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RECEIVED
By Alameda County Environmental Health 2:04 pm, Apr 21, 2015

20 April 2015

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
2015 Request for Site Closure
6601/6603 Shellmound Street, Emeryville, California
(EKI 950074.05)

Dear Mr. Detterman:

On behalf of SAP America ("SAP"), Erler & Kalinowski, Inc. is pleased to submit this *Report of Additional Site Investigation and 2015 Request for Site Closure* for the property located at 6601/6603 Shellmound Street (formerly Bay Street), in Emeryville, California.

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

Very truly yours,

ERLER & KALINOWSKI, INC.

Michelle K. King, Ph.D.
President

Jeff R. Shaw, P.G.
Project Geologist

cc: Dwain Christensen, SAP America
Julie Treinen, Griffin Capital Corporation

SAP Labs, LLC
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16 March 2015

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 2015 Request for Site Closure
6601/6603 Shellmound Street
Emeryville, California

Dear Mr. Detterman,

I am a legally authorized representative of SAP America, 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.

Regards,

SAP America

Dwain Christensen
Director of Facilities, Bay Area Region

ATTACHMENT

Report of Additional Site Investigation and 2015 Request for Site Closure, 6601/6603 Shellmound Street Emeryville, California.

Erler & Kalinowski, Inc.

Report of Additional Site Investigation and 2015 Request for Site Closure

6601/6603 Shellmound Street
Emeryville, California

Prepared for:

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20 April 2015

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Consulting engineers and scientists

Report of Additional Site Investigation and
2015 Request for Site Closure
6601/6603 Shellmound Street, Emeryville, California

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1 INTRODUCTION

On behalf of SAP, Inc. ("SAP"), successor to Sybase, Inc. ("Sybase"), Erler & Kalinowski, Inc. ("EKI") is pleased to submit this *Report of Additional Site Investigation and 2015 Request for Site Closure*, describing additional characterization and other tasks requested by the Alameda County Department of Environmental Health ("ACEH"), associated with underground storage tanks ("USTs") formerly located at 6601 and 6603 Shellmound Street, Emeryville, California ("Site") (Figure 1). The tanks were excavated in 1989 from the driveway between the current Site buildings and the adjacent property to the south at 1650 65th Street (Figure 2).

Sybase sold the Site in 1998, and Griffin Capital Management ("Griffin") represents the current owners of both the 1650 65th Street and 6601-6603 Shellmound Street properties. Ex'pression College for Digital Arts ("Expression") has tenancy of the 6601-6603 Shellmound Street property and the eastern portion of the 1650 65th Street property. The western part of the 1650 65th Street property is occupied by offices of the U.S. Government General Services Administration. Historically, the Site was part of the former Emeryville municipal landfill.

This report summarizes additional Site characterization and documentation performed by SAP in accordance with the following documents:

- *Work Plan for Subslab Vapor Sampling, 6601/6603 Shellmound Street, Emeryville, California,* ("Work Plan") prepared by EKI and submitted to ACEH on 21 October 2014 (EKI, 2014);
- A 12 December 2014 letter from ACEH entitled *Modified Work Plan Approval; Fuel Leak Case No's. RO0000042 / RO0000043 and Geotracker Global ID's T0600100825 / T0600100470, Mussallem / Sybase and Richardson / Sybase, 6601 and 6603 Bay Street, Emeryville, CA 94608,* (ACEH, 2014) which approved the Work Plan, conditional upon a minor modification to the proposed format of reporting.

This report summarizes background information in Section 2, describes the December 2014 field investigation in Section 3, summarizes analytical results in Section 4, and presents summaries of existing Site information requested by ACEH in Section 5.

Based on the findings described herein, as well as on previous investigations (EKI, 2010; EKI, 2012), the Site compares favorably with criteria published 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 (SWRCB, 2012). SAP believes that no further study or action at the Site is necessary to protect public health and the environment, and again requests that the Site be considered for closure under the current Low-Threat Closure Policy.

2 SUMMARY OF BACKGROUND AND SITE HISTORY

Three underground fuel storage tanks ("USTs") were reportedly installed at the Site in 1973. The general former location of the USTs is shown on Figure 2. The USTs were removed from the Site in August and October 1989.[1] In 1997, Sybase submitted a closure report (EKI, 1997a) and closure report addendum (EKI, 1997b) to ACEH requesting closure of the case.

ACEH issued a letter dated 23 June 1998 (ACEH, 1998), indicating that ACEH was preparing a case closure memorandum for the Site for review by ACEH staff and the Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB"), and that a final case closure letter may be issued within 60 to 90 days. A case closure letter for the Site was never received by Sybase.

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

In December 2008 ACEH responded, requesting 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).

Over the period 2009-2014, Sybase conducted several phases of investigation regarding chemicals of concern in groundwater, soil, and subslab vapor at the Site (EKI, 2010; EKI, 2012). A comprehensive review of investigation methods, results, and conclusions is available in EKI (2012), which reported data collected up to that point, made a detailed comparison of Site conditions with criteria of the Low-Threat Closure Policy, and again requested Site closure from ACEH.

In December 2011, benzene was detected at a concentration of 5.21 micrograms per cubic meter ("ug/m^3") in subslab vapor probe ("SSVP") SSVP1650-4, and 1.82 ug/m^3 in SSVP1650-3, both installed in the 1650 65th Street building (Table 1). Benzene also was detected at 1.79 ug/m^3 in ambient air outside the buildings, which is consistent with conditions in the San Francisco Bay area, especially given that Interstate Highway 80 is located immediately east of the Site. Benzene was not detected in subslab vapor under the 6601 and 6603 Shellmound Street buildings. All other compounds detected in subslab vapor in December 2011 were less than their applicable screening levels (Table 1).

[1]A 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.

The calculated commercial/industrial subslab vapor screening level for benzene in December 2011 was 2.8 ug/m^3. RWQCB Environmental Screening Levels ("ESLs") updated in 2008 (RWQCB, 2008) [2] were used as health-protective screening criteria for chemical concentrations in subslab vapor, but ESLs do not include specific levels for subslab vapor. In accordance with the California Environmental Protection Agency Department of Toxic Substances Control ("DTSC") vapor intrusion guidance (DTSC, 2011), subslab vapor screening levels were calculated by multiplying indoor air ESLs by an attenuation factor of 20.

ACEH requested another round of subslab sampling in the 1650 65th Street building to supplement the existing benzene data, and in May 2012, SAP conducted another round of sampling. As shown in Table 1, no chemicals of concern were detected in any samples, and laboratory reporting limits were below calculated subslab screening levels. SAP reported the results to ACEH in July 2012 (EKI, 2012). ACEH did not formally respond to the report.

SAP and EKI scheduled a meeting with ACEH on 23 January 2014 to discuss closure of the Site. At the meeting, ACEH requested additional investigation tasks, and clarified them in an exchange of emails dated 3 February 2014 with subject line *RE: Meeting Followup: RO42 & RO43 6601-6603 Shellmound St., Emeryville*. This email requested SAP perform the following actions:

- Preparation of a Work Plan for additional subslab vapor sampling;
- Upload of several reports and files to the State Water Resources Control Board Geotracker public database;
- Preparation of a tabular summary of the Site Conceptual Model ("SCM"), compilation of existing soil analytical data for naphthalene, calculation of benzo(a)pyrene toxicity equivalent PAH concentrations in Site soil, and compilation of existing groundwater level data for Site wells.

SAP responded with the Work Plan prepared by EKI and submitted to ACEH on 21 October 2014 (EKI, 2014). ACEH approved the Work Plan in a letter dated 12 December 2014.

3 DECEMBER 2014 FIELD INVESTIGATION

As described in the Work Plan, on 26 December 2014 EKI re-sampled the two SSVPs located in the 1650 65th Street building (Figure 2). A summary of the investigation is provided below, and analytical results are presented in Section 4. More details of field investigation methods are presented in Appendix A.

[2] Current version: *San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels, Table E-3, Ambient and Indoor Air Screening Levels (volatile chemicals only), Commercial/Industrial Land Use.* RWQCB, Interim Final, December 2013.

3.1 Preparation for Sampling

SAP does not own the Site, and has no contractual relationship with the owner of the Site or with the owner of the adjacent 1650 65th Street Property. An access agreement with the property owners was obtained by SAP prior to sampling. The planned field work tasks, sampling locations, and schedule were reviewed by representatives of the Site owners and tenants.

Buildings at the Site and on the 1650 65th Street property are slab-on-grade construction, and four SSVPs were drilled and installed through the building slabs in December 2011. On 19 December 2014, EKI conducted a site walk to check the status of the existing SSVPs on the 1650 65th Street parcel. The SSVPs were sealed with gas-tight threaded plugs after the previous sampling round, and based on visual observation, the SSVPs were undamaged and usable for additional sampling. No repair, drilling, or underground clearance work was required.

EKI coordinated with K-Prime Inc. ("K-Prime"), a California-certified analytical laboratory in Santa Rosa, California to provide sampling equipment and containers, sample courier transport, and analytical services.

3.2 Subslab Vapor Probe Sampling

On 26 December 2014, EKI conducted subslab vapor sampling on the 1650 65th Street property. EKI collected subslab vapor samples from locations SSVP1650-3 and SSVP1650-4 using an enclosed space ("shroud") around each SSVP. A duplicate sample also was collected from the SSVP1650-4 location.

For quality control, the air inside each shroud was spiked with 1,1-difluoroethane ("DFA"), a tracer compound which can indicate the presence of leaks in the sampling system. The air inside the shroud was sampled separately and analyzed for DFA, so that the concentration ratio between the shroud sample and the SSVP sample could be used to estimate dilution, in case of leakage.

EKI also collected an outdoor time-weighted ambient air sample, to provide baseline ambient chemical concentrations, including potential effects of the Interstate-80 freeway located immediately west of the Site. After collection, samples were transported to K-Prime for analysis of BTEX compounds by EPA Method TO-15 and TFA by EPA Method TO-3. Further details of SSVP sampling procedures are provided in Appendix A.

4 FIELD INVESTIGATION RESULTS

No chemicals of concern were detected above laboratory reporting limits in any of the samples, and the laboratory reporting limits (1.6 ug/m^3 for benzene, 4.34 ug/m^3 for ethylbenzene, and 3.77 ug/m^3 for toluene, respectively) were all below applicable commercial/ industrial subslab screening levels (8.4 ug/m^3 for benzene, 98 ug/m^3 for ethylbenzene, and 26,000 ug/m^3 for toluene). Analytical results for subslab vapor and ambient outdoor air samples and the applicable screening levels are summarized in Table 1.

No leaks were detected in any of the subslab vapor samples. Concentrations of the leak-indicator compound DFA were not detected in any of the samples above the laboratory reporting limit of 10 parts per million volumetric ("ppmv"). Laboratory data sheets are compiled in Appendix B.

5 ACEH-REQUESTED ADDITIONAL INFORMATION

In addition to the requested field investigation, ACEH requested that SAP perform several tasks using existing Site data, including the following:

- Upload of several reports and files to the State Water Resources Control Board Geotracker public database;
- Preparation of a tabular summary of the Site Conceptual Model ("SCM");
- Compilation of existing soil analytical data for naphthalene;
- Calculation of benzo(a)pyrene toxicity equivalent ("B(a)P Equivalent") polycyclic aromatic hydrocarbon ("PAH") concentrations using existing Site data for PAHs in soil; and
- Compilation of existing groundwater level data for Site wells MW-3, MW-5, and MW-7.

5.1 Geotracker Upload and Conceptual Site Model

SAP uploaded the ACEH-requested documents to Geotracker on 7 January 2015, and a preliminary tabular summary of the Site CSM and data assessment was presented in the Work Plan. The CSM has been updated and is shown in Table 2, based on the findings of this investigation. Included are a description of site conditions, potential exposure pathways, data gaps, and findings after addressing the data gaps.

5.2 Naphthalene Data

Data for naphthalene in soil are summarized in Table 3. Existing analytical data for naphthalene in soil indicate no detections, with all laboratory reporting limits below No Significant Risk Thresholds under the Low-Threat Closure Policy for commercial/ industrial sites, and only one reporting limit (with no detection) above the threshold for residential sites (SWRCB, 2012). The lack of detected naphthalene indicates that naphthalene in soil does not present a threat to human health at the Site.

Groundwater data for naphthalene are summarized in Table 4. Analytical data from sampling conducted in 1996 and 2010 indicate no detections of naphthalene in groundwater. With one exception, all laboratory reporting limits were well below RWQCB ESLs for naphthalene in groundwater at commercial / industrial sites (1,600 ug/L) and also at residential sites (160 ug/L) (Table 4).

5.3 PAHs and BaP Equivalents

SWRCB (2012) states that sampling and analysis for PAHs is only necessary where soil is affected by either waste oil or Bunker C fuel, and storage or use of waste oil or Bunker C fuel is not known to have occurred at the Site. Nonetheless, B(a)P Equivalent concentration soil data are compiled in Table 5. The data indicate that total B(a)P Equivalent concentrations for PAHs detected in site soil are well below No Significant Risk Thresholds under the Low-Threat Closure Policy for commercial/ industrial sites (SWRCB, 2012). B(a)P Equivalent concentrations exceed residential limits in samples collected from one borehole, SB-8 (Table 5).

5.4 Water Level Data

Available historical groundwater level data are compiled for the listed Site wells in Table 6. Water levels show seasonal and longer-term fluctuations, slightly increasing in the early 1990s, then appearing to approximately stabilize from about 1997 up to the latest available data measured in November 2012. Water levels in monitoring well MW-3 consistently remained within the well's screened interval. Monitoring well MW-5 water levels also were measured within the screened interval except for a few measurements in the late 1990s. Water levels in monitoring well MW-7 varied across the top of screened interval through the period of measurement, but approximately half (49%) of the measured water levels were below the top of the screen.

5.5 Request for Closure

Based on the characteristics of the Site discussed above and in EKI (2012), SAP requests that ACEH issue a case-closure letter for the Site.

6 REFERENCES

ACEH, 1998, *Case Closure for the Three Underground Storage Tanks at 6601 and 6603 Shellmound Street, Emeryville, California 94608 (STID #3696 and 3710).* Alameda County Environmental Health, 23 June 1998.

ACEH, 2008, *Fuel Leak Case No. RO0000042/RO0000043 and Geotracker Global ID T0600100825/T06001100470, Vacant Facility, 6601 and 6603 Shellmound Street, Emeryville, CA 94608.* Alameda County Environmental Health, 29 December 2008.

ACEH, 2014, *Modified Work Plan Approval; Fuel Leak Case No's. RO0000042 / RO0000043 and Geotracker Global ID's T0600100825 / T0600100470, Mussallem / Sybase and Richardson / Sybase, 6601 and 6603 Bay Street, Emeryville, CA 94608.* Letter from Alameda County Environmental Health to Sybase, Inc., dated 12 December 2014.

DTSC, 2011, *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance).* California Environmental Protection Agency, Department of Toxic Substances Control, October 2011.

Dubovsky and Petite, 1990, *Environmental Report 6601 and 6603 Shellmound Street, Emeryville, California*, William Dubovsky Environmental and Petite Engineering, July 1990.

EKI, 1997a. *Closure Report, Three Former Underground Storage Tanks at 6601 and 6603 Shellmound Street, Emeryville, California.* Erler & Kalinowski, Inc., 18 August 1997.

EKI, 1997b, *Addendum to Closure Report - Site Management Plan, Three Former Underground Storage Tanks at 6601 and 6603 Shellmound Street, Emeryville, California.* Erler & Kalinowski, Inc., 24 October 1997.

EKI, 2010, *Site Investigation and Closure Request Report, 6601/6603 Shellmound Street, Emeryville, California.* Erler & Kalinowski, Inc., 14 May 2010.

EKI, 2012, *Report of Additional Site Investigation and 2012 Request for Site Closure, 6601/6603 Shellmound Street, Emeryville, California.* Erler & Kalinowski, Inc., 5 July 2012.

EKI, 2014, *Work Plan for Additional Sub-Slab Vapor Sampling, 6601/6603 Shellmound Street, Emeryville, California.* Erler & Kalinowski, Inc., 15 October 2014.

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

RWQCB, 2013. *San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels.* Interim Final, December 2013.

SWRCB, 2012, *Low-Threat Underground Storage Tank Case Closure Policy.* State Water Resources Control Board, adopted 1 May 2012.

TABLES

Table 1

Summary of Analytical Results for Sub-Slab Vapor Samples[(a)]

6601/6603 Shellmound Street, Emeryville, California

(EKI 950074.05)

Sample Name	Location / Building	Date	VOCs (ug/m^3)					Major Gases (% volume)			
			Benzene	Toluene	Ethyl benzene	Xylenes	TVH (C2-C10)	Methane	Oxygen	Carbon Dioxide	Nitrogen
SSVP6601-1	6601 Shellmound	12/23/2011	<1.6	**5.84**	<4.34	<4.34	--	<0.100%	18.4%	<0.100%	81.6%
SSVP6603-2[(b)]	6603 Shellmound	12/23/2011	<1.6	<3.77	**7.34**	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
SSVP1650-3	1650 65th St.	12/23/2011	**1.82**	<3.77	<4.34	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
		5/2/2012	<1.60	<3.77	<4.34	<4.34	<586	<0.100%	18.4%	0.452%	81.1%
		12/26/2014	<1.60	<3.77	<4.34	<4.34	--	--	--	--	--
SSVP1650-4[(c,d)]	1650 65th St.	12/23/2011	**5.21**	**6.07**	<4.34	<4.34	--	<0.100%	19.4%	<0.100%	80.6%
		5/2/2012	<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%
		12/26/2014	<1.60/ <1.60	<3.77/ <3.77	<4.34/ <4.34	<4.34/ <4.34	--	--	--	--	--
AMBIENT-20111223	Outside in alley	12/23/2011	**1.79**	<3.77	<4.34	<4.34	--	--	--	--	--
AMBIENT-20120502		5/2/2012	<1.60	<3.77	<4.34	<4.34	<586	--	--	--	--
AMBIENT-20141226		12/26/2014	<0.799	<1.86	<2.17	<2.17	--	--	--	--	--
2013 Commercial/Industrial Subslab Vapor Screening Levels[(f)]			***8.4***	***26,000***	***98***	***8,800***	***50,000***	***n/a***	***n/a***	***n/a***	***n/a***
2013 Residential Subslab Vapor Screening Levels[(f)]			***1.7***	***6,200***	***19***	***2,000***	***12,000***	***n/a***	***n/a***	***n/a***	***n/a***

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/m^3 = 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. Samples collected in 2011 and 2012 also were analyzed 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 16.6 ppmv concentration detected 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 10 ppmv concentration detected in sample SSVP1650-4 thus indicates a very minor leak in that particular vapor sample, resulting in a negligable potential sample dilution of approximately 0.068%.

(d) For the 2012 and 2014 sampling events, blind duplicate samples were collected from this location and subjected to the same suite of analytical tests as the primary sample.

(e) San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels ("ESLs"), Table E-2, Soil Gas Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only), Commercial/Industrial Land Use. California Regional Water Quality Control Board - San Francisco Bay Region ("RWQCB"), Interim Final, December 2013.

(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 (i.e., multiplied by 20).

(g) San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels ("ESLs"), Table E-3. Ambient and Indoor Air Screening Levels (volatile chemicals only), Commercial/Industrial Land Use. RWQCB, Interim Final, December 2013. These values are not applicable to subslab sampling results, but are used to calculate sub-slab soil vapor screening levels [see Note (f)]. ESL for TPH-gasoline listed as surrogate for TVH (C2-C10).

Table 2
Summary of Site Conditions, Exposure Pathways, and Data Sufficiency
6601/6603 Shellmound Street, Emeryville, California
(EKI 950074.05)

CSM Element	Description	Data Gap	Proposed Investigation	Rationale	Analytical Methods
Background and Occurrence of Chemicals of Concern	- The Site includes the properties at 6601/6603 Shellmound Street in Emeryville, California. - In 1989, three diesel & gasoline underground storage tanks ("USTs") were removed from the 6601/6603 Shellmound Street property by overexcavation to approximately 16 feet below ground surface. - Soil, groundwater, and soil vapor sampling has demonstrated that petroleum hydrocarbons have migrated in the subsurface to the adjacent 1650 65th Street property. - Residual petroleum hydrocarbons and associated chemicals remain in soil and groundwater, including benzene, toluene, ethylbenzene, and xylenes ("BTEX"), and polycyclic aromatic hydrocarbons ("PAHs"). - Benzene, toluene, and ethylbenzene also have been detected infrequently in sub-slab vapor samples. - The Site was used as a landfill by the City of Emeryville prior to development and installation of the USTs.	- No data gap exists. Spatial extent of petroleum hydrocarbons in soil and groundwater have been characterized.	- None needed	- The lateral and vertical extent of petroleum hydrocarbons and related constituents in groundwater has been characterized (EKI, 2012). - Residual petroleum hydrocarbons in soil from the former USTs generally are restricted to the saturated zone. - No horizontal or vertical conduits have been identified. - VOC and PAH concentrations in soil generally are below Commercial / Industrial Environmental Screening Levels ("ESLs") published by the California Regional Water Quality Control Board, San Francisco Bay Region ("RWQCB") and Low Threat Closure Policy ("LTCP") criteria. - Although a sheen has been observed in groundwater samples collected near and downgradient of the former tank area (EKI, 2010), the extent of contamination is limited, as shown by groundwater analytical data at locations MW-5, MW-7, GGW-3 and GGW-4 (Figure 2; EKI, 2012). - Aqueous concentrations of petroleum-related constituents (BTEX compounds) now have declined to below their respective Commercial / Industrial ESLs. - The most recent sampling groundwater analytical data (e.g., MW-3) indicate that residual benzene may remain in groundwater (EKI, 2012) at a concentration of 2.8 micrograms per liter ("ug/L"), which is below the LTCP groundwater criteria but above the water quality objective for the Santa Clara Valley East Bay Plain groundwater basin (DWR, 2003), i.e., the drinking water Maximum Contaminant Level ("MCL") of 1 ug/L (RWQCB, 2013). - The concentration of benzene in downgradient monitoring wells MW-5 and MW-7 has decreased over time to below detection limits (Figure 2; EKI, 2012).	- N/A
Exposure Pathways	- Ingestion and direct-contact exposure pathways for soil and groundwater are incomplete for current Site occupants.	- No data gap exists	- None needed	- The Site is paved and completely developed for commercial use.	- N/A
	- Vapor intrusion of VOCs (e.g., BTEX compounds) to indoor air is not a significant exposure pathway both on-Site and at the adjacent 1650 65th Street property. Three sub-slab vapor sampling events have demonstrated that concentrations of BTEX compounds remain below screening levels for commercial/industrial sites and residential sites (RWQCB, 2013; DTSC, 2011).	- The former data gap has been addressed. Sub-slab vapor sampling was performed in 2011, 2012, and 2014.	- None needed.	- Benzene was present in subslab vapor below current commercial/industrial screening levels, but above current residential screening levels in two locations on the 1650 65th Street property in 2011, and in an ambient air sample collected concurrently. - Follow-up subslab vapor sampling conducted in 2012 and 2014 indicated that subslab vapor concentrations of benzene are not detected above commercial/industrial and residential screening levels. - Commercial/Industrial and residential screening levels were calculated according to current DTSC guidance (DTSC, 2011) by multiplying Indoor Air ESLs by an attenuation factor of 20.	- EPA TO-15 for BTEX

Table 2
Summary of Site Conditions, Exposure Pathways, and Data Sufficiency
6601/6603 Shellmound Street, Emeryville, California
(EKI 950074.05)

CSM Element	Description	Data Gap	Proposed Investigation	Rationale	Analytical Methods
Exposure Pathways (continued)	- Vapor intrusion of napthalene from soil to indoor or outdoor air (SWRCB, 2012) is not a significant exposure pathway both on-Site and at the adjacent 1650 65th Street property, based on existing data. - Naphthalene has not been detected in Site soil or groundwater, and laboratory reporting limits generally have been below no-significant risk threshold values.	- The former data gap has been addressed. A screening-level evaluation of napththalene in Site soil and groundwater has been performed.	- None needed.	- Tables 3 and 4 of this report contain a screening-level evaluation of naphthalene concentrations based on the potential for vapor intrusion to indoor and outdoor air. Analytical data for naphthalene in soil and groundwater were compared to criteria listed in SWRCB (2012), Table 1, "Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health". - Naphthalene was not detected in any soil or groundwater samples collected by EKI in either 1996 or 2010. - Analytical reporting limits for naphthalene were compared to soil naphthalene screening levels from Table 1 of SWRCB (2012), and groundwater ESLs for naphthalene (RWQCB, 2013). - Reporting limits for soil were below residential screening levels (9.7 mg/kg) in all soil samples except SB4-5 (collected in 1996), which had a reporting limit of 25 mg/kg. - Reporting limits for groundwater were below residential screening levels (160 ug/L) in all groundwater samples except SB6 (collected in 1996), which had a reporting limit of 100,000 ug/L.	- N/A
	- Direct contact with PAHs (and other chemicals of concern) in Site soil during excavation is not a significant exposure pathway for future construction or utility workers due to low concentrations in soil. - PAH (B(a)P equivalent) concentrations are below commercial/industrial screening levels from Table 1 of SWRCB (2012).	- The former data gap has been addressed. Benzo(a)pyrene ("BaP") equivalents for PAH compounds have been calculated using existing soil analytical data.	- None needed.	- Sampling and analysis for PAHs is only necessary where soil is affected by either waste oil or Bunker C fuel (SWRCB, 2012). There is no indication that storage or use of waste oil or Bunker C fuel occurred at the Site. - Soil analytical data for petroleum hydrocarbons and related constituents (including naphthalene and PAHs) have been compiled (Table 5) for the immediate vicinity of the former USTs. - B(a)P equivalent concentrations generally are not detected, but where detected in one borehole (SB-8), concentrations are below commercial/industrial land use concentration criteria published in the Low-Threat Case Closure Policy (SWRCB, 2012). Concentrations detected in borehole SB-8 exceed residential threshold values in SWRCB (2012), but the Site is not used for residential purposes.	- N/A

References:

DTSC, 2011, *Final Guidance for the Evaluation and Mitigation of Subsurface Vapor Intrusion to Indoor Air (Vapor Intrusion Guidance).* California Environmental Protection Agency, Department of Toxic Substances Control, October 2011.

EKI, 2010, *Site Investigation and Closure Request Report, 6601/6603 Shellmound Street, Emeryville, California.* Report prepared by Erler & Kalinowski, Inc., 14 May 2010.

EKI, 2012, *Report of Additional Site Investigation and 2012 Request for Site Closure, 6601/6603 Shellmound Street, Emeryville, California.* Report prepared by Erler & Kalinowski, Inc., 5 July 2012.

EKI, 2014, *Work Plan for Additional Sub-Slab Vapor Sampling, 6601/6603 Shellmound Street, Emeryville, California.* Work plan prepared by Erler & Kalinowski, Inc., 13 June 2014.

RWQCB, 2013, *Environmental Screening Levels.* California Regional Water Quality Control Board, San Francisco Bay Region, December 2013 Update.

SWRCB, 2012, *Low-Threat Underground Storage Tank Case Closure Policy.* California State Water Resources Control Board, adopted 1 May 2012.

Table 3
Soil Sample Analytical Results for Naphthalene

6601/6603 Shellmound St., Emeryville, California
(EKI 950074.05)

Location	Sample ID	Sample Date	Depth (ft bgs)	Naphthalene (mg/kg) [(a)]
SB-3	SB3-5	6/15/1996	4.5-5	<5.0
SB-4	SB4-5	6/15/1996	4.5-5	<25
SB-7	SB-7-5-5.5	4/9/2010	5-5.5	<0.092
	SB-7-8-8.5	4/9/2010	8-8.5	<1.9
	SB-7-13-13.5	4/9/2010	13-13.5	<0.080
	SB-7-20.5-21	4/9/2010	20.5-21	<0.078
SB-8	SB-8-4.5-5	4/9/2010	4.5-5	<0.075
	SB-8-13-13.5	4/9/2010	13-13.5	<0.080
	SB-8-17.5-18	4/9/2010	17.5-18	<0.083
SB-9	SB-9-5-5.5	4/9/2010	5-5.5	<0.076
	SB-9-9-9.5	4/9/2010	9-9.5	<0.77
	SB-9-12.5-13	4/9/2010	12.5-13	<0.04
	SB-9-19-19.5	4/9/2010	19-19.5	<0.086
No Significant Risk Threshold Concentration, LTCP Commercial/Industrial Land Use, (0-10 feet bgs) [(b)]				***45***
No Significant Risk Threshold Concentration, LTCP Residential Land Use, (0-10 feet bgs) [(b)]				***9.7***

Abbreviations:

<5.0: compound not detected at or above the laboratory reporting limit of 5.0 mg/kg
ESL: Environmental Screening Level (RWQCB, December 2013)
ft bgs: feet below ground surface
LTCP: Low-Threat Closure Policy
mg/kg: milligrams per kilogram
RWQCB: California Regional Water Quality Control Board, San Francisco Bay Region
SWRCB: State Water Resources Control Board

Notes:

(a) Samples collected in 2010 were analyzed by Curtis & Tompkins, Ltd., of Berkeley, California using EPA method 8270C. Sample collected in 1996 was analyzed by Sequoia Analytical of Redwood City, California using EPA method 8100.

(b) From SWRCB (2012), *Low-Threat Underground Storage Tank Case Closure Policy (Table 1).* The listed threshold concentration (45 mg/kg) addresses commercial/ industrial land-use exposure pathways through direct contact as well as through volatilization to outdoor air. The corresponding residential land-use threshold concentration is 9.7 mg/kg.

(c) Commercial/Industrial Shallow soil Environmental Screening Level ("ESL") from RWQCB (2013) - *Table A-2. Shallow Soil Screening Levels (<3m bgs), Commercial/Industrial Land Use, (groundwater is a current or potential drinking water resource)*

References

RWQCB, 2013. *San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels.* Interim Final, December 2013.

SWRCB, 2012. *Low-Threat Underground Storage Tank Case Closure Policy; Table 1- Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health.* California State Water Resources Control Board, 1 May 2012.

Table 4
Groundwater Sample Analytical Results for Naphthalene

6601/6603 Shellmound St., Emeryville, California

Sample ID	Sample Date	Naphthalene [(a)] (ug/L)
SB-6	6/15/1996	<100000
GGW-1	3/6/2010	<98
GGW-2	3/6/2010	<9.9
GGW-3	3/6/2010	<9.4
GGW-4	4/9/2010	<9.9
2013 RWQCB Commercial/Industrial Land Use Groundwater ESL [(b)]		***1,600***
2013 RWQCB Residential Land Use Groundwater ESL [(b)]		***160***

Abbreviations:

<9.4: compound not detected at or above the laboratory reporting limit of 9.4 ug/L

ESL: Environmental Screening Level (RWQCB, December 2013)

ug/L - micrograms per liter

RWQCB: California Regional Water Quality Control Board, San Francisco Bay Region

Notes:

(a) Samples collected in 2010 were analyzed by Curtis & Tompkins, Ltd., of Berkeley, California using EPA method 8270C. Sample collected on 1996 was analyzed by Sequoia Analytical of Sacramento, California using EPA method 8100.

(b) Naphthalene groundwater ESLs for commercial/industrial and residential land uses, assuming fine / coarse mixed soils are from Table E-1, *Groundwater Screening Levels for Evaluation of Potential Vapor Intrusion (volatile chemicals only),* RWQCB (2013).

References

RWQCB, 2013. *San Francisco Bay Regional Water Quality Control Board Environmental Screening Levels.* Interim Final, December 2013.

Table 5

Summary of B(a)P Equivalents for Carcinogenic PAHs Detected in Soil Samples[a]

6601/6603 Shellmound Street, Emeryville, California

(EKI 950074.05)

Sample Location	Sample Depth (ft bgs)	Analyte	Results (mg/kg)	Potency Equivalency Factor	B(a)P Equivalent Concentration	Total B(a)P Equivalents [b,c] (mg/kg)
SB-7	5 - 5.5	Benz(a)anthracene	< 0.092	0.1	0	0
		Benzo(a)pyrene	< 0.092	1	0	
		Benzo(b)fluoranthene	< 0.092	0.1	0	
		Benzo(k)fluoranthene	< 0.092	0.1	0	
		Chrysene	< 0.092	0.01	0	
		Dibenz(a,h)anthracene	< 0.092	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.092	0.1	0	
	8 - 8.5	Benz(a)anthracene	< 1.9	0.1	0	0
		Benzo(a)pyrene	< 1.9	1	0	
		Benzo(b)fluoranthene	< 1.9	0.1	0	
		Benzo(k)fluoranthene	< 1.9	0.1	0	
		Chrysene	< 1.9	0.01	0	
		Dibenz(a,h)anthracene	< 1.9	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 1.9	0.1	0	
	13 - 13.5	Benz(a)anthracene	< 0.08	0.1	0	0
		Benzo(a)pyrene	< 0.08	1	0	
		Benzo(b)fluoranthene	< 0.08	0.1	0	
		Benzo(k)fluoranthene	< 0.08	0.1	0	
		Chrysene	< 0.08	0.01	0	
		Dibenz(a,h)anthracene	< 0.08	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.08	0.1	0	
SB-8	4.5 - 5	Benz(a)anthracene	**0.15**	0.1	0.015	0.207
		Benzo(a)pyrene	**0.16**	1	0.16	
		Benzo(b)fluoranthene	**0.23**	0.1	0.023	
		Benzo(k)fluoranthene	**0.076**	0.1	0.0076	
		Chrysene	**0.18**	0.01	0.0018	
		Dibenz(a,h)anthracene	< 0.075	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.075	0.1	0	
	13 - 13.5	Benz(a)anthracene	< 0.08	0.1	0	0.147
		Benzo(a)pyrene	**0.13**	1	0.13	
		Benzo(b)fluoranthene	**0.16**	0.1	0.016	
		Benzo(k)fluoranthene	< 0.08	0.1	0	
		Chrysene	**0.11**	0.01	0.0011	
		Dibenz(a,h)anthracene	< 0.08	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.08	0.1	0	
	17.5 - 18	Benz(a)anthracene	< 0.083	0.1	0	0
		Benzo(a)pyrene	< 0.083	1	0	
		Benzo(b)fluoranthene	< 0.083	0.1	0	
		Benzo(k)fluoranthene	< 0.083	0.1	0	
		Chrysene	< 0.083	0.01	0	
		Dibenz(a,h)anthracene	< 0.083	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.083	0.1	0	

Table 5

Summary of B(a)P Equivalents for Carcinogenic PAHs Detected in Soil Samples[(a)]

6601/6603 Shellmound Street, Emeryville, California

(EKI 950074.05)

Sample Location	Sample Depth (ft bgs)	Analyte	Results (mg/kg)	Potency Equivalency Factor	B(a)P Equivalent Concentration	Total B(a)P Equivalents [(b,c)] (mg/kg)
SB-9	5 - 5.5	Benz(a)anthracene	< 0.076	0.1	0	0
		Benzo(a)pyrene	< 0.076	1	0	
		Benzo(b)fluoranthene	< 0.076	0.1	0	
		Benzo(k)fluoranthene	< 0.076	0.1	0	
		Chrysene	< 0.076	0.01	0	
		Dibenz(a,h)anthracene	< 0.076	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.076	0.1	0	
	9 - 9.5	Benz(a)anthracene	< 0.77	0.1	0	0
		Benzo(a)pyrene	< 0.77	1	0	
		Benzo(b)fluoranthene	< 0.77	0.1	0	
		Benzo(k)fluoranthene	< 0.77	0.1	0	
		Chrysene	< 0.77	0.01	0	
		Dibenz(a,h)anthracene	< 0.77	0.34	0	
		Indeno(1,2,3-cd)pyrene	< 0.77	0.1	0	

Notes

(a) B(a)P Equivalents were calculated for the seven carcinogenic PAHs in accordance with the 2012 California Office of Health Hazard Assessment ("OEHHA") guidance document *Technical Justification for Soil Screening Levels for Direct Contact and Outdoor Air Exposure Pathways (Final 03-15-2012)* , p.4.

(b) The 2012 SWRCB document *Low-Threat Underground Storage Tank Case Closure Policy* (SWRCB, 2012) lists **maximum total B(a)P equivalent soil concentrations of 0.68 mg/kg** (0-5 feet below ground surface, commercial / industrial worker) and 4.5 mg/kg (0-10 ft bgs, utility worker). Site soil PAH (B(a)P equivalent) concentrations are well below these levels, based on the available data (above). Refer to SWRCB (2012), *Table 1 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health.*

(c) Maximum total B(a)P equivalent soil concentrations are listed in SWRCB (2012) as **0.063 mg/kg for residential land use** (0-5 feet below ground surface). **Site soil PAH concentrations (B(a)P equivalents) exceed this residential land-use threshold in one location (SB-8), based on the available data**, listed above. Refer to SWRCB (2012), *Table 1 - Concentrations of Petroleum Constituents in Soil That Will Have No Significant Risk of Adversely Affecting Human Health.*

Abbreviations

B(a)P = Benzo(a)pyrene
PAHs = Polycyclic Aromatic Hydrocarbons

Table 6
Historical Water-Levels in Monitoring Wells MW-3, MW-5, and MW-7
6601/6603 Shellmound St., Emeryville, California
(EKI 950074.05)

Well	Date	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft bTOC)	Top of Screen Depth (ft bgs)	Top of Screen Elevation [(a)] (ft NAVD88)	Groundwater Elevation (ft NAVD88)	Field Data Source
MW-3	21-Feb-90	14.92	9.18	6.6	8.82	5.74	ES
	25-May-90	14.92	9.25	6.6	8.82	5.67	ES
	29-Aug-90	14.92	9.50	6.6	8.82	5.42	ES
	28-May-91	14.92	9.03	6.6	8.82	5.89	ES
	1-Aug-91	14.92	NA	6.6	8.82	-	ES
	27-Jan-92	14.92	9.44	6.6	8.82	5.48	PES
	28-Feb-92	14.92	8.80	6.6	8.82	6.12	PES
	28-May-92	14.92	8.80	6.6	8.82	6.12	PES
	27-Aug-92	14.92	9.18	6.6	8.82	5.74	PES
	10-Nov-92	14.92	9.44	6.6	8.82	5.48	PES
	18-Feb-93	14.92	7.59	6.6	8.82	7.33	PES
	20-May-93	14.92	8.21	6.6	8.82	6.71	PES
	19-Aug-93	14.92	8.71	6.6	8.82	6.21	PES
	15-Nov-93	14.92	9.09	6.6	8.82	5.83	PES
	14-Feb-94	14.92	8.84	6.6	8.82	6.08	PES
	16-May-94	14.92	8.18	6.6	8.82	6.74	PES
	10-Aug-94	14.92	8.72	6.6	8.82	6.20	PES
	3-Nov-94	14.92	8.13	6.6	8.82	6.79	PES
	9-Feb-95	14.92	6.86	6.6	8.82	8.06	PES
	9-May-95	14.92	7.16	6.6	8.82	7.76	PES
	10-Aug-95	14.92	8.00	6.6	8.82	6.92	PES
	13-Nov-95	14.92	8.44	6.6	8.82	6.48	PES
	2-Mar-96	14.92	7.31	6.6	8.82	7.61	PES
	9-May-96	14.92	7.72	6.6	8.82	7.20	PES
	8-Aug-96	14.92	8.22	6.6	8.82	6.70	PES
	11-Nov-96	14.92	8.67	6.6	8.82	6.25	PES
	14-Feb-97	14.92	7.18	6.6	8.82	7.74	PES
	14-May-97	14.92	8.03	6.6	8.82	6.89	PES
	12-Aug-97	14.92	7.39	6.6	8.82	7.53	PES
	12-Nov-97	14.92	8.53	6.6	8.82	6.39	PES
	4-Feb-98	14.92	7.39	6.6	8.82	7.53	PES
	18-May-98	14.92	7.31	6.6	8.82	7.61	PES
	11-Aug-98	14.92	7.95	6.6	8.82	6.97	PES
	17-Dec-98	14.92	8.58	6.6	8.82	6.34	PES
	7-Oct-99	14.92	8.25	6.6	8.82	6.67	PES
	12-Oct-00	14.92	8.22	6.6	8.82	6.70	PES
	6-Oct-10	14.92	8.41	6.6	8.82	6.51	PES
	26-May-11	14.92	7.72	6.6	8.82	7.20	PES
	17-Nov-11	14.92	8.70	6.6	8.82	6.22	PES
	1-Dec-11	14.92	8.70	6.6	8.82	6.22	EKI
	23-May-12	14.92	8.29	6.6	8.82	6.63	PES
	21-Nov-12	14.92	8.36	6.6	8.82	6.56	PES

Table 6
Historical Water-Levels in Monitoring Wells MW-3, MW-5, and MW-7
6601/6603 Shellmound St., Emeryville, California
(EKI 950074.05)

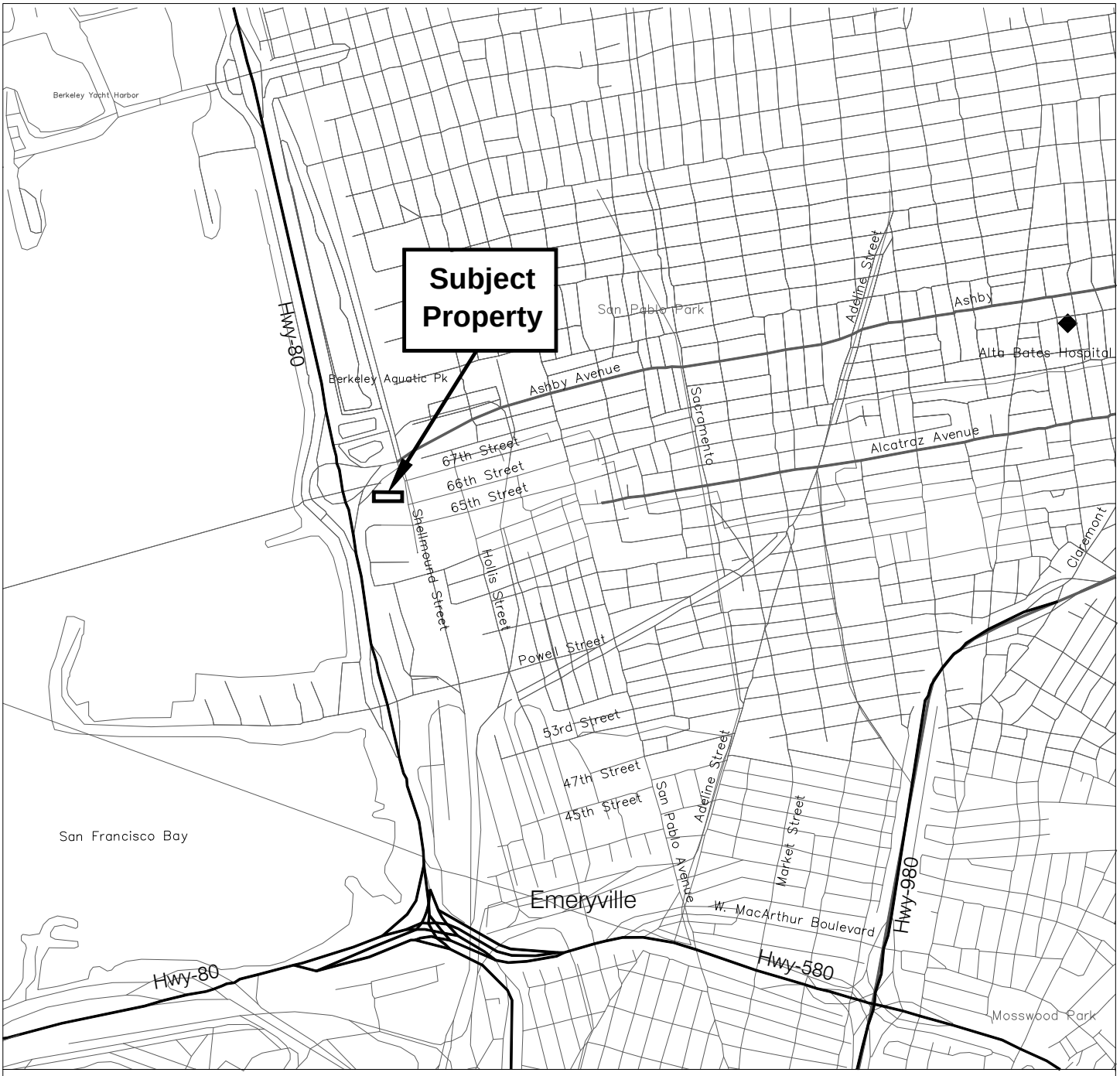
Well	Date	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft bTOC)	Top of Screen Depth (ft bgs)	Top of Screen Elevation [(a)] (ft NAVD88)	Groundwater Elevation (ft NAVD88)	Field Data Source
MW-5	21-Feb-90	15.34	6.91	6.7	9.14	8.43	ES
	25-May-90	15.34	7.58	6.7	9.14	7.76	ES
	29-Aug-90	15.34	7.75	6.7	9.14	7.59	ES
	29-Nov-90	15.34	8.17	6.7	9.14	7.17	ES
	1-Mar-91	15.34	8.11	6.7	9.14	7.23	ES
	28-May-91	15.34	7.39	6.7	9.14	7.95	ES
	1-Aug-91	15.34	NA	6.7	9.14	-	ES
	27-Jan-92	15.34	7.90	6.7	9.14	7.44	PES
	28-Feb-92	15.34	7.73	6.7	9.14	7.61	PES
	28-May-92	15.34	7.18	6.7	9.14	8.16	PES
	27-Aug-92	15.34	7.54	6.7	9.14	7.80	PES
	10-Nov-92	15.34	7.90	6.7	9.14	7.44	PES
	18-Feb-93	15.34	6.58	6.7	9.14	8.76	PES
	20-May-93	15.34	6.29	6.7	9.14	9.05	PES
	19-Aug-93	15.34	6.89	6.7	9.14	8.45	PES
	15-Nov-93	15.34	7.43	6.7	9.14	7.91	PES
	14-Feb-94	15.34	7.16	6.7	9.14	8.18	PES
	16-May-94	15.34	6.50	6.7	9.14	8.84	PES
	10-Aug-94	15.34	6.98	6.7	9.14	8.36	PES
	3-Nov-94	15.34	7.36	6.7	9.14	7.98	PES
	9-Feb-95	15.34	5.68	6.7	9.14	9.66	PES
	9-May-95	15.34	5.36	6.7	9.14	9.98	PES
	10-Aug-95	15.34	6.29	6.7	9.14	9.05	PES
	13-Nov-95	15.34	6.89	6.7	9.14	8.45	PES
	2-Mar-96	15.34	7.26	6.7	9.14	8.08	PES
	9-May-96	15.34	6.00	6.7	9.14	9.34	PES
	15-Jun-96	15.34	6.20	6.7	9.14	9.14	EKI
	8-Aug-96	15.34	6.67	6.7	9.14	8.67	PES
	11-Nov-96	15.34	6.69	6.7	9.14	8.65	PES
	27-Dec-96	15.34	6.53	6.7	9.14	8.81	EKI
	14-Feb-97	15.34	5.88	6.7	9.14	9.46	PES
	14-May-97	15.34	6.25	6.7	9.14	9.09	PES
	19-Jun-97	15.34	6.54	6.7	9.14	8.80	EKI
	12-Aug-97	15.34	6.77	6.7	9.14	8.57	PES
	12-Nov-97	15.34	7.21	6.7	9.14	8.13	PES
	4-Feb-98	15.34	6.81	6.7	9.14	8.53	PES
	18-May-98	15.34	4.81	6.7	9.14	10.53	PES
	11-Aug-98	15.34	6.38	6.7	9.14	8.96	PES
	17-Dec-98	15.34	7.00	6.7	9.14	8.34	PES
	7-Oct-99	15.34	7.23	6.7	9.14	8.11	PES
	12-Oct-00	15.34	7.30	6.7	9.14	8.04	PES
	6-Mar-10	15.34	6.81	6.7	9.14	8.53	EKI
	6-Oct-10	15.34	6.83	6.7	9.14	8.51	PES
	26-May-11	15.34	6.45	6.7	9.14	8.89	PES
	17-Nov-11	15.34	7.10	6.7	9.14	8.24	PES
	1-Dec-11	15.34	7.20	6.7	9.14	8.14	EKI
	23-May-12	15.34	6.91	6.7	9.14	8.43	PES
	21-Nov-12	15.34	7.71	6.7	9.14	7.63	PES

Table 6
Historical Water-Levels in Monitoring Wells MW-3, MW-5, and MW-7
6601/6603 Shellmound St., Emeryville, California
(EKI 950074.05)

Well	Date	Top of Casing Elevation (ft NAVD88)	Depth to Water (ft bTOC)	Top of Screen Depth (ft bgs)	Top of Screen Elevation [(a)] (ft NAVD88)	Groundwater Elevation (ft NAVD88)	Field Data Source
MW-7	1-Mar-91	15.45	7.51	6.7	9.25	7.94	ES
	28-May-91	15.45	7.07	6.7	9.25	8.38	ES
	1-Aug-91	15.45	NA	6.7	9.25	-	ES
	27-Jan-92	15.45	7.28	6.7	9.25	8.17	PES
	28-Feb-92	15.45	7.04	6.7	9.25	8.41	PES
	28-May-92	15.45	6.81	6.7	9.25	8.64	PES
	27-Aug-92	15.45	7.12	6.7	9.25	8.33	PES
	10-Nov-92	15.45	7.80	6.7	9.25	7.65	PES
	18-Feb-93	15.45	6.54	6.7	9.25	8.91	PES
	20-May-93	15.45	6.17	6.7	9.25	9.28	PES
	19-Aug-93	15.45	6.60	6.7	9.25	8.85	PES
	15-Nov-93	15.45	6.89	6.7	9.25	8.56	PES
	14-Feb-94	15.45	6.50	6.7	9.25	8.95	PES
	17-May-94	15.45	6.07	6.7	9.25	9.38	PES
	10-Aug-94	15.45	6.34	6.7	9.25	9.11	PES
	3-Nov-94	15.45	6.18	6.7	9.25	9.27	PES
	9-Feb-95	15.45	5.57	6.7	9.25	9.88	PES
	9-May-95	15.45	5.15	6.7	9.25	10.30	PES
	10-Aug-95	15.45	5.72	6.7	9.25	9.73	PES
	13-Nov-95	15.45	5.98	6.7	9.25	9.47	PES
	2-Mar-96	15.45	6.02	6.7	9.25	9.43	PES
	9-May-96	15.45	6.11	6.7	9.25	9.34	PES
	16-Jun-96	15.45	6.11	6.7	9.25	9.34	EKI
	8-Aug-96	15.45	6.87	6.7	9.25	8.58	PES
	11-Nov-96	15.45	6.39	6.7	9.25	9.06	PES
	27-Dec-96	15.45	5.94	6.7	9.25	9.51	EKI
	14-Feb-97	15.45	5.97	6.7	9.25	9.48	PES
	14-May-97	15.45	5.89	6.7	9.25	9.56	PES
	19-Jun-97	15.45	6.32	6.7	9.25	9.13	EKI
	12-Aug-97	15.45	6.56	6.7	9.25	8.89	PES
	12-Nov-97	15.45	6.76	6.7	9.25	8.69	PES
	4-Feb-98	15.45	5.94	6.7	9.25	9.51	PES
	6-Mar-10	15.45	5.46	6.7	9.25	9.99	EKI
	6-Oct-10	15.45	5.78	6.7	9.25	9.67	PES
	26-May-11	15.45	5.80	6.7	9.25	9.65	PES
	17-Nov-11	15.45	7.10	6.7	9.25	8.35	PES
	1-Dec-11	15.45	6.23	6.7	9.25	9.22	EKI
	23-May-12	15.45	5.97	6.7	9.25	9.48	PES
	21-Nov-12	15.45	4.44	6.7	9.25	11.01	PES

Notes
(a) Ground surface elevation not available; assumed depth to top of casing is 0.5 ft bgs.
(b) Field Data Sources other than EKI: PES = PES Environmental, Inc.; ES = Engineering Science, Inc.

FIGURES



Notes:

1. All locations are approximate.

0 2500 5000

(Approximate Scale in Feet)

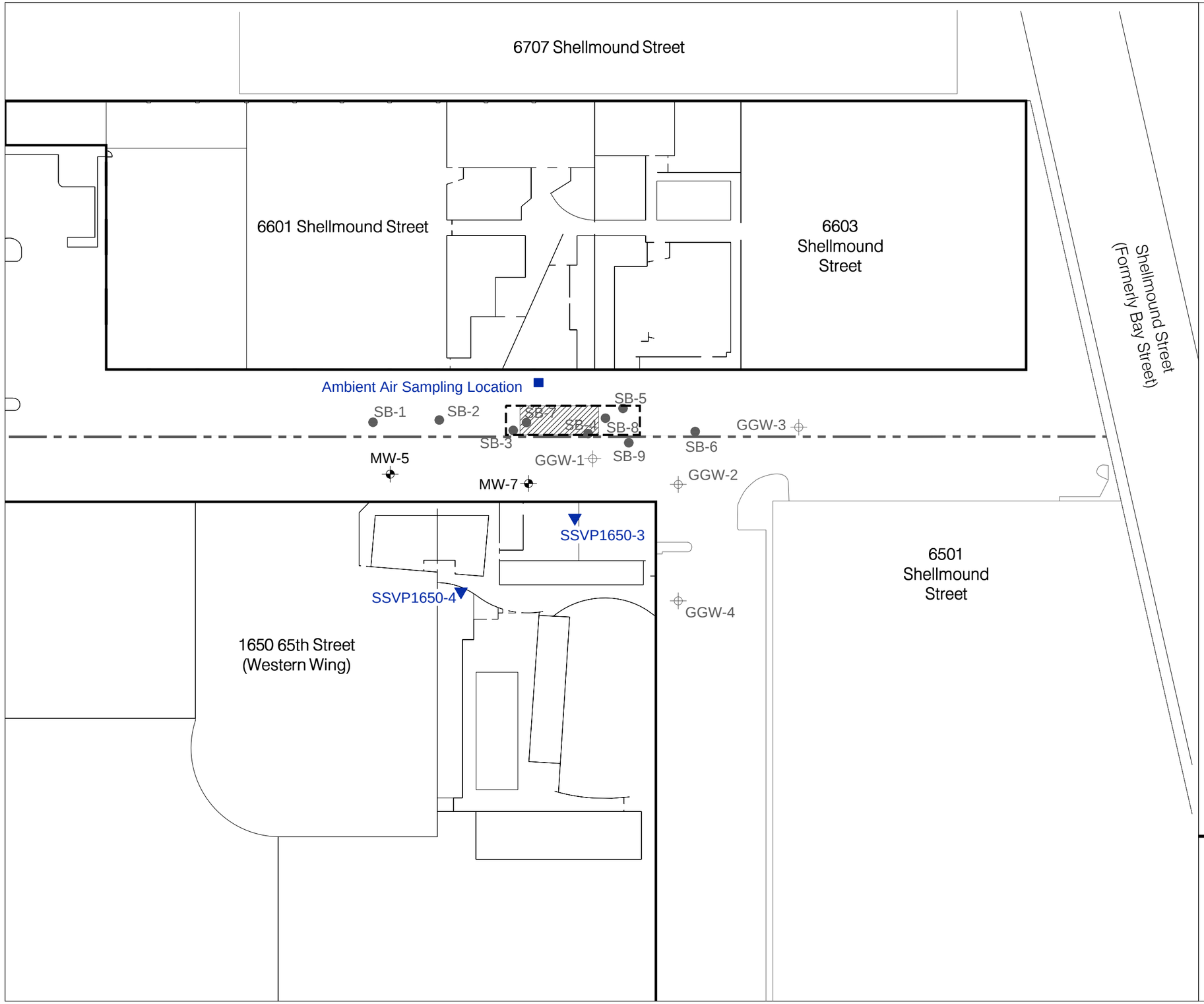
N

Erler & Kalinowski, Inc.

Site Location Map

6601/6603 Shellmound Street
Emeryville, CA
April 2015
EKI 950074.05

Figure 1



N

0 50 100

(Approximate Scale in Feet)

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)
- Soil Borehole Location (1996, 2010)
- Subslab Vapor Probe Location
- Ambient Air Sampling Location

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.

Current and Historical Sampling Locations

6601/6603 Shellmound Street
Emeryville, CA
April 2015
EKI 950074.05

Figure 2

APPENDIX A

Field Methods and Procedures for Subslab Vapor Sampling

Appendix A
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"), sampling existing subslab vapor probes in December 2014.

Subslab Vapor Probe Construction and Installation

Subslab vapor probes ("SSVPs") were constructed in 2011, 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-difluoroethane or "DFA") 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 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 sequentially 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 sampling in December 2014. 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. 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 EPA Method TO-3 for the tracer compound DFA. Each leak-detection shroud vapor sample was analyzed for DFA using EPA Method TO-3.

APPENDIX B

Analytical Laboratory Reports

K PRIME, Inc.

CONSULTING ANALYTICAL CHEMISTS

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

TRANSMITTAL

DATE: 1/22/2015

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

Phone: 650-292-9100
Email: labs@ekiconsult.com
mkking@ekiconsult.com
jshaw@ekiconsult.com

ACCT: 9115
PROJ: 950074.05

FROM: Richard A. Kagel, Ph.D. RAK 1/22/2015
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 #
AMBIENT-20141226	AIR	12/26/2014	08:46	128629
SSVP1650-3	AIR	12/26/2014	09:17	128630
SSVP1650-4	AIR	12/26/2014	09:49	128631
DUP 20141226	AIR	12/26/2014	10:16	128632

The above listed sample group was received on 12/29/2014 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 TO 15 (GC-MS-SCAN)

SAMPLE ID:	AMBIENT-20141226
LAB NO:	128629
SAMPLE TYPE:	AIR
DATE SAMPLED:	12/26/2014
TIME SAMPLED:	8:46
BATCH ID:	012015A1
DATE ANALYZED:	01/20/2015

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	CAS NO.	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).

APPROVED BY: RMC
DATE: 1/22/15

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

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

SAMPLE ID:	SSVP1650-3
LAB NO:	128630
SAMPLE TYPE:	AIR
DATE SAMPLED:	12/26/2014
TIME SAMPLED:	9:17
BATCH ID:	012015A1
DATE ANALYZED:	01/21/2015

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	CAS NO.	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: _____
DATE: 1/22/15

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

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

SAMPLE ID:	SSVP1650-4
LAB NO:	128631
SAMPLE TYPE:	AIR
DATE SAMPLED:	12/26/2014
TIME SAMPLED:	9:49
BATCH ID:	012015A1
DATE ANALYZED:	01/21/2015

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	CAS NO.	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: 1/22/15

K PRIME, INC.
LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

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

SAMPLE ID:	DUP 20141226
LAB NO:	128632
SAMPLE TYPE:	AIR
DATE SAMPLED:	12/26/2014
TIME SAMPLED:	10:16
BATCH ID:	012015A1
DATE ANALYZED:	01/21/2015

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	CAS NO.	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: MMC
DATE: 1/22/15

K PRIME, INC.

LABORATORY REPORT

K PRIME PROJECT: 9115
CLIENT PROJECT: 950074.05

METHOD: 1,1-DIFLUOROETHANE
REFERENCE: EPA TO 3

UNITS: PPMV

SAMPLE ID	LAB NO.	SAMPLE TYPE	DATE SAMPLED	BATCH ID	DATE ANALYZED	MRL	SAMPLE CONC
SSVP1650-3	128630	AIR	12/26/2014	011415A1	01/14/2015	10.0	ND
SSVP1650-4	128631	AIR	12/26/2014	011415A1	01/14/2015	10.0	ND
DUP 20141226	128632	AIR	12/26/2014	011415A1	01/14/2015	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: RMC
DATE: 1/22/15

K PRIME, INC.

LABORATORY METHOD BLANK REPORT

METHOD BLANK ID: B012015A1
SAMPLE TYPE: AIR

BATCH ID: 012015A1
DATE ANALYZED: 01/20/2015

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

		PPB (V/V)		µg/cu. m	
COMPOUND NAME	CAS NO.	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: L012015A1
LAB CONTROL DUPLICATE ID: D012015A1

SAMPLE TYPE: AIR
BATCH ID: 012015A1
DATE ANALYZED: 01/20/2015

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	10.3	103	60 - 140
BENZENE	10.0	0.250	ND	10.6	106	60 - 140
TOLUENE	10.0	0.500	ND	10.2	102	60 - 140
TETRACHLOROETHENE	10.0	0.500	ND	9.35	94	60 - 140

COMPOUND NAME	SPIKE ADDED (PPB)	SPIKE DUP CONC (PPB)	SPIKE DUP REC (%)	RPD (%)	QC LIMITS RPD (%)	QC LIMITS REC (%)
1,1-DICHLOROETHENE	10.0	10.5	105	1.0	25	60 - 140
TRICHLOROETHENE	10.0	10.3	103	0.2	25	60 - 140
BENZENE	10.0	10.6	106	0.2	25	60 - 140
TOLUENE	10.0	10.3	103	1.1	25	60 - 140
TETRACHLOROETHENE	10.0	9.40	94	0.5	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: B011415A1
LAB CONTROL SAMPLE ID: L011415A1
LAB CONTROL DUPLICATE ID: D011415A1
BATCH ID: 011415A1

METHOD: 1,1-DIFLUOROETHANE
REFERENCE: EPA TO 3

SAMPLE TYPE: AIR
UNITS: PPM -V/V

METHOD BLANK

COMPOUND NAME	REPORTING LIMIT	SAMPLE CONC
1,1-DIFLUOROETHANE	10.0	ND

ACCURACY (LAB CONTROL SAMPLE)

COMPOUND NAME	EXPECTED CONC	MEASURED CONC	PERCENT RECOVERY	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	10000	9460	95	60-140

PRECISION (LAB CONTROL DUPLICATE)

COMPOUND NAME	SAMPLE RESULT	DUPLICATE RESULT	RPD (PERCENT)	LIMITS (PERCENT)
1,1-DIFLUOROETHANE	9460	9480	0.2	±30

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

9115

Erler & Kalinowski, Inc.
CONSULTING ENGINEERS AND SCIENTISTS

CHAIN OF CUSTODY RECORD

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

PAGE 1 OF 1

Project Name: Sybase
Project No.: 950074.05
Location: 6601/ 6603 Shellmound St., Emeryville, CA
Sampled By: J. Shaw
Reporting:
Electronic Format: EDF Hard Copy Format: PDF
EPA Data Report Level: II
Please report results to the following people:
(1) Data Archive: labs@ekiconsult.com
(2) Michelle King: mkking@ekiconsult.com
(3) Jeff Shaw: jshaw@ekiconsult.com
(4)

Laboratory:
K-Prime Laboratories, Inc.
3621 Westwind Boulevard
Santa Rosa, CA, USA 95403
(707) 527-7574

EKI COC No.: (YYYYMMDD-#) 20141226-1

Field Sample Identification	Lab Sample No.	Date	Time	Matrix	No./Type of Containers	Method No. TO-15 / Analyte Group BTEX	TO-3 / Difluoroethane	Extract and HOLD	HOLD	EXPECTED TURN-AROUND TIME	Revision: (A, B, C, D, etc.) Date: By: / Remarks
AMBIENT-20141226	128629	26 Dec '14	0846	air	6L Summa	X				Std.	
SSVP1650-3	128630	"	0917	"	"	X	X			"	
SSVP1650-4	128631	"	0949	"	"	X	X			"	
DUP 20141226	128632	"	1016	"	"	X	X			"	

Special Instructions:
NOTE: Please obtain a benzene reporting limit of no more than 1.68 ug/m3 (i.e., RWQCB subslab ESL).

Relinquished by: (Signature/Affiliation)	Date	Time	Received by: (Signature/Affiliation or Carrier/Air Bill No.)
Jeff Shaw EKI	26 Dec 2014	1230	EKI Sample Storage
Jeff Shaw EKI	29 Dec 2014	1400	Email (VTC) 12/29/14 2:00
Email (VTC)	12/29/14	16:35	RW-Cook KPI

=FieldDataForms-JRS-2014.xlsx