Appendix B
Table 2
Groundwater Analytical Results - June 2019

					Field Parameters					Inorganics	Alkalinity & Alkalinity		Major Ions						Nutrients			
					pH (Field)	Electrical conductivity (Field)	Dissolved Oxygen (Field) (Filtered)	Redox (Field)	Temperature (Field)	pH (Lab)	Alkalinity (Carbonate as CaCO3)	Alkalinity (Bicarbonate as CaCO3)	Calcium	Magnesium	Potassium	Sodium	Chloride	Sulfate	Ammonia as N	Nitrate (as N)	Nitrite (as N)	Ammonia
					pH Units	µS/cm	mg/L	mV	°C	pH Units	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
EQL										0.1	10	20	0.5	0.5	0.5	0.5	1	5	0.01	0.02	0.02	0.005
Environmental Trigger Value (BAP GHD, 2011)																			0.9			
ADWG 2011 Health (v3 updated 2018)																		500[#1]		11.29[#3]	0.91[#4]	
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																						
2-4m																						
4-8m																						
Location_Code	Field_ID	Sampled_Date_Time	Lab_Report_Number	Sample_Type																		
GG1	GG1	13/06/2019	660593	Normal	4.59	60,486	0.54	348.7	24.7	3.9	<10	<20	1700	2200	120	7800	26,000	1000	120	<1[#1]	<1[#1]	-
GG10	GG10	13/06/2019	660593	Normal	3.56	80,895	0.82	449	22.8	2.8	<10	<20	3900	3300	170	8200	32,000	490	170	<1[#1]	<1[#1]	-
GG2	GG2	13/06/2019	660593	Normal	2.96	73,042	0.92	606.8	23.1	2.6	<10	<20	1700	1200	92	3300	32,000	580	3100	<1[#1]	<1[#1]	-
GG2	QA02	13/06/2019	660593	Field_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	110	-	-	-
GG5	GG5	13/06/2019	660593	Normal	1.35	115,564	0.35	682.8	24.1	1.5	<10	<20	8700	860	59	14,000	66,000	280	870	<4[#1]	<4[#1]	-
GG7	GG7	13/06/2019	660593	Normal	6.35	17,330	0.12	65.1	21.9	7.8	<10	600	100	490	19	3500	5800	820	0.23	<0.02	<0.02	-
GG8	GG8	13/06/2019	660593	Normal	6.67	13,372	0.14	62.3	22	8	<10	1000	110	320	15	2600	4000	860	0.14	<0.02	<0.02	-
GG9	GG9	13/06/2019	660593	Normal	5.38	33,162	0.57	272.5	24.5	5.8	<10	40	550	1300	41	5900	14,000	970	34	<0.5[#1]	<0.5[#1]	-
MW119	MW119	13/06/2019	660593	Normal	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW127	MW127	13/06/2019	660593	Normal	6.56	8677	1.61	185.4	22.9	8	<10	540	6.8	110	6.6	2000	2800	470	<0.01	1.1	<0.02	-
MW134D	MW134D	13/06/2019	660593	Normal	3.95	66,253	1.02	424.8	24.9	3.6	<10	820	2500	2000	130	4900	27,000	670	1400	0.93	<0.02	-
MW134S	MW134S	13/06/2019	660593	Normal	6.61	13,327	1.1	224	25.8	7.9	<10	880	100	370	13	2600	3400	800	0.22	0.87	<0.02	-
MW135	MW135	13/06/2019	660593	Normal	6.24	17,587	0.5	172.5	22.5	7.5	<10	470	66	570	19	4700	5900	870	0.29	<0.02	<0.02	-
WS-MW5	QA01	13/06/2019	219628	Interlab_D	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	2
WS-MW5	WS-MW5	13/06/2019	660593	Normal	6.87	21,108	0.13	148.1	19.9	8	<10	850	200	740	27	5500	7200	940	2.1	<0.02	<0.02	-
WS-MW6	WS-MW6	13/06/2019	660593	Normal	6.58	11,360	0.59	248.3	20.5	8.2	<10	400	93	390	16	3000	4200	380	0.19	0.08	<0.02	-
WS-MW7	WS-MW7	13/06/2019	660593	Normal	6.66	16,081	0.1	146.7	20	8	<10	960	150	570	20	3900	5600	770	0.81	<0.02	<0.02	-
WS-MW8	WS-MW8	13/06/2019	660593	Normal	5.51	29,565	0.19	229.2	21.1	5.7	<10	35	550	1400	46	5300	12,000	690	17	<0.5[#1]	<0.5[#1]	-

	Metals								BTEXN							TRH - NEPM 2013							TRH - NEPM 1999			
	Arsenic (Filtered)	Cadmium (Filtered)	Chromium (III+VI) (Filtered)	Copper (Filtered)	Lead (Filtered)	Mercury (Filtered)	Nickel (Filtered)	Zinc (Filtered)	Benzene	Toluene	Ethylbenzene	Xylene (o)	Xylene (m & p)	Xylene Total	Naphthalene (BTEXN)	F1 (C6-C10 minus BTEX)	C6-C10 Fraction	F2 (>C10-C16 minus Naphthalene)	>C10-C16 Fraction	F3 (>C16-C34 Fraction)	F4 (>C34-C40 Fraction)	>C10-C40 (Sum of Total)	C6-C9 Fraction	C10-C14 Fraction	C15-C28 Fraction	C29-C36 Fraction	>C10-C36 (Sum of Total)
	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L	µg/L
EQL	0.001	0.0002	0.001	0.001	0.001	0.0001	0.001	0.005	1	1	1	1	2	3	10	20	20	50	50	100	100	100	20	50	100	100	100
Environmental Trigger Value (BAP GHD, 2011)	0.013	0.0121		0.07	1.18		0.55	0.4																			
ADWG 2011 Health (v3 updated 2018)	0.01	0.002		2	0.01	0.001	0.02		1	800	300			600													
NEPM 2013 Table 1A(4) HSL D Comm/Ind GW for Vapour Intrusion, Sand																											
2-4m									5000	NL	NL			NL	NL	6000[#6]		NL									
4-8m									5000	NL	NL			NL	NL	6000[#6]		NL									
GG1	0.15	0.19	2.3	0.78	3.6	0.088	3.6	1300	<1	<1	<1	<1	<2	<3	<10	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100
GG10	0.049	0.58	2.1	3.6	16	0.024	9.8	3400	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GG2	0.098	0.18	2.6	4.2	33	0.077	6.4	3100	<1	<1	<1	<1	<2	<3	<10	<20	<20	1900	1900	900	<100	2800	<20	950	1900	<100	2850
GG2	<0.001	0.24	2.3	0.87	3.9	0.029	3.6	1500	<1	<1	<1	<1	<2	<3	<10	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100
GG5	0.15	0.97	18	29	61	0.067	17	9700	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GG7	0.14	0.012	2.1	0.77	0.32	0.07	0.79	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GG8	0.008	0.016	2.5	0.89	0.26	0.076	0.81	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
GG9	<0.001	0.039	2.6	0.96	0.073	0.021	1.4	440	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW119	0.013	0.0044	2.4	0.71	0.016	0.087	0.58	110	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW127	<0.001	0.0025	3.2	0.76	0.019	0.057	0.73	97	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW134D	<0.001	0.47	2.6	3.7	47	0.039	7.2	3500	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW134S	<0.001	0.0004	2.5	0.72	<0.001	0.06	0.63	98	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MW135	0.003	0.02	2.5	0.93	0.18	0.041	0.76	120	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-MW5	<0.001	<0.0001	<0.001	0.003	<0.001	<0.00005	0.002	0.26	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-MW5	<0.001	0.014	2.6	0.9	0.042	0.033	0.72	140	<1	<1	<1	<1	<2	<3	<10	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100
WS-MW6	<0.001	0.0061	2.5	0.88	0.004	0.035	0.94	140	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-MW7	<0.001	0.0063	2.6	1	0.037	0.041	1.1	150	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
WS-MW8	<0.001	0.0081	2.5	0.83	0.026	0.032	1.4	370	<1	<1	<1	<1	<2	<3	<10	<20	<20	<50	<50	<100	<100	<100	<20	<50	<100	<100	<100

Env Stds Comments

#1:Natural concentrations generally <0.01 mg/L
#2:Not specifically guideline value: >500mg/L can have purgative effects
#3:Guideline value calculated by dividing Nitrate (as Nitrate) value (50 mg/L) by 4.427
#4:Guideline value calculated by dividing Nitrite (as Nitrite) value (0.3 mg/L) by molecular weight (3.2967033).
#5:Not limiting: Derived water HSL exceeds water solubility limit
#6:To obtain F1 subtract the sum of BTEX concentrations from the C6 - C10 fraction.

Data Comments

#1 The LORs have been raised due to the high concentration of one or more analytes