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January 12, 2017

Alameda County Department of Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, PG, CEG, Senior Hazardous Materials Specialist

TRANSMITTAL LETTER
REMEDIAL PROGRESS REPRORT NO. 2
SOIL VAPOR EXTRACTION SYSTEM OPERATION
NOVEMBER 16 THROUGH DECEMBER 15, 2016
6701, 6705, and 6707 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA
Fuel Leak Case No. RO0000548
Geotracker Global ID T0600100894

Dear Mr. Detterman:

Submitted herewith for your review is the Remedial Progress Report No. 2, Soil Vapor Extraction System Operation, November 16 through December 15, 2016, 6701, 6705, and 6707 Shellmound Street, Emeryville, California dated January 12, 2017, prepared by PES Environmental, Inc.

I declare, under penalty of perjury, that the information and/or recommendations contained in the above-referenced document for the subject property are true and correct to the best of my knowledge.

Very truly yours,

ANTON EMERYVILLE, LLC

Rachel Green
Development Manager

PES Environmental, Inc.
Engineering & Environmental Services

January 20, 2017

1448.001.02.005

Alameda County Environmental Health
1131 Harbor Bay Parkway
Alameda, California 94502-6577

Attention: Mr. Mark Detterman, P.G., C.E.G.

Re: Remedial Progress Report No. 2
Soil Vapor Extraction System Operation
November 16 through December 15, 2016
6701, 6705, and 6707 Shellmound Street
Emeryville, California
Fuel Leak Case No. RO0000548
Geotracker Global Id T0600100894

Dear Mr. Detterman:

PES Environmental, Inc. (PES) has prepared this Remedial Progress Report (RPR) No. 2 on behalf of Anton Emeryville, LLC (Anton) to fulfill the monthly remedial progress reporting requirement[1] requested by Alameda County Environmental Health (ACEH) for operation of the soil vapor extraction (SVE) system currently operated as an interim remedial action (IRA) the property at 6701, 6705, and 6707 Shellmound Street in Emeryville, California (collectively, the subject property or site). The subject property is currently listed as an open Spills, Leaks, Investigation and Cleanup (SLIC) case (listed under Mike Roberts Color Production at 6707 Bay Street) with ACEH as the lead environmental regulatory agency.

Operation of the SVE system commenced on November 8, 2016. The reporting period covered by this RPR is inclusive of November 16 through December 15, 2016.

This RPR summarizes operation and maintenance of the soil vapor extraction (SVE) system during the subject reporting period, and includes:

1. Summary of SVE monitoring activities during the subject reporting period;

[1] ACEH, 2016. *Request for Interim Remedial Action Monitoring Plan and Schedule; SCP Case RO000548 and Geotracker Global ID T0600100894, Mike Roberts Color Production 6707 Bay Street, Emeryville, CA 94608.* November 8.

2. Summary tables of laboratory analytical data for vapor samples; and

3. Anticipated field activities for following month.

SVE System

The SVE well network consists of 19 soil vapor extraction wells (wells SVE-1 through SVE-19) connected through schedule 40 polyvinyl chloride (PVC) piping plumbed to the SVE system air inlet. The extracted airstream is conveyed from the air inlet through a water knockout vessel, vacuum blower and through one treatment vessel containing 2,000 lb. of granular activated carbon (GAC) and two vessels containing 4,000 lb. of granular Hydrosil HS-600 potassium permangenate (7%) zeolite to remove volatile organic compounds (VOCs) contained in the extracted vapors. After treatment, the airstream is conveyed through an exhaust stack prior to discharge to the atmosphere above the roof line of the building. Monitoring points near each wellhead, between vessels, as well as at multiple points past the air inlet are monitored. Influent, mid-point, and effluent monitoring is conducted in accordance with the Authority to Construct (ATC) permit obtained from Bay Area Air Monitoring District (BAAQMD). As-built drawings of the SVE system are presented in Appendix A.

O&M

The SVE system is operated in accordance with methods and procedures for routine operation, maintenance, and monitoring identified in the O&M Plan. Implementation of the O&M Plan is performed by Environmental Engineering, Consulting, and Remediation, Inc. (E2CR).

Summary of SVE Monitoring

SVE field measurements completed during the RPR reporting period includes:

- Daily SVE system monitoring and maintenance by E2CR, in compliance with conditions of the BAAQMD ATC permit. A summary of SVE operational data is presented in Table 1;

- Weekly field measurements conducted by PES of individual SVE well vacuum[2], flow rates[3], and total VOCs using a photoionization detector (PID)[4]. PID and vacuum measurements at SVE wells are presented in Table 2. Time-concentration plots SVE influent concentration trends will be provided in future RPRs; and

[2] Measured with Dwyer Series 477 digital manometer.
[3] Measured with TSI inc., Velocicalc Model 9535 digital anemometer. Due to the presence of turbulent flow at accessible SVE well monitoring points, accurate measurement of individual well flow rates were not obtained.
[4] Measured with a MiniRAE 2000 PID.

- Vapor samples were collected by PES on December 2, 2016 from the extraction wells, and analyzed for the full list of VOCs using U.S. Environmental Protection Agency (EPA) Test Method TO-15. Laboratory analytical results for detected VOCs are presented in Table 3.

SVE System Observed Vacuum and Flow Rate

During November 16 through December 15, observed operating vacuum ranged from 7.0 to 4.0 inches of mercury. Due to water entering system, the SVE system vacuum was reduced on November 29 to approximately 5 inches of mercury, and was further reduced to 4.75 on November 30.

SVE influent flow rate is estimated utilizing the blower manufacturer curve based on measured vacuum at an influent sample port upstream of the blower. As shown in Table 1, average operating flow rates during the reporting period ranged from 696 to 787 standard cubic feet per minute (scfm).

Vacuum at Vapor Extraction Wells

Table 2 summarizes vacuum observations at each extraction well. In general, observed vacuum pressures from November 2 through December 13, 2016, indicate well-distributed vacuum pressure through the SVE well network (i.e., similar vacuum at each well).

Wells SVE-2, SVE-3, SVE-7, SVE-8, and SVE-14 were shut off on November 30, 2016 based on low concentrations of VOCs detected in baseline samples submitted for laboratory analysis, as well as generally low field measurement readings of total VOCs.

VOC Mass Removal

PID readings of total VOCs in influent vapor collected by E2CR during daily SVE system monitoring ranged from 7.0 to 17.7 parts per million by volume (ppmv). The estimated cumulative pounds of vinyl chloride extracted during this reporting period was 0.29 pounds (mass based on laboratory analytical results using vinyl chloride as the primary COC).

Anticipated Upcoming IRM Field Activities

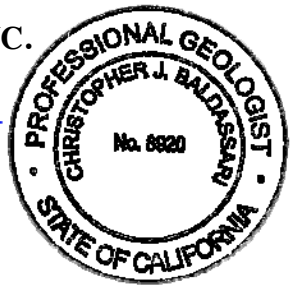
- Continue daily monitoring of SVE system in accordance with BAAQMD requirements[5];
- Conduct weekly field measurements of SVE flow, vacuum, and total VOCs; and
- Conduct second 30-day interval vapor sampling of select SVE wells.

[5] The current ATC permit conditions require daily SVE monitoring. BAAQMD is preparing a Permit to Operate (PTO) which, once issued, is anticipated to reduce required monitoring to a weekly frequency.

If you have any questions, please contact the undersigned at (415) 899-1600.

Very truly yours,

PES ENVIRONMENTAL, INC.



Christopher J. Baldassari, P.G.
Senior Geologist

Kyle S. Flory, P.G.
Principal Geologist

Attachments:

	Table 1	Summary of SVE System Operational Data
	Table 2	Summary of SVE Well Field Measurements
	Table 3	Summary of Laboratory Analytical Results for Vapor Samples
	Appendix A	As-Built Drawings of SVE System

TABLES

Table 1
Summary of SVE System Operational Data
Soil Vapor Extraction System
6701-6707 Shellmound Street
Emeryville, California

Date	System Status on Arrival	Total Operating Hours	System Vacuum Reading (in. of Hg)	Average Flow Rate (scfm)	Well Field Vacuum (in. of Hg)	PID Influent (ppmv)	Lab Influent (mg/m^3)	VC Extracted (grams)	Cumulative lbs VC Extracted
11/8/16	Started	0	6.5	712	NA	7.0	0.25	0.00	0.00
11/9/16	ON	18.7	6.2	721	NA	17.7		14.6	0.03
11/10/16	ON	42.6	5.3	748	NA	13.0		19.4	0.07
11/11/16	ON	63.6	4.89	760	4.89	12.7		17.3	0.11
11/12/16	OFF	63.6	0.0	0	0.0	NA		0.0	0.11
11/13/16	OFF	63.6	0.0	0	0.0	NA		0.0	0.11
11/14/16	ON	65.1	6.0	727	6.00	9.0		1.2	0.12
11/15/16	ON	90.4	6.0	727	0.0	11.3		19.9	0.16
11/16/16	ON	114.4	6.0	727	5.74	9.1		18.9	0.20
11/17/16	ON	137.4	6.0	727	5.73	10.1	0.047	10.8	0.23
11/18/16	ON	161.4	6.0	727	5.67	7.5		3.6	0.23
11/19/16	ON	184.4	5.65	737	5.65	6.4		3.5	0.24
11/20/16	ON	207.4	6.0	727	5.60	6.5		3.4	0.25
11/21/16	ON	231.4	6.0	727	5.25	6.5		3.6	0.26
11/22/16	ON	255.5	6.0	727	5.20	4.3		3.6	0.26
11/23/16	ON	276.8	6.0	727	5.50	2.3	0.0	1.6	0.27
11/24/16	ON	289	6.0	727	NA	1.4		0.0	0.27
11/25/16	ON	318	6.5	712	NA	1.5		0.0	0.27
11/26/16	ON	344	7.0	696	NA	1.1		0.0	0.27
11/27/16	ON	367	7.0	696	NA	1.3		0.0	0.27
11/28/16	ON	390	6.0	727	NA	2.9	0.012	0.0	0.27
11/29/16	ON	415	5.0	757	4.63	0.0		1.8	0.27
11/30/16	ON	437	4.75	765	4.00	0.0		0.8	0.27
12/1/16	ON	459	4.76	764	3.95	1.8		0.8	0.27
12/2/16	ON	484	4.76	764	3.93	0.9		1.0	0.28
12/3/16	OFF	484	0.00	0	0.0	NA		0.0	0.28
12/4/16	OFF	484	0.0	0	0.0	NA		0.0	0.28
12/5/16	ON	485	4.9	762	4.00	0.0		0.0	0.28
12/6/16	ON	507	4.9	760	4.00	0.3		0.8	0.28
12/7/16	ON	532	4.9	760	4.00	0.3		0.9	0.28
12/8/16	ON	553	4.9	762	4.00	0.4		0.8	0.28
12/9/16	ON	577	4.9	761	4.07	0.6		0.9	0.28
12/10/16	OFF	577	0.00	0	0.0	NA		0.0	0.28
12/11/16	OFF	577	0.0	0	0.0	NA		0.0	0.28
12/12/16	ON	578	4.9	761	4.00	0.1		0.0	0.28
12/13/16	ON	598	4.6	770	4.20	0.3		0.8	0.29
12/14/16	ON	627	5	760	4.13	0.00		1.1	0.29
12/15/16	ON	645	5	762	4.10	0.40		0.7	0.29

Notes:

-- = Data not available

NA = Not Applicable or Not Available

in. = inches

VOC = Volatile Organic Compounds

scfm = Standard cubic feet per minute

ppmv = Parts per million by volume

lbs = Pounds

VC = Vinyl Chloride

Mass extracted are estimated on laboratory analytical data.

mg/m^3 = milligrams per cubic meter air

SVE = Soil vapor extraction

Table 2
SVE Well Field Measurements
6701 - 6707 Shellmound Street
Emeryville, California

	Units	11/9/2016	11/15/2016	11/22/2016	12/1/2016	12/5/2016	12/13/2016
SVE-1							
Total VOCs	PPMv	49.3	115.7	102.1	80.2	75.9	3.80
Vacuum	in. H2O	67.6	77.8	69.5	54.5	51.2	53.70
SVE-2							
Total VOCs	PPMv	44.3	36.5	11.1	--	--	--
Vacuum	in. H2O	64.2	72.3	65.1	--	--	--
SVE-3							
Total VOCs	PPMv	12.5	17.9	10.4	--	--	--
Vacuum	in. H2O	65.9	75.3	67.5	--	--	--
SVE-4							
Total VOCs	PPMv	26.8	40.8	31.3	17.6	33.3	15.30
Vacuum	in. H2O	66.4	75.7	68.0	54.7	51.3	53.60
SVE-5							
Total VOCs	PPMv	35.4	79.4	71.6	40.9	91.8	0.30
Vacuum	in. H2O	66.8	76.3	68.4	54.5	48.5	52.90
SVE-6							
Total VOCs	PPMv	126.2	93.3	20.7	4.3	32.6	16.30
Vacuum	in. H2O	65.2	76.9	68.9	54.6	51.1	49.50
SVE-7							
Total VOCs	PPMv	17.1	66.4	11.4	--	--	--
Vacuum	in. H2O	64.9	77.0	69.0	--	--	--
SVE-8							
Total VOCs	PPMv	5.7	40.2	14.4	--	--	--
Vacuum	in. H2O	65.0	77.2	69.1	--	--	--
SVE-9							
Total VOCs	PPMv	1.7	13.1	7.4	4.1	7.7	22.30
Vacuum	in. H2O	67.6	77.8	69.4	54.5	51.1	53.30
SVE-10							
Total VOCs	PPMv	1.7	24.9	6.2	3.9	4.7	8.40
Vacuum	in. H2O	67.7	77.9	69.4	54.4	51.2	53.20
SVE-11							
Total VOCs	PPMv	12.3	31.1	7.6	--	1.9	2.00
Vacuum	in. H2O	67.5	77.7	69.3	54.3	51.1	53.50
SVE-12							
Total VOCs	PPMv	15.2	46.1	5.0	--	2.1	1.70
Vacuum	in. H2O	67.6	77.7	69.3	54.3	50.9	54.00
SVE-13							
Total VOCs	PPMv	4.2	50.2	9.0	--	0.4	0.40
Vacuum	in. H2O	67.8	77.6	69.3	54.1	50.5	53.30
SVE-14							
Total VOCs	PPMv	4.5	1.2	1.3	--	--	--
Vacuum	in. H2O	67.7	77.8	69.5	--	--	--
SVE-15							
Total VOCs	PPMv	2.5	34.2	8.1	--	5.1	3.80
Vacuum	in. H2O	67.6	77.8	69.5	54.4	51.3	53.20
SVE-16							
Total VOCs	PPMv	127.1	121.7	55.3	--	56.7	53.60
Vacuum	in. H2O	67.5	77.8	69.5	54.1	51.2	361.00
SVE-17							
Total VOCs	PPMv	15.2	32.1	8.9	--	5.4	32.50
Vacuum	in. H2O	67.8	77.9	69.4	54.2	51.2	53.30
SVE-18							
Total VOCs	PPMv	8.5	60.3	7.9	--	6.9	0.20
Vacuum	in. H2O	67.7	77.6	69.2	54.2	51.3	53.40
SVE-19							
Total VOCs	PPMv	8.3	83.9	4.7	--	1.9	0.50
Vacuum	in. H2O	67.5	77.6	69.3	54.2	51.3	53.60

Note:
SVE = Soil vapor extraction
PID = Photoionization Detector
-- = Not measured
PPMv = parts per million by volume
in. H2O = inches of water

Table 3
Summary of Laboratory Analytical Results for Vapor Samples
Soil Vapor Extraction System
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Date	Sample Depth (feet bgs)	PCE (µg/m³)	TCE (µg/m³)	cis-1,2-DCE (µg/m³)	trans-1,2-DCE (µg/m³)	Vinyl chloride (µg/m³)	1,1,1-TCA (µg/m³)	1,1,2,2-PCA (µg/m³)	MEK (µg/m³)	MIBK (µg/m³)	Acetone (µg/m³)	Benzene (µg/m³)	Toluene (µg/m³)	Ethylbenzene (µg/m³)	m,p-Xylene (µg/m³)	o-Xylene (µg/m³)	1,2,4-TMB (µg/m³)	1,3,5-TMB (µg/m³)	1,3-DCB (µg/m³)	4-Ethyltoluene (µg/m³)	Carbon disulfide (µg/m³)	Chloroform (µg/m³)	Other VOCs (µg/m³)
SVE Wells																									
SVE-1	SVE-1	7/13/2016	5 to 10	< 140	< 180	< 110	< 110	**3,400**	< 110	< 180	< 160	< 110	< 790	< 85	< 100	< 120	< 230	< 120	< 260	< 130	< 160	< 130	< 170	< 98	
SVE-1	SVE-1	7/14/2016	5 to 10	< 1600	< 2000	**3,500**	**1,900**	**40,000**	< 1200	< 2000	< 1700	< 1200	< 8600	< 930	< 1100	< 1300	< 2500	< 1300	< 2900	< 1400	< 1800	< 1400	< 1800	< 1100	
SVE-1	SVE-1-103116	10/31/2016	5 to 10	**120**	< 180	**670**	**270**	**16,000**	< 74	< 120	**10,000**	< 75	**7,700**	**130**	**66**	< 79	< 160	< 79	< 180	< 89	< 110	< 89	< 110	< 67	150 (1,1-DCE)
SVE-1	SVE-1	12/2/2016	5 to 10	**150**	< 180	**7,900**	**3,400**	**6,200**	< 110	< 180	< 150	< 110	< 770	**240**	< 98	< 110	< 230	**190**	< 260	**190**	< 160	< 130	**270**	< 95	
SVE-2	SVE-2-103116	10/31/2016	5 to 10	< 26	< 33	< 19	< 19	**20**	< 20	< 34	**2,400**	< 20	**1,700**	**41**	< 18	< 21	< 42	< 21	< 48	< 24	< 29	< 24	< 30	< 18	
SVE-3	SVE-3-103116	10/31/2016	4 to 9	< 16	< 21	**14**	< 12	**40**	< 13	< 21	**280**	< 13	**190**	**290**	**240**	**92**	**770**	**130**	**110**	**53**	< 18	**27**	**190**	< 11	
SVE-3	SVE-3	12/2/2016	4 to 9	< 5.2	< 6.6	**12**	< 3.9	< 2.5	< 4	< 6.7	**7.0**	< 4	< 29	**21**	**11**	**10**	**110**	**18**	**20**	**10**	< 5.8	< 4.8	**240**	< 3.6	19 (Naphthalene)
SVE-4	SVE-4-103116	10/31/2016	5 to 10	**18**	< 12	**51**	**12**	**170**	< 7.1	< 12	**290**	< 7.1	**360**	**67**	**12**	**8.3**	**27**	**10**	< 17	< 8.5	< 10	< 8.5	**240**	< 6.3	21 (1,2-DCB)
SVE-5	SVE-5-103116	10/31/2016	5 to 10	**69**	< 12	**160**	**23**	**230**	< 7.3	< 12	**320**	< 7.3	**150**	**170**	**33**	**19**	**110**	**23**	**23**	**15**	**24**	< 8.8	< 11	< 6.6	31 (1,4-DCB)
SVE-5	SVE-5	12/2/2016	5 to 10	**18**	< 2.7	**62**	**7.0**	**22**	< 1.6	< 2.7	< 2.4	< 1.6	< 12	**93**	**17**	**21**	**76**	**32**	< 3.9	**2.4**	**15**	< 2	**79**	< 1.5	4.2 (1,1-DCE), 23 (1,4-DCB), 2.3
SVE-6	SVE-6-103116	10/31/2016	5 to 10	< 29	< 36	< 21	< 21	< 14	< 22	< 37	**1,400**	< 22	**600**	**150**	< 20	**27**	**88**	**52**	< 53	< 26	< 32	< 26	< 33	< 20	
SVE-7	SVE-7-103116	10/31/2016	5 to 10	< 7.5	< 9.5	< 5.6	< 5.6	**40**	< 5.7	< 9.6	**140**	< 5.8	**58**	< 4.5	< 5.3	< 6.1	< 12	< 6.1	< 14	< 6.9	< 8.4	< 6.9	< 8.7	< 5.1	
SVE-7	SVE-7	12/2/2016	5 to 10	< 2.1	**6.3**	< 1.6	< 1.6	< 1	< 1.6	< 2.7	< 2.4	< 1.6	< 12	< 1.3	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2.4	< 2	< 2.5	< 1.5	2 (Dichlorodifluoromethane), 1.7
SVE-8	SVE-8-103116	10/31/2016	5 to 10	< 2.1	< 2.7	< 1.6	< 1.6	< 1	< 1.6	< 2.7	**26**	**3.0**	**34**	< 1.3	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2.4	< 2	**17**	< 1.5	
SVE-9	SVE-9-103116	10/31/2016	5 to 10	< 22	< 28	**38**	< 16	**340**	< 17	< 28	**390**	< 17	**240**	**160**	**68**	**19**	**120**	**32**	< 40	**25**	< 25	< 20	**26**	< 15	
SVE-10	SVE-10-103116	10/31/2016	5 to 10	< 150	< 180	< 110	< 110	**3,900**	< 110	< 190	< 160	< 110	< 800	**200**	< 100	< 120	< 240	< 120	< 270	< 130	< 160	< 130	< 170	< 99	
SVE-10	SVE-10	12/2/2016	5 to 10	< 15	< 19	**110**	**36**	**320**	< 12	< 20	< 17	< 12	< 85	**78**	**17**	< 12	**31**	< 12	< 28	< 14	< 17	< 14	**630**	< 11	
SVE-11	SVE-11-103116	10/31/2016	5 to 10	< 95	< 120	**180**	< 70	< 45	< 73	< 120	**2,300**	< 73	**3,300**	**130**	< 67	< 77	< 150	< 77	< 170	< 87	< 110	< 87	< 110	< 65	
SVE-12	SVE-12-103116	10/31/2016	5 to 10	< 1300	< 1600	**18,000**	**27,000**	**62,000**	< 970	< 1600	< 1400	< 970	< 7000	< 760	< 890	< 1000	< 2100	< 1000	< 2300	< 1200	< 1400	< 1200	< 1500	< 870	2900 (1,1-DCE)
SVE-12	SVE-12	12/2/2016	5 to 10	**2.2**	< 2.7	**32**	**10**	**52**	< 1.6	< 2.7	< 2.4	< 1.6	< 12	**5.0**	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2.4	< 2	**53**	< 1.5	2 (Dichlorodifluoromethane)
SVE-13	SVE-13-103116	10/31/2016	5 to 10	< 54	< 68	**160**	< 40	**1,600**	< 41	< 69	**660**	< 41	**330**	**42**	< 38	< 44	< 88	< 44	< 99	< 50	< 61	< 50	< 63	< 37	
SVE-13	SVE-13	12/2/2016	5 to 10	< 2.1	< 2.7	**1.8**	< 1.6	< 1	< 1.6	< 2.7	**3.3**	< 1.6	< 12	< 1.3	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2.4	< 2	< 2.5	< 1.5	
SVE-14	SVE-14-103116	10/31/2016	5 to 10	< 20	< 25	**49**	< 15	**24**	< 15	< 25	**790**	< 15	**330**	**21**	< 14	< 16	< 32	< 16	< 36	< 18	< 22	< 18	< 23	< 14	
SVE-15	SVE-15-103116	10/31/2016	5 to 10	< 360	< 460	< 270	< 270	**11,000**	< 280	< 460	**1,100**	< 280	< 2000	< 210	< 250	< 290	< 580	< 290	< 660	< 330	< 400	< 330	< 420	< 250	
SVE-15	SVE-15	12/2/2016	5 to 10	< 52	< 66	< 38	< 38	< 25	< 40	< 66	**94**	< 40	< 290	< 31	< 36	< 42	< 84	< 42	< 95	< 48	< 58	< 48	< 60	< 35	
SVE-16	SVE-16-103116	10/31/2016	5 to 10	< 7400	< 9400	**130,000**	**45,000**	**410,000**	< 5700	< 9500	< 8200	< 5700	< 41000	< 4400	< 5200	< 6000	< 12000	< 6000	< 14000	< 6800	< 8300	< 6800	< 8600	< 5100	
SVE-16	SVE-16	12/2/2016	5 to 10	< 890	< 1100	**71,000**	**19,000**	**30,000**	< 680	< 1100	< 980	< 680	< 4900	< 530	< 620	< 720	< 1400	< 720	< 1600	< 810	< 1000	< 810	< 1000	< 610	
SVE-17	SVE-17-103116	10/31/2016	5 to 10	< 500	< 630	**1,300**	**2,200**	**14,000**	< 380	< 640	**680**	< 380	< 2800	< 300	< 350	< 410	< 810	< 410	< 920	**950**	< 560	< 460	< 580	< 340	
SVE-17	SVE-17	12/2/2016	5 to 10	< 2.1	< 2.7	< 1.6	**1.7**	**52**	< 1.6	< 2.7	**3.7**	< 1.6	**15**	< 1.3	< 1.5	< 1.7	< 3.5	< 1.7	< 3.9	< 2	< 2.4	< 2	**3.4**	< 1.5	1.4 (Methylene chloride)
SVE-18	SVE-18-103116	10/31/2016	5 to 10	< 680	< 860	< 500	< 500	**52,000**	< 520	< 870	< 750	< 520	< 3800	**880**	< 480	< 550	< 1100	< 550	< 1200	< 620	< 760	< 620	< 790	< 460	
SVE-18	SVE-18	12/2/2016	5 to 10	< 7.4	< 9.4	**6.4**	**10**	**710**	< 5.6	< 9.5	< 8.1	< 5.7	< 41	**8.3**	< 5.2	< 6	< 12	< 6	< 14	< 6.8	< 8.3	< 6.8	< 8.6	< 5.1	
SVE-19	SVE-19-103116	10/31/2016	5 to 10	< 99	< 130	< 73	< 73	< 47	< 76	< 130	**4,200**	< 76	**1,400**	< 59	< 70	< 80	< 160	< 80	< 180	< 91	< 110	< 91	< 120	< 68	

Table 3
Summary of Laboratory Analytical Results for Vapor Samples
Soil Vapor Extraction System
6701, 6705, and 6707 Shellmound Street, Emeryville, California

Sample Location	Sample ID	Date	Sample Depth (feet bgs)	PCE ($\mu g/m^3$)	TCE ($\mu g/m^3$)	cis-1,2-DCE ($\mu g/m^3$)	trans-1,2-DCE ($\mu g/m^3$)	Vinyl chloride ($\mu g/m^3$)	1,1,1-TCA ($\mu g/m^3$)	1,1,2,2-PCA ($\mu g/m^3$)	MEK ($\mu g/m^3$)	MIBK ($\mu g/m^3$)	Acetone ($\mu g/m^3$)	Benzene ($\mu g/m^3$)	Toluene ($\mu g/m^3$)	Ethylbenzene ($\mu g/m^3$)	m,p-Xylene ($\mu g/m^3$)	o-Xylene ($\mu g/m^3$)	1,2,4-TMB ($\mu g/m^3$)	1,3,5-TMB ($\mu g/m^3$)	1,3-DCB ($\mu g/m^3$)	4-Ethyltoluene ($\mu g/m^3$)	Carbon disulfide ($\mu g/m^3$)	Chloroform ($\mu g/m^3$)	Other VOCs ($\mu g/m^3$)
Soil Vapor Monitoring Probes																									
SVP-1-7.5	SVP-1-7.5	7/12/2016	7.5	< 250	< 250	**250**	< 180	**13,000**	< 190	< 310	< 270	< 190	< 1400	**250**	< 170	< 200	< 400	< 200	< 450	< 220	< 270	< 220	< 280	< 170	
SVP-2-3.5	SVP-2-3.5	7/12/2016	3.5	< 17	< 17	< 12	< 12	**920**	< 13	< 21	< 18	< 13	< 92	**28**	**31**	**14**	**55**	**23**	< 31	< 15	< 19	< 15	**83**	**78**	
SVP-2-7.5	SVP-2-7.5	7/12/2016	7.5	< 1300	< 1300	< 990	< 990	**75,000**	< 1000	< 1700	< 1500	< 1000	< 7400	< 800	< 950	< 1100	< 2200	< 1100	< 2500	< 1200	< 1500	< 1200	< 1600	< 920	
SVP-3-7.5	SVP-3-7.5	7/12/2016	7.5	< 38	< 38	< 28	< 28	**2,400**	< 29	< 49	**57**	< 29	**260**	**310**	**170**	< 31	< 61	< 31	< 70	< 35	< 43	< 35	**130**	< 26	
SVP-4-3.5	SVP-4-3.5	7/12/2016	3.5	**6.9**	**6.9**	< 1.6	< 1.6	< 1	**9.5**	**4.8**	**19**	**11**	**44**	**19**	**18**	**23**	**120**	**54**	**17**	**8.7**	< 2.4	**3.9**	**3.1**	**57**	2.0 (BDCM), 2.4 (Freon 12), 1.5
SVP-4-7.5	SVP-4-7.5	7/12/2016	7.5	**19**	**19**	**57**	**9.1**	**180**	< 4.5	< 7.6	**23**	< 4.5	**84**	**230**	**59**	**21**	**210**	**24**	**20**	**10**	**59**	< 5.4	**20**	< 4.1	72 (1,4-DCB), 23 (NAPH)
SVP-5-7.5	SVP-5-7.5	7/12/2016	7.5	< 510	< 510	< 370	< 370	**22,000**	< 390	< 650	< 560	< 390	< 2800	**490**	< 360	< 410	< 820	< 410	< 930	< 460	< 570	< 460	< 590	< 350	
SVP-6-3.5	SVP-6-3.5	7/12/2016	3.5	< 1700	< 1700	**14,000**	**6,100**	**100,000**	< 1300	< 2200	< 1900	< 1300	< 9600	< 1000	< 1200	< 1400	< 2800	< 1400	< 3200	< 1600	< 2000	< 1600	< 2000	< 1200	
SVP-6-7.5	SVP-6-7.5	7/12/2016	7.5	< 1800	< 1800	**16,000**	**6,300**	**98,000**	< 1400	< 2300	< 2000	< 1400	< 10000	< 1100	< 1300	< 1500	< 3000	< 1500	< 3400	< 1700	< 2000	< 1700	< 2100	< 1200	
Residential Land Use ESL [1]				*240*	*240*	*4,200*	*31,000*	*4.7*	*520,000*	*24*	*2,600,000*	*1,600,000*	*16,000,000*	*48*	*160,000*	*560*	*52,000*	*52,000*	*NE*	*NE*	*NE*	*NE*	*61*	*NE*	*Varies*
Commercial/Industrial Land Use ESL [2]				*3,000*	*3,000*	*35,000*	*260,000*	*160*	*4,400,000*	*210*	*22,000,000*	*13,000,000*	*140,000,000*	*420*	*1,300,000*	*4,900*	*440,000*	*440,000*	*NE*	*NE*	*NE*	*NE*	*530*	*NE*	*Varies*

Notes:

Detections are shown in bold. Results equal to or exceeding commercial/industrial ESLs are shaded.

Only detected analytes are summarized on table. Refer to Appendix D for laboratory report to access entire list of compounds analyzed.

SVE = Soil vapor extraction

BDCM = Bromodichloromethane

DCB = Dichlorobenzene

DCE = Dichloroethene.

Freon 11 = Trichlorofluoromethane

Freon 12 = Dichlorodifluoromethane

MC = Methylene Chloride

MEK = Methyl Ethyl Ketone

MIBK = Methyl Isobutyl Ketone

NAPH = Naphthalene

PCA = Tetrachloroethane

TCA = Trichloroethane.

TCE = Trichloroethene.

TMB = Trimethylbenzene.

VOCs = Volatile organic compounds.

bgs = Below ground surface.

$\mu g/m^3$ = Micrograms per cubic meter.

< 2.9 = Not detected at or above the indicated laboratory method reporting limit.

NE = Not established.

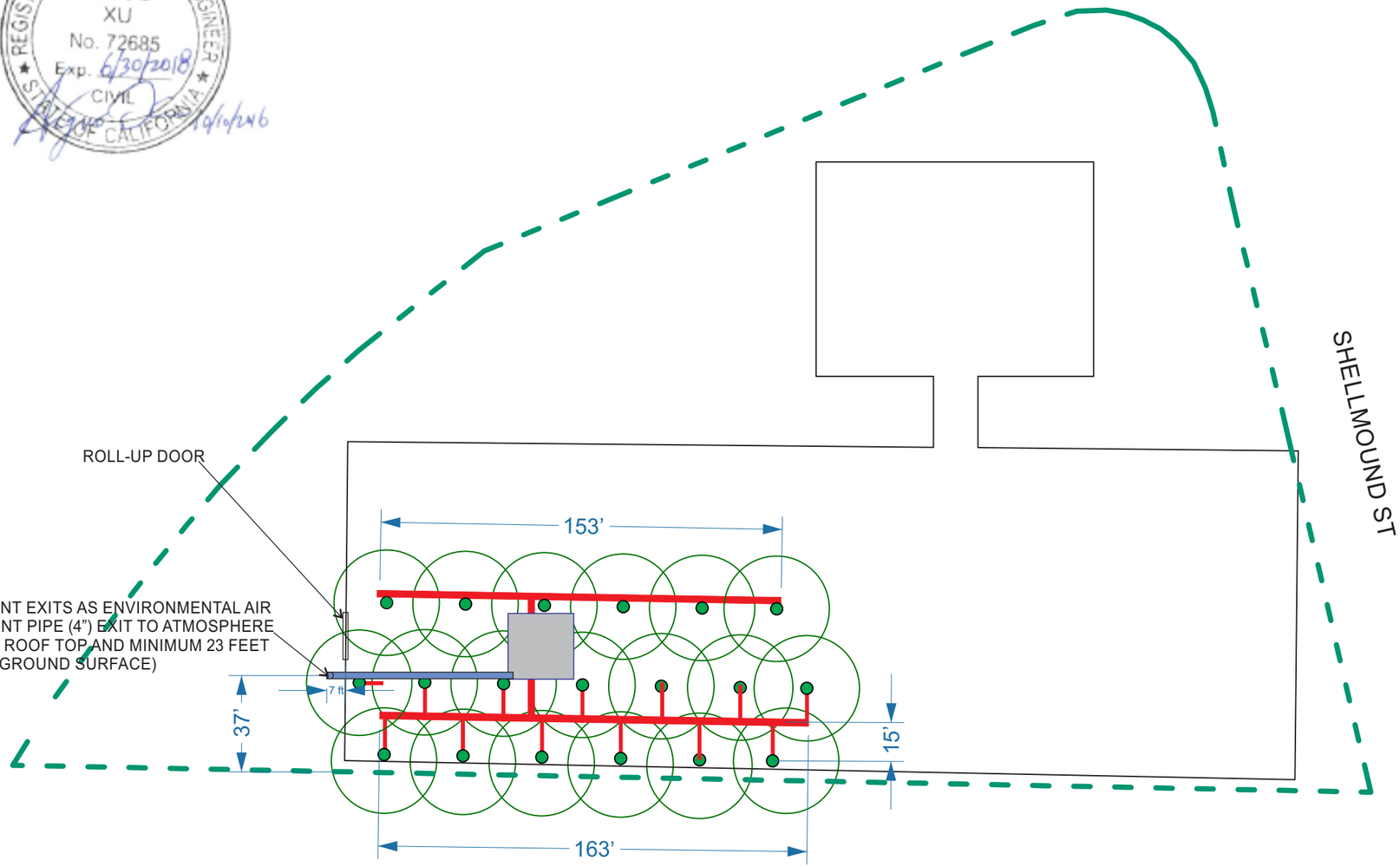
-- = Not applicable/not analyzed.

1. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table SG-1 Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels. Residential.
2. February 2016 Regional Water Quality Control Board, San Francisco Bay Region (RWQCB) Environmental Screening Levels (ESLs), Table SG-1 Subslab/Soil Gas Vapor Intrusion: Human Health Risk Levels. Commercial/Industrial.

APPENDIX A

AS-BUILT DRAWINGS OF SVE SYSTEM

REGISTERED PROFESSIONAL ENGINEER
AIGUO XU
No. 72685
Exp. 6/30/2018
CIVIL
STATE OF CALIFORNIA
10/10/2016



Legend

- Soil Vapor Extraction Equipment Compound
- Vapor Extraction Pipe
- Approximate Property Boundary
- Building Outline
- SVE Well Location

N

0 50 FT
APPROX SCALE

NOTE: SOIL VAPOR EXTRACTION WELLS WITH RADII OF INFLUENCE OVER PROPERTY LINE ONLY EXTRACT SHALLOW SOIL VAPOR AND THEY DO NOT HAVE ANY EFFECTS ON ADJACENT BUILDING'S FOUNDATION.

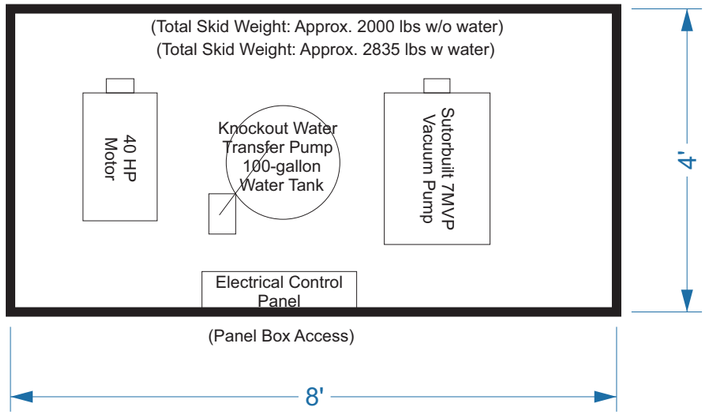
E2C REMEDIATION
Environmental Engineering, Consulting & Remediation, Inc.
1020 Winding Creek Rd., #110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

MIKE ROBERTS COLOR PRODUCTION
6701 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA

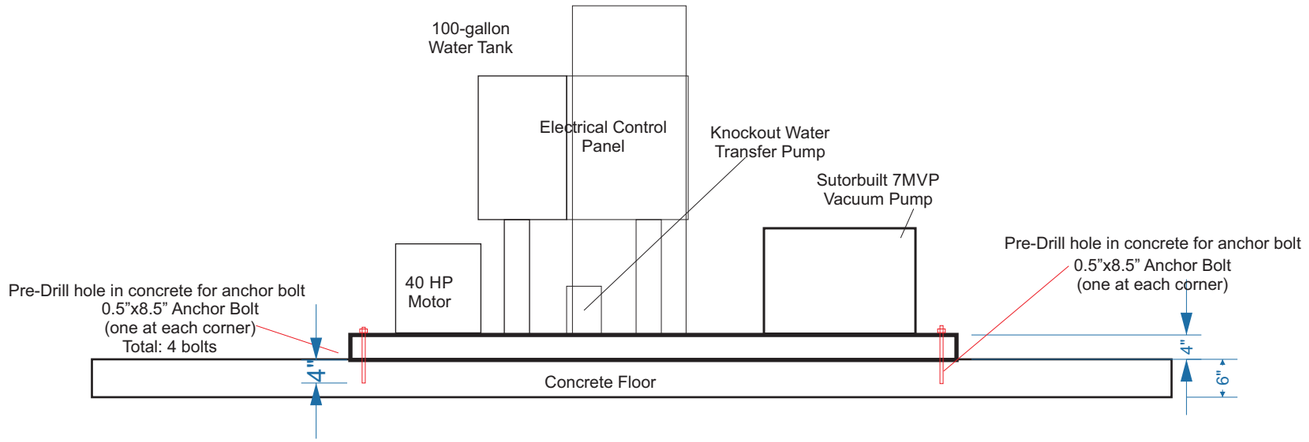
SITE PLAN

FIGURE

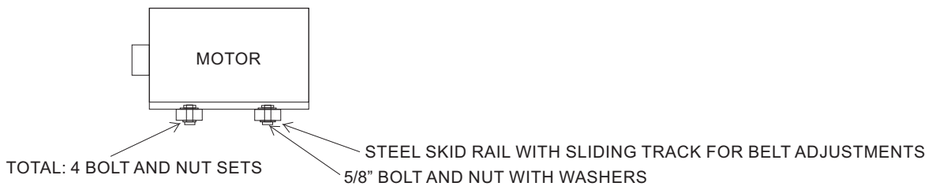
3



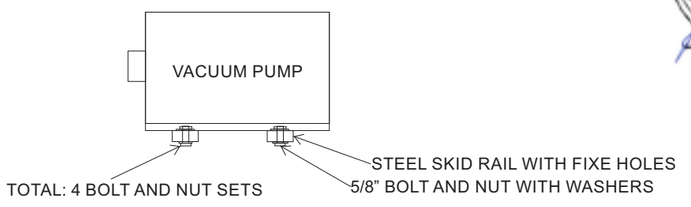
SOIL VAPOR EXTRACTION EQUIPMENT SKID LAYOUT



SKID ANCHORING CONSTRUCTION DETAILS



MOTOR MOUNTING DETAILS



VACUUM PUMP MOUNTING DETAILS

Environmental Engineering, Consulting & Remediation, Inc.
1020 Winding Creek Rd., #110, Roseville, CA 95678
Phone: (916) 782-8700 Fax: (916) 782-8750

MIKE ROBERTS COLOR PRODUCTION
6701 SHELLMOUND STREET
EMERYVILLE, CALIFORNIA

EQUIPMENT SKID LAYOUT AND EQUIPMENT MOUNTING AND ANCHORING DETAILS

FIGURE

4