408 826 1875 | Mobile +1 408 796 8889 | Alternate +1 408 582 4422 smcclurkin-nelson@deltaenv.com<mailto:smcclurkin-nelson@deltaenv.com> | www.deltaenv.com<http://www.deltaenv.com/>
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ALAMEDA COUNTY
HEALTH CARE SERVICES
AGENCY
ALEX BRISCOE, Director

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

September 13, 2010

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

Mr. Frank Salel
Salel Enterprises
P.O. Box 5099
Oakland, CA 94605

Subject: Fuel Leak Case No. RO0000372 and Geotracker Global ID T0600101226, Shell#129460, 15275 Washington Avenue, San Leandro, CA 94579 – Review of Site Assessment Report

Dear Mr. Brown and Mr. Salel:

Alameda County Environmental Health (ACEH) staff has reviewed the case file for the above-referenced site, including the recent report entitled, "*2010 Soil Assessment Report*," dated August 11, 2010 (Report). The Report, which was prepared on Shell's behalf by Delta Consultants, Inc., presents the results from 14 soil borings advanced both on and off site to define the horizontal and vertical extent of contamination. The soil boring data indicate that the primary areas of impacted soil are on-site soils immediately down- and cross-gradient of the former dispenser island in the northern portion of the site and off-site soils west and southwest of the former dispensers and underground storage tanks.

Based on these results, the Report recommends a second round of soil gas sampling to ensure that seasonal variations are taken into account and to obtain data from a deeper set of probes. A risk analysis is proposed to assess the significance of the detected vapor concentrations. Conducting a second round of soil gas sampling utilizing previously established sampling methods is acceptable. Please assure that all soil gas samples are analyzed for oxygen, carbon dioxide, and methane using EPA Method 1946-D in addition to petroleum hydrocarbons. During the March 2010 sampling event, we note that the reporting limits for benzene, toluene, ethylbenzene, and xylenes (BTEX) were elevated for several samples due to dilution due for non-target hydrocarbons. Since the BTEX compounds are the specific compounds for which toxicity values are available, we recommend that you review the proposed analytical methods to assess whether the reporting limits can be improved in order to improve the results of a risk analysis.

TECHNICAL REPORT REQUEST

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

- **October 8, 2010** – Semi-Annual Groundwater Monitoring Report – Third Quarter 2010
- **January 13, 2011** – Soil Vapor Sampling Report

Thank you for your cooperation. If you have any questions, please call me at (510) 567-6791 or send me an electronic mail message at jerry.wickham@acgov.org.

Sincerely,

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

Attachment: Responsible Party(ies) Legal Requirements/Obligations

Enclosure: ACEH Electronic Report Upload (ftp) Instructions

cc: Suzanne McClurkin-Nelson, Delta Environmental Consultants, Inc., 312 Piercy Road, San Jose, CA 95138 (*Sent via E-mail to: SMcClurkin-Nelson@deltaenv.com*)

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

Geotracker, File

Attachment 1

Responsible Party(ies) Legal Requirements/Obligations

REPORT REQUESTS

These reports are being requested pursuant to California Health and Safety Code Section 25296.10. 23 CCR Sections 2652 through 2654, and 2721 through 2728 outline the responsibilities of a responsible party in response to an unauthorized release from a petroleum UST system, and require your compliance with this request.

ELECTRONIC SUBMITTAL OF REPORTS

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

PERJURY STATEMENT

All work plans, technical reports, or technical documents submitted to ACEH must be accompanied by a cover letter from the responsible party that states, at a minimum, the following: "I declare, under penalty of perjury, that the information and/or recommendations contained in the attached document or report is true and correct to the best of my knowledge." This letter must be signed by an officer or legally authorized representative of your company. Please include a cover letter satisfying these requirements with all future reports and technical documents submitted for this fuel leak case.

PROFESSIONAL CERTIFICATION & CONCLUSIONS/RECOMMENDATIONS

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

UNDERGROUND STORAGE TANK CLEANUP FUND

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

AGENCY OVERSIGHT

If it appears as though significant delays are occurring or reports are not submitted as requested, we will consider referring your case to the Regional Board or other appropriate agency, including the County District Attorney, for possible enforcement actions. California Health and Safety Code, Section 25299.76 authorizes enforcement including administrative action or monetary penalties of up to $10,000 per day for each day of violation.

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

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

REQUIREMENTS

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

Additional Recommendations

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

Submission Instructions

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

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

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

Suzanne McClurkin-Nelson

From: Wickham, Jerry, Env. Health [jerry.wickham@acgov.org]
Sent: Tuesday, September 14, 2010 5:39 PM
To: Suzanne McClurkin-Nelson
Cc: denis.l.brown@shell.com; Abhik Dutta; Regina Bussard
Subject: RE: ACEH Correspondence for RO372 (15275 Washington, San Leandro)

Hi Suzanne,

Your proposal to analyze fixed gases for only the sample locations with multiple vertical samples is acceptable. Collection of additional samples for fixed gases from the four single sample points indicated below does not appear to be warranted.

Regards,
Jerry Wickham
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502-6577
phone: 510-567-6791
jerry.wickham@acgov.org

From: Suzanne McClurkin-Nelson [mailto:SMcClurkin-Nelson@deltaenv.com]
Sent: Tuesday, September 14, 2010 4:00 PM
To: Wickham, Jerry, Env. Health
Cc: Suzanne McClurkin-Nelson; denis.l.brown@shell.com; Abhik Dutta; Regina Bussard
Subject: RE: ACEH Correspondence for RO372 (15275 Washington, San Leandro)
Importance: High

Hi Jerry; We actually collected soil gas samples last Thursday (9/9/10) at the site referenced above. Unfortunately, we were able to collect a complete sample set (with probes set at three sample depths) at only two of the nine well locations (offsite wells SVG-8 and SVG-9), and were able to collect samples from two of the three probe depths at three well locations (onsite well SVG-2 and offsite wells SVG-5 and SVG-6). We were able to collect complete samples from only the shallowest probes (3-3.5 feet bgs) from two onsite wells (SVG-1 and SVG-3) and two offsite wells (SVG-4 and SVG-7) (see attached site map). Wells from which we were not able to collect deeper samples either had standing water in the well or condensation which collected in the tubing and Tedlar bags, rendering the soil gas sample unusable.

Out of the 16 samples collected, we requested fixed gases oxygen and carbon dioxide for all wells from which we were able to collect samples from at least two sample depths, which translated into 75% of the samples. We did not request those additional analytes for the wells from which we were able to collect only a single sample point, as we were interested in looking at the vertical distribution of those gases. I was able to contact the laboratory today and request that they add methane to our fixed gas analyses, however.

Please let me know if you find our current data set acceptable; in order to run the specified fixed gase analyses on the additional four samples which represent only a single data point, we would either have to run the analyses out of hold (assuming there is sufficient media left) or go back to the site and collect fresh samples from those four sample points. If you feel we have a sufficient sample set with what has been collected, we focus our fixed gas evaluation to the samples already collected and submitted. Let me know what you think - thanks!

Suzanne McClurkin-Nelson | Consultant | North American Operations
Delta Consultants, an Oranjewoud N.V. Company
Direct +1 408 826 1875 | Mobile +1 408 796 8889 | Alternate +1 408 582 4422
smcclurkin-nelson@deltaenv.com | www.deltaenv.com

From: dehloptoxic, Env. Health [mailto:deh.loptoxic@acgov.org]
Sent: Tuesday, September 14, 2010 11:13 AM
To: Suzanne McClurkin-Nelson
Cc: Drogos, Donna, Env. Health
Subject: ACEH Correspondence for RO372

Dear Interested Parties,

Attached is Alameda County Environmental Health's (ACEH) correspondence for your case, RO0000372.

Please add our e-mail address to your address book to prevent future e-mails from being filtered as spam.

Sincerely,

ACEH

APPENDIX B

GUIDELINES FOR SOIL GAS COLLECTION IN TEDLAR® BAGS

INSTRUCTIONS FOR
SOIL GAS COLLECTION IN TEDLAR BAGS
FULFILLING MISSOURI DNR GUIDELINES

Collecting Samples into Tedlar Bags

1. Connect a 2-way valve on to the soil gas probe using flex tubing. Connect the vacuum gauge to the 2-way valve and to a 3-way valve on 60 cc syringe as shown in Figure 1. BEWARE, STEM ON 3-WAY VALVE POINTS TO THE OFF DIRECTION.

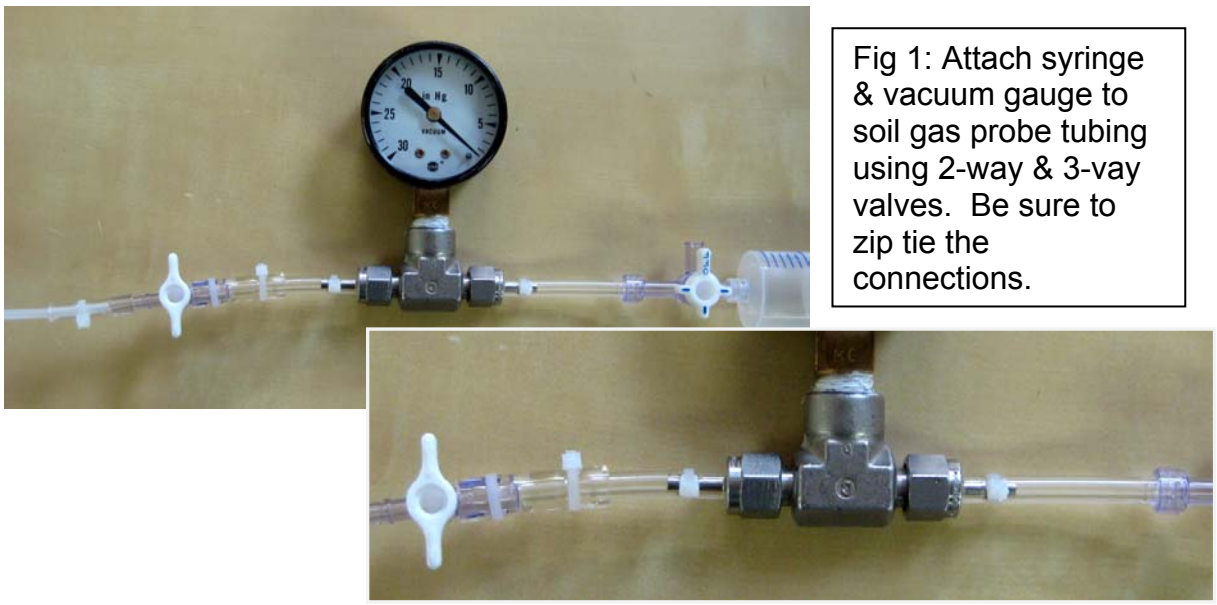


Fig 1: Attach syringe & vacuum gauge to soil gas probe tubing using 2-way & 3-vay valves. Be sure to zip tie the connections.

2. Leak test the sampling train by pulling on the syringe with the 2-way valve on the soil gas probe in off position. The vacuum gauge should deflect to ~10" to 15" of HG.

3. Turn the 3-way valve on the syringe so that the flow-path to the vacuum gauge is off. Watch the vacuum gauge. If vacuum remains steady for 30 seconds, sampling train is leak-tight. If the vacuum does not remain steady, find the leak, correct, and repeat leak test.

4. Open the 3-way and 2-way valves so that the soil gas probe is open to the syringe and purge appropriate volume from probe using 60 cc syringe). Use 3 internal dead-volumes unless otherwise instructed to do so. Dead volume of 1/8" nylaflow is 1 cc per foot. Dead volume of ¼" tubing is 5 cc/foot.

Mobile Geochemistry Inc.

5. After purging, leave the syringe connected to the vapor gauge & vapor probe and connect a tedlar bag to the side port of the 3-way valve using flex tubing (figure 2).

Fig 2: Connect tedlar to the side port of the 3-way valve and fill bag with 300-450 cc vapor sample.

6. If a leak/tracer compound is required, place leak compound around base of probe where it enters the ground. An easy way to do this is to dampen a paper towel with isopropyl alcohol (rubbing alcohol) or difluoroethane (duster spray) and place around the base of probe.

7. Open valve on the tedlar bag. Fill tedlar bag with 300 cc to 400 cc using the syringe and switching the position of the 3-way valve from the probe to the tedlar bag. Note: if tedlar bags are to be shipped by air, only fill them with 300 cc. If the samples in the tedlar will be transferred to mini-canisters on-site, put 450 cc into the tedlar.

8. Once filled, close valve on tedlar bag and remove from 3-way valve.

Note: When filling with a syringe, you control the flow rate by how fact you pull on the syringe. Hence, a flow meter should not be necessary. If you wish to install a flow meter, place it between the 60 cc syringe and the vacuum gauge.

APPENDIX C

CERTIFIED ANALYTICAL REPORTS WITH CHAIN-OF-CUSTODY DOCUMENTATION

Calscience
Environmental
Laboratories, Inc.

September 24, 2010

Suzanne McClurkin-Nelson
Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Subject: **Calscience Work Order No.: 10-09-0895**
Client Reference: 15275 Washington, San Leandro, CA

Dear Client:

Enclosed is an analytical report for the above-referenced project. The samples included in this report were received 9/11/2010 and analyzed in accordance with the attached chain-of-custody.

Calscience Environmental Laboratories certifies that the test results provided in this report meet all NELAC requirements for parameters for which accreditation is required or available. Any exceptions to NELAC requirements are noted in the case narrative. The original report of subcontracted analysis, if any, is provided herein, and follows the standard Calscience data package. The results in this analytical report are limited to the samples tested and any reproduction thereof must be made in its entirety.

If you have any questions regarding this report, please do not hesitate to contact the undersigned.

Sincerely,

Calscience Environmental
Laboratories, Inc.
Xuan H. Dang
Project Manager

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@3'	**10-09-0895-2-A**	**09/09/10 10:25**	**Air**	**GC 36**	**N/A**	**09/11/10 10:16**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.33	0.500	1		Oxygen + Argon	2.26	0.500	1	
Carbon Dioxide	13.9	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@5'	**10-09-0895-3-A**	**09/09/10 10:40**	**Air**	**GC 36**	**N/A**	**09/11/10 10:35**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.19	0.500	1		Oxygen + Argon	2.22	0.500	1	
Carbon Dioxide	16.9	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@3'	**10-09-0895-6-A**	**09/09/10 12:05**	**Air**	**GC 36**	**N/A**	**09/11/10 10:51**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.20	0.500	1		Oxygen + Argon	2.28	0.500	1	
Carbon Dioxide	13.3	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@5'	**10-09-0895-7-A**	**09/09/10 12:15**	**Air**	**GC 36**	**N/A**	**09/11/10 11:07**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.11	0.500	1		Oxygen + Argon	1.97	0.500	1	
Carbon Dioxide	16.5	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@3'	**10-09-0895-8-A**	**09/09/10 12:50**	**Air**	**GC 36**	**N/A**	**09/11/10 11:25**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.89	0.500	1		Oxygen + Argon	2.11	0.500	1	
Carbon Dioxide	8.57	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@5'	**10-09-0895-9-A**	**09/09/10 13:00**	**Air**	**GC 36**	**N/A**	**09/11/10 12:00**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	1.87	0.500	1		Oxygen + Argon	2.43	0.500	1	
Carbon Dioxide	9.09	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@3'	**10-09-0895-11-A**	**09/09/10 14:15**	**Air**	**GC 36**	**N/A**	**09/11/10 12:17**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	1.97	0.500	1	
Carbon Dioxide	12.4	0.500	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: ASTM D-1946
Units: %v

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@5'	**10-09-0895-12-A**	**09/09/10 14:30**	**Air**	**GC 36**	**N/A**	**09/11/10 13:39**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	1.97	0.500	1	
Carbon Dioxide	12.6	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@7.5'	**10-09-0895-13-A**	**09/09/10 14:45**	**Air**	**GC 36**	**N/A**	**09/11/10 13:55**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	1.97	0.500	1	
Carbon Dioxide	12.5	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@3'	**10-09-0895-14-A**	**09/09/10 15:15**	**Air**	**GC 36**	**N/A**	**09/11/10 14:12**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	7.01	0.500	1	
Carbon Dioxide	15.1	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@5'	**10-09-0895-15-B**	**09/09/10 15:30**	**Air**	**GC 36**	**N/A**	**09/11/10 14:29**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	20.4	0.500	1	
Carbon Dioxide	1.54	0.500	1						

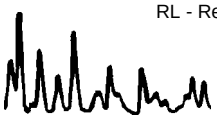
Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@7.5'	**10-09-0895-16-A**	**09/09/10 15:50**	**Air**	**GC 36**	**N/A**	**09/11/10 14:52**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	5.52	0.500	1	
Carbon Dioxide	16.8	0.500	1						

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-03-002-1,138**	**N/A**	**Air**	**GC 36**	**N/A**	**09/11/10 09:01**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Methane	ND	0.500	1		Oxygen + Argon	ND	0.500	1	
Carbon Dioxide	ND	0.500	1						

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers



Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA TO-3M

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-1@3.5'	**10-09-0895-1-A**	**09/09/10 09:55**	**Air**	**GC 13**	**N/A**	**09/11/10 14:20**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	15000000	70000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@3'	**10-09-0895-2-A**	**09/09/10 10:25**	**Air**	**GC 13**	**N/A**	**09/11/10 14:29**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	17000000	70000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@5'	**10-09-0895-3-A**	**09/09/10 10:40**	**Air**	**GC 13**	**N/A**	**09/11/10 14:52**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	18000000	70000	10		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-3@3'	**10-09-0895-4-A**	**09/09/10 11:05**	**Air**	**GC 13**	**N/A**	**09/11/10 10:43**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	86000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-4@3'	**10-09-0895-5-A**	**09/09/10 11:40**	**Air**	**GC 13**	**N/A**	**09/11/10 11:04**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	50000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@3'	**10-09-0895-6-A**	**09/09/10 12:05**	**Air**	**GC 13**	**N/A**	**09/11/10 15:25**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	37000000	140000	20		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA TO-3M

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@5'	**10-09-0895-7-A**	**09/09/10 12:15**	**Air**	**GC 13**	**N/A**	**09/11/10 15:15**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	32000000	140000	20		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@3'	**10-09-0895-8-A**	**09/09/10 12:50**	**Air**	**GC 13**	**N/A**	**09/11/10 15:38**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	140000000	700000	100		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@5'	**10-09-0895-9-A**	**09/09/10 13:00**	**Air**	**GC 13**	**N/A**	**09/11/10 15:49**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	160000000	700000	100		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-7@3'	**10-09-0895-10-A**	**09/09/10 13:30**	**Air**	**GC 13**	**N/A**	**09/11/10 11:13**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	97000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@3'	**10-09-0895-11-A**	**09/09/10 14:15**	**Air**	**GC 13**	**N/A**	**09/11/10 11:27**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	100000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@5'	**10-09-0895-12-A**	**09/09/10 14:30**	**Air**	**GC 13**	**N/A**	**09/11/10 12:31**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	81000	7000	1		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.		Date Received:	09/11/10
312 Piercy Rd.		Work Order No:	10-09-0895
San Jose, CA 95138-1401		Preparation:	N/A
		Method:	EPA TO-3M

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@7.5'	**10-09-0895-13-A**	**09/09/10 14:45**	**Air**	**GC 13**	**N/A**	**09/11/10 13:59**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	62000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@3'	**10-09-0895-14-A**	**09/09/10 15:15**	**Air**	**GC 13**	**N/A**	**09/11/10 13:40**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	57000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@5'	**10-09-0895-15-B**	**09/09/10 15:30**	**Air**	**GC 13**	**N/A**	**09/11/10 13:49**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	7900	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@7.5'	**10-09-0895-16-A**	**09/09/10 15:50**	**Air**	**GC 13**	**N/A**	**09/11/10 14:08**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	36000	7000	1		ug/m3

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**098-01-005-2,608**	**N/A**	**Air**	**GC 13**	**N/A**	**09/11/10 09:25**	**100911L01**

Parameter	Result	RL	DF	Qual	Units
TPH as Gasoline	ND	7000	1		ug/m3

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.	Date Received:	09/11/10
312 Piercy Rd.	Work Order No:	10-09-0895
San Jose, CA 95138-1401	Preparation:	N/A
	Method:	EPA 8260B (M)
	Units:	ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-1@3.5'	**10-09-0895-1-A**	**09/09/10 09:55**	**Air**	**GC/MS V**	**N/A**	**09/12/10 01:07**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	3400	2000	125		Methyl-t-Butyl Ether (MTBE)	ND	4500	125	
Toluene	ND	2400	125		Tert-Butyl Alcohol (TBA)	ND	3800	125	
Ethylbenzene	ND	2700	125		Isopropanol	ND	1500	125	
Xylenes (total)	ND	5400	125						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	139	47-156		1,2-Dichloroethane-d4	73	47-156	
Toluene-d8	89	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@3'	**10-09-0895-2-A**	**09/09/10 10:25**	**Air**	**GC/MS V**	**N/A**	**09/11/10 16:41**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	32000	16000	1000		Methyl-t-Butyl Ether (MTBE)	ND	36000	1000	
Toluene	ND	19000	1000		Tert-Butyl Alcohol (TBA)	ND	30000	1000	
Ethylbenzene	150000	22000	1000		Isopropanol	ND	12000	1000	
Xylenes (total)	ND	43000	1000						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	47-156		1,2-Dichloroethane-d4	72	47-156	
Toluene-d8	92	47-156					

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-2@5'	**10-09-0895-3-A**	**09/09/10 10:40**	**Air**	**GC/MS V**	**N/A**	**09/11/10 15:51**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	17000	16000	1000		Methyl-t-Butyl Ether (MTBE)	ND	36000	1000	
Toluene	ND	19000	1000		Tert-Butyl Alcohol (TBA)	ND	30000	1000	
Ethylbenzene	200000	22000	1000		Isopropanol	ND	12000	1000	
Xylenes (total)	44000	43000	1000						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	97	47-156		1,2-Dichloroethane-d4	72	47-156	
Toluene-d8	91	47-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-3@3'	**10-09-0895-4-A**	**09/09/10 11:05**	**Air**	**GC/MS V**	**N/A**	**09/11/10 14:49**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	80	5		Methyl-t-Butyl Ether (MTBE)	ND	180	5	
Toluene	ND	94	5		Tert-Butyl Alcohol (TBA)	ND	150	5	
Ethylbenzene	1100	110	5		Isopropanol	ND	61	5	
Xylenes (total)	220	220	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	95	47-156			1,2-Dichloroethane-d4	73	47-156		
Toluene-d8	91	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-4@3'	**10-09-0895-5-A**	**09/09/10 11:40**	**Air**	**GC/MS V**	**N/A**	**09/11/10 14:00**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Methyl-t-Butyl Ether (MTBE)	ND	36	1	
Toluene	ND	19	1		Tert-Butyl Alcohol (TBA)	ND	30	1	
Ethylbenzene	610	87	4		Isopropanol	ND	12	1	
Xylenes (total)	160	43	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	122	47-156			1,2-Dichloroethane-d4	97	47-156		
Toluene-d8	108	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@3'	**10-09-0895-6-A**	**09/09/10 12:05**	**Air**	**GC/MS K**	**N/A**	**09/12/10 01:49**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	2700	2000	125		Methyl-t-Butyl Ether (MTBE)	ND	4500	125	
Toluene	ND	2400	125		Tert-Butyl Alcohol (TBA)	ND	3800	125	
Ethylbenzene	9300	2700	125		Isopropanol	ND	1500	125	
Xylenes (total)	ND	5400	125						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	345	47-156		2	1,2-Dichloroethane-d4	144	47-156		
Toluene-d8	49	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-5@5'	**10-09-0895-7-A**	**09/09/10 12:15**	**Air**	**GC/MS K**	**N/A**	**09/11/10 23:20**	**100911L01**

Comment(s): -The reporting limits are elevated due to high levels of non-target compounds.

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	4800	300		Methyl-t-Butyl Ether (MTBE)	ND	11000	300	
Toluene	ND	5700	300		Tert-Butyl Alcohol (TBA)	ND	9100	300	
Ethylbenzene	ND	6500	300		Isopropanol	ND	3700	300	
Xylenes (total)	ND	13000	300						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	185	47-156		2	1,2-Dichloroethane-d4	87	47-156		
Toluene-d8	77	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@3'	**10-09-0895-8-A**	**09/09/10 12:50**	**Air**	**GC/MS K**	**N/A**	**09/11/10 20:40**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	44000	26000	1600		Methyl-t-Butyl Ether (MTBE)	ND	58000	1600	
Toluene	ND	30000	1600		Tert-Butyl Alcohol (TBA)	ND	49000	1600	
Ethylbenzene	ND	35000	1600		Isopropanol	ND	20000	1600	
Xylenes (total)	ND	69000	1600						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	116	47-156			1,2-Dichloroethane-d4	89	47-156		
Toluene-d8	72	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-6@5'	**10-09-0895-9-A**	**09/09/10 13:00**	**Air**	**GC/MS K**	**N/A**	**09/11/10 19:52**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	46000	26000	1600		Methyl-t-Butyl Ether (MTBE)	ND	58000	1600	
Toluene	ND	30000	1600		Tert-Butyl Alcohol (TBA)	ND	49000	1600	
Ethylbenzene	ND	35000	1600		Isopropanol	ND	20000	1600	
Xylenes (total)	ND	69000	1600						
Surrogates:	REC (%)	Control Limits	Qual		Surrogates:	REC (%)	Control Limits	Qual	
1,4-Bromofluorobenzene	118	47-156			1,2-Dichloroethane-d4	94	47-156		
Toluene-d8	74	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.		Date Received:	09/11/10
312 Piercy Rd.		Work Order No:	10-09-0895
San Jose, CA 95138-1401		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-7@3'	**10-09-0895-10-A**	**09/09/10 13:30**	**Air**	**GC/MS K**	**N/A**	**09/11/10 15:53**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	80	5		Methyl-t-Butyl Ether (MTBE)	ND	180	5	
Toluene	ND	94	5		Tert-Butyl Alcohol (TBA)	ND	150	5	
Ethylbenzene	300	110	5		Isopropanol	ND	61	5	
Xylenes (total)	ND	220	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	105	47-156			1,2-Dichloroethane-d4	94	47-156		
Toluene-d8	97	47-156							

SVG-8@3'	**10-09-0895-11-A**	**09/09/10 14:15**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 14:02**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	80	5		Methyl-t-Butyl Ether (MTBE)	ND	180	5	
Toluene	ND	94	5		Tert-Butyl Alcohol (TBA)	ND	150	5	
Ethylbenzene	300	110	5		Isopropanol	ND	61	5	
Xylenes (total)	ND	220	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	133	47-156			1,2-Dichloroethane-d4	94	47-156		
Toluene-d8	104	47-156							

SVG-8@5'	**10-09-0895-12-A**	**09/09/10 14:30**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 15:52**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	80	5		Methyl-t-Butyl Ether (MTBE)	ND	180	5	
Toluene	ND	94	5		Tert-Butyl Alcohol (TBA)	ND	150	5	
Ethylbenzene	240	110	5		Isopropanol	ND	61	5	
Xylenes (total)	ND	220	5						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	116	47-156			1,2-Dichloroethane-d4	89	47-156		
Toluene-d8	102	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: 09/11/10
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA 8260B (M)
Units: ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-8@7.5'	**10-09-0895-13-A**	**09/09/10 14:45**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 16:42**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	51	3.2		Methyl-t-Butyl Ether (MTBE)	ND	120	3.2	
Toluene	ND	60	3.2		Tert-Butyl Alcohol (TBA)	ND	97	3.2	
Ethylbenzene	230	69	3.2		Isopropanol	ND	39	3.2	
Xylenes (total)	ND	140	3.2						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	126	47-156			1,2-Dichloroethane-d4	87	47-156		
Toluene-d8	104	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@3'	**10-09-0895-14-A**	**09/09/10 15:15**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 17:33**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	51	3.2		Methyl-t-Butyl Ether (MTBE)	ND	120	3.2	
Toluene	ND	60	3.2		Tert-Butyl Alcohol (TBA)	ND	97	3.2	
Ethylbenzene	230	69	3.2		Isopropanol	ND	39	3.2	
Xylenes (total)	ND	140	3.2						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	106	47-156			1,2-Dichloroethane-d4	87	47-156		
Toluene-d8	101	47-156							

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@5'	**10-09-0895-15-B**	**09/09/10 15:30**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 14:59**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Methyl-t-Butyl Ether (MTBE)	ND	36	1	
Toluene	32	19	1		Tert-Butyl Alcohol (TBA)	ND	30	1	
Ethylbenzene	32	22	1		Isopropanol	99	12	1	
Xylenes (total)	ND	43	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	102	47-156			1,2-Dichloroethane-d4	88	47-156		
Toluene-d8	102	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.		Date Received:	09/11/10
312 Piercy Rd.		Work Order No:	10-09-0895
San Jose, CA 95138-1401		Preparation:	N/A
		Method:	EPA 8260B (M)
		Units:	ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
SVG-9@7.5'	**10-09-0895-16-A**	**09/09/10 15:50**	**Air**	**GC/MS V**	**N/A**	**09/11/10 23:22**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	64	4		Methyl-t-Butyl Ether (MTBE)	ND	140	4	
Toluene	ND	75	4		Tert-Butyl Alcohol (TBA)	ND	120	4	
Ethylbenzene	95	87	4		Isopropanol	ND	49	4	
Xylenes (total)	ND	170	4						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	87	47-156			1,2-Dichloroethane-d4	73	47-156		
Toluene-d8	92	47-156							

Method Blank	**099-13-041-174**	**N/A**	**Air**	**GC/MS HH**	**N/A**	**09/11/10 12:32**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Methyl-t-Butyl Ether (MTBE)	ND	36	1	
Toluene	ND	19	1		Tert-Butyl Alcohol (TBA)	ND	30	1	
Ethylbenzene	ND	22	1		Isopropanol	ND	12	1	
Xylenes (total)	ND	43	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	97	47-156			1,2-Dichloroethane-d4	90	47-156		
Toluene-d8	99	47-156							

Method Blank	**099-13-041-175**	**N/A**	**Air**	**GC/MS V**	**N/A**	**09/11/10 12:22**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Methyl-t-Butyl Ether (MTBE)	ND	36	1	
Toluene	ND	19	1		Tert-Butyl Alcohol (TBA)	ND	30	1	
Ethylbenzene	ND	22	1		Isopropanol	ND	12	1	
Xylenes (total)	ND	43	1						
Surrogates:	REC (%)	Control Limits		Qual	Surrogates:	REC (%)	Control Limits		Qual
1,4-Bromofluorobenzene	91	47-156			1,2-Dichloroethane-d4	92	47-156		
Toluene-d8	91	47-156							

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Analytical Report

Delta Environmental Consultants, Inc.	Date Received:	09/11/10
312 Piercy Rd.	Work Order No:	10-09-0895
San Jose, CA 95138-1401	Preparation:	N/A
	Method:	EPA 8260B (M)
	Units:	ug/m3

Project: 15275 Washington, San Leandro, CA

Client Sample Number	Lab Sample Number	Date/Time Collected	Matrix	Instrument	Date Prepared	Date/Time Analyzed	QC Batch ID
Method Blank	**099-13-041-177**	**N/A**	**Air**	**GC/MS K**	**N/A**	**09/11/10 13:13**	**100911L01**

Parameter	Result	RL	DF	Qual	Parameter	Result	RL	DF	Qual
Benzene	ND	16	1		Methyl-t-Butyl Ether (MTBE)	ND	36	1	
Toluene	ND	19	1		Tert-Butyl Alcohol (TBA)	ND	30	1	
Ethylbenzene	ND	22	1		Isopropanol	ND	12	1	
Xylenes (total)	ND	43	1						

Surrogates:	REC (%)	Control Limits	Qual	Surrogates:	REC (%)	Control Limits	Qual
1,4-Bromofluorobenzene	98	47-156		1,2-Dichloroethane-d4	97	47-156	
Toluene-d8	97	47-156					

RL - Reporting Limit , DF - Dilution Factor , Qual - Qualifiers

Calscience Environmental Laboratories, Inc.

Quality Control - Duplicate

Delta Environmental Consultants, Inc.	Date Received:	09/11/10
312 Piercy Rd.	Work Order No:	10-09-0895
San Jose, CA 95138-1401	Preparation:	N/A
	Method:	EPA TO-3M

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared:	Date Analyzed:	Duplicate Batch Number
SVG-3@3'	**Air**	**GC 13**	**N/A**	**09/11/10**	**100911D01**

Parameter	Sample Conc	DUP Conc	RPD	RPD CL	Qualifiers
TPH as Gasoline	86000	83000	3	0-20	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants, Inc.	Date Received:	N/A
312 Piercy Rd.	Work Order No:	10-09-0895
San Jose, CA 95138-1401	Preparation:	N/A
	Method:	ASTM D-1946

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-03-002-1,138	**Air**	**GC 36**	**N/A**	**09/11/10**	**100911L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Carbon Dioxide	92	96	80-120	4	0-30	
Oxygen + Argon	87	89	80-120	2	0-30	
Nitrogen	88	89	80-120	2	0-30	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants, Inc.		Date Received:	N/A
312 Piercy Rd.		Work Order No:	10-09-0895
San Jose, CA 95138-1401		Preparation:	N/A
		Method:	EPA 8260B (M)

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-177	**Air**	**GC/MS K**	**N/A**	**09/11/10**	**100911L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	108	106	60-156	3	0-40	
Toluene	114	109	56-146	5	0-43	
Ethylbenzene	120	115	52-154	4	0-38	
Xylenes (total)	122	117	52-148	4	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: N/A
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA 8260B (M)

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-175	**Air**	**GC/MS V**	**N/A**	**09/11/10**	**100911L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	101	104	60-156	2	0-40	
Toluene	109	110	56-146	1	0-43	
Ethylbenzene	119	121	52-154	2	0-38	
Xylenes (total)	115	118	52-148	2	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Quality Control - LCS/LCS Duplicate

Delta Environmental Consultants, Inc.
312 Piercy Rd.
San Jose, CA 95138-1401

Date Received: N/A
Work Order No: 10-09-0895
Preparation: N/A
Method: EPA 8260B (M)

Project: 15275 Washington, San Leandro, CA

Quality Control Sample ID	Matrix	Instrument	Date Prepared	Date Analyzed	LCS/LCSD Batch Number
099-13-041-174	**Air**	**GC/MS HH**	**N/A**	**09/11/10**	**100911L01**

Parameter	LCS %REC	LCSD %REC	%REC CL	RPD	RPD CL	Qualifiers
Benzene	105	102	60-156	3	0-40	
Toluene	106	100	56-146	7	0-43	
Ethylbenzene	110	102	52-154	7	0-38	
Xylenes (total)	108	101	52-148	7	0-38	

RPD - Relative Percent Difference , CL - Control Limit

Calscience Environmental Laboratories, Inc.

Glossary of Terms and Qualifiers

Work Order Number: 10-09-0895

Qualifier	Definition
*	See applicable analysis comment.
<	Less than the indicated value.
>	Greater than the indicated value.
1	Surrogate compound recovery was out of control due to a required sample dilution, therefore, the sample data was reported without further clarification.
2	Surrogate compound recovery was out of control due to matrix interference. The associated method blank surrogate spike compound was in control and, therefore, the sample data was reported without further clarification.
3	Recovery of the Matrix Spike (MS) or Matrix Spike Duplicate (MSD) compound was out of control due to matrix interference. The associated LCS and/or LCSD was in control and, therefore, the sample data was reported without further clarification.
4	The MS/MSD RPD was out of control due to matrix interference. The LCS/LCSD RPD was in control and, therefore, the sample data was reported without further clarification.
5	The PDS/PDSD or PES/PESD associated with this batch of samples was out of control due to a matrix interference effect. The associated batch LCS/LCSD was in control and, hence, the associated sample data was reported without further clarification.
B	Analyte was present in the associated method blank.
E	Concentration exceeds the calibration range.
IH	CCV recovery below the method control limit, see narrative
IJ	CCV recovery above the method control limit, see narrative
J	Analyte was detected at a concentration below the reporting limit and above the laboratory method detection limit. Reported value is estimated.
ME	LCS Recovery Percentage is within LCS ME Control Limit range.
ND	Parameter not detected at the indicated reporting limit.
Q	Spike recovery and RPD control limits do not apply resulting from the parameter concentration in the sample exceeding the spike concentration by a factor of four or greater.
X	% Recovery and/or RPD out-of-range.
Z	Analyte presence was not confirmed by second column or GC/MS analysis.
	Solid - Unless otherwise indicated, solid sample data is reported on a wet weight basis, not corrected for % moisture.

0895

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- [x] CALSCIENCE (_____)
- [ ] SPL (_____)
- [ ] XENCO (_____)
- [ ] TEST AMERICA (_____)
- [ ] OTHER (_____)

Please Check Appropriate Box:
- [ ] ENV. SERVICES
- [ ] MOTIVA RETAIL
- [ ] SHELL RETAIL
- [ ] MOTIVA SD&CM
- [x] CONSULTANT
- [ ] LUBES
- [ ] SHELL PIPELINE
- [ ] OTHER _____

Print Bill To Contact Name: SUZANNE MCCLURKIN-NELSON

INCIDENT # (ENV SERVICES): 97093412

- [ ] CHECK IF NO INCIDENT # APPLIES

DATE: 9/10/2010

PAGE: 1 of 2

PO #:

SAP #: 12946 0

SAMPLING COMPANY: Delta Consultants

LOG CODE:

ADDRESS: 312 Piercy Rd, San Jose, CA. 95138

PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin-Nelson

TELEPHONE: 408-826-1869 | FAX: 408-225-8506 | E-MAIL: smcclurkin-nelson@deltaenv.com

SITE ADDRESS: Street and City: 15275 Washington, San Leandro | State: CA | GLOBAL ID NO.: T0600101226

EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico, Delta Consultant San Jose, CA | PHONE NO.: 408-826-1862 | E-MAIL: apico@deltaenv.com | CONSULTANT PROJECT NO.: SCA152751A

SAMPLER NAME(S) (Print): Abhik Dutta

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
- [x] STANDARD (14 DAY)
- [ ] 5 DAYS
- [ ] 3 DAYS
- [ ] 2 DAYS
- [ ] 24 HOURS
- [ ] RESULTS NEEDED ON WEEKEND

- [ ] LA - RWQCB REPORT FORMAT
- [ ] UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

please also email results to: adutta@deltaenv.com

- [ ] SHELL CONTRACT RATE APPLIES
- [ ] STATE REIMBURSEMENT RATE APPLIES
- [ ] EDD NOT NEEDED
- [ ] RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	Air Analysis: TPH-G Purgeable (8260)	BTEX (8260)	MTBE (8260)	TBA (8260)	Carbon Dioxide (ASTM 1945-	Oxygen (ASTM 1945-96)	IPA	Waste Characterization: CAM 17 Metals (6010)	Run STLC/TCLP Metals/Org Pb if needed	Run Bioassay if Benzene >5000 ppm,
1	SVG-1@3.5'	9/9/10	9:55	AIR				X			X	X	X	X			X			
2	SVG-2@3'	9/9/10	10:25	AIR				X			X	X	X	X	X	X	X			
3	SVG-2@5'	9/9/10	10:40	AIR				X			X	X	X	X	X	X	X			
4	SVG-3@3'	9/9/10	11:05	AIR				X			X	X	X	X			X			
5	SVG-4@3'	9/9/10	11:40	AIR				X			X	X	X	X			X			
6	SVG-5@3'	9/9/10	12:05	AIR				X			X	X	X	X	X	X	X			
7	SVG-5@5'	9/9/10	12:15	AIR				X			X	X	X	X	X	X	X			
8	SVG-6@3'	9/9/10	12:50	AIR				X			X	X	X	X	X	X	X			
9	SVG-6@5'	9/9/10	13:00	AIR				X			X	X	X	X	X	X	X			
10	SVG-7@3'	9/9/10	13:30	AIR				X			X	X	X	X			X			

TEMPERATURE ON RECEIPT C°

Container PID Readings or Laboratory Notes

used IPA as leak tracer use T0-15 if needed

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
[signature] 9/10/10			
	[signature] CEL	9/11/10	10:05

05/2/06 Revision

0895

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☐ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
☐ ENV. SERVICES | ☐ MOTIVA RETAIL | ☐ SHELL RETAIL
☐ MOTIVA SD&CM | ☑ CONSULTANT | ☐ LUBES
☐ SHELL PIPELINE | ☐ OTHER _____

Print Bill To Contact Name: SUZANNE MCCLURKIN-NELSON

INCIDENT # (ENV SERVICES): 97093412 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 9/10/2010

PAGE: 2 of 2

PO #:

SAP #: 12946 0

SAMPLING COMPANY: Delta Consultants

LOG CODE:

SITE ADDRESS: Street and City: 15275 Washington, San Leandro

State: CA

GLOBAL ID NO.: T0600101226

ADDRESS: 312 Piercy Rd, San Jose, CA. 95138

EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico, Delta Consultant San Jose, CA

PHONE NO.: 408-826-1862

E-MAIL: apico@deltaenv.com

CONSULTANT PROJECT NO.: SCA152751A

PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin-Nelson

TELEPHONE: 408-826-1869

FAX: 408-225-8506

E-MAIL: smcclurkin-nelson@deltaenv.com

SAMPLER NAME(S) (Print): Abhik Dutta

LAB USE ONLY

TURNAROUND TIME (CALENDAR DAYS):
☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

REQUESTED ANALYSIS

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

please also email results to: adutta@deltaenv.com

☐ SHELL CONTRACT RATE APPLIES
☐ STATE REIMBURSEMENT RATE APPLIES
☐ EDD NOT NEEDED
☐ RECEIPT VERIFICATION REQUESTED

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	Air Analysis: TPH-G Purgeable (8260)	BTEX (8260)	MTBE (8260)	TBA (8260)	Carbon Dioxide (ASTM 1945-	Oxygen (ASTM 1945-96)	IPA	Waste Characterization: CAM 17 Metals (6010)	Run STLC/TCLP Metals/Org Pb if needed	Run Bioassay if Benzene >5000 ppm,	Container PID Readings or Laboratory Notes
11	SVG-8@3'	9/9/10	14:15	AIR				X			X	X	X	X	X	X	X				used IPA as leak tracer use T0-15 if needed
12	SVG-8@5'	9/9/10	14:30	AIR				X			X	X	X	X	X	X	X				
13	SVG-8@7.5'	9/9/10	14:45	AIR				X			X	X	X	X	X	X	X				
14	SVG-9@3'	9/9/10	15:15	AIR				X			X	X	X	X	X	X	X				
15	SVG-9@5'	9/9/10	15:30	AIR				X			X	X	X	X	X	X	X				
16	SVG-9@7.5'	9/9/10	15:50	AIR				X			X	X	X	X	X	X	X				

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
9/10/10			
	OEL	9/11/10	9:05

05/2/06 Revision

DATE 9/16/10 [redacted]

COMPANY Delta Consultants

ADDRESS [illegible] Terry Rd

ADDRESS

STE/ ROOM

CITY [illegible]

ZIP CODE 951[illegible]

SENDERS NAME Abhik Datta

PHONE NUMBER 408-926-1809

COMPANY CAL SCIENCE

NAME

PHONE NUMBER 714-895-5494

ADDRESS 7440 LINCOLN WAY

ADDRESS

STE/ ROOM

CITY GARDEN GROVE

ZIP CODE 92841

YOUR INTERNAL BILLING REFERENCE WILL APPEAR ON YOUR INVOICE

IAL
IUCTIONS

GSO
GOLDEN STATE OVERNIGHT

1-800-322-5555

WWW.GSO.COM

SHIPPING AIR BILL

PACKAGE LABEL

4 PACKAGE INFORMATION

- ☐ LETTER (MAX 8 OZ)
- ☐ PACKAGE (WT) ____________
- ☐ DECLARED VALUE $____________
- ☐ COD AMOUNT $____________ (CASH NOT ACCEPTED)

5 DELIVERY SERVICE ☐ PRIORITY OVERNIGHT BY 10:30 AM ☐ EARLY PRIORITY BY 8:00 AM ☐ SATURDAY DELIVERY

*DELIVERY TIMES MAY BE LATER IN SOME AREAS • CONSULT YOUR SERVICE GUIDE OR CALL GOLDEN STATE OVERNIGHT.

6 RELEASE SIGNATURE ____________
SIGN TO AUTHORIZE DELIVERY WITHOUT OBTAINING SIGNATURE

7

8 PICK UP INFORMATION ____________
TIME DRIVER # ROUTE #

106193801

PEEL OFF HERE

106193801

9 GSO TRACKING NUMBER

0895

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-09-0895

SAMPLE RECEIPT FORM

Box ~~Cooler~~ 1 of 1

CLIENT: Delta DATE: 09/11/10

TEMPERATURE: Thermometer ID: SC1 (Criteria: 0.0 °C – 6.0 °C, not frozen)

Temperature ____.____ °C + 0.5 °C (CF) = ____.____ °C ☐ Blank ☐ Sample

☐ Sample(s) outside temperature criteria (PM/APM contacted by: _____).

☐ Sample(s) outside temperature criteria but received on ice/chilled on same day of sampling.

☐ **Received at ambient temperature, placed on ice for transport by Courier.**

Ambient Temperature: ☑ Air ☐ Filter ☐ Metals Only ☐ PCBs Only **Initial:** [illegible]

CUSTODY SEALS INTACT:

☐ Cooler ☐_____ ☐ No (Not Intact) ☐ Not Present ☐ N/A **Initial:** [illegible]

☐ Sample ☐_____ ☐ No (Not Intact) ☑ Not Present **Initial:** TN

SAMPLE CONDITION:	Yes	No	N/A
Chain-Of-Custody (COC) document(s) received with samples	☑	☐	☐
COC document(s) received complete	☐	☑	☐
☑ Collection date/time, matrix, and/or # of containers logged in based on sample labels.			
☐ No analysis requested. ☐ Not relinquished. ☑ No date/time relinquished.			
Sampler's name indicated on COC	☑	☐	☐
Sample container label(s) consistent with COC	☑	☐	☐
Sample container(s) intact and good condition	~~☐~~ ☑ TN 9/11/10	☑	☐
Proper containers and sufficient volume for analyses requested	☑	☐	☐
Analyses received within holding time	☑	☐	☐
pH / Residual Chlorine / Dissolved Sulfide received within 24 hours	☐	☐	☑
Proper preservation noted on COC or sample container	☐	☐	☑
☐ Unpreserved vials received for Volatiles analysis			
Volatile analysis container(s) free of headspace	☐	☐	☑
Tedlar bag(s) free of condensation	☑	☐	☐

CONTAINER TYPE:

Solid: ☐4ozCGJ ☐8ozCGJ ☐16ozCGJ ☐Sleeve (_____) ☐EnCores® ☐TerraCores® ☐_____

Water: ☐VOA ☐VOA**h** ☐VOA**na$_2$** ☐125AGB ☐125AGB**h** ☐125AGB**p** ☐1AGB ☐1AGB**na$_2$** ☐1AGB**s** ☐500AGB ☐500AGJ ☐500AGJ**s** ☐250AGB ☐250CGB ☐250CGB**s** ☐1PB ☐500PB ☐500PB**na** ☐250PB ☐250PB**n** ☐125PB ☐125PB**znna** ☐100PJ ☐100PJ**na$_2$** ☐_____ ☐_____ ☐_____

Air: ☑Tedlar® ☐Summa® **Other:** ☐_____ **Trip Blank Lot#:**_____ **Labeled/Checked by:** TN

Container: **C:** Clear **A:** Amber **P:** Plastic **G:** Glass **J:** Jar **B:** Bottle **Z:** Ziploc/Resealable Bag **E:** Envelope **Reviewed by:** WG

Preservative: **h:** HCL **n:** HNO_3 **na$_2$:**$Na_2S_2O_3$ **na:** NaOH **p:** H_3PO_4 **s:** H_2SO_4 **znna:** $ZnAc_2$+NaOH **f:** Field-filtered **Scanned by:** TN

Calscience Environmental Laboratories, Inc.

WORK ORDER #: 10-09-0895

SAMPLE ANOMALY FORM

SAMPLES - CONTAINERS & LABELS: | **Comments:**

- ☐ **Sample(s)/Container(s) NOT RECEIVED but listed on COC**
- ☐ **Sample(s)/Container(s) received but NOT LISTED on COC**
- ☐ **Holding time expired** – list sample ID(s) and test
- ☐ **Insufficient quantities for analysis** – list test
- ☐ **Improper container(s) used** – list test
- ☐ **Improper preservative used** – list test
- ☐ **No preservative noted on COC or label** – list test & notify lab
- ☐ **Sample labels illegible** – note test/container type
- ☐ **Sample label(s) do not match COC** – Note in comments
  - ☐ **Sample ID**
  - ☐ **Date and/or Time Collected**
  - ☐ **Project Information**
  - ☐ **# of Container(s)**
  - ☐ **Analysis**
- ☐ **Sample container(s) compromised** – Note in comments
  - ☐ **Water present in sample container**
  - ☐ **Broken**
  - ☐ **Without Label(s)**
- ☑ **Air sample container(s) compromised** – Note in comments: (-15) Received leaking and transferred in air lab.
  - ☐ **Flat**
  - ☐ **Very low in volume**
  - ☐ **Leaking (Not transferred - duplicate bag submitted)**
  - ☑ **Leaking (transferred into Calscience Tedlar® Bag*)**
  - ☐ **Leaking (transferred into Client's Tedlar® Bag*)**
- ☐ **Other:** _____

HEADSPACE – Containers with Bubble > 6mm or ¼ inch:

Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Vials Received	Sample #	Container ID(s)	# of Cont. received	Analysis

Comments: _____

*Transferred at Client's request.

Initial / Date: TN 09/11/10

Xuan Dang

From: Suzanne McClurkin-Nelson [SMcClurkin-Nelson@deltaenv.com]
Sent: Tuesday, September 14, 2010 2:01 PM
To: Xuan Dang
Cc: Susan Kageyama; Suzanne McClurkin-Nelson; Abhik Dutta; denis.l.brown@shell.com
Subject: RE: 15275 Washington, San Leandro, CA (10-09-0895)
Attachments: 10-09-0895-Revised.pdf

Thank you Xuan, yes. Please add methane to all samples for which oxygen and carbon dioxide was run - I have attached an updated COC. Let me know if you need anything else - thanks!

Suzanne McClurkin-Nelson | Consultant | North American Operations
Delta Consultants, an Oranjewoud N.V. Company
Direct +1 408 826 1875 | Mobile +1 408 796 8889 | Alternate +1 408 582 4422
smcclurkin-nelson@deltaenv.com | www.deltaenv.com

SUSTAINABLE STRATEGIES FOR GLOBAL LEADERS

From: Xuan Dang [mailto:xdang@calscience.com]
Sent: Tuesday, September 14, 2010 1:31 PM
To: Susan Kageyama
Cc: Suzanne McClurkin-Nelson
Subject: 15275 Washington, San Leandro, CA (10-09-0895)

Susan,
Methane is included in method ASTM D-1946 with reporting limit of 0.5%. Would that work for you?
Attached is the COC for the referenced work order.

Best Regards,

Xuan Dang
Project Manager
Calscience Environmental Laboratories, Inc.
7440 Lincoln Way
Garden Grove, CA 92841-1427
Phone: 714-895-5494 x229
Fax: 714-894-7501
xdang@calscience.com

The difference is service

0895

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☐ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: SUZANNE MCCLURKIN-NELSON

INCIDENT # (ENV SERVICES): 97093412 ☐ CHECK IF NO INCIDENT # APPLIES

PO #:

SAP #: 12460

DATE: 9/10/2010

PAGE: 1 of 2

SAMPLING COMPANY: Delta Consultants	LOG CODE:	SITE ADDRESS; Street and City: 15275 Washington, San Leandro	State: CA
GLOBAL ID NO.: T0600101226			
ADDRESS: 312 Piercy Rd, San Jose, CA. 95138		EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico, Delta Consultant San Jose, CA	PHONE NO.: 408-826-1862
E-MAIL: apico@deltaenv.com	CONSULTANT PROJECT NO.: SCA152751A		
PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin-Nelson		SAMPLER NAME(S) (Print): Abhik Dutta	LAB USE ONLY
TELEPHONE: 408-826-1869	FAX: 408-225-8506	E-MAIL: smcclurkin-nelson@deltaenv.com	

TURNAROUND TIME (CALENDAR DAYS): ☑ STANDARD (14 DAY) ☐ 5 DAYS ☐ 3 DAYS ☐ 2 DAYS ☐ 24 HOURS ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

please also email results to: adutta@deltaenv.com

- ☐ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED

9/11/10

REQUESTED ANALYSIS

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	Air Analysis: TPH-G Purgeable (8260)	BTEX (8260)	MTBE (8260)	TBA (8260)	Carbon Dioxide (ASTM 1945-96)	Oxygen (ASTM 1945-96)	IPA	METHANE (SWM)	Waste Characterization: CAM 17 Metals (6010)	Run STLC/TCLP Metals/Org Pb if needed	Run Bioassay if Benzene >5000 ppm.	TEMPERATURE ON RECEIPT C°	Container PID Readings or Laboratory Notes
1	SVG-1@3.5'	9/9/10	9:55	AIR				X			X	X	X	X			X						
2	SVG-2@3'	9/9/10	10:25	AIR				X			X	X	X	X	X	X	X	X					used IPA as leak tracer use T0-15 if needed
3	SVG-2@5'	9/9/10	10:40	AIR				X			X	X	X	X	X	X	X	X					
4	SVG-3@3'	9/9/10	11:05	AIR				X			X	X	X	X			X						
5	SVG-4@3'	9/9/10	11:40	AIR				X			X	X	X	X			X						
6	SVG-5@3'	9/9/10	12:05	AIR				X			X	X	X	X	X	X	X	X					
7	SVG-5@5'	9/9/10	12:15	AIR				X			X	X	X	X	X	X	X	X					
8	SVG-6@3'	9/9/10	12:50	AIR				X			X	X	X	X	X	X	X						
9	SVG-6@5'	9/9/10	13:00	AIR				X			X	X	X	X	X	X	X	X					
10	SVG-7@3'	9/9/10	13:30	AIR				X			X	X	X	X			X						

Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
9/10/10			
Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
Relinquished by: (Signature)	Received by: (Signature) CEL	Date: 9/11/10	Time: 10:05

05/2/06 Revision

0895

Shell Oil Products Chain Of Custody Record

LAB (LOCATION)
- ☑ CALSCIENCE (_____)
- ☐ SPL (_____)
- ☐ XENCO (_____)
- ☐ TEST AMERICA (_____)
- ☐ OTHER (_____)

Please Check Appropriate Box:
- ☐ ENV. SERVICES
- ☐ MOTIVA RETAIL
- ☐ SHELL RETAIL
- ☐ MOTIVA SD&CM
- ☑ CONSULTANT
- ☐ LUBES
- ☐ SHELL PIPELINE
- ☐ OTHER _____

Print Bill To Contact Name: SUZANNE MCCLURKIN-NELSON

INCIDENT # (ENV SERVICES): 9 7 0 9 3 4 1 2 ☐ CHECK IF NO INCIDENT # APPLIES

DATE: 9/10/2010

PAGE: 2 of 2

PO #:

SAP #: 1 2 9 4 6 0

SAMPLING COMPANY: Delta Consultants

LOG CODE:

SITE ADDRESS: Street and City: 15275 Washington, San Leandro

State: CA

GLOBAL ID NO.: T0600101226

ADDRESS: 312 Piercy Rd, San Jose, CA. 95138

EDF DELIVERABLE TO (Name, Company, Office Location): Angela Pico, Delta Consultant San Jose, CA

PHONE NO.: 408-826-1862

E-MAIL: apico@deltaenv.com

CONSULTANT PROJECT NO.: SCA152751A

PROJECT CONTACT (Hardcopy or PDF Report to): Suzanne McClurkin-Nelson

SAMPLER NAME(S) (Print): Abhik Dutta 9/9/10

LAB USE ONLY

TELEPHONE: 408-826-1869

FAX: 408-225-8506

E-MAIL: smcclurkin-nelson@deltaenv.com

TURNAROUND TIME (CALENDAR DAYS):
- ☑ STANDARD (14 DAY)
- ☐ 5 DAYS
- ☐ 3 DAYS
- ☐ 2 DAYS
- ☐ 24 HOURS
- ☐ RESULTS NEEDED ON WEEKEND

☐ LA - RWQCB REPORT FORMAT ☐ UST AGENCY:

SPECIAL INSTRUCTIONS OR NOTES :

please also email results to: adutta@deltaenv.com

- ☐ SHELL CONTRACT RATE APPLIES
- ☐ STATE REIMBURSEMENT RATE APPLIES
- ☐ EDD NOT NEEDED
- ☐ RECEIPT VERIFICATION REQUESTED

REQUESTED ANALYSIS

Air Analysis: TPH-G Purgeable (8260); BTEX (8260); MTBE (8260); TBA (8260); Carbon Dioxide (ASTM 1945); Oxygen (ASTM 1945-96); IPA; METHANE (SHW)

Waste Characterization: CAM 17 Metals (6010); Run STLC/TCLP Metals/Org Pb if needed; Run Bioassay if Benzene >5000 ppm.

TEMPERATURE ON RECEIPT C°

LAB USE ONLY	Field Sample Identification	SAMPLING DATE	SAMPLING TIME	MATRIX	PRESERVATIVE HCL	HNO3	H2SO4	NONE	OTHER	NO. OF CONT.	TPH-G	BTEX	MTBE	TBA	Carbon Dioxide	Oxygen	IPA	METHANE	CAM 17 Metals	STLC/TCLP Metals/Org Pb	Bioassay	Container PID Readings or Laboratory Notes
11	SVG-8@3'	9/9/10	14:15	AIR				X			X	X	X	X	X	X	X	X				used IPA as leak tracer use T0-15 if needed
12	SVG-8@5'	9/9/10	14:30	AIR				X			X	X	X	X	X	X	X	X				
13	SVG-8@7.5'	9/9/10	14:45	AIR				X			X	X	X	X	X	X	X	X				
14	SVG-9@3'	9/9/10	15:15	AIR				X			X	X	X	X	X	X	X	X				
15	SVG-9@5'	9/9/10	15:30	AIR				X			X	X	X	X	X	X	X	X				
16	SVG-9@7.5'	9/9/10	15:50	AIR				X			X	X	X	X	X	X	X	X				

	Relinquished by: (Signature)	Received by: (Signature)	Date:	Time:
1	9/10/10			
2				
3		Received by: (Signature) OEL	9/11/10	9:05

05/2/05 Revision

APPENDIX D
HISTORICAL SOIL VAPOR DATA

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

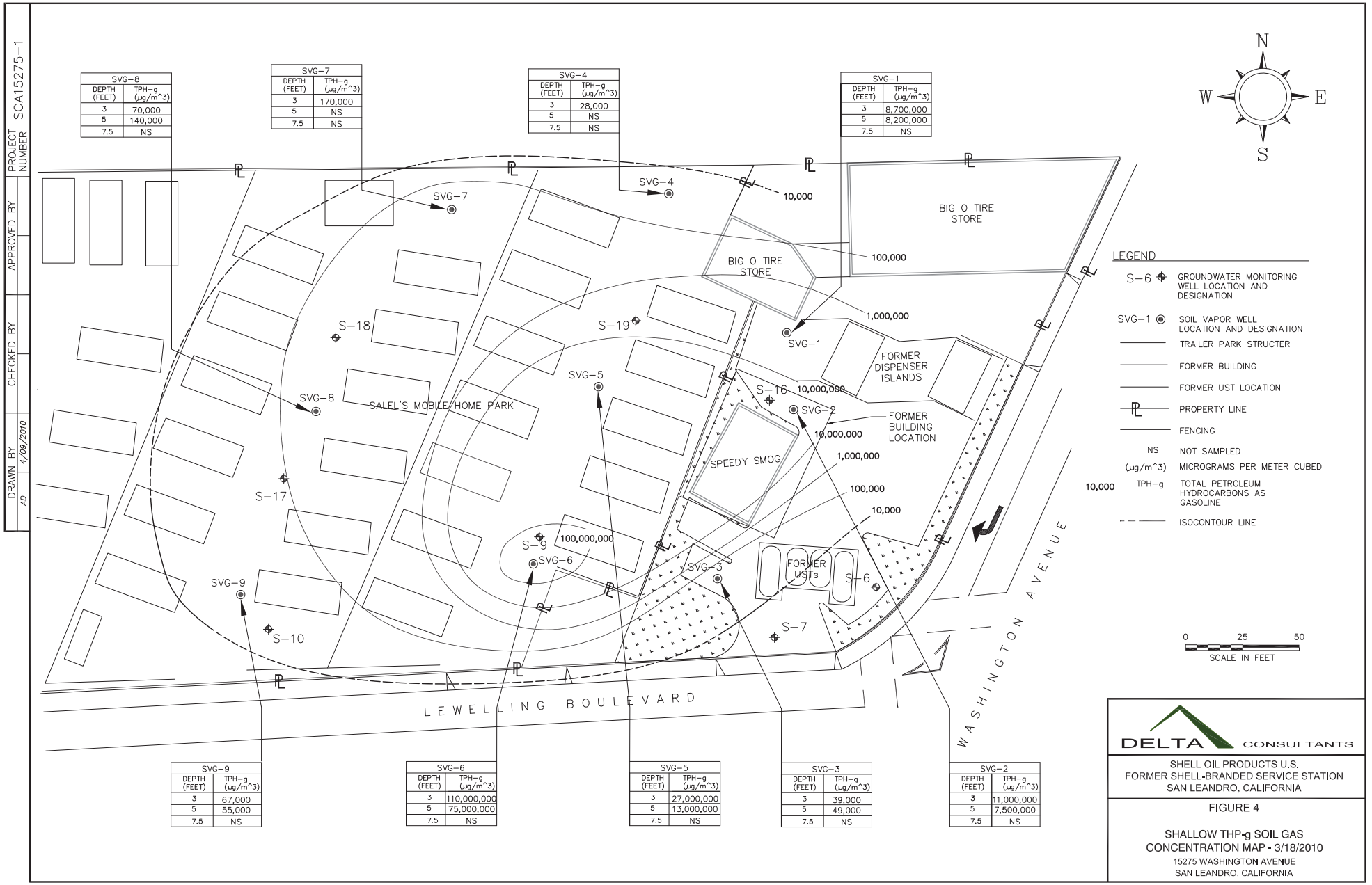
Sample Location (depth, feet)	Date	TPH-g ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	Isopropanol ($\mu g/m^3$)
SVG-1 (3')	03/18/10	**8,700,000**	ND(<8,000)	ND(<9,400)	**11,000**	ND(<22.000)	ND(<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 ESL[1]		10,000	84	63,000	980	21,000	9,400	NA	
Commercial ESL[1]		29,000	280	180,000	3,300	58,000	31,000	NA	

Abbreviations and Notes:
TPH-g - Total petroleum hydrocarbons as gasoline
MTBE - Methyl-tert butyl ether
TBA - Tert-butyl alcohol
$\mu g/m^3$ = Micrograms per cubic meter
ND - Not detected above shown detection limit
1. Environmental Screening Levels (ESLs), Table E-2: Indoor Air and Soil Gas (Vapor Intrusion Concerns), Shallow soil gas, Regional Water Quality Control Board, San Francisco Bay Region, Interim Final (Revised May 2008)

TABLE 2
BIOGENIC GAS ANALYTICAL DATA
Former Shell Service Station
15275 Washington Avenue
San Leandro, California

Sample Location (depth in feet)	Date	TPH-g ($\mu g/m^3$)	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:
$\mu g/m^3$ = Micrograms per cubic meter
%v = Percent by volume
ND = Not detected above shown detection limit



DELTA CONSULTANTS

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

FIGURE 4

SHALLOW THP-g SOIL GAS CONCENTRATION MAP - 3/18/2010

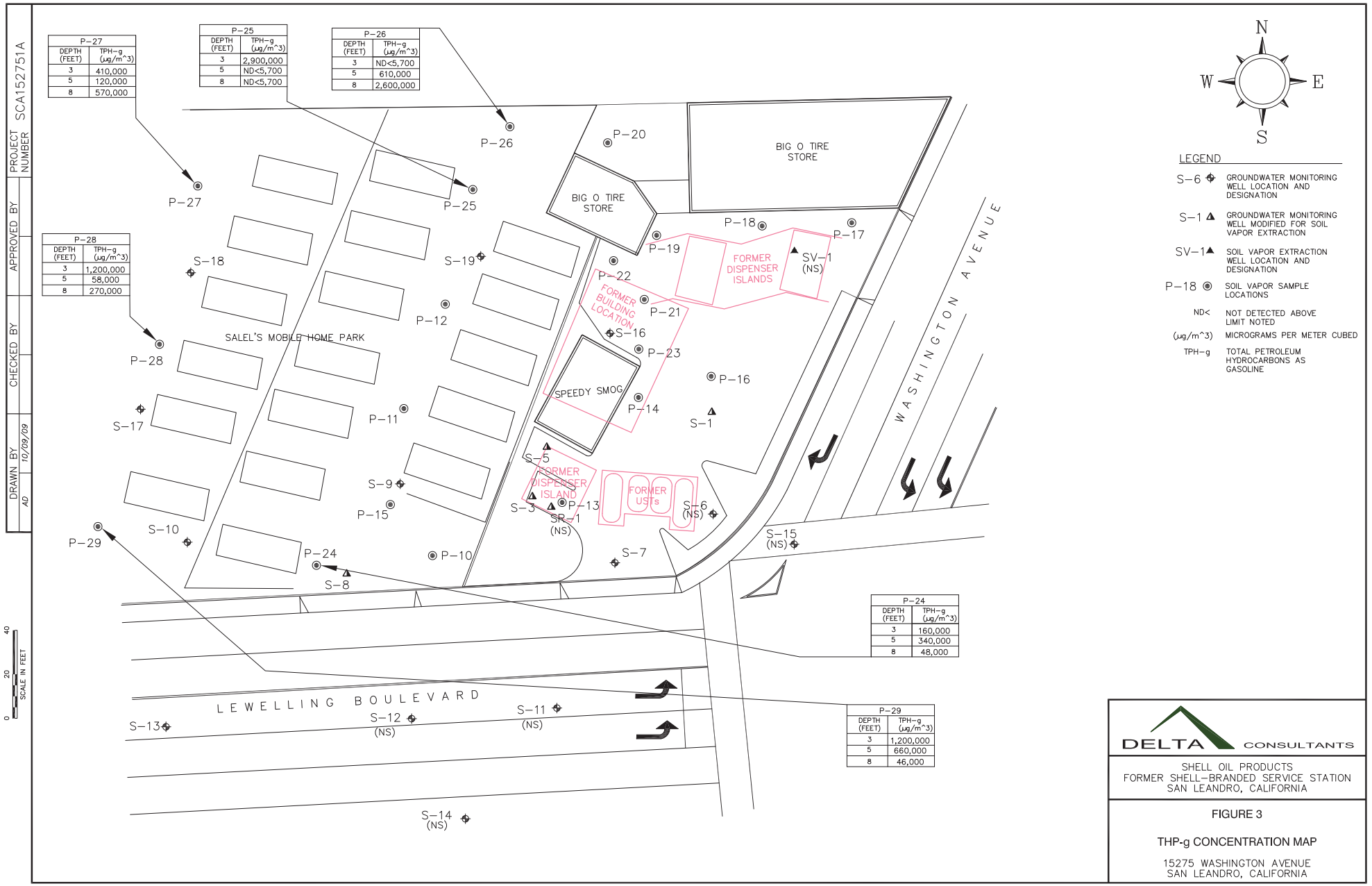
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

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

Sample Location (depth, feet)	Date	TPH-g ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethyl-benzene ($\mu g/m^3$)	Total Xylenes ($\mu g/m^3$)	MTBE ($\mu g/m^3$)	TBA ($\mu g/m^3$)	1,1-difluoro-ethane ($\mu g/m^3$) [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
($\mu g/m^3$) - micrograms per cubic meter
ND - Not detected above shown detection limit

a. Concentrations exceeding 10,000 $\mu g/m^3$ generally indicate the presence of a leak
b. Dilution analysis was performed outside the recommended holding time for tracer gas compound (1,1-diflurorethane)



PROJECT NUMBER SCA152751A
APPROVED BY
CHECKED BY
DRAWN BY AD 10/09/09

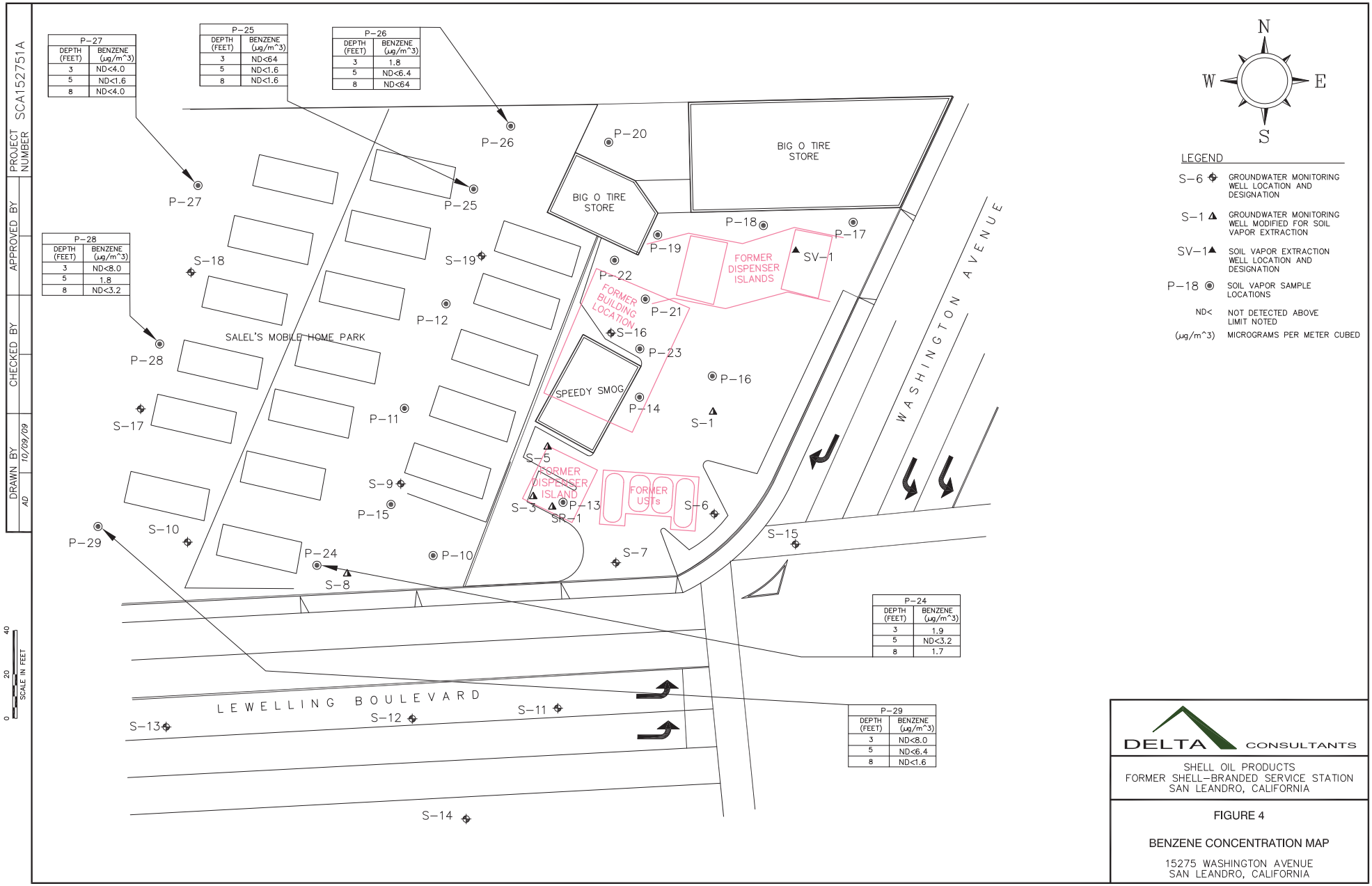
DELTA CONSULTANTS

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

FIGURE 3

THP-g CONCENTRATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA



PROJECT NUMBER SCA152751A
APPROVED BY
CHECKED BY
DRAWN BY AD 10/09/09

DELTA CONSULTANTS

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

FIGURE 4

BENZENE CONCENTRATION MAP

15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

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	611/2008	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

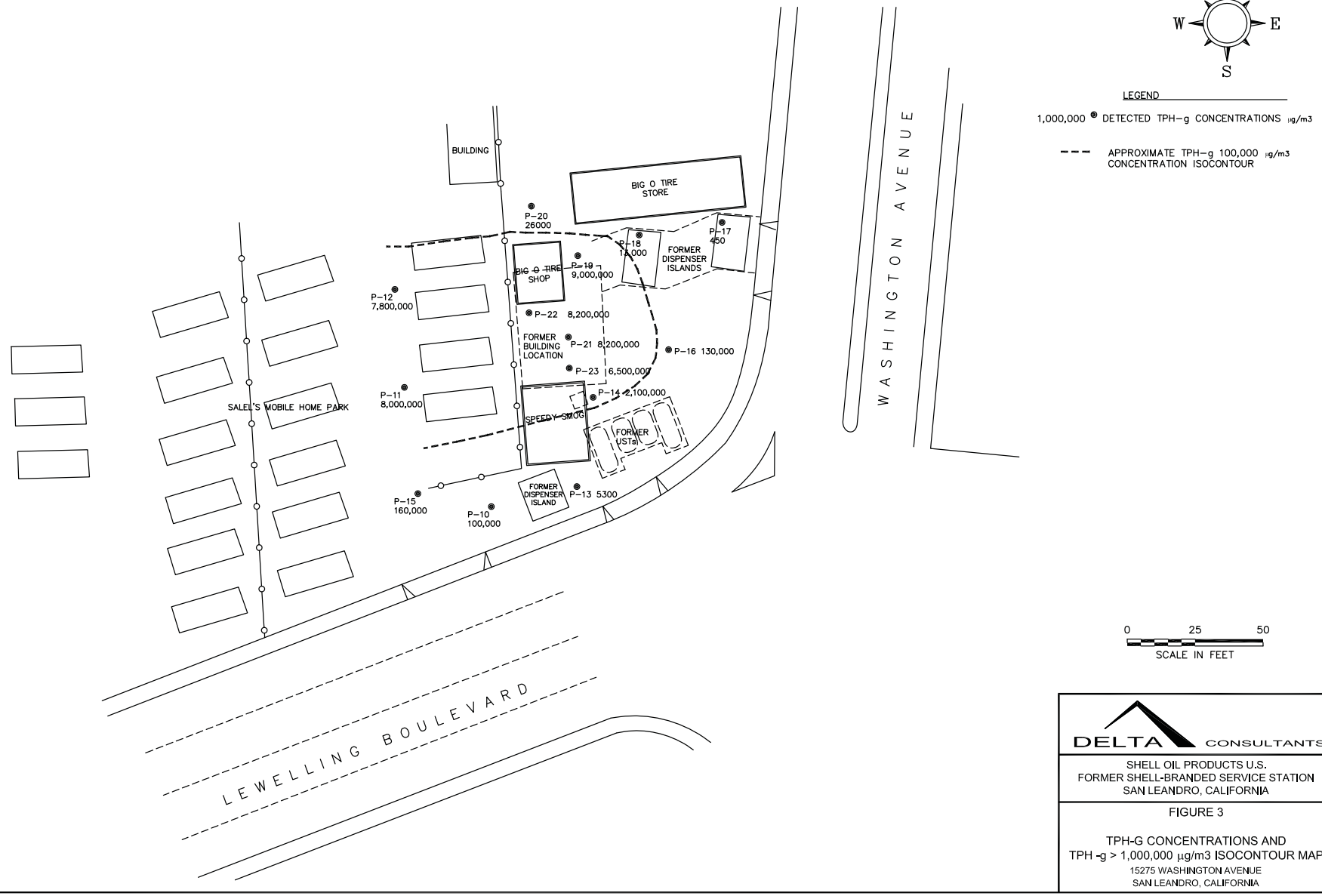
2-Propanol= Isopropyl alcohol

ug/m3 = Microgram per cubic meter

<n = Not detected, below method detection limit

D = Duplicate sample

LD = Lab duplicate



DRAWN BY	CHECKED BY	APPROVED BY	PROJECT NUMBER
AD 6/19/08			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 µg/m3 ISOCONTOUR MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

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AD 6/19/08			SCA15275-1

DELTA CONSULTANTS

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

FIGURE 4

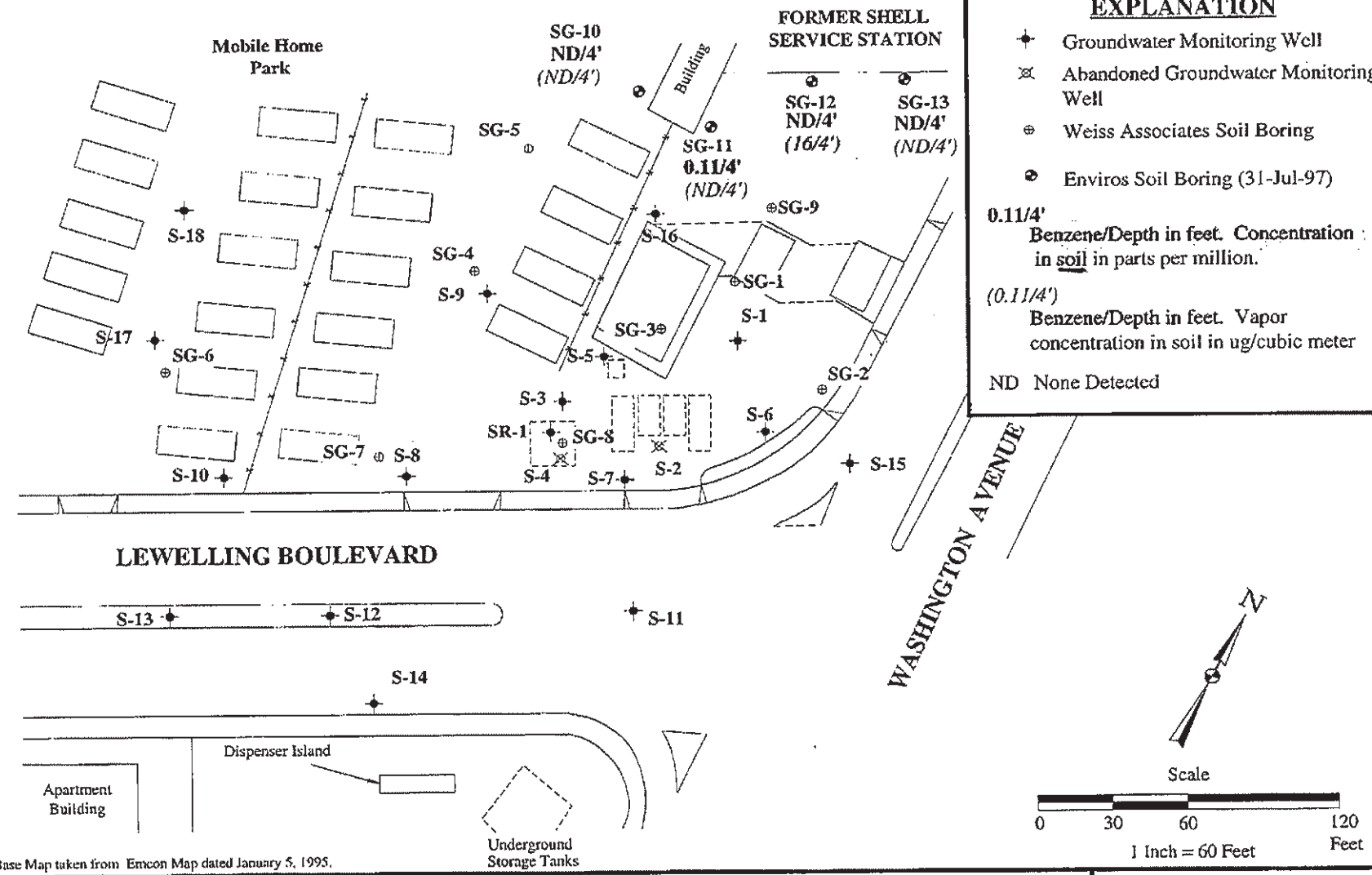
BENZENE CONCENTRATIONS AND
BENZENE > 1,000 µg/m3 ISOCONTOUR MAP
15275 WASHINGTON AVENUE
SAN LEANDRO, CALIFORNIA

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 (µg/m³)	B (µg/m³)	T (µg/m³)	E (µg/m³)	X (µg/m³)	MTBE (µg/m³)	Comments
SG-10-4								
4	31-Jul-97	1700	<7.0	11	<9.5	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



EXPLANATION

- Groundwater Monitoring Well
- Abandoned Groundwater Monitoring Well
- Weiss Associates Soil Boring
- Enviros Soil Boring (31-Jul-97)

0.11/4' Benzene/Depth in feet. Concentration in soil in parts per million.

(0.11/4') Benzene/Depth in feet. Vapor concentration in soil in ug/cubic meter

ND None Detected

Base Map taken from Emcon Map dated January 5, 1995.

PLATE **2**

SITE MAP / BENZENE CONCENTRATION MAP
Shell Oil Products Company
15275 Washington Avenue
San Leandro, California

enviros
95276.01

Drawn By: DML Date: 7-22-97

Approved By: _____ Date: 8-13-97

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 (ug/m³) TPH (C_4+ as gas)	MtBE	Benzene	Toluene	Ethylbenzene	m,p,o-Xylene	InterPhase Data (%) Carbon Dioxide	Oxygen	Nitrogen	Methane	Comments
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-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:	2 ft	23,256,200	118,081	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 tight
SG-06 4ft	4 ft	66,000	22	8	150	380	790	0.5%	19.9%	79.6%	< 0.1%	Good flow
SG-07-4ft	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	46,000	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:	4 ft	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 ft	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.

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	TPH (C_4+ as gas)	MTBE	Benzene	Toluene	Ethylbenzene	m,p,o-Xylene	Carbon Dioxide	Oxygen	Nitrogen	Methane	Comments
		Air Toxics LTD Data (ug/m³)						InterPhase Data (%)				
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%	79.8%	< 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 depth
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 depth
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

Notes: < - Below the method detection limit.

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

APPENDIX E

TABLE E-2 – RWQCB SHALLOW SOIL GAS ENVIRONMENTAL SCREENING LEVELS FOR EVALUATION OF POTENTIAL VAPOR INTRUSION CONCERNS

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)	Lowest C/I ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)
Acenaphthene	V	S	4.4E+04		4.4E+04	1.2E+05		1.2E+05
Acenaphthylene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Acetone	V	L	6.6E+05		6.6E+05	1.8E+06		1.8E+06
Aldrin	NV	S						
Anthracene	V	S	2.2E+05		2.2E+05	6.1E+05		6.1E+05
Antimony	NV	S						
Arsenic	NV	S						
Barium	NV	S						
Benzene	V	L	8.4E+01	8.4E+01	6.3E+03	2.8E+02	2.8E+02	1.8E+04
Benzo(a)anthracene	NV	S						
Benzo(b)fluoranthene	NV	S						
Benzo(k)fluoranthene	NV	S						
Benzo(g,h,i)perylene	NV	S						
Benzo(a)pyrene	NV	S						
Beryllium	NV	S						
1,1-Biphenyl	V	S						
Bis(2-chloroethyl) ether	V	L	7.4E+00	7.4E+00		2.5E+01	2.5E+01	
Bis(2-chloroisopropyl) ether	V	L	3.4E+00	3.4E+00	2.9E+04	1.2E+01	1.2E+01	8.2E+04
Bis(2-ethylhexyl) phthalate	NV	S						
Boron	NV	S						
Bromodichloromethane	V	L	1.4E+02	1.4E+02	1.5E+04	4.6E+02	4.6E+02	4.1E+04
Bromoform (Tribromomethane)	NV	S						
Bromomethane	V	G	1.0E+03		1.0E+03	2.9E+03		2.9E+03
Cadmium	NV	S						
Carbon tetrachloride	V	L	1.9E+01	1.9E+01	8.3E+03	6.3E+01	6.3E+01	2.3E+04
Chlordane	NV	S						
p -Chloroaniline	NV	S						
Chlorobenzene	V	L	2.1E+05		2.1E+05	5.8E+05		5.8E+05
Chloroethane	V	G	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Chloroform	V	L	4.6E+02	4.6E+02	6.3E+04	1.5E+03	1.5E+03	1.8E+05
Chloromethane	V	G	1.9E+04		1.9E+04	5.3E+04		5.3E+04
2-Chlorophenol	V	L	3.7E+03		3.7E+03	1.0E+04		1.0E+04
Chromium (total)	NV	S						
Chromium III	NV	S						
Chromium VI	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)	Lowest C/I ($\mu g/m^3$)	Carcinogenic Effects ($\mu g/m^3$)	Noncarcinogenic Effects ($\mu g/m^3$)
Chrysene	NV	S						
Cobalt	NV	S						
Copper	NV	S						
Cyanide	NV	S	1.5E+04		1.5E+04	4.1E+04		4.1E+04
Dibenz(a,h)anthracene	NV	S						
Dibromochloromethane	V	S						
1,2-dibromo-3-chloropropane	V	L	1.3E+00	1.3E+00	4.2E+01	4.3E+00	4.3E+00	1.2E+02
1,2-Dibromoethane	V	S	4.1E+00	4.1E+00	1.9E+03	1.4E+01	1.4E+01	5.3E+03
1,2-Dichlorobenzene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
1,3-Dichlorobenzene	V	L	2.2E+04		2.2E+04	6.1E+04		6.1E+04
1,4-Dichlorobenzene	V	S	2.2E+02	2.2E+02	1.7E+05	7.4E+02	7.4E+02	4.7E+05
3,3-Dichlorobenzidine	NV	S						
Dichlorodiphenyldichloroethane (DDD)	NV	S						
Dichlorodiphenyldichloroethene (DDE)	NV	S						
Dichlorodiphenyltrichloroethane (DDT)	NV	S						
1,1-Dichloroethane	V	L	1.5E+03	1.5E+03	1.0E+05	5.1E+03	5.1E+03	2.9E+05
1,2-Dichloroethane	V	L	9.4E+01	9.4E+01	1.0E+03	3.1E+02	3.1E+02	2.9E+03
1,1-Dichloroethene	V	L	4.2E+04		4.2E+04	1.2E+05		1.2E+05
cis-1,2-Dichloroethene	V	L	7.3E+03		7.3E+03	2.0E+04		2.0E+04
trans-1,2-Dichloroethene	V	L	1.5E+04		1.5E+04	4.1E+04		4.1E+04
2,4-Dichlorophenol	NV	S						
1,2-Dichloropropane	V	L	2.4E+02	2.4E+02	8.3E+02	8.2E+02	8.2E+02	2.3E+03
1,3-Dichloropropene	V	L	1.5E+02	1.5E+02	4.2E+03	5.1E+02	5.1E+02	1.2E+04
Dieldrin	NV	S						
Diethyl phthalate	NV	S						
Dimethyl phthalate	NV	S						
2,4-Dimethylphenol	V	S						
2,4-Dinitrophenol	NV	S						
2,4-Dinitrotoluene	NV	S						
1,4-Dioxane	NV	L						
Dioxin (2,3,7,8-TCDD)	NV	S						
Endosulfan	NV	S						
Endrin	NV	S						
Ethylbenzene	V	L	9.8E+02	9.8E+02	2.1E+05	3.3E+03	3.3E+03	5.8E+05
Fluoranthene	NV	S						

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure			Commercial/Industrial Land Use		
			Lowest Residential	Carcinogenic Effects	Noncarcinogenic Effects	Lowest C/I	Carcinogenic Effects	Noncarcinogenic Effects
			($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)	($\mu g/m^3$)
Fluorene	V	S	2.9E+04		2.9E+04	8.2E+04		8.2E+04
Heptachlor	NV	S						
Heptachlor epoxide	NV	S						
Hexachlorobenzene	NV	S						
Hexachlorobutadiene	NV	S						
γ-Hexachlorocyclohexane (Lindane)	NV	S						
Hexachloroethane	NV	S						
Indeno(1,2,3-c,d)pyrene	NV	S						
Lead	NV	S						
Mercury (elemental)	V	S	1.9E+01		1.9E+01	5.3E+01		5.3E+01
Methoxychlor	NV	S						
Methylene chloride	V	L	5.2E+03	5.2E+03	8.3E+04	1.7E+04	1.7E+04	2.3E+05
Methyl ethyl ketone	V	L	1.0E+06		1.0E+06	2.9E+06		2.9E+06
Methyl isobutyl ketone	V	L	6.3E+05		6.3E+05	1.8E+06		1.8E+06
Methyl mercury	NV	S						
2-Methylnaphthalene	V	S						
tert-Butyl methyl ether	V	L	9.4E+03	9.4E+03	6.3E+05	3.1E+04	3.1E+04	1.8E+06
Molybdenum	NV	S						
Naphthalene	V	S	7.2E+01	7.2E+01	6.3E+02	2.4E+02	2.4E+02	1.8E+03
Nickel	NV	S						
Pentachlorophenol	NV	S						
Perchlorate	NV	S						
Phenanthrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Phenol	NV	S						
Polychlorinated biphenyls (PCBs)	NV	S						
Pyrene	V	S	2.2E+04		2.2E+04	6.1E+04		6.1E+04
Selenium	NV	S						
Silver	NV	S						
Styrene	V	L	1.9E+05		1.9E+05	5.3E+05		5.3E+05
tert-Butyl alcohol	V	L						
1,1,1,2-Tetrachloroethane	V	L	3.2E+02	3.2E+02		1.1E+03	1.1E+03	
1,1,2,2-Tetrachloroethane	V	L	4.2E+01	4.2E+01	4.4E+04	1.4E+02	1.4E+02	1.2E+05
Tetrachloroethene	V	L	4.1E+02	4.1E+02	8.3E+04	1.4E+03	1.4E+03	2.3E+05
Thallium	NV	S						
Toluene	V	L	6.3E+04		6.3E+04	1.8E+05		1.8E+05

Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only)

Chemcial	Physical State		Residential Exposure: Lowest Residential ($\mu g/m^3$)	Residential Exposure: Carcinogenic Effects ($\mu g/m^3$)	Residential Exposure: Noncarcinogenic Effects ($\mu g/m^3$)	Commercial/Industrial Land Use: Lowest C/I ($\mu g/m^3$)	Commercial/Industrial Land Use: Carcinogenic Effects ($\mu g/m^3$)	Commercial/Industrial Land Use: Noncarcinogenic Effects ($\mu g/m^3$)
Toxaphene	NV	S						
TPH (gasolines)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (middle distillates)	V	L	1.0E+04		1.0E+04	2.9E+04		2.9E+04
TPH (residual fuels)	NV	L/S						
1,2,4-Trichlorobenzene	V	L	8.3E+02		8.3E+02	2.3E+03		2.3E+03
1,1,1-Trichloroethane	V	L	4.6E+05		4.6E+05	1.3E+06		1.3E+06
1,1,2-Trichloroethane	V	L	1.5E+02	1.5E+02	2.9E+03	5.1E+02	5.1E+02	8.2E+03
Trichloroethene	V	L	1.2E+03	1.2E+03	1.3E+05	4.1E+03	4.1E+03	3.5E+05
2,4,5-Trichlorophenol	V	S	7.3E+04		7.3E+04	2.0E+05		2.0E+05
2,4,6-Trichlorophenol	NV	S						
Vanadium	NV	S						
Vinyl chloride	V	G	3.1E+01	3.1E+01	2.1E+04	1.0E+02	1.0E+02	5.8E+04
Xylenes	V	L	2.1E+04		2.1E+04	5.8E+04		5.8E+04
Zinc	NV	S						

Notes:

Soil gas screening levels intended to be protective of indoor air quality, calculated for volatile chemicals only.
Physical state of chemical at ambient conditions (V - volatile, NV - nonvolatile, S - solid, L - liquid, G - gas).
Chemical considered to be volatile if Henry's Law constant (atm m^3/mole) >10^{-5} and molecular weight <200 (see Table E-1).
Dibromochloromethane, dibromochloropropane and pyrene considered volatile for purposes of modeling (USEPA 2004).
Target cancer risk = 1E-06, Target Hazard Quotient = 0.2 for all chemicals.
Residential soil gas:indoor air attenuation factor = 0.001 (1/1000). Commercial/industrial soil gas:indoor air attenuation factor = 0.0005 (1/2000).
Soil gas screening level for ethanol based on potential indoor air nuisance concerns (refer to Section 5.3.3 and Table H series).
soils or limited soil impacts and no groundwater source of VOCs.