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1870 Ogden Drive
Burlingame, CA 94010
(650) 292-9100
Fax (650) 552-9012

5 July 2012

Mr. Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Subject: RO0000042 / RO0000043
Report of Additional Site Investigation and 2012 Request for Site Closure
6601/6603 Shellmound Street, Emeryville, California
(EKI 950074.05)

Dear Mr. Detterman:

On behalf of Sybase, Inc. ("Sybase"), Erler & Kalinowski ("EKI"), is pleased to submit the *Report of Additional Site Investigation and 2012 Request for Site Closure* for the property located at 6601/6603 Shellmound Street (formerly Bay Street), in Emeryville, California. This report is being submitted to you in response to your letter, dated 1 November 2011, and your email request for additional sampling, dated 12 April 2012.

We would appreciate it if you would copy the individuals listed below on correspondence regarding this site.

Please do not hesitate to call if you have any questions regarding this document.

Very truly yours,

ERLER & KALINOWSKI, INC.

Thomas J. Belick, Vice President

for
Michelle K. King, Ph.D.
Vice President

Jeff Rolf Shaw, P.G.
Project Geologist



Expires 31 July 2013

cc: Vince Herington, Sybase



July 5, 2012

Mr. Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, CA 94502

Subject: RO0000042/RO0000043
Report of Additional Site Investigation and 2012 Request for Site Closure
6601/6603 Shellmound Street
Emeryville, CA

Dear Mr. Detterman,

I am a legally authorized representative of Sybase, Inc., and 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.

If you have any questions, please contact me at 925-236-4595.

Regards,

Sybase, Inc.

Vince Herington
Director, Operations

ATTACHMENT

Attachment A: Report of Additional Site Investigation and 2012 Request for Site Closure,
6601/6603 Shellmound Street, Emeryville, CA



Erler &
Kalinowski,
Inc.

Report of Additional Site Investigation and 2012 Request for Site Closure

6601/6603 Shellmound Street
Emeryville, California

Prepared by:

Erler & Kalinowski, Inc.

**1870 Ogden Drive
Burlingame, California 94010**

www.ekiconsult.com

3 July 2012

EKI 950074.05

Consulting engineers and scientists

**Report of Additional Site Investigation and
2012 Request for Site Closure
6601 - 6603 Shellmound Street, Emeryville, California**

TABLE OF CONTENTS

1	INTRODUCTION	1
1.1	Limitations and Exceptions of Site Investigation	2
1.2	Report Reliance.....	2
2	SUMMARY OF BACKGROUND AND SITE HISTORY	2
2.1	1997 Closure Request	3
2.2	ACEH 2008 Request for Additional Investigation	4
2.3	2010 Preferential Pathway Evaluation, Additional Site Investigation, and Vapor Intrusion Assessment	4
2.3.1	Preferential Pathway Evaluation.....	4
2.3.2	2010 Additional Site Investigation	4
2.3.3	2010 Vapor Intrusion Assessment	5
2.4	ACEH 2011 Request for Vapor Intrusion Work Plan	6
2.5	2011 Work Plan for Subslab Vapor Sampling.....	7
3	2011 - 2012 FIELD INVESTIGATION	7
3.1	Preparation for Sampling	7
3.2	Groundwater Sampling and Analysis	8
3.3	Subslab Vapor Probe Installation and Sampling	8
4	2011 - 2012 FIELD INVESTIGATION RESULTS.....	9
4.1	2011 Groundwater Analytical Data	9
4.2	2011 and 2012 Subslab Vapor Analytical Data.....	9
4.2.1	December 2011 Results	10
4.2.2	May 2012 Results	10
4.2.3	Sample Quality (Leak-Check analysis)	11
5	DISCUSSION OF CURRENT SITE CONDITIONS	11
5.1	Summary of Site Characterization	11
5.2	Concentration Trend Analysis of Benzene in Groundwater	13
6	REQUEST FOR SITE CLOSURE UNDER 2012 SWRCB LOW-THREAT UNDERGROUND STORAGE TANK CLOSURE POLICY CRITERIA	14
6.1	Criteria for Closure under SWRCB Final Low-Threat Underground Storage Tank Case Closure Policy Adopted 1 May 2012.....	14
6.2	General Criteria for Low-Threat Closure	14
6.3	Specific Criteria for Groundwater	16
6.4	Specific Criteria for Vapor Intrusion to Indoor Air	17
6.5	Specific Criteria for Direct Contact and Outdoor Air Exposure.....	18
7	REFERENCES	19

**Report of Additional Site Investigation and
2012 Request for Site Closure
6601 - 6603 Shellmound Street, Emeryville, California**

TABLE OF CONTENTS

LIST OF TABLES

Table 1	Summary of Analytical Results for Groundwater Samples from Monitoring Wells
Table 2	Summary of Groundwater Analytical Data from the Spring 2010 Investigation
Table 3	Summary of Soil Analytical Data from the Spring 2010 Investigation
Table 4	Summary of Analytical Results for Sub-Slab Vapor Samples
Table 5	Results of Trend Analysis, Benzene Concentrations in Groundwater, 1989 - 2011

LIST OF FIGURES

Figure 1	Site Location
Figure 2	Groundwater Sampling Results
Figure 3	Soil Sampling Results
Figure 4	Subslab Vapor Sampling Results
Figure 5	Benzene Concentrations Over Time in Groundwater Monitoring Wells

APPENDICES

Appendix A	Potentiometric Surface Map (after PES, 2012)
Appendix B	Soil and Groundwater Data Tables from 1996 EKI Investigation
Appendix C	Field Methods and Procedures for Subslab Vapor Sampling
Appendix D	Analytical Laboratory Reports

1 INTRODUCTION

On behalf of Sybase, Inc. (“Sybase”), Erler & Kalinowski, Inc. (“EKI”) is pleased to submit this *Report of Additional Site Investigation and 2012 Request for Site Closure* pertaining to underground storage tanks (“USTs”) formerly located at 6601 and 6603 Shellmound Street (formerly Bay Street), in Emeryville, California (the “Site”) (Figure 1). Sybase sold the Site in 1998, and the property currently is occupied by the Ex’pression College for Digital Arts. Historically, the Site was part of the former Emeryville municipal landfill.

This report and closure request summarizes additional Site characterization performed by Sybase in accordance with the following documents:

- *Work Plan for Subslab Vapor Sampling, 6601/6603 Bay Street and 1650 65th Street, Emeryville, California*, (“Work Plan”) prepared by EKI and submitted to Alameda County Environmental Health Department (“ACEH”) on 15 August 2011;
- A letter from ACEH, dated 1 November 2011, entitled Modified Work Plan Approval; Fuel Leak Case No’s. RO0000042 / RO0000043 and Geotracker Global ID’s TO000100825 / T0600100470, Mussalem / Sybase and Richardson / Sybase, 6601 and 6603 Bay Street, Emeryville, CA 94608, and
- An ACEH email to EKI requesting additional subslab vapor sampling, dated 12 April 2012, with subject line *RE: Data for 6601/6603 Shellmound (RO42 and RO43)*. This email discussed results of subslab vapor sampling conducted by EKI on 23 December 2011, which was reported as draft tables and figures submitted to ACEH in an email dated 3 February 2012.

This report provides background information and a summary of the Site history in Section 2, describes recent field investigations of vapor intrusion and monitoring well sampling in Section 3, summarizes analytical results of the investigations in Section 4, discusses the current understanding of Site conditions in Section 5, and in Section 6 compares conditions at the Site with specific criteria under the California State Water Resources Control Board (“SWRCB”) Low-Threat Underground Storage Tank Case Closure Policy (“Low-Threat Closure Policy”), adopted 1 May 2012.

Based on the findings described herein, as well as on previous investigations, EKI suggests that no further study or action at the Site is necessary, and again requests that the Site be considered for closure under the current Low-Threat Closure Policy.

1.1 Limitations and Exceptions of Site Investigation

The conclusions and recommendations presented herein are our professional opinion and are not a warranty or guaranty as to the presence, absence, or extent of contamination at the Site or of releases from or near the Site. The facts presented herein are based on available information obtained by EKI and represent existing conditions at the Site at the time the information was collected.

1.2 Report Reliance

This report was prepared pursuant to EKI's Agreement with Sybase, dated 4 February 2009, and subsequent work authorizations, dated 16 May 2009, 15 March 2010, and 22 April 2011. This report is for the sole use and reliance of Sybase. Unless specifically authorized in writing in an agreement acceptable to EKI, the reliance on this report by any other entity or third party is not permitted or authorized. Reliance on the information contained in this report by any other entity or third party without written authorization by EKI does not make the third party a beneficiary to EKI's Agreement with Sybase. Any such unauthorized reliance on or use of this report, including any of its information or conclusions, will be at such third party's sole risk.

2 SUMMARY OF BACKGROUND AND SITE HISTORY

Three underground fuel storage tanks ("USTs") were reportedly installed at the Site in 1973.¹ The general former location of the USTs is shown on Figure 2. The 6,000-gallon easternmost UST was used to store diesel; the central 7,500-gallon UST was used to store leaded gasoline, and the western 2,000-gallon UST was used for unleaded gasoline. This history of the tank removal and associated monitoring is summarized below. The subsequent closure requests and follow-up investigations are described in the sections that follow the summary.

- The USTs were removed from the Site in August and October 1989. At the time of the removal, "no obvious holes, perforations, or corrosion was noted". The tanks had reportedly passed system pressurization tests in 1987 and 1989. Free product flowed into the excavation. During the period from 23 August to 12 September 1989, a reported total of 4,950 gallons of accumulated petroleum and groundwater was removed by a hazardous waste hauler and disposed offsite. The excavation was extended to a depth of approximately 15 to 16 feet below ground surface ("bgs"), and remained open until it was dewatered and backfilled on 23 February 1990 (Dubovsky and Petite, 1990).

¹A report prepared by William Dubovsky Environmental and Petite Engineering, dated July 1990 ("Dubovsky & Petite, 1990") summarized the history and removal of the USTs, and soil and groundwater sampling performed at that time.

- Analytical results for soil and groundwater samples collected in 1989 to 1990 from the excavation sidewalls and excavation pit, respectively, indicated the presence of extractable petroleum hydrocarbons quantified as diesel (“TEPH”), purgeable petroleum hydrocarbons quantified as gasoline (“TPPH”), oil and grease, and benzene, toluene, ethylbenzene, and xylenes (“BTEX”) in both soil and groundwater.
- Groundwater monitoring was performed from 1989 through 1997. Groundwater samples were collected from two monitoring wells (MW-5 and MW-7), located off-site and 50 to 75 feet downgradient of the former tanks, and analyzed for TPPH and BTEX (Figure 2) (PES, 1995). In 1996 and 1997, EKI collected samples from these wells on behalf of Sybase, and analyzed the samples for TEPH, TPPH, BTEX, and methyl tertiary butyl ether (“MTBE”) (EKI, 1997a). Results of historical groundwater monitoring are included in Table 1.
- In 1996, EKI drilled and sampled six soil boreholes at the Site to assess the lateral extent of petroleum hydrocarbons and related constituents in soil and groundwater (EKI, 1996). Results of the groundwater sampling from that investigation are shown on Figure 3. Tables summarizing all soil and groundwater results from the 1996 investigation are provided in Appendix A.

2.1 1997 Closure Request

In 1997, EKI, on behalf of Sybase, submitted a closure report (EKI, 1997a) and closure report addendum (EKI, 1997b) requesting that ACEH grant closure of the case. Arguments in favor of closing the Site were based on (a) a lack of significant sources of petroleum hydrocarbons related to the former USTs in shallow soil; (b) a lack of polycyclic aromatic hydrocarbons (“PAHs”) and methyl-tert-butyl ether (“MTBE”) in soil; (c) a Mann-Kendall statistical analysis of Site historical groundwater concentrations of petroleum compounds indicating that the plume was stable or decreasing; (d) a risk analysis indicating that potential human health risks due to residual chemicals related to the former USTs were less than or within U.S. EPA’s acceptable risk range, and that the risks also were less than California State Proposition 65 notification level of 10^{-5} ; and (e) comparison of Site groundwater concentrations to water quality objectives for protection of aquatic organisms indicating that chemicals of concern at the Site presented minimal potential risks to the environment.

In response to the closure report, ACEH issued a letter, dated 23 June 1998 (ACEH, 1998), indicating that ACEH was ready to prepare a case closure memorandum for review by ACEH staff and submittal to the Regional Water Quality Control Board, San Francisco Bay Region (“RWQCB”). The letter further indicated that a case closure letter may be issued within 60 to 90 days of the date of the June 1998 letter. However, a case closure letter for the Site was never received by Sybase.

Eight years later, in 2006, ACEH requested all available documents associated with the Site from Sybase, because case files maintained by ACEH reportedly were missing and could not be located. Sybase complied with ACEH's request that year.

2.2 ACEH 2008 Request for Additional Investigation

After reviewing the available information, ACEH requested in a December 2008 letter that Sybase (a) define the extent of separate phase and dissolved phase petroleum hydrocarbons in groundwater, (b) assess potential migration and exposure pathways for hydrocarbons, including both utility lines and nearby wells, (c) define the vertical and lateral extent of petroleum hydrocarbons in soil, and (d) assess the vapor intrusion pathway through soil gas sampling (ACEH, 2008).

Representatives from EKI, Sybase, and Griffin Capital Management (property managers for the Site and the adjacent 1650 65th Street parcel) met with ACEH on 16 April 2009 to discuss the agency's concerns and explore options to address these concerns.

2.3 2010 Preferential Pathway Evaluation, Additional Site Investigation, and Vapor Intrusion Assessment

In June 2009, EKI submitted a Work Plan to ACEH for additional site characterization and a preferential pathway evaluation. ACEH approved the Work Plan, conditional upon incorporation of minor revisions, in a letter dated 14 August 2009. EKI addressed the requested revisions in a follow-up letter dated 11 September 2009.

2.3.1 Preferential Pathway Evaluation

EKI presented initial findings of the preferential pathway study in a section of the 2009 Work Plan (EKI, 2009). EKI described the results of the complete evaluation, including a well survey and utility assessment in the May 2010 report entitled *Site Investigation And Closure Request Report, 6601/6603 Shellmound Street, Emeryville, California* (EKI, 2010). No lateral or vertical conduits were identified as part of the preferential pathway evaluation. The well survey indicated that known offsite wells located within 500 feet of the Site were screened no deeper than 30 ft bgs, and were used only for groundwater investigation or remediation purposes. Potential lateral conduits such as buried utilities were confirmed to exist only above the saturated zone.

2.3.2 2010 Additional Site Investigation

In March and April 2010, EKI performed additional characterization activities at the Site, including drilling three boreholes (SB-7, SB-8, and SB-9) to depths of 18 to 24 feet below ground surface ("ft bgs") for collection of soil samples, and drilling four boreholes

(GGW-1, GGW-2, GGW-3, and GGW-4) to depths of 13.5 to 15 ft bgs for grab groundwater sampling. Soil and groundwater samples were collected and analyzed for petroleum hydrocarbons and related constituents. The objectives of the sampling were to characterize the lateral and vertical extent of petroleum hydrocarbons and related constituents in soil and groundwater to the south, southeast, and east of the former tank excavation area (Figures 2 and 3).

Soil and groundwater samples were analyzed for TPHH, TEPH, BTEX compounds, fuel oxygenates including 1,2-dibromoethane (“EDB”), and 1,2-dichloroethane (“1,2-DCA”), and polycyclic aromatic hydrocarbons (“PAHs”). Soil samples also were analyzed for moisture content, and groundwater samples were analyzed for total dissolved solids (“TDS”). Analytical results for grab groundwater and soil samples from 2010 are summarized in Tables 2 and 3. Detailed descriptions of drilling and sampling techniques, borehole logs, field notes, and full analytical results are compiled in EKI (2010). Key findings from the site investigation included:

- Residual petroleum hydrocarbons in soil from the former USTs at the Site generally are restricted to the saturated zone. Volatile organic compound (“VOC”) and polycyclic aromatic hydrocarbon (“PAH”) concentrations in soil generally remain below commercial/industrial Environmental Screening Levels (“ESLs”) published by the California Regional Water Quality Control Board, San Francisco Bay Region (“RWQCB”). The Site is paved and there is no direct-contact exposure pathway based on the current usage.
- The lateral extent of petroleum hydrocarbons and related constituents in groundwater has been characterized. Although a sheen is present near and downgradient of the former tank area, the extent is limited, as shown by groundwater analytical data at locations MW-5, MW-7, GGW-3 and GGW-4 on Figure 2. A map of the piezometric surface using Site wells (PES, 2012) shows the local gradient direction to be southwest (Appendix B).
- The concentration of benzene in monitoring wells MW-5 and MW-7 has decreased significantly over time to below detection limits, as shown in Table 1. In addition, petroleum hydrocarbon and related constituent concentrations in grab groundwater samples collected in 2010 were significantly lower than those collected in 1996.

2.3.3 2010 Vapor Intrusion Assessment

In the 2008 letter (with clarifications in 2009), ACEH requested that a vapor intrusion assessment be performed at the Site, expressing concern that benzene and naphthalene could pose a risk to human health via the vapor intrusion pathway. Based on discussion with ACEH, it was agreed that EKI would use existing groundwater and soil analytical

data to assess the potential for vapor intrusion. EKI compared available groundwater data to the ESLs for vapor intrusion concerns (RWQCB, 2008).

Groundwater analytical results from the 2010 investigation are summarized in Table 2. Benzene was detected at 56 ug/L in sample GGW-1, near the former UST excavation, 2.1 ug/L in sample GGW-3, located east and upgradient of the former USTs, and 0.9 ug/L in sample GGW-2, located southeast and cross-gradient of the former USTs. Naphthalene was not detected above laboratory reporting limits of 9.4 ug/L to 98 ug/L in the four grab groundwater samples.

The maximum historical benzene concentration in Site groundwater was 240 ug/L in a May 1990 sample from monitoring well MW-7, the closest well to the former tank location (Figure 2). Only one historical groundwater grab sample from 1996 (borehole SB-6) was analyzed for naphthalene. Naphthalene was not detected in this sample above the laboratory reporting limit of 10,000 ug/L (EKI, 1996).

All detected benzene concentrations in groundwater are well below the commercial/ industrial ESL of 1,800 ug/L for vapor intrusion to indoor air. Naphthalene was not detected with a maximum reporting limit of 10,000 ug/L (EKI, 1996), which is below the 11,000 ug/L commercial/ industrial ESL for vapor intrusion (RWQCB, 2008).

Soil ESLs are not available for the vapor intrusion pathway, so EKI compared available soil benzene concentrations to ESLs for direct contact and groundwater protection. The maximum soil benzene concentration from the 2010 investigation was 0.01 mg/kg, and the maximum 1996 soil benzene concentration was 0.019 mg/kg (EKI, 1996), both of which are less than the commercial/ industrial ESLs of 0.27 mg/kg for direct contact, and 0.044 mg/kg for protection of drinking water resources. Up to 0.76 mg/kg benzene in soil was reportedly measured in soil samples collected during tank removal in 1989, suggesting an incremental increased cancer risk of 3×10^{-6} through the direct contact exposure pathway (EKI, 2010), but details regarding location and collection of these samples apparently are no longer available.

Based on the 2010 investigation results, EKI concluded that residual VOCs in Site soil and groundwater do not present significant vapor intrusion risks to human health.

2.4 ACEH 2011 Request for Vapor Intrusion Work Plan

In a letter dated 1 April 2011, ACEH provided comments on EKI's 2010 investigation report, acknowledging that Site groundwater concentrations are below ESLs for vapor intrusion.

ACEH did express concern, citing groundwater analytical data from the adjacent 1650 65th Street property, that elevated concentrations of methane beneath Site buildings could impede the oxidation of residual hydrocarbons, thus allowing buildup and movement of

volatile petroleum hydrocarbons into the buildings. ACEH also indicated a preference for use of soil vapor data over soil or groundwater data to evaluate the potential for vapor intrusion into buildings. ACEH requested (a) submittal of a vapor intrusion investigation work plan, and (b) additional sampling of nearby groundwater monitoring wells on the 1650 65th Street property.

2.5 2011 Work Plan for Subslab Vapor Sampling

On behalf of Sybase, EKI prepared a subslab vapor sampling plan for 6601/6603 Shellmound Street and 1650 65th Street, dated 17 August 2011 (EKI, 2011). The work plan proposed installation and sampling of subslab vapor probes (“SSVPs”) at four indoor locations near the former USTs, one in the 6601 Shellmound Street building, one in the 6603 Shellmound Street building, and two in the 1650 65th Street building. The two SSVP locations in the 6601/6603 Shellmound buildings are generally upgradient of the former USTs, and the two in the 1650 65th Street building are generally downgradient. Final locations of the SSVPs are mapped on Figure 4.

ACEH conditionally approved the work plan in a letter dated 1 November 2011, requesting that analyses for oxygen, nitrogen, carbon dioxide, and methane be added to the analytical suite.

3 2011 - 2012 FIELD INVESTIGATION

In December 2011, EKI sampled the requested monitoring wells, and installed and sampled the SSVPs. A summary of the investigation is provided below, and analytical results are presented in Section 4.2. More details of field investigation methods are presented in Appendix C.

3.1 Preparation for Sampling

Sybase does not own the Site, nor does Sybase have any current contractual relationship with the owner of the Site, or with the owner of the adjacent 1650 65th Street Property, so Sybase negotiated access for sampling with the owners and tenants prior to sampling. The planned field work tasks, sampling locations, and schedule were reviewed with the owner’s and the tenant’s representatives. Underground Services Alert (“USA”) was contacted to locate buried utilities, and a private utility locating company cleared the proposed subslab vapor probe locations for utilities using non-destructive electromagnetic methods. In accordance with standard procedures, EKI prepared a site-specific Health and Safety Plan for EKI field personnel.

3.2 Groundwater Sampling and Analysis

On 1 December 2011, EKI sampled groundwater from monitoring wells MW-3, MW-5, and MW-7. Samples were collected into laboratory-supplied containers using a low-flow minimal-drawdown technique, and were stored in an insulated cooler on ice immediately after collection. EKI carried the samples directly to Curtis & Tompkins, LTD, a California-certified analytical lab, for analysis of:

- VOCs (including halogenated VOCs) by EPA Method 8260B;
- Fuel oxygenates, 1,2-DCA, and EDB by EPA Method 8260B;
- Total purgeable petroleum hydrocarbons as gasoline (“TPPH”) by EPA Method 8015M;
- Total extractable petroleum hydrocarbons as diesel (“TEPH”), with silica gel treatment, by EPA Method 8015M; and
- TDS by SM2540C.

Additional details of field procedures during monitoring well sampling are included in Appendix C.

3.3 Subslab Vapor Probe Installation and Sampling

Buildings at the Site and on the 1650 65th Street property are slab-on-grade construction. The 1650 65th Street building was constructed with a passive ventilation system designed to reduce methane buildup under the slab. In the letter of 1 April 2011, ACEH expressed concern regarding the potential for intrusion of VOCs into indoor air from groundwater and soil concentrations of petroleum hydrocarbons, and requested a vapor intrusion work plan to investigate the issue.

On 23 December 2011, EKI drilled and installed SSVPs in the building slabs using a hand-held electric hammer drill, then sampled the probes the same day, using laboratory-provided evacuated stainless-steel gas-sampling “Summa” canisters.

EKI conducted subslab vapor sampling within an enclosed space (“shroud”) around each SSVP. The air inside the shroud was spiked with 1,1,1,2-tetrafluoroethene (“TeFA”), a leak-check compound, to indicate the presence of leaks in the sampling system, if any. The air inside the shroud was sampled separately and analyzed for TeFA, so that the concentration ratio between shroud sample and SSVP sample could be used to estimate dilution, in case of leakage.

EKI also collected an outdoor time-weighted ambient air sample, to examine the effects of the Interstate-80 freeway located immediately west of the Site. Further details of SSVP construction and sampling procedures used are compiled in Appendix C.

After collection, samples were couriered to K-Prime Analytical, Inc. of Santa Rosa, California, for analysis of BTEX compounds by EPA Method TO-15, major gases (methane, oxygen, nitrogen, and carbon dioxide) by ASTM D 1946, and TeFA by EPA Method TO-3.

After reviewing preliminary results of the 2011 SSVP sampling, ACEH requested an additional round of subslab vapor sampling from the 1650 65th Street Property. On 2 May 2012 EKI collected an additional set of samples from the SSVPs, and another time-weighted average ambient air sample from outside the building. Sampling techniques were the same as those used in December 2011, i.e., using laboratory-provided evacuated stainless-steel gas-sampling canisters and leak-check sampling shrouds for data quality assurance.

4 2011 - 2012 FIELD INVESTIGATION RESULTS

Analytical results for monitoring well groundwater samples and subslab vapor samples are summarized in Tables 1 and 4, respectively, and are shown on Figures 2 and 4, respectively. The laboratory data sheets are compiled in Appendix D.

4.1 2011 Groundwater Analytical Data

No halogenated VOCs were detected in the groundwater samples from 2011. The sample from monitoring well MW-3 contained benzene at 2.8 ug/L, TPPH at 73 ug/L, and MTBE at 1.5 ug/L. The sample from monitoring well MW-5 did not contain benzene above reporting limits, but contained TPPH and TEPH at 180 and 250 ug/L, respectively, and MTBE at 2.2 ug/L. The sample from well MW-7 did not contain any BTEX compounds, TPPH, TEPH, or fuel oxygenates above the laboratory reporting limits. Overall, concentrations detected in the monitoring wells are consistent with, or lower than, historical data (Table 1).

4.2 2011 and 2012 Subslab Vapor Analytical Data

Table 4 summarizes subslab vapor analytical results for the December 2011 and May 2012 sampling events. Results also are mapped on Figure 4.

The October 2011 Vapor Intrusion Guidance published by the California Environmental Protection Agency Department of Toxic Substances Control (CalEPA, 2011) specifies a method to calculate subslab vapor screening-level concentrations (“screening levels”) that represent insignificantly low vapor-intrusion risks for human health. According to CalEPA (2011), subslab screening levels are calculated by multiplying the RWQCB indoor air ESLs for commercial / industrial sites by an attenuation factor of 20. Using

this method, the calculated subslab vapor screening level for benzene is 2.8 ug/m³, and the subslab vapor screening level for total hydrocarbons as gasoline (“TVH C2-C10” or “TPPH”) is 280 ug/m³.

RWQCB ESLs for soil vapor also may be considered relevant screening levels; the ESL for benzene is 280 ug/m³, and the RWQCB ESL for TPPH in soil gas is 29,000 ug/m³. Comparison of results from the 2011 and 2012 subslab vapor sampling events to RWQCB ESLs shows that all BTEX and TPPH compound concentrations were well below their applicable ESLs for shallow soil vapor at commercial/ industrial sites (Table 4).

4.2.1 December 2011 Results

The December 2011 SSVP sampling showed low concentrations of VOCs in some locations (Table 4), generally below subslab screening levels calculated from RWQCB indoor air ESLs, using an attenuation factor of 20 (DTSC, 2011). The exception was location SSVP1650-4, in an office hallway of the 1650 65th Street building, approximately 65 ft southwest of monitoring well MW-7. Benzene in this sample was 5.21 ug/m³, slightly above the DTSC subslab screening level of 2.8 ug/m³, but below the RWQCB soil gas ESL of 280 ug/m³. Benzene was not detected above laboratory reporting limits of 1.6 ug/m³ in samples from beneath the 6601 - 6603 Shellmound building.

Based on the outdoor ambient air sample results (Table 4), the ambient background concentration of benzene on the day of sampling was 1.79 ug/m³, i.e., 34% to 98% of the benzene concentrations detected in the SSVPs may be attributed to background concentration in ambient air.

Xylenes were not detected in any of the samples. Toluene and ethylbenzene were detected at maximum concentrations of 5.84 ug/m³ and 7.34 ug/m³ respectively, which are significantly less than their respective CalEPA DTSC subslab screening criteria of 1,800 ug/m³ and 32 ug/m³. (CalEPA, 2011)

4.2.2 May 2012 Results

In response to ACEH’s request for follow-up sampling of SSVPs at the 1650 65th Street building, EKI conducted another round of sampling on 2 May 2012. No BTEX compounds were detected in any of the second round of subslab vapor samples. Based on the existing data, benzene may be present in subslab vapor at the 1650 65th Street building, but concentrations are low and are not persistent through time, thus, they do not appear to pose a human health risk to building occupants.

For the May 2012 sampling, ACEH requested additional analysis for petroleum hydrocarbons as gasoline. These data were reported by the lab as total volatile

hydrocarbons in the C₂-C₁₀ range (“TVH C2-C10”, or “TPPH”). TPPH was not detected in any of the vapor samples, with a laboratory reporting limit of 586 ug/m³.

EKI contacted the director of the analytical laboratory to discuss options available to lower the TPPH reporting limit, given that the calculated subslab vapor screening level for TPPH is 280 ug/m³. He indicated that although a reporting limit less than 586 ug/m³ technically was possible, it would not be meaningful to report at that level due to interference from non-petroleum volatile hydrocarbons such as terpinenes (from pine trees) and ethanol (from natural fermentation of organic matter). Thus, based on the available data, TPPH does not appear to be present in subslab vapor at the Site.

The major-gas analytical results (Table 4) indicate that oxic conditions are present under the slabs, with oxygen concentration ranging from 18.4% to 19.4%. Methane and carbon dioxide were not detected above reporting limits of 0.1%. Nitrogen levels ranged from 80.6 to 82.4%.

4.2.3 Sample Quality (Leak-Check analysis)

During the December 2011 sampling event, TeFA was detected in sample SSVP6603-2 at 16.6 parts per million (“ppm”), indicating the presence of a very small leak which resulted in a very minor sample dilution of approximately 0.16%. In the May 2012 follow-up sampling, TeFA was detected in sample SSVP1650-4, at 10.0 (“ppm”), which corresponds to an insignificant sample dilution of approximately 0.068%. See Table 4 and Appendix D for additional details.

5 DISCUSSION OF CURRENT SITE CONDITIONS

5.1 Summary of Site Characterization

Key findings from the 1996, 2010, 2011, and 2012 investigations are briefly summarized below. Additional details may be found in EKI (1997a), EKI (1997b), and EKI (2010).

- Limited extent of residual hydrocarbons. The lateral extent of separate-phase petroleum hydrocarbons and related constituents in soil and groundwater has been characterized. Although a sheen on groundwater was observed in some boreholes near the former UST area, the affected zone is limited in extent, and is bounded by analytical data at locations MW-5, MW-7, MW-3, GGW-3, and GGW-4 on Figure 2.
- Characterized plume. Concentrations and extent of chemicals of concern in groundwater have been characterized. VOC concentrations in groundwater samples all were below available California drinking water maximum contaminant levels (“MCLs”), with the exception of benzene. The concentration

of benzene in monitoring wells MW-5 and MW-7 has decreased over time to below detection limits, and all benzene groundwater concentrations were significantly below the 1,800 ug/L RWQCB ESL for vapor intrusion from groundwater to indoor commercial/industrial air (Table 1).

- Characterized soil concentrations. Residual petroleum hydrocarbons in soil from the former Site USTs are mostly found in the saturated zone, and VOC and PAH concentrations in soil generally are below commercial/industrial ESLs.
- Declining chemicals concentrations. A Mann-Kendall test and a Kendall's Tau analysis, both of which are summarized in Table 5, indicate a decreasing benzene concentration trend in wells MW-5 and MW-7, and no trend (i.e., stable conditions) in downgradient well MW-3. The decline in trend is illustrated on Figure 5. Support for interpretation of a decreasing concentration trend also comes from grab groundwater sampling, where concentrations of petroleum hydrocarbons and related constituents in 2010 and 2011 were significantly lower than in 1996.
- Lack of conduits or exposure pathways. No lateral or vertical conduits for groundwater flow were identified during the 2010 preferential-pathway evaluation. All wells identified within five hundred feet of the Site were monitoring wells, used for groundwater investigation or remediation purposes, having a maximum total depth of 30 ft bgs. These do not create potential for vertical movement of hydrocarbon concentrations to deeper water-bearing units. The Site is paved, and no direct-contact soil or groundwater exposure pathway exists for occupants of the Site, based on current usage.
- Lack of vapor intrusion risk. Subslab vapor sampling performed in 2011 and 2012 indicates a lack of significant vapor intrusion risk to building occupants at the 1650 65th Street and 6601/6603 Shellmound Street properties. Comparison of observed residual VOC concentrations in soil and groundwater to ESLs supports this conclusion. The vapor sampling showed that concentrations of VOCs below the Site buildings are very low to non-detectable, and that oxidizing conditions exist. These data suggest that petroleum hydrocarbons have degraded and will continue to do so, as the subsurface environment under both buildings is conducive to biodegradation of petroleum hydrocarbons and related constituents.
- Possible sources of petroleum hydrocarbons unrelated to former Site USTs. The Site was once part of the City of Emeryville municipal waste landfill, where various materials were disposed, thus, petroleum hydrocarbon components may be present at the Site in various locations unrelated to the former USTs.

Based on the available data, no significant UST-related source of petroleum hydrocarbons and BTEX compounds remains at the Site. Residual concentrations of

petroleum hydrocarbons do remain in the subsurface, but these concentrations are well-characterized, and the Site does not pose a significant risk to human health or the environment, given current conditions and Site use.

5.2 Concentration Trend Analysis of Benzene in Groundwater

Historical groundwater VOC concentration data from MW-5 and MW-7 were statistically evaluated in a closure report for the Site (EKI, 1997a). Results of a Mann-Kendall test for TPPH, benzene, toluene, and xylene concentrations in groundwater from the wells showed no statistically significant upward trend. Moreover, a regression analysis of benzene concentrations in groundwater from wells MW-5 and MW-7 showed a decreasing slope of concentration versus time (EKI, 1997a).

A re-examination of benzene concentrations which included the most recent (2011) groundwater data from monitoring wells MW-3, MW-5, and MW-7 provided additional evidence of a stable or shrinking groundwater plume (Table 5). These data were subjected to an evaluation of trend with the Mann-Kendall test, using a two-tailed 95% confidence interval (USEPA, 2009). The data also were analyzed using the method of Kendall's Tau, a nonparametric ranked correlation coefficient technique that allows estimation of the strength of a monotonic relationship between two variables, in this case, concentration and time (Helsel & Hirsch, 2002).

The Mann-Kendal test indicated a decreasing trend of benzene concentration in groundwater at monitoring wells MW-5 and MW-7, and stable conditions (i.e., no trend) at monitoring well MW-3, using a two-tailed confidence level of 95% ($\alpha = 0.025$).

For the Kendall's Tau test, a positive Tau value indicates an increasing trend, and a negative Tau indicates a decreasing trend. Tau values for monitoring wells MW-5 (-0.53) and MW-7 (-0.38) indicate distinctly decreasing benzene trends. Downgradient monitoring well MW-3 did not show a trend via Kendall's Tau, meaning the concentration is stable. Non-detected analytical results for a sample (i.e., censored data) were assumed to be present at a concentration of one-half the reporting limit for purposes of trend analysis.

Unlike a linear or Pearson correlation coefficient, a Kendall's Tau of 0.7 or greater indicates a strong positive ranked correlation between variables, corresponding to a value of 0.9 or greater for the more familiar linear correlation coefficient (Helsel & Hirsch, 2002). Correspondingly, a Kendall's Tau of -0.7 or less indicates a strong negative ranked correlation.

Helsel & Hirsch (2002) note that Kendall's Tau can be applied to censored datasets, is resistant to outliers, and measures both linear and nonlinear monotonic correlations. Table 5 shows a summary of the Kendall's Tau analysis for benzene in groundwater, the primary chemical of concern at the Site for vapor intrusion into indoor air. Figure 5 is a

scatterplot of the logarithm of benzene concentration data from all three wells versus time.

Taken together, the analytical data indicate that the hydrocarbon plume downgradient of the former USTs is stable or shrinking.

6 REQUEST FOR SITE CLOSURE UNDER 2012 SWRCB LOW-THREAT UNDERGROUND STORAGE TANK CLOSURE POLICY CRITERIA

On 1 May 2012, the SWRCB adopted their Final Low-Threat Underground Storage Tank Case Closure Policy, incorporating responses to comments received on the 31 January 2012 draft (SWRCB, 2012).

Based on (a) the extensive history of investigation, (b) the resulting suite of analytical data characterizing the Site, (c) the concentrations of residual petroleum hydrocarbons and related constituents in Site soil, groundwater, and soil vapor, and (d) the favorable comparison of Site data to the Low-Threat Closure Policy, Sybase does not believe the Site poses a significant risk to human health or the environment, and requests that ACEH issue a case-closure letter for the 6601/6603 Shellmound Site.

A comparison of Site characteristics and data are made to required criteria within the Low-Threat Closure Policy below. Based on this comparison, the Site qualifies for closure.

6.1 Criteria for Closure under SWRCB Final Low-Threat Underground Storage Tank Case Closure Policy Adopted 1 May 2012

The SWRCB Low-Threat Closure Policy states several categories of criteria that a given UST site must meet for case closure under this policy. These categories include general criteria, and media-specific criteria for groundwater, vapor intrusion, and direct contact and outdoor air exposure. The Site meets these criteria (listed in italics), as explained below.

6.2 General Criteria for Low-Threat Closure

1) *The site is located within the service area of a public water system.*

The Site, 6601-6603 Shellmound Street, is located within the municipal boundaries of Emeryville, California, and is part of the service area of Alameda County Public Works.

2) *The release consists only of petroleum.*

Multiple sampling events and analytical results indicate that petroleum hydrocarbons are the only release from the former USTs at the Site. Data from 2011 indicate that halogenated VOCs are not present.

3) *The “primary” release of petroleum has been stopped.*

A 6,000-gallon diesel UST was used to store diesel, and two gasoline USTs, one 7,500 gallons and one 2,000 gallons, were removed in 1989, along with surrounding soil and approximately 4,950 gallons of free product and groundwater.

4) *Free product has been removed to the maximum extent practicable.*

During excavation of the USTs, soil was removed to a maximum depth of approximately 13 ft bgs, and the excavation was fenced and left open for several months. The excavation later was extended laterally to the east. Accumulations of approximately 4,950 gallons of separate phase liquid petroleum product and groundwater that flowed into the pit from the sidewalls were removed by vacuum truck, and disposed offsite over several mobilizations.

5) *A Conceptual Site Model has been developed specifying the nature, extent, and mobility of release.*

The conceptual site model is presented herein, and in EKI (1997a), and EKI (2010). The conceptual model may be summarized as the release of diesel fuel and gasoline from three former USTs located at the Site, followed by a number of years of slow migration of a plume of petroleum hydrocarbons, and attenuation of the plume through natural breakdown processes. The plume appears to extend from the former UST location, chiefly in the upper saturated zone, approximately to monitoring well MW-3 on the adjoining parcel to the south (1650 65th Street). Some limited locations of free-phase hydrocarbons appear to remain at the Site, in the immediate vicinity of the former UST excavation, at depths near the top of the saturated zone. Results from multiple groundwater samples collected over the period 1989 through 2011 indicate that BTEX concentrations in groundwater have decreased to maximum levels at or below laboratory reporting limits. Statistical analysis of concentration trends indicate two of three monitoring wells (MW-5 and MW-7) have decreasing concentrations of benzene, and one well (downgradient well MW-3) has no discernible trend, i.e., it is stable. Analysis of subsurface vapor samples indicate no significant risk to human health from vapor intrusion into buildings.

6) *Any “Secondary source” (defined as “petroleum-impacted soil or groundwater located at, or immediately beneath, the point of release from the primary source”) has been removed to the extent practicable.*

As described in Section 2, overexcavation of soil and vacuum-removal of free product and groundwater was performed at the time of UST removal in 1989-1990. Residual petroleum hydrocarbons in soil remain in the saturated zone.

7) *Soil or groundwater has been tested for MTBE and results reported in accordance with Health and Safety Code Section 25296.15.*

Groundwater samples have been collected on several occasions from 1997 through 2011 and analyzed for MTBE. Based on the available analytical data, concentrations are declining in MW-5 (2.2 ug/L in 2011), have declined below reporting limits in MW-7 (<1 ug/L in 2011), and are slightly above the reporting limit in MW-3 (1.5 ug/L in 2011). The ESL for MTBE for gross contamination is 5 ug/L; thus, all recent analytical data for groundwater (i.e., post-1997) are below the lowest ESL for MTBE in groundwater.

8) *The Site does not present a public nuisance as defined by Water Code sec. 13050, specifically:*

- a. *The Site is not injurious to health, indecent or offensive to the senses, an obstruction to the free use of the property that interferes with the “comfortable enjoyment of life or property”;*
- b. *The Site does not affect an entire community, neighborhood, or considerable number of persons; and*
- c. *Contamination at the Site does not occur during, or as a result of, treatment or disposal of wastes.*

The Site meets all three public nuisance criteria.

6.3 Specific Criteria for Groundwater

9) *SWRCB Resolution 92-49 states that groundwater cleanup must “attain either background water quality or best water quality that is reasonable”, within a “reasonable time frame”, which is stated not necessarily to be at the time of case closure.*

Based on analytical data going back two over decades, the hydrocarbon plume in groundwater is decreasing in concentration near the former source, and is stable near the downgradient edge. Thus, the Site hydrocarbon plume appears to be undergoing natural attenuation, which reasonably may be expected to be complete before Site groundwater is likely to be used for human consumption. Background water quality precludes use of the local shallow groundwater for human consumption under most conceivable conditions, due to its high concentration of total dissolved solids, the presence of a former municipal landfill, and the Site’s close proximity to San Francisco Bay.

10) *The plume must be stable or decreasing in areal extent, and must be classified as one of five categories detailed in SWRCB (2012), specifying plume dimensions,*

maximum concentrations of benzene and MTBE, and proximity to water supply wells or surface water bodies.

The Site may be classified as Class 4, except for a criterion prohibiting free product. Based on soil boreholes and analytical data, there appears to be an areally limited, discontinuous, weathered source of free product in soil within the upper saturated zone, immediately adjacent to the former UST excavation.

Regarding other criteria for this classification,

- The contaminant plume that exceeds water quality objectives (Drinking water MCL for benzene, although the water fails secondary standards for TDS) is less than 1,000 feet in length, extending approximately 500 feet from the former UST location toward San Francisco Bay;
- Supply wells screened within the zone of elevated petroleum concentrations are not known to be operated within a 1,000-foot radius of the Site; and
- Dissolved concentrations of benzene and MTBE are less than 1,000 ug/L (recent benzene concentrations range from 2.8 ug/L, to < 0.5 ug/L, and recent MTBE concentrations range from 2.2 ug/L, to < 1.0 ug/L).

The Site also may be categorized under Class 5, where the overseeing agency determines, based on site-specific data, that contaminant plume “poses a low threat to human health and safety and to the environment”, and that “water quality objectives will be achieved within a reasonable time frame”.

6.4 Specific Criteria for Vapor Intrusion to Indoor Air

11) *The Site must be the site where the release originated, plus any adjacent parcels.*

A petroleum release occurred at the Site, which appears to have originated from one or more USTs formerly located at the Site. It is unknown whether or not other components of the plume exist that are unrelated to the former USTs.

12) *The Site must meet requirements of one of four scenarios regarding details of depth to hydrocarbons, types of buildings, soil concentrations, and evidence for bioattenuation, or a site-specific risk assessment for the vapor intrusion pathway is conducted and demonstrates that human health is protected to the satisfaction of the regulatory agency.*

A Site-specific risk assessment for the vapor intrusion pathway has been conducted, by means of measuring subslab vapor concentrations of chemicals of concern under both buildings on-Site, and under the adjacent building to the south on two separate occasions. The analytical data from these sampling events (Table 4) indicate that concentrations are below appropriate screening levels which are protective of human health for building

occupants (RWQCB, 2008). Analysis of subslab vapor in 2011 and 2012 showed the conditions under the buildings to be oxidizing, with oxygen concentrations of 17.5% to 19.4% volumetrically, which should promote further biodegradation of petroleum hydrocarbons and related constituents.

6.5 Specific Criteria for Direct Contact and Outdoor Air Exposure

13) *The Site must present “a low threat to human health” through exposure to contaminated soil through direct contact, or through volatilization of chemicals of concern to outdoor air. Specific depth-concentration criteria are listed in the Low-Threat UST Closure Policy memo.*

Conditions at the Site meet the listed soil concentration criteria. Maximum concentrations of benzene, ethylbenzene, and naphthalene in soil do not exceed levels specified in Table 3 for all protective scenarios (e.g., including for residential soil 0-5 ft bgs):

- Benzene 1.9 mg/kg
 - Site maximum = 0.012 mg/kg (SB-7 @ 13.0 ft bgs)
- Ethylbenzene 21 mg/kg
 - Site maximum = 0.014 mg/kg (SB-7 @ 13.0 ft bgs)
- Naphthalene 9.7 mg/kg
 - (maximum = ND < 1.9 mg/kg in all boreholes)

Based on the characteristics of the Site discussed above, Sybase requests that ACEH issue a case-closure letter for the Site.

7 REFERENCES

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Table 1
Summary of Analytical Results for Groundwater Samples from Monitoring Wells^(a)
6601/6603 Shellmound Street, Emeryville, California

Well Number	Sample Date	Chemical Concentration (ug/L)						
		TPPH	TEPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-3	Nov 89	130	NA	2.2	ND	ND	3	NA
	Feb 90	ND ^(b)	NA	2.5	ND	ND	ND	NA
	May 90	ND	ND	2	ND	ND	ND	NA
	Aug 90	ND	800	4.4	2.9	ND	5.4	NA
	Nov 90	900	800	3.4	ND	ND	ND	NA
	Mar 91	ND	ND	25	25	5.3	320	NA
	May 91	ND	ND	2.6	ND	ND	ND	NA
	Aug 91	ND	ND	1.9	ND	ND	ND	NA
	29 Jan 92	92	NA	2.4	<0.3	0.6	<0.3	NA
	28 Feb 92	160	NA	2.8	<0.3	0.7	0.5	NA
	28 May 92	<50	NA	2.5	<0.5	<0.5	<0.5	NA
	27 Aug 92	370	NA	4	<1	<0.5	<0.5	NA
	10 Nov 92	240	<100	4.2	<0.3	<0.3	<0.6	NA
	18 Feb 93	140	NA	1.8	<0.5	<0.5	<0.5	NA
	20 May 93	72	NA	3.1	<0.5	<0.5	<0.5	NA
	19 Aug 93	<50	NA	3.2	<0.5	<0.5	0.7	NA
	15 Nov 93	70	NA	2.3	0.7	<0.5	1.5	NA
	14 Feb 94	120	NA	5.3	2.3	1.2	4.2	NA
	16 May 94	120	NA	3.1	<0.5	<0.4	1.7	NA
	10 Aug 94	100	NA	3	<0.5	0.5	<2	NA
	3 Nov 94	100	NA	3	<0.5	<0.5	<2	NA
	9 Feb 95	100	NA	2	<0.5	<0.5	<2	NA
	9 May 95	100	NA	3	<0.5	0.5	<2	NA
10 Aug 95	100	NA	3	<0.5	<0.5	<2	NA	
13 Nov 95	<50	NA	3	<0.5	<0.5	<2	NA	
1 Dec 11	73	<50	2.8	<0.5	<0.5	<0.5	1.5	
MW-5	Nov 89	ND	NA	74	ND	ND	4.2	NA
	Feb 90	ND	NA	200	ND	ND	ND	NA
	May 90	ND	ND	110	ND	ND	ND	NA
	Aug 90	ND	700	66	2.2	ND	3.8	NA
	Nov 90	600	900	69	ND	ND	ND	NA
	Mar 91	ND	1100	66	2.3	ND	ND	NA
	May 91	ND	ND	110	ND	ND	ND	NA
	Aug 91	ND	ND	78	2.1	ND	ND	NA
	29 Jan 92	190	NA	90	0.5	<0.3	0.6	NA
	28 Feb 92	230	NA	110	0.9	<0.3	0.5	NA
	28 May 92	130	NA	100	<0.5	<0.5	<0.5	NA
	27 Aug 92	520	NA	83	2	<0.5	<0.5	NA
	10 Nov 92	240	<100	74	1	<0.3	<0.6	NA
	18 Feb 93	190	NA	56	0.6	<0.5	<0.5	NA
	20 May 93	<200	NA	56	<2	<2	<2	NA
	19 Aug 93	170	NA	50	0.7	<0.5	<0.5	NA
	15 Nov 93	220	NA	49	1	<1	<1	NA
	14 Feb 94	140	NA	62	<0.5	<0.5	<0.5	NA
	16 May 94	310	NA	140	3	<3	<3	NA
	12 Aug 94	500	NA	95	34	4	14	NA
	3 Nov 94	400	NA	79	0.6	<0.5	<2	NA
	9 Feb 95	300	NA	74	0.8	<0.5	<2	NA
	9 May 95	200	NA	47	0.5	<0.5	<2	NA
	10 Aug 95	200	NA	46	0.5	<0.5	<2	NA
	13 Nov 95	300	NA	48	0.7	<0.5	<2	NA
	15 Jun 96	180	<40,000	39	<0.5	<0.5	<0.5	8.1
	27 Dec 96	220	4,500	54	0.5	<0.5	<0.5	15
19 Jun 97	210	4,800	38	<0.5	<0.5	<0.5	7.5	
6 Mar 10	99	250	<0.5	<0.5	<0.5	<1	2	
1 Dec 11	180	250	<0.5	<0.5	<0.5	<1	2.2	

Table 1
Summary of Analytical Results for Groundwater Samples from Monitoring Wells^(a)
6601/6603 Shellmound Street, Emeryville, California

Well Number	Sample Date	Chemical Concentration (ug/L)						
		TPPH	TEPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-7	May 90	NA	600	240	ND	ND	ND	NA
	Aug 90	ND	ND	81	1.8	ND	ND	NA
	Nov 90	ND	800	54	ND	ND	ND	NA
	Mar 91	ND	ND	100	3.6	ND	ND	NA
	May 91	ND	ND	120	2.7	ND	ND	NA
	Aug 91	ND	ND	74	3.3	ND	ND	NA
	29 Jan 92	270	NA	25	0.5	<0.3	0.8	NA
	28 Feb 92	100	NA	33	0.7	<0.3	0.7	NA
	28 May 92	150	NA	21	<0.5	<0.5	<0.5	NA
	27 Aug 92	440	NA	11	1	<0.5	<0.5	NA
	10 Nov 92	370	<100	31	1.2	<0.3	1.2	NA
	18 Feb 93	270	NA	77	1.3	<0.5	1.4	NA
	20 May 93	300	NA	150	3	<2	3	NA
	19 Aug 93	110	NA	40	1	<0.5	1.1	NA
	15 Nov 93	120	NA	15	0.6	<0.5	2.3	NA
	14 Feb 94	120	NA	38	<0.5	<0.5	<0.5	NA
	17 May 94	<300	NA	61	<3	<3	<3	NA
	10 Aug 94	100	NA	9	<0.5	<0.5	<2	NA
	3 Nov 94	100	NA	3	<0.5	<0.5	<2	NA
	9 Feb 95	200	NA	50	0.6	<0.5	<2	NA
	9 May 95	300	NA	120	1	<0.5	<2	NA
	10 Aug 95	<50	NA	7	<0.5	<0.5	<2	NA
	13 Nov 95	90	NA	3	<0.5	<0.5	<2	NA
	16 Jun 96	<50	1,000	47	0.87	<0.5	0.8	6.5
27 Dec 96	110	2,300	35	0.88	<0.5	0.79	5	
19 Jun 97	200	2,500	59	1.2	<0.5	<0.5	8.2	
6 Mar 10	<50	<50	<1	<1	<1	<2	<1	
1 Dec 11	<50	<50	<1	<1	<1	<2	<1	
Groundwater ESL, Commercial / Industrial^(b)		n/a	n/a	1,800	530,000	170,000	160,000	80,000

Abbreviations:

- TPPH = total purgeable petroleum hydrocarbons quantified as gasoline
- TEPH = total extractable petroleum hydrocarbons quantified as diesel
- MTBE = methyl tert-butyl ether
- NA = not analyzed
- n/a = not applicable
- ND = not detected; historical data with unknown laboratory reporting limit.
- ug/L = micrograms per liter
- < X = analyte not detected above the indicated laboratory reporting limit of X ug/L.

Notes:

- (a) Samples collected from 1996 to 2011 by Erler & Kalinowski, Inc. Samples from 2011 were analyzed for TPPH and TEPH by EPA Method 8015 and for VOCs and fuel oxygenates using EPA Method 8260. The 2011 data only shows detected analytes (no halogenated VOCs were detected). Samples collected prior to 1992 by Engineering Science. All other data are from PES Environmental, Inc. (December 1995).
- (b) Detection limits were not published in PES (1995), thus reporting limits are not shown for samples from this source.
- (c) In addition to the analytes listed, isopropylbenzene and sec-butylbenzene were detected at 0.6 ug/L each in the December 2011 sample from well MW-3.
- (d) In addition to the analytes listed, isopropylbenzene was detected at 2.4 ug/L, sec-butylbenzene was detected at 0.9 ug/L, and n-propylbenzene was detected at 3.3 ug/L in the December 2011 sample from well MW-5.

Table 2
Summary of Grab Groundwater Analytical Data from the Spring 2010 Investigation
6601/6603 Shellmound Street, Emeryville, California

Sample Location	Collection Date	Petroleum Compounds (ug/L) ^(a,b)		Volatile Organic Compounds (ug/L) ^(a,c)										PAHs ^(a,d)	TDS (mg/L)
		TEPH	TPPH	Benzene	Toluene	Ethyl-benzene	Xylenes (m&p)	Xylene (o)	Diiso-propyl ether	MTBE	Tert-butyl alcohol	1,2-Dibromoethane	1,2-Dichloroethane		
GGW-1	3/6/2010	34,000	550	56	2.7	2.2	4	2.2	<0.5	1.4	11	<0.5	<0.5	ND	1,420
GGW-2	3/6/2010	10,000	90 ^(e)	0.9	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	ND	700
GGW-3	3/6/2010	180^(e)	<50	2.1	<0.5	<0.5	<0.5	<0.5	2.4	<0.5	<10	<0.5	<0.5	ND	1,530
GGW-4	4/9/2010	<50	<50	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	<10	<0.5	<0.5	ND	690
MW-5	3/6/2010	250^(e)	99 ^(e)	<0.5	<0.5	<0.5	<0.5	<0.5	<0.5	2	<10	<0.5	<0.5	ND	1,290
MW-7	3/6/2010	<50	<50	<1	<1	<1	<1	<1	<1	<1	<20	<1	<1	ND	780
<i>ESL for drinking water consumption</i>		210	210	1	150	300	1800		-	13	12	0.05	0.5	-	500 to 1,500
<i>ESL for Commercial/ Industrial vapor intrusion</i>		-	-	1,800	530,000	170,000	160,000		-	80,000	-	510	690	-	-
<i>ESL for gross contamination, in drinking water</i>		100	100	170	40	30	20		-	5	50,000	50,000	7,000	-	-
<i>ESL for gross contamination, in non-drinking water</i>		2,500	5,000	20,000	400	300	5,300		-	1,800	50,000	50,000	50,000	-	-
<i>San Francisco Bay Basin Plan (see Reference 2)</i>		-	-	1	150	300	1750		-	13	-	0.05	0.5	-	3,000

Abbreviations:

"C/I" = commercial/industrial land use

"ESL" = Environmental Screening Level (see Reference 1)

"MCL" = Maximum Contaminant Level

"ND" = not detected above laboratory reporting limits

"MTBE" = Methyl-tert-Butyl Ether

"PAHs" = polycyclic aromatic hydrocarbons

"TEPH" = total extractable petroleum hydrocarbons, quantified as diesel

"TPPH" = total purgeable petroleum hydrocarbons, quantified as gasoline

"ug/L" = micrograms per liter

"VOCs" = volatile organic compounds

Notes:

(a) Concentrations exceeding at least one of the screening criteria are shown in bold text.

(b) TEPH and TPPH were analyzed using EPA Method 8015M.

(c) VOCs were analyzed using EPA Method 8260B. This table only includes detected analytes.

(d) PAHs were analyzed using EPA Method 8270. No PAHs were detected in the groundwater samples.

(e) Sample exhibits a chromatographic pattern which does not resemble the standard.

References:

1. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, San Francisco Bay Region, revised May 2008.

2. *San Francisco Bay Basin (Region 2) Water Quality Control Plan (Basin Plan)*, California Regional Water Quality Control Board, San Francisco Bay Region, January 2007.

Table 3
Summary of Soil Analytical Data from the Spring 2010 Investigation
6601/6603 Shellmound Street, Emeryville, California

Sample Location	Sample Depth (feet bgs)	Collection Date	Petroleum Compounds (mg/kg) (a,b)		Volatile Organic Compounds (mg/kg) (a,c)							PAHs (mg/kg) (a,d)									
			TEPH	TPPH	Benzene	Toluene	Ethylbenzene	Xylenes, m- & p-	Xylene, o-	1,2-Dibromoethane	1,2-Dichloroethane	Anthracene	Benzo(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Fluorene	Phenanthrene	Pyrene
SB-7	5.0 - 5.5	4/9/2010	100	<0.23	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092	<0.092
	8.0 - 8.5	4/9/2010	4,400	160	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<0.57	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9	<1.9
	13.0 - 13.5	4/9/2010	1,000	1.5	0.012	<0.0051	0.014	0.0066	<0.0051	<0.0051	<0.0051	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	<0.08	0.16	0.24	0.08
	20.5 - 21.0	4/9/2010	6.2	<0.18	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.005	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078	<0.078
SB-8	4.5 - 5.0	4/9/2010	900	0.19	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	<0.0047	0.099	0.15	0.16	0.23	0.076	0.18	0.41	<0.075	0.26	0.39
	13.0 - 13.5	4/9/2010	2,500	0.77	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.0046	<0.08	<0.08	0.13	0.16	<0.08	0.11	0.38	0.14	0.49	0.46
	17.5 - 18.0	4/9/2010	12	<0.21	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.0053	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083	<0.083
SB-9	5.0 - 5.5	4/9/2010	49	<0.22	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.0045	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076	<0.076
	9.0 - 9.5	4/9/2010	4,600	140	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<0.77	<0.77	<0.77	<0.77	<0.77	<0.77	1.6	0.9	2.8	2.6
	12.5 - 13.0	4/9/2010	3,200	98	0.0077	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.0049	<0.4	<0.4	<0.4	<0.4	<0.4	<0.4	0.49	<0.4	1.1	0.65
	19.0 - 19.5	4/9/2010	78	<0.23	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.0058	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086	<0.086
<i>ESL for C/I direct exposure (shallow soil)</i>			450	450	0.27	210	5	100		0.044	0.48	26,000	1.3	0.13	1.3	1.3	210	4,400	2,800	3,300	6,600
<i>ESL for C/I direct exposure (deep soil)</i>			4,200	4,200	12	650	210	420		1.7	21	100,000	15	1.5	15	15	2,400	14,000	12,000	11,000	21,000
<i>ESL for groundwater protection of drinking water resource</i>			83	83	0.044	2.9	3.3	2.3		0.0003	0.0005	2.8	12	130	46	2.7	23	60	8.9	11	85
<i>ESL for groundwater protection of non-drinking water resource</i>			180	180	2	9.3	4.7	11		1	1.8	2.8	12	130	46	37	23	60	8.9	11	85

Abbreviations:

- "C/I" = commercial/industrial land use
- "ESL" = Environmental Screening Level (see Reference 1)
- "feet bgs" = feet below ground surface
- "mg/kg" = milligrams per kilogram
- "PAHs" = polycyclic aromatic hydrocarbons
- "TEPH" = total extractable petroleum hydrocarbons, quantified as diesel
- "TPPH" = total purgeable petroleum hydrocarbons, quantified as gasoline
- "VOCs" = volatile organic compounds

Notes:

- (a) Soil concentrations are reported on a dry-weight basis. Concentrations exceeding at least one of the screening criteria are shown in bold text.
- (b) TEPH and TPPH were analyzed using EPA Method 8015M.
- (c) VOCs were analyzed using EPA Method 8260B. This table only includes detected analytes.
- (d) PAHs were analyzed using EPA Method 8270C. This table only includes detected analytes

References:

1. *Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater*, California Regional Water Quality Control Board, San Francisco Bay Region, revised May 2008.

Table 4
Summary of Analytical Results for Sub-Slab Vapor Samples^(a)
6601/6603 Shellmound Street, Emeryville, California

Sample Name	Date	Time	VOCs (ug/m ³)					Major Gases (% volume)			
			Benzene	Toluene	Ethyl benzene	Xylenes, total	TVH (C2-C10)	Methane	Oxygen	Carbon Dioxide	Nitrogen
SSVP6601-1	12/23/2011	13:26	<1.6	5.84	<4.34	<4.34	--	<0.100%	18.4%	<0.100%	81.6%
SSVP6603-2 ^(b)	12/23/2011	10:26	<1.6	<3.77	7.34	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
SSVP1650-3	12/23/2011	10:32	1.82	<3.77	<4.34	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
SSVP1650-4	12/23/2011	10:41	5.21	6.07	<4.34	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
AMBIENT-20111223	12/23/2011	n/a	1.79	<3.77	<4.34	<4.34	--	--	--	--	--
SSVP1650-3	5/2/2012	8:48	<1.60	<3.77	<4.34	<4.34	<586	<0.100%	18.4%	0.452%	81.1%
SSVP1650-4 ^(c,d)	5/2/2012	9:17	<1.60/ <1.60	<3.77/ <3.77	<4.34/ <4.34	<4.34/ <4.35	<586/ <586	<0.100%/ <0.100%	17.5%/ 18.2%	<0.100%	82.4%/ 81.7%
AMBIENT-20120502	5/2/2012	n/a	<1.60	<3.77	<4.34	<4.34	<586	--	--	--	--
Shallow Soil Vapor ESLs^(e)			280	180,000	3,300	58,000	29,000	n/a	n/a	n/a	n/a
Subslab Vapor Screening Levels^(f)			2.8	1,800	32	580	280	n/a	n/a	n/a	n/a
<i>Indoor Air ESLs^(g)</i>			<i>0.14</i>	<i>88</i>	<i>1.6</i>	<i>29</i>	<i>14</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>	<i>n/a</i>

Abbreviations:

< X = Analyte not detected above the indicated laboratory reporting limit of X ug/L.
BTEX = benzene, toluene, ethylbenzene, xylenes
n/a = Not applicable

-- = Sample not analyzed for the indicated compound
ug/m³ = Micrograms per cubic meter
ppmv = Parts per million.

Notes:

(a) Samples were collected in stainless-steel batch-certified Summa canisters and analyzed by KPrime, Inc. of Santa Rosa, California, for BTEX compounds using EPA Method TO-15, and for major gases using ASTM D 1946.

(b) Sample SSVP6603-2 (collected 12/23/2011) contained a 1,1,1,2-tetrafluoroethane ("TeFA") concentration of 16.6 parts per million volumetric ("ppmv"). TeFA was analyzed by EPA Method TO-3, and was used as a leak-detection compound during sampling. Analytical results for the shroud outside the sampling apparatus indicate a TeFA concentration of approximately 10,400 ppmv. The detected concentration in sample SSVP6603-2 thus indicates a minor leak in that particular vapor sample, resulting in a very small potential sample dilution of approximately 0.16%.

(c) Sample SSVP1650-4 (collected 05/02/2012) contained TeFA concentration of 10.0 ppmv. TeFA was analyzed by EPA Method TO-3. Analytical results for the shroud outside the sampling apparatus indicate a TeFA concentration of approximately 14,600 ppmv. The detected concentration in sample SSVP1650-4 thus indicates a very minor leak in that particular vapor sample, resulting in a negligible potential sample dilution of approximately 0.068%.

Table 4
Summary of Analytical Results for Sub-Slab Vapor Samples^(a)
6601/6603 Shellmound Street, Emeryville, California

(d) A blind duplicate sample (DUP-A-20120502) was simultaneously collected from this location and subjected to the same suite of analytical tests as the primary sample.

(e) Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater ("ESLs"), Table E-2. Shallow Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only), California Regional Water Quality Control Board - San Francisco Bay Region ("SFBRWQCB"), INTERIM FINAL - November 2007 (Revised May 2008). Shallow soil gas includes subslab soil gas to a depth up to 5 feet.

(f) In accordance with the California EPA Department of Toxic Substances Control Vapor Intrusion Guidance (October 2011), subslab soil vapor screening levels are calculated as the indoor air screening level (e.g., ESL) divided by an attenuation factor of 0.05 (or multiplied by 20).

(g) Screening for Environmental Concerns at Sites with Contaminated Soil and Groundwater ("ESLs"), Table E-3. Ambient and Indoor Air Screening Levels (volatile chemicals only), California Regional Water Quality Control Board - San Francisco Bay Region ("SFBRWQCB"), INTERIM FINAL - November 2007 (Revised May 2008). These values are not applicable to subslab sampling results, but are used to calculate subslab soil vapor screening levels.

Table 5
Results of Trend Analysis
Benzene Concentrations in Groundwater, 1989 - 2011
6601/6603 Shellmound Street, Emeryville, California

Well	Number of Analyses	Sample Period	Benzene (ug/L)		Kendall's Tau	Mann-Kendall S	Standard Normal Transform of S (Z)	Standard Normal Percentile at P = 95%	Trend Interpretation ^(a)
			Min	Max					
MW-3	26	1989-2011	1.8	25	→ 0.034	11	0.244	1.96	No Trend / Stable
MW-5	30	1989-2011	< 0.5	200	↘ -0.533	-232	4.25	1.96	Decreasing
MW-7	28	1990-2011	< 1.0	240	↘ -0.384	-145	2.88	1.96	Decreasing
Groundwater ESL, Commercial / Industrial ^(b)			1,800						

Notes

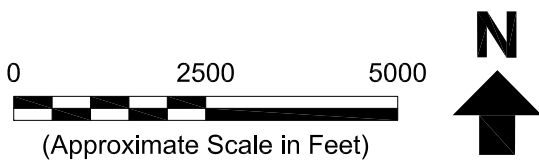
(a) Trend interpretation is based on a Mann-Kendall test, using a two-tailed 95% confidence interval after USEPA (2009), and the "Kendall's Tau" statistic, a rank correlation coefficient that may be used to estimate the strength of a monotonic relationship between two variables, in this case, concentration and time (Helsel & Hirsch, 2002). A positive Tau indicates an increasing trend, and a negative Tau indicates a decreasing trend. A correlation is considered "strong" where the absolute value of Tau is 0.7 or more. For purposes of this analysis, Tau values between -0.35 and 0.35 (i.e., 50% of 0.7) are considered indeterminate. Helsel & Hirsch (2002) note that Tau can be applied to censored datasets, is resistant to outliers, and measures all monotonic correlations, linear and nonlinear.

(b) From RWQCB (2008), Table E-1. Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion Concerns (volatile chemicals only).



Notes:

- 1. All locations are approximate.

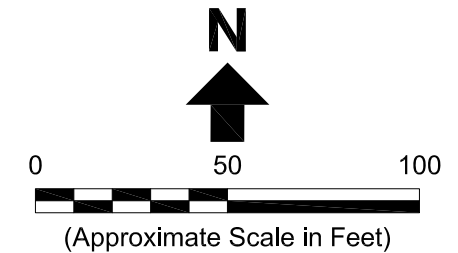
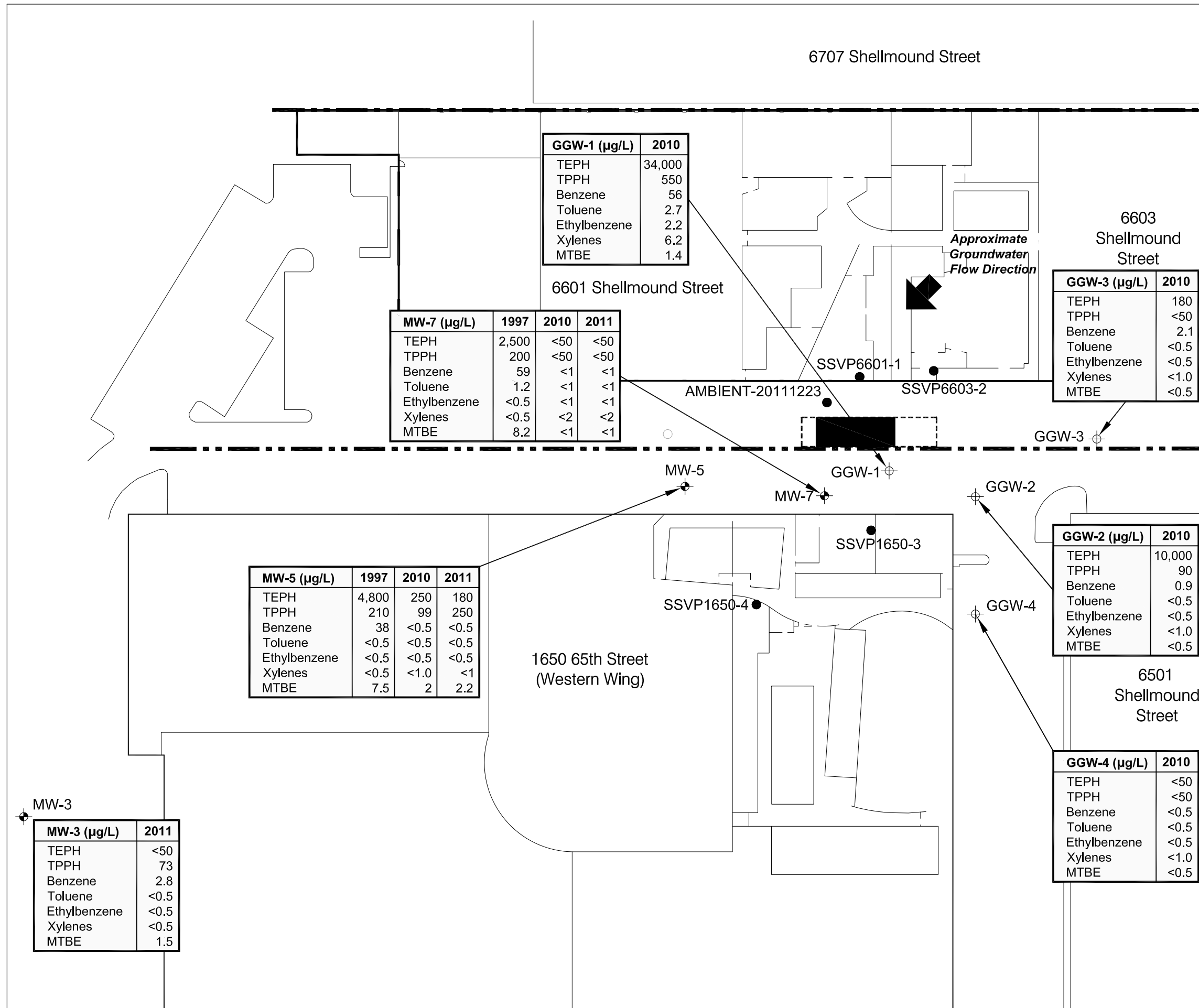


Erler & Kalinowski, Inc.

Site Location Map

6601/6603 Shellmound Street
 Emeryville, CA
 July 2012
 EKI 950074.05

Figure 1



- Legend:**
- Property Boundary
 - Approximate Tank Area
 - Approximate Excavation Area (as depicted in Dubovsky and Petite, 1990)
 - Off-Site Monitoring Well Location
 - Grab Groundwater Sampling Location (2010)
 - Subslab Vapor Probe Location, Sampled 23 December 2011

- Abbreviations:**
- ug/L = micrograms per liter
 - MTBE = methyl tertiary butyl ether
 - TEPH = total extractable petroleum hydrocarbons
 - TPPH = total purgeable petroleum hydrocarbons

- Notes:**
1. All locations are approximate.
 2. Basemap source: Digitized from Alta Land Survey Title Map (undated); interior layout from maps provided by on-site tenant.
 3. Posted groundwater data are from the 6 March 2010, 9 April 2010, and 1 December 2011 sampling event. Previous groundwater investigation were conducted in 1996 and 1997; those groundwater data are not shown.

Erler & Kalinowski, Inc.

Groundwater Sampling Results

6601/6603 Shellmound Street
Emeryville, CA
July 2012
EKI 950074.05

Figure 2

GGW-1 (µg/L)	2010
TEPH	34,000
TPPH	550
Benzene	56
Toluene	2.7
Ethylbenzene	2.2
Xylenes	6.2
MTBE	1.4

MW-7 (µg/L)	1997	2010	2011
TEPH	2,500	<50	<50
TPPH	200	<50	<50
Benzene	59	<1	<1
Toluene	1.2	<1	<1
Ethylbenzene	<0.5	<1	<1
Xylenes	<0.5	<2	<2
MTBE	8.2	<1	<1

GGW-3 (µg/L)	2010
TEPH	180
TPPH	<50
Benzene	2.1
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
MTBE	<0.5

MW-5 (µg/L)	1997	2010	2011
TEPH	4,800	250	180
TPPH	210	99	250
Benzene	38	<0.5	<0.5
Toluene	<0.5	<0.5	<0.5
Ethylbenzene	<0.5	<0.5	<0.5
Xylenes	<0.5	<1.0	<1
MTBE	7.5	2	2.2

GGW-2 (µg/L)	2010
TEPH	10,000
TPPH	90
Benzene	0.9
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
MTBE	<0.5

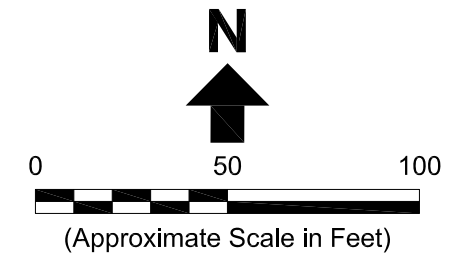
GGW-4 (µg/L)	2010
TEPH	<50
TPPH	<50
Benzene	<0.5
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<1.0
MTBE	<0.5

MW-3 (µg/L)	2011
TEPH	<50
TPPH	73
Benzene	2.8
Toluene	<0.5
Ethylbenzene	<0.5
Xylenes	<0.5
MTBE	1.5

SB-7 (mg/kg)	5.0-5.5 ft bgs	8.0-8.5 ft bgs	13.0-13.5 ft bgs	20.5-21.0 ft bgs
TEPH	100	4,400	1,000	6.2
TPPH	<0.23	160	1.5	<0.18
Benzene	<0.0058	<0.57	0.012	<0.005
Toluene	<0.0058	<0.57	<0.0051	<0.005
Ethylbenzene	<0.0058	<0.57	0.014	<0.005
Xylenes	<0.0116	<1.14	0.0066	<0.010
MTBE	<0.0058	<0.57	<0.0051	<0.005

SB-8 (mg/kg)	4.5-5.0 ft bgs	13.0-13.5 ft bgs	17.5-18.0 ft bgs
TEPH	900	2,500	12
TPPH	0.19	0.77	<0.21
Benzene	<0.0047	<0.0046	<0.0053
Toluene	<0.0047	<0.0046	<0.0053
Ethylbenzene	<0.0047	<0.0046	<0.0053
Xylenes	<0.0094	<0.0092	<0.0106
MTBE	<0.0047	<0.0046	<0.0053

SB-9 (mg/kg)	5.0-5.5 ft bgs	9.0-9.5 ft bgs	12.5-13.0 ft bgs	19.0-19.5 ft bgs
TEPH	49	4,600	3,200	78
TPPH	<0.22	140	98	<0.23
Benzene	<0.0045	<1.5	0.0077	<0.0058
Toluene	<0.0045	<1.5	<0.0049	<0.0058
Ethylbenzene	<0.0045	<1.5	<0.0049	<0.0058
Xylenes	<0.0090	<3.0	<0.0098	<0.0116
MTBE	<0.0045	<1.5	<0.0049	<0.0058



Legend:

- Property Boundary
- Approximate Tank Area
- Approximate Excavation Area (as depicted in Dubovsky and Petite, 1990)
- Off-Site Monitoring Well Location
- Soil Borehole Location (1996)
- Soil Borehole Location (2010)
- Grab Groundwater Sampling Location (2010)
- Power Pole (PP)
- Storm Drain Line
- Fire Service Line
- Sanitary Sewer Line
- Electrical Line
- Gas Line

Abbreviations:

- ft bgs = feet below ground surface
- mg/kg = milligrams per kilogram
- MTBE = Methyl Tertiary Butyl Ether
- TEPH = Total Extractable Petroleum Hydrocarbons
- TPPH = Total Purgeable Petroleum Hydrocarbons

Notes:

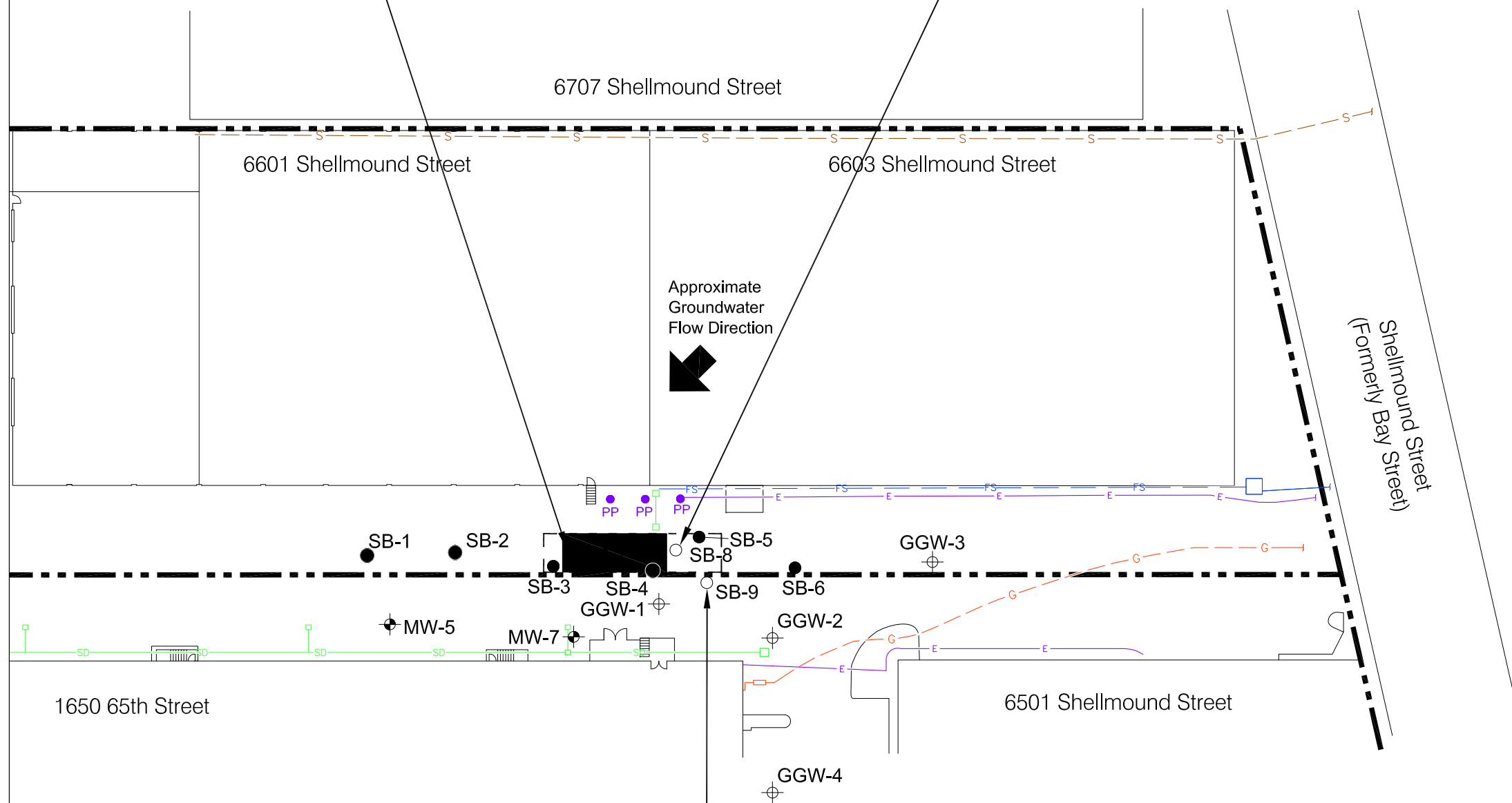
1. All locations are approximate.
2. Basemap source: Digitized from Alta Land Survey Title Map (undated).
3. Posted soil data are from 9 April 2010 sampling event.

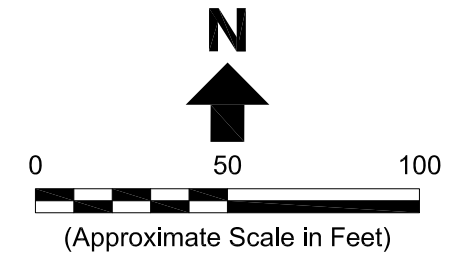
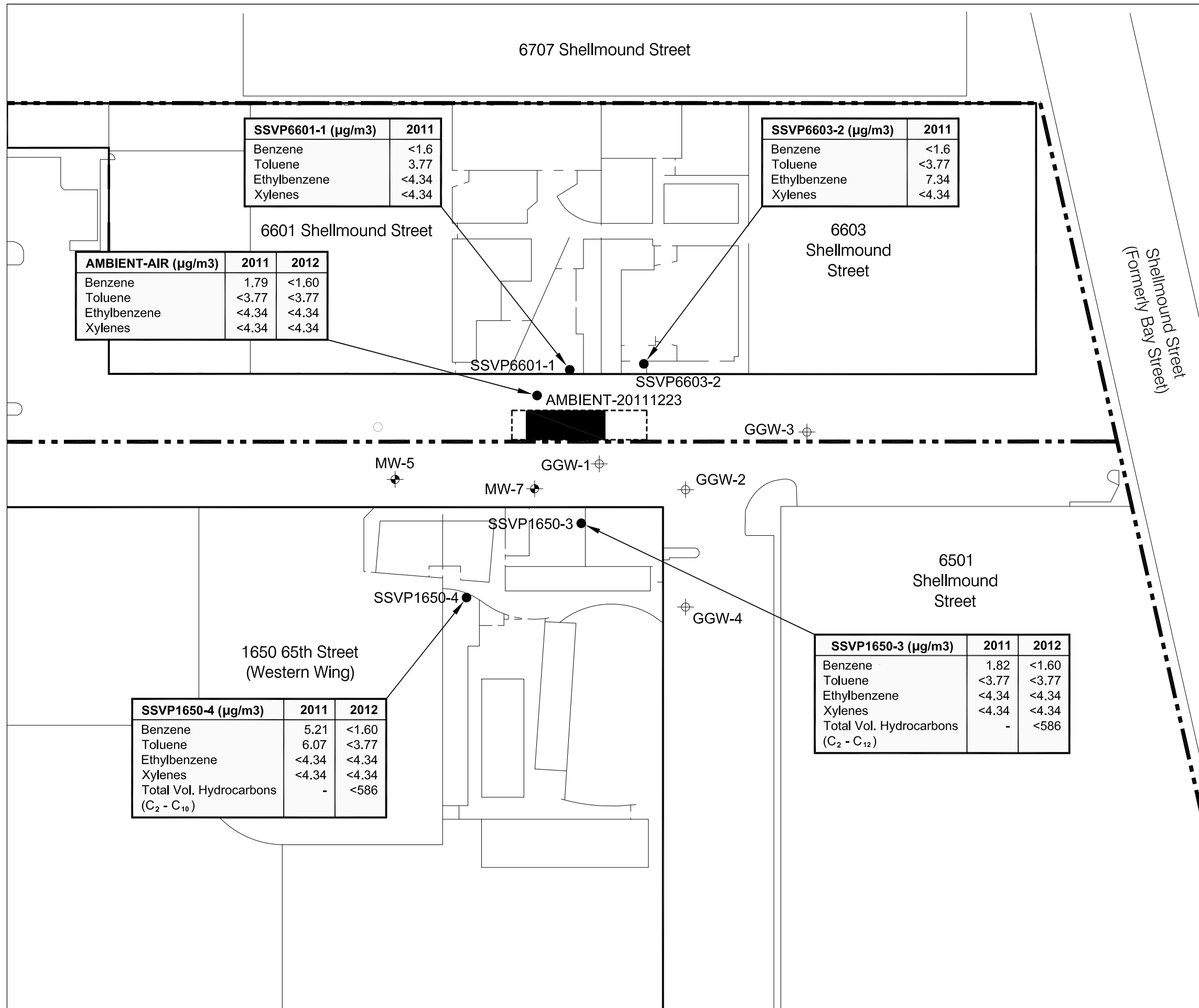
Erler & Kalinowski, Inc.

Soil Sampling Results

6601/6603 Shellmound Street
Emeryville, CA
July 2012
EKI 950074.05

Figure 3





- Legend:**
- Property Boundary
 - Approximate Tank Area
 - - - - Approximate Excavation Area (as depicted in Dubovsky and Petite, 1990)
 - ⊕ Off-Site Monitoring Well Location
 - ⊕ Grab Groundwater Sampling Location (2010)
 - Subslab Vapor Probe Location, Sampled 23 December 2011.

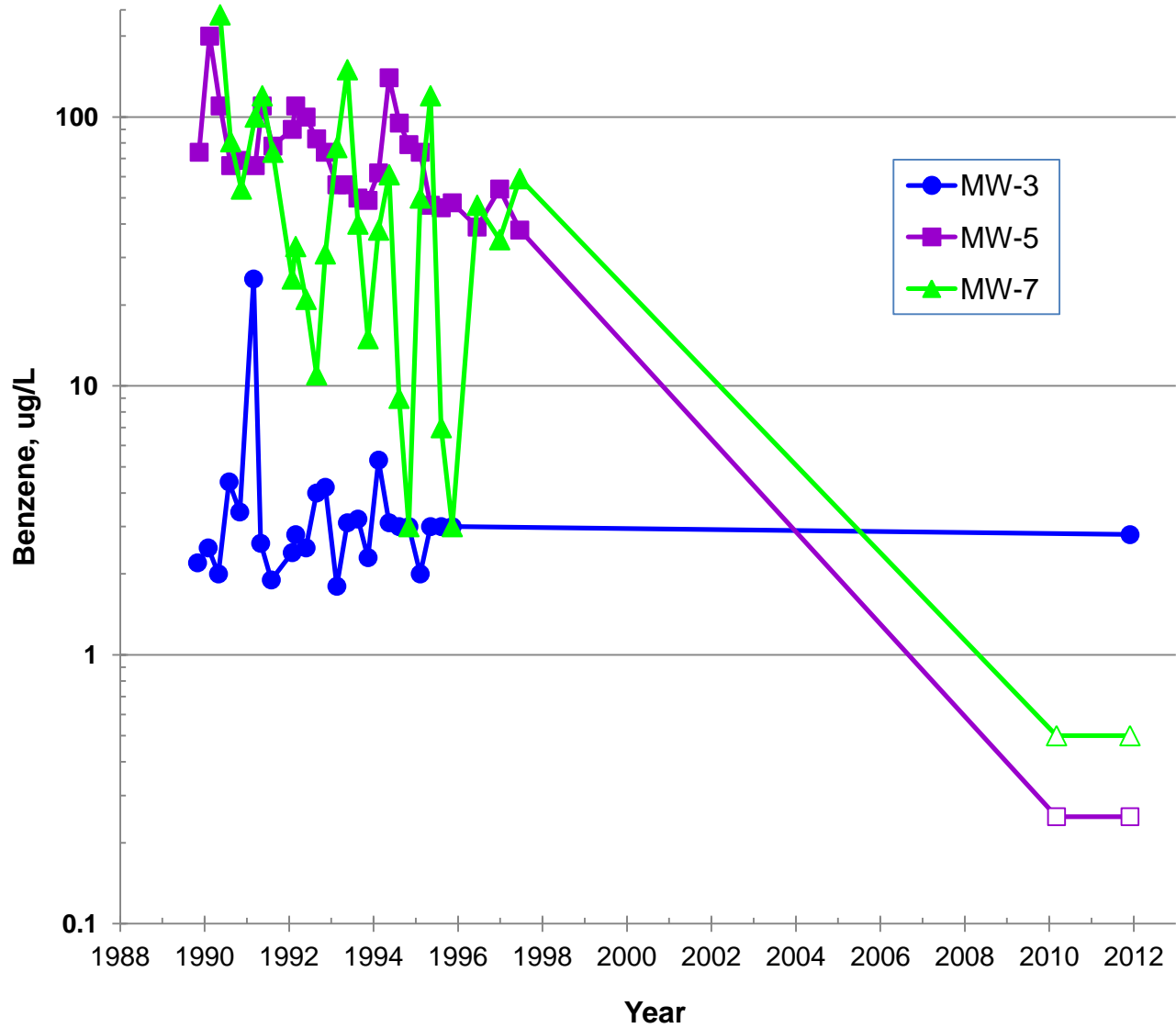
- Notes:**
1. All locations are approximate.
 2. Basemap source: Digitized from Alta Land Survey Title Map (undated); interior layout from maps provided by on-site tenant.
 3. Only major interior walls near proposed sample locations are presented. Not all interior walls are shown.

Erler & Kalinowski, Inc.

Subslab Vapor Sampling Results

6601/6603 Shellmound Street
 Emeryville, CA
 July 2012
 EKI 950074.05

Figure 4



Note:
Open symbols denote non-detections,
plotted at one-half the reporting limit.

**Erler &
Kalinowski, Inc.**

Benzene Concentrations
Over Time in Groundwater
Monitoring Wells

6601/6603 Shellmound Street
Emeryville, California

July 2012
EKI 950074.05

Figure 5

APPENDIX A

Soil and Groundwater Data from 1996 EKI Investigation

(Tables 2 through 7 from EKI, 1996)

Table 2
Summary of Soil and Groundwater Sampling Depths and Analyses (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Sample ID (b)	Sample Location	Sample Depth (feet bgs) (c)	TPPH as gasoline / BTEX & MTBE (EPA 8015 and 8020)	TEPH as diesel (EPA 8015)	TEPH and Fuel Fingerprint (d)	PAHs (EPA Method 8100)
Soil						
SB-1-5	SB-1	4.5-5	X	X		
SB-2-5	SB-2	4.5-5	X	X		
SB-3-5	SB-3	4.5-5	X	X		X
SB-4-5	SB-4	4.5-5	X	X		X
SB-5-6	SB-5	5.5-6	X	X		
SB-6-5	SB-6	4.5-5	X	X		
Groundwater						
Travel Blank	-	-	X			
SB-1	SB-1	11.0	X	X		
SB-2	SB-2	13.5	X	X		
SB-3	SB-3	11.5	X		X	
SB-4	SB-4	11.5	X	X		
SB-5	SB-5	10.5	X		X	
SB-6	SB-6	11.5	X		X	X
MW-5	MW-5	18.0 (e)	X	X		
MW-7	MW-7	6.7-18.7 (e)	X	X		

Notes:

- (a) Soil and grab groundwater samples collected by Erlen & Kallnowski, Inc. on 15 June 1996 and 16 June 1996.
- (b) See Figure 2 for sampling locations corresponding to Sample ID.
- (c) "feet bgs" denotes feet below ground surface.
 Grab groundwater samples were collected through the hollow stem augers in borings drilled to the depth indicated.
- (d) For a fuel fingerprint analysis, the laboratory attempts to match the sample chromatogram with that of various hydrocarbon standards. The analysis includes the entire extractable range, i.e. from carbon chain lengths C9 to C40.
- (e) Sample depth for the monitoring wells are indicated by the screened interval of the well. For well MW-5, only the bottom depth of the screened interval is known.

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons
 BTEX = Benzene, Toluene, Ethylbenzene, and Xylenes
 MTBE = Methyl tertiary butyl ether
 TEPH = Total Extractable Petroleum Hydrocarbons
 PAHs = Polycyclic Aromatic Hydrocarbons

Table 3
Total Petroleum Hydrocarbon Concentrations in Soil Samples (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Sample ID (b)	Total Purgeable Petroleum Hydrocarbons			Total Extractable Petroleum Hydrocarbons		
	Conc. as gas (c) (mg/kg)	Laboratory Description of Chromatogram Pattern	Additional Comments (d)	Conc. as diesel (e) (mg/kg)	Laboratory Description of Chromatogram Pattern	Additional Comments (c)
SB-1-5	200	Unidentifiable pattern of hydrocarbons in C8-C12 range.	Mound centered at 17 min. (not observed in other soil samples).	820	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Mound in less than C12 range (not observed in other soil samples). Mound centered at C28.
SB-2-5	1.1	Pattern characteristic of weathered gasoline in C8-C12 range.	Mound centered at 23 min.	210	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Mound centered at C30.
SB-3-5	<1.0	Not detected.	Mound centered at 23 min.	86	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Mound centered at C30.
SB-4-5	4.2	Unidentifiable pattern of hydrocarbons greater than C9.	Mound centered at 23 min.	360	Unidentifiable pattern of hydrocarbons in C10-C24 range.	Mound centered at C30.
SB-5-6	7.3	Unidentifiable pattern of hydrocarbons greater than C8.	Mound centered at 23 min.	120	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Some small peaks in less than C12 range. Mound centered at C30.
SB-6-5	2.5	Unidentifiable pattern of hydrocarbons in C8-C12 range.	Mound centered at 23 min. Also several peaks centered at 17 min.	1,800	Unidentifiable pattern of hydrocarbons in C9-C40 range.	Very different pattern from other soil samples. Discrete peaks at C14, C17, C20, C24, and C28.

Notes:

- (a) Soil samples collected by Erler & Kalinowski, Inc. on 15 June 1996.
- (b) Sampling locations corresponding to Sample ID are shown in Figure 3.
- (c) Concentration quantified as gasoline (includes C6 to C12 compounds).
- (d) Appendix G contains chromatograms from laboratory analysis of soil samples and, for comparison, petroleum hydrocarbon and n-alkane standards.
- (e) Concentration quantified as diesel (includes C9 to C24 compounds).

Table 4
Concentrations of Petroleum Hydrocarbon-Related Compounds in Soil Samples (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Sample ID (b)	Benzene (mg/kg)	Toluene (mg/kg)	Ethyl-benzene (mg/kg)	Total Xylenes (mg/kg)	MTBE (mg/kg)	PAHs (mg/kg)
SB-1-5	<0.12	<0.12	0.29	2.8	<0.62	NA
SB-2-5	0.019	<0.005	<0.005	0.0092	<0.025	NA
SB-3-5	<0.005	<0.005	<0.005	<0.005	<0.025	ND
SB-4-5	<0.005	0.0094	<0.005	0.015	<0.025	ND
SB-5-6	<0.005	0.0062	<0.005	0.021	<0.025	NA
SB-6-5	<0.005	<0.005	<0.005	0.026	<0.025	NA
PRG (c)	3.2	2,800	690	990	3,400	

Notes:

- (a) Soil samples collected by Eler & Kalinowski, Inc. on 15 June 1996.
- (b) Sampling locations corresponding to Sample ID are shown in Figure 2.
- (c) U.S. EPA Preliminary Remediation Goals ("PRGs") for industrial soils (U.S. EPA, 1 September 1995).

Abbreviations:

- MTBE = Methyl tertiary butyl ether
- PAHs = Polycyclic Aromatic Hydrocarbons
- NA = Not analyzed
- ND = No compounds detected above laboratory method detection limits (See Appendix E for laboratory data sheets)

Table 5
Total Petroleum Hydrocarbon Concentrations in Groundwater Samples (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Sample ID (b)	Total Purgeable Petroleum Hydrocarbons			Total Extractable Petroleum Hydrocarbons		
	Conc. as gas (c) (ug/L)	Laboratory Description of Chromatogram Pattern	Additional Comments (c)	Conc. (d) (ug/L)	Laboratory Description of Chromatogram Pattern	Additional Comments (c)
SB-1	930	Unidentifiable pattern of hydrocarbons greater than C8.	Discrete peaks in 12-20 min. range.	9,400 (as diesel)	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Mound in less than C12 range.
SB-2	<50	Not detected.	Small mound centered at 24 min.	<41,000 (as diesel)	Not detected.	No peaks visible.
SB-3	<5000	Not detected.	Mound centered at 24 min.	13,000,000 (total extract.)	Pattern characteristic of diesel and unidentifiable pattern of hydrocarbons in C25-C36 range.	Mound centered at C17 with some discrete peaks.
SB-4	<200	Not detected.	Small mound centered at 24 min.	690,000 (as diesel)	Pattern characteristic of weathered diesel.	Mound centered at C17 with some discrete peaks.
SB-5	1,800	Unidentifiable pattern of hydrocarbons greater than C11 and discrete peak in C6-C7 range.	Mound centered at 24 min.	2,100,000 (total extract.)	Pattern characteristic of diesel.	Mound centered at C17.
SB-6	370,000	Unidentifiable pattern of hydrocarbons greater than C11.	Mound centered at 24 min.	22,000,000 (total extract.)	Pattern characteristic of diesel.	Mound centered at C17.
MW-5	180	Pattern characteristic of weathered gasoline in C6-C12 range.	Discrete peaks in 16-23 min. range.	<40,000 (as diesel)	Not detected.	No peaks visible.
MW-7	<50	Not detected.	No peaks or mounds.	1,000 (as diesel)	Unidentifiable pattern of hydrocarbons in C9-C24 range.	Mound centered at C24 (not observed in other groundwater samples).

Notes:

(a) Groundwater samples collected by Eler & Kalinowski, Inc. on 15 and 16 June 1996.

(b) Sampling locations corresponding to Sample ID are shown in Figure 2.

(c) Concentration quantified as gasoline (includes C6 to C12 compounds).

(d) Appendix G contains chromatograms from laboratory analysis of samples and, for comparison, petroleum hydrocarbon and n-alkane standards.

(e) Concentration quantified either as diesel (includes C9 to C24 compounds) or as total extractable petroleum hydrocarbons (includes C9 to C40 compounds).

Table 6
Concentrations of Petroleum Hydrocarbon-Related Compounds
in Groundwater Samples (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Sample ID (b)	Benzene (ug/L)	Toluene (ug/L)	Ethylbenzene (ug/L)	Total Xylenes (ug/L)	MTBE (ug/L)	PAHs	
						Acenaphthene (ug/L)	Fluorene (ug/L)
SB-1	<5	<5	11	17	<25	NA	NA
SB-2	0.99	<0.5	<0.5	<0.5	6.4	NA	NA
SB-3	160	<50	<50	<50	<250	NA	NA
SB-4	5.0	<2	<2	<2	<10	NA	NA
SB-5	150	<5	<5	11	<25	NA	NA
SB-6	<1,000	<1,000	<1,000	<1,000	<5,000	12,000-42,000 (c)	25,000-96,000 (c)
MW-5	39	<0.5	<0.5	<0.5	8.1	NA	NA
MW-7	47	0.87	<0.5	0.8	6.5	NA	NA
PRG (d)	0.39	720	1,300	1,400	180	370	240
MCL (e)	1	150	700	1,750	-(f)	-	-

Notes:

- (a) Groundwater samples collected by Eler & Kalinowski, Inc. on 15 and 16 June 1996.
- (b) Sampling locations corresponding to Sample ID are shown in Figure 2.
- (c) Laboratory indicated that results may be artificially high due to presence of unknown, interfering hydrocarbon. PAHs are most likely associated with free product present in groundwater sample. Therefore, the reported concentrations are likely to be greater than actual aqueous concentrations. Sample analyzed after hold time.
- (d) U.S. EPA Preliminary Remediation Goals ("PRGs") for drinking water (U.S. EPA, 1 September 1995).
- (e) Maximum Contaminant Levels ("MCLs") for drinking water.
- (f) Hyphen indicates that an MCL is not available for this compound.

Abbreviations:

- MTBE = Methyl tertiary butyl ether
- PAHs = Polycyclic Aromatic Hydrocarbons
- NA = Not analyzed

Table 7
Results of Trend Analysis for Groundwater Data from Wells MW-5 and MW-7 (a)
6601 and 6603 Bay Street
Sybase, Inc.
Emeryville, California
(EKI 950074.03)

Statistical Parameters	Well MW-5				Well MW-7			
	TPPH	Benzene	Toluene	Total Xylenes	TPPH	Benzene	Toluene	Total Xylenes
n (b)	18	26	18	18	18	26	18	18
S (c)	14	-135	-18	21	-61	-96	-22	2
Mann-Kendall Probability (d)	0.313	NA (e)	NA (e)	0.227	NA (e)	NA (e)	NA (e)	0.485
Significance Level (f)	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Result (g)	No upward trend	No upward trend	No upward trend	No upward trend	No upward trend	No upward trend	No upward trend	No upward trend

Notes:

- (a) The data from Table 1 were evaluated using the Mann-Kendall test. A value equal to half the detection limit was used for concentrations reported to be less than laboratory method detection limits. Because detection limit values were not available for data prior to 1992, only the data from 29 January 1992 to 16 June 1996 were used in the analyses for all compounds except benzene. All historical data for benzene were used because the benzene concentrations were above detection limits. A statistical evaluation of ethylbenzene concentrations was not performed because ethylbenzene concentrations were less than detection limits in all but one sample.
- (b) "n" is the number of sampling events.
- (c) "S" is the Mann-Kendall statistic calculated using the methodology described in Gilbert (1987).
- (d) Mann-Kendall probability is related to the values of S and n, and is obtained from Table A21 in Hollander and Wolfe (1973).
- (e) A negative S value indicates that the data are clearly not increasing and a Mann-Kendall probability is not applicable ("NA").
- (f) A significance level of 0.05 is recommended by U.S. EPA (1994).
- (g) A negative S value or a Mann-Kendall probability greater than the significance level indicates that there is no upward trend in the data (Gilbert, 1987).

Abbreviations:

TPPH = Total Purgeable Petroleum Hydrocarbons quantified as gasoline

APPENDIX B

**Potentiometric Surface Map from
2012 Report for Adjacent Property**

*Plate 3, Groundwater Elevation Contours on November 17, 2011
1650 65th Street, Emeryville, California*

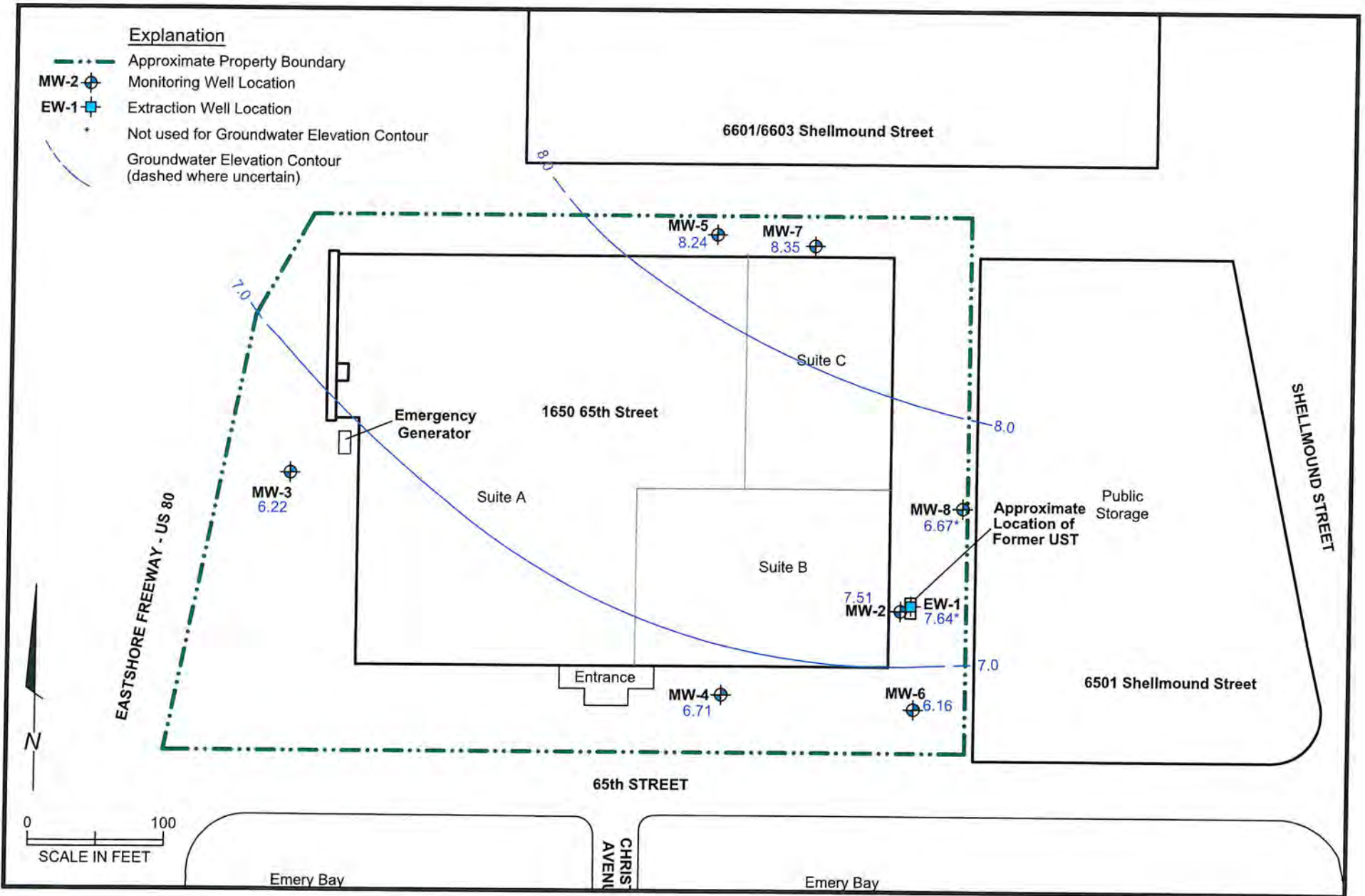
from

*Groundwater Monitoring Report
Fourth Quarter 2011 Sampling Event
1650 65th Street, Emeryville, CA
Fuel Leak Case No. RO0000440
Geotracker Global ID T0600100511*

prepared by

**PES Environmental,
Novato, California**

19 January 2012



APPENDIX C

Field Methods and Procedures for Subslab Vapor Sampling

Appendix C

Field Methods and Procedures for Subslab Vapor Sampling

6601/6603 Shellmound Street, Emeryville, California

On behalf of Sybase, Inc., EKI performed subslab vapor sampling for chemical analysis at the 6601-6603 Shellmound Street property (“Site”), installing and sampling subslab vapor probes in December 2011, and sampling the probes again in May 2012.

Subslab Vapor Probe Construction and Installation

Subslab vapor probes (“SSVPs”) were constructed in general accordance with current guidance documents (e.g., CalEPA, 2011, CalEPA, 2012). A schematic of a typical SSVP installed in a small-diameter hole drilled through a concrete slab-on-grade floor is shown on Figure C-1.

Prior to drilling, EKI subcontracted the services of a private utility-locating subcontractor to clear each planned SSVP location for subsurface power lines, water, sewer, and gas pipes, drains, and other unidentified metallic objects.

The SSVP probes were constructed prior to mobilization to the Site. Each probe consists of an approximately six-inch long by ¼-inch O.D. section of stainless-steel tubing, equipped with a threaded compression fitting and plug at the top, and a rubber stopper at the bottom (Figure C-1).

At each cleared SSVP location, a small diameter (1.25-inch) hole was drilled to a depth of approximately 1.5 inches into the concrete slab, using an electric rotary hammer. Centered within that hole, a smaller 7/8-inch diameter hole was drilled through the bottom of the concrete slab into the material below, to allow insertion of the SSVP. A pre-assembled SSVP was inserted into the hole, and the annular space was sealed with granular bentonite and expansion cement, flush with the existing slab surface. The cement seal was allowed to set without disturbance for at least 30 minutes.

No investigation-derived waste (“IDW”) was generated during SSVP drilling, installation, or sampling, other than a very small amount of concrete dust at the top of the borehole. These concrete cuttings were removed as they were generated during drilling, using a HEPA-filtered shop vacuum cleaner.

SSVP Sampling

Samples collected for chemical analysis, including vapor samples, duplicate vapor samples, and leak check samples, were collected in 1-liter stainless-steel SUMMA[®] canisters that were batch-certified clean by K Prime, Inc., the California-certified analytical laboratory that supplied them. Prior to sample collection, the threaded plug in the top of the SSVP was removed and replaced by a closed stainless steel ball valve with Swagelok[®]-type threads. Sampling was not started for approximately 30 minutes after installing the valve, in order to allow re-equilibration of subslab vapor from any disturbance created by valve installation.

Prior to sampling, a short length of new PTFE tubing was connected to the valve of each SSVP via a compression fitting. The tubing was attached to a sealed, laboratory-cleaned sampling manifold. Each manifold contains two valved sample ports, a stainless-steel dust filter, a vacuum gauge, and a flow restrictor set to a sampling rate of 50 milliliters per minute (“mL/min”). A vacuum test of each manifold was performed in the field prior after connecting it to the SSVP. A one-liter sample canister was attached to one sample port on each manifold, and a purging syringe was attached to the other port.

Prior to sampling, the initial vacuum in each canister was noted. Each SSVP was purged of approximately 50 milliliters (“mL”) of soil vapor using the manual syringe. Purging is intended to remove any non-representative vapor from the SSVP prior to sample collection. The 50- mL purge volume is several times larger than the SSVP tubing volume, and thus provides an adequate purge, yet it is small relative to the 1-liter sample canisters and thus is unlikely to affect vapor sampling conditions.

After an SSVP was purged, the purging valve on the manifold was closed, isolating the purging syringe from the sample train. The inlet valve on the sampling canister then was opened, to collect the sub-slab vapor sample.

A leak detection protocol was included as a quality control check for field sampling system leaks. The leak detection protocol involves (a) creating an enclosed space (“sampling shroud”) around the above-ground sampling assembly and all of its connections, (b) injecting a volatile tracer gas (1,1,1,2-tetrafluoroethane or “TeFA”) into this space during the time that the SSVPs are being actively sampled, and (c) sampling this space independently of the SSVP, using a separate leak-detection (“shroud”) canister. The purpose of the leak detection protocol is to provide a means for detecting leakage of ambient air into the vapor sample through either leaks in the sampling train or cracks in the concrete floor, and to provide a quantitative means of estimating the effect of leakage, if it occurs, on the analytical results for the vapor sample.

To implement the leak detection protocol, a flexible plastic bag was used as the sampling shroud, which contained SSVP, sampling manifold, and sample canister. The intake tubing for the shroud canister was inserted through a small tightly-fitting hole in the shroud. Immediately after the valve on the sampling canister was opened, two or three short bursts of tracer gas were injected into the shroud through a separate hole, which then was closed. The valve to the shroud canister then was opened to sample the air inside the shroud.

Each canister was allowed to fill until its remaining vacuum was nearly or completely depleted, which took approximately 20-45 minutes per sample.

Once vapor sampling was complete, the valves on the sampling and shroud canisters were closed and capped. Each canister was labeled with a unique sample identification number, sampling start time, and the sampling date. Chain-of-custody records were initiated to document sample handling and delivery to the analytical laboratory. The canisters then were returned to the laboratory for analysis via courier or commercial carrier. For field Quality Assurance/Quality Control (“QA/QC”) purposes, one duplicate vapor sample was collected concurrently from one of the SSVPs during each sampling event. Pertinent details such as initial and final canister

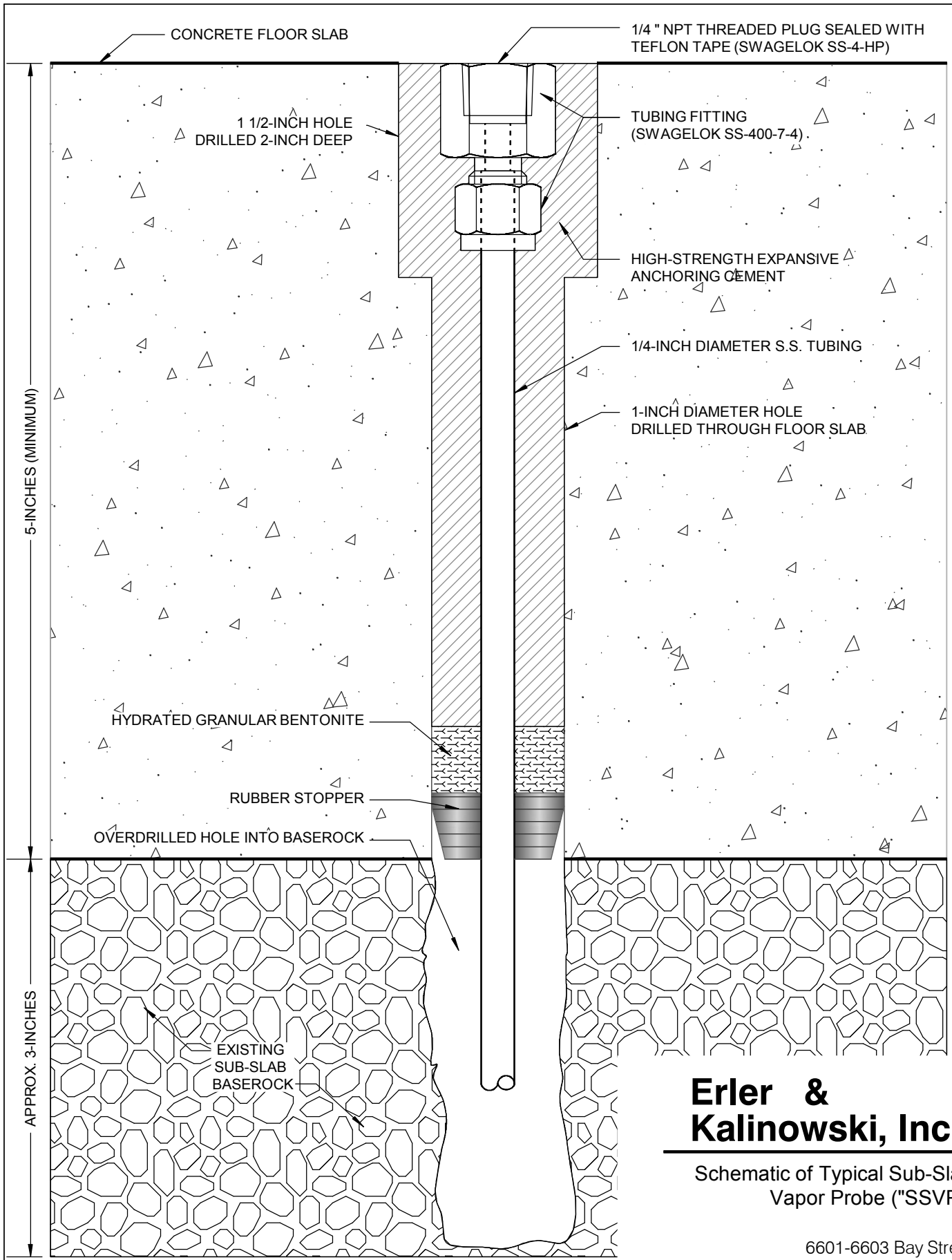
vacuum, start and stop time, approximate ambient temperature, and other conditions were recorded in field notes during sampling. A hexagonal-socket plug was threaded into the SSVP with PTFE tape and tightened, to seal the probe between sampling events.

Ambient Air Sample

An outdoor ambient air sample was collected over the entire period of SSVP installation and sampling (in December 2011), or sampling (in May 2012). The sample was collected using a batch-certified clean 6-L SUMMA[®] canister equipped with a flow restrictor and manifold. The ambient air sampling canister was placed in a secure location outside and upwind of the SSVP locations at the start of work. The start time and initial vacuum was noted, the valve was opened, and the canister was left to slowly collect an integrated sample for the entire period of sampling, which varied from 7 hours during the December 2011 SSVP installation and sampling event, to 1.25 hours during the May 2012 sampling event. The ambient sample canister was checked periodically to ensure it was undisturbed, and that the vacuum was within expected limits. After SSVP sampling was complete, the valve was closed, the time and vacuum noted, and documentation under chain of custody protocols was prepared for the ambient sample.

Vapor Sample Analysis

Soil vapor samples (including duplicates) and the ambient air sample was analyzed by a State of California certified laboratory using EPA Method TO-15 for BTEX compounds and the tracer compound 1,1,1,2-TFA. Each leak-detection shroud vapor sample was analyzed for 1,1,1,2-TFA using EPA Method TO-15. Concentrations of the major gases oxygen, nitrogen, methane, and carbon dioxide also were analyzed.

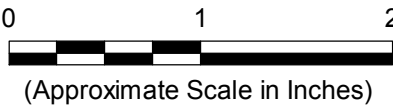


Erler & Kalinowski, Inc.

Schematic of Typical Sub-Slab Vapor Probe ("SSVP")

6601-6603 Bay Street
 Emeryville, CA
 July 2012
 EKI 950074.05

Figure C-1





Contractor: SUBDYNAMIC LOCATING SERVICE (PETER TONGANT)

EKI Staff On-Site: Roger Lion

Weather: CLEAR

Temperature: 35 °F Min to _____ °F Max

Work Hours: 07:20 to 15:25 Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: SOME DELAY IN GETTING INTO 1650-4 LOCATION THROUGH LOCKED DOOR.

Accidents, Damage: —

Sampling, Testing: CLEAR LOCATIONS, INSTALL SSVP IMPLANTS w/ RAPID SET GROUT.

Visitors to Site: —

Work Report (Work done, Personnel/Equipment working): 07:20 I ARRIVED ON SITE

07:30 met up w/ PETER T. of SUBDYNAMIC. WE LOOKED OVER SAMPLE LOCATIONS

08:11 START AMBIENT SAMPLE - OUTSIDE CAFETERIA OF 6601 34 INCH DIAMETER

08:50 FINISHED CLEARING LOCATIONS, SUBDYNAMIC OFF SITE

09:28 SSVP-6601-1 GROUTED INTO FLOOR SLAB IN CAFETERIA (UNDER REFRIGERATOR)

09:53 SSVP-6603-2 GROUTED INTO FLOOR SLAB - HALL NEXT TO DOUBLE OUTSIDE DOORS (UNDER CARPET)

10:20 SSVP-1650-3 GROUTED INTO FLOOR SLAB IN LIFE DRAWING ROOM. (SMALL FLAP IN CARPET)

10:42 SSVP-1650-4 GROUTED INTO FLOOR SLAB IN OFFICE AREA. (NEAR CURVED WALL)

13:45 I STARTED SAMPLE COLLECTION @ SSVP6601-1, THEN SSVP6603-2.

14:18 I STARTED SAMPLE & SHROUD SAMPLE COLLECTION AT SSVP1650-4.

14:18 I STARTED SAMPLE & DUPLICATE SAMPLE COLLECTION AT SSVP1650-3.

14:26 I ENDED SAMPLE COLLECTION AT SSVP-6601-1, REPLACING THE SAMPLING VALVE WITH A SEALING PLUG IN THE IMPLANT IN THE FLOOR.

14:34 I ENDED SAMPLE COLLECTION AT SSVP6603-2, AS ABOVE, THEN AT SSVP1650-3 AND SSVP1650-4.

15:16 I ENDED AMBIENT SAMPLE COLLECTION

15:25 I LEFT THE SITE

15:50 I SHIPPED SAMPLES TO K-PRIME, INC VIA FEDEX.

Roger Lion

Sheet:	<u>1</u>	of	<u>1</u>
Date:	<u>12/23/11</u>		
Project:	<u>SYBASE</u>		
EKI Job No:	<u>950074.05</u>		

Soil Vapor Sample Collection Log - Sub-Slab Vapor Probes

Project Location: 6601 Shellmound Street, Emeryville

Date: 12/23/2011

Samples Collected By: Roger Leon

EKI Project Number: 950074.05

Item	Units	Field Data and Notes					
Sampling Location							
Sample port ID or well ID	-	SSVP6601-1	SSVP6603-2-2	SSVP1650-3	SSVP1650-4		
Date & Time SSVP installed	-	12/23/11 09:28	12/23/11 09:53	12/23/11 10:20	12/23/11 09:53		
Port Vacuum (-) or Pressure (+)	in-WC	0.00	0.00	0.00	0.00		
volume Purged	cm3	50	50	50	50		
Pre-sampling leak check OK? (Yes/No)	-	YES	YES	YES	YES		
Sample Collection							
Sample ID	-	SSVP6601-1	SSVP6603-2	SSVP1650-3	SSVP1650-4	Dup-A	Ambient-20111223
Leak check gas used (Yes / No)	-	YES	YES	YES	YES	YES	—
Sample Start Time	hh:mm	13:45	13:52	14:18	14:13	14:18	08:11
Sample End Time	hh:mm	14:26	14:34	14:48	14:59	14:48	15:16
Initial canister vacuum (using gauge on canister)	in-Hg	30	30	30	30	30	34
Final canister vacuum (using gauge on canister)	in-Hg	0	0	0	0	0	11
Canister volume	liters	1	1	1	1	1	6
Canister ID	-	S-525	S-355	S-234	S-236	S-233	A-421
						<u>AT SSVP1650-3</u>	
Shroud Sample Collection							
Sample Start Time	hh:mm				14:13		
Sample End Time	hh:mm				14:59		
Initial canister vacuum (using gauge on canister)	in-Hg				30		
Final canister vacuum (using gauge on canister)	in-Hg				0		
Canister volume	liters				1		
Canister ID	-				S-434		
Field Data After Sample Collection							
Methane on CGM	ppmv or % LEL	0%	0%	0%	0%		
Carbon Monoxide (CO) on CGM	% Vol.	0%	0%	0%	0%		
Oxygen (O2) on CGM	% Vol.	19.8	20.9	20.9	21.1		
Notes							
VACUUM DURING CGM SAMPLING	in-H2O	0.30 in H2O	0.0 in H2O VAC	0.1 in H2O VAC.	—		

Contractor: _____

EKI Staff On-Site: Roger Lion

Weather: CLEAR

Temperature: _____ °F Min to _____ °F Max

Work Hours: 08:00 to 09:30 Memos Issued: _____

Photos: _____

Special Conditions, Delays, Changes: _____

Accidents, Damage: _____

Sampling, Testing: _____

Visitors to Site: _____

Sheet: _____ of _____
Date: 05/02/12
Project: SYBASE
EKI Job No: 950074.05

Work Report (Work done, Personnel/Equipment working): I ARRIVED ON SITE AND SET UP FLOW CONTROLLERS ON SUMMA CANNISTERS. I WENT TO THE PRIOR SAMPLING LOCATIONS AND PLACED A SAMPLING TUBE/VALVE IN THE SAMPLING IMPLANT IN THE FLOOR, THEN CONNECTED THE SUMMAS TO THE TUBING AND CLOSELY OBSERVED VACUUMS FOR ANY INDICATION OF LEAKS IN THE CONNECTIONS, NO SIGN OF LEAKAGE WAS PRESENT. THE AMBIENT SAMPLER, PLACED ON THE RAILING OF THE CAFE TERRACE WAS STARTED FIRST TO ENCOMPASS THE FULL TIME OF SAMPLING PREP AND COLLECTION.

AFTER SAMPLE COLLECTION, AND AFTER SUBSLAB VAPOR PROBES WERE SEALED WITH HEX PLUGS AND TEFLON TAPE, EPOXY WAS PAVED ON THE GROUND AROUND THE SSUP'S AS AN ADDITIONAL MEASURE AGAINST LEAKAGE.

09:50 AFTER ALL SAMPLES WERE PACKED UP, I LEFT THE SITE

Roger Lion

Soil Vapor Sample Collection Log - Sub-Slab Vapor Probes

Project Location: 6601 Shellmound Street, Emeryville

Date: 05/02/12

Samples Collected By: Roger Lion

EKI Project Number: 950074.05

Item	Units	Field Data and Notes					
Sampling Location							
Sample port ID or well ID	-	SSVP1650-3	SSVP1650-4	Dup-A			
Date & Time ^{VALVE} SSVP installed	-	08:27	08:37				
Port Vacuum (-) or Pressure (+)	in-WC	0.00	0.00				
Volume Purged	cm ³	50	50				
Pre-sampling leak check OK? (Yes/No)	-	YES	YES				
Sample Collection							
Sample ID	-	SSVP1650-3	SSVP1650-4	Dup-A	Ambient-20120502		
Leak check gas used (Yes/No)	-	YES	YES	YES	NO		
Sample Start Time	hh:mm	08:48	08:56	08:56	08:16		
Sample End Time	hh:mm	09:09	09:17	09:17	09:43		
Initial canister vacuum (using gauge on canister)	in-Hg	30	30	30	30		
Final canister vacuum (using gauge on canister)	in-Hg	1	3	0.5	6		
Canister volume	liters	1	1	1	6		
Canister ID	-	S-353	S-433	S-525	A-805		
ALL FLOW CONTROLLERS 50-ML/MIN. AT SSVP-1605-4 [EACH SUMMA HAS A FLOW CONTROLLER OF 50 ml/min, AND TOTAL FLOW IS 100 ml/min.]							
Ground Sample Collection							
Sample Start Time	hh:mm	08:48	08:56				
Sample End Time	hh:mm	09:09	09:17				
Initial canister vacuum (using gauge on canister)	in-Hg	30	30				
Final canister vacuum (using gauge on canister)	in-Hg	15	0				
Canister volume	liters	1	1				
Canister ID	-	S-231	S-659				
Field Data After Sample Collection							
Methane on CGM	ppmv or % LEL	-	-				
Carbon Monoxide (CO) on CGM	% Vol.	-	-				
Oxygen (O2) on CGM	% Vol.	-	-				
Notes: AMBIENT SAMPLE ON RAILING OF TERRACE OF 6601, OUTSIDE CAFETERIA, 7 FT ABOVE TERRACE LEVEL.							

APPENDIX D

Analytical Laboratory Reports



Curtis & Tompkins, Ltd.
Analytical Laboratories, Since 1878



Curtis & Tompkins, Ltd., Analytical Laboratories, Since 1878

2323 Fifth Street, Berkeley, CA 94710, Phone (510) 486-0900

**Laboratory Job Number 233062
ANALYTICAL REPORT**

Erler & Kalinowski, Inc.
1870 Ogden Drive
Burlingame, CA 94010-5306

Project : 950074.05
Location : 6601-6603 Bay Street
Level : II

<u>Sample ID</u>	<u>Lab ID</u>
MW-3	233062-001
MW-5	233062-002
MW-7	233062-003

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the following signature. The results contained in this report meet all requirements of NELAC and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

Signature: 
Project Manager

Date: 12/08/2011

NELAP # 01107CA

CASE NARRATIVE

Laboratory number: 233062
Client: Erler & Kalinowski, Inc.
Project: 950074.05
Location: 6601-6603 Bay Street
Request Date: 12/01/11
Samples Received: 12/01/11

This data package contains sample and QC results for three water samples, requested for the above referenced project on 12/01/11. The samples were received intact.

TPH-Purgeables and/or BTXE by GC (EPA 8015B):

No analytical problems were encountered.

TPH-Extractables by GC (EPA 8015B):

No analytical problems were encountered.

Volatile Organics by GC/MS (EPA 8260B):

MW-7 (lab # 233062-003) was diluted due to foaming. No other analytical problems were encountered.

Total Dissolved Solids (TDS) (SM2540C):

High RPD was observed for total dissolved solids in the BS/BSD for batch 181854. High RPD was observed for total dissolved solids in the SDUP for batch 181854; the parent sample was not a project sample. No other analytical problems were encountered.

233062

Erler & Kalinowski, Inc.

CHAIN OF CUSTODY RECORD

PAGE 1 OF 1

CONSULTING ENGINEERS AND SCIENTISTS

1870 Ogden Drive, Burlingame CA 94010

PHONE: 650-292-9100

FAX: 650-552-9012

Project Name 6601-6603 Bay Street		Project No. 950074.05		ANALYSES REQUESTED					EKI COC No.: (YYYYMMDD-#) 20111201-1			
Location: 6601-6603 Shellmound Street, Emeryville, CA		Sampled By: <i>R. LION</i>		Method No. Analyte Group	EPA 8260B + EDC + EDB VOCs + Oxygenates	EPA 8015M TPH-gasoline	EPA 8015M TPH-diesel EPA 3630 w/ silica-gel cleanup	SM 2540C TDS	Field Filtered with 0.45-micron filter	PLACE ON HOLD	Revision: _____ (A, B, C, D, etc.)	
Reporting: Electronic Format EDF Hard Copy Format PDF EPA Data Report Level: II Please report results to the following: (1) Cindy Cheng: ccheng@ekiconsult.com (2) Michelle King: mkking@ekiconsult.com (3) Jeff Shaw: jshaw@ekiconsult.com		Laboratory: Curtis & Tompkins, LTD 2323 Fifth Street, Berkeley, CA 94710 (510) 486-0900 attn: Tracy Babjar / John Goyette									Date: _____	
Field Sample Identification	Lab Sample No.	Date	Time	Matrix	No./Type of Containers						TURN AROUND TIME	Remarks
MW-3		12/1/2012	10:30	Water	3 x 40mL VOAs 3 x 40mL VOAs 2 x 500mL ambers 1 x 250mL plastic	X	X	X			STANDARD	
MW-5		12/1/2012	11:40	Water	3 x 40mL VOAs 3 x 40mL VOAs 2 x 500mL ambers 1 x 250mL plastic	X	X	X			STANDARD	
MW-7		12/1/2012	12:48	Water	3 x 40mL VOAs 3 x 40mL VOAs 2 x 500mL ambers 1 x 250mL plastic	X	X	X			STANDARD	
					3 x 40mL VOAs 3 x 40mL VOAs 2 x 500mL ambers 1 x 250mL plastic							
Special Instructions: <i>no ice to</i>												
Relinquished by: <i>[Signature]</i> (Signature/Affiliation)		Date 12/01/11	Time 13:20	Received by: <i>[Signature]</i> (Signature/Affiliation or Carrier/Air Bill No.)								
Relinquished by: <i>[Signature]</i> (Signature/Affiliation)		Date	Time	Received by: <i>[Signature]</i> (Signature/Affiliation)								
Relinquished by: _____ (Signature/Affiliation)		Date	Time	Received by: _____ (Signature/Affiliation)								

3 of 25

COOLER RECEIPT CHECKLIST



Curtis & Tompkins, Ltd.

Login # 233062 Date Received 11/1/11 Number of coolers
Client EKI Project 6601-6603 Bay street

Date Opened 12/1/11 By (print) Vidya Doshi (sign)
Date Logged in By (print) (sign)

1. Did cooler come with a shipping slip (airbill, etc) YES NO
Shipping info

2A. Were custody seals present? ... YES (circle) on cooler on samples NO
How many Name Date

2B. Were custody seals intact upon arrival? YES NO N/A

3. Were custody papers dry and intact when received? YES NO

4. Were custody papers filled out properly (ink, signed, etc)? YES NO

5. Is the project identifiable from custody papers? (If so fill out top of form) YES NO

6. Indicate the packing in cooler: (if other, describe)

- Bubble Wrap, Foam blocks, Bags, None, Cloth material, Cardboard, Styrofoam, Paper towels

7. Temperature documentation: * Notify PM if temperature exceeds 6°C

Type of ice used: Wet, Blue/Gel, None Temp(°C)

Samples Received on ice & cold without a temperature blank

Samples received on ice directly from the field. Cooling process had begun

8. Were Method 5035 sampling containers present? YES NO
If YES, what time were they transferred to freezer?

9. Did all bottles arrive unbroken/unopened? YES NO

10. Are there any missing / extra samples? YES NO

11. Are samples in the appropriate containers for indicated tests? YES NO

12. Are sample labels present, in good condition and complete? YES NO

13. Do the sample labels agree with custody papers? YES NO

14. Was sufficient amount of sample sent for tests requested? YES NO

15. Are the samples appropriately preserved? YES NO N/A

16. Did you check preservatives for all bottles for each sample? YES NO N/A

17. Did you document your preservative check? YES NO N/A

18. Did you change the hold time in LIMS for unpreserved VOAs? YES NO N/A

19. Did you change the hold time in LIMS for preserved terracores? YES NO N/A

20. Are bubbles > 6mm absent in VOA samples? YES NO N/A

21. Was the client contacted concerning this sample delivery? YES NO
If YES, Who was called? By Date:

COMMENTS

Blank lines for handwritten comments.

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8015B
Type:	LCS	Diln Fac:	1.000
Lab ID:	QC620964	Batch#:	181830
Matrix:	Water	Analyzed:	12/01/11
Units:	ug/L		

Analyte	Spiked	Result	%REC	Limits
Gasoline C7-C12	1,000	1,085	108	80-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-123

Batch QC Report

Total Volatile Hydrocarbons			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8015B
Field ID:	MW-3	Batch#:	181830
MSS Lab ID:	233062-001	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/01/11
Diln Fac:	1.000		

Type: MS Lab ID: QC620966

Analyte	MSS Result	Spiked	Result	%REC	Limits
Gasoline C7-C12	72.62	2,000	2,166	105	66-120

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	108	78-123

Type: MSD Lab ID: QC620967

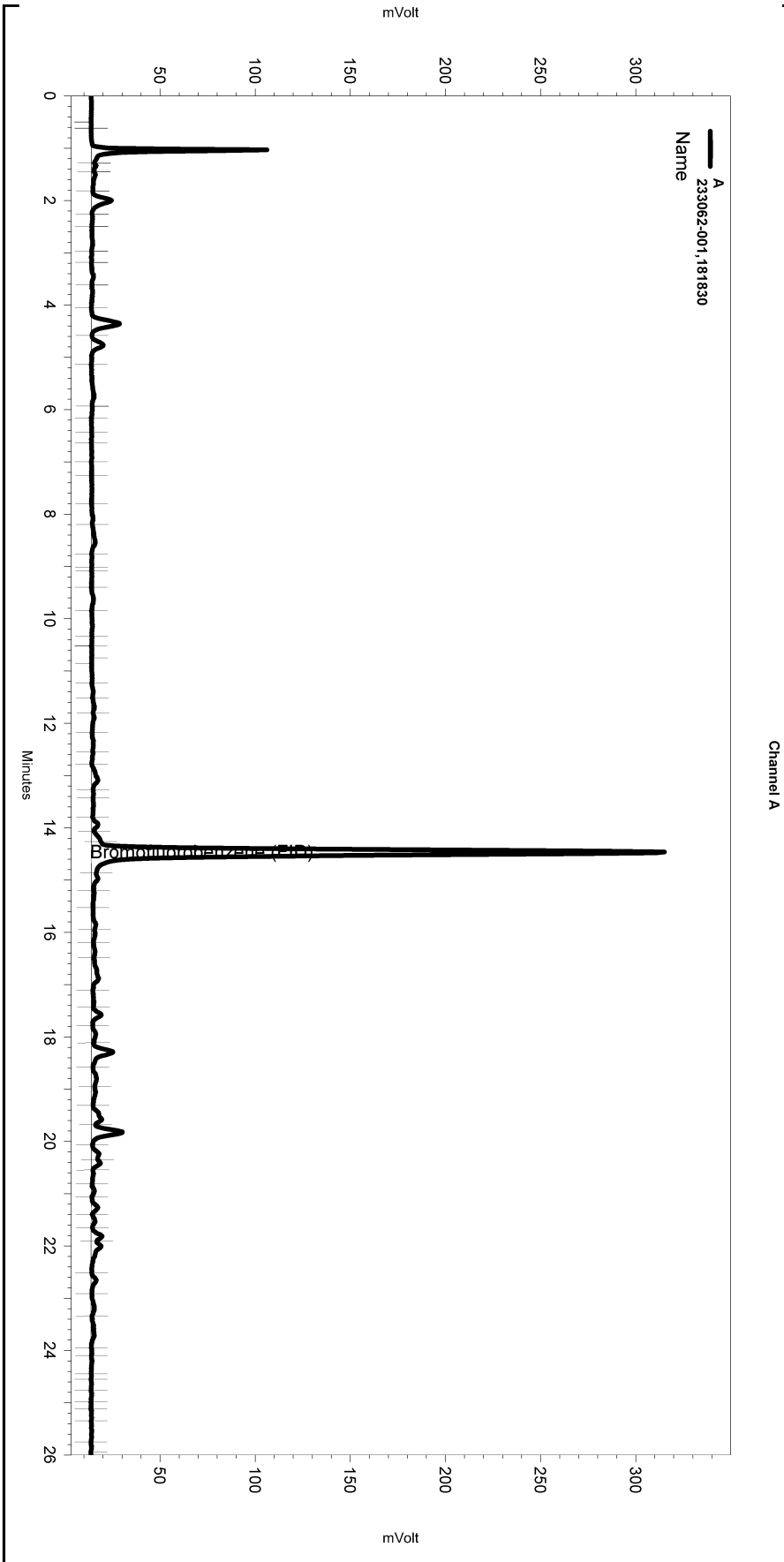
Analyte	Spiked	Result	%REC	Limits	RPD	Lim
Gasoline C7-C12	2,000	2,211	107	66-120	2	25

Surrogate	%REC	Limits
Bromofluorobenzene (FID)	109	78-123

RPD= Relative Percent Difference

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC04\Sequence\335.seq
 Sample Name: 233062-001,181830
 Data File: \\Lims\gdrive\ezchrom\Projects\GC04\Data\335-008
 Instrument: GC04 (Offline) Vial: N/A Operator: Tvh 2. Analyst (lims2k3\tvh2)
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC04\Method\lvhbtxe313r.met

Software Version 3.1.7
 Run Date: 12/1/2011 9:04:41 PM
 Analysis Date: 12/2/2011 2:14:56 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



---< General Method Parameters >---

No items selected for this section

---< A >---

No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

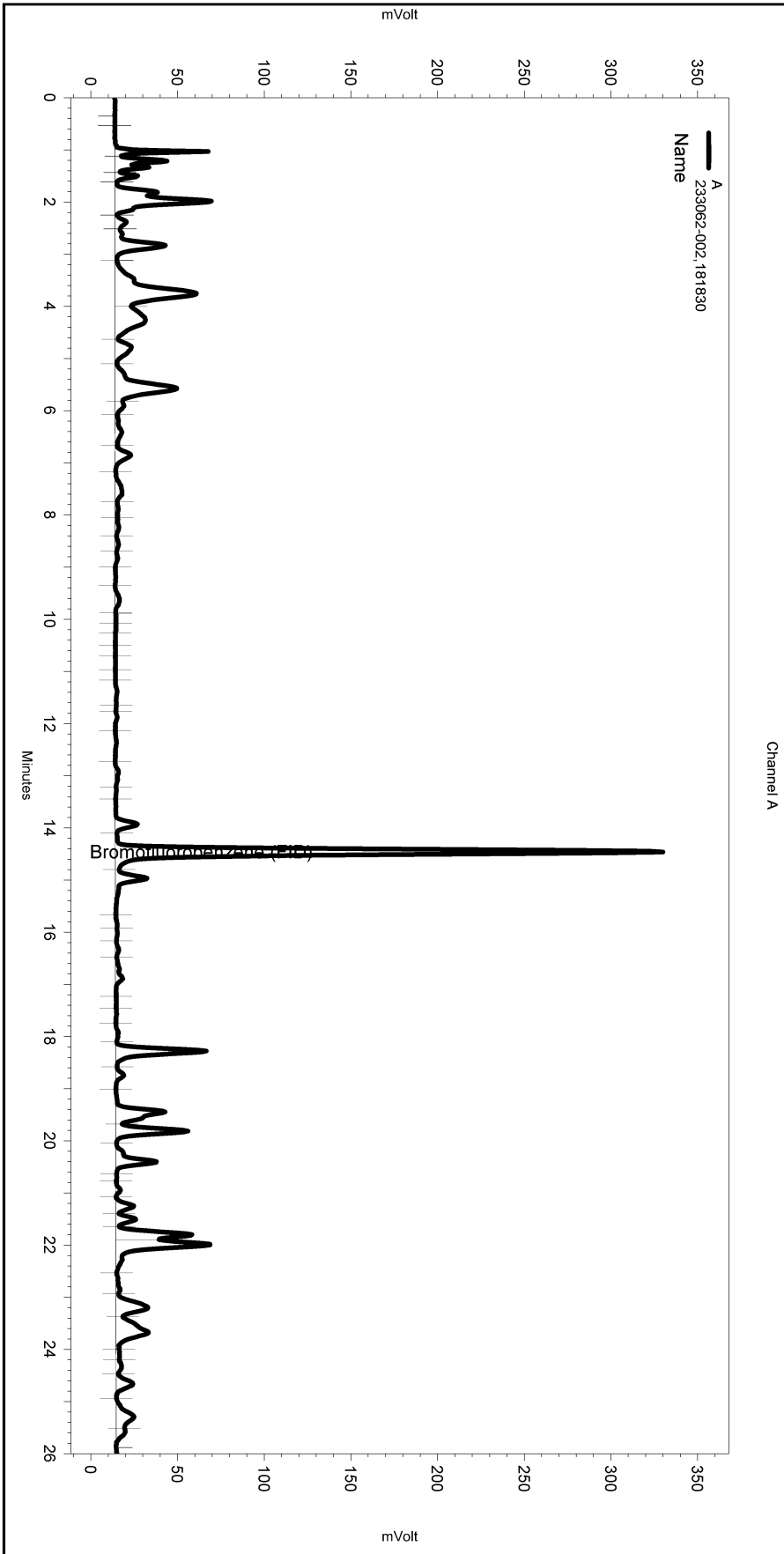
Manual Integration Fixes

Data File: \\Lims\gdrive\ezchrom\Projects\GC04\Data\335-008

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Split Peak	14.269	0	0

Sequence File: \\Lims\gdrive\ezchrom\Projects\GC04\Sequence\335.seq
 Sample Name: 233062-002,181830
 Data File: \\Lims\gdrive\ezchrom\Projects\GC04\Data\335-011
 Instrument: GC04 Vial: N/A Operator: lims2k3\lvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC04\Method\lvh3\313r.met

Software Version 3.1.7
 Run Date: 12/1/2011 10:57:40 PM
 Analysis Date: 12/1/2011 11:27:09 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: a1.0



 ---< General Method Parameters >-----

No items selected for this section

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No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

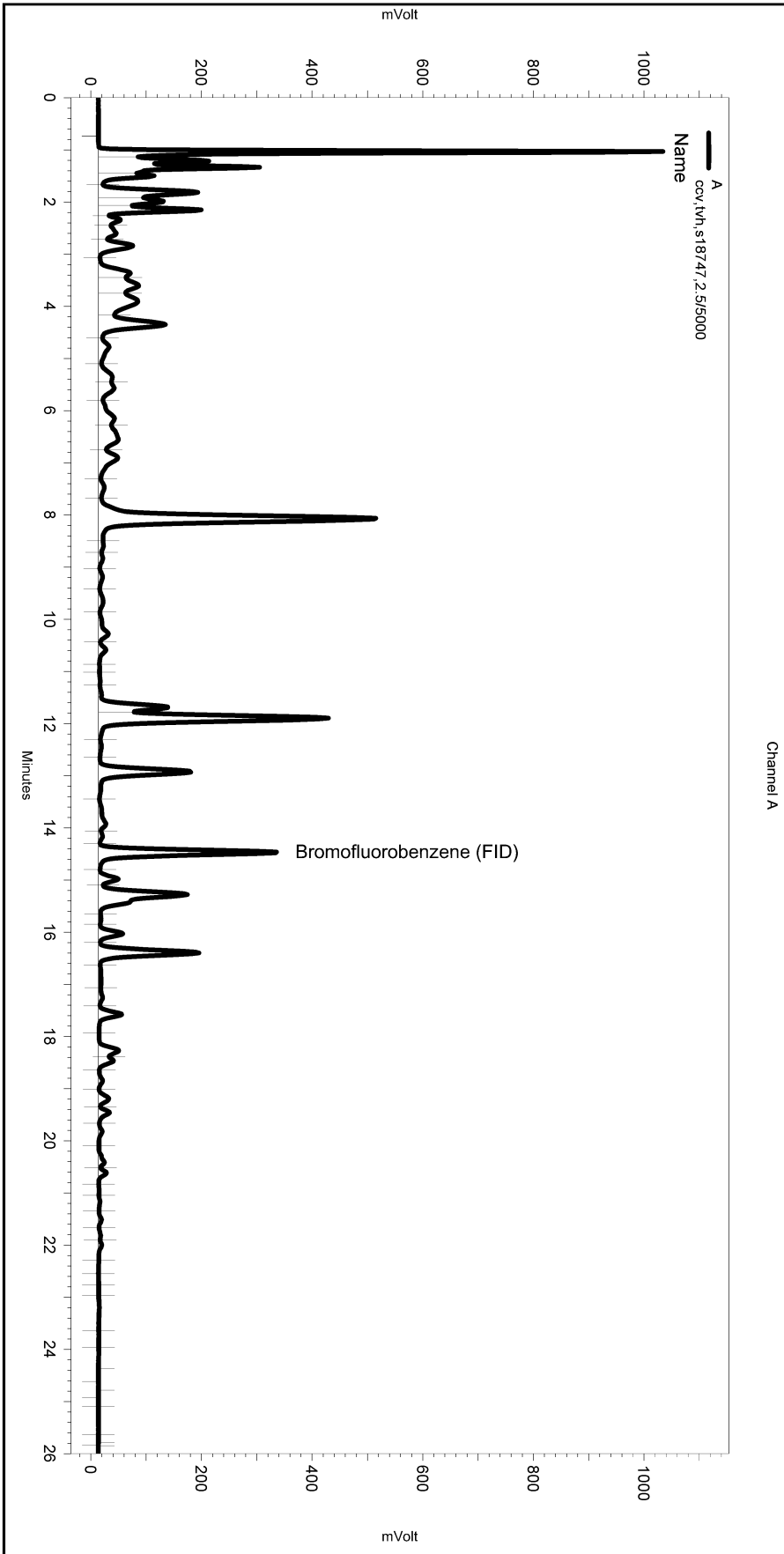
Manual Integration Fixes

Data File: C:\Documents and Settings\All Users\Application
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 Data\Instrument.10047\335-011_6699.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
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Sequence File: \\Lims\gdrive\ezchrom\Projects\GC04\Sequence\335.seq
 Sample Name: ccv,tvh,s18747,2.5/5000
 Data File: \\Lims\gdrive\ezchrom\Projects\GC04\Data\335-002
 Instrument: GC04 Vial: N/A Operator: lims2k3\tvh3
 Method Name: \\Lims\gdrive\ezchrom\Projects\GC04\Method\tvhbtxe313r.met

Software Version 3.1.7
 Run Date: 12/1/2011 1:19:36 PM
 Analysis Date: 12/1/2011 1:49:05 PM
 Sample Amount: 5 Multiplier: 5
 Vial & pH or Core ID: {Data Description}



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No items selected for this section

Integration Events

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
Yes	Width	0	0	0.2
Yes	Threshold	0	0	50

Manual Integration Fixes

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 Data\ChromatographySystem\Recovery
 Data\Instrument.10047\335-002_6690.tmp

Enabled	Event Type	Start (Minutes)	Stop (Minutes)	Value
None				

Total Extractable Hydrocarbons			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 3520C
Project#:	950074.05	Analysis:	EPA 8015B
Matrix:	Water	Sampled:	12/01/11
Units:	ug/L	Received:	12/01/11
Diln Fac:	1.000	Prepared:	12/02/11
Batch#:	181864		

Field ID: MW-3
 Type: SAMPLE
 Lab ID: 233062-001

Analyzed: 12/05/11
 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	111	68-120

Field ID: MW-5
 Type: SAMPLE
 Lab ID: 233062-002

Analyzed: 12/05/11
 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	250 Y	50

Surrogate	%REC	Limits
o-Terphenyl	103	68-120

Field ID: MW-7
 Type: SAMPLE
 Lab ID: 233062-003

Analyzed: 12/05/11
 Cleanup Method: EPA 3630C

Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	120	68-120

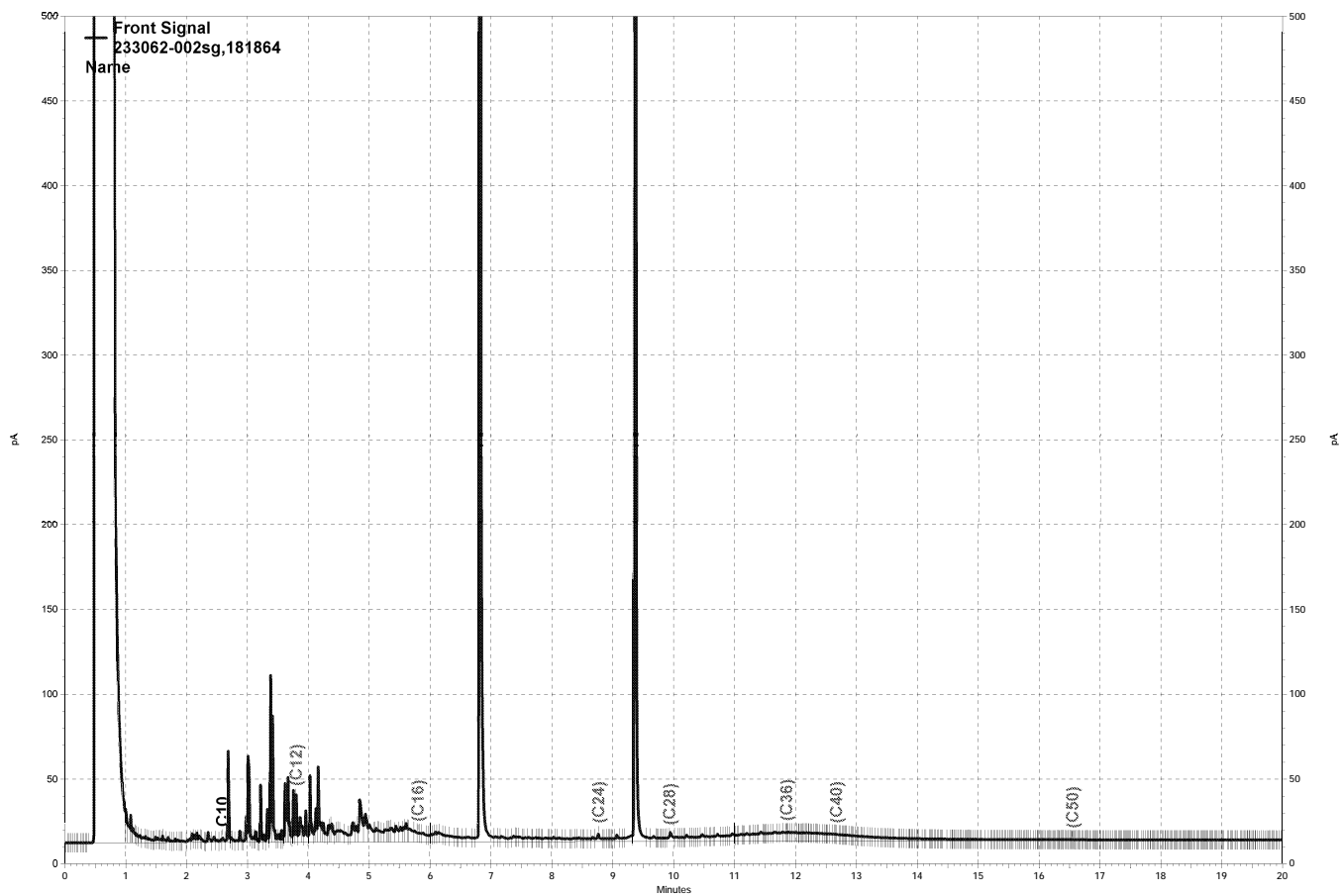
Type: BLANK
 Lab ID: QC621111

Analyzed: 12/04/11
 Cleanup Method: EPA 3630C

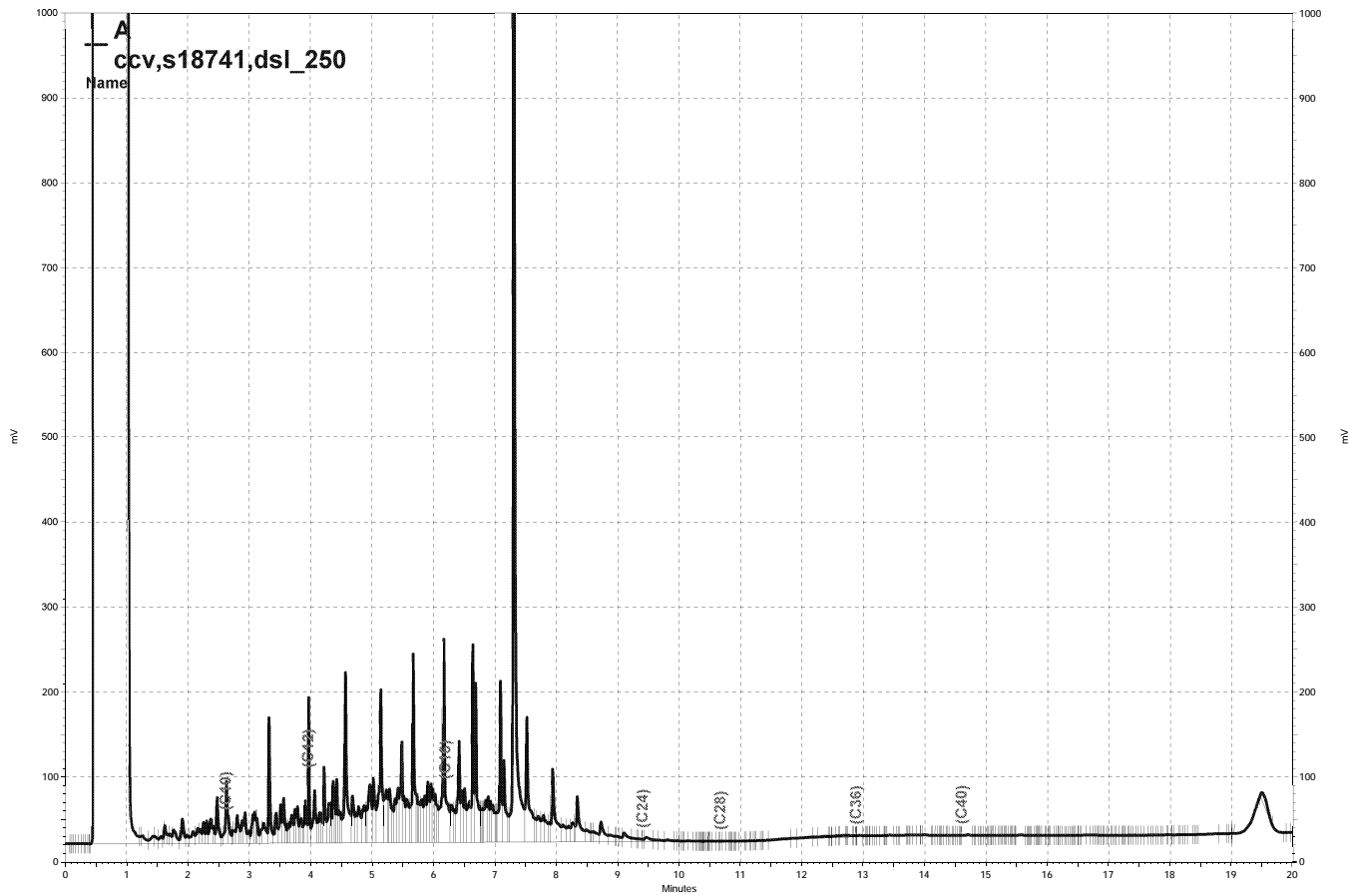
Analyte	Result	RL
Diesel C10-C24	ND	50

Surrogate	%REC	Limits
o-Terphenyl	112	68-120

Y= Sample exhibits chromatographic pattern which does not resemble standard
 ND= Not Detected
 RL= Reporting Limit



\\lms\gdrive\ezchrom\Projects\GC27\Data\338a035.dat, Front Signal



\\Lims\gdrive\ezchrom\Projects\GC17A\Data\338a003, A

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	181841
Lab ID:	233062-001	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	1.5	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	2.8	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	0.6	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-3	Batch#:	181841
Lab ID:	233062-001	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	0.6	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	94	80-127
1,2-Dichloroethane-d4	119	73-145
Toluene-d8	96	80-120
Bromofluorobenzene	97	80-120

ND= Not Detected
 RL= Reporting Limit

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	181841
Lab ID:	233062-002	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	1.000		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	2.2	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	2.4	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	3.3	0.5

ND= Not Detected
 RL= Reporting Limit

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-5	Batch#:	181841
Lab ID:	233062-002	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	1.000		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	0.9	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	98	80-127
1,2-Dichloroethane-d4	116	73-145
Toluene-d8	96	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected
 RL= Reporting Limit

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	181841
Lab ID:	233062-003	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	2.000		

Analyte	Result	RL
Freon 12	ND	2.0
tert-Butyl Alcohol (TBA)	ND	20
Chloromethane	ND	2.0
Isopropyl Ether (DIPE)	ND	1.0
Vinyl Chloride	ND	1.0
Bromomethane	ND	2.0
Ethyl tert-Butyl Ether (ETBE)	ND	1.0
Chloroethane	ND	2.0
Methyl tert-Amyl Ether (TAME)	ND	1.0
Trichlorofluoromethane	ND	2.0
Acetone	ND	20
Freon 113	ND	4.0
1,1-Dichloroethene	ND	1.0
Methylene Chloride	ND	20
Carbon Disulfide	ND	1.0
MTBE	ND	1.0
trans-1,2-Dichloroethene	ND	1.0
Vinyl Acetate	ND	20
1,1-Dichloroethane	ND	1.0
2-Butanone	ND	20
cis-1,2-Dichloroethene	ND	1.0
2,2-Dichloropropane	ND	1.0
Chloroform	ND	1.0
Bromochloromethane	ND	1.0
1,1,1-Trichloroethane	ND	1.0
1,1-Dichloropropene	ND	1.0
Carbon Tetrachloride	ND	1.0
1,2-Dichloroethane	ND	1.0
Benzene	ND	1.0
Trichloroethene	ND	1.0
1,2-Dichloropropane	ND	1.0
Bromodichloromethane	ND	1.0
Dibromomethane	ND	1.0
4-Methyl-2-Pentanone	ND	20
cis-1,3-Dichloropropene	ND	1.0
Toluene	ND	1.0
trans-1,3-Dichloropropene	ND	1.0
1,1,2-Trichloroethane	ND	1.0
2-Hexanone	ND	20
1,3-Dichloropropane	ND	1.0
Tetrachloroethene	ND	1.0
Dibromochloromethane	ND	1.0
1,2-Dibromoethane	ND	1.0
Chlorobenzene	ND	1.0
1,1,1,2-Tetrachloroethane	ND	1.0
Ethylbenzene	ND	1.0
m,p-Xylenes	ND	1.0
o-Xylene	ND	1.0
Styrene	ND	1.0
Bromoform	ND	2.0
Isopropylbenzene	ND	1.0
1,1,2,2-Tetrachloroethane	ND	1.0
1,2,3-Trichloropropane	ND	1.0
Propylbenzene	ND	1.0

ND= Not Detected
 RL= Reporting Limit

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Field ID:	MW-7	Batch#:	181841
Lab ID:	233062-003	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	2.000		

Analyte	Result	RL
Bromobenzene	ND	1.0
1,3,5-Trimethylbenzene	ND	1.0
2-Chlorotoluene	ND	1.0
4-Chlorotoluene	ND	1.0
tert-Butylbenzene	ND	1.0
1,2,4-Trimethylbenzene	ND	1.0
sec-Butylbenzene	ND	1.0
para-Isopropyl Toluene	ND	1.0
1,3-Dichlorobenzene	ND	1.0
1,4-Dichlorobenzene	ND	1.0
n-Butylbenzene	ND	1.0
1,2-Dichlorobenzene	ND	1.0
1,2-Dibromo-3-Chloropropane	ND	4.0
1,2,4-Trichlorobenzene	ND	1.0
Hexachlorobutadiene	ND	4.0
Naphthalene	ND	4.0
1,2,3-Trichlorobenzene	ND	1.0

Surrogate	%REC	Limits
Dibromofluoromethane	99	80-127
1,2-Dichloroethane-d4	116	73-145
Toluene-d8	99	80-120
Bromofluorobenzene	96	80-120

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Matrix:	Water	Batch#:	181841
Units:	ug/L	Analyzed:	12/02/11
Diln Fac:	1.000		

Type: BS Lab ID: QC621010

Analyte	Spiked	Result	%REC	Limits
tert-Butyl Alcohol (TBA)	125.0	113.9	91	46-141
Isopropyl Ether (DIPE)	25.00	21.98	88	52-139
Ethyl tert-Butyl Ether (ETBE)	25.00	25.11	100	56-131
Methyl tert-Amyl Ether (TAME)	25.00	23.78	95	65-120
1,1-Dichloroethene	25.00	22.88	92	64-133
Benzene	25.00	24.67	99	80-122
Trichloroethene	25.00	22.72	91	78-120
Toluene	25.00	23.66	95	80-120
Chlorobenzene	25.00	24.81	99	80-120

Surrogate	%REC	Limits
Dibromofluoromethane	97	80-127
1,2-Dichloroethane-d4	111	73-145
Toluene-d8	94	80-120
Bromofluorobenzene	101	80-120

Type: BSD Lab ID: QC621011

Analyte	Spiked	Result	%REC	Limits	RPD	Lim
tert-Butyl Alcohol (TBA)	125.0	115.0	92	46-141	1	31
Isopropyl Ether (DIPE)	25.00	22.84	91	52-139	4	20
Ethyl tert-Butyl Ether (ETBE)	25.00	25.55	102	56-131	2	20
Methyl tert-Amyl Ether (TAME)	25.00	23.06	92	65-120	3	20
1,1-Dichloroethene	25.00	21.61	86	64-133	6	20
Benzene	25.00	23.45	94	80-122	5	20
Trichloroethene	25.00	22.53	90	78-120	1	20
Toluene	25.00	22.81	91	80-120	4	20
Chlorobenzene	25.00	24.35	97	80-120	2	20

Surrogate	%REC	Limits
Dibromofluoromethane	103	80-127
1,2-Dichloroethane-d4	119	73-145
Toluene-d8	98	80-120
Bromofluorobenzene	96	80-120

RPD= Relative Percent Difference

Batch QC Report

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC621012	Batch#:	181841
Matrix:	Water	Analyzed:	12/02/11
Units:	ug/L		

Analyte	Result	RL
Freon 12	ND	1.0
tert-Butyl Alcohol (TBA)	ND	10
Chloromethane	ND	1.0
Isopropyl Ether (DIPE)	ND	0.5
Vinyl Chloride	ND	0.5
Bromomethane	ND	1.0
Ethyl tert-Butyl Ether (ETBE)	ND	0.5
Chloroethane	ND	1.0
Methyl tert-Amyl Ether (TAME)	ND	0.5
Trichlorofluoromethane	ND	1.0
Acetone	ND	10
Freon 113	ND	2.0
1,1-Dichloroethene	ND	0.5
Methylene Chloride	ND	10
Carbon Disulfide	ND	0.5
MTBE	ND	0.5
trans-1,2-Dichloroethene	ND	0.5
Vinyl Acetate	ND	10
1,1-Dichloroethane	ND	0.5
2-Butanone	ND	10
cis-1,2-Dichloroethene	ND	0.5
2,2-Dichloropropane	ND	0.5
Chloroform	ND	0.5
Bromochloromethane	ND	0.5
1,1,1-Trichloroethane	ND	0.5
1,1-Dichloropropene	ND	0.5
Carbon Tetrachloride	ND	0.5
1,2-Dichloroethane	ND	0.5
Benzene	ND	0.5
Trichloroethene	ND	0.5
1,2-Dichloropropane	ND	0.5
Bromodichloromethane	ND	0.5
Dibromomethane	ND	0.5
4-Methyl-2-Pentanone	ND	10
cis-1,3-Dichloropropene	ND	0.5
Toluene	ND	0.5
trans-1,3-Dichloropropene	ND	0.5
1,1,2-Trichloroethane	ND	0.5
2-Hexanone	ND	10
1,3-Dichloropropane	ND	0.5
Tetrachloroethene	ND	0.5
Dibromochloromethane	ND	0.5
1,2-Dibromoethane	ND	0.5
Chlorobenzene	ND	0.5
1,1,1,2-Tetrachloroethane	ND	0.5
Ethylbenzene	ND	0.5
m,p-Xylenes	ND	0.5
o-Xylene	ND	0.5
Styrene	ND	0.5
Bromoform	ND	1.0
Isopropylbenzene	ND	0.5
1,1,2,2-Tetrachloroethane	ND	0.5
1,2,3-Trichloropropane	ND	0.5
Propylbenzene	ND	0.5

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Volatile Organics			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	EPA 5030B
Project#:	950074.05	Analysis:	EPA 8260B
Type:	BLANK	Diln Fac:	1.000
Lab ID:	QC621012	Batch#:	181841
Matrix:	Water	Analyzed:	12/02/11
Units:	ug/L		

Analyte	Result	RL
Bromobenzene	ND	0.5
1,3,5-Trimethylbenzene	ND	0.5
2-Chlorotoluene	ND	0.5
4-Chlorotoluene	ND	0.5
tert-Butylbenzene	ND	0.5
1,2,4-Trimethylbenzene	ND	0.5
sec-Butylbenzene	ND	0.5
para-Isopropyl Toluene	ND	0.5
1,3-Dichlorobenzene	ND	0.5
1,4-Dichlorobenzene	ND	0.5
n-Butylbenzene	ND	0.5
1,2-Dichlorobenzene	ND	0.5
1,2-Dibromo-3-Chloropropane	ND	2.0
1,2,4-Trichlorobenzene	ND	0.5
Hexachlorobutadiene	ND	2.0
Naphthalene	ND	2.0
1,2,3-Trichlorobenzene	ND	0.5

Surrogate	%REC	Limits
Dibromofluoromethane	96	80-127
1,2-Dichloroethane-d4	115	73-145
Toluene-d8	94	80-120
Bromofluorobenzene	93	80-120

ND= Not Detected
 RL= Reporting Limit

Total Dissolved Solids (TDS)			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	950074.05	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Sampled:	12/01/11
Matrix:	Water	Received:	12/01/11
Units:	mg/L	Prepared:	12/02/11
Batch#:	181854	Analyzed:	12/05/11

Field ID	Type	Lab ID	Result	RL	Diln Fac
MW-3	SAMPLE	233062-001	1,310	11	1.111
MW-5	SAMPLE	233062-002	1,340	11	1.111
MW-7	SAMPLE	233062-003	520	10	1.000
	BLANK	QC621071	ND	10	1.000

ND= Not Detected
 RL= Reporting Limit

Batch QC Report

Total Dissolved Solids (TDS)			
Lab #:	233062	Location:	6601-6603 Bay Street
Client:	Erler & Kalinowski, Inc.	Prep:	METHOD
Project#:	950074.05	Analysis:	SM2540C
Analyte:	Total Dissolved Solids	Batch#:	181854
Field ID:	ZZZZZZZZZZ	Sampled:	12/01/11
MSS Lab ID:	233083-007	Received:	12/01/11
Matrix:	Water	Prepared:	12/02/11
Units:	mg/L	Analyzed:	12/05/11
Diln Fac:	1.000		

Type	Lab ID	MSS Result	Spiked	Result	RL	%REC	Limits	RPD	Lim
BS	QC621072		100.0	100.0		96	75-120		
BSD	QC621073		100.0	86.00		83	75-120	15 *	5
SDUP	QC621074	1,694		1,580	10.00			7 *	5

*= Value outside of QC limits; see narrative

RL= Reporting Limit

RPD= Relative Percent Difference

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.
Santa Rosa CA 95403
Phone: 707 527 7574
FAX: 707 527 7879

TRANSMITTAL

DATE: 1/20/2012

TO: MR. JEFF SHAW
MS. CINDY CHENG
MS. MICHELLE KRIEGMAN-KING
ERLER & KALINOWSKI, INC.
1870 OGDEN DRIVE
BURLINGAME, CA 94010

ACCT: 9115
PROJ: 950074.05

Phone: 650-292-9100
Fax: 650-552-9012
Email: jshaw@ekiconsult.com
ccheng@ekiconsult.com
mkking@ekiconsult.com

FROM: Richard A. Kage1, Ph.D. *MLK 1/20/2012*
Laboratory Director

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT 950074.05

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
SSVP6601-1	AIR	12/23/2011	14:26	97170
SSVP6603-2	AIR	12/23/2011	14:34	97171
SSVP1650-3	AIR	12/23/2011	14:48	97172
SSVP1650-4	AIR	12/23/2011	14:59	97173
DUP-A	AIR	12/23/2011	NA	97174
SHROUD-SSVP	AIR	12/23/2011	14:59	97175
AMBIENT-20111223	AIR	12/23/2011	15:16	97176

The above listed sample group was received on 12/27/2011 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.
Thank you for this opportunity to be of service.

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

SAMPLE ID: SSV1650-3
LAB NO: 97172
SAMPLE TYPE: AIR
DATE SAMPLED: 12/23/11
TIME SAMPLED: 14:48
BATCH ID: 011112A01
DATE ANALYZED: 1/11/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	0.570	1.60	1.82
TOLUENE	108-88-3	1.00	ND	3.77	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	ND	4.34	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: MMK

DATE: 1/20/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

SAMPLE ID: SSV1650-4
LAB NO: 97173
SAMPLE TYPE: AIR
DATE SAMPLED: 12/23/11
TIME SAMPLED: 14:59
BATCH ID: 011112A01
DATE ANALYZED: 1/11/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	1.63	1.60	5.21
TOLUENE	108-88-3	1.00	1.61	3.77	6.07
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	ND	4.34	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY:

DATE:

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 121911A01

METHOD: 1,1,1,2-TETRAFLUOROETHANE
REFERENCE: EPA TO 3

UNITS: PPMV

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP6601-1	97170	AIR	12/23/11	14:26	1/3/12	10.0	ND
SSVP6603-2	97171	AIR	12/23/11	14:34	1/3/12	10.0	16.6
SSVP1650-3	97172	AIR	12/23/11	14:48	1/3/12	10.0	ND
SSVP1650-4	97173	AIR	12/23/11	14:59	1/3/12	10.0	ND
SHROUD-SSVP	97175	AIR	12/23/11	14:59	1/3/12	10.0	10400
AMBIENT-20111223	97176	AIR	12/23/11	15:16	1/3/12	10.0	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: MAC
DATE: 1/13/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 010512A01

METHOD: METHANE
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP6601-1	97170	AIR	12/23/11	14:26	1/5/12	0.100	ND
SSVP6603-2	97171	AIR	12/23/11	14:34	1/5/12	0.100	ND
SSVP1650-3	97172	AIR	12/23/11	14:48	1/5/12	0.100	ND
SSVP1650-4	97173	AIR	12/23/11	14:59	1/5/12	0.100	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: *MAC*
DATE: 1/13/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 010512A01

METHOD: OXYGEN
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP6601-1	97170	AIR	12/23/11	14:26	1/5/12	1.00	18.4
SSVP6603-2	97171	AIR	12/23/11	14:34	1/5/12	1.00	19.4
SSVP1650-3	97172	AIR	12/23/11	14:48	1/5/12	1.00	19.4
SSVP1650-4	97173	AIR	12/23/11	14:59	1/5/12	1.00	19.4

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: RAM
DATE: 1/13/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 010412A01

METHOD: CARBON DIOXIDE
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP6601-1	97170	AIR	12/23/11	14:26	1/4/12	0.100	ND
SSVP6603-2	97171	AIR	12/23/11	14:34	1/4/12	0.100	ND
SSVP1650-3	97172	AIR	12/23/11	14:48	1/4/12	0.100	ND
SSVP1650-4	97173	AIR	12/23/11	14:59	1/4/12	0.100	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY:
DATE:

MM
1/13/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 010512A01

METHOD: NITROGEN (BALANCE)
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP6601-1	97170	AIR	12/23/11	14:26	1/5/12	1.00	81.6
SSVP6603-2	97171	AIR	12/23/11	14:34	1/5/12	1.00	80.6
SSVP1650-3	97172	AIR	12/23/11	14:48	1/5/12	1.00	80.6
SSVP1650-4	97173	AIR	12/23/11	14:59	1/5/12	1.00	80.6

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: *MM*
DATE: 1/13/12

K PRIME, INC.

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B01111201

SAMPLE TYPE: AIR

METHOD: VOC'S IN AIR

BATCH ID: 011112A01

DATE ANALYZED: 1/11/12

REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.250	ND	0.800	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	1330-20-7	0.500	ND	2.17	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

LAB CONTROL ID: L01111201
LAB CONTROL DUPLICATE ID: D01111201

SAMPLE TYPE: AIR
BATCH ID: 011112A01
DATE ANALYZED: 1/11/12

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	10.2	102	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	8.87	88.7	60 - 140
BENZENE	10.0	0.250	ND	9.18	91.8	60 - 140
TOLUENE	10.0	0.500	ND	9.09	90.9	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	8.82	88.2	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS	
					RPD (%)	REC (%)
1,1-DICHLOROETHENE	10.0	9.31	93.1	8.73	25	60 - 140
TRICHLOROETHENE	10.0	9.07	90.7	2.23	25	60 - 140
BENZENE	10.0	9.22	92.2	0.435	25	60 - 140
TOLUENE	10.0	9.26	92.6	1.85	25	60 - 140
TETRACHLOROETHENE	10.0	9.23	92.3	4.54	25	60 - 140

NOTES:

NA - NOT APPLICABLE OR AVAILABLE

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID: B12191101
LAB CONTROL SAMPLE ID: L12191101
LAB CONTROL DUPLICATE ID: D12191101
BATCH ID: 121911A01

METHOD: 1,1,1,2-TETRAFLUOROETHANE
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR
UNITS: PPM -V/V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1,1,2-TETRAFLUOROETHANE	10.0	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1,1,2-TETRAFLUOROETHANE	10000	10000	100	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1,1,2-TETRAFLUOROETHANE	10000	10500	4.88	±30

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

K PRIME, INC.
LABORATORY QC REPORT

METHOD: METHANE, OXYGEN, NITROGEN (BALANCE)
REFERENCE: ASTM D 1946

METHOD BLANK ID: B01051201
SAMPLE ID: L01051201
DUPLICATE ID: D01051201
BATCH #: 010512A01
SAMPLE TYPE: AIR
UNITS: %-V

DATE ANALYZED: 1/5/12

METHOD BLANK

PARAMETER	REPORTING LIMIT	SAMPLE RESULT
METHANE	0.100	ND
OXYGEN	1.00	ND

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
METHANE	50.0	ND	50.5	101	90-110
OXYGEN	10.0	ND	9.75	97.5	90-110
NITROGEN (BALANCE)	40.0	ND	39.8	99.4	90-110

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
METHANE	0.100	50.5	51.2	1.38	±10
OXYGEN	1.00	9.75	9.58	1.76	±10
NITROGEN (BALANCE)	1.00	39.8	39.2	1.34	±10

K PRIME, INC.
LABORATORY QC REPORT

METHOD: CARBON DIOXIDE
REFERENCE: ASTM D 1946

METHOD BLANK ID: B01041201
SAMPLE ID: L01041201
DUPLICATE ID: D01041201
BATCH #: 010412A01
SAMPLE TYPE: AIR
UNITS: %-V

DATE ANALYZED: 1/4/12

METHOD BLANK

PARAMETER	REPORTING LIMIT	SAMPLE RESULT
CARBON DIOXIDE	0.0500	ND

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
CARBON DIOXIDE	1.00	ND	1.03	103	70-130

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
CARBON DIOXIDE	0.0500	1.03	1.04	0.966	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

CONSULTING ENGINEERS AND SCIENTISTS 1870 Ogden Drive, Burlingame CA 94010 PHONE: 650-292-9100 FAX: 650-552-9012

Project Name		Project No.		ANALYSES REQUESTED					EKI COC No.		
Sybase		950074.05							20110-23		
Location:		Sampled By:		Method No.	TO-15	TO-15	TO-15	PLACE ON HOLD	EXPECTED TURNAROUND TIME	Revision: _____ (A, B, C, D, etc.)	
Shellmound Street, Emeryville, CA		Roger Lion								Analyte Group	BTEX + 1,1,1,2-TFA
Reporting:		Laboratory:									
Electronic Format: (none) Hard Copy Format: PDF EPA Data Report Level: II Report results to: jshaw@ekiconsult.com; ccheng@ekiconsult.com, mkking@ekiconsult.com		K-Prime Inc. 3261 Westwind Blvd. Santa Rosa, CA 95403 (707) 527-7574 Attention: Rich Kagel									
Field Sample Identification	Lab Sample No.	Date	Time	Matrix	No./Type of Containers and Preservative	TO-15	TO-15	TO-15	PLACE ON HOLD	EXPECTED TURNAROUND TIME	Remarks/ Summa ID No.
SSVP6601-1	97170	23-Dec-11	1345-14:26	air	1-ea. 1-L SUMMA	X	X	-		standard	SUMMA S-525
SSVP6603-2	97171	23-Dec-11	1352-14:34	air	1-ea. 1-L SUMMA	X	X	-		standard	SUMMA S-355
SSVP1650-3	97172	23-Dec-11	1414-14:48	air	1-ea. 1-L SUMMA	X	X	-		standard	SUMMA S-234
SSVP1650-4	97173	23-Dec-11	1413-14:59	air	1-ea. 1-L SUMMA	X	X	-		standard	SUMMA S:236
Dup-A	97174	23-Dec-11	- - -	air	1-ea. 1-L SUMMA	X	X	-	*	standard	SUMMA S-233
shroud - SSV	97175	23-Dec-11	1413-14:59	air	1-ea. 1-L SUMMA	-	-	X		standard	SUMMA S434
Ambient - 20111223	97176	23-Dec-11	08:11-15:16	air	1-ea. 6-L SUMMA	X	-	-		standard	SUMMA A-421

Analyze for leak check compound 1,1,1,2-tetrafluoroethane ("TFA"). Report TFA on a separate page than the analytes in TO-15 analysis. For TFA use a reporting limit of 10 parts per million by volume ("ppmv"), narrate TFA concentration, if necessary. * - Do not analyze per R.L. AMK 11/5/2012

Relinquished by: <i>Raymond</i> (Signature/Affiliation) EKI	Date: 12/23/11	Time: 15:37	Received by: <i>VIA FEDEX</i> (Signature/Affiliation or Carrier/Air Bill No.)
Relinquished by: <i>FEDEX 8987 4229 8424</i> (Signature/Affiliation)	Date: 12/27/11	Time: 11:35	Received by: <i>Tom Newirth</i> (Signature/Affiliation)

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

3621 Westwind Blvd.
Santa Rosa CA 95403
Phone: 707 527 7574
FAX: 707 527 7879

TRANSMITTAL

DATE: 6/7/2012

TO: MR. JEFF SHAW
MS. MICHELLE KRIEGMAN KING
MS. CINDY CHENG
ERLER & KALINOWSKI, INC.
1870 OGDEN DRIVE
BURLINGAME, CA 94010

ACCT: 9115
PROJ: 950074.05

Phone: 650-292-9100
Fax: 650-552-9012
Email: jshaw@ekiconsult.com
mkking@ekiconsult.com
ccheng@ekiconsult.com

FROM: Richard A. Kage1, Ph.D. *AMC 6/7/2012*
Laboratory Director

SUBJECT: LABORATORY RESULTS FOR YOUR PROJECT 950074.05

Enclosed please find K Prime's laboratory reports for the following samples:

SAMPLE ID	TYPE	DATE	TIME	KPI LAB #
SSVP1650-3	AIR	5/2/2012	08:48	101077
SSVP1650-4	AIR	5/2/2012	09:17	101078
DUP-A -20120502	AIR	5/2/2012	NA	101079
SHROUD-1650-3	AIR	5/2/2012	08:48	101080
SHROUD-1650-4	AIR	5/2/2012	09:17	101081
AMBIENT-20120502	AIR	5/2/2012	08:16	101082

The above listed sample group was received on 5/2/2012 and tested as requested on the chain of custody document.

Please call me if you have any questions or need further information.

Thank you for this opportunity to be of service.

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

SAMPLE ID: SSV1650-3
LAB NO: 101077
SAMPLE TYPE: AIR
DATE SAMPLED: 5/2/12
TIME SAMPLED: 8:48
BATCH ID: 050712A01
DATE ANALYZED: 5/8/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	ND	1.60	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	ND	4.34	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

NOTES:
 ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
 MRL - METHOD REPORTING LIMIT
 NA - NOT APPLICABLE OR AVAILABLE
 µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: *AMC*
DATE: 6/7/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

SAMPLE ID: DUP-A -20120502
LAB NO: 101079
SAMPLE TYPE: AIR
DATE SAMPLED: 5/2/12
TIME SAMPLED: NA
BATCH ID: 050712A01
DATE ANALYZED: 5/8/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	ND	1.60	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	ND	4.34	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
MRL - METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: _____ *PAK*
DATE: _____ *6/7/12*

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

SAMPLE ID: AMBIENT-20120502

LAB NO: 101082

SAMPLE TYPE: AIR

DATE SAMPLED: 5/2/12

TIME SAMPLED: 8:16

BATCH ID: 050712A01

DATE ANALYZED: 5/8/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.500	ND	1.60	ND
TOLUENE	108-88-3	1.00	ND	3.77	ND
ETHYLBENZENE	100-41-4	1.00	ND	4.34	ND
XYLENE (M+P)	1330-20-7	1.00	ND	4.34	ND
XYLENE (O)	95-47-6	1.00	ND	4.34	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

APPROVED BY: *RMC*
DATE: 6/7/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 042312A01

METHOD: TVH C2-C10
REFERENCE: EPA TO 3

UNITS: UG/M3

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	5/2/12	8:48	5/2/12	586	ND
SSVP1650-4	101078	AIR	5/2/12	9:17	5/2/12	586	ND
DUP-A -20120502	101079	AIR	5/2/12	NA	5/2/12	586	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY:
DATE:

WMC
6/7/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 050412A02

METHOD: METHANE
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	5/2/12	8:48	5/4/12	0.100	ND
SSVP1650-4	101078	AIR	5/2/12	9:17	5/4/12	0.100	ND
DUP-A -20120502	101079	AIR	5/2/12	NA	5/4/12	0.100	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY:
DATE:

YMC

5/22/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 050412A02

METHOD: OXYGEN
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	5/2/12	8:48	5/4/12	1.00	18.4
SSVP1650-4	101078	AIR	5/2/12	9:17	5/4/12	1.00	17.5
DUP-A -20120502	101079	AIR	5/2/12	NA	5/4/12	1.00	18.2

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: YMK
DATE: 5/22/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 050412A01

METHOD: CARBON DIOXIDE
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	5/2/12	8:48	5/4/12	0.100	0.452
SSVP1650-4	101078	AIR	5/2/12	9:17	5/4/12	0.100	ND
DUP-A -20120502	101079	AIR	5/2/12	NA	5/4/12	0.100	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: MM
DATE: 5/22/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

BATCH ID: 050412A01

METHOD: NITROGEN (BALANCE)
REFERENCE: ASTM D 1946

UNITS: %-V

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	TIME SAMPLED	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	5/2/12	8:48	5/4/12	1.00	81.1
SSVP1650-4	101078	AIR	5/2/12	9:17	5/4/12	1.00	82.4
DUP-A -20120502	101079	AIR	5/2/12	NA	5/4/12	1.00	81.7

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: MM
DATE: 5/22/12

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: 1,1,1,2-TETRAFLUOROETHANE
REFERENCE: EPA TO 3

UNITS: PPMV

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	101077	AIR	05/02/2012	042312A1	05/02/2012	10.0	ND
SSVP1650-4	101078	AIR	05/02/2012	042312A1	05/02/2012	10.0	10.0
DUP-A -20120502	101079	AIR	05/02/2012	042312A1	05/02/2012	10.0	ND
SHROUD-1650-3	101080	AIR	05/02/2012	042312A1	05/02/2012	20.0	13900
SHROUD-1650-4	101081	AIR	05/02/2012	042312A1	05/02/2012	10.0	14600
AMBIENT-20120502	101082	AIR	05/02/2012	042312A1	05/04/2012	10.0	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
MRL - METHOD REPORTING LIMIT

APPROVED BY: *1997c*
DATE: 5/22/12

K PRIME, INC.

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B05071201

SAMPLE TYPE: AIR

METHOD: VOC'S IN AIR

BATCH ID: 050712A01

REFERENCE: EPA METHOD TO15 (GC-MS-SCAN)

DATE ANALYZED: 5/7/12

COMPOUND NAME	CAS NO.	PPB (V/V)		µg/cu. m	
		MRL	SAMPLE CONC	MRL	SAMPLE CONC
BENZENE	71-43-2	0.250	ND	0.799	ND
TOLUENE	108-88-3	0.500	ND	1.88	ND
ETHYLBENZENE	100-41-4	0.500	ND	2.17	ND
XYLENE (M+P)	1330-20-7	0.500	ND	2.17	ND
XYLENE (O)	95-47-6	0.500	ND	2.17	ND

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

MRL - METHOD REPORTING LIMIT

NA - NOT APPLICABLE OR AVAILABLE

µg/cu. m VALUES ARE CALCULATED FROM PPB RESULTS USING NORMAL TEMPERATURE AND PRESSURE (NPT).

K PRIME, INC.
LABORATORY QUALITY CONTROL REPORT

LAB CONTROL ID: L05071201
LAB CONTROL DUPLICATE ID: D05071201

SAMPLE TYPE: AIR
BATCH ID: 050712A01
DATE ANALYZED: 5/7/12

METHOD: VOC'S IN AIR
REFERENCE: EPA METHOD TO 15 (GC-MS-SCAN)

COMPOUND NAME	SPIKE ADDED (PPB)	REPORTING LIMIT (PPB)	SAMPLE CONC (PPB)	SPIKE CONC (PPB)	SPIKE REC (%)	REC LIMITS (%)
1,1-DICHLOROETHENE	10.0	0.500	ND	10.4	104	60 - 140
TRICHLOROETHENE	10.0	0.500	ND	10.0	100	60 - 140
BENZENE	10.0	0.250	ND	9.85	98.5	60 - 140
TOLUENE	10.0	0.500	ND	10.1	101	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	9.90	99.0	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS	
					RPD (%)	REC (%)
1,1-DICHLOROETHENE	10.0	9.77	97.7	5.77	25	60 - 140
TRICHLOROETHENE	10.0	9.67	96.7	3.36	25	60 - 140
BENZENE	10.0	9.97	99.7	1.21	25	60 - 140
TOLUENE	10.0	10.0	100	0.596	25	60 - 140
TETRACHLOROETHENE	10.0	9.85	98.5	0.506	25	60 - 140

NOTES:

NA - NOT APPLICABLE OR AVAILABLE
 ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID: B04231201
LAB CONTROL SAMPLE ID: L04231201
LAB CONTROL DUPLICATE ID: D04231201
BATCH ID: 042312A01

METHOD: TVH C2-C10
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR
UNITS: UG/M3

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
TVH	293	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
TVH	586000	539000	92.0	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
TVH	539000	544000	0.923	±30

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE
TVH - TOTAL VOLATILE HYDROCARBONS

K PRIME, INC.
LABORATORY QC REPORT

METHOD: METHANE, OXYGEN, NITROGEN (BALANCE)
REFERENCE: ASTM D 1946

METHOD BLANK ID: B05041202
SAMPLE ID: L05041202
DUPLICATE ID: D05041202
BATCH #: 050412A02
SAMPLE TYPE: AIR
UNITS: %-V

DATE ANALYZED: 5/4/12

METHOD BLANK

PARAMETER	REPORTING LIMIT	SAMPLE RESULT
METHANE	0.100	ND
OXYGEN	1.00	ND

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
METHANE	50.0	ND	50.7	101	90-110
OXYGEN	10.0	ND	9.78	97.8	90-110
NITROGEN (BALANCE)	40.0	ND	39.5	98.8	90-110

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
METHANE	0.100	50.7	51.1	0.786	±10
OXYGEN	1.00	9.78	9.39	4.07	±10
NITROGEN (BALANCE)	1.00	39.5	39.5	0.025	±10

K PRIME, INC.
LABORATORY QC REPORT

METHOD: CARBON DIOXIDE
REFERENCE: ASTM D 1946

METHOD BLANK ID: B05041201
SAMPLE ID: L05041201
DUPLICATE ID: D05041201
BATCH #: 050412A01
SAMPLE TYPE: AIR
UNITS: %-V

DATE ANALYZED: 5/4/12

METHOD BLANK

PARAMETER	REPORTING LIMIT	SAMPLE RESULT
CARBON DIOXIDE	0.0500	ND

ACCURACY (MATRIX SPIKE)

PARAMETER	SPIKE ADDED	SAMPLE RESULT	SPIKE RESULT	RECOVERY (%)	LIMITS (%)
CARBON DIOXIDE	1.00	ND	1.02	102	70-130

PRECISION (SPIKE DUPLICATE)

COMPOUND NAME	REPORTING LIMIT	SPIKE RESULT	DUPLICATE RESULT	RPD (%)	LIMITS (%)
CARBON DIOXIDE	0.0500	1.02	1.06	3.85	±20

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED REPORTING LIMIT
NA - NOT AVAILABLE OR APPLICABLE

K PRIME, INC.
LABORATORY QC REPORT

METHOD BLANK ID: B042312A1
LAB CONTROL SAMPLE ID: L042312A1
LAB CONTROL DUPLICATE ID: D042312A1
BATCH ID: 042312A1

METHOD: 1,1,1,2-TETRAFLUOROETHANE
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR
UNITS: PPM -V/V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1,1,2-TETRAFLUOROETHANE	10.0	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1,1,2-TETRAFLUOROETHANE	10000	10100	101	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1,1,2-TETRAFLUOROETHANE	10100	9670	4.4	±30

NOTES:

ND - NOT DETECTED AT OR ABOVE THE STATED METHOD REPORTING LIMIT
NA - NOT APPLICABLE OR AVAILABLE

CHAIN OF CUSTODY RECORD

CONSULTING ENGINEERS AND SCIENTISTS

870 Ogden Drive, Burlingame CA 94010

PHONE: 650-262-9100

FAX: 650-552-0012

Project Name Sylbase		Project No. 950074 05		ANALYSES REQUESTED					EKI CUC No. 20120502-1		
Location Shellmound Street, Emeryville, CA		Sampled By: Roger Lion		Method No.	TO-15 BTEX + 1,1,2-TFA	TO-15 TPH	D-1940 M2, O2, CO2, methane	TO-15 1,1,2-TFA only	PLACE ON HOLD	EXPECTED TURNAROUND TIME	Revision: A (A, B, C, D, etc.)
Reporting: Electronic Format: (none) Hard Copy Format: PDF EPA Data Report Level: II Report results to jshaw@ekiconsult.com ccheng@ekiconsult.com, mkking@ekiconsult.com		Laboratory: K-Prime Inc. 3261 Westwind Blvd. Santa Rosa, CA 95403 (707) 527-7574 Attention: Rich Kagel									Revision Date
Field Sample Identification	Lab Sample No.	Date	Time	Matrix	No./Type of Containers and Preservative						Remarks/ Summa ID No.
SSVP1650-3	101077	2-May-12	08:48	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-353
SSVP1650-4	101078	2-May-12	09:17	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-433
Dup-A - 20120502	101079	2-May-12	-	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-525
shroud - 1650-3	101080	2-May-12	08:48	air	1-ea. 1-L SUMMA	-	-	-	X	standard	SUMMA S-231
shroud - 1650-4	101081	2-May-12	09:17	air	1-ea. 1-L SUMMA	-	-	-	X	standard	SUMMA S-659
Ambient - 20111223	101082	2-May-12	08:16	air	1-ea. 6-L SUMMA	X	X	-	-	standard	SUMMA A-805

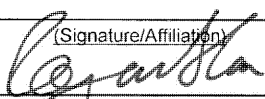
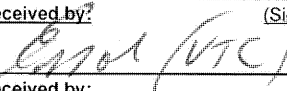
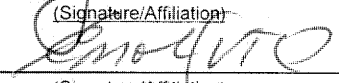
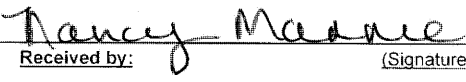
Analyze for leak check compound 1,1,1,2-tetrafluoroethane ("TFA"). Report TFA on a separate page than the analytes in TO-15 analysis. For TFA use a reporting limit of 10 parts per million by volume ("ppmv"), narrate TFA concentration, if necessary.

Relinquished by: <i>(Signature)</i>	Date: 05/02/12	Time: 12:32	Received by: <i>(Signature)</i>	Date: 5/12/12	Time: 12:32
Relinquished by: <i>(Signature)</i>	Date: 05/02/12	Time: 14:30	Received by: <i>(Signature)</i>		
Relinquished by: <i>(Signature)</i>	Date:	Time:	Received by: <i>(Signature)</i>		

CONSULTING ENGINEERS AND SCIENTISTS 1870 Ogden Drive, Burlingame CA 94010 PHONE: 650-292-9100 FAX: 650-552-9012

Project Name		Project No.		ANALYSES REQUESTED							EKI COC No.	
Location:		Sampled By:		Method No.	TO-15	TO-15	D - 1946	TO-15	PLACE ON HOLD	EXPECTED TURNAROUND TIME	Revision:	
Reporting:		Laboratory:									Analyte Group	TO-15
Field Sample Identification	Lab Sample No.	Date	Time	Matrix	No./Type of Containers and Preservative	BTEX + 1,1,1,2-TFA	N2, O2, CO2, methane	TPHg	REVISION DATE:	Remarks/ Summa ID No.		
SSVP1650-3	101077	2-May-12	08:48	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-353	
SSVP1650-4	101078	2-May-12	09:17	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-433	
Dup-A	101079	2-May-12	—	air	1-ea. 1-L SUMMA	X	X	X	-	standard	SUMMA S-525	
shroud - 1650-3	101080	2-May-12	08:48	air	1-ea. 1-L SUMMA	-	-	-	X	standard	SUMMA S-231	
shroud - 1650-4	101081	2-May-12	09:17	air	1-ea. 1-L SUMMA	-	-	-	X	standard	SUMMA S-659	
Ambient - 20111223	101082	2-May-12	08:16	air	1-ea. 6-L SUMMA	X	X	-	-	standard	SUMMA A-805	

Analyze for leak check compound 1,1,1,2-tetrafluoroethane ("TFA"). Report TFA on a separate page than the analytes in TO-15 analysis. For TFA use a reporting limit of 10 parts per million by volume ("ppmv"), narrate TFA concentration, if necessary.

Relinquished by: 	(Signature/Affiliation)	Date	05/02/12	Time	12:32	Received by: 	(Signature/Affiliation or Carrier/Air Bill No.)	5/2/12	1232
Relinquished by: 	(Signature/Affiliation)	Date	05 02 12	Time	14:30	Received by: 	(Signature/Affiliation)		
Relinquished by:	(Signature/Affiliation)	Date		Time		Received by:	(Signature/Affiliation)		