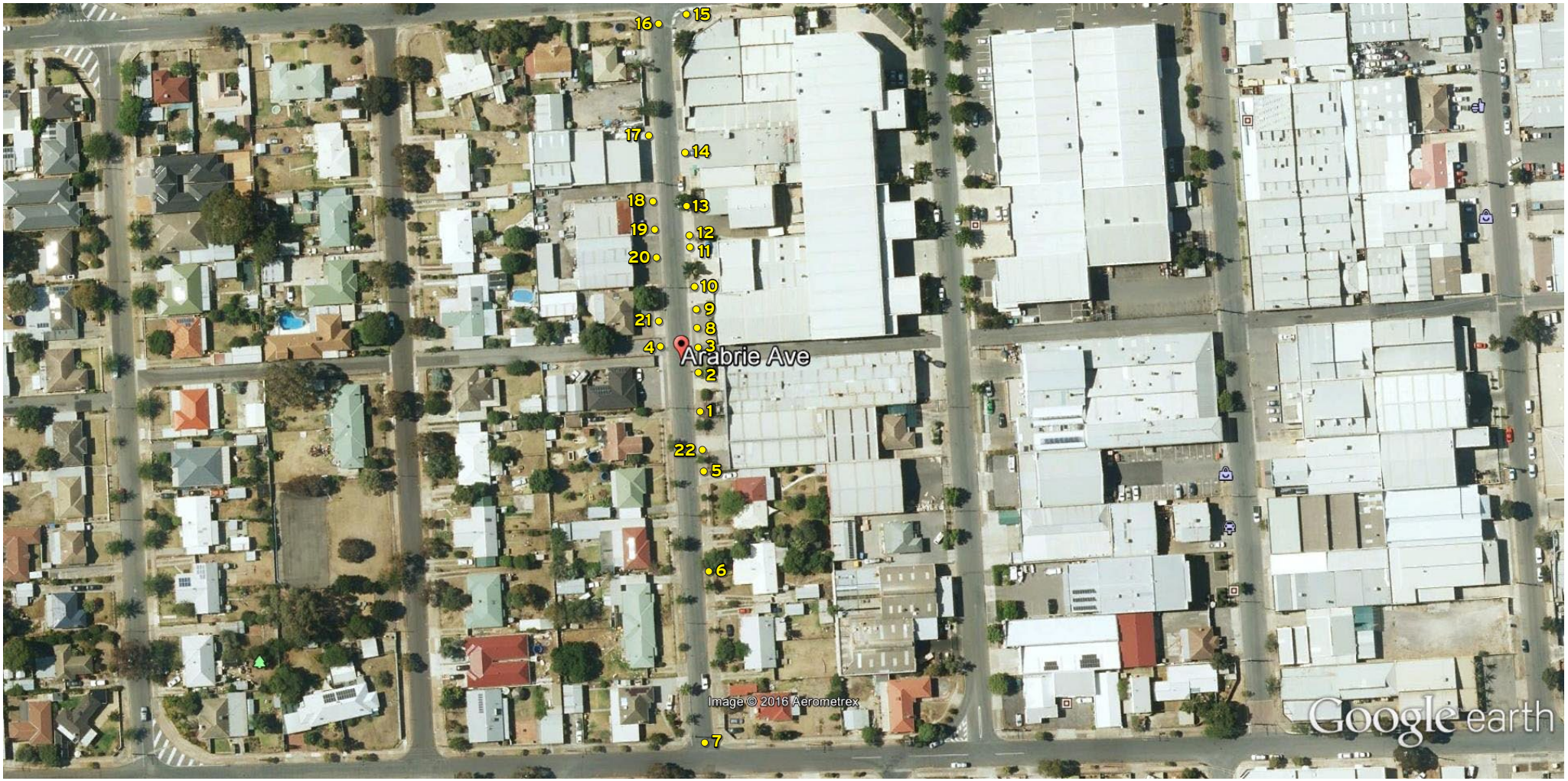
APPENDIX J

UTILITY ACCESS POINT SURVEY PLAN AND RESULTS

Service Pit Locations - Arabrie Avenue South Eastern Edwardstown (17 December 2015)



ARABRIE AVE UTILITY PIT VAPOUR TESTING

Location	Type	PID Reading (ppm)
1	Telstra	0.0
2	Stormwater	0.0
3	Stormwater	0.0
4	Stormwater	0.0
5	Telstra	0.0
6	Telstra	0.0
7	E&WS	0.9
8	SA Gas	0.0
9	Telstra	0.0
10	Stormwater	0.0
11	Water meter	0.0
12	Telstra	0.2
13	Telstra	0.0
14	SA Gas	0.0
15	Stormwater	0.0
16	Water mains	0.0
17	Telstra	0.0
18	Water meter	0.0
19	Water meter	0.0
20	SA Gas	0.0
21	Stormwater	0.0
22	Stormwater	0.0

Date: 17 Dec 2015

APPENDIX K

TIER 1 ASSESSMENT –
FS1 AND FS2: SOIL VAPOUR

Tier 1 Screening Assessment of Vapour Intrusion Risks Based on Soil Vapour in FS1 and FS2

Property	Location	Sampling Method	Sample Date	Sample Depth (m)	Reference	Contaminants of Concern	
						PCE	TCE
						µg/m³	µg/m³
		Interim Soil Vapour HIL[1] (Commercial/Industrial) α=0.1				8,000	80
		Modified Soil Vapour HIL[2] α=0.03				27,000	2,700
FS1	VP10 Sub	Summa canister	17-Dec-15	0.1	FYFE (2016)	<270	270,000
	VP10 Sub	Thermal desorption tube	17-Dec-15	0.1	Fyfe (2016)	60	340,000
	VP10 Sub	Summa canister	18-May-15	sub-slab	Greencap (2015)	<24	110,000
	VP10-1.0m	Summa canister	17-Dec-15	1	Fyfe (2016)	<590	700,000
	VP10-1.0m	Thermal desorption tube	17-Dec-15	1	Fyfe (2016)	39	84,000
	VP10-1.0m	Summa canister	18-May-15	1	Greencap (2015)	<430	300,000
	VP10-1.7m	Summa canister	17-Dec-15	1.7	Fyfe (2016)	<540	420,000
	VP10-1.7m	Thermal desorption tube	17-Dec-15	1.7	Fyfe (2016)	89	240,000
FS2	VP11 Sub	Summa canister	17-Dec-15	0.1	Fyfe (2016)	1,100,000	5,700,000
	VP11 Sub	Thermal desorption tube	17-Dec-15	0.1	Fyfe (2016)	480,000	5,000,000
	VP11 Sub	Summa canister	22-May-15	sub-slab	Greencap (2015)	170,000	2,000,000
	VP11-1.0m	Summa canister	17-Dec-15	1	Fyfe (2016)	1,100,000	5,700,000
	VP11-1.0m	Thermal desorption tube	17-Dec-15	1	Fyfe (2016)	75,000	650,000
	VP11-1.0m	Summa canister	22-May-15	1	Greencap (2015)	270,000	3,100,000
	VP11-1.7m	Summa canister	17-Dec-15	1.7	Fyfe (2016)	1,400,000	6,900,000
	VP11-1.7m	Thermal desorption tube	17-Dec-15	1.7	Fyfe (2016)	5,800,000	31,000,000
	VP12 Sub	Summa canister	17-Dec-15	0.1	Fyfe (2016)	30,000	260,000
	VP12 Sub	Summa canister	22-May-15	sub-slab	Greencap (2015)	15,000	130,000
	VP12-1.0m	Summa canister	17-Dec-15	1	Fyfe (2016)	26,000	310,000
	VP12-1.0m	Thermal desorption tube	17-Dec-15	1	Fyfe (2016)	33,000	380,000
	VP12-1.0m	Summa canister	22-May-15	1	Greencap (2015)	9,200	240,000
	VP12-1.7m	Summa canister	17-Dec-15	1.7	Fyfe (2016)	32,000	620,000

Notes:

1 Based on indoor air criteria adopted for derivation of interim soil vapour Health Investigation Level (HIL).

2 Based on applying a crawl space to indoor air attenuation factor of 0.4 to the indoor air criteria.

80	Concentration that exceeded the interim soil vapour HIL
80	Concentration that exceeded the modified HIL

APPENDIX L

TIER 1 ASSESSMENT –
FS1 AND FS2: INDOOR AIR

Tier 1 Screening Assessment of Vapour Intrusion Risks Based on Indoor Air in FS1 and FS2

Property	Sample ID	Type	Location	Target	Date Installed	Date Collected	PCE	TCE
							µg/m^3	µg/m^3
					Tier 1 Assessment Criteria[1]		800	8
FS1	IA16	Summa canister	Front office	Indoor air	17-Dec-15	18-Dec-15	<6	<2
	IA17	Summa canister	Office #1	Indoor air	17-Dec-15	18-Dec-15	<5.9	<2
	IA18	Summa canister	Working area (Central)	Indoor air	17-Dec-15	18-Dec-15	<4.9	<2
	IA19	Summa canister	Working area (SW)	Indoor air	17-Dec-15	18-Dec-15	<6.7	<2
	IA5	Radiello	Front office	Indoor air	11-Dec-15	18-Dec-15	**0.1**	**0.19**
	IA6	Radiello	Office #1	Indoor air	11-Dec-15	18-Dec-15	**0.09**	**0.11**
	IA7	Radiello	Working area (Central)	Indoor air	11-Dec-15	18-Dec-15	**0.09**	**0.14**
	IA8	Radiello	Working area (SW)	Indoor air	11-Dec-15	18-Dec-15	**0.08**	**0.16**
FS2	IA12	Summa canister	Front office	Indoor air	17-Dec-15	18-Dec-15	<7	**5.5**
	IA13	Summa canister	Office #3	Indoor air	17-Dec-15	18-Dec-15	<4.6	**6**
	IA14	Summa canister	Showroom	Indoor air	17-Dec-15	18-Dec-15	<6.1	**6.5**
	IA15	Summa canister	Warehouse	Indoor air	17-Dec-15	18-Dec-15	**21**	**66**
	IA1	Radiello	Front office	Indoor air	11-Dec-15	18-Dec-15	<0.02	<0.02
	IA2	Radiello	Office #3	Indoor air	11-Dec-15	18-Dec-15	**1.1**	**4**
	IA3	Radiello	Showroom	Indoor air	11-Dec-15	18-Dec-15	**1**	**3.5**
	IA4	Radiello	Warehouse	Indoor air	11-Dec-15	18-Dec-15	**18**	**36**
Outdoor	OA 1	Radiello	Back yard	Outdoor air	16-Dec-15	23-Dec-15	**0.07**	**0.03**
	OA 2	Radiello	Rear of park	Outdoor air	17-Dec-15	23-Dec-15	<0.20	<0.17
	OA 3	Radiello	Fence of rail reserve	Outdoor air	17-Dec-15	23-Dec-15	<0.20	<0.17

Notes:

1. Based on commercial/industrial indoor air criteria adopted for the derivation of interim soil vapour Health Investigation Levels (HILs).

Detectable concentrations in bold font; concentrations exceeding the Tier 1 Assessment Criteria are highlighted in **red**.

APPENDIX M

TIER 1 ASSESSMENT – RESIDENTIAL AREA: SOIL VAPOUR

Tier 1 Screening Assessment of Vapour Intrusion Risks Based on Soil Vapour in Residential Zone

Property	Location	Sampling Method	Reference	Soil Vapour Concentration							COPC and Conc Adopted for Tier 2 Assessment	
				PCE	TCE	1,1 DCE	cis 1,2 DCE	trans 1,2 DCE	Total DCE	VC	Location	TCE
				µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³	µg/m³		µg/m³
		NEPM[1] (Residential) α=0.1		2,000	20		80		80	30		
		Modified NEPM[2] α=0.03		6,600	65		260		260	100		
Road Verges	VP01	Summa canister	Fyfe (2016)	22	180	<3.1	30	<3.1	30	<2.1	VP01	680
		Summa canister	Greencap (2015)	29	260		40	<2		<1.3		
		TDT (1 min)	Greencap (2015)	120	680		<55	<55		<55		
		TDT (5 min)	Greencap (2015)	30	330		39	<11		<11		
	VP02	Summa canister	Fyfe (2016)	310	200	<2.9	6.5	<2.9	6.5	<1.9	VP02	200
		Summa canister	Greencap (2015)	98	73		<2	<2		<1.3		
		TDT	Greencap (2015)	230	200		<10	<10		<10		
	VP03	Summa canister	Fyfe (2016)	260	1,100	<3.2	<4.3	<3.2	0	<2.1	VP03	1,100
	VP04	Summa canister	Fyfe (2016)	110	450	<2.8	5.2	6	11.2	<1.9	VP04	450
		Summa canister	Greencap (2015)	11	19		<2	<2		<1.3		
		TDT	Greencap (2015)	20	<10		<10	<10		<10		
	VP05	Summa canister	Fyfe (2016)	33	59	<9	<12	<9	0	<6	VP05	1,900
		Summa canister	Greencap (2015)	260	1,900		3.1	<2		<1.3		
		TDT	Greencap (2015)	140	112		<10	<10		<10		
	VP06	Summa canister	Fyfe (2016)	570	230	<2.9	9.3	43	52.3	<1.9	VP06	410
		Summa canister	Greencap (2015)		210		5.37	16		<1.3		
		TDT	Greencap (2015)		410		<10	<10		<10		
	VP07	Summa canister	Fyfe (2016)	35	43	<3	9.8	<3	9.8	<2	VP07	70
		Summa canister	Greencap (2015)	17	70		7.7	<2		<1.3		
		TDT	Greencap (2015)	<100	<100	<100	<100	<100	<100	<100		
	VP08	Summa canister	Fyfe (2016)	610	640	<3.2	<4.3	<3.2	<4.3	<2.2	VP08	640
		Summa canister	Greencap (2015)	220	390		<2	<2.3		<1.3		
		Duplicate	Greencap (2015)	<340	518		<20	<200		<5.1		
	VP09	Canister	Fyfe (2016)	180	1,200	<3	140	11	151	<2	VP09	2,400
		Canister	Greencap (2015)	95	2,400		160	8.7		<1.3		
		Duplicate	Greencap (2015)	52	1,900		120	6.8		<1.3		
	VP13	Canister	Fyfe (2016)	48	230	<2.9	7.2	<2.9	7.2	<1.9	VP13	230
	VP14	Canister	Fyfe (2016)	23	<2	<3.3	<4.4	<3.3	0	<2.2	VP14	<2
	VP15	Canister	Fyfe (2016)	<5	5	<3	<4	<3	0	<2	VP15	5
	VP16	Canister	Fyfe (2016)	<4.8	<2	<2.9	<3.8	<2.9	0	<1.9	VP16	<2
	VP17	Canister	Fyfe (2016)	400	510	<2.9	<3.9	<2.9	0	<1.9	VP17	510
	VP18	Canister	Fyfe (2016)	4,700	9,800	1,300	140	63	1,503	<11	VP18	9,800
	VP19	Canister	Fyfe (2016)	26	2.1	<3.1	<4.1	<3.1	0	<2.1	VP19	2.1
	VP20	Canister	Fyfe (2016)	250	4	<2.9	<3.9	<2.9	0	<2	VP20	4
	VP21	Canister	Fyfe (2016)	50	3.3	<3.3	<4.4	<3.3	0	<2.2	VP21	3.3
	VP22	Canister	Fyfe (2016)	42	33	<3	<4.1	<3	0	<2	VP22	33
	VP23	Canister	Fyfe (2016)	38	12	<2.8	<3.7	<2.8	0	<1.9	VP23	12
	VP24	Canister	Fyfe (2016)	65	61	<3	<4	<3	0	<2	VP24	61
	VP25	Canister	Fyfe (2016)	40	590	<8.4	<11	<8.4	0	<5.6	VP25	590
	VP25	TDT	Fyfe (2016)	<25	<25	<25	<25	<25	0	<25	VP25 *	<25
	VP26	Canister	Fyfe (2016)	<5.5	6.5	<3.3	<4.4	<3.3	0	<2.2	VP26	6.5
	VP27	Canister	Fyfe (2016)	<5.4	9.8	3.3	<4.3	<3.2	3.3	<2.2	VP27	9.8
	VP28	Canister	Fyfe (2016)	180	1,100	<3.5	60	9.3	69.3	<2.3	VP28	1,100
	VP29	Canister	Fyfe (2016)	2,500	5,700	350	92	46	488	<4.1	VP29	5,700
	VP30	Canister	Fyfe (2016)	870	2,700	260	57	280	597	<3.9	VP30	2,700
	VP31	Canister	Fyfe (2016)	260	380	<3.1	<4.1	<3.1	0	<2	VP31	380
	VP32	Canister	Fyfe (2016)	590	1,100	45	28	22	95	<1.9	VP32	1,100
1	H1 VP1	Summa canister	Fyfe (2016)	<5.9	2.6	<3.2	<4.3	<3.2	<4.3	<2.2	H1 VP1	2.6
	H1 VP2	Summa canister	Fyfe (2016)	<13	<2	<6.8	<9.1	<6.8	<9.1	<4.6	H1 VP2	<2
2	H6 VP1	Summa canister	Fyfe (2016)	<5.7	2	<3.1	<4.1	<3.1	<4.1	<2.1	H6 VP1	2
	H6 VP2	Summa canister	Fyfe (2016)	<5.6	<2	<3.1	<4.1	<3.1	<4.1	<2	H6 VP2	<2
3	H3 VP1	Summa canister	Fyfe (2016)	<5.4	<2	<2.9	<3.9	<2.9	<3.9	<2	H3 VP1	<2
	H3 VP2	Summa canister	Fyfe (2016)	<5.1	<2	<2.8	<3.7	<2.8	<3.7	<1.9	H3 VP2	<2
	H7 VP1	Summa canister	Fyfe (2016)	27	13	<2.9	<3.9	<2.9	<3.9	<2	H7 VP1	13
	H7 VP2	Summa canister	Fyfe (2016)	40	23	<3.1	<4.1	<3.1	<4.1	<2	H7 VP2	23
4	H9 VP1	Summa canister	Fyfe (2016)	<5.7	<2	<3.1	<4.1	<3.1	<4.1	<2.1	H9 VP1	<2
	H9 VP2	Summa canister	Fyfe (2016)	18	<2	<3.1	<4.2	<3.1	<4.2	<2.1	H9 VP2	<2
5	H4 VP1	Summa canister	Fyfe (2016)	15	2	<3	<4.1	<3	<4.1	<2	H4 VP1	2
	H4 VP2	Summa canister	Fyfe (2016)	28	9.8	<2.8	<3.7	<2.8	<3.7	<1.9	H4 VP2	9.8
	H8 VP-1	Summa canister	Fyfe (2016)	77	51	<3.7	<4.9	<3.7	<4.9	<2.5	H8 VP-1	51
	H8 VP-2	Summa canister	Fyfe (2016)	34	16	<2.8	<3.7	<2.8	<3.7	<1.9	H8 VP-2	16
6	H5 VP1	Summa canister	Fyfe (2016)	7.6	4.6	<3	<4	<3	<4	<2	H5 VP1	4.6
	H5 VP2	Summa canister	Fyfe (2016)	<5.5	8.6	<3	<4	<3	<4	<2	H5 VP2	8.6
7	H10 VP1	Summa canister	Fyfe (2016)	41	31	<3.4	<4.5	<3.4	<4.5	<2.3	H10 VP1	31
	H10 VP2	Summa canister	Fyfe (2016)	29	<2	<3.2	<4.3	<3.2	<4.3	<2.1	H10 VP2	<2

Notes:

1 Based on Indoor air criteria adopted for derivation of interim soil vapour Health Investigation Level (HIL).

2 Based on applying a crawl space to indoor air attenuation factor of 0.4 to the indoor air criteria.

20 Concentration that exceeded the interim soil vapour HIL

20 Concentration that exceeded the modified HIL

TDT = thermal desorption tube

APPENDIX N

TIER 1 ASSESSMENT – RESIDENTIAL AREA: CRAWL SPACE & INDOOR AIR

Tier 1 Screening Assessment of Vapour Intrusion Risks Based on Crawl space and Indoor Air in Residential Zone

Residential Property	Sample ID	Sample Date	Type	Location	Target	Date Installed	Date Collected	PCE µg/m³	TCE µg/m³
						HIL Based Indoor Air Criterion[1]		200	2
						Crawl Space Air Criterion[2]		500	5
1	CSR-1	10-Dec-15	Radiello	Front bedroom	Crawl space	10-Dec-15	18-Dec-15	0.03	<0.02
	CSR-2	10-Dec-15	Radiello	Loungeroom	Crawl space	10-Dec-15	18-Dec-15	0.08	0.04
	CSR-3	10-Dec-15	Radiello	Kitchen	Crawl space	10-Dec-15	18-Dec-15	0.07	0.05
2	CS7	11-Dec-15	Summa canister	Loungeroom	Crawl space	10-Dec-15	11-Dec-15	<6	<2
	CS8	11-Dec-15	Summa canister	kitchen	Crawl space	10-Dec-15	11-Dec-15	<5.5	<2
	CS9	11-Dec-15	Summa canister	Back bedroom	Crawl space	10-Dec-15	11-Dec-15	<6.6	<2
	CSR-13	16-Dec-15	Radiello	Loungeroom	Crawl space	16-Dec-15	23-Dec-15	0.08	0.04
	CSR-14	16-Dec-15	Radiello	Kitchen	Crawl space	16-Dec-15	23-Dec-15	0.09	0.04
	CSR-15	16-Dec-15	Radiello	Bedroom	Crawl space	16-Dec-15	23-Dec-15	0.08	0.05
	IA9	17-Dec-15	Summa canister	Loungeroom	Indoor air	16-Dec-15	17-Dec-15	<5.2	<2
	IA10	17-Dec-15	Summa canister	Kitchen	Indoor air	16-Dec-15	17-Dec-15	<5.2	<2
	IA11	17-Dec-15	Summa canister	Bedroom	Indoor air	16-Dec-15	17-Dec-15	<5	<2
	IA20	11-Dec-15	Radiello	Loungeroom	Indoor air	17-Dec-15	23-Dec-15	0.07	0.03
	IA21	11-Dec-15	Radiello	Kitchen	Indoor air	17-Dec-15	23-Dec-15	0.07	0.03
	IA22	11-Dec-15	Radiello	Bedroom	Indoor air	17-Dec-15	23-Dec-15	0.07	0.03
3	CS13	11-Dec-15	Summa canister	Loungeroom	Crawl space	10-Dec-15	11-Dec-15	<5	<2
	CS14	11-Dec-15	Summa canister	Front bedroom	Crawl space	10-Dec-15	11-Dec-15	<5	<2
	CS15	11-Dec-15	Summa canister	Kitchen	Crawl space	10-Dec-15	11-Dec-15	<4.9	<2
	CSR-10	16-Dec-15	Radiello	Loungeroom	Crawl space	16-Dec-15	23-Dec-15	0.08	0.04
	CSR-11	16-Dec-15	Radiello	Front bedroom	Crawl space	16-Dec-15	23-Dec-15	0.09	0.05
	CSR-12	16-Dec-15	Radiello	Kitchen	Crawl space	16-Dec-15	23-Dec-15	0.1	0.05
5	CS1	11-Dec-15	Summa canister	Front bedroom	Crawl space	10-Dec-15	11-Dec-15	<5.2	<2
	CS2	11-Dec-15	Summa canister	Loungeroom	Crawl space	10-Dec-15	11-Dec-15	<5.2	<2
	CS3	11-Dec-15	Summa canister	Kitchen	Crawl space	10-Dec-15	11-Dec-15	<5.1	<2
	CSR-4	11-Dec-15	Radiello	Front bedroom	Crawl space	11-Dec-15	18-Dec-15	0.11	<2
	CSR-5	11-Dec-15	Radiello	Main bedroom	Crawl space	11-Dec-15	18-Dec-15	0.11	0.07
	CSR-6	11-Dec-15	Radiello	Kitchen	Crawl space	11-Dec-15	18-Dec-15	0.11	0.05
6	CS4	11-Dec-15	Summa canister	Kitchen	Crawl space	10-Dec-15	11-Dec-15	<4.6	<2
	CS5	11-Dec-15	Summa canister	Back bedroom	Crawl space	10-Dec-15	11-Dec-15	<4.8	<2
	CS6	11-Dec-15	Summa canister	Loungeroom	Crawl space	10-Dec-15	11-Dec-15	<4.8	<2
	CSR-16	16-Dec-15	Radiello	Kitchen	Crawl space	16-Dec-15	23-Dec-15	0.14	0.06
	CSR-17	16-Dec-15	Radiello	Bedroom	Crawl space	16-Dec-15	24-Dec-15	0.13	0.06
	CSR-18	16-Dec-15	Radiello	Loungeroom	Crawl space	16-Dec-15	23-Dec-15	0.16	0.07
7	CS10	11-Dec-15	Summa canister	Front bedroom	Crawl space	10-Dec-15	11-Dec-15	<4.9	<2
	CS11	11-Dec-15	Summa canister	Kitchen	Crawl space	10-Dec-15	11-Dec-15	<5.2	<2
	CS12	11-Dec-15	Summa canister	Loungeroom	Crawl space	10-Dec-15	11-Dec-15	<4.7	<2
	CSR-7	11-Dec-15	Radiello	Front bedroom	Crawl space	11-Dec-15	18-Dec-15	0.36	0.26
	CSR-8	11-Dec-15	Radiello	Kitchen	Crawl space	11-Dec-15	18-Dec-15	0.97	3.5
	CSR-9	11-Dec-15	Radiello	Loungeroom	Crawl space	11-Dec-15	18-Dec-15	0.27	0.17
Outdoor	OA 1	11-Dec-15	Radiello	Back yard	Outdoor air	16-Dec-15	23-Dec-15	0.07	0.03
	OA 2	11-Dec-15	Radiello	Rear of park	Outdoor air	17-Dec-15	23-Dec-15	<0.20	<0.17
	OA 3	11-Dec-15	Radiello	Fence of rail reserve	Outdoor air	17-Dec-15	23-Dec-15	<0.20	<0.17

Notes:

1 Based on Indoor air criteria adopted for derivation of interim soil vapour Health Investigation Level (HIL).

2 Based on applying a crawl space to indoor air attenuation factor of 0.4 to the indoor air criteria.

APPENDIX O

GEOTECHNICAL PARAMETERS

Geotechnical data adopted for VIRA modelling purposes

Borehole	Depth interval (m)	Sample Date	Material	Soil particle density, ρ_s (t/m^3)	Density of water ρ_w (t/m^3)	Specific gravity of the solid particles, G_s	Maximum dry density, γ_d (t/m^3)	void ratio, e	Porosity, *n*	Moisture %	Water Porosity	Air Porosity	Note
H4 VP2	0.5-1.0	7-Dec-15	Clay	2.550	1	2.550	1.70	0.50	0.33	25.7%			Actual data
VP25	0.4-0.9	10-Dec-15	Clay	2.600	1	2.600	1.48	0.76	0.43	24.2%			
Average	0-0.5			2.575	1	2.575	1.59	0.62	0.38	5.0%	0.08	0.30	Adopted for Modelling
	0.5-1.0			2.575	1	2.575	1.59	0.62	0.38	11.8%	0.19	0.19	
H1 VP2	1.0-1.5	7-Dec-15	Clay	2.500	1	2.500	1.47	0.70	0.41	23.8%			Actual data
VP22	1.1-1.5	9-Dec-15	Clay	2.550	1	2.550	1.43	0.78	0.44	23.9%			
VP29	1.0-1.5	10-Dec-15	Clay	2.580	1	2.580	1.56	0.65	0.40	15.9%			
Average	>1.0			2.543	1	2.543	1.49	0.71	0.42	16.3%	0.24	0.17	Adopted for Modelling
Average	Cap Fringe			2.543	1	2.543	1.49	0.71	0.42	20.0%	0.30	0.12	Adopted for Modelling

APPENDIX P

VAPOUR INTRUSION MODEL – RESIDENTIAL SLAB ON GROUND: SOIL VAPOUR

DATA ENTRY SHEET

SG-ADV
Version 3.1; 02/04

SEE VIRA- Slab On Ground

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	1.00E+00			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
10	100	22	50	50	0	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24
			5% Moisture				11.80%				16.3% moisture

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
10	40	1500	1000	240	0.3	0.6	108	3600	0.03

MORE ↓

RESULTS α (unitless)
7.8E-04

END

DATA ENTRY SHEET

SG-ADV
Version 3.1; 02/04

SEE VIRA- Slab on Ground

Reset to Defaults

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	1.00E+00			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
10	150	22	50	50	50	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24
			5% Moisture				11.80%				16.3% moisture

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
10	40	1500	1000	240	0.3	0.6	108	3600	0.03

MORE ↓

RESULTS α (unitless)
3.5E-04

END

APPENDIX Q

VAPOUR INTRUSION MODEL – RESIDENTIAL CRAWL SPACE: SOIL VAPOUR

DATA ENTRY SHEET

SG-ADV
Version 3.1; 02/04

Reset to Defaults

SEE VIRA- Crawl Space

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	1.00E+00			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, (Enter value or 0) h_B (cm)	Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
0	150	22	50	50	50	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24
			5% Moisture				11.80%				16.3% moisture

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
0	0.00E+00	1500	1000	240	300	0.6	3600	3600	1

MORE ↓

RESULTS
α (unitless)

3.5E-04

END

DATA ENTRY SHEET

SG-ADV
Version 3.1; 02/04

Reset to Defaults

SEE VIRA- Crawl Space

Soil Gas Concentration Data

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Soil gas conc., C_g ($\mu g/m^3$)	OR	ENTER Soil gas conc., C_g (ppmv)	Chemical
79016	1.00E+00			Trichloroethylene

MORE ↓

ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Soil gas sampling depth below grade, L_s (cm)	ENTER Average soil temperature, T_S (^oC)	ENTER Totals must add up to value of Ls (cell F24) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
0	100	22	50	50	0	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24
			5% Moisture				11.80%				16.3% moisture

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
0	0.00E+00	1500	1000	240	300	0.6	3600	3600	1

MORE ↓

RESULTS
α (unitless)

7.7E-04

END

APPENDIX R

SUMMARY OF VAPOUR ATTENUATION FACTORS

Comparison of Attenuation Factors

Depth (m BGL)	Slab-on-Ground	Crawl Space
1	7.8×10^{-4}	7.7×10^{-4}
1.5	3.5×10^{-4}	3.5×10^{-4}

APPENDIX S

TIER 2 ASSESSMENT (SOIL VAPOUR) – RESIDENTIAL: SLAB ON GROUND/CRAWL SPACE

Tier 2 Screening Assessment of Vapour Intrusion Risks Based on Soil Vapour in Residential Zone

Property	Sample ID	Sample Date	Sample Depth (m)	Soil Vapour TCE concentration (µg/m³)	Predicted Indoor air Conc Residential Building with Slab-on-ground/Crawl space
					TCE
					µg/m³
		Preliminary Site-specific α		1 m BGL	7.80E-04
				1.5 m BGL	3.50E-04
				Indoor Air Level Response Range (TCE)	ND (No Action) [1]
					<2 (Validation)
					2-<20 (Investigation)
					20-<200 (Intervention)
					200+ (Accelerated Intervention)
Road Verges	VP01	10-Dec-15	1.5	680	0.2
	VP02	10-Dec-15	1.5	200	0.1
	VP03	10-Dec-15	1.5	1100	0.4
	VP04	10-Dec-15	1.5	450	0.2
	VP05	10-Dec-15	1.5	1900	0.7
	VP06	14-Dec-15	1.5	410	0.1
	VP07	14-Dec-15	1.5	70	0.02
	VP08	14-Dec-15	1.5	640	0.2
	VP09	14-Dec-15	1.5	2400	0.8
	VP13	14-Dec-15	1.5	230	0.1
	VP14	14-Dec-15	1.5	<2	ND
	VP15	14-Dec-15	1.5	5	0.002
	VP16	14-Dec-15	1.5	<2	ND
	VP17	14-Dec-15	1.5	510	0.2
	VP18	14-Dec-15	1.5	9800	3.4
	VP19	16-Dec-15	1.5	2.1	0.001
	VP20	16-Dec-15	1.5	4	0.001
	VP21	14-Dec-15	1.5	3.3	0.001
	VP22	14-Dec-15	1.5	33	0.012
	VP23	14-Dec-15	1.5	12	0.004
	VP24	14-Dec-15	1.5	61	0.021
	VP25	17-Dec-15	1.5	590	0.2
	VP26	14-Dec-15	1.5	6.5	0.002
	VP27	14-Dec-15	1.5	9.8	0.003
	VP28	14-Dec-15	1.5	1100	0.4
	VP29	14-Dec-15	1.5	5700	2.0
	VP30	14-Dec-15	1.5	2700	0.9
	VP31	14-Dec-15	1.5	380	0.1
	VP32	14-Dec-15	1.5	1100	0.4
1	H1 VP1	16-Dec-15	1	2.6	0.002
	H1 VP2	16-Dec-15	1.7	<2	ND
2	H6 VP1	16-Dec-15	1	2	0.002
	H6 VP2	16-Dec-15	1.7	<2	ND
3	H3 VP1	16-Dec-15	1	<2	ND
	H3 VP2	16-Dec-15	1.7	<2	ND
	H7 VP1	16-Dec-15	1	13	0.01
	H7 VP2	16-Dec-15	1.7	23	0.008
4	H9 VP1	16-Dec-15	1	<2	ND
	H9 VP2	16-Dec-15	1.7	<2	ND
5	H4 VP1	16-Dec-15	1	2	0.002
	H4 VP2	16-Dec-15	1.7	9.8	0.003
	H8 VP-1	17-Dec-15	1	51	0.04
	H8 VP-2	17-Dec-15	1.7	16	0.006
6	H5 VP1	16-Dec-15	1	4.6	0.004
	H5 VP2	16-Dec-15	1.7	8.6	0.003
7	H10 VP1	16-Dec-15	1	31	ND
	H10 VP2	16-Dec-15	1.7	<2	ND

Note:

1 Predicted air concentrations < 0.1 µg/m^3 are designated as non-detect (ND) for the purposes of the response levels.

APPENDIX T

VAPOUR INTRUSION MODEL – RESIDENTIAL WITH BASEMENT: GROUNDWATER

DATA ENTRY SHEET

GW-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box) — SEE VIRA- Basement

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
127184	1.00E+00	Tetrachloroethylene

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Totals must add up to value of L_{WT} (cell G28) Thickness of soil stratum A, h_A (cm)	Thickness of soil stratum B, (Enter value or 0) h_B (cm)	Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
22	240	260	260	0	0	A	SIC	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
10	40	1500	1000	240	0.3	0.6	108	3600	0.03

MORE ↓

ENTER Thickness of capillary zone, L_{cz} (cm)	ENTER Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	ENTER Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	ENTER Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)
10.00	0.42	0.120	0.300

MORE ↓

RESULT Infinite source indoor attenuation coefficient, α (unitless)
1.0E-03

END

DATA ENTRY SHEET

GW-ADV Version 3.1; 02/04

Reset to Defaults

CALCULATE RISK-BASED GROUNDWATER CONCENTRATION (enter "X" in "YES" box) — SEE VIRA- Basement

YES [ ]

OR

CALCULATE INCREMENTAL RISKS FROM ACTUAL GROUNDWATER CONCENTRATION (enter "X" in "YES" box and initial groundwater conc. below)

YES [X]

ENTER Chemical CAS No. (numbers only, no dashes)	ENTER Initial groundwater conc., C_W (µg/L)	Chemical
79016	1.00E+00	Trichloroethylene

MORE ↓

ENTER Average soil/ groundwater temperature, T_S (°C)	ENTER Depth below grade to bottom of enclosed space floor, L_F (cm)	ENTER Depth below grade to water table, L_{WT} (cm)	ENTER Totals must add up to value of L_{WT} (cell G28) Thickness of soil stratum A, h_A (cm)	ENTER Thickness of soil stratum B, (Enter value or 0) h_B (cm)	ENTER Thickness of soil stratum C, (Enter value or 0) h_C (cm)	ENTER Soil stratum directly above water table, (Enter A, B, or C)	ENTER SCS soil type directly above water table	ENTER Soil stratum A SCS soil type (used to estimate soil vapor permeability)	OR	ENTER User-defined stratum A soil vapor permeability, k_v (cm^2)
22	240	260	260	0	0	A	SIC	S		

MORE ↓

ENTER Stratum A SCS soil type (Lookup Soil Parameters)	ENTER Stratum A soil dry bulk density, ρ_b^A (g/cm^3)	ENTER Stratum A soil total porosity, n^A (unitless)	ENTER Stratum A soil water-filled porosity, θ_w^A (cm^3/cm^3)	ENTER Stratum B SCS soil type (Lookup Soil Parameters)	ENTER Stratum B soil dry bulk density, ρ_b^B (g/cm^3)	ENTER Stratum B soil total porosity, n^B (unitless)	ENTER Stratum B soil water-filled porosity, θ_w^B (cm^3/cm^3)	ENTER Stratum C SCS soil type (Lookup Soil Parameters)	ENTER Stratum C soil dry bulk density, ρ_b^C (g/cm^3)	ENTER Stratum C soil total porosity, n^C (unitless)	ENTER Stratum C soil water-filled porosity, θ_w^C (cm^3/cm^3)
	1.59	0.380	0.08		1.59	0.380	0.19		1.49	0.420	0.24

MORE ↓

ENTER Enclosed space floor thickness, L_{crack} (cm)	ENTER Soil-bldg. pressure differential, ΔP ($g/cm\text{-}s^2$)	ENTER Enclosed space floor length, L_B (cm)	ENTER Enclosed space floor width, W_B (cm)	ENTER Enclosed space height, H_B (cm)	ENTER Floor-wall seam crack width, w (cm)	ENTER Indoor air exchange rate, ER (1/h)	ENTER Average vapor flow rate into bldg. OR Leave blank to calculate Q_{soil} (L/m)	ENTER $Q_{building}$ (L/m)	ENTER $Q_{soil}/Q_{building}$
10	40	1500	1000	240	0.3	0.6	108	3600	0.03

MORE ↓

ENTER Thickness of capillary zone, L_{cz} (cm)	ENTER Total porosity in capillary zone, n_{cz} (cm^3/cm^3)	ENTER Air-filled porosity in capillary zone, $\theta_{a,cz}$ (cm^3/cm^3)	ENTER Water-filled porosity in capillary zone, $\theta_{w,cz}$ (cm^3/cm^3)
10.00	0.42	0.120	0.300

MORE ↓

RESULT Infinite source indoor attenuation coefficient, α (unitless)
1.4E-03

END

APPENDIX U

TIER 2 ASSESSMENT (GROUNDWATER) – RESIDENTIAL: SLAB ON GROUND/CRAWL SPACE & BASEMENT

Tier 1 and 2 Screening Assessments of Vapour Intrusion Risks Based on Groundwater Data

Property	Well Location	Sample Date	GW Depth (m BGL)	Dissolved Phase Concentration[1]						H' of COPC[2,3] @22C		Estimated Soil Vapour at Source		Predicted Indoor Air Conc Residential Building with Slab-on-Ground/Crawl space	Predicted Indoor air Conc Residential Building with Basement		Predicted Indoor air Conc Residential Building with Basement
				PCE	TCE	11 DCE	cis 1,2 DCE	trans 1,2 DCE	VC	PCE	TCE	PCE	TCE	PCE	PCE		TCE
				µg/L	µg/L	µg/L	µg/L	µg/L	µg/L			µg/m³	µg/m³	µg/m³	µg/m³		µg/m³
												Preliminary Site-specific α[4]		5.50E-05	1.00E-03		1.40E-03
			ADWG (2011)	50		30	60		0.3			NEPM Indoor Air-Residential		200	200		ND (No Action)
																Indoor Air Level Response Range (TCE)	<2 (Validation)
																	2-<20 (Investigation)
																	20-<200 (Intervention)
																	200+ (Accelerated Intervention)
FS1	GW1	6/05/2015	2.454	<1	6	<1	<1	<1	<0.05	0.62	0.35	NE	2100	NE[5]	NE		2.94
	GW2	6/05/2015	3.128	2	51	<1	18	<1	0.07	0.724	0.35	1448	17850	0.08	1.45		25
	GW3	06-May-15	2.382	6	15	<1	2	<1	<0.05	0.724	0.35	4344	5250	0.24	4.34		7.35
FS2	GWA	06-May-15	2.598	120	520	<1	4	<1	<1	0.62	0.35	74400	182000	4.09	74.40		255
	GWB	06-May-15	2.896	19	150	<1	3	<1	<1	0.62	0.35	11780	52500	0.65	11.78		74
	GWC	06-May-15	2.429	4	8	<1	<1	<1	<0.05	0.62	0.35	2480	2800	0.14	2.48		4
Residential Zone	MW01	06-May-15	2.41	1	41	<1	22	<1	0.12	0.62	0.35	620	14350	0.03	0.62		20
	MW02	06-May-15	2.335	10	17	<1	2	<1	<0.05	0.62	0.35	6200	5950	0.34	6.20		8
	MW03	06-May-15	2.575	1	14	<1	1	<1	0.12	0.62	0.35	620	4900	0.03	0.62		6.86
	MW04	06-May-15	2.562	2	12	<1	2	<1	<0.05	0.62	0.35	1240	4200	0.07	1.24		6
	MW05	06-May-15	2.749	5	42	<1	8	<1	0.1	0.62	0.35	3100	14700	0.17	3.10		21
	MW06	06-May-15	2.837	13	35	<1	8	<1	0.1	0.62	0.35	8060	12250	0.44	8.06		17
	MW07	06-May-15	2.891	31	400	<1	39	<1	<1	0.62	0.35	19220	140000	1.06	19.22		196

Notes:

1. Based on data presented in Greencap (2015)
2 COPC are chemicals of potential concern identified by comparing the dissoplved phase concentrations to the adopted water quality guidelines (i.e. ADWG 2011).
3 H' = unitless Henry's Law constant.
4 α = vapour attenuation factor estimated by vapour intrusion model
5 NE= not evaluated due low concentrations.