Detterman, Mark, Env. Health

From: Detterman, Mark, Env. Health
Sent: Thursday, April 12, 2012 1:19 PM
To: 'king, michelle'
Cc: 'Vince.Herington@sybase.com'; Shaw, Jeff; 'JULIE TREINEN'
Subject: RE: Data for 6601/6603 Shellmound (RO42 and RO43)

That would be fine. I'd intended to do that, but apparently forgot to…

Mark Detterman
Senior Hazardous Materials Specialist, PG, CEG
Alameda County Environmental Health
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PDF copies of case files can be downloaded at:

http://www.acgov.org/aceh/lop/ust.htm

From: king, michelle [mailto:mkking@EKICONSULT.COM]
Sent: Thursday, April 12, 2012 12:38 PM
To: Detterman, Mark, Env. Health
Cc: 'Vince.Herington@sybase.com'; Shaw, Jeff; 'JULIE TREINEN'
Subject: RE: Data for 6601/6603 Shellmound (RO42 and RO43)

Mark-
Would it be possible to limit the follow-up round of sampling to the 1650 65th Street building given that benzene was not detected in the 6601/6603 buildings and those buildings are located upgradient of the tank area?

Thanks,
Michelle

From: Detterman, Mark, Env. Health [mailto:Mark.Detterman@acgov.org]
Sent: Thursday, April 12, 2012 12:34 PM
To: king, michelle
Cc: 'Vince.Herington@sybase.com'; Shaw, Jeff; 'JULIE TREINEN'
Subject: RE: Data for 6601/6603 Shellmound (RO42 and RO43)

Hi Michelle,
Good to talk with you and Jeff and the phone earlier today; sorry it took so long. I'm following up by email to help document our thinking and the request contained herein.

While I find the soil vapor data initially encouraging, I think ultimately we will need to conduct another round of vapor sampling at the site to help validate the first set. Because the highest benzene concentration detected is further beneath the 1650 65th Street building (as could be expected from groundwater migration), it would be appropriate to check the data. It also makes sense due to the new DTSC guidance and the attenuation factor employed, since those new guidelines indicate some level of concern with that benzene concentration. As you know, multiple sampling events are consistent with DTSC guidelines. I would continue to request that major gases be collected, along with the BTEX compounds (and the leak check compound). I would also add TPHg to the analytical suite, as it may provide

insight to the initial results of the major gases as well as the BTEX compounds. The data can be included in the report for the work. You will obviously need an extension to the due date for the report. I'll extend that date to June 22, 2012 shortly.
Let me know if you have questions.

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From: king, michelle [mailto:mkking@EKICONSULT.COM]
Sent: Friday, February 03, 2012 10:15 AM
To: Detterman, Mark, Env. Health
Cc: 'Vince.Herington@sybase.com'; Shaw, Jeff; 'JULIE TREINEN'
Subject: Data for 6601/6603 Shellmound (RO42 and RO43)

Mark-
As discussed, attached are the draft tables and figures for the recent investigation at the 6601/6603 Shellmound site in Emeryville. A summary of the findings is presented below:

Subslab soil gas: No methane was detected in any of the samples; oxygen and nitrogen were at typical ambient air levels. Benzene was detected in 2 samples, but at concentrations significantly below the subslab soil gas ESLs and slightly greater than the subslab screening level calculated using the new DTSC VI guidance from Oct 2011. Benzene was also present in outdoor air at a concentration in the range of the subslab samples.

Groundwater: No chlorinated VOCs were detected in any of the samples. Concentrations of petroleum-related compounds were similar to or less than those detected previously.

Based on these data, EKI believes it is appropriate to close the site. We would appreciate it if you could review the attached data and let us know if you concur with that approach. You indicated that you would need to review all of the site data in context with the new data before rendering an opinion. Please do not hesitate to call me if you have questions about the data. Once we hear back from you (which you indicated could be more than a month), we will prepare a report of the findings and request for closure, if appropriate. As such, EKI would like you to consider this submittal in compliance with the 2/11/2012 submittal date.

We look forward to hearing back from you.

Thanks,
Michelle

Michelle K. King, Ph.D.
Vice President
Erler & Kalinowski, Inc.
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Burlingame, CA 94010

650-292-9100
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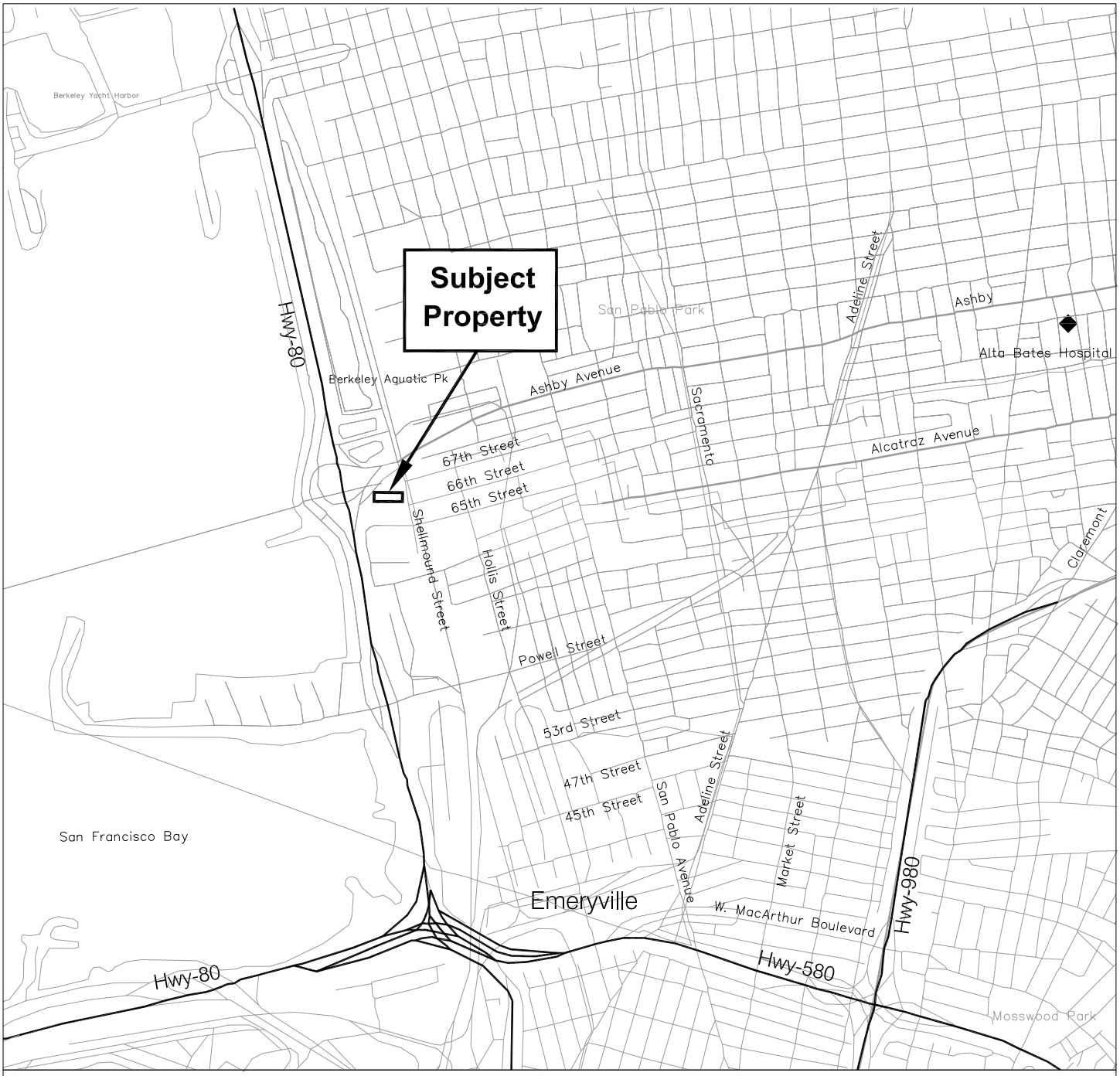

Notes:

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

January 2012
EKI 950074.05

Figure 1

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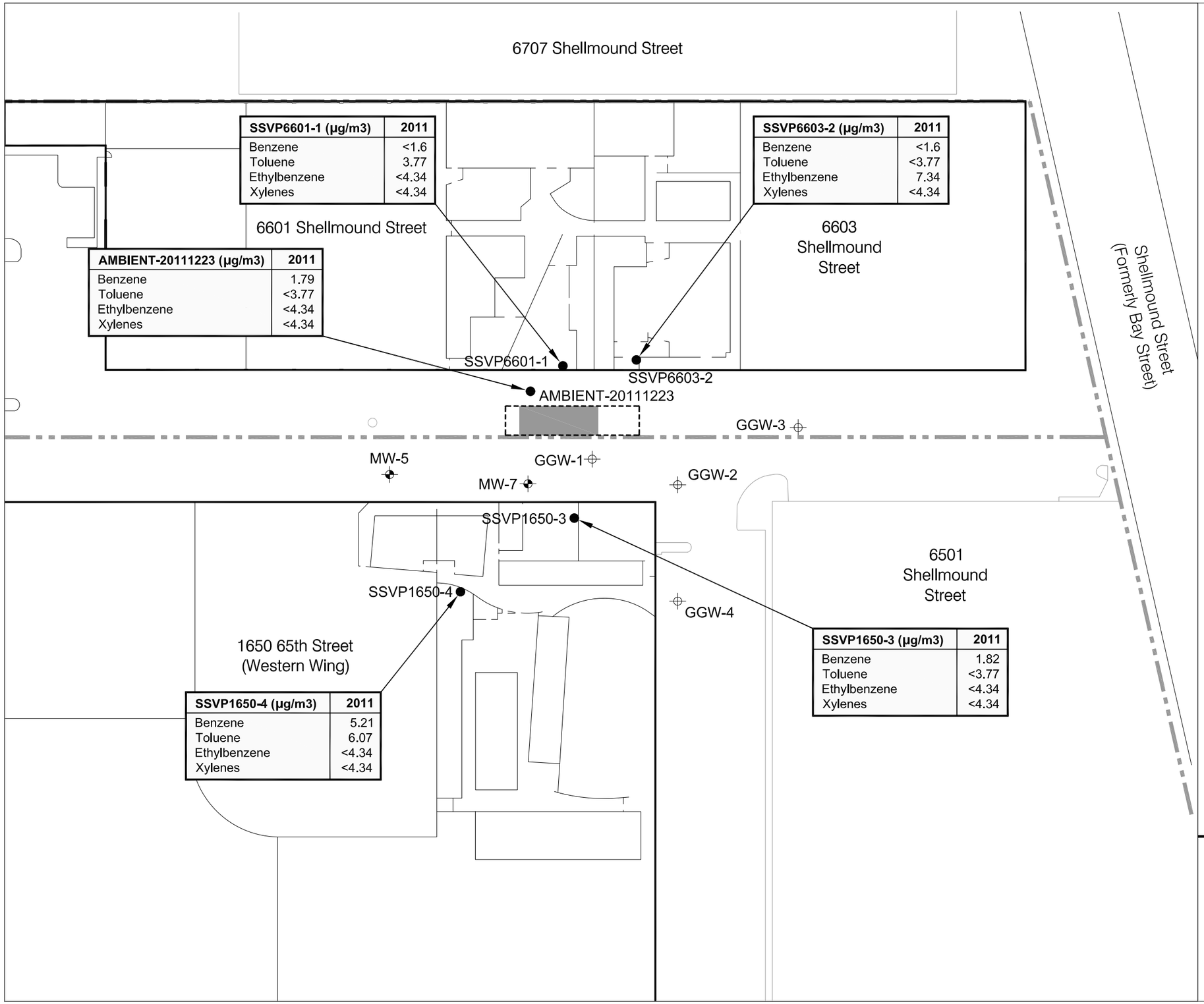

SSVP6601-1 (µg/m3)	2011
Benzene	<1.6
Toluene	3.77
Ethylbenzene	<4.34
Xylenes	<4.34

SSVP6603-2 (µg/m3)	2011
Benzene	<1.6
Toluene	<3.77
Ethylbenzene	7.34
Xylenes	<4.34

AMBIENT-20111223 (µg/m3)	2011
Benzene	1.79
Toluene	<3.77
Ethylbenzene	<4.34
Xylenes	<4.34

SSVP1650-3 (µg/m3)	2011
Benzene	1.82
Toluene	<3.77
Ethylbenzene	<4.34
Xylenes	<4.34

SSVP1650-4 (µg/m3)	2011
Benzene	5.21
Toluene	6.07
Ethylbenzene	<4.34
Xylenes	<4.34

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)
- 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.

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Subslab Vapor Sampling Results

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

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Figure 2

6707 Shellmound Street

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

6601 Shellmound Street

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

Approximate Groundwater Flow Direction

6603 Shellmound Street

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

SSVP6601-1
SSVP6603-2
AMBIENT-20111223
GGW-3
GGW-1
MW-5
MW-7
GGW-2
SSVP1650-3
SSVP1650-4
GGW-4

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

1650 65th Street (Western Wing)

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

6501 Shellmound Street

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

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

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)
- Subslab Vapor Probe Location, Sampled 23 December 2011

Abbreviations:

ug/L = micrograms per liter
MTBE = methyl tertiary butyl ether
TEPH = total extractable petroleum hydrocarbopns
TPPH = total purgeable petroleum hydrocarbopns

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
January 2012
EKI 950074.05

DRAFT

Figure 3

Table 1

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	Methane	Oxygen	Carbon Dioxide	Nitrogen
SSVP6601-1	12/23/2011	13:26	<1.6	3.77	<4.34	<4.34	<0.100	19.4	<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	--	--	--	--
Shallow Soil Vapor ESLs[(c)]			**280**	**180,000**	**3,300**	**58,000**	n/a	n/a	n/a	n/a
Subslab Soil Vapor Screening Levels[(d)]			**2.8**	**1,800**	**32**	**580**	n/a	n/a	n/a	n/a
Indoor Air ESLs[(e)]			**0.14**	**88**	**1.6**	**29**	n/a	n/a	n/a	n/a

Abbreviations:

< X = Analyte not detected above the indicated laboratory reporting limit of X ug

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 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 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 potential sample dilution of approximately 0.16%.

(c) 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.

(d) In accordance with the 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).

(e) 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 2

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)[b]						
		TPPH	TEPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
MW-3[c]	1 Dec 11	73	<50	2.8	<0.5	<0.5	<0.5	1.5
MW-5[d]	Nov 89	ND[b]	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	<0.5	<0.5	NA
	10 Nov 92	240	<100	74	1.0	<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	1.0	<1	<1	NA
	14 Feb 94	140	NA	62	<0.5	<0.5	<0.5	NA
	16 May 94	310	NA	140	3.0	<3	<3	NA
	12 Aug 94	500	NA	95	34	4.0	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
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	<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	3.0	<2	3.0	NA
	19 Aug 93	110	NA	40	1.0	<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	<0.5	<0.5	<2	NA
	3 Nov 94	100	NA	3.0	<0.5	<0.5	<2	NA
	9 Feb 95	200	NA	50	0.6	<0.5	<2	NA

Table 2

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)[(b)]						
		TPPH	TEPH	Benzene	Toluene	Ethyl-benzene	Total Xylenes	MTBE
	9 May 95	300	NA	120	1	<0.5	<2	NA
	10 Aug 95	<50	NA	7.0	<0.5	<0.5	<2	NA
	13 Nov 95	90	NA	3.0	<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	5.0
	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

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
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 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 sample from well MW-5.