

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-13	223302-14	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.7-1.0	1.5-1.7	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	118	119	106	116	116

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-18	223302-20	223302-23	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.5-0.9	1.5-1.95	4.5-4.7	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	124	115	121	116	92

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	108	114	119	125	87

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	107	118	105	114	135

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	115	121	128	111	115

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223302-53	223302-54	223302-55	223302-56	223302-57
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102	TB2	TB3
Depth		1.5-1.7	-	-	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	122	110	113	123	118

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		223302-58	223302-59
Your Reference	UNITS	TB4	T1
Depth		-	-
Date Sampled		02/08/2019	31/07/2019
Type of sample		soil	soil
Date extracted	-	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	<25	[NA]
TRH C ₆ - C ₁₀	mg/kg	<25	[NA]
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	[NA]
Benzene	mg/kg	<0.2	83%
Toluene	mg/kg	<0.5	91%
Ethylbenzene	mg/kg	<1	88%
m+p-xylene	mg/kg	<2	87%
o-Xylene	mg/kg	<1	92%
naphthalene	mg/kg	<1	[NA]
Total +ve Xylenes	mg/kg	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	113	119

svTRH (C10-C40) in Soil						
Our Reference		223302-1	223302-3	223302-5	223302-6	223302-7
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE102	JKE102
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0.3-0.5	1.2-1.6
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	240	160
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	150	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	50	290	170
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	50	290	170
TRH >C ₁₆ -C ₃₄	mg/kg	170	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	200	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	370	<50	50	290	170
Surrogate o-Terphenyl	%	98	86	80	83	78

svTRH (C10-C40) in Soil						
Our Reference		223302-8	223302-9	223302-10	223302-11	223302-12
Your Reference	UNITS	JKE102	JKE103	JKE103	JKE104	JKE104
Depth		1.6-2.0	0-0.1	0.1-0.4	0-0.1	0.1-0.3
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	100	<50	96	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	1,200	<100	1,400	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	1,500	<100	1,300	100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	180	<50	160	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	180	<50	160	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	2,100	100	2,300	120
TRH >C ₃₄ -C ₄₀	mg/kg	<100	1,100	<100	930	100
Total +ve TRH (>C10-C40)	mg/kg	<50	3,400	100	3,400	220
Surrogate o-Terphenyl	%	77	#	81	132	91

svTRH (C10-C40) in Soil						
Our Reference		223302-13	223302-14	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.7-1.0	1.5-1.7	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	63	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	260	<100	310
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	390	<100	730
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	80	<50	68
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	80	<50	68
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	500	<100	740
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	280	<100	820
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	860	<50	1,600
Surrogate o-Terphenyl	%	77	76	109	77	127

svTRH (C10-C40) in Soil						
Our Reference		223302-18	223302-20	223302-23	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.5-0.9	1.5-1.95	4.5-4.7	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	77	79	76	80	78

svTRH (C10-C40) in Soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	120	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	250	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	250	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	330	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	580	<50
Surrogate o-Terphenyl	%	76	77	77	109	78

svTRH (C10-C40) in Soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	51	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	210	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	340	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	60	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	60	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	430	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	260	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	750	<50	<50	<50
Surrogate o-Terphenyl	%	#	99	78	77	77

svTRH (C10-C40) in Soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	130	<100	<100	140	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	180	<100	<100	170	<100
TRH >C ₃₄ -C ₄₀	mg/kg	100	<100	<100	120	<100
Total +ve TRH (>C10-C40)	mg/kg	280	<50	<50	290	<50
Surrogate o-Terphenyl	%	91	77	77	102	81

svTRH (C10-C40) in Soil				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	09/08/2019	09/08/2019	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	190
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	190
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	120
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	310
Surrogate o-Terphenyl	%	83	77	80

PAHs in Soil						
Our Reference		223302-1	223302-3	223302-5	223302-6	223302-7
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE102	JKE102
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0.3-0.5	1.2-1.6
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.1	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.08	<0.05	0.09	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Total +ve PAH's	mg/kg	0.70	<0.05	0.09	1.1	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	97	76	75	80	78

PAHs in Soil						
Our Reference		223302-8	223302-9	223302-10	223302-11	223302-12
Your Reference	UNITS	JKE102	JKE103	JKE103	JKE104	JKE104
Depth		1.6-2.0	0-0.1	0.1-0.4	0-0.1	0.1-0.3
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.1	<0.1	0.5	0.2
Pyrene	mg/kg	<0.1	0.1	<0.1	0.5	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.3	0.1
Chrysene	mg/kg	<0.1	0.1	<0.1	0.4	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.4	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.08	<0.05	0.4	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.2	0.1	0.3	0.2
Total +ve PAH's	mg/kg	<0.05	0.57	0.1	3.2	0.94
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	77	97	84	92	79

PAHs in Soil						
Our Reference		223302-13	223302-14	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.7-1.0	1.5-1.7	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.6	<0.1	0.1	<0.1	0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.6	<0.1	0.3	<0.1	0.3
Pyrene	mg/kg	0.6	<0.1	0.3	<0.1	0.4
Benzo(a)anthracene	mg/kg	0.3	<0.1	0.2	<0.1	0.1
Chrysene	mg/kg	0.4	<0.1	0.3	<0.1	0.2
Benzo(b,j+k)fluoranthene	mg/kg	0.2	<0.2	0.3	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.3	<0.05	0.2	0.06	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.1	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	0.3	<0.1	0.2
Total +ve PAH's	mg/kg	3.0	<0.05	2.1	0.06	1.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	70	82	82	84	82

PAHs in Soil						
Our Reference		223302-18	223302-20	223302-23	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.5-0.9	1.5-1.95	4.5-4.7	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.3	<0.1	<0.1	0.4	<0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	0.4	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.3	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	0.4	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.07	<0.05	0.06	0.2	0.09
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Total +ve PAH's	mg/kg	0.86	<0.05	0.06	2.8	0.09
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	84	82	88	79	82

PAHs in Soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	0.4	0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	0.4	0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.1	<0.05	0.05	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	0.4	<0.05	0.05	1.6	0.2
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	82	79	85	88	84

PAHs in Soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	0.2	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.2	0.5	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.7	0.7	0.1	<0.1
Pyrene	mg/kg	<0.1	0.7	0.7	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.4	0.4	0.1	<0.1
Chrysene	mg/kg	<0.1	0.5	0.5	0.2	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.5	0.3	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.5	0.3	0.2	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.3	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.5	0.2	0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	4.4	4.0	0.94	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	0.8	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	80	81	82	85	84

PAHs in Soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.2	<0.1	<0.1	0.4	0.1
Pyrene	mg/kg	0.2	<0.1	<0.1	0.4	0.2
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.2	<0.1	<0.1	0.3	0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	0.3	<0.2
Benzo(a)pyrene	mg/kg	0.1	<0.05	<0.05	0.5	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.1	<0.1	<0.1	0.2	0.1
Total +ve PAH's	mg/kg	0.78	<0.05	<0.05	2.4	0.66
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	0.6	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	82	91	86	90	89

PAHs in Soil				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.4
Pyrene	mg/kg	<0.1	<0.1	0.4
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	0.3
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	0.3
Benzo(a)pyrene	mg/kg	<0.05	0.1	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	0.2
Total +ve PAH's	mg/kg	<0.05	0.1	2.5
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	82	83	92

Organochlorine Pesticides in soil						
Our Reference		223302-1	223302-3	223302-5	223302-9	223302-10
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE103	JKE103
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0-0.1	0.1-0.4
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	88	86	99	93

Organochlorine Pesticides in soil						
Our Reference		223302-11	223302-12	223302-13	223302-14	223302-15
Your Reference	UNITS	JKE104	JKE104	JKE104	JKE104	JKE105
Depth		0-0.1	0.1-0.3	0.7-1.0	1.5-1.7	0-0.1
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
TCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	90	85	93	88

Organochlorine Pesticides in soil						
Our Reference		223302-17	223302-18	223302-20	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.08-0.2	0.5-0.9	1.5-1.95	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	92	94	83	89

Organochlorine Pesticides in soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	88	93	92	93

Organochlorine Pesticides in soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	94	95	89

Organochlorine Pesticides in soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	93	83	91	85

Organochlorine Pesticides in soil				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	86	90

Organophosphorus Pesticides						
Our Reference		223302-1	223302-3	223302-5	223302-9	223302-10
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE103	JKE103
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0-0.1	0.1-0.4
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	88	86	99	93

Organophosphorus Pesticides						
Our Reference		223302-11	223302-12	223302-13	223302-14	223302-15
Your Reference	UNITS	JKE104	JKE104	JKE104	JKE104	JKE105
Depth		0-0.1	0.1-0.3	0.7-1.0	1.5-1.7	0-0.1
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	90	85	93	88

Organophosphorus Pesticides						
Our Reference		223302-17	223302-18	223302-20	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.08-0.2	0.5-0.9	1.5-1.95	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	92	94	83	89

Organophosphorus Pesticides						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	88	93	92	93

Organophosphorus Pesticides						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	94	95	89

Organophosphorus Pesticides						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	93	83	91	85

Organophosphorus Pesticides				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	86	90

PCBs in Soil						
Our Reference		223302-1	223302-3	223302-5	223302-9	223302-10
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE103	JKE103
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0-0.1	0.1-0.4
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	112	88	86	99	93

PCBs in Soil						
Our Reference		223302-11	223302-12	223302-13	223302-14	223302-15
Your Reference	UNITS	JKE104	JKE104	JKE104	JKE104	JKE105
Depth		0-0.1	0.1-0.3	0.7-1.0	1.5-1.7	0-0.1
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	95	90	85	93	88

Client Reference: E32465BD, Liverpool

PCBs in Soil						
Our Reference		223302-17	223302-18	223302-20	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.08-0.2	0.5-0.9	1.5-1.95	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	92	94	83	89

PCBs in Soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	93	88	93	92	93

PCBs in Soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	91	94	95	89

PCBs in Soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	93	83	91	85

PCBs in Soil				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date extracted	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	82	86	90

Acid Extractable metals in soil						
Our Reference		223302-1	223302-3	223302-5	223302-6	223302-7
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE102	JKE102
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0.3-0.5	1.2-1.6
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	<4	14	4	6	8
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	17	8	10	14
Copper	mg/kg	35	18	15	9	10
Lead	mg/kg	19	12	20	19	13
Mercury	mg/kg	<0.1	<0.1	0.1	0.2	<0.1
Nickel	mg/kg	27	3	12	3	3
Zinc	mg/kg	54	20	29	16	9

Acid Extractable metals in soil						
Our Reference		223302-8	223302-9	223302-10	223302-11	223302-12
Your Reference	UNITS	JKE102	JKE103	JKE103	JKE104	JKE104
Depth		1.6-2.0	0-0.1	0.1-0.4	0-0.1	0.1-0.3
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	9	9	10	11
Copper	mg/kg	5	33	10	30	16
Lead	mg/kg	8	19	16	51	28
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	1	13	10	8	11
Zinc	mg/kg	4	72	21	93	75

Acid Extractable metals in soil						
Our Reference		223302-13	223302-14	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.7-1.0	1.5-1.7	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	4	<4	5	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	14	11	10
Copper	mg/kg	15	4	60	10	44
Lead	mg/kg	100	17	61	16	16
Mercury	mg/kg	0.6	0.4	0.2	<0.1	<0.1
Nickel	mg/kg	10	1	8	7	7
Zinc	mg/kg	80	5	130	56	35

Acid Extractable metals in soil						
Our Reference		223302-18	223302-20	223302-23	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.5-0.9	1.5-1.95	4.5-4.7	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	18	8	14	9	12
Copper	mg/kg	15	8	7	32	12
Lead	mg/kg	15	13	13	78	18
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	8	5	2	9	6
Zinc	mg/kg	18	15	8	100	23

Acid Extractable metals in soil						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	12	18	20	11
Copper	mg/kg	13	7	6	29	24
Lead	mg/kg	43	15	13	16	15
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	8	4	4	9	10
Zinc	mg/kg	43	16	8	48	44

Acid Extractable metals in soil						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	<4	5	4	6	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	12	10	8	14
Copper	mg/kg	5	28	23	12	8
Lead	mg/kg	11	37	100	33	14
Mercury	mg/kg	<0.1	<0.1	0.3	0.1	<0.1
Nickel	mg/kg	1	7	8	5	1
Zinc	mg/kg	4	92	73	36	5

Acid Extractable metals in soil						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	5	6	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	11	13	8	9	10
Copper	mg/kg	17	2	2	41	12
Lead	mg/kg	23	24	11	61	13
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	7	2	1	23	17
Zinc	mg/kg	36	3	3	88	24

Acid Extractable metals in soil					
Our Reference		223302-53	223302-54	223302-55	223302-61
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102	JKE121 - [TRIPLICATE]
Depth		1.5-1.7	-	-	0.4-0.85
Date Sampled		02/08/2019	31/07/2019	01/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Arsenic	mg/kg	4	5	4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	7	13	11
Copper	mg/kg	5	13	62	9
Lead	mg/kg	18	20	50	16
Mercury	mg/kg	<0.1	0.1	0.1	<0.1
Nickel	mg/kg	2	12	8	13
Zinc	mg/kg	5	29	120	24

Moisture						
Our Reference		223302-1	223302-3	223302-5	223302-6	223302-7
Your Reference	UNITS	JKE101	JKE101	JKE102	JKE102	JKE102
Depth		0.04-0.2	1.4-1.7	0.1-0.3	0.3-0.5	1.2-1.6
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	4.7	18	17	20	23

Moisture						
Our Reference		223302-8	223302-9	223302-10	223302-11	223302-12
Your Reference	UNITS	JKE102	JKE103	JKE103	JKE104	JKE104
Depth		1.6-2.0	0-0.1	0.1-0.4	0-0.1	0.1-0.3
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	20	30	4.5	20	11

Moisture						
Our Reference		223302-13	223302-14	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.7-1.0	1.5-1.7	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	11	17	23	14	9.3

Moisture						
Our Reference		223302-18	223302-20	223302-23	223302-24	223302-26
Your Reference	UNITS	JKE106	JKE106	JKE106	JKE107	JKE107
Depth		0.5-0.9	1.5-1.95	4.5-4.7	0-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	21	11	16	7.1	16

Moisture						
Our Reference		223302-29	223302-30	223302-33	223302-34	223302-37
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE110	JKE110
Depth		0.22-0.4	0.5-0.95	3.0-3.45	0.04-0.2	1.5-1.95
Date Sampled		01/08/2019	01/08/2019	01/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	12	14	23	11	17

Moisture						
Our Reference		223302-38	223302-39	223302-42	223302-43	223302-45
Your Reference	UNITS	JKE110	JKE111	JKE111	JKE111	JKE111
Depth		3.0-3.2	0-0.2	1.4-1.7	1.8-2.0	3.0-3.2
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	18	12	19	16	18

Moisture						
Our Reference		223302-46	223302-48	223302-49	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	1.5-1.7	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Moisture	%	9.2	15	20	5.7	7.0

Moisture				
Our Reference		223302-53	223302-54	223302-55
Your Reference	UNITS	JKE121	DUPAM101	DUPAM102
Depth		1.5-1.7	-	-
Date Sampled		02/08/2019	31/07/2019	01/08/2019
Type of sample		soil	soil	soil
Date prepared	-	07/08/2019	07/08/2019	07/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019
Moisture	%	16	16	23

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223302-1	223302-5	223302-9	223302-10	223302-11
Your Reference	UNITS	JKE101	JKE102	JKE103	JKE103	JKE104
Depth		0.04-0.2	0.1-0.3	0-0.1	0.1-0.4	0-0.1
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019
Sample mass tested	g	1,112.28	642.43	494.68	860	223.67
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223302-12	223302-13	223302-15	223302-16	223302-17
Your Reference	UNITS	JKE104	JKE104	JKE105	JKE105	JKE106
Depth		0.1-0.3	0.7-1.0	0-0.1	0.5-0.95	0.08-0.2
Date Sampled		31/07/2019	31/07/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019
Sample mass tested	g	712.2	685.17	504.43	448.91	679.95
Sample Description	-	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223302-18	223302-20	223302-24	223302-26	223302-29
Your Reference	UNITS	JKE106	JKE106	JKE107	JKE107	JKE108
Depth		0.5-0.9	1.5-1.95	0-0.2	1.5-1.95	0.22-0.4
Date Sampled		01/08/2019	01/08/2019	01/08/2019	01/08/2019	01/08/2019
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019
Sample mass tested	g	635.11	539.07	615.1	369.09	693.93
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown sandy soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223302-30	223302-34	223302-37	223302-39	223302-42
Your Reference	UNITS	JKE108	JKE110	JKE110	JKE111	JKE111
Depth		0.5-0.95	0.04-0.2	1.5-1.95	0-0.2	1.4-1.7
Date Sampled		01/08/2019	02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil	soil
Date analysed	-	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019
Sample mass tested	g	464.38	769.21	583.07	632.26	466.3
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown clayey soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001					
Our Reference		223302-46	223302-48	223302-50	223302-51
Your Reference	UNITS	JKE120	JKE120	JKE121	JKE121
Depth		0-0.2	0.85-1.1	0-0.2	0.4-0.85
Date Sampled		02/08/2019	02/08/2019	02/08/2019	02/08/2019
Type of sample		soil	soil	soil	soil
Date analysed	-	9-12/08/2019	9-12/08/2019	9-12/08/2019	9-12/08/2019
Sample mass tested	g	703.79	477.41	574.67	971.69
Sample Description	-	Brown clayey soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & rocks	Brown fine-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-
FA and AF Estimation*	g	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001

BTEX in Water		
Our Reference		223302-60
Your Reference	UNITS	FR1
Depth		-
Date Sampled		31/07/2019
Type of sample		water
Date extracted	-	07/08/2019
Date analysed	-	08/08/2019
Benzene	µg/L	<1
Toluene	µg/L	2
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Surrogate Dibromofluoromethane	%	101
Surrogate toluene-d8	%	100
Surrogate 4-BFB	%	108

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	<p>Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004.</p> <p>Results reported denoted with * are outside our scope of NATA accreditation.</p> <p>NOTE #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF)</p> <p>NOTE #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres.</p> <p>Estimation = Estimated asbestos weight</p> <p>Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.</p>
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p>
Org-003	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p> <p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.

Method ID	Methodology Summary
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	<25	1	<25	<25	0	118	108
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	1	<25	<25	0	118	108
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	107	102
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	107	105
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	123	110
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	127	111
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	130	115
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	129	1	110	107	3	112	109

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		08/08/2019	08/08/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	15	<25	<25	0	123	108
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	15	<25	<25	0	123	108
Benzene	mg/kg	0.2	Org-016	[NT]	15	<0.2	<0.2	0	117	109
Toluene	mg/kg	0.5	Org-016	[NT]	15	<0.5	<0.5	0	116	105
Ethylbenzene	mg/kg	1	Org-016	[NT]	15	<1	<1	0	127	106
m+p-xylene	mg/kg	2	Org-016	[NT]	15	<2	<2	0	127	111
o-Xylene	mg/kg	1	Org-016	[NT]	15	<1	<1	0	132	110
naphthalene	mg/kg	1	Org-014	[NT]	15	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	15	106	119	12	111	117

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	08/08/2019	08/08/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	34	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	34	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	34	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	34	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	34	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	34	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	34	125	114	9	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	08/08/2019	08/08/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	51	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	51	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	51	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	51	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	51	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	51	115	104	10	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	1	<50	<50	0	121	113
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	1	<100	<100	0	99	119
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	1	150	140	7	88	74
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	1	<50	<50	0	121	113
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	1	170	140	19	99	119
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	1	200	210	5	88	74
Surrogate o-Terphenyl	%		Org-003	81	1	98	111	12	112	86

QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		09/08/2019	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	15	63	70	11	112	116
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	15	260	290	11	96	95
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	15	390	410	5	75	107
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	15	80	86	7	112	116
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	15	500	540	8	96	95
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	15	280	300	7	75	107
Surrogate o-Terphenyl	%		Org-003	[NT]	15	109	108	1	107	78

QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	09/08/2019	09/08/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	34	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	34	120	120	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	34	250	230	8	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	34	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	34	250	220	13	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	34	330	320	3	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	34	109	107	2	[NT]	[NT]

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QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	09/08/2019	09/08/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	51	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	51	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	51	81	81	0	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	98	91
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	90	82
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.1	<0.1	0	100	85
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.1	0	82	75
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.1	67	88	78
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.1	0	118	108
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	0.08	0.1	22	96	94
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	90	1	97	80	19	89	82

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Naphthalene	mg/kg	0.1	Org-012	[NT]	15	<0.1	<0.1	0	96	98
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	15	<0.1	<0.1	0	88	88
Phenanthrene	mg/kg	0.1	Org-012	[NT]	15	0.1	0.4	120	92	90
Anthracene	mg/kg	0.1	Org-012	[NT]	15	<0.1	0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	15	0.3	0.9	100	80	86
Pyrene	mg/kg	0.1	Org-012	[NT]	15	0.3	0.9	100	84	90
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	15	0.2	0.4	67	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	15	0.3	0.5	50	118	117
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	15	0.3	0.5	50	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	15	0.2	0.53	90	102	98
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	15	0.1	0.2	67	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	15	<0.1	0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	15	0.3	0.3	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	15	82	79	4	88	88

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QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	08/08/2019	08/08/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	34	0.2	0.2	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	34	0.4	0.4	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	34	0.4	0.4	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	34	0.2	0.2	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	34	0.2	0.2	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	34	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	34	0.2	0.2	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	34	0.1	0.2	67	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	34	88	80	10	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	08/08/2019	08/08/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	51	0.1	0.2	67	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	51	0.2	0.2	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	51	0.1	0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	51	0.2	0.2	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	51	0.1	0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	51	89	101	13	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil							Duplicate		Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	92	91
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	84
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	76	68
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	108	100
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	108	98
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	112	104
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	126	115
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	100	91
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	92	91
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	84
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	97	1	112	90	22	95	88

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		08/08/2019	08/08/2019
HCB	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	74	70
gamma-BHC	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	86	77
Heptachlor	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	80	77
delta-BHC	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	88	86
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	89	85
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	98	93
Dieldrin	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	105	101
Endrin	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	91	90
pp-DDD	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	94	91
Endosulfan II	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	103	98
Methoxychlor	mg/kg	0.1	Org-005	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	15	88	85	3	92	91

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	08/08/2019	08/08/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	34	92	85	8	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	08/08/2019	08/08/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	51	85	98	14	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	96	88
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	96	98
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	92	85
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	82	72
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	92	104
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	112	95
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	100	88
Surrogate TCMX	%		Org-008	97	1	112	90	22	95	88

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	88	89
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	70	82
Dimethoate	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	90	88
Fenitrothion	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	70	70
Malathion	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	66	77
Parathion	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	114	110
Ronnel	mg/kg	0.1	Org-008	[NT]	15	<0.1	<0.1	0	84	86
Surrogate TCMX	%		Org-008	[NT]	15	88	85	3	92	91

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	08/08/2019	08/08/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	34	92	85	8	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	08/08/2019	08/08/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	51	85	98	14	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date extracted	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	103	90
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	97	1	112	90	22	95	88

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date extracted	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	94	96
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	15	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	15	88	85	3	92	91

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	08/08/2019	08/08/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	34	92	85	8	[NT]	[NT]

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QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	08/08/2019	08/08/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	51	85	98	14	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-9	223302-3
Date prepared	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			07/08/2019	1	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	101	77
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	97	83
Chromium	mg/kg	1	Metals-020	<1	1	14	18	25	102	79
Copper	mg/kg	1	Metals-020	<1	1	35	38	8	96	88
Lead	mg/kg	1	Metals-020	<1	1	19	19	0	100	75
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	0.1	0	101	106
Nickel	mg/kg	1	Metals-020	<1	1	27	28	4	97	81
Zinc	mg/kg	1	Metals-020	<1	1	54	58	7	99	83

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-10	223302-37
Date prepared	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Date analysed	-			[NT]	15	07/08/2019	07/08/2019		07/08/2019	07/08/2019
Arsenic	mg/kg	4	Metals-020	[NT]	15	5	8	46	99	88
Cadmium	mg/kg	0.4	Metals-020	[NT]	15	<0.4	<0.4	0	97	83
Chromium	mg/kg	1	Metals-020	[NT]	15	14	17	19	102	85
Copper	mg/kg	1	Metals-020	[NT]	15	60	73	20	96	77
Lead	mg/kg	1	Metals-020	[NT]	15	61	63	3	99	82
Mercury	mg/kg	0.1	Metals-021	[NT]	15	0.2	0.2	0	101	95
Nickel	mg/kg	1	Metals-020	[NT]	15	8	8	0	96	85
Zinc	mg/kg	1	Metals-020	[NT]	15	130	150	14	99	#

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	34	07/08/2019	07/08/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	34	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	34	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	34	20	15	29	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	34	29	23	23	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	34	16	14	13	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	34	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	34	9	9	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	34	48	36	29	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	07/08/2019	07/08/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	51	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	51	10	8	22	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	51	12	14	15	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	51	13	13	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	51	17	9	62	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	51	24	26	8	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: BTEX in Water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			07/08/2019	[NT]	[NT]	[NT]	[NT]	07/08/2019	[NT]
Date analysed	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	117	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	117	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Surrogate Dibromofluoromethane	%		Org-016	97	[NT]	[NT]	[NT]	[NT]	98	[NT]
Surrogate toluene-d8	%		Org-016	100	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-BFB	%		Org-016	106	[NT]	[NT]	[NT]	[NT]	104	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

Acid Extractable Metals in Soil:

The laboratory RPD acceptance criteria has been exceeded for 223302-51 for Ni. Therefore a triplicate result has been issued as laboratory sample number 223302-61.

Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

TRH Soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike is not possible to report as the high concentration of analytes in sample 223302-9 and 38 have caused interference.

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, samples 223302-11, 16, 26, 30, 42 & 48 are below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

PAHs in Soil - The RPD for duplicate results is accepted due to the non homogenous nature of sample 223302-15.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223302
Date Sample Received	06/08/2019
Date Instructions Received	06/08/2019
Date Results Expected to be Reported	14/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	59 soil, 1 water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	17.3
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	BTEX in Water	On Hold
JKE101-0.04-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE101-0.5-1.1										✓
JKE101-1.4-1.7	✓	✓	✓	✓	✓	✓	✓			
JKE101-1.7-1.9										✓
JKE102-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓		
JKE102-0.3-0.5	✓	✓	✓				✓			
JKE102-1.2-1.6	✓	✓	✓				✓			
JKE102-1.6-2.0	✓	✓	✓				✓			
JKE103-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓		
JKE103-0.1-0.4	✓	✓	✓	✓	✓	✓	✓	✓		
JKE104-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓		
JKE104-0.1-0.3	✓	✓	✓	✓	✓	✓	✓	✓		
JKE104-0.7-1.0	✓	✓	✓	✓	✓	✓	✓	✓		
JKE104-1.5-1.7	✓	✓	✓	✓	✓	✓	✓			
JKE105-0-0.1	✓	✓	✓	✓	✓	✓	✓	✓		
JKE105-0.5-0.95	✓	✓	✓				✓	✓		
JKE106-0.08-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE106-0.5-0.9	✓	✓	✓	✓	✓	✓	✓	✓		
JKE106-1.0-1.2										✓
JKE106-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓		
JKE106-2.5-2.9										✓
JKE106-3.5-4.0										✓
JKE106-4.5-4.7	✓	✓	✓				✓			
JKE107-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE107-0.5-0.95										✓
JKE107-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓		
JKE107-2.5-3.0										✓
JKE107-3.1-3.4										✓
JKE108-0.22-0.4	✓	✓	✓	✓	✓	✓	✓	✓		
JKE108-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓		
JKE108-1.5-1.95										✓
JKE108-2.5-2.9										✓



Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	BTEX in Water	On Hold
JKE108-3.0-3.45	✓	✓	✓	✓	✓	✓	✓			
JKE110-0.04-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE110-0.4-0.6										✓
JKE110-0.6-0.95										✓
JKE110-1.5-1.95	✓	✓	✓	✓	✓	✓	✓	✓		
JKE110-3.0-3.2	✓	✓	✓	✓	✓	✓	✓			
JKE111-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE111-0.5-0.7										✓
JKE111-0.7-0.95										✓
JKE111-1.4-1.7	✓	✓	✓	✓	✓	✓	✓	✓		
JKE111-1.8-2.0	✓	✓	✓	✓	✓	✓	✓			
JKE111-2.0-2.3										✓
JKE111-3.0-3.2	✓	✓	✓	✓	✓	✓	✓			
JKE120-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE120-0.5-0.85										✓
JKE120-0.85-1.1	✓	✓	✓	✓	✓	✓	✓	✓		
JKE120-1.5-1.7	✓	✓	✓	✓	✓	✓	✓			
JKE121-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓		
JKE121-0.4-0.85	✓	✓	✓	✓	✓	✓	✓	✓		
JKE121-1.0-1.2										✓
JKE121-1.5-1.7	✓	✓	✓	✓	✓	✓	✓			
DUPAM101	✓	✓	✓	✓	✓	✓	✓			
DUPAM102	✓	✓	✓	✓	✓	✓	✓			
TB2	✓									
TB3	✓									
TB4	✓									
T1	✓									
FR1									✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 1 of 3	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
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Location:		Sample Preserved In Esky on Ice														
Sampler:		Tests Required														
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHS	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
31/7/19	1	JKE101	0.04-0.2	G,A	0	F: Gravelly Sand			X						X	
	2		0.5-1.1		0	F: Silty clay										
	3		1.4-1.7	↓	0	Silty CLAY			X							
	4	↓	1.7-1.9	G	0	XL Silstone										
	5	JKE102	0.1-0.3	G,A	3	Fragnentary Sand			X						X	
	6		0.3-0.5		57	F: Silty clay	X									
	7		1.2-1.6		120	F: Silty clay	X									
	8	↓	1.6-2.0		41	Silty CLAY	X									
	9	JKE103	0-0.1		0	F: Silty sand			X						X	
	10		0.1-0.4		0	F: Sandy gravel			X						X	
	11	JKE104	0-0.1		0	F: Silty clay			X						X	
	12		0.1-0.3		0	F: Sandy gravel			X						X	
	13		0.7-1.0		1	F: Silty clay			X						X	
↓	14	↓	1.5-1.7		0	Silty CLAY			X							
1/8/19	15	JKE105	0-0.1		0	F: Silty sand			X						X	
	16	↓	0.5-0.95		14	F: Silty clay	X								X	
	17	JKE106	0.08-0.2		0	F: Silty clay sand			X						X	
	18		0.5-0.9		1	F: Silty clay			X						X	
	19		1.0-1.2		0											
	20		1.5-1.95		1				X						X	
	21		2.5-2.9		0											
	22		3.5-4.0		0	↓										
	23	↓	4.5-4.7		3	Silty CLAY	X									
	24	JKE107	0-0.2		0	F: Silty sand			X						X	
↓	25	↓	0.5-0.95	↓	0	F: Silty clay										

Remarks (comments/detection limits required): 	Sample Containers: G - 250mg Glass Jar P - Plastic Bag A - 500mL Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag
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Relinquished By: MD	Date: 6/8/19	Time:	Received By: Ming Yan To Job No: 223302
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ENVIROLAB
 Chatswood NSW 2067
 Ph: (02) 9910 6200

Date Received: 06/08/19
 Time Received: 16:35
 Received by: M7
 Temp: Cool Ambient
 Cooling: Ice/Cool Pack
 Security: Intact/Broken/None

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 2 of 5	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
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Location:		Sample Preserved In Esky on Ice														
Sampler:		Tests Required														
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
	26	JKE107	1.5-1.95	G1A	0	↓			X						X	
	27	↓	2.15-3.0			↓										
	28	↓	3.1-3.4			Silt/CLAY										
	29	JKE108	0.22-0.4			F: silty clayey sand			X						X	
	30	↓	0.5-0.95			f: silty clay			X						X	
	31	↓	1.5-1.95			↓										
	32	↓	2.5-2.9			↓										
↓	33	↓	3.0-3.45			Silty clay			X							
2/18/19	34	JKE110	0.09-0.2			F: silty sand			X						X	
	35	↓	0.4-0.6			↓										
	36	↓	0.6-0.95			F: silty clay										
	37	↓	1.5-1.95			F: silty clay			X						X	
↓	38	↓	3.0-3.2			Silt/CLAY			X							
	39	JKE111	0-0.2			F: sandy gravel			X						X	
	40	↓	0.5-0.7			F: clayey sand										
	41	↓	0.7-0.95			F: silty clay										
	42	↓	1.4-1.7			↓			X						X	
	43	↓	1.8-2.0			F: silty clay sand			X							
	44	↓	2.0-2.3			F: silty clay										
	45	↓	3.0-3.2			Silt/CLAY			X							
2/18/19	46	JKE120	0-0.2			F: silty sand			X						X	
	47	↓	0.5-0.85			F: silty sand										
	48	↓	0.85-1.1			F: silty clay			X						X	
	49	↓	1.5-1.7			Silt/CLAY			X							
↓	50	JKE121	0-0.2		↓	F: silty sand			X						X	

Remarks (comments/detection limits required):

Sample Containers:
 G - 250mg Glass Jar P - Plastic Bag
 A - 500mL Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag

Relinquished By: <i>MD</i>	Date: <i>6/18/19</i>	Time:	Received By:	Date:
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SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 3 of 3	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
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Location:		Liverpool		Sample Preserved in Esky on Ice												
Sampler:		AM		Tests Required												
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
2/8/19	S1	JKE121	0.4-0.85	G/A	U	F: sandy silt/clay			X						X	
↓	S2		1.0-1.2	↓	↓	F: silty clay										
↓	S3		1.5-1.7	↓	↓	Silt/clay			X							
31/7/19	S4	DUPAM10	-	G	-	Soil			X							
1/8/19	S5	DUPAM2	-		-	↓			X							
↓	S6	DUPAM13	-		-	↓			X							
31/7/19	S7	TB2	56-		-	Sand/clay								X		
1/8/19	S8	TB3	57-		-	↓								X		
2/8/19	S9	TB4	58-	↓	-	↓								X		
31/7/19	S10	TS1	59-	Wd	-	Sand								X		
31/7/19	S11	FA1	60-	Wd	-	Water								X		

(Please see DUPAM103 to Environments use)

Remarks (comments/detection limits required):		Sample Containers: G - 250mg Glass Jar P - Plastic Bag A - 500mL Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag	
Relinquished By: <i>MD</i>	Date: <i>6/8/19</i>	Time:	Received By: _____ Date: _____



CERTIFICATE OF ANALYSIS 223661

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	E32465BD, Liverpool
Number of Samples	73 Soil, 2 Water, 1 Material
Date samples received	11/02/2019
Date completed instructions received	12/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	19/08/2019
Date of Issue	19/08/2019
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Asbestos Approved By

Analysed by Asbestos Approved Identifier: Panika Wongchanda, Aida Marnier

Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Diego Bigolin, Team Leader, Inorganics
Jaimie Loa-Kum-Cheung, Metals Supervisor
Loren Bardwell, Senior Chemist
Lucy Zhu, Senior Asbestos Analyst
Nancy Zhang, Laboratory Manager, Sydney
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	94	101	104	102	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	102	108	79	106	99

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	103	69	63	80	75

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	63	89	66	81	76

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	104	111	69	65	77

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	0.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	81	77	88	95	107

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	101	96	101	103	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	108	88	101	87	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	99	106	95	102	103

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	101	103	96	92	96

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	97	95	95	93	100

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		223661-67	223661-69	223661-71	223661-72	223661-73
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108	TB4	TS2
Depth		0.5-0.7	-	-	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	17/08/2019	17/08/2019	17/08/2019	17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	[NA]	[NA]
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	[NA]	[NA]
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	[NA]	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	83%
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	84%
Ethylbenzene	mg/kg	<1	<1	<1	<1	89%
m+p-xylene	mg/kg	<2	<2	<2	<2	89%
o-Xylene	mg/kg	<1	<1	<1	<1	89%
naphthalene	mg/kg	<1	<1	<1	[NA]	[NA]
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	95	98	105	103	102

svTRH (C10-C40) in Soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	14/08/2019	15/08/2019	14/08/2019	14/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	130	<100	130	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	140	<100	170	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	170	<100	110	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	310	<50	270	<50	<50
Surrogate o-Terphenyl	%	88	90	90	88	87

svTRH (C10-C40) in Soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	14/08/2019	15/08/2019	14/08/2019	14/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	280	<100	<100	<100	110
TRH C ₂₉ - C ₃₆	mg/kg	420	<100	120	<100	120
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	66
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	66
TRH >C ₁₆ -C ₃₄	mg/kg	560	<100	170	<100	150
TRH >C ₃₄ -C ₄₀	mg/kg	280	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	830	<50	170	<50	220
Surrogate o-Terphenyl	%	97	87	95	85	91

svTRH (C10-C40) in Soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	14/08/2019	14/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	68	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	420	<100	<100	260	<100
TRH C ₂₉ - C ₃₆	mg/kg	310	<100	<100	<100	140
TRH >C ₁₀ -C ₁₆	mg/kg	50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	630	<100	<100	310	180
TRH >C ₃₄ -C ₄₀	mg/kg	170	<100	<100	<100	170
Total +ve TRH (>C10-C40)	mg/kg	850	<50	<50	310	350
Surrogate o-Terphenyl	%	97	86	86	91	91

svTRH (C10-C40) in Soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	120	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	120	<50
Surrogate o-Terphenyl	%	89	86	88	91	88

svTRH (C10-C40) in Soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	120
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	120
Surrogate o-Terphenyl	%	86	91	90	90	92

svTRH (C10-C40) in Soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	200	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	160	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	320	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	480	<50	<50
Surrogate o-Terphenyl	%	86	86	97	93	90

svTRH (C10-C40) in Soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	85	86	85	85	91

svTRH (C10-C40) in Soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	89	91	91	91

svTRH (C10-C40) in Soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	91	101	89	92	89

svTRH (C10-C40) in Soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	92	90	90	90	89

svTRH (C10-C40) in Soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50	<50	<50
Surrogate o-Terphenyl	%	96	89	89	90	92

svTRH (C10-C40) in Soil				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50
Surrogate o-Terphenyl	%	87	89	88

PAHs in Soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	0.1	<0.1	0.2	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.5	<0.1	0.6	<0.1	<0.1
Pyrene	mg/kg	0.7	<0.1	0.6	<0.1	<0.1
Benzo(a)anthracene	mg/kg	0.3	<0.1	0.3	<0.1	<0.1
Chrysene	mg/kg	0.4	<0.1	0.4	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	0.4	<0.2	0.5	<0.2	<0.2
Benzo(a)pyrene	mg/kg	0.4	<0.05	0.60	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	<0.1	0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	0.2	<0.1	0.2	<0.1	<0.1
Total +ve PAH's	mg/kg	3.1	<0.05	3.5	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	0.6	<0.5	0.7	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	0.6	<0.5	0.7	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	0.6	<0.5	0.8	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	84	89	79	87	93

PAHs in Soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.1	0.2	<0.1
Pyrene	mg/kg	<0.1	<0.1	0.1	0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.1	<0.05	0.2	0.3	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	88	92	85	88	85

PAHs in Soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	0.3	0.2	0.4
Pyrene	mg/kg	<0.1	<0.1	0.3	0.2	0.4
Benzo(a)anthracene	mg/kg	<0.1	<0.1	0.1	<0.1	0.2
Chrysene	mg/kg	<0.1	<0.1	0.2	0.2	0.2
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	0.2	<0.2	0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.3
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	1.1	0.52	1.9
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	87	132	85	100	86

PAHs in Soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	0.4	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	0.6	<0.1	0.2	<0.1
Pyrene	mg/kg	<0.1	0.6	<0.1	0.2	<0.1
Benzo(a)anthracene	mg/kg	<0.1	0.3	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	0.5	<0.1	0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	0.6	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	0.2	<0.1	0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	3.5	<0.05	0.62	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	83	85	79	89	89

PAHs in Soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	91	88	84	88	89

PAHs in Soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	0.07	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	0.2	0.07	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	84	91	91	88	95

PAHs in Soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	1.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.5
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.7
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	4.7
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	88	93	91	89	91

PAHs in Soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	90	93	93	90	91

PAHs in Soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	89	91	88	89	94

PAHs in Soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.1
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	0.1
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	89	84	90	82	98

PAHs in Soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.8
Benzo(a)pyrene	mg/kg	<0.05	0.1	<0.05	<0.05	0.52
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Total +ve PAH's	mg/kg	<0.05	0.1	<0.05	<0.05	4.0
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.7
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.7
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	0.8
Surrogate <i>p</i> -Terphenyl-d14	%	92	85	98	89	84

PAHs in Soil				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	92	89	90

Organochlorine Pesticides in soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	94	87	87	97

Organochlorine Pesticides in soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	93	92	94

Organochlorine Pesticides in soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
TCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	134	86	97	87

Organochlorine Pesticides in soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	93	85	90	92

Organochlorine Pesticides in soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	92	93	90

Organochlorine Pesticides in soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	90	85	97

Organochlorine Pesticides in soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	91	88	89	91

Organochlorine Pesticides in soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	90	91	90	90

Organochlorine Pesticides in soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
TCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	93	91	83	91

Organochlorine Pesticides in soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	90	95	87	97

Organochlorine Pesticides in soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	86	93	91	91

Organochlorine Pesticides in soil				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	92	89

Organophosphorus Pesticides						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	94	87	87	97

Organophosphorus Pesticides						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	93	92	94

Organophosphorus Pesticides						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	134	86	97	87

Organophosphorus Pesticides						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	93	85	90	92

Organophosphorus Pesticides						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	92	93	90

Organophosphorus Pesticides						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	90	85	97

Organophosphorus Pesticides						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	91	88	89	91

Organophosphorus Pesticides						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	90	91	90	90

Organophosphorus Pesticides						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	93	91	83	91

Organophosphorus Pesticides						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyriphos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	90	95	87	97

Organophosphorus Pesticides						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	86	93	91	91

Organophosphorus Pesticides				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	92	89

PCBs in Soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	85	94	87	87	97

PCBs in Soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	96	93	92	94

PCBs in Soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	88	134	86	97	87

PCBs in Soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	93	85	90	92

PCBs in Soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	92	93	90

PCBs in Soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	92	90	85	97

PCBs in Soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	89	91	88	89	91

PCBs in Soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	90	91	90	90

PCBs in Soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	91	93	91	83	91

PCBs in Soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	96	90	95	87	97

PCBs in Soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	94	86	93	91	91

PCBs in Soil				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	86	92	89

Acid Extractable metals in soil						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	7	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	13	17	9	12
Copper	mg/kg	34	8	41	7	5
Lead	mg/kg	16	15	250	20	11
Mercury	mg/kg	<0.1	<0.1	<0.1	0.2	<0.1
Nickel	mg/kg	8	3	13	3	2
Zinc	mg/kg	47	8	130	16	7

Acid Extractable metals in soil						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	5	4	4	4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	14	12	14	9
Copper	mg/kg	74	9	25	22	13
Lead	mg/kg	27	22	39	32	15
Mercury	mg/kg	0.2	<0.1	0.1	0.1	<0.1
Nickel	mg/kg	7	5	9	5	7
Zinc	mg/kg	120	30	71	26	29

Acid Extractable metals in soil						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	8	<4	4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	25	12	10	13	14
Copper	mg/kg	43	5	41	30	25
Lead	mg/kg	22	13	44	33	33
Mercury	mg/kg	<0.1	<0.1	0.2	0.1	<0.1
Nickel	mg/kg	6	2	23	24	15
Zinc	mg/kg	70	8	80	56	57

Acid Extractable metals in soil						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	4	5	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	14	12	7	24	13
Copper	mg/kg	15	34	4	20	8
Lead	mg/kg	28	100	7	28	12
Mercury	mg/kg	0.2	1.4	<0.1	<0.1	<0.1
Nickel	mg/kg	14	6	<1	9	4
Zinc	mg/kg	37	110	3	40	17

Acid Extractable metals in soil						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	13	11	10	11
Copper	mg/kg	3	51	24	4	48
Lead	mg/kg	11	4	14	9	4
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	4	62	29	2	64
Zinc	mg/kg	5	33	28	4	31

Acid Extractable metals in soil						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	00.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	5	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	12	11	10	5	10
Copper	mg/kg	21	6	49	3	48
Lead	mg/kg	58	9	2	4	2
Mercury	mg/kg	0.3	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	67	1	59
Zinc	mg/kg	57	6	33	2	29

Acid Extractable metals in soil						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	10	11	7	25	9
Copper	mg/kg	17	4	68	23	4
Lead	mg/kg	7	10	1	3	8
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	24	3	76	43	2
Zinc	mg/kg	23	6	34	18	4

Acid Extractable metals in soil						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	16	6	30	5
Copper	mg/kg	66	27	58	37	73
Lead	mg/kg	2	4	1	2	1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	80	39	73	66	53
Zinc	mg/kg	34	19	31	25	27

Acid Extractable metals in soil						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	9	6	45	6	9
Copper	mg/kg	28	93	2	63	30
Lead	mg/kg	2	2	4	2	2
Mercury	mg/kg	<0.1	0.2	<0.1	<0.1	<0.1
Nickel	mg/kg	35	64	24	63	50
Zinc	mg/kg	16	41	3	29	21

Acid Extractable metals in soil						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	<4	7
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	7	6	5	10	16
Copper	mg/kg	11	<1	4	40	12
Lead	mg/kg	8	4	4	1	49
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Nickel	mg/kg	13	<1	<1	80	5
Zinc	mg/kg	21	1	2	30	86

Acid Extractable metals in soil						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	4	<4	5
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	9	11	7	14
Copper	mg/kg	5	16	6	5	21
Lead	mg/kg	10	26	16	7	51
Mercury	mg/kg	<0.1	0.1	<0.1	<0.1	0.2
Nickel	mg/kg	1	9	3	1	7
Zinc	mg/kg	5	63	10	4	57

Acid Extractable metals in soil						
Our Reference		223661-67	223661-69	223661-71	223661-77	223661-78
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108	JKE117 - [TRIPLICATE]	JKE123 - [TRIPLICATE]
Depth		0.5-0.7	-	-	0-0.2	0.8-0.95
Date Sampled		08/08/2019	05/08/2019	09/08/2019	05/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Arsenic	mg/kg	<4	<4	<4	6	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	8	7	5	12	7
Copper	mg/kg	4	4	60	42	3
Lead	mg/kg	8	8	1	26	6
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	2	1	56	7	3
Zinc	mg/kg	3	4	25	63	4

Acid Extractable metals in soil		
Our Reference		223661-79
Your Reference	UNITS	JKE127 - [TRIPLICATE]
Depth		0.3-0.5
Date Sampled		07/08/2019
Type of sample		Soil
Date prepared	-	14/08/2019
Date analysed	-	14/08/2019
Arsenic	mg/kg	<4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	9
Copper	mg/kg	10
Lead	mg/kg	8
Mercury	mg/kg	<0.1
Nickel	mg/kg	14
Zinc	mg/kg	19

Moisture						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-8
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE112
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	1.3-1.5
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	10	18	16	17	20

Moisture						
Our Reference		223661-9	223661-11	223661-12	223661-13	223661-15
Your Reference	UNITS	JKE113	JKE114	JKE115	JKE115	JKE116
Depth		0-0.2	0-0.2	0-0.2	0.2-0.4	0-0.2
Date Sampled		07/08/2019	06/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	20	10	17	16	2.1

Moisture						
Our Reference		223661-17	223661-18	223661-19	223661-21	223661-22
Your Reference	UNITS	JKE117	JKE117	JKE118	JKE119	JKE122
Depth		0-0.2	0.4-0.6	0-0.2	0-0.2	0.04-0.2
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	5.2	19	5.4	3.7	13

Moisture						
Our Reference		223661-23	223661-24	223661-25	223661-26	223661-27
Your Reference	UNITS	JKE122	JKE122	JKE122	JKE123	JKE123
Depth		0.5-0.8	0.8-1.0	1.5-1.95	0.03-0.2	0.5-0.8
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	18	16	15	8.5	18

Moisture						
Our Reference		223661-28	223661-29	223661-30	223661-32	223661-33
Your Reference	UNITS	JKE123	JKE124	JKE124	JKE124	JKE125
Depth		0.8-0.95	0.05-0.2	0.2-0.3	0.6-0.95	0.05-0.2
Date Sampled		06/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	13	5.4	8.7	19	7.0

Moisture						
Our Reference		223661-35	223661-36	223661-37	223661-39	223661-40
Your Reference	UNITS	JKE125	JKE125	JKE126	JKE126	JKE127
Depth		0.4-0.7	0.7-0.95	0.08-0.2	0.5-0.95	0.06-0.3
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	14	18	2.6	12	4.4

Moisture						
Our Reference		223661-41	223661-42	223661-43	223661-44	223661-45
Your Reference	UNITS	JKE127	JKE127	JKE128	JKE128	JKE128
Depth		0.3-0.5	0.6-0.95	0.08-0.2	0.3-0.4	0.4-0.6
Date Sampled		07/08/2019	07/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	9.4	17	5.7	8.1	9.8

Moisture						
Our Reference		223661-46	223661-47	223661-48	223661-49	223661-50
Your Reference	UNITS	JKE129	JKE129	JKE130	JKE130	JKE131
Depth		0.09-0.25	0.25-0.3	0.07-0.2	0.2-0.25	0.07-0.2
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	2.1	9.6	3.3	4.2	2.4

Moisture						
Our Reference		223661-51	223661-52	223661-53	223661-54	223661-55
Your Reference	UNITS	JKE131	JKE132	JKE132	JKE133	JKE133
Depth		0.2-0.3	0.08-0.15	0.15-0.3	0.08-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	5.8	3.9	10	3.2	5.7

Moisture						
Our Reference		223661-56	223661-57	223661-58	223661-59	223661-61
Your Reference	UNITS	JKE134	JKE134	JKE134	JKE135	JKE135
Depth		0-0.2	0.5-0.95	1.5-1.7	0.05-0.25	0.4-0.6
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	5.1	2.7	12	3.6	13

Moisture						
Our Reference		223661-62	223661-63	223661-64	223661-65	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE136	JKE137
Depth		1.5-1.7	0-0.2	0.4-0.8	1.5-1.7	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Moisture	%	11	11	15	19	10

Moisture				
Our Reference		223661-67	223661-69	223661-71
Your Reference	UNITS	JKE137	DUPAM104	DUPAM108
Depth		0.5-0.7	-	-
Date Sampled		08/08/2019	05/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019
Moisture	%	13	12	2.6

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-1	223661-3	223661-6	223661-7	223661-9
Your Reference	UNITS	JKE109	JKE109	JKE112	JKE112	JKE113
Depth		0.045-0.2	0.6-0.95	0-0.02	0.5-0.95	0-0.2
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	663.65	499.34	641.55	545.44	378.57
Sample Description	-	Grey sandy soil & rocks	Brown clayey soil & rocks	Brown coarse-grained soil & rocks	Brown clayey soil & rocks	Brown fine-grained soil & debris
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected Synthetic mineral fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-11	223661-12	223661-13	223661-15	223661-17
Your Reference	UNITS	JKE114	JKE115	JKE115	JKE116	JKE117
Depth		0-0.2	0-0.2	0.2-0.4	0-0.2	0-0.2
Date Sampled		06/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	652.62	537.09	444.62	791	754.22
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg	No asbestos detected at reporting limit of 0.1g/kg
		Organic fibres detected	Organic fibres detected	Organic fibres detected	Organic fibres detected	Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-19	223661-21	223661-22	223661-23	223661-24
Your Reference	UNITS	JKE118	JKE119	JKE122	JKE122	JKE122
Depth		0-0.2	0-0.2	0.04-0.2	0.5-0.8	0.8-1.0
Date Sampled		06/08/2019	06/08/2019	06/08/2019	06/08/2019	06/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	863.27	997.04	643.06	798.25	551.57
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks	Brown sandy soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-26	223661-27	223661-29	223661-30	223661-33
Your Reference	UNITS	JKE123	JKE123	JKE124	JKE124	JKE125
Depth		0.03-0.2	0.5-0.8	0.05-0.2	0.2-0.3	0.05-0.2
Date Sampled		06/08/2019	06/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	812.47	536.28	1,001.34	743.82	861.11
Sample Description	-	Brown sandy soil & rocks	Brown clayey soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-35	223661-37	223661-40	223661-41	223661-43
Your Reference	UNITS	JKE125	JKE126	JKE127	JKE127	JKE128
Depth		0.4-0.7	0.08-0.2	0.06-0.3	0.3-0.5	0.08-0.2
Date Sampled		07/08/2019	07/08/2019	07/08/2019	07/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	473.83	1,072.09	967.78	645.31	908.55
Sample Description	-	Brown clayey soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Peach sandy soil & rocks	Grey coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-44	223661-46	223661-48	223661-50	223661-51
Your Reference	UNITS	JKE128	JKE129	JKE130	JKE131	JKE131
Depth		0.3-0.4	0.09-0.25	0.07-0.2	0.07-0.2	0.2-0.3
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	710.84	920.55	921.86	891.89	699.37
Sample Description	-	Brown coarse-grained soil & rocks	Grey coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001						
Our Reference		223661-52	223661-54	223661-56	223661-57	223661-59
Your Reference	UNITS	JKE132	JKE133	JKE134	JKE134	JKE135
Depth		0.08-0.15	0.08-0.2	0-0.2	0.5-0.95	0.05-0.25
Date Sampled		09/08/2019	09/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	1,158.41	1,088.38	788.35	942.46	1,022.15
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown sandy soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001					
Our Reference		223661-61	223661-63	223661-64	223661-66
Your Reference	UNITS	JKE135	JKE136	JKE136	JKE137
Depth		0.4-0.6	0-0.2	0.4-0.8	0.04-0.2
Date Sampled		08/08/2019	08/08/2019	08/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Sample mass tested	g	704.78	599.06	437.68	739.61
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	Chrysotile asbestos detected Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos#1	g/kg	<0.1	0.3727	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	See Above	No visible asbestos detected	Chrysotile
ACM >7mm Estimation*	g	-	-	-	-
FA and AF Estimation*	g	-	0.2233	-	0.0632
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	0.0373	<0.001	0.0085

Misc Inorg - Soil				
Our Reference		223661-1	223661-12	223661-56
Your Reference	UNITS	JKE109	JKE115	JKE134
Depth		0.045-0.2	0-0.2	0-0.2
Date Sampled		05/08/2019	05/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	15/08/2019	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019
pH 1:5 soil:water	pH Units	10.5	7.5	7.3

CEC				
Our Reference		223661-1	223661-12	223661-56
Your Reference	UNITS	JKE109	JKE115	JKE134
Depth		0.045-0.2	0-0.2	0-0.2
Date Sampled		05/08/2019	05/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	15/08/2019	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019
Exchangeable Ca	meq/100g	87	31	5.8
Exchangeable K	meq/100g	0.7	0.5	0.3
Exchangeable Mg	meq/100g	0.49	2.0	1.8
Exchangeable Na	meq/100g	0.15	<0.1	<0.1
Cation Exchange Capacity	meq/100g	88	33	8.0

Clay 50-120g				
Our Reference		223661-1	223661-12	223661-56
Your Reference	UNITS	JKE109	JKE115	JKE134
Depth		0.045-0.2	0-0.2	0-0.2
Date Sampled		05/08/2019	05/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil
Date prepared	-	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019
Clay in soils <2µm	% (w/w)	3	10	8

Asbestos ID - materials		
Our Reference		223661-76
Your Reference	UNITS	AMF1
Depth		-
Date Sampled		08/08/2019
Type of sample		Material
Date analysed	-	14/08/2019
Mass / Dimension of Sample	-	45x30x5mm
Sample Description	-	White fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected

BTEX in Water			
Our Reference		223661-74	223661-75
Your Reference	UNITS	FRAM101	FRRK1
Depth		-	-
Date Sampled		06/08/2019	09/08/2019
Type of sample		Water	Water
Date extracted	-	14/08/2019	14/08/2019
Date analysed	-	15/08/2019	15/08/2019
Benzene	µg/L	<1	<1
Toluene	µg/L	<1	1
Ethylbenzene	µg/L	<1	<1
m+p-xylene	µg/L	<2	<2
o-xylene	µg/L	<1	<1
Surrogate Dibromofluoromethane	%	104	114
Surrogate toluene-d8	%	98	100
Surrogate 4-BFB	%	99	99

Method ID	Methodology Summary
AS1289.3.6.3	Determination Particle Size Analysis using AS1289.3.6.3 and AS1289.3.6.1 and in house method INORG-107. Clay fraction at <2µm reported.
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004. Results reported denoted with * are outside our scope of NATA accreditation. NOTE #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF) NOTE #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres. Estimation = Estimated asbestos weight Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.

Method ID	Methodology Summary
Org-003	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p> <p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>
Org-005	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.</p>
Org-005	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.</p> <p>Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.</p>
Org-006	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.</p>
Org-006	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.</p> <p>Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.</p>
Org-008	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.</p>
Org-012	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.</p> <p>For soil results:-</p> <ol style="list-style-type: none"> 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. <p>Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.</p>
Org-014	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.</p>
Org-016	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p>
Org-016	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			16/08/2019	1	16/08/2019	16/08/2019		16/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	<25	1	<25	<25	0	104	115
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	1	<25	<25	0	104	115
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	98	110
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	103	113
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	107	117
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	107	117
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	107	121
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	108	1	94	109	15	100	105

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	16/08/2019	16/08/2019		17/08/2019	16/08/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	17	<25	<25	0	115	116
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	17	<25	<25	0	115	116
Benzene	mg/kg	0.2	Org-016	[NT]	17	<0.2	<0.2	0	111	107
Toluene	mg/kg	0.5	Org-016	[NT]	17	<0.5	<0.5	0	112	111
Ethylbenzene	mg/kg	1	Org-016	[NT]	17	<1	<1	0	117	121
m+p-xylene	mg/kg	2	Org-016	[NT]	17	<2	<2	0	117	122
o-Xylene	mg/kg	1	Org-016	[NT]	17	<1	<1	0	120	121
naphthalene	mg/kg	1	Org-014	[NT]	17	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	17	103	65	45	104	108

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	16/08/2019	16/08/2019		17/08/2019	17/08/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	28	<25	<25	0	114	90
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	28	<25	<25	0	114	90
Benzene	mg/kg	0.2	Org-016	[NT]	28	<0.2	<0.2	0	112	85
Toluene	mg/kg	0.5	Org-016	[NT]	28	<0.5	<0.5	0	114	88
Ethylbenzene	mg/kg	1	Org-016	[NT]	28	<1	<1	0	115	90
m+p-xylene	mg/kg	2	Org-016	[NT]	28	<2	<2	0	114	93
o-Xylene	mg/kg	1	Org-016	[NT]	28	<1	<1	0	118	92
naphthalene	mg/kg	1	Org-014	[NT]	28	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	28	104	92	12	99	83

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QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	17/08/2019	17/08/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	41	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	41	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	41	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	41	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	41	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	41	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	41	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	41	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	41	101	100	1	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	17/08/2019	17/08/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	51	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	51	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	51	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	51	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	51	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	51	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	51	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	51	99	96	3	[NT]	[NT]

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	17/08/2019	17/08/2019		[NT]	[NT]
TRH C ₆ - C ₉	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	[NT]	62	<25	<25	0	[NT]	[NT]
Benzene	mg/kg	0.2	Org-016	[NT]	62	<0.2	<0.2	0	[NT]	[NT]
Toluene	mg/kg	0.5	Org-016	[NT]	62	<0.5	<0.5	0	[NT]	[NT]
Ethylbenzene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
m+p-xylene	mg/kg	2	Org-016	[NT]	62	<2	<2	0	[NT]	[NT]
o-Xylene	mg/kg	1	Org-016	[NT]	62	<1	<1	0	[NT]	[NT]
naphthalene	mg/kg	1	Org-014	[NT]	62	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	[NT]	62	97	98	1	[NT]	[NT]

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QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	15/08/2019	15/08/2019		14/08/2019	14/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	1	<50	<50	0	97	84
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	1	<100	<100	0	101	94
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	1	130	110	17	100	96
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	1	<50	<50	0	97	84
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	1	140	130	7	101	94
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	1	170	150	12	100	96
Surrogate o-Terphenyl	%		Org-003	89	1	88	89	1	98	91

QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	15/08/2019	15/08/2019		15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	17	68	<50	31	95	120
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	17	420	170	85	101	119
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	17	310	220	34	100	93
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	17	50	<50	0	95	120
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	17	630	320	65	101	119
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	17	170	150	12	100	93
Surrogate o-Terphenyl	%		Org-003	[NT]	17	97	93	4	94	104

QUALITY CONTROL: svTRH (C10-C40) in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	15/08/2019	15/08/2019		15/08/2019	15/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	28	<50	<50	0	109	91
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	28	<100	<100	0	97	97
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	28	<100	<100	0	113	96
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	28	<50	<50	0	109	91
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	28	<100	<100	0	97	97
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	28	<100	<100	0	113	96
Surrogate o-Terphenyl	%		Org-003	[NT]	28	86	95	10	97	95

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QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	15/08/2019	15/08/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	41	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	41	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	41	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	41	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	41	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	41	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	41	85	85	0	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	15/08/2019	15/08/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	51	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	51	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	51	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	51	91	91	0	[NT]	[NT]

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	15/08/2019	15/08/2019		[NT]	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	[NT]	62	<50	<50	0	[NT]	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	[NT]	62	<100	<100	0	[NT]	[NT]
Surrogate o-Terphenyl	%		Org-003	[NT]	62	96	90	6	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	104	102
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	116	96
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.1	0	98	100
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	0.5	0.5	0	88	102
Pyrene	mg/kg	0.1	Org-012	<0.1	1	0.7	0.7	0	96	106
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	0.3	0.3	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	0.4	0.4	0	118	129
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	0.4	0.5	22	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	0.4	0.3	29	124	110
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	0.1	0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	0.2	0.2	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	91	1	84	90	7	78	77

QUALITY CONTROL: PAHs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Naphthalene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	108	105
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	116	107
Phenanthrene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	106	99
Anthracene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	90	87
Pyrene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	96	89
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	124	119
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	17	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	17	<0.05	<0.05	0	80	85
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	17	87	87	0	78	72

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QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Naphthalene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	100	101
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	126	114
Phenanthrene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	92	90
Anthracene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	96	92
Pyrene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	96	92
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	122	125
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	28	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	28	<0.05	<0.05	0	118	119
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	28	91	90	1	78	74

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	41	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	41	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	41	88	92	4	[NT]	[NT]

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QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	51	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	51	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	51	89	88	1	[NT]	[NT]

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Naphthalene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Phenanthrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Pyrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	[NT]	62	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	[NT]	62	<0.05	<0.05	0	[NT]	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	[NT]	62	92	88	4	[NT]	[NT]

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QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	87
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	86	92
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	90
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	112	100
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	116	95
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	108	105
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	114	108
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	108	102
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	104	100
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	72	93
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	96	1	85	92	8	82	88

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QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
HCB	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	92	97
gamma-BHC	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	99	101
Heptachlor	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	96	96
delta-BHC	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	99	96
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	100	101
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	108	103
Dieldrin	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	118	114
Endrin	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	105	101
pp-DDD	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	94	106
Endosulfan II	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	90	99
Methoxychlor	mg/kg	0.1	Org-005	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	17	88	95	8	91	93

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
HCB	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	88	88
gamma-BHC	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	94	90
Heptachlor	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	76	69
delta-BHC	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	114	95
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	116	107
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	108	97
Dieldrin	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	128	116
Endrin	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	94	88
pp-DDD	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	104	93
Endosulfan II	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	95	71
Methoxychlor	mg/kg	0.1	Org-005	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	28	91	92	1	82	78

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	41	89	92	3	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	51	91	91	0	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
HCB	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
gamma-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
delta-BHC	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
gamma-Chlordane	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dieldrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endrin	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Methoxychlor	mg/kg	0.1	Org-005	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	[NT]	62	94	90	4	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	104	102
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	92	100
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	98	92
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	92	80
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	112	98
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	114	116
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	100	110
Surrogate TCMX	%		Org-008	96	1	85	92	8	82	79

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	108	99
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	88	79
Dimethoate	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	92	93
Fenitrothion	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	90	83
Malathion	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	100	101
Parathion	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	136	123
Ronnel	mg/kg	0.1	Org-008	[NT]	17	<0.1	<0.1	0	108	101
Surrogate TCMX	%		Org-008	[NT]	17	88	95	8	82	79

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	116	99
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	96	120
Dimethoate	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	108	95
Fenitrothion	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	114	95
Malathion	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	96	112
Parathion	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	126	118
Ronnel	mg/kg	0.1	Org-008	[NT]	28	<0.1	<0.1	0	106	97
Surrogate TCMX	%		Org-008	[NT]	28	91	92	1	82	78

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	41	89	92	3	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	51	91	91	0	[NT]	[NT]

QUALITY CONTROL: Organophosphorus Pesticides				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Fenitrothion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Malathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-008	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-008	[NT]	62	94	90	4	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date extracted	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	70	80
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	96	1	85	92	8	82	79

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date extracted	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	120	100
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	17	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	17	88	95	8	82	79

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date extracted	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	110	90
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	28	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	28	91	92	1	82	78

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	41	89	92	3	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	51	91	91	0	[NT]	[NT]

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Aroclor 1016	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1260	mg/kg	0.1	Org-006	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	[NT]	62	94	90	4	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	223661-3
Date prepared	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			14/08/2019	1	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	100	84
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	95	81
Chromium	mg/kg	1	Metals-020	<1	1	13	13	0	102	84
Copper	mg/kg	1	Metals-020	<1	1	34	26	27	97	110
Lead	mg/kg	1	Metals-020	<1	1	16	21	27	99	85
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	101	100
Nickel	mg/kg	1	Metals-020	<1	1	8	8	0	93	85
Zinc	mg/kg	1	Metals-020	<1	1	47	47	0	99	102

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-4	223661-29
Date prepared	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	17	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Arsenic	mg/kg	4	Metals-020	[NT]	17	8	5	46	102	71
Cadmium	mg/kg	0.4	Metals-020	[NT]	17	<0.4	<0.4	0	96	71
Chromium	mg/kg	1	Metals-020	[NT]	17	25	11	78	106	76
Copper	mg/kg	1	Metals-020	[NT]	17	43	48	11	100	91
Lead	mg/kg	1	Metals-020	[NT]	17	22	18	20	102	70
Mercury	mg/kg	0.1	Metals-021	[NT]	17	<0.1	<0.1	0	110	116
Nickel	mg/kg	1	Metals-020	[NT]	17	6	5	18	96	85
Zinc	mg/kg	1	Metals-020	[NT]	17	70	53	28	105	70

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-5	223661-52
Date prepared	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Date analysed	-			[NT]	28	14/08/2019	14/08/2019		14/08/2019	14/08/2019
Arsenic	mg/kg	4	Metals-020	[NT]	28	<4	<4	0	98	78
Cadmium	mg/kg	0.4	Metals-020	[NT]	28	<0.4	<0.4	0	92	74
Chromium	mg/kg	1	Metals-020	[NT]	28	9	6	40	100	80
Copper	mg/kg	1	Metals-020	[NT]	28	3	3	0	95	76
Lead	mg/kg	1	Metals-020	[NT]	28	11	3	114	100	72
Mercury	mg/kg	0.1	Metals-021	[NT]	28	<0.1	<0.1	0	96	#
Nickel	mg/kg	1	Metals-020	[NT]	28	4	2	67	92	#
Zinc	mg/kg	1	Metals-020	[NT]	28	5	3	50	96	#

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	41	14/08/2019	14/08/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	41	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	41	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	41	10	9	11	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	41	17	8	72	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	41	7	9	25	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	41	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	41	24	12	67	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	41	23	21	9	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	51	14/08/2019	14/08/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	51	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	51	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	51	9	10	11	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	51	28	26	7	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	51	2	2	0	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	51	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	51	35	40	13	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	51	16	18	12	[NT]	[NT]

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date prepared	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Date analysed	-			[NT]	62	14/08/2019	14/08/2019		[NT]	[NT]
Arsenic	mg/kg	4	Metals-020	[NT]	62	<4	<4	0	[NT]	[NT]
Cadmium	mg/kg	0.4	Metals-020	[NT]	62	<0.4	<0.4	0	[NT]	[NT]
Chromium	mg/kg	1	Metals-020	[NT]	62	8	9	12	[NT]	[NT]
Copper	mg/kg	1	Metals-020	[NT]	62	5	6	18	[NT]	[NT]
Lead	mg/kg	1	Metals-020	[NT]	62	10	11	10	[NT]	[NT]
Mercury	mg/kg	0.1	Metals-021	[NT]	62	<0.1	<0.1	0	[NT]	[NT]
Nickel	mg/kg	1	Metals-020	[NT]	62	1	1	0	[NT]	[NT]
Zinc	mg/kg	1	Metals-020	[NT]	62	5	4	22	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Misc Inorg - Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	102	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: CEC				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/08/2019	12	15/08/2019	15/08/2019		15/08/2019	[NT]
Date analysed	-			15/08/2019	12	15/08/2019	15/08/2019		15/08/2019	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	12	31	29	7	101	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	12	0.5	0.5	0	90	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	12	2.0	1.9	5	96	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	12	<0.1	<0.1	0	88	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: BTEX in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			14/08/2019	[NT]	[NT]	[NT]	[NT]	14/08/2019	[NT]
Date analysed	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	102	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Surrogate Dibromofluoromethane	%		Org-016	106	[NT]	[NT]	[NT]	[NT]	103	[NT]
Surrogate toluene-d8	%		Org-016	98	[NT]	[NT]	[NT]	[NT]	101	[NT]
Surrogate 4-BFB	%		Org-016	102	[NT]	[NT]	[NT]	[NT]	98	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, samples 223661-35,64 are below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

Acid Extractable Metals in Soil:

The laboratory RPD acceptance criteria has been exceeded for 223661-17 for Cr. Therefore a triplicate result has been issued as laboratory sample number 223661-77.

The laboratory RPD acceptance criteria has been exceeded for 223661-28 for Pb. Therefore a triplicate result has been issued as laboratory sample number 223661-78.

The laboratory RPD acceptance criteria has been exceeded for 223661-41 for Cu and Ni. Therefore a triplicate result has been issued as laboratory sample number 223661-79.

Percent recovery is not possible to report due to the inhomogeneous nature of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

TRH Soil C10-C40 NEPM - The RPD for duplicate results is accepted due to the non homogenous nature of sample 223661-17.

BTEX in Water - Only 1 vial supplied for analysis. Envirolab recommends that two 40mL VOA vials preserved with Hydrochloric Acid (HCl) or similar is supplied for the analysis of VOC/BTEX.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223661
Date Sample Received	11/02/2019
Date Instructions Received	12/08/2019
Date Results Expected to be Reported	19/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	73 Soil, 2 Water, 1 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.1
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Clay 50-120g	Asbestos ID - materials	BTEX in Water	On Hold
JKE109-0.045-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
JKE109-0.4-0.6														✓
JKE109-0.6-0.95	✓	✓	✓	✓	✓	✓	✓	✓						
JKE109-1.6-1.95														✓
JKE109-3.0-3.2														✓
JKE112-0-0.02	✓	✓	✓	✓	✓	✓	✓	✓						
JKE112-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓						
JKE112-1.3-1.5	✓	✓	✓	✓	✓	✓	✓							
JKE113-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE113-0.2-0.3														✓
JKE114-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE115-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
JKE115-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓						
JKE115-0.9-1.1														✓
JKE116-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE116-0.6-0.8														✓
JKE117-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE117-0.4-0.6	✓	✓	✓	✓	✓	✓	✓							
JKE118-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE118-1.0-1.5														✓
JKE119-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE122-0.04-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE122-0.5-0.8	✓	✓	✓	✓	✓	✓	✓	✓						
JKE122-0.8-1.0	✓	✓	✓	✓	✓	✓	✓	✓						
JKE122-1.5-1.95	✓	✓	✓	✓	✓	✓	✓							
JKE123-0.03-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE123-0.5-0.8	✓	✓	✓	✓	✓	✓	✓	✓						
JKE123-0.8-0.95	✓	✓	✓	✓	✓	✓	✓							
JKE124-0.05-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE124-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓						
JKE124-0.3-0.5														✓
JKE124-0.6-0.95	✓	✓	✓	✓	✓	✓	✓							



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Clay 50-120g	Asbestos ID - materials	BTEX in Water	On Hold
JKE125-0.05-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE125-0.2-0.4														✓
JKE125-0.4-0.7	✓	✓	✓	✓	✓	✓	✓	✓						
JKE125-0.7-0.95	✓	✓	✓	✓	✓	✓	✓							
JKE126-0.08-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE126-0.3-0.5														✓
JKE126-0.5-0.95	✓	✓	✓	✓	✓	✓	✓							
JKE127-0.06-0.3	✓	✓	✓	✓	✓	✓	✓	✓						
JKE127-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓						
JKE127-0.6-0.95	✓	✓	✓	✓	✓	✓	✓							
JKE128-0.08-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE128-0.3-0.4	✓	✓	✓	✓	✓	✓	✓	✓						
JKE128-0.4-0.6	✓	✓	✓	✓	✓	✓	✓							
JKE129-0.09-0.25	✓	✓	✓	✓	✓	✓	✓	✓						
JKE129-0.25-0.3	✓	✓	✓	✓	✓	✓	✓							
JKE130-0.07-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE130-0.2-0.25	✓	✓	✓	✓	✓	✓	✓							
JKE131-0.07-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE131-0.2-0.3	✓	✓	✓	✓	✓	✓	✓	✓						
JKE132-0.08-0.15	✓	✓	✓	✓	✓	✓	✓	✓						
JKE132-0.15-0.3	✓	✓	✓	✓	✓	✓	✓							
JKE133-0.08-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE133-0.2-0.3	✓	✓	✓	✓	✓	✓	✓							
JKE134-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓			
JKE134-0.5-0.95	✓	✓	✓	✓	✓	✓	✓	✓						
JKE134-1.5-1.7	✓	✓	✓	✓	✓	✓	✓							
JKE135-0.05-0.25	✓	✓	✓	✓	✓	✓	✓	✓						
JKE135-0.25-0.4														✓
JKE135-0.4-0.6	✓	✓	✓	✓	✓	✓	✓	✓						
JKE135-1.5-1.7	✓	✓	✓	✓	✓	✓	✓							
JKE136-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE136-0.4-0.8	✓	✓	✓	✓	✓	✓	✓	✓						



Sample ID	VTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	Misc Inorg - Soil	CEC	Clay 50-120g	Asbestos ID - materials	BTEX in Water	On Hold
JKE136-1.5-1.7	✓	✓	✓	✓	✓	✓	✓							
JKE137-0.04-0.2	✓	✓	✓	✓	✓	✓	✓	✓						
JKE137-0.5-0.7	✓	✓	✓	✓	✓	✓	✓							
JKE137-0.7-0.95														✓
DUPAM104	✓	✓	✓	✓	✓	✓	✓							
DUPAM105														✓
DUPAM108	✓	✓	✓	✓	✓	✓	✓							
TB4	✓													
TS2	✓													
FRAM101													✓	
FRRK1													✓	
AMF1												✓		

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job <u>E32465BD</u> Number: Date Results <u>STANDARD</u> Required: Page: <u>1</u>	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: <u>Mitchell Delaney</u>
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Location:	Liverpool	Sample Preserved in Esky on Ice
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Sampler:	AM	Tests Required
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Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Asbestos (500ml Sample) pH, CEC and clay content	BTEX										
5.8.19	1	JKE109	0.045-0.2	G, A	0	Fill: Gravelly Sand	X	X	X										
5.8.19	2	JKE109	0.4-0.6	G, A	0	Fill: Gravelly Sand													
5.8.19	3	JKE109	0.6-0.95	G, A	0	Fill: Silty Clay	X	X											
5.8.19	4	JKE109	1.6-1.95	G, A	0	Fill: Silty Clay													
5.8.19	5	JKE109	3.0-3.2	G, A	0	Silty Clay													
5.8.19	6	JKE112	0-0.2	G, A	0	Fill: Silty Clay	X	X											
5.8.19	7	JKE112	0.5-0.95	G, A	0	Fill: Silty Clay	X	X											
5.8.19	8	JKE112	1.3-1.5	G, A	0	Silty Clay	X												
7.8.19	9	JKE113	0-0.2	G, A	0	Fill: Silty Sand	X	X											
7.8.19	10	JKE113	0.2-0.3	G, A	0	Fill: Silty Clay													
6.8.19	11	JKE114	0-0.2	G, A	0	Fill: Silty Clay	X	X											
5.8.19	12	JKE115	0-0.2	G, A	0	Fill: Sandy Gravel	X	X	X										
5.8.19	13	JKE115	0.2-0.4	G, A	0	Fill: Silty Clay	X	X											
5.8.19	14	JKE115	0.9-1.1	G, A	0	Silty Clay													
5.8.19	15	JKE116	0-0.2	G, A	0	Fill: Sandy Gravel	X	X											
5.8.19	16	JKE116	0.6-0.8	G, A	0	Silty Clay													
5.8.19	17	JKE117	0-0.2	G, A	0	Fill: Sandy Gravel	X	X											
5.8.19	18	JKE117	0.4-0.6	G, A	0	Silty Clay	X												
6.8.19	19	JKE118	0-0.2	G, A	0	Fill: Silty Clay	X	X											
6.8.19	20	JKE118	1.0-1.5	G, A	0	Fill: Silty Clay													
6.8.19	21	JKE119	0-0.2	G, A	0	Fill: Silty Clay	X	X											
6.8.19	22	JKE122	0.04-0.2	G, A	1	Fill: Gravelly Sand	X	X											
6.8.19	23	JKE122	0.5-0.8	G, A	0	Fill: Silty Clay	X	X											
6.8.19	24	JKE122	0.8-1.0	G, A	0	Fill: Silty Clay	X	X											
6.8.19	25	JKE122	1.5-1.95	G, A	0	Silty Clay	X												

Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 223661
 Date Received: 12/08/19
 Time Received: 15:06
 Received by: TE
 Temp: Cool/Ambient
 Coding: Ice/Ceppack
 Security: Intact Broken/None

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag
--	--

Relinquished By: <u>MD</u>	Date: <u>12/8/19</u>	Time: <u>15:06</u>	Received By: <u>TE</u> <u>ORUC</u>	Date: <u>12-08-19</u>
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SAMPLE AND CHAIN OF CUSTODY FORM

TO:
 ENVIROLAB SERVICES PTY LTD
 12 ASHLEY STREET
 CHATSWOOD NSW 2067
 P: (02) 99106200
 F: (02) 99106201
 Attention: Aileen

EIS Job E32465BD
Number:
Date Results STANDARD
Required:
Page: 2

FROM:

JK Environments
 REAR OF 115 WICKS ROAD
 MACQUARIE PARK, NSW 2113
 P: 02-9888 5000 F: 02-9888 5001
 Attention: Mitchell Delaney

Location: Liverpool **Sample Preserved in Esky on Ice**

Sampler: AM **Tests Required**

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Asbestos (500ml Sample)	pH, CEC and clay content	BTEX									
6.8.19	26	JKE123	0.03-0.2	G, A	0	Fill: Gravelly Sand	X	X											
6.8.19	27	JKE123	0.5-0.38	G, A	0	Fill: Silty Clay	X	X											
6.8.19	28	JKE123	0.8-0.95	G, A	3	Silty Clay	X	X											
7.8.19	29	JKE124	0.05-0.2	G, A	0	Fill: Silty Sand	X	X											
7.8.19	30	JKE124	0.2-0.3	G, A	0	Fill: Silty Clay	X	X											
7.8.19	31	JKE124	0.3-0.5	G, A	0	Fill: Silty Clay													
7.8.19	32	JKE124	0.6-0.95	G, A	0	Silty Clay	X												
7.8.19	33	JKE125	0.05-0.2	G, A	0	Fill: Gravelly Sand	X	X											
7.8.19	34	JKE125	0.2-0.4	G, A	0	Fill: Sandy Gravel													
7.8.19	35	JKE125	0.4-0.7	G, A	0	Fill: Silty Clay	X	X											
7.8.19	36	JKE125	0.7-0.95	G, A	0	Silty Clay	X												
7.8.19	37	JKE126	0.08-0.2	G, A	0	Fill: Silty Sand	X	X											
7.8.19	38	JKE126	0.3-0.5	G, A	0	Fill: Silty Clay													
7.8.19	39	JKE126	0.5-0.95	G, A	0	Silty Clay	X												
7.8.19	40	JKE127	0.06-0.3	G, A	0	Fill: Gravelly Sand	X	X											
7.8.19	41	JKE127	0.3-0.5	G, A	0	Fill: Silty Clay	X	X											
7.8.19	42	JKE127	0.6-0.95	G, A	0	Silty Clay	X												
9.8.19	43	JKE128	0.08-0.2	G, A	0	Fill: Gravelly Sand	X	X											
9.8.19	44	JKE128	0.3-0.4	G, A	0	Fill: Silty Clay	X	X											
9.8.19	45	JKE128	0.4-0.6	G, A	0	Silty Clay	X												
9.8.19	46	JKE129	0.09-0.25	G, A	0	Fill: Gravelly Sand	X	X											
9.8.19	47	JKE129	0.25-0.13	G, A	0	Fill: Silty Clay	X												
9.8.19	48	JKE130	0.07-0.2	G, A	0	Fill: Gravelly Sand	X	X											
9.8.19	49	JKE130	0.2-0.25	G, A	0	Fill: Silty Clay	X												
9.8.19	50	JKE131	0.07-0.2	G, A	0	Fill: Gravelly Sand	X	X											


Remarks (comments/detection limits required):

Sample Containers:
 G - 250mg Glass Jar
 A - Ziplock Asbestos Bag
 P - Plastic Bag

Relinquished By: MD **Date:** 12/8/19 **Time:** 15:06 **Received By:** EUS Muddad C. **Date:** 12-08-19
 JFUC

JOB ID: 223881

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 3	FROM:  JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
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Location: Liverpool	Sample Preserved In Esky on Ice
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Sampler: AM	Tests Required
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Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Asbestos (500ml Sample) pH, CEC and clay content	BTEX										
9.8.19	51	JKE131	0.2-0.3	G, A	0	Fill: Silty Clay	X	X											
9.8.19	52	JKE132	0.08-0.15	G, A	0	Fill: Gravelly	X	X											
9.8.19	53	JKE132	0.15-0.3	G, A	0	Fill: Silty Clay	X												
9.8.19	54	JKE133	0.08-0.2	G, A	0	Fill: Gravelly Sand	X	X											
9.8.19	55	JKE133	0.2-0.3	G, A	0	Fill: Silty Clay	X												
8.8.19	56	JKE134	0-0.2	G, A	0	Fill: Silty Sand	X	X	X										
8.8.19	57	JKE134	0.5-0.95	G, A	0	Fill: Silty Clayey Sand	X	X											
8.8.19	58	JKE134	1.5-1.7	G, A	0	Silty Clay	X												
8.8.19	59	JKE135	0.05-0.25	G, A	0	Fill: Gravelly Sand	X	X											
8.8.19	60	JKE135	0.25-0.4	G, A	0	Fill: Sandy Gravel													
8.8.19	61	JKE135	0.4-0.6	G, A	0	Fill: Silty Clay	X	X											
8.8.19	62	JKE135	1.5-1.7	G, A	0	Silty Clay	X												
63 8.8.19	62	JKE136	0-0.2	G, A	0	Fill: Silty Clay	X	X											
64 8.8.19	63	JKE136	0.4-0.8	G, A	0	Fill: Silty Clay	X	X											
65 8.8.19	64	JKE136	1.5-1.7	G, A	0	Silty Clay	X												
66 8.8.19	65	JKE137	0.04-0.2	G, A	0	Fill: Silty Clay	X	X											
67 8.8.19	66	JKE137	0.5-0.7	G, A	0	Fill: Silty Clay	X												
68 8.8.19	68	JKE137	0.7-0.95	G, A	0	Silty Clay													
5.8.19	69	DUPAM104	-	G	-	DUP Soil	X												
6.8.19	70	DUPAM105	-	G	-	DUP Soil													
7.8.19	-	DUPAM106	-	G	-	DUP Soil	X												
8.8.19	-	DUPAM107	-	G	-	DUP Soil	X												
9.8.19	71	DUPAM108	-	G	-	DUP Soil	X												
9.8.19	72	TB4	-	G	-	Trip Blank Soil													
✓	73	TS2	-	V	-	Trip Spike Soil													

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag
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Relinquished By: <i>AD</i>	Date: <i>12/8/19</i>	Time:	Received By: <i>EWS Mitchell C. Ball C.</i>
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JOBID: 223661



CERTIFICATE OF ANALYSIS 223661-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	73 Soil, 2 Water, 1 Material
Date samples received	11/02/2019
Date completed instructions received	21/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	28/08/2019
Date of Issue	27/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Loren Bardwell, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

Metals in TCLP USEPA1311						
Our Reference		223661-A-6	223661-A-29	223661-A-33	223661-A-37	223661-A-40
Your Reference	UNITS	JKE112	JKE124	JKE125	JKE126	JKE127
Depth		0-0.02	0.05-0.2	0.05-0.2	0.08-0.2	0.06-0.3
Date Sampled		05/08/2019	07/08/2019	07/08/2019	07/08/2019	07/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
Date analysed	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
pH of soil for fluid# determ.	pH units	8.1	9.6	9.5	9.7	9.7
pH of soil TCLP (after HCl)	pH units	2.2	2.0	2.0	1.9	2.0
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.9	5.2	5.2	5.2	5.2
Lead in TCLP	mg/L	<0.03	[NA]	[NA]	[NA]	[NA]
Nickel in TCLP	mg/L	[NA]	0.06	0.08	0.1	0.08

Metals in TCLP USEPA1311						
Our Reference		223661-A-43	223661-A-44	223661-A-46	223661-A-48	223661-A-49
Your Reference	UNITS	JKE128	JKE128	JKE129	JKE130	JKE130
Depth		0.08-0.2	0.3-0.4	0.09-0.25	0.07-0.2	0.2-0.25
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	09/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
Date analysed	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
pH of soil for fluid# determ.	pH units	9.8	9.2	9.8	9.8	9.4
pH of soil TCLP (after HCl)	pH units	2.0	1.7	1.9	1.9	1.8
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.2	5.1	5.2	5.2	5.1
Nickel in TCLP	mg/L	0.1	0.05	0.1	0.1	0.1

Metals in TCLP USEPA1311						
Our Reference		223661-A-50	223661-A-52	223661-A-54	223661-A-55	223661-A-59
Your Reference	UNITS	JKE131	JKE132	JKE133	JKE133	JKE135
Depth		0.07-0.2	0.08-0.15	0.08-0.2	0.2-0.3	0.05-0.25
Date Sampled		09/08/2019	09/08/2019	09/08/2019	09/08/2019	08/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
Date analysed	-	23/08/2019	23/08/2019	23/08/2019	23/08/2019	23/08/2019
pH of soil for fluid# determ.	pH units	9.7	9.7	9.6	9.3	9.7
pH of soil TCLP (after HCl)	pH units	1.9	1.9	1.9	1.7	1.8
Extraction fluid used	-	1	1	1	1	1
pH of final Leachate	pH units	5.3	5.1	5.1	5.1	5.2
Nickel in TCLP	mg/L	0.1	0.09	0.09	0.08	0.1

Metals in TCLP USEPA1311		
Our Reference		223661-A-71
Your Reference	UNITS	DUPAM108
Depth		-
Date Sampled		09/08/2019
Type of sample		Soil
Date extracted	-	23/08/2019
Date analysed	-	23/08/2019
pH of soil for fluid# determ.	pH units	9.7
pH of soil TCLP (after HCl)	pH units	1.8
Extraction fluid used	-	1
pH of final Leachate	pH units	5.2
Nickel in TCLP	mg/L	0.1

Client Reference: E32465BD, Liverpool

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP) using Zero Headspace Extraction (zHE) using AS4439 and USEPA 1311.
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using in house method INORG-004. Please note that the mass used may be scaled down from the default based on sample mass available.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Metals in TCLP USEPA1311				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	223661-A-29
Date extracted	-			23/08/2019	6	23/08/2019	23/08/2019		23/08/2019	23/08/2019
Date analysed	-			23/08/2019	6	23/08/2019	23/08/2019		23/08/2019	23/08/2019
Lead in TCLP	mg/L	0.03	Metals-020 ICP-AES	<0.03	6	<0.03	<0.03	0	89	91
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	50	0.1	0.1	0	92	92

QUALITY CONTROL: Metals in TCLP USEPA1311				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	[NT]	[NT]
Date extracted	-			[NT]	50	23/08/2019	23/08/2019		[NT]	[NT]
Date analysed	-			[NT]	50	23/08/2019	23/08/2019		[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223661-A
Date Sample Received	11/02/2019
Date Instructions Received	21/08/2019
Date Results Expected to be Reported	28/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	73 Soil, 2 Water, 1 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	18.1
Cooling Method	None
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	Nickel in TCLP	On Hold
JKE109-0.045-0.2							✓
JKE109-0.4-0.6							✓
JKE109-0.6-0.95							✓
JKE109-1.6-1.95							✓
JKE109-3.0-3.2							✓
JKE112-0-0.02	✓	✓	✓	✓	✓		
JKE112-0.5-0.95							✓
JKE112-1.3-1.5							✓
JKE113-0-0.2							✓
JKE113-0.2-0.3							✓
JKE114-0-0.2							✓
JKE115-0-0.2							✓
JKE115-0.2-0.4							✓
JKE115-0.9-1.1							✓
JKE116-0-0.2							✓
JKE116-0.6-0.8							✓
JKE117-0-0.2							✓
JKE117-0.4-0.6							✓
JKE118-0-0.2							✓
JKE118-1.0-1.5							✓
JKE119-0-0.2							✓
JKE122-0.04-0.2							✓
JKE122-0.5-0.8							✓
JKE122-0.8-1.0							✓
JKE122-1.5-1.95							✓
JKE123-0.03-0.2							✓
JKE123-0.5-0.8							✓
JKE123-0.8-0.95							✓
JKE124-0.05-0.2	✓	✓	✓	✓		✓	
JKE124-0.2-0.3							✓
JKE124-0.3-0.5							✓
JKE124-0.6-0.95							✓



Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	Nickel in TCLP	On Hold
JKE125-0.05-0.2	✓	✓	✓	✓	✓		
JKE125-0.2-0.4							✓
JKE125-0.4-0.7							✓
JKE125-0.7-0.95							✓
JKE126-0.08-0.2	✓	✓	✓	✓	✓		
JKE126-0.3-0.5							✓
JKE126-0.5-0.95							✓
JKE127-0.06-0.3	✓	✓	✓	✓	✓		
JKE127-0.3-0.5							✓
JKE127-0.6-0.95							✓
JKE128-0.08-0.2	✓	✓	✓	✓	✓		
JKE128-0.3-0.4	✓	✓	✓	✓	✓		
JKE128-0.4-0.6							✓
JKE129-0.09-0.25	✓	✓	✓	✓	✓		
JKE129-0.25-0.3							✓
JKE130-0.07-0.2	✓	✓	✓	✓	✓		
JKE130-0.2-0.25	✓	✓	✓	✓	✓		
JKE131-0.07-0.2	✓	✓	✓	✓	✓		
JKE131-0.2-0.3							✓
JKE132-0.08-0.15	✓	✓	✓	✓	✓		
JKE132-0.15-0.3							✓
JKE133-0.08-0.2	✓	✓	✓	✓	✓		
JKE133-0.2-0.3	✓	✓	✓	✓	✓		
JKE134-0-0.2							✓
JKE134-0.5-0.95							✓
JKE134-1.5-1.7							✓
JKE135-0.05-0.25	✓	✓	✓	✓	✓		
JKE135-0.25-0.4							✓
JKE135-0.4-0.6							✓
JKE135-1.5-1.7							✓
JKE136-0-0.2							✓
JKE136-0.4-0.8							✓



Sample ID	pH of soil for fluid#determ.	pH of soil TCLP (after HCl)	Extraction fluid used	pH of final Leachate	Lead in TCLP	Nickel in TCLP	On Hold
JKE136-1.5-1.7							✓
JKE137-0.04-0.2							✓
JKE137-0.5-0.7							✓
JKE137-0.7-0.95							✓
DUPAM104							✓
DUPAM105							✓
DUPAM108	✓	✓	✓	✓		✓	
TB4							✓
TS2							✓
FRAM101							✓
FRRK1							✓
AMF1							✓
JKE117 - [TRIPLICATE]-0-0.2							✓
JKE123 - [TRIPLICATE]-0.8-0.95							✓
JKE127 - [TRIPLICATE]-0.3-0.5							✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkenvironments.com.au>
Sent: Wednesday, 21 August 2019 5:50 PM
To: Samplereceipt
Subject: Additional Analysis Request 223661 Liverpool

Follow Up Flag: Follow up
Flag Status: Flagged

Hi,

Can I please schedule TCLP on the samples as per below:

Ref: 223661-A
TAT: Std
Due: 28/8/19

Sample Ref	Sample Depth	Analyte
JKE112	0-0.02 6	Lead
JKE124	0.05-0.2 29	Nickel
JKE125	0.05-0.2 33	Nickel
JKE126	0.08-0.2 37	Nickel
JKE127	0.06-0.3 40	Nickel
JKE128	0.08-0.2 43	Nickel
JKE128	0.3-0.4 44	Nickel
JKE129	0.09-0.25 46	Nickel
JKE130	0.07-0.2 48	Nickel
JKE130	0.2-0.25 49	Nickel
JKE131	0.07-0.2 50	Nickel
JKE132	0.08-0.15 52	Nickel
JKE133	0.08-0.2 54	Nickel
JKE133	0.2-0.3 55	Nickel
JKE135	0.05-0.25 59	Nickel
DUPAM108	- 71	Nickel

FAZ

Standard TA is fine.

Many thanks.

Regards
Mitchell Delaney
Senior Associate | Environmental Scientist



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NORTH RYDE BC NSW 1670
115 Wicks Road
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JK Environments

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CERTIFICATE OF ANALYSIS 225210

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	E32465BD, Liverpool
Number of Samples	14 Soil, 1 Water, 1 Material
Date samples received	02/09/2019
Date completed instructions received	02/09/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	09/09/2019
Date of Issue	09/09/2019
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Asbestos Approved By

Analysed by Asbestos Approved Identifier: Aida Marner
Authorised by Asbestos Approved Signatory: Lucy Zhu

Results Approved By

Jeremy Faircloth, Operations Manager, Sydney
Josh Williams, Chemist
Ken Nguyen, Reporting Supervisor
Lucy Zhu, Senior Asbestos Analyst
Nick Sarlamis, Inorganics Supervisor
Steven Luong, Organics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	<25	<25
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	<25	<25
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	<25	<25
Benzene	mg/kg	<0.2	<0.2	<0.2	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1	<1	<1	<1
m+p-xylene	mg/kg	<2	<2	<2	<2	<2
o-Xylene	mg/kg	<1	<1	<1	<1	<1
naphthalene	mg/kg	<1	<1	<1	<1	<1
Total +ve Xylenes	mg/kg	<3	<3	<3	<3	<3
Surrogate aaa-Trifluorotoluene	%	78	91	96	83	92

vTRH(C6-C10)/BTEXN in Soil					
Our Reference		225210-7	225210-9	225210-11	225210-16
Your Reference	UNITS	JKE140	JKE140	DUPAM201	TS201
Depth		0.2-0.4	0.9-1.1	-	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	04/09/2019	04/09/2019	04/09/2019	04/09/2019
TRH C ₆ - C ₉	mg/kg	<25	<25	<25	[NA]
TRH C ₆ - C ₁₀	mg/kg	<25	<25	<25	[NA]
vTPH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25	<25	[NA]
Benzene	mg/kg	<0.2	<0.2	<0.2	86%
Toluene	mg/kg	<0.5	<0.5	<0.5	84%
Ethylbenzene	mg/kg	<1	<1	<1	86%
m+p-xylene	mg/kg	<2	<2	<2	79%
o-Xylene	mg/kg	<1	<1	<1	100%
naphthalene	mg/kg	<1	<1	<1	[NA]
Total +ve Xylenes	mg/kg	<3	<3	<3	[NA]
Surrogate aaa-Trifluorotoluene	%	113	98	100	97

svTRH (C10-C40) in Soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	280	<100	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	240	<100	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	260	<100	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	510	<50	<50	<50	<50
Surrogate o-Terphenyl	%	89	87	87	78	92

svTRH (C10-C40) in Soil				
Our Reference		225210-7	225210-9	225210-11
Your Reference	UNITS	JKE140	JKE140	DUPAM201
Depth		0.2-0.4	0.9-1.1	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100	<100
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50	<50
Surrogate o-Terphenyl	%	88	77	83

PAHs in Soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.4
Anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.7
Pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.6
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Chrysene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.3
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2	<0.2	0.4
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05	<0.05	0.2
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1	<0.1	0.2
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05	<0.05	3.3
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	128	114	111	110	119

PAHs in Soil				
Our Reference		225210-7	225210-9	225210-11
Your Reference	UNITS	JKE140	JKE140	DUPAM201
Depth		0.2-0.4	0.9-1.1	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019
Naphthalene	mg/kg	<0.1	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	mg/kg	<0.2	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05	<0.05
Benzo(a)pyrene TEQ calc (zero)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(half)	mg/kg	<0.5	<0.5	<0.5
Benzo(a)pyrene TEQ calc(PQL)	mg/kg	<0.5	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d14	%	104	115	111

Organochlorine Pesticides in soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
HCB	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	98	95	98	107

Organochlorine Pesticides in soil				
Our Reference		225210-7	225210-9	225210-11
Your Reference	UNITS	JKE140	JKE140	DUPAM201
Depth		0.2-0.4	0.9-1.1	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019
HCB	mg/kg	<0.1	<0.1	<0.1
alpha-BHC	mg/kg	<0.1	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1	<0.1
Total +ve DDT+DDD+DDE	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	98	94

Organophosphorus Pesticides						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	98	95	98	107

Organophosphorus Pesticides				
Our Reference		225210-7	225210-9	225210-11
Your Reference	UNITS	JKE140	JKE140	DUPAM201
Depth		0.2-0.4	0.9-1.1	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019
Azinphos-methyl (Guthion)	mg/kg	<0.1	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1	<0.1
Dichlorvos	mg/kg	<0.1	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	98	94

PCBs in Soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Surrogate TCMX	%	101	98	95	98	107

PCBs in Soil				
Our Reference		225210-7	225210-9	225210-11
Your Reference	UNITS	JKE140	JKE140	DUPAM201
Depth		0.2-0.4	0.9-1.1	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil
Date extracted	-	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019
Aroclor 1016	mg/kg	<0.1	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1	<0.1
Surrogate TCMX	%	98	98	94

Acid Extractable metals in soil						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Arsenic	mg/kg	<4	<4	<4	<4	13
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	13	14	3	18	25
Copper	mg/kg	24	10	4	8	63
Lead	mg/kg	39	21	9	23	64
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	7	5	2	8	6
Zinc	mg/kg	590	38	27	15	160

Acid Extractable metals in soil					
Our Reference		225210-7	225210-9	225210-11	225210-13
Your Reference	UNITS	JKE140	JKE140	DUPAM201	TB201
Depth		0.2-0.4	0.9-1.1	-	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Arsenic	mg/kg	<4	<4	<4	<4
Cadmium	mg/kg	<0.4	<0.4	<0.4	<0.4
Chromium	mg/kg	16	12	5	2
Copper	mg/kg	4	6	5	<1
Lead	mg/kg	19	13	6	<1
Mercury	mg/kg	<0.1	<0.1	<0.1	<0.1
Nickel	mg/kg	5	3	3	<1
Zinc	mg/kg	14	8	24	1

Client Reference: E32465BD, Liverpool

Moisture						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date prepared	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	04/09/2019	04/09/2019	04/09/2019	04/09/2019	04/09/2019
Moisture	%	28	13	9.6	20	32

Moisture					
Our Reference		225210-7	225210-9	225210-11	225210-13
Your Reference	UNITS	JKE140	JKE140	DUPAM201	TB201
Depth		0.2-0.4	0.9-1.1	-	-
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil
Date prepared	-	03/09/2019	03/09/2019	03/09/2019	03/09/2019
Date analysed	-	04/09/2019	04/09/2019	04/09/2019	04/09/2019
Moisture	%	19	18	9.5	0.4

Asbestos ID - soils NEPM - ASB-001						
Our Reference		225210-1	225210-2	225210-3	225210-5	225210-6
Your Reference	UNITS	JKE138	JKE138	JKE139	JKE139	JKE140
Depth		0-0.05	0.05-0.2	0-0.2	0.3-0.5	0-0.2
Date Sampled		30/08/2019	30/08/2019	30/08/2019	30/08/2019	30/08/2019
Type of sample		Soil	Soil	Soil	Soil	Soil
Date analysed	-	05/09/2019	05/09/2019	05/09/2019	05/09/2019	05/09/2019
Sample mass tested	g	384.73	649.72	738.71	492.65	473.54
Sample Description	-	Brown coarse-grained soil & rocks	Brown coarse-grained soil & rocks	Brown sandy soil & rocks	Brown clayey soil & rocks	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected	No asbestos detected
Total Asbestos ^{#1}	g/kg	<0.1	<0.1	<0.1	<0.1	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected	No visible asbestos detected
ACM >7mm Estimation*	g	-	-	-	-	-
FA and AF Estimation*	g	-	-	-	-	-
ACM >7mm Estimation*	%(w/w)	<0.01	<0.01	<0.01	<0.01	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001	<0.001	<0.001	<0.001	<0.001

Asbestos ID - soils NEPM - ASB-001		
Our Reference		225210-7
Your Reference	UNITS	JKE140
Depth		0.2-0.4
Date Sampled		30/08/2019
Type of sample		Soil
Date analysed	-	05/09/2019
Sample mass tested	g	536.2
Sample Description	-	Brown coarse-grained soil & rocks
Asbestos ID in soil (AS4964) >0.1g/kg	-	No asbestos detected at reporting limit of 0.1g/kg Organic fibres detected
Trace Analysis	-	No asbestos detected
Total Asbestos#1	g/kg	<0.1
Asbestos ID in soil <0.1g/kg*	-	No visible asbestos detected
ACM >7mm Estimation*	g	-
FA and AF Estimation*	g	-
ACM >7mm Estimation*	%(w/w)	<0.01
FA and AF Estimation*#2	%(w/w)	<0.001

Asbestos ID - materials		
Our Reference		225210-15
Your Reference	UNITS	AMF101
Depth		-
Date Sampled		30/08/2019
Type of sample		Material
Date analysed	-	03/09/2019
Mass / Dimension of Sample	-	45x36x7mm
Sample Description	-	Brown layered fibre cement material
Asbestos ID in materials	-	Chrysotile asbestos detected Organic fibres detected

sPOCAS + %S w/w			
Our Reference		225210-9	225210-10
Your Reference	UNITS	JKE140	JKE140
Depth		0.9-1.1	1.1-1.3
Date Sampled		30/08/2019	30/08/2019
Type of sample		Soil	Soil
Date prepared	-	06/09/2019	06/09/2019
Date analysed	-	06/09/2019	06/09/2019
pH _{KCl}	pH units	5.7	3.8
TAA pH 6.5	moles H ⁺ / t	5	49
s-TAA pH 6.5	%w/w S	<0.01	0.08
pH _{Ox}	pH units	4.6	4.0
TPA pH 6.5	moles H ⁺ / t	<5	76
s-TPA pH 6.5	%w/w S	<0.01	0.12
TSA pH 6.5	moles H ⁺ / t	<5	28
s-TSA pH 6.5	%w/w S	<0.01	0.04
ANC _E	% CaCO ₃	<0.05	<0.05
a-ANC _E	moles H ⁺ / t	<5	<5
s-ANC _E	%w/w S	<0.05	<0.05
S _{KCl}	%w/w S	0.02	0.04
S _P	%w/w	0.03	0.04
S _{POS}	%w/w	0.009	<0.005
a-S _{POS}	moles H ⁺ / t	6	<5
Ca _{KCl}	%w/w	0.16	0.06
Ca _P	%w/w	0.16	0.06
Ca _A	%w/w	<0.005	<0.005
Mg _{KCl}	%w/w	0.086	0.098
Mg _P	%w/w	0.094	0.096
Mg _A	%w/w	0.008	<0.005
S _{HCl}	%w/w S	<0.005	0.045
S _{NAS}	%w/w S	<0.005	0.006
a-S _{NAS}	moles H ⁺ / t	<5	<5
s-S _{NAS}	%w/w S	<0.01	<0.01
Fineness Factor	-	1.5	1.5
a-Net Acidity	moles H ⁺ / t	11	53
s-Net Acidity	%w/w S	0.02	0.09
Liming rate	kg CaCO ₃ / t	0.80	4.0
s-Net Acidity without -ANCE	%w/w S	0.017	0.086
a-Net Acidity without ANCE	moles H ⁺ / t	11	53
Liming rate without ANCE	kg CaCO ₃ / t	0.80	4.0

vTRH(C6-C10)/BTEXN in Water		
Our Reference		225210-14
Your Reference	UNITS	FRAM201
Depth		-
Date Sampled		30/08/2019
Type of sample		Water
Date extracted	-	03/09/2019
Date analysed	-	04/09/2019
TRH C ₆ - C ₉	µg/L	<10
TRH C ₆ - C ₁₀	µg/L	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	102
Surrogate toluene-d8	%	99
Surrogate 4-BFB	%	103

Method ID	Methodology Summary
ASB-001	Asbestos ID - Qualitative identification of asbestos in bulk samples using Polarised Light Microscopy and Dispersion Staining Techniques including Synthetic Mineral Fibre and Organic Fibre as per Australian Standard 4964-2004.
ASB-001	<p>Asbestos ID - Identification of asbestos in soil samples using Polarised Light Microscopy and Dispersion Staining Techniques. Minimum 500mL soil sample was analysed as recommended by "National Environment Protection (Assessment of site contamination) Measure, Schedule B1 and "The Guidelines from the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia - May 2009" with a reporting limit of 0.1g/kg (0.01% w/w) as per Australian Standard AS4964-2004.</p> <p>Results reported denoted with * are outside our scope of NATA accreditation.</p>
	<p>NOTE #1 Total Asbestos g/kg was analysed and reported as per Australian Standard AS4964 (This is the sum of ACM >7mm, <7mm and FA/AF)</p>
	<p>NOTE #2 The screening level of 0.001% w/w asbestos in soil for FA and AF only applies where the FA and AF are able to be quantified by gravimetric procedures. This screening level is not applicable to free fibres.</p>
	<p>Estimation = Estimated asbestos weight</p>
	<p>Results reported with "--" is equivalent to no visible asbestos identified using Polarised Light microscopy and Dispersion Staining Techniques.</p>
Inorg-008	Moisture content determined by heating at 105+/-5 °C for a minimum of 12 hours.
Inorg-064	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.
Metals-020	Determination of various metals by ICP-AES.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.
	F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
	<p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>

Method ID	Methodology Summary
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-005	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's. Note, the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD.
Org-006	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-008	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC with dual ECD's.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			04/09/2019	1	04/09/2019	04/09/2019		04/09/2019	04/09/2019
TRH C ₆ - C ₉	mg/kg	25	Org-016	<25	1	<25	<25	0	93	93
TRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	1	<25	<25	0	93	93
Benzene	mg/kg	0.2	Org-016	<0.2	1	<0.2	<0.2	0	94	90
Toluene	mg/kg	0.5	Org-016	<0.5	1	<0.5	<0.5	0	88	93
Ethylbenzene	mg/kg	1	Org-016	<1	1	<1	<1	0	98	96
m+p-xylene	mg/kg	2	Org-016	<2	1	<2	<2	0	95	93
o-Xylene	mg/kg	1	Org-016	<1	1	<1	<1	0	92	92
naphthalene	mg/kg	1	Org-014	<1	1	<1	<1	0	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	99	1	78	73	7	92	91

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: svTRH (C10-C40) in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	1	<50	<50	0	88	77
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	1	<100	140	33	86	78
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	1	280	420	40	77	96
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	1	<50	<50	0	88	77
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	1	240	420	55	86	78
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	1	260	420	47	77	96
Surrogate o-Terphenyl	%		Org-003	85	1	89	97	9	97	87

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PAHs in Soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Naphthalene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	105	116
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	0.1	0	[NT]	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	110	112
Phenanthrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	105	104
Anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	1	<0.1	0.1	0	107	104
Pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	0.1	0	110	107
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	1	<0.1	0.2	67	124	120
Benzo(b,j+k)fluoranthene	mg/kg	0.2	Org-012	<0.2	1	<0.2	<0.2	0	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	1	<0.05	0.05	0	113	116
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	120	1	128	118	8	110	105

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organochlorine Pesticides in soil						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
HCB	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	88	89
gamma-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	93	86
Heptachlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	87	81
delta-BHC	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	96	91
Heptachlor Epoxide	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	99	92
gamma-Chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
alpha-chlordane	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	96	91
Dieldrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	115	107
Endrin	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	94	89
pp-DDD	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	89	84
Endosulfan II	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	82	92
Methoxychlor	mg/kg	0.1	Org-005	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-005	101	1	101	97	4	95	90

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Organophosphorus Pesticides							Duplicate		Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Azinphos-methyl (Guthion)	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyriphos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	99	93
Chlorpyriphos-methyl	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorvos	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	102	99
Dimethoate	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	94	90
Fenitrothion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	104	102
Malathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	102	103
Parathion	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	108	108
Ronnel	mg/kg	0.1	Org-008	<0.1	1	<0.1	<0.1	0	96	95
Surrogate TCMX	%		Org-008	101	1	101	97	4	95	90

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date extracted	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Aroclor 1016	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	117	115
Aroclor 1260	mg/kg	0.1	Org-006	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate TCMX	%		Org-006	101	1	101	97	4	95	90

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	225210-2
Date prepared	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Date analysed	-			03/09/2019	1	03/09/2019	03/09/2019		03/09/2019	03/09/2019
Arsenic	mg/kg	4	Metals-020	<4	1	<4	<4	0	103	90
Cadmium	mg/kg	0.4	Metals-020	<0.4	1	<0.4	<0.4	0	100	88
Chromium	mg/kg	1	Metals-020	<1	1	13	14	7	107	94
Copper	mg/kg	1	Metals-020	<1	1	24	20	18	104	102
Lead	mg/kg	1	Metals-020	<1	1	39	40	3	107	93
Mercury	mg/kg	0.1	Metals-021	<0.1	1	<0.1	<0.1	0	111	100
Nickel	mg/kg	1	Metals-020	<1	1	7	6	15	100	89
Zinc	mg/kg	1	Metals-020	<1	1	590	400	38	104	87

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
Date prepared	-			06/09/2019	[NT]	[NT]	[NT]	[NT]	06/09/2019	[NT]
Date analysed	-			06/09/2019	[NT]	[NT]	[NT]	[NT]	06/09/2019	[NT]
pH _{KCl}	pH units		Inorg-064	[NT]	[NT]	[NT]	[NT]	[NT]	88	[NT]
TAA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	85	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pH _{Ox}	pH units		Inorg-064	[NT]	[NT]	[NT]	[NT]	[NT]	93	[NT]
TPA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	110	[NT]
s-TPA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
TSA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-TSA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
ANC _E	% CaCO ₃	0.05	Inorg-064	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-ANC _E	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-ANC _E	%w/w S	0.05	Inorg-064	<0.05	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S _{KCl}	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S _P	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S _{POS}	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-S _{POS}	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ca _{KCl}	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ca _P	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ca _A	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mg _{KCl}	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mg _P	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Mg _A	%w/w	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S _{HCl}	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
S _{NAS}	%w/w S	0.005	Inorg-064	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-S _{NAS}	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-S _{NAS}	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fineness Factor	-	1.5	Inorg-064	<1.5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Net Acidity	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
s-Net Acidity without -ANCE	%w/w S	0.01	Inorg-064	<0.01	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-3	[NT]
a-Net Acidity without ANCE	moles H ⁺ /t	5	Inorg-064	<5	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Liming rate without ANCE	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date extracted	-			03/09/2019	[NT]	[NT]	[NT]	[NT]	03/09/2019	[NT]
Date analysed	-			04/09/2019	[NT]	[NT]	[NT]	[NT]	04/09/2019	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	85	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-016	<10	[NT]	[NT]	[NT]	[NT]	85	[NT]
Benzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	87	[NT]
Toluene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	83	[NT]
m+p-xylene	µg/L	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	84	[NT]
o-xylene	µg/L	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Naphthalene	µg/L	1	Org-013	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-016	102	[NT]	[NT]	[NT]	[NT]	102	[NT]
Surrogate toluene-d8	%		Org-016	106	[NT]	[NT]	[NT]	[NT]	99	[NT]
Surrogate 4-BFB	%		Org-016	95	[NT]	[NT]	[NT]	[NT]	99	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
<p>Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.</p>	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

vTRH & BTEXN in Water NEPM - Only 1 vial supplied for analysis. Envirolab recommends that two 40mL VOA vials preserved with Hydrochloric Acid (HCl) or similar is supplied for the analysis of VOC/BTEX.

Asbestos-ID in soil: NEPM

This report is consistent with the reporting recommendations in the National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013. This is reported outside our scope of NATA accreditation.

Note: All samples analysed as received. However, sample 225210-1 was below the minimum 500mL sample volume as per National Environment Protection (Assessment of Site Contamination) Measure, Schedule B1, May 2013.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	225210
Date Sample Received	02/09/2019
Date Instructions Received	02/09/2019
Date Results Expected to be Reported	09/09/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	14 Soil, 1 Water, 1 Material
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	15.5
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	vTRH(C6-C10)/BTEXN in Soil	svTRH (C10-C40) in Soil	PAHs in Soil	Organochlorine Pesticides in soil	Organophosphorus Pesticides	PCBs in Soil	Acid Extractable metals in soil	Asbestos ID - soils NEPM - ASB-001	Asbestos ID - materials	sPOCAS + %S w/w	vTRH(C6-C10)/BTEXN in Water	On Hold
JKE138-0-0.05	✓	✓	✓	✓	✓	✓	✓	✓				
JKE138-0.05-0.2	✓	✓	✓	✓	✓	✓	✓	✓				
JKE139-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓				
JKE139-0.25-0.3												✓
JKE139-0.3-0.5	✓	✓	✓	✓	✓	✓	✓	✓				
JKE140-0-0.2	✓	✓	✓	✓	✓	✓	✓	✓				
JKE140-0.2-0.4	✓	✓	✓	✓	✓	✓	✓	✓				
JKE140-0.6-0.9												✓
JKE140-0.9-1.1	✓	✓	✓	✓	✓	✓	✓			✓		
JKE140-1.1-1.3										✓		
DUPAM201	✓	✓	✓	✓	✓	✓	✓					
DUPAM202												✓
TB201							✓					
FRAM201											✓	
AMF101								✓				
TS201	✓											

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job E32465BD Number: Date Results STANDARD Required: Page: 5/1	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
---	---	---

Location:		Sample Preserved in Esky on Ice													
Sampler:		Tests Required													
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Asbestos (WA 500ml method)	SPOCAS	BTEX	TRH/BTEX	Heavy Metals	Asbestos		
30.8.19	1	JKE138	0-0.05	G, A	1.6	Fill:Silty Clay	X	X							
30.8.19	2	JKE138	0.05-0.2	G, A	0.1	Fill:Silty Clay	X	X							
30.8.19	3	JKE139	0-0.2	G, A	0.3	Fill:Silty Clayey Sand	X	X							
30.8.19	4	JKE139	0.25-0.3	G, A	0.2	Fill:Silty Clay									
30.8.19	5	JKE139	0.3-0.5	G, A	0.3	Fill:Silty Clay	X	X							
30.8.19	6	JKE140	0-0.2	G, A, P	0.2	Fill:Silty Clayey Sand	X	X							
30.8.19	7	JKE140	0.2-0.4	G, A, P	0.1	Fill:Silty Clay	X	X							
30.8.19	8	JKE140	0.6-0.9	G, A, P	0.3	Fill:Silty Clay									
30.8.19	9	JKE140	0.9-1.1	G, A, P	0.3	Silty Clay	X		X						
30.8.19	10	JKE140	1.1-1.3	P	-	Silty Clay			X						
30.8.19	11	DUPAM201	-	G	-	DUP Soil	X								
30.8.19	12	DUPAM202	-	G	-	DUP Soil									
30.8.19	13	TB201	-	G	-	Trip Blank						X			
30.8.19	14	FRAM201	-	V	-	Field Rinsate				X					
30.8.19	15	AMF101	Surface	A	-	Fragment							X		
30.8.19	16	TS 201	Hand PA	V	-	Sand				X					

Envirolab Services
 13 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200
 Job No: 225210
 Date Received: 02/09/19
 Time Received: 12:37
 Received by: S.B
 Temp: Ambient
 Cooling: Ice/Keepack
 Security: Intact/Broken/Tone

Remarks (comments/detection limits required):		Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag	
Relinquished By: MD	Date: 2/9/19	Time: 12:37	Received By: S. Bolton
			Date: 02/09/19



Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

CERTIFICATE OF ANALYSIS 17672

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD</u>
Number of Samples	1 Soil
Date samples received	08/08/2019
Date completed instructions received	08/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	13/08/2019
Date of Issue	13/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	09/08/2019
Date analysed	-	09/08/2019
vTRH C ₆ - C ₉	mg/kg	<25
vTRH C ₆ - C ₁₀	mg/kg	<25
TRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25
Benzene	mg/kg	<0.2
Toluene	mg/kg	<0.5
Ethylbenzene	mg/kg	<1
m+p-xylene	mg/kg	<2
o-Xylene	mg/kg	<1
Naphthalene	mg/kg	<1
Total +ve Xylenes	mg/kg	<1
Surrogate aaa-Trifluorotoluene	%	100

TRH Soil C10-C40 NEPM		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	09/08/2019
Date analysed	-	09/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100
TRH C ₂₉ - C ₃₆	mg/kg	190
Total +ve TRH (C10-C36)	mg/kg	190
TRH >C ₁₀ -C ₁₆	mg/kg	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50
TRH >C ₁₆ -C ₃₄	mg/kg	220
TRH >C ₃₄ -C ₄₀	mg/kg	<100
Total +ve TRH (>C10-C40)	mg/kg	220
Surrogate o-Terphenyl	%	82

PAHs in Soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	08/08/2019
Date analysed	-	10/08/2019
Naphthalene	mg/kg	<0.1
Acenaphthylene	mg/kg	<0.1
Acenaphthene	mg/kg	<0.1
Fluorene	mg/kg	<0.1
Phenanthrene	mg/kg	0.1
Anthracene	mg/kg	<0.1
Fluoranthene	mg/kg	0.5
Pyrene	mg/kg	0.5
Benzo(a)anthracene	mg/kg	0.2
Chrysene	mg/kg	0.3
Benzo(b,j&k)fluoranthene	mg/kg	0.7
Benzo(a)pyrene	mg/kg	0.48
Indeno(1,2,3-c,d)pyrene	mg/kg	0.3
Dibenzo(a,h)anthracene	mg/kg	<0.1
Benzo(g,h,i)perylene	mg/kg	0.4
Total +ve PAH's	mg/kg	3.5
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	0.6
Benzo(a)pyrene TEQ calc (Half)	mg/kg	0.7
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	0.7
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	98

OCP in Soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	08/08/2019
Date analysed	-	10/08/2019
alpha-BHC	mg/kg	<0.1
Hexachlorobenzene	mg/kg	<0.1
beta-BHC	mg/kg	<0.1
gamma-BHC	mg/kg	<0.1
Heptachlor	mg/kg	<0.1
delta-BHC	mg/kg	<0.1
Aldrin	mg/kg	<0.1
Heptachlor Epoxide	mg/kg	<0.1
gamma-Chlordane	mg/kg	<0.1
alpha-chlordane	mg/kg	<0.1
Endosulfan I	mg/kg	<0.1
pp-DDE	mg/kg	<0.1
Dieldrin	mg/kg	<0.1
Endrin	mg/kg	<0.1
Endosulfan II	mg/kg	<0.1
pp-DDD	mg/kg	<0.1
Endrin Aldehyde	mg/kg	<0.1
pp-DDT	mg/kg	<0.1
Endosulfan Sulphate	mg/kg	<0.1
Methoxychlor	mg/kg	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	98

OP in Soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	08/08/2019
Date analysed	-	10/08/2019
Azinphos-methyl	mg/kg	<0.1
Bromophos-ethyl	mg/kg	<0.1
Chlorpyrifos	mg/kg	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1
Diazinon	mg/kg	<0.1
Dichlorovos	mg/kg	<0.1
Dimethoate	mg/kg	<0.1
Ethion	mg/kg	<0.1
Fenitrothion	mg/kg	<0.1
Malathion	mg/kg	<0.1
Parathion	mg/kg	<0.1
Ronnel	mg/kg	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	98

PCBs in Soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date extracted	-	08/08/2019
Date analysed	-	10/08/2019
Aroclor 1016	mg/kg	<0.1
Aroclor 1221	mg/kg	<0.1
Aroclor 1232	mg/kg	<0.1
Aroclor 1242	mg/kg	<0.1
Aroclor 1248	mg/kg	<0.1
Aroclor 1254	mg/kg	<0.1
Aroclor 1260	mg/kg	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	98

Acid Extractable metals in soil		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date digested	-	12/08/2019
Date analysed	-	12/08/2019
Arsenic	mg/kg	4
Cadmium	mg/kg	<0.4
Chromium	mg/kg	42
Copper	mg/kg	34
Lead	mg/kg	41
Mercury	mg/kg	<0.1
Nickel	mg/kg	8
Zinc	mg/kg	90

Moisture		
Our Reference		17672-1
Your Reference	UNITS	DUPAM103
Date Sampled		01/08/2019
Type of sample		Soil
Date prepared	-	09/08/2019
Date analysed	-	12/08/2019
Moisture	%	12

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

Method ID	Methodology Summary
Org-012	<p>Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS.</p> <p>Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.</p>
Org-014	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.</p>
Org-016	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

Client Reference: E32465BD

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			09/08/2019	[NT]	[NT]	[NT]	[NT]	09/08/2019	[NT]
Date analysed	-			09/08/2019	[NT]	[NT]	[NT]	[NT]	09/08/2019	[NT]
vTRH C ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
vTRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	97	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	95	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	90	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	93	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	98	[NT]	[NT]	[NT]	[NT]	92	[NT]

QUALITY CONTROL: TRH Soil C10-C40 NEPM					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			09/08/2019	[NT]	[NT]	[NT]	[NT]	09/08/2019	[NT]
Date analysed	-			09/08/2019	[NT]	[NT]	[NT]	[NT]	09/08/2019	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	94	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate o-Terphenyl	%		Org-003	88	[NT]	[NT]	[NT]	[NT]	84	[NT]

Client Reference: E32465BD

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Date analysed	-			10/08/2019	[NT]	[NT]	[NT]	[NT]	10/08/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	96	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	92	[NT]	[NT]	[NT]	[NT]	90	[NT]

Client Reference: E32465BD

QUALITY CONTROL: OCP in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Date analysed	-			10/08/2019	[NT]	[NT]	[NT]	[NT]	10/08/2019	[NT]
alpha-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	106	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	[NT]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
delta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Dieldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Endrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	92	[NT]	[NT]	[NT]	[NT]	90	[NT]

Client Reference: E32465BD

QUALITY CONTROL: OP in Soil				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/08/2019	1	08/08/2019	08/08/2019		08/08/2019	[NT]
Date analysed	-			10/08/2019	1	10/08/2019	10/08/2019		10/08/2019	[NT]
Azinphos-methyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	100	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ethion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	94	[NT]
Fenitrothion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	88	[NT]
Malathion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Parathion	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-012	<0.1	1	<0.1	<0.1	0	[NT]	[NT]
Surrogate <i>p</i> -Terphenyl-d ₁₄	%		Org-012	92	1	98	96	2	90	[NT]

Client Reference: E32465BD

QUALITY CONTROL: PCBs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Date analysed	-			10/08/2019	[NT]	[NT]	[NT]	[NT]	10/08/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Aroclor 1260	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	92	[NT]	[NT]	[NT]	[NT]	90	[NT]

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Date analysed	-			12/08/2019	[NT]	[NT]	[NT]	[NT]	12/08/2019	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	106	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	107	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	119	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	103	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
<p>Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.</p>	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E32465BD
Envirolab Reference	17672
Date Sample Received	08/08/2019
Date Instructions Received	08/08/2019
Date Results Expected to be Reported	14/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	10.1
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: padams@envirolab.com.au

Analisa Mathrick

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: amathrick@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd
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 25 Research Drive Croydon South VIC 3136
 ph 03 9763 2500 fax 03 9763 2633
 melbourne@envirolab.com.au
 www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBs in Soil	Acid Extractable metals in soil
DUPAM103	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 3 of 3	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
---	--	---

Location:		Sample Preserved in Esky on Ice														
Sampler:		Tests Required														
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
2/8/19	S1	JKE121	0.4-0.85	G/A	U	F: Sandy gravel			X						X	
↓	S2		1.0-1.2	↓	↓	FISILY GRY										
↓	S3		1.5-1.7	↓	↓	SILT CLAY			X							
31/7/19	S4	DUPAMP1	-	G	-	Soil			X							
1/8/19	S5	DUPAMP2	-	↓	-	↓			X							
↓	S6	DUPAMP3	-	↓	-	↓			X							
31/7/19	S7	TB2	56-	↓	-	Sand/Water								X		
1/8/19	S8	TB3	57-	↓	-	↓								X		
2/8/19	S9	TB4	58-	↓	-	↓								X		
3/7/19	S10	TS1	59-	Wd	-	Sand								X		
3/7/19	60	FR1	60-	Wd	-	Water								X		

(Please See DUPAMP03 to Dupamp1 use!)

Envirolab Services
 25 Research Drive
 Croydon South VIC 3136
 Ph: (03) 9753 2500
 Job No: 17672
 Date Received: 8/8/19
 Time Received: 13:00
 Received By: GS 10.1
 Temp: Cool/Ambient
 Cooling: Ice/Icepack
 Security: Intact/Broken/None

Remarks (comments/detection limits required):		Sample Containers: G - 250mg Glass Jar P - Plastic Bag A - 500ml Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag	
Relinquished By: MD	Date: 6/8/19	Time:	Received By:
			Date:

MD 31/8/19

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 2 of 3	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
---	--	---

Location:		Sample Preserved in Esky on Ice														
Sampler:		Tests Required														
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 2	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
	26	JKE107	1.5-1.95	G, A	0				X						X	
	27		2.5-3.0			↓										
	28		3.1-3.4			Silt clay										
	29	JKE108	0.22-0.4			F: silty clayey sand			X						X	
	30		0.5-0.95			f: silty clay			X						X	
	31		1.5-1.95			↓										
	32		2.5-2.9			↓										
	33		3.0-3.45			Silty clay	X		X							
2/8/19	34	JKE110	0.09-0.2			F: silty sand			X						X	
	35		0.4-0.6			↓										
	36		0.6-0.95			F: silty clay										
	37		1.5-1.95			F: silty clay			X						X	
	38		3.0-3.2			SILTY CLAY			X							
	39	JKE111	0-0.2			F: sandy gravel			X						X	
	40		0.5-0.7			F: clayey sand										
	41		0.7-0.95			F: silty clay										
	42		1.4-1.7			↓			X						X	
	43		1.8-2.0			F: silty clay sand			X							
	44		2.0-2.3			F: silty clay										
	45		3.0-3.2			SILTY CLAY			X							
2/8/19	46	JKE120	0-0.2			F: silty sand			X						X	
	47		0.5-0.85			F: sandy sand										
	48		0.85-1.1			F: silty clay			X						X	
	49		1.5-1.7			SILTY CLAY			X							
	50	JKE121	0-0.2			F: gravelly sand			X						X	

Remarks (comments/detection limits required):

Sample Containers:
 G - 250mg Glass Jar P - Plastic Bag
 A - 500mL Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag

Relinquished By: <i>MD</i>	Date: <i>6/8/19</i>	Time:	Received By:	Date:
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Play *7/8/2019*

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 1 of 3	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
---	--	---

Location:		Sample Preserved in Esky on Ice														
Sampler:		Tests Required														
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 3	Combo 3a	Combo 6	Combo 6a	8 Metals	PAHs	TRH/BTEX	BTEX	Asbestos (WA Method)	Asbestos (Detection)
31/7/19	1	JKE101	0.04-0.2	G,A	0	F: Gravelly sand			X						X	
	2		0.5-1.1	G	0	F: Silty clay										
	3		1.4-1.7	↓	0	Silty CLAY			X							
	4	↓	1.7-1.9	G	0	X: Silty sand										
	5	JKE102	0.1-0.3	G,A	3	F: Gravelly sand			X						X	
	6		0.3-0.5		57	F: Silty clay	X									
	7		1.2-1.6		120	F: Silty clay	X									
	8	↓	1.6-2.0		41	Silty CLAY	X									
	9	JKE103	0-0.1		0	F: Silty sand			X						X	
	10		0.1-0.4		0	F: Silty gravel			X						X	
	11	JKE104	0-0.1		0	F: Silty clay			X						X	
	12		0.1-0.3		0	F: Silty gravel			X						X	
	13		0.7-1.0		1	F: Silty clay			X						X	
	14	↓	1.5-1.7		0	Silty CLAY			X							
1/8/19	15	JKE105	0-0.1		0	F: Silty sand			X						X	
	16	↓	0.5-0.95		14	F: Silty clay	X								X	
	17	JKE106	0.08-0.2		0	F: Silty clay sand			X						X	
	18		0.5-0.9		1	F: Silty clay			X						X	
	19		1.0-1.2		0	↓										
	20		1.5-1.95		1	↓			X						X	
	21		2.5-2.9		0	↓										
	22		3.5-4.0		0	↓										
	23	↓	4.5-4.7		3	Silty CLAY	X									
	24	JKE107	0-0.2		0	F: Silty sand			X						X	
	25	↓	0.5-0.95	↓	0	F: Silty clay										

Remarks (comments/detection limits required):		Sample Containers: G - 250mg Glass Jar P - Plastic Bag A - 500mL Ziplock Asbestos Bag A1 - 40g Ziplock Asbestos Bag	
Relinquished By: <i>MD</i>	Date: <i>6/8/19</i>	Time:	Received By: <i>Ming Yan To</i> Date: <i>06/08/19</i>
		Job No: <i>228302</i>	

Play *7/8/2019*

Date Received: *06/08/19*
 Time Received: *16:30*
 Received by: *M7*
 Temp: *Cool/Ambient*
 Cooling: *Ice/Icepack*
 Security: *Intact/Broken/None* *173*



CERTIFICATE OF ANALYSIS 17738

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD - Liverpool</u>
Number of Samples	2 Soil
Date samples received	14/08/2019
Date completed instructions received	14/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	20/08/2019
Date of Issue	20/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019
vTRH C ₆ - C ₉	mg/kg	<25	<25
vTRH C ₆ - C ₁₀	mg/kg	<25	<25
TRH C ₆ - C ₁₀ less BTEX (F1)	mg/kg	<25	<25
Benzene	mg/kg	<0.2	<0.2
Toluene	mg/kg	<0.5	<0.5
Ethylbenzene	mg/kg	<1	<1
m+p-xylene	mg/kg	<2	<2
o-Xylene	mg/kg	<1	<1
Naphthalene	mg/kg	<1	<1
Total +ve Xylenes	mg/kg	<1	<1
Surrogate aaa-Trifluorotoluene	%	104	101

TRH Soil C10-C40 NEPM			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	16/08/2019	16/08/2019
TRH C ₁₀ - C ₁₄	mg/kg	<50	<50
TRH C ₁₅ - C ₂₈	mg/kg	<100	<100
TRH C ₂₉ - C ₃₆	mg/kg	<100	<100
Total +ve TRH (C10-C36)	mg/kg	<50	<50
TRH >C ₁₀ -C ₁₆	mg/kg	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	mg/kg	<50	<50
TRH >C ₁₆ -C ₃₄	mg/kg	<100	<100
TRH >C ₃₄ -C ₄₀	mg/kg	<100	<100
Total +ve TRH (>C10-C40)	mg/kg	<50	<50
Surrogate o-Terphenyl	%	84	85

PAHs in Soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	17/08/2019	17/08/2019
Naphthalene	mg/kg	<0.1	<0.1
Acenaphthylene	mg/kg	<0.1	<0.1
Acenaphthene	mg/kg	<0.1	<0.1
Fluorene	mg/kg	<0.1	<0.1
Phenanthrene	mg/kg	<0.1	<0.1
Anthracene	mg/kg	<0.1	<0.1
Fluoranthene	mg/kg	<0.1	<0.1
Pyrene	mg/kg	<0.1	<0.1
Benzo(a)anthracene	mg/kg	<0.1	<0.1
Chrysene	mg/kg	<0.1	<0.1
Benzo(b,j&k)fluoranthene	mg/kg	<0.2	<0.2
Benzo(a)pyrene	mg/kg	<0.05	<0.05
Indeno(1,2,3-c,d)pyrene	mg/kg	<0.1	<0.1
Dibenzo(a,h)anthracene	mg/kg	<0.1	<0.1
Benzo(g,h,i)perylene	mg/kg	<0.1	<0.1
Total +ve PAH's	mg/kg	<0.05	<0.05
Benzo(a)pyrene TEQ calc (Zero)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc (Half)	mg/kg	<0.5	<0.5
Benzo(a)pyrene TEQ calc (PQL)	mg/kg	<0.5	<0.5
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	100	98

OCP in Soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	17/08/2019	17/08/2019
alpha-BHC	mg/kg	<0.1	<0.1
Hexachlorobenzene	mg/kg	<0.1	<0.1
beta-BHC	mg/kg	<0.1	<0.1
gamma-BHC	mg/kg	<0.1	<0.1
Heptachlor	mg/kg	<0.1	<0.1
delta-BHC	mg/kg	<0.1	<0.1
Aldrin	mg/kg	<0.1	<0.1
Heptachlor Epoxide	mg/kg	<0.1	<0.1
gamma-Chlordane	mg/kg	<0.1	<0.1
alpha-chlordane	mg/kg	<0.1	<0.1
Endosulfan I	mg/kg	<0.1	<0.1
pp-DDE	mg/kg	<0.1	<0.1
Dieldrin	mg/kg	<0.1	<0.1
Endrin	mg/kg	<0.1	<0.1
Endosulfan II	mg/kg	<0.1	<0.1
pp-DDD	mg/kg	<0.1	<0.1
Endrin Aldehyde	mg/kg	<0.1	<0.1
pp-DDT	mg/kg	<0.1	<0.1
Endosulfan Sulphate	mg/kg	<0.1	<0.1
Methoxychlor	mg/kg	<0.1	<0.1
Total +ve reported DDT+DDD+DDE	mg/kg	<0.1	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	100	98

OP in Soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	17/08/2019	17/08/2019
Azinphos-methyl	mg/kg	<0.1	<0.1
Bromophos-ethyl	mg/kg	<0.1	<0.1
Chlorpyrifos	mg/kg	<0.1	<0.1
Chlorpyrifos-methyl	mg/kg	<0.1	<0.1
Diazinon	mg/kg	<0.1	<0.1
Dichlorovos	mg/kg	<0.1	<0.1
Dimethoate	mg/kg	<0.1	<0.1
Ethion	mg/kg	<0.1	<0.1
Fenitrothion	mg/kg	<0.1	<0.1
Malathion	mg/kg	<0.1	<0.1
Parathion	mg/kg	<0.1	<0.1
Ronnel	mg/kg	<0.1	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	100	98

PCBs in Soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date extracted	-	15/08/2019	15/08/2019
Date analysed	-	17/08/2019	17/08/2019
Aroclor 1016	mg/kg	<0.1	<0.1
Aroclor 1221	mg/kg	<0.1	<0.1
Aroclor 1232	mg/kg	<0.1	<0.1
Aroclor 1242	mg/kg	<0.1	<0.1
Aroclor 1248	mg/kg	<0.1	<0.1
Aroclor 1254	mg/kg	<0.1	<0.1
Aroclor 1260	mg/kg	<0.1	<0.1
Total +ve PCBs (1016-1260)	mg/kg	<0.1	<0.1
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	100	98

Acid Extractable metals in soil			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date digested	-	16/08/2019	16/08/2019
Date analysed	-	16/08/2019	16/08/2019
Arsenic	mg/kg	<4	<4
Cadmium	mg/kg	<0.4	<0.4
Chromium	mg/kg	11	9
Copper	mg/kg	68	19
Lead	mg/kg	6	23
Mercury	mg/kg	<0.1	0.1
Nickel	mg/kg	61	8
Zinc	mg/kg	27	58

Moisture			
Our Reference		17738-1	17738-2
Your Reference	UNITS	DUPAM106	DUPAM107
Date Sampled		07/08/2019	08/08/2019
Type of sample		Soil	Soil
Date prepared	-	15/08/2019	15/08/2019
Date analysed	-	16/08/2019	16/08/2019
Moisture	%	6.7	11

Method ID	Methodology Summary
Inorg-008	Moisture content determined by heating at 105 deg C for a minimum of 12 hours.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis. Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Note, For OCs the Total +ve reported DDD+DDE+DDT PQL is reflective of the lowest individual PQL and is therefore simply a sum of the positive individually report DDD+DDE+DDT.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013. For soil results:- 1. 'EQ PQL' values are assuming all contributing PAHs reported as <PQL are actually at the PQL. This is the most conservative approach and can give false positive TEQs given that PAHs that contribute to the TEQ calculation may not be present. 2. 'EQ zero' values are assuming all contributing PAHs reported as <PQL are zero. This is the least conservative approach and is more susceptible to false negative TEQs when PAHs that contribute to the TEQ calculation are present but below PQL. 3. 'EQ half PQL' values are assuming all contributing PAHs reported as <PQL are half the stipulated PQL. Hence a mid-point between the most and least conservative approaches above. Note, the Total +ve PAHs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PAHs" is simply a sum of the positive individual PAHs.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS.

Method ID	Methodology Summary
Org-012	Soil samples are extracted with dichloromethane/acetone and waters with dichloromethane and analysed by GC-ECD or GC-MS. Note, the Total +ve PCBs PQL is reflective of the lowest individual PQL and is therefore "Total +ve PCBs" is simply a sum of the positive individual PCBs.
Org-014	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater. Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
vTRH C ₆ - C ₉	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	96	[NT]
vTRH C ₆ - C ₁₀	mg/kg	25	Org-016	<25	[NT]	[NT]	[NT]	[NT]	96	[NT]
Benzene	mg/kg	0.2	Org-016	<0.2	[NT]	[NT]	[NT]	[NT]	99	[NT]
Toluene	mg/kg	0.5	Org-016	<0.5	[NT]	[NT]	[NT]	[NT]	98	[NT]
Ethylbenzene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	92	[NT]
m+p-xylene	mg/kg	2	Org-016	<2	[NT]	[NT]	[NT]	[NT]	95	[NT]
o-Xylene	mg/kg	1	Org-016	<1	[NT]	[NT]	[NT]	[NT]	98	[NT]
Naphthalene	mg/kg	1	Org-014	<1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate aaa-Trifluorotoluene	%		Org-016	110	[NT]	[NT]	[NT]	[NT]	101	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: TRH Soil C10-C40 NEPM					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			16/08/2019	[NT]	[NT]	[NT]	[NT]	16/08/2019	[NT]
TRH C ₁₀ - C ₁₄	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH C ₁₅ - C ₂₈	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH C ₂₉ - C ₃₆	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C ₁₀ -C ₁₆	mg/kg	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	93	[NT]
TRH >C ₁₆ -C ₃₄	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	96	[NT]
TRH >C ₃₄ -C ₄₀	mg/kg	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	93	[NT]
Surrogate o-Terphenyl	%		Org-003	85	[NT]	[NT]	[NT]	[NT]	83	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: PAHs in Soil					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			17/08/2019	[NT]	[NT]	[NT]	[NT]	17/08/2019	[NT]
Naphthalene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Acenaphthylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Acenaphthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Phenanthrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Benzo(a)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	100	[NT]
Benzo(b,j&k)fluoranthene	mg/kg	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	mg/kg	0.05	Org-012	<0.05	[NT]	[NT]	[NT]	[NT]	104	[NT]
Indeno(1,2,3-c,d)pyrene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	92	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: OCP in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			17/08/2019	[NT]	[NT]	[NT]	[NT]	17/08/2019	[NT]
alpha-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Hexachlorobenzene	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
beta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
gamma-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Heptachlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	74	[NT]
delta-BHC	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Heptachlor Epoxide	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
gamma-Chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
alpha-chlordane	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan I	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDE	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Dieldrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Endrin	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan II	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDD	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	[NT]
Endrin Aldehyde	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
pp-DDT	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Endosulfan Sulphate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Methoxychlor	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	92	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: OP in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			17/08/2019	[NT]	[NT]	[NT]	[NT]	17/08/2019	[NT]
Azinphos-methyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Bromophos-ethyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chlorpyrifos	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Chlorpyrifos-methyl	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Diazinon	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dichlorovos	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dimethoate	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ethion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	[NT]
Fenitrothion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Malathion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Parathion	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Ronnel	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate <i>p</i> -Terphenyl-d ₁₄	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	92	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: PCBs in Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			17/08/2019	[NT]	[NT]	[NT]	[NT]	17/08/2019	[NT]
Aroclor 1016	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1221	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1232	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1242	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1248	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Aroclor 1254	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	80	[NT]
Aroclor 1260	mg/kg	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	90	[NT]	[NT]	[NT]	[NT]	92	[NT]

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: Acid Extractable metals in soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date digested	-			16/08/2019	[NT]	[NT]	[NT]	[NT]	16/08/2019	[NT]
Date analysed	-			16/08/2019	[NT]	[NT]	[NT]	[NT]	16/08/2019	[NT]
Arsenic	mg/kg	4	Metals-020 ICP-AES	<4	[NT]	[NT]	[NT]	[NT]	97	[NT]
Cadmium	mg/kg	0.4	Metals-020 ICP-AES	<0.4	[NT]	[NT]	[NT]	[NT]	100	[NT]
Chromium	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]
Copper	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Lead	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	97	[NT]
Mercury	mg/kg	0.1	Metals-021 CV-AAS	<0.1	[NT]	[NT]	[NT]	[NT]	113	[NT]
Nickel	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	99	[NT]
Zinc	mg/kg	1	Metals-020 ICP-AES	<1	[NT]	[NT]	[NT]	[NT]	93	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney

Sample Login Details

Your reference	E32465BD - Liverpool
Envirolab Reference	17738
Date Sample Received	14/08/2019
Date Instructions Received	14/08/2019
Date Results Expected to be Reported	20/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	2 Soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.6C
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: padams@envirolab.com.au

Analisa Mathrick

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: amathrick@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	VTRH(C6-C10)/BTEXN in Soil	TRH Soil C10-C40 NEPM	PAHs in Soil	OCP in Soil	OP in Soil	PCBs in Soil	Acid Extractable metals in soil
DUPAM106	✓	✓	✓	✓	✓	✓	✓
DUPAM107	✓	✓	✓	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 3	FROM: REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
---	---	--

Location: Liverpool	Sample Preserved in Esky on Ice
Sampler: AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	PID	Sample Description	Combo 6	Asbestos (500ml Sample) pH, CEC and clay content	BTEX									
9.8.19	51	JKE131	0.2-0.3	G, A	0	Fill: Silty Clay	X	X										
9.8.19	52	JKE132	0.08-0.15	G, A	0	Fill: Gravelly	X	X										
9.8.19	53	JKE132	0.15-0.3	G, A	0	Fill: Silty Clay	X											
9.8.19	54	JKE133	0.08-0.2	G, A	0	Fill: Gravelly Sand	X	X										
9.8.19	55	JKE133	0.2-0.3	G, A	0	Fill: Silty Clay	X											
8.8.19	56	JKE134	0-0.2	G, A	0	Fill: Silty Sand	X	X	X									
8.8.19	57	JKE134	0.5-0.95	G, A	0	Fill: Silty Clayey Sand	X	X										
8.8.19	58	JKE134	1.5-1.7	G, A	0	Silty Clay	X											
8.8.19	59	JKE135	0.05-0.25	G, A	0	Fill: Gravelly Sand	X	X										
8.8.19	60	JKE135	0.25-0.4	G, A	0	Fill: Sandy Gravel												
8.8.19	61	JKE135	0.4-0.6	G, A	0	Fill: Silty Clay	X	X										
8.8.19	62	JKE135	1.5-1.7	G, A	0	Silty Clay	X											
63	8.8.19	62	JKE136	0-0.2	G, A	0	Fill: Silty Clay	X	X									
64	8.8.19	63	JKE136	0.4-0.8	G, A	0	Fill: Silty Clay	X	X									
65	8.8.19	64	JKE136	1.5-1.7	G, A	0	Silty Clay	X										
66	8.8.19	65	JKE137	0.04-0.2	G, A	0	Fill: Silty Clay	X	X									
67	8.8.19	66	JKE137	0.5-0.7	G, A	0	Fill: Silty Clay	X										
68	8.8.19	68	JKE137	0.7-0.95	G, A	0	Silty Clay											
	5.8.19	69	DUPAM104	-	G	-	DUP Soil	X										
	6.8.19	70	DUPAM105	-	G	-	DUP Soil											
1	7.8.19	-	DUPAM106	-	G	-	DUP Soil	X										
2	8.8.19	-	DUPAM107	-	G	-	DUP Soil	X										
	9.8.19	71	DUPAM108	-	G	-	DUP Soil	X										
	9.8.19	72	TB4	-	G	-	Trip Blank Soil											
	✓	73	TS2	-	V	-	Trip Spike Soil											

Envirolab Services
 25 Research Drive
 Craydon South VIC 3136
 Ph: (03) 9763 2900
 Job No: 17738
 Date Received: 14/8/19
 Time Received: 11
 Received By: AS 8.6
 Temp: Cool/Ambient
 Cooling: Ice/Icepack
 Security: Intact/Broken/None

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag
---	--

Relinquished By: MD	Date: 12/8/19	Time:	Received By: ELS Munilla Orellana
---------------------	---------------	-------	---

ELS Syd K. Gore 13.08.2019 JOBID: 223661



CERTIFICATE OF ANALYSIS 17738-A

Client Details

Client	Environmental Investigation Services
Attention	Mitch Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD - Liverpool</u>
Number of Samples	2 Soil
Date samples received	14/08/2019
Date completed instructions received	21/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	27/08/2019
Date of Issue	22/08/2019
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Results Approved By

Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

Metals in TCLP USEPA1311		
Our Reference		17738-A-1
Your Reference	UNITS	DUPAM106
Date Sampled		07/08/2019
Type of sample		Soil
Date extracted	-	21/08/2019
Date analysed	-	22/08/2019
pH of soil for ASLP	pH units	9.5
pH of soil ASLP (after HCl)	pH units	1.7
Extraction fluid used	-	1
pH of final Leachate	pH units	5.1
Nickel in TCLP	mg/L	0.1

Client Reference: E32465BD - Liverpool

Method ID	Methodology Summary
EXTRACT.7	Toxicity Characteristic Leaching Procedure (TCLP).
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only as analysis outside of the APHA storage times.
Inorg-004	Toxicity Characteristic Leaching Procedure (TCLP) using AS 4439 and USEPA 1311. Please note that the sample mass used may be scaled down from the default based on the sample mass available. Samples are stored at 2-6oC before and after leachate preparation.
Metals-020 ICP-AES	Determination of various metals by ICP-AES.

Client Reference: E32465BD - Liverpool

QUALITY CONTROL: Metals in TCLP USEPA1311				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			21/08/2019	[NT]	[NT]	[NT]	[NT]	21/08/2019	[NT]
Date analysed	-			22/08/2019	[NT]	[NT]	[NT]	[NT]	22/08/2019	[NT]
Nickel in TCLP	mg/L	0.02	Metals-020 ICP-AES	<0.02	[NT]	[NT]	[NT]	[NT]	94	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
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Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

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Laboratory Acceptance Criteria

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Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

17738-A

Chris De Luca

From: Mitchell Delaney <MDelaney@jkenvironments.com.au>
Sent: Wednesday, 21 August 2019 4:29 PM
To: Chris De Luca
Subject: Additional Analysis 17738 - Liverpool

Hi Chris,

|

Can I please schedule TCLP analysis for nickel on the sample DUPAM106.

Many thanks.

Regards
Mitchell Delaney
Senior Associate | Environmental Scientist



T: +612 9888 5000
E: MDelaney@jkenvironments.com.au
www.jkenvironments.com.au

PO Box 976
NORTH RYDE BC NSW 1670
115 Wicks Road
MACQUARIE PARK NSW 2113

JKEnvironments

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CERTIFICATE OF ANALYSIS 224207

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	6 WATER
Date samples received	19/08/2019
Date completed instructions received	19/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	26/08/2019
Date of Issue	26/08/2019

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Results Approved By

Josh Williams, Chemist
Loren Bardwell, Senior Chemist
Nancy Zhang, Laboratory Manager, Sydney

Authorised By

Nancy Zhang, Laboratory Manager

VOCs in water				
Our Reference		224207-1	224207-2	224207-3
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135
Date Sampled		16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER
Date extracted	-	21/08/2019	21/08/2019	21/08/2019
Date analysed	-	22/08/2019	22/08/2019	22/08/2019
Dichlorodifluoromethane	µg/L	<10	<10	<10
Chloromethane	µg/L	<10	<10	<10
Vinyl Chloride	µg/L	<10	<10	<10
Bromomethane	µg/L	<10	<10	<10
Chloroethane	µg/L	<10	<10	<10
Trichlorofluoromethane	µg/L	<10	<10	<10
1,1-Dichloroethene	µg/L	<1	<1	<1
Trans-1,2-dichloroethene	µg/L	<1	<1	<1
1,1-dichloroethane	µg/L	<1	<1	<1
Cis-1,2-dichloroethene	µg/L	<1	<1	<1
Bromochloromethane	µg/L	<1	<1	<1
Chloroform	µg/L	<1	2	<1
2,2-dichloropropane	µg/L	<1	<1	<1
1,2-dichloroethane	µg/L	<1	<1	<1
1,1,1-trichloroethane	µg/L	<1	<1	<1
1,1-dichloropropene	µg/L	<1	<1	<1
Cyclohexane	µg/L	<1	<1	<1
Carbon tetrachloride	µg/L	<1	<1	<1
Benzene	µg/L	<1	<1	<1
Dibromomethane	µg/L	<1	<1	<1
1,2-dichloropropane	µg/L	<1	<1	<1
Trichloroethene	µg/L	<1	<1	<1
Bromodichloromethane	µg/L	<1	<1	<1
trans-1,3-dichloropropene	µg/L	<1	<1	<1
cis-1,3-dichloropropene	µg/L	<1	<1	<1
1,1,2-trichloroethane	µg/L	<1	<1	<1
Toluene	µg/L	<1	1	<1
1,3-dichloropropane	µg/L	<1	<1	<1
Dibromochloromethane	µg/L	<1	<1	<1
1,2-dibromoethane	µg/L	<1	<1	<1
Tetrachloroethene	µg/L	<1	<1	<1
1,1,1,2-tetrachloroethane	µg/L	<1	<1	<1
Chlorobenzene	µg/L	<1	<1	<1
Ethylbenzene	µg/L	<1	<1	<1

VOCs in water				
Our Reference		224207-1	224207-2	224207-3
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135
Date Sampled		16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER
Bromoform	µg/L	<1	<1	<1
m+p-xylene	µg/L	<2	<2	<2
Styrene	µg/L	<1	<1	<1
1,1,2,2-tetrachloroethane	µg/L	<1	<1	<1
o-xylene	µg/L	<1	<1	<1
1,2,3-trichloropropane	µg/L	<1	<1	<1
Isopropylbenzene	µg/L	<1	<1	<1
Bromobenzene	µg/L	<1	<1	<1
n-propyl benzene	µg/L	<1	<1	<1
2-chlorotoluene	µg/L	<1	<1	<1
4-chlorotoluene	µg/L	<1	<1	<1
1,3,5-trimethyl benzene	µg/L	<1	<1	<1
Tert-butyl benzene	µg/L	<1	<1	<1
1,2,4-trimethyl benzene	µg/L	<1	<1	<1
1,3-dichlorobenzene	µg/L	<1	<1	<1
Sec-butyl benzene	µg/L	<1	<1	<1
1,4-dichlorobenzene	µg/L	<1	<1	<1
4-isopropyl toluene	µg/L	<1	<1	<1
1,2-dichlorobenzene	µg/L	<1	<1	<1
n-butyl benzene	µg/L	<1	<1	<1
1,2-dibromo-3-chloropropane	µg/L	<1	<1	<1
1,2,4-trichlorobenzene	µg/L	<1	<1	<1
Hexachlorobutadiene	µg/L	<1	<1	<1
1,2,3-trichlorobenzene	µg/L	<1	<1	<1
Surrogate Dibromofluoromethane	%	83	83	81
Surrogate toluene-d8	%	81	79	80
Surrogate 4-BFB	%	101	104	103

vTRH(C6-C10)/BTEXN in Water						
Our Reference		224207-1	224207-2	224207-3	224207-4	224207-5
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135	DUPMP1	TSW1
Date Sampled		16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER	WATER	WATER
Date extracted	-	21/08/2019	21/08/2019	21/08/2019	21/08/2019	21/08/2019
Date analysed	-	22/08/2019	22/08/2019	22/08/2019	22/08/2019	22/08/2019
TRH C ₆ - C ₉	µg/L	<10	<10	<10	<10	[NA]
TRH C ₆ - C ₁₀	µg/L	<10	<10	<10	<10	[NA]
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10	<10	<10	<10	[NA]
Benzene	µg/L	<1	<1	<1	<1	123%
Toluene	µg/L	<1	1	<1	1	109%
Ethylbenzene	µg/L	<1	<1	<1	<1	106%
m+p-xylene	µg/L	<2	<2	<2	<2	104%
o-xylene	µg/L	<1	<1	<1	<1	109%
Naphthalene	µg/L	<1	<1	<1	<1	[NA]
Surrogate Dibromofluoromethane	%	83	83	81	99	79
Surrogate toluene-d8	%	81	79	80	108	100
Surrogate 4-BFB	%	101	104	103	105	101

vTRH(C6-C10)/BTEXN in Water		
Our Reference		224207-6
Your Reference	UNITS	TBW1
Date Sampled		16/08/2019
Type of sample		WATER
Date extracted	-	21/08/2019
Date analysed	-	22/08/2019
Benzene	µg/L	<1
Toluene	µg/L	3
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Surrogate Dibromofluoromethane	%	101
Surrogate toluene-d8	%	134
Surrogate 4-BFB	%	96

svTRH (C10-C40) in Water					
Our Reference		224207-1	224207-2	224207-3	224207-4
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135	DUPMP1
Date Sampled		16/08/2019	16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER	WATER
Date extracted	-	20/08/2019	20/08/2019	20/08/2019	20/08/2019
Date analysed	-	20/08/2019	21/08/2019	21/08/2019	21/08/2019
TRH C ₁₀ - C ₁₄	µg/L	<50	<50	<50	<50
TRH C ₁₅ - C ₂₈	µg/L	<100	<100	<100	<100
TRH C ₂₉ - C ₃₆	µg/L	<100	<100	<100	<100
TRH >C ₁₀ - C ₁₆	µg/L	<50	<50	<50	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50	<50	<50	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100	<100	<100	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100	<100	<100	<100
Surrogate o-Terphenyl	%	88	82	77	76

PAHs in Water - Low Level					
Our Reference		224207-1	224207-2	224207-3	224207-4
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135	DUPMP1
Date Sampled		16/08/2019	16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER	WATER
Date extracted	-	20/08/2019	20/08/2019	20/08/2019	20/08/2019
Date analysed	-	21/08/2019	21/08/2019	21/08/2019	21/08/2019
Naphthalene	µg/L	<0.2	<0.2	<0.2	<0.2
Acenaphthylene	µg/L	<0.1	<0.1	<0.1	<0.1
Acenaphthene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluorene	µg/L	<0.1	<0.1	<0.1	<0.1
Phenanthrene	µg/L	<0.1	<0.1	<0.1	<0.1
Anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Fluoranthene	µg/L	<0.1	<0.1	<0.1	<0.1
Pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Chrysene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(b,j+k)fluoranthene	µg/L	<0.2	<0.2	<0.2	<0.2
Benzo(a)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1	<0.1	<0.1	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1	<0.1	<0.1	<0.1
Benzo(a)pyrene TEQ	µg/L	<0.5	<0.5	<0.5	<0.5
Total +ve PAH's	µg/L	NIL (+)VE	NIL (+)VE	NIL (+)VE	NIL (+)VE
Surrogate <i>p</i> -Terphenyl-d14	%	87	102	86	77

HM in water - dissolved					
Our Reference		224207-1	224207-2	224207-3	224207-4
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135	DUPMP1
Date Sampled		16/08/2019	16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER	WATER
Date prepared	-	20/08/2019	20/08/2019	20/08/2019	20/08/2019
Date analysed	-	20/08/2019	20/08/2019	20/08/2019	20/08/2019
Arsenic-Dissolved	µg/L	<1	<1	<1	<1
Cadmium-Dissolved	µg/L	<0.1	<0.1	<0.1	<0.1
Chromium-Dissolved	µg/L	<1	<1	<1	<1
Copper-Dissolved	µg/L	47	7	30	7
Lead-Dissolved	µg/L	<1	<1	<1	<1
Mercury-Dissolved	µg/L	<0.05	<0.05	<0.05	<0.05
Nickel-Dissolved	µg/L	1	2	3	2
Zinc-Dissolved	µg/L	16	25	48	24

Miscellaneous Inorganics				
Our Reference		224207-1	224207-2	224207-3
Your Reference	UNITS	MWJKE102	MWJKE122	MWJKE135
Date Sampled		16/08/2019	16/08/2019	16/08/2019
Type of sample		WATER	WATER	WATER
Date prepared	-	19/08/2019	19/08/2019	19/08/2019
Date analysed	-	19/08/2019	19/08/2019	19/08/2019
pH	pH Units	8.1	7.7	8.0
Electrical Conductivity	µS/cm	14,000	14,000	14,000
Chloride, Cl	mg/L	3,400	3,200	3,400
Sulphate, SO ₄	mg/L	480	420	490

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
Metals-021	Determination of Mercury by Cold Vapour AAS.
Metals-022	Determination of various metals by ICP-MS.
Org-003	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID. F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater - 2013.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
Org-016	Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: VOCs in water				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
Date extracted	-			21/08/2019	2	21/08/2019	23/08/2019		21/08/2019	[NT]
Date analysed	-			22/08/2019	2	22/08/2019	24/08/2019		22/08/2019	[NT]
Dichlorodifluoromethane	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
Chloromethane	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
Vinyl Chloride	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
Bromomethane	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
Chloroethane	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
Trichlorofluoromethane	µg/L	10	Org-013	<10	2	<10	<10	0	[NT]	[NT]
1,1-Dichloroethene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Trans-1,2-dichloroethene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,1-dichloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	88	[NT]
Cis-1,2-dichloroethene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Bromochloromethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Chloroform	µg/L	1	Org-013	<1	2	2	2	0	89	[NT]
2,2-dichloropropane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	82	[NT]
1,1,1-trichloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	84	[NT]
1,1-dichloropropene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Cyclohexane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Carbon tetrachloride	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Dibromomethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichloropropane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Trichloroethene	µg/L	1	Org-013	<1	2	<1	<1	0	87	[NT]
Bromodichloromethane	µg/L	1	Org-013	<1	2	<1	<1	0	85	[NT]
trans-1,3-dichloropropene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
cis-1,3-dichloropropene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,1,2-trichloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Toluene	µg/L	1	Org-013	<1	2	1	1	0	[NT]	[NT]
1,3-dichloropropane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Dibromochloromethane	µg/L	1	Org-013	<1	2	<1	<1	0	77	[NT]
1,2-dibromoethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Tetrachloroethene	µg/L	1	Org-013	<1	2	<1	<1	0	83	[NT]
1,1,1,2-tetrachloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Chlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Ethylbenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Bromoform	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
m+p-xylene	µg/L	2	Org-013	<2	2	<2	<2	0	[NT]	[NT]
Styrene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,1,2,2-tetrachloroethane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: VOCs in water						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	[NT]
o-xylene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2,3-trichloropropane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Isopropylbenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Bromobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
n-propyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
2-chlorotoluene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
4-chlorotoluene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,3,5-trimethyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Tert-butyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-trimethyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,3-dichlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Sec-butyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,4-dichlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
4-isopropyl toluene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2-dichlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
n-butyl benzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2-dibromo-3-chloropropane	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2,4-trichlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Hexachlorobutadiene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
1,2,3-trichlorobenzene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-013	84	2	83	99	18	98	[NT]
Surrogate toluene-d8	%		Org-013	75	2	79	94	17	98	[NT]
Surrogate 4-BFB	%		Org-013	102	2	104	105	1	98	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water				Duplicate			Spike Recovery %			
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W3	[NT]
Date extracted	-			21/08/2019	2	21/08/2019	23/08/2019		21/08/2019	[NT]
Date analysed	-			22/08/2019	2	22/08/2019	24/08/2019		22/08/2019	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-016	<10	2	<10	<10	0	118	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-016	<10	2	<10	<10	0	118	[NT]
Benzene	µg/L	1	Org-016	<1	2	<1	<1	0	122	[NT]
Toluene	µg/L	1	Org-016	<1	2	1	1	0	121	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	2	<1	<1	0	113	[NT]
m+p-xylene	µg/L	2	Org-016	<2	2	<2	<2	0	116	[NT]
o-xylene	µg/L	1	Org-016	<1	2	<1	<1	0	114	[NT]
Naphthalene	µg/L	1	Org-013	<1	2	<1	<1	0	[NT]	[NT]
Surrogate Dibromofluoromethane	%		Org-016	84	2	83	99	18	97	[NT]
Surrogate toluene-d8	%		Org-016	75	2	79	94	17	100	[NT]
Surrogate 4-BFB	%		Org-016	102	2	104	105	1	119	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: svTRH (C10-C40) in Water					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	224207-1
Date extracted	-			21/08/2019	[NT]	[NT]	[NT]	[NT]	20/08/2019	20/08/2019
Date analysed	-			21/08/2019	[NT]	[NT]	[NT]	[NT]	20/08/2019	20/08/2019
TRH C ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	97
TRH C ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	78	87
TRH C ₂₉ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	99
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	86	97
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	78	87
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	100	99
Surrogate o-Terphenyl	%		Org-003	90	[NT]	[NT]	[NT]	[NT]	105	92

QUALITY CONTROL: PAHs in Water - Low Level				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W2	224207-1
Date extracted	-			20/08/2019	[NT]	[NT]	[NT]	[NT]	20/08/2019	20/08/2019
Date analysed	-			21/08/2019	[NT]	[NT]	[NT]	[NT]	21/08/2019	21/08/2019
Naphthalene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	128	124
Acenaphthylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Acenaphthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	108	102
Phenanthrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	96	92
Anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	102
Pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	94	94
Benzo(a)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	80
Benzo(b,j+k)fluoranthene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	104	88
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d14	%		Org-012	108	[NT]	[NT]	[NT]	[NT]	100	100

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: HM in water - dissolved				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			20/08/2019	1	20/08/2019	20/08/2019		20/08/2019	[NT]
Date analysed	-			20/08/2019	1	20/08/2019	20/08/2019		20/08/2019	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	98	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022	<0.1	1	<0.1	<0.1	0	101	[NT]
Chromium-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	99	[NT]
Copper-Dissolved	µg/L	1	Metals-022	<1	1	47	48	2	103	[NT]
Lead-Dissolved	µg/L	1	Metals-022	<1	1	<1	<1	0	100	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021	<0.05	1	<0.05	<0.05	0	103	[NT]
Nickel-Dissolved	µg/L	1	Metals-022	<1	1	1	1	0	96	[NT]
Zinc-Dissolved	µg/L	1	Metals-022	<1	1	16	17	6	98	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Miscellaneous Inorganics				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-W1	[NT]
Date prepared	-			19/08/2019	[NT]	[NT]	[NT]	[NT]	19/08/2019	[NT]
Date analysed	-			19/08/2019	[NT]	[NT]	[NT]	[NT]	19/08/2019	[NT]
pH	pH Units		Inorg-001	[NT]	[NT]	[NT]	[NT]	[NT]	99	[NT]
Electrical Conductivity	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	101	[NT]
Chloride, Cl	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	111	[NT]
Sulphate, SO4	mg/L	1	Inorg-081	<1	[NT]	[NT]	[NT]	[NT]	95	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

Tests/Analytes PH have exceeded the recommended technical holding times, Envirolab Group form 347 "Recommended Preservation and Holding Times" can be provided on request (available on the Envirolab website)

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	224207
Date Sample Received	19/08/2019
Date Instructions Received	19/08/2019
Date Results Expected to be Reported	26/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	6 WATER
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	11.2
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Sample ID	VOCs in water	VTRH(C6-C10)/BTEXN in Water	svTRH (C10-C40) in Water	PAHs in Water - Low Level	HM in water - dissolved	pH	Electrical Conductivity	Chloride, Cl	Sulphate, SO4
MWJKE102	✓	✓	✓	✓	✓	✓	✓	✓	✓
MWJKE122	✓	✓	✓	✓	✓	✓	✓	✓	✓
MWJKE135	✓	✓	✓	✓	✓	✓	✓	✓	✓
DUPMP1		✓	✓	✓	✓				
TSW1		✓							
TBW1		✓							

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

TO:
EnviroLab Services Pty Ltd
 12 Ashley St, Chatswood 2067

Phone: (02) 9910 6200
 Fax: (02) 9910 6201

Attention: Aileen

Date Results Required: **Standard**

SAMPLE AND CHAIN OF CUSTODY FORM

FROM:
 JK Environments

Rear 115 Wicks Road
 Macquarie Park NSW 2113

Phone: (02) 9888 5000
 Fax: (02) 9888 5004

Contact: Mitch Delaney

EIS Job Number: E32465BD

Sheet 1 / 1


Location: Liverpool
 Sampler: MP

Tests Required

Sample Preservation:
 In esky on ice

Date Sampled	Time Sampled	Location/ Sample Number	Sample Container	PID (ppm/ Odour)	Sample Description	Combo 3L	Phenols	TPH/BTEX	VOCs	PAHs	pH/EC/ sulfate & chloride	BTEX
16-8-19	Pm	MWJKE102	2x 0.5L Amber Bottle 4x BTEX Vials 2x HDPE Plastic Bottle 1x Metals wash bottle	0	Water	X			X		X	
16-8-19	Am	MWJKE122	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	2.7	Water	X			X		X	
16-8-19	Am	MWJKE135	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	1.8	Water	X			X		X	
16-8-19	NA	DUPMP1	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	NA	Water	X						
16-8-19	NA	DUPMP2	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	NA	Water	X						
16-8-19	NA	TSW1	1x BTEX vial	NA	Water							X
16-8-19	NA	TBW1	1x BTEX vial	NA	Water							X

Comments/Detection Limits
 Required


EnviroLab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200

Job No: 224207

Date Received: 19/8/19

Time Received: 1:30 PM

Received by: PZ

Temp: Cool/Ambient

Cooling: Ice/Icepack

Security: Intact/Broken/None

Please send duplicate
 to EnviroLab via

Relinquished By: MD	Date: 19/8/19	Received By: Kevin WJ
	Time: 1:30 pm	19/8/19
Relinquished By:	Date:	Received By:
	Time:	

Remarks:

All analysis PQLs to ANZECC (2000) Detection Limits Please

1
2
3
4
5
6



CERTIFICATE OF ANALYSIS 17823

Client Details

Client	JK Environments
Attention	Mitch Delaney
Address	Rear of 115 Wicks rd, Macquarie Park, NSW, 2113

Sample Details

Your Reference	<u>E32465BD</u>
Number of Samples	1 Water
Date samples received	21/08/2019
Date completed instructions received	21/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	27/08/2019
Date of Issue	27/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Chris De Luca, Operations Manager

Authorised By

Pamela Adams, Laboratory Manager

vTRH(C6-C10)/BTEXN in Water		
Our Reference		17823-1
Your Reference	UNITS	DUPMP1
Date Sampled		16/08/2019
Type of sample		Water
Date extracted	-	22/08/2019
Date analysed	-	22/08/2019
TRH C ₆ - C ₉	µg/L	<10
TRH C ₆ - C ₁₀	µg/L	<10
TRH C ₆ - C ₁₀ less BTEX (F1)	µg/L	<10
Benzene	µg/L	<1
Toluene	µg/L	<1
Ethylbenzene	µg/L	<1
m+p-xylene	µg/L	<2
o-xylene	µg/L	<1
Naphthalene	µg/L	<1
Total +ve Xylenes	µg/L	<1
Surrogate Dibromofluoromethane	%	113
Surrogate toluene-d8	%	103
Surrogate 4-BFB	%	99

TRH Water(C10-C40) NEPM		
Our Reference		17823-1
Your Reference	UNITS	DUPMP1
Date Sampled		16/08/2019
Type of sample		Water
Date extracted	-	23/08/2019
Date analysed	-	23/08/2019
TRH C ₁₀ - C ₁₄	µg/L	<50
TRH C ₁₅ - C ₂₈	µg/L	<100
TRH C ₂₉ - C ₃₆	µg/L	<100
Total +ve TRH (C10-C36)	µg/L	<50
TRH >C ₁₀ - C ₁₆	µg/L	<50
TRH >C ₁₀ - C ₁₆ less Naphthalene (F2)	µg/L	<50
TRH >C ₁₆ - C ₃₄	µg/L	<100
TRH >C ₃₄ - C ₄₀	µg/L	<100
Total +ve TRH (>C10-C40)	µg/L	<50
Surrogate o-Terphenyl	%	88

PAHs in Water - Low Level		
Our Reference		17823-1
Your Reference	UNITS	DUPMP1
Date Sampled		16/08/2019
Type of sample		Water
Date extracted	-	23/08/2019
Date analysed	-	24/08/2019
Naphthalene	µg/L	<0.1
Acenaphthylene	µg/L	<0.1
Acenaphthene	µg/L	<0.1
Fluorene	µg/L	<0.1
Phenanthrene	µg/L	<0.1
Anthracene	µg/L	<0.1
Fluoranthene	µg/L	<0.1
Pyrene	µg/L	<0.1
Benzo(a)anthracene	µg/L	<0.1
Chrysene	µg/L	<0.1
Benzo(b,j&k)fluoranthene	µg/L	<0.2
Benzo(a)pyrene	µg/L	<0.1
Indeno(1,2,3-c,d)pyrene	µg/L	<0.1
Dibenzo(a,h)anthracene	µg/L	<0.1
Benzo(g,h,i)perylene	µg/L	<0.1
Total +ve PAH's	µg/L	NIL (+)VE PAH
Benzo(a)pyrene TEQ	µg/L	<0.5
Surrogate <i>p</i> -Terphenyl-d ₁₄	%	94

HM in water - dissolved		
Our Reference		17823-1
Your Reference	UNITS	DUPMP1
Date Sampled		16/08/2019
Type of sample		Water
Date prepared	-	23/08/2019
Date analysed	-	23/08/2019
Arsenic-Dissolved	µg/L	<1
Cadmium-Dissolved	µg/L	<0.1
Chromium-Dissolved	µg/L	<1
Copper-Dissolved	µg/L	33
Lead-Dissolved	µg/L	<1
Nickel-Dissolved	µg/L	1
Zinc-Dissolved	µg/L	52
Mercury-Dissolved	µg/L	<0.05

Method ID	Methodology Summary
Metals-021 CV-AAS	Determination of Mercury by Cold Vapour AAS.
Metals-022 ICP-MS	Determination of various metals by ICP-MS.
Org-003	<p>Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-FID.</p> <p>F2 = (>C10-C16)-Naphthalene as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater (HSLs Tables 1A (3, 4)). Note Naphthalene is determined from the VOC analysis.</p> <p>Note, the Total +ve TRH PQL is reflective of the lowest individual PQL and is therefore "Total +ve TRH" is simply a sum of the positive individual TRH fractions (>C10-C40).</p>
Org-012	Soil samples are extracted with Dichloromethane/Acetone and waters with Dichloromethane and analysed by GC-MS. Benzo(a)pyrene TEQ as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater 2013.
Org-013	Water samples are analysed directly by purge and trap GC-MS.
Org-016	<p>Soil samples are extracted with methanol and spiked into water prior to analysing by purge and trap GC-MS. Water samples are analysed directly by purge and trap GC-MS. F1 = (C6-C10)-BTEX as per NEPM B1 Guideline on Investigation Levels for Soil and Groundwater.</p> <p>Note, the Total +ve Xylene PQL is reflective of the lowest individual PQL and is therefore "Total +ve Xylenes" is simply a sum of the positive individual Xylenes.</p>

Client Reference: E32465BD

QUALITY CONTROL: vTRH(C6-C10)/BTEXN in Water							Duplicate		Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			22/08/2019	1	22/08/2019	22/08/2019		22/08/2019	[NT]
Date analysed	-			22/08/2019	1	22/08/2019	22/08/2019		22/08/2019	[NT]
TRH C ₆ - C ₉	µg/L	10	Org-016	<10	1	<10	<10	0	96	[NT]
TRH C ₆ - C ₁₀	µg/L	10	Org-016	<10	1	<10	<10	0	97	[NT]
Benzene	µg/L	1	Org-016	<1	1	<1	<1	0	90	[NT]
Toluene	µg/L	1	Org-016	<1	1	<1	<1	0	97	[NT]
Ethylbenzene	µg/L	1	Org-016	<1	1	<1	<1	0	98	[NT]
m+p-xylene	µg/L	2	Org-016	<2	1	<2	<2	0	97	[NT]
o-xylene	µg/L	1	Org-016	<1	1	<1	<1	0	101	[NT]
Naphthalene	µg/L	1	Org-013	<1	1	<1	<1	0	85	[NT]
Surrogate Dibromofluoromethane	%		Org-016	109	1	113	116	3	101	[NT]
Surrogate toluene-d8	%		Org-016	104	1	103	104	1	100	[NT]
Surrogate 4-BFB	%		Org-016	100	1	99	100	1	97	[NT]

Client Reference: E32465BD

QUALITY CONTROL: TRH Water(C10-C40) NEPM					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/08/2019	[NT]	[NT]	[NT]	[NT]	23/08/2019	[NT]
Date analysed	-			23/08/2019	[NT]	[NT]	[NT]	[NT]	23/08/2019	[NT]
TRH C ₁₀ - C ₁₄	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH C ₁₅ - C ₂₈	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH C ₂₉ - C ₃₆	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
TRH >C ₁₀ - C ₁₆	µg/L	50	Org-003	<50	[NT]	[NT]	[NT]	[NT]	91	[NT]
TRH >C ₁₆ - C ₃₄	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	114	[NT]
TRH >C ₃₄ - C ₄₀	µg/L	100	Org-003	<100	[NT]	[NT]	[NT]	[NT]	107	[NT]
Surrogate o-Terphenyl	%		Org-003	82	[NT]	[NT]	[NT]	[NT]	84	[NT]

QUALITY CONTROL: PAHs in Water - Low Level				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date extracted	-			23/08/2019	[NT]	[NT]	[NT]	[NT]	23/08/2019	[NT]
Date analysed	-			24/08/2019	[NT]	[NT]	[NT]	[NT]	24/08/2019	[NT]
Naphthalene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	76	[NT]
Acenaphthylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	90	[NT]
Acenaphthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluorene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Phenanthrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	86	[NT]
Anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Fluoranthene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	88	[NT]
Benzo(a)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Chrysene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	82	[NT]
Benzo(b,j&k)fluoranthene	µg/L	0.2	Org-012	<0.2	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(a)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	84	[NT]
Indeno(1,2,3-c,d)pyrene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Dibenzo(a,h)anthracene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Benzo(g,h,i)perylene	µg/L	0.1	Org-012	<0.1	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
Surrogate p-Terphenyl-d ₁₄	%		Org-012	94	[NT]	[NT]	[NT]	[NT]	96	[NT]

Client Reference: E32465BD

QUALITY CONTROL: HM in water - dissolved					Duplicate			Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			23/08/2019	[NT]	[NT]	[NT]	[NT]	23/08/2019	[NT]
Date analysed	-			23/08/2019	[NT]	[NT]	[NT]	[NT]	23/08/2019	[NT]
Arsenic-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Cadmium-Dissolved	µg/L	0.1	Metals-022 ICP-MS	<0.1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Chromium-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Copper-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Lead-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	114	[NT]
Nickel-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	115	[NT]
Zinc-Dissolved	µg/L	1	Metals-022 ICP-MS	<1	[NT]	[NT]	[NT]	[NT]	116	[NT]
Mercury-Dissolved	µg/L	0.05	Metals-021 CV-AAS	<0.05	[NT]	[NT]	[NT]	[NT]	104	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
<p>Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.</p>	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.



Envirolab Services Pty Ltd
ABN 37 112 535 645 - 002
25 Research Drive Croydon South VIC 3136
ph 03 9763 2500 fax 03 9763 2633
melbourne@envirolab.com.au
www.envirolab.com.au

SAMPLE RECEIPT ADVICE

Client Details

Client	JK Environments
Attention	Mitch Delaney

Sample Login Details

Your reference	E32465BD
Envirolab Reference	17823
Date Sample Received	21/08/2019
Date Instructions Received	21/08/2019
Date Results Expected to be Reported	27/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	1 Water
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.7
Cooling Method	Ice Pack
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Pamela Adams

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: padams@envirolab.com.au

Analisa Mathrick

Phone: 03 9763 2500

Fax: 03 9763 2633

Email: amathrick@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd
 ABN 37 112 535 645 - 002
 25 Research Drive Croydon South VIC 3136
 ph 03 9763 2500 fax 03 9763 2633
 melbourne@envirolab.com.au
 www.envirolab.com.au

Sample ID	VTRH(C6-C10)/BTEXN in Water	TRH Water(C10-C40) NEPM	PAHs in Water - Low Level	HM in water - dissolved
DUPMP1	✓	✓	✓	✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TO:
 EnviroLab Services Pty Ltd
 12 Ashley St, Chatswood 2067

Phone: (02) 9910 6200
 Fax: (02) 9910 6201

Attention: Aileen

Date Results Required: **Standard**

SAMPLE AND CHAIN OF CUSTODY FORM

EIS Job Number: E32465BD

Sheet 1 / 1

FROM:
 JK Environments

Rear 115 Wicks Road
 Macquarie Park NSW 2113

Phone: (02) 9888 5000
 Fax: (02) 9888 5004

Contact: Mitch Delaney

Location: Liverpool
 Sampler: MP

Tests Required

Sample Preservation:
 In-sky of EnviroLab Services
 25 Research Drive
 ENRIPOLES
 Croydon South VIC 3130
 Ph: (95) 9700 2500

JOB NO: 17923

Comments/Detection Limits
 Date Received: 19/8/19 Required 21/8
 Time Received: 1:30 PM
 Received By: [Signature]

EnviroLab Services
 12 Ashley St, Chatswood NSW 2067
 Ph: (02) 9910 6200

Date Sampled	Time Sampled	Location/ Sample Number	Sample Container	PID (ppm/ Odour)	Sample Description	Combo 3L	Phenols	TPH/BTEX	VOCs	PAHs	pH / EC / sulfate & chloride	BTEX	Remarks
16-8-19	Pm	MMWJKE102	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	0	Water	X			X		X		
16-8-19	Am	MMWJKE122	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	2.7	Water	X			X		X		
16-8-19	Am	MMWJKE135	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	1.8	Water	X			X		X		
16-8-19	NA	DUPMIP1	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	NA	Water	X							
16-8-19	NA	DUPMIP2	2x 0.5L Amber Bottle 4x BTEX Vials 4x HDPE Plastic Bottle 1x Metals wash bottle	NA	Water	X							
16-8-19	NA	TSW1	1x BTEX vial	NA	Water							X	
16-8-19	NA	TBW1	1x BTEX vial	NA	Water							X	
Relinquished By: MD				Date: 19/8/19	Time: 1:30 pm	Received By: [Signature]	Remarks:						
Relinquished By: K. Coore				Date: 20.8.19	Time: 12:00	Received By: [Signature]	All analysis PQLs to ANZECC (2000) Detection Limits Please						

Please send duplicate to EnviroLab VIC

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CERTIFICATE OF ANALYSIS 223303

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	28 SOIL
Date samples received	06/08/2019
Date completed instructions received	06/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	14/08/2019
Date of Issue	14/08/2019
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Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Nick Sarlamis, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Client Reference: E32465BD, Liverpool

sPOCAS + %S w/w						
Our Reference		223303-3	223303-9	223303-10	223303-18	223303-23
Your Reference	UNITS	JKE102	JKE102	JKE102	JKE102	JKE108
Depth		1.2-1.6	4.7-4.95	5.0-5.4	9.8-10.0	6.0-6.45
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	01/08/2019
Type of sample		SOIL	SOIL	SOIL	SOIL	SOIL
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019	14/08/2019
pH _{kcl}	pH units	7.8	5.0	5.3	7.4	4.8
TAA pH 6.5	moles H ⁺ /t	<5	5	<5	<5	6
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01	0.01
pH _{ox}	pH units	5.8	5.5	5.8	7.3	5.7
TPA pH 6.5	moles H ⁺ /t	<5	16	16	<5	16
s-TPA pH 6.5	%w/w S	<0.01	0.03	0.03	<0.01	0.03
TSA pH 6.5	moles H ⁺ /t	<5	11	14	<5	10
s-TSA pH 6.5	%w/w S	<0.01	0.02	0.02	<0.01	0.02
ANC _E	% CaCO ₃	<0.05	<0.05	<0.05	0.25	<0.05
a-ANC _E	moles H ⁺ /t	<5	<5	<5	50	<5
s-ANC _E	%w/w S	<0.05	<0.05	<0.05	0.08	<0.05
S _{KCl}	%w/w S	0.006	0.01	0.008	0.008	0.007
S _P	%w/w	0.04	0.02	0.009	0.01	0.007
S _{POS}	%w/w	0.03	<0.005	<0.005	<0.005	<0.005
a-S _{POS}	moles H ⁺ /t	19	<5	<5	<5	<5
Ca _{KCl}	%w/w	0.36	<0.005	<0.005	0.04	<0.005
Ca _P	%w/w	0.33	<0.005	<0.005	0.09	<0.005
Ca _A	%w/w	<0.005	<0.005	<0.005	0.046	<0.005
Mg _{KCl}	%w/w	0.076	0.073	0.032	0.059	0.054
Mg _P	%w/w	0.076	0.075	0.033	0.071	0.057
Mg _A	%w/w	<0.005	<0.005	<0.005	0.012	<0.005
S _{HCl}	%w/w S	<0.005	<0.005	<0.005	<0.005	<0.005
S _{NAS}	%w/w S	<0.005	<0.005	<0.005	<0.005	<0.005
a-S _{NAS}	moles H ⁺ /t	<5	<5	<5	<5	<5
s-S _{NAS}	%w/w S	<0.01	<0.01	<0.01	<0.01	<0.01
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5
a-Net Acidity	moles H ⁺ /t	19	6	<5	<5	7
s-Net Acidity	%w/w S	0.03	0.01	<0.01	<0.01	0.01
Liming rate	kg CaCO ₃ /t	1.5	<0.75	<0.75	<0.75	<0.75
s-Net Acidity without -ANCE	%w/w S	0.031	0.01	<0.01	<0.01	0.01
a-Net Acidity without ANCE	moles H ⁺ /t	19	5.9	<5	<5	6.5
Liming rate without ANCE	kg CaCO ₃ /t	1.5	<0.75	<0.75	<0.75	<0.75

sPOCAS + %S w/w					
Our Reference		223303-24	223303-25	223303-27	223303-28
Your Reference	UNITS	JKE108	JKE108	JKE108	JKE102
Depth		7.5-7.95	8.4-8.8	9.2-9.45	9.0-9.45
Date Sampled		01/08/2019	01/08/2019	01/08/2019	31/07/2019
Type of sample		SOIL	SOIL	SOIL	SOIL
Date prepared	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019
Date analysed	-	14/08/2019	14/08/2019	14/08/2019	14/08/2019
pH _{kcl}	pH units	5.9	7.1	6.4	7.2
TAA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
pH _{ox}	pH units	6.6	6.7	5.0	6.5
TPA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5
s-TPA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
TSA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5
s-TSA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
ANC _E	% CaCO ₃	0.06	0.12	<0.05	<0.05
a-ANC _E	moles H ⁺ /t	12	25	<5	<5
s-ANC _E	%w/w S	<0.05	<0.05	<0.05	<0.05
S _{KCl}	%w/w S	<0.005	0.008	<0.005	0.007
S _P	%w/w	<0.005	0.009	<0.005	0.006
S _{POS}	%w/w	<0.005	<0.005	<0.005	<0.005
a-S _{POS}	moles H ⁺ /t	<5	<5	<5	<5
Ca _{KCl}	%w/w	<0.005	0.04	<0.005	0.03
Ca _P	%w/w	<0.005	0.04	0.005	0.03
Ca _A	%w/w	<0.005	0.005	<0.005	<0.005
Mg _{KCl}	%w/w	0.009	0.032	0.013	0.055
Mg _P	%w/w	0.012	0.037	0.015	0.059
Mg _A	%w/w	<0.005	0.005	<0.005	<0.005
S _{HCl}	%w/w S	<0.005	<0.005	<0.005	<0.005
S _{NAS}	%w/w S	<0.005	<0.005	<0.005	<0.005
a-S _{NAS}	moles H ⁺ /t	<5	<5	<5	<5
s-S _{NAS}	%w/w S	<0.01	<0.01	<0.01	<0.01
Fineness Factor	-	1.5	1.5	1.5	1.5
a-Net Acidity	moles H ⁺ /t	<5	<5	<5	<5
s-Net Acidity	%w/w S	<0.01	<0.01	<0.01	<0.01
Liming rate	kg CaCO ₃ /t	<0.75	<0.75	<0.75	<0.75
s-Net Acidity without -ANCE	%w/w S	<0.01	<0.01	<0.01	<0.01
a-Net Acidity without ANCE	moles H ⁺ /t	<5	<5	<5	<5
Liming rate without ANCE	kg CaCO ₃ /t	<0.75	<0.75	<0.75	<0.75

Method ID	Methodology Summary
Inorg-064	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			14/08/2019	3	14/08/2019	14/08/2019		14/08/2019	[NT]
Date analysed	-			14/08/2019	3	14/08/2019	14/08/2019		14/08/2019	[NT]
pH _{KCl}	pH units		Inorg-064	[NT]	3	7.8	7.8	0	90	[NT]
TAA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	3	<5	<5	0	80	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	3	<0.01	<0.01	0	[NT]	[NT]
pH _{Ox}	pH units		Inorg-064	[NT]	3	5.8	6.1	5	95	[NT]
TPA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	3	<5	<5	0	104	[NT]
s-TPA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	3	<0.01	<0.01	0	[NT]	[NT]
TSA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	3	<5	<5	0	[NT]	[NT]
s-TSA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	3	<0.01	<0.01	0	[NT]	[NT]
ANC _E	% CaCO ₃	0.05	Inorg-064	<0.05	3	<0.05	<0.05	0	[NT]	[NT]
a-ANC _E	moles H ⁺ /t	5	Inorg-064	<5	3	<5	<5	0	[NT]	[NT]
s-ANC _E	%w/w S	0.05	Inorg-064	<0.05	3	<0.05	<0.05	0	[NT]	[NT]
S _{KCl}	%w/w S	0.005	Inorg-064	<0.005	3	0.006	0.007	15	[NT]	[NT]
S _P	%w/w	0.005	Inorg-064	<0.005	3	0.04	0.04	0	[NT]	[NT]
S _{POS}	%w/w	0.005	Inorg-064	<0.005	3	0.03	0.03	0	[NT]	[NT]
a-S _{POS}	moles H ⁺ /t	5	Inorg-064	<5	3	19	20	5	[NT]	[NT]
Ca _{KCl}	%w/w	0.005	Inorg-064	<0.005	3	0.36	0.36	0	[NT]	[NT]
Ca _P	%w/w	0.005	Inorg-064	<0.005	3	0.33	0.33	0	[NT]	[NT]
Ca _A	%w/w	0.005	Inorg-064	<0.005	3	<0.005	<0.005	0	[NT]	[NT]
Mg _{KCl}	%w/w	0.005	Inorg-064	<0.005	3	0.076	0.074	3	[NT]	[NT]
Mg _P	%w/w	0.005	Inorg-064	<0.005	3	0.076	0.078	3	[NT]	[NT]
Mg _A	%w/w	0.005	Inorg-064	<0.005	3	<0.005	<0.005	0	[NT]	[NT]
S _{HCl}	%w/w S	0.005	Inorg-064	<0.005	3	<0.005	<0.005	0	[NT]	[NT]
S _{NAS}	%w/w S	0.005	Inorg-064	<0.005	3	<0.005	<0.005	0	[NT]	[NT]
a-S _{NAS}	moles H ⁺ /t	5	Inorg-064	<5	3	<5	<5	0	[NT]	[NT]
s-S _{NAS}	%w/w S	0.01	Inorg-064	<0.01	3	<0.01	<0.01	0	[NT]	[NT]
Fineness Factor	-	1.5	Inorg-064	<1.5	3	1.5	1.5	0	[NT]	[NT]
a-Net Acidity	moles H ⁺ /t	5	Inorg-064	<5	3	19	20	5	[NT]	[NT]
s-Net Acidity	%w/w S	0.01	Inorg-064	<0.01	3	0.03	0.03	0	[NT]	[NT]
Liming rate	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	3	1.5	1.5	0	[NT]	[NT]
s-Net Acidity without -ANCE	%w/w S	0.01	Inorg-064	<0.01	3	0.031	0.032	3	[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w						Duplicate			Spike Recovery %	
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
a-Net Acidity without ANCE	moles H ⁺ /t	5	Inorg-064	<5	3	19	20	5	[NT]	[NT]
Liming rate without ANCE	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	3	1.5	1.5	0	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223303
Date Sample Received	06/08/2019
Date Instructions Received	06/08/2019
Date Results Expected to be Reported	14/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	28 SOIL
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	8.0
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	sPOCAs + %S w/w	On Hold
JKE102-0.1-0.3		✓
JKE102-0.3-0.5		✓
JKE102-1.2-1.6	✓	
JKE102-1.6-2.0		✓
JKE102-2.8-3.0		✓
JKE102-3.25-3.45		✓
JKE102-4.0-4.2		✓
JKE102-4.4-4.5		✓
JKE102-4.7-4.95	✓	
JKE102-5.0-5.4	✓	
JKE102-5.8-6.0		✓
JKE102-6.2-6.4		✓
JKE102-6.4-6.45		✓
JKE102-6.7-7.0		✓
JKE102-7.3-7.5		✓
JKE102-7.75-7.95		✓
JKE102-8.4-8.6		✓
JKE102-9.8-10.0	✓	
JKE108-0.5-0.95		✓
JKE108-3.0-3.45		✓
JKE108-4.0-4.2		✓
JKE108-4.8-4.95		✓
JKE108-6.0-6.45	✓	
JKE108-7.5-7.95	✓	
JKE108-8.4-8.8	✓	
JKE108-9.0-9.2		✓
JKE108-9.2-9.45	✓	
JKE102-9.0-9.45	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

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Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: <u>E32465BD</u> Date Results Required: <u>STANDARD</u> Page: <u>1 of 2</u>	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
---	--	---

Location:		Liverpool		Sample Preserved in Esky on Ice																
Sampler:		AM		Tests Required																
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	sPOCAS	pH (1:5 water)													
31/7/19		JKE102	0.1-0.3	P	F: SILTY SAND															
	2		0.3-0.5		F: SILTY CLAY															
	3		1.2-1.6		F: SILTY CLAY	X														
	4		1.6-2.0		SILTY CLAY															
	5		2.8-3.0		SILTY CLAY															
	6		3.25-3.45																	
	7		4.0-4.2																	
	8		4.4-4.5																	
	9		4.7-4.95			X														
	10		5.0-5.4		↓	X														
	11		5.8-6.0		SAND															
	12		6.2-6.4		SILTY SAND															
	13		6.4-6.45		SILTY CLAY															
	14		6.7-7.0																	
	15		7.3-7.5																	
	16		7.75-7.95																	
	17		8.4-8.6																	
	20		9.0-9.45			X														
	18		9.8-10.0		↓	X														
	11/8/19	JKE108	0.5-0.45	↓	F: SILTY CLAY															
			3.0-3.45		SILTY CLAY															
			4.0-4.2																	
			4.8-4.95																	
			6.0-6.45			X														
	↓	2A	7.5-7.95	↓	↓	X														

Envirolab Services
 12 Ashley St
 Chatswood NSW 2067
 P: (02) 9910 6200
 Job No: 223303
 Date Received: 6/8/19
 Time Received: 18:00
 Received by: AWO
 Temp: COOL Ambient 9.0°C
 Cooling: Ice/Chill Pack
 Security: Intact/Broken/None

P2
7/8/19

Remarks (comments/detection limits required):				Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag			
Relinquished By:	<u>AWO</u>	Date:	<u>6/8/19</u>	Time:		Received By:	



Envirolab Services Pty Ltd
ABN 37 112 535 645
12 Ashley St Chatswood NSW 2067
ph 02 9910 6200 fax 02 9910 6201
customerservice@envirolab.com.au
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CERTIFICATE OF ANALYSIS 223772

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	54 soil
Date samples received	13/08/2019
Date completed instructions received	13/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	20/08/2019
Date of Issue	20/08/2019
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Results Approved By

Nick Sarlamis, Inorganics Supervisor

Authorised By

Nancy Zhang, Laboratory Manager

Client Reference: E32465BD, Liverpool

sPOCAS + %S w/w						
Our Reference		223772-9	223772-10	223772-15	223772-25	223772-26
Your Reference	UNITS	JKE116	JKE116	JKE116	JKE122	JKE122
Depth		7.6-7.95	8.3-8.6	15.4-15.6	8.5-8.8	9.0-9.45
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
pH _{kcl}	pH units	6.7	6.9	6.7	6.6	4.9
TAA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5	5
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01	<0.01
pH _{ox}	pH units	6.4	6.4	3.5	6.5	5.5
TPA pH 6.5	moles H ⁺ /t	<5	<5	60	<5	<5
s-TPA pH 6.5	%w/w S	<0.01	<0.01	0.1	<0.01	<0.01
TSA pH 6.5	moles H ⁺ /t	<5	<5	60	<5	<5
s-TSA pH 6.5	%w/w S	<0.01	<0.01	0.1	<0.01	<0.01
ANC _E	% CaCO ₃	[NT]	[NT]	[NT]	0.12	[NT]
a-ANC _E	moles H ⁺ /t	[NT]	[NT]	[NT]	25	[NT]
s-ANC _E	%w/w S	[NT]	[NT]	[NT]	<0.05	[NT]
S _{KCl}	%w/w S	<0.005	0.005	0.01	0.006	0.009
S _P	%w/w	<0.005	0.005	0.18	0.007	0.007
S _{POS}	%w/w	<0.005	<0.005	0.17	<0.005	<0.005
a-S _{POS}	moles H ⁺ /t	<5	<5	100	<5	<5
Ca _{KCl}	%w/w	0.009	0.02	0.02	0.01	<0.005
Ca _P	%w/w	0.01	0.02	0.02	0.02	<0.005
Ca _A	%w/w	<0.005	<0.005	0.007	0.006	<0.005
Mg _{KCl}	%w/w	0.051	0.041	0.041	0.052	0.038
Mg _P	%w/w	0.055	0.040	0.060	0.057	0.040
Mg _A	%w/w	<0.005	<0.005	0.020	0.005	<0.005
S _{HCl}	%w/w S	[NT]	[NT]	[NT]	[NT]	[NT]
S _{NAS}	%w/w S	[NT]	[NT]	[NT]	[NT]	[NT]
a-S _{NAS}	moles H ⁺ /t	[NT]	[NT]	[NT]	[NT]	[NT]
s-S _{NAS}	%w/w S	[NT]	[NT]	[NT]	[NT]	[NT]
Fineness Factor	-	1.5	1.5	1.5	1.5	1.5
a-Net Acidity	moles H ⁺ /t	<5	<5	75	<5	5
s-Net Acidity	%w/w S	<0.01	<0.01	0.12	<0.01	<0.01
Liming rate	kg CaCO ₃ /t	<0.75	<0.75	5.6	<0.75	<0.75
s-Net Acidity without -ANCE	%w/w S	[NT]	[NT]	[NT]	<0.01	[NT]
a-Net Acidity without ANCE	moles H ⁺ /t	[NT]	[NT]	[NT]	<5	[NT]
Liming rate without ANCE	kg CaCO ₃ /t	[NT]	[NT]	[NT]	<0.75	[NT]

Client Reference: E32465BD, Liverpool

sPOCAS + %S w/w					
Our Reference		223772-41	223772-42	223772-44	223772-54
Your Reference	UNITS	JKE126	JKE126	JKE135	JKE135
Depth		12.5-13.0	13.5-13.75	1.7-1.95	9.1-9.45
Date Sampled		05/08/2019	05/08/2019	05/08/2019	05/08/2019
Type of sample		soil	soil	soil	soil
Date prepared	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019
pH _{kcl}	pH units	7.5	7.4	4.8	7.1
TAA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5
s-TAA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
pH _{ox}	pH units	6.8	7.2	4.3	7.4
TPA pH 6.5	moles H ⁺ /t	<5	<5	5	<5
s-TPA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
TSA pH 6.5	moles H ⁺ /t	<5	<5	<5	<5
s-TSA pH 6.5	%w/w S	<0.01	<0.01	<0.01	<0.01
ANC _E	% CaCO ₃	0.19	0.19	[NT]	0.25
a-ANC _E	moles H ⁺ /t	38	38	[NT]	50
s-ANC _E	%w/w S	0.06	0.06	[NT]	0.08
S _{KCl}	%w/w S	0.02	<0.005	<0.005	<0.005
S _P	%w/w	0.02	0.01	0.02	0.008
S _{POS}	%w/w	<0.005	0.01	0.02	0.008
a-S _{POS}	moles H ⁺ /t	<5	8	12	<5
Ca _{KCl}	%w/w	0.02	<0.005	<0.005	<0.005
Ca _P	%w/w	0.03	0.03	0.06	0.02
Ca _A	%w/w	0.008	0.027	0.061	0.016
Mg _{KCl}	%w/w	0.079	<0.005	<0.005	<0.005
Mg _P	%w/w	0.098	0.090	0.074	0.050
Mg _A	%w/w	0.019	0.090	0.074	0.050
S _{HCl}	%w/w S	[NT]	[NT]	[NT]	[NT]
S _{NAS}	%w/w S	[NT]	[NT]	[NT]	[NT]
a-S _{NAS}	moles H ⁺ /t	[NT]	[NT]	[NT]	[NT]
s-S _{NAS}	%w/w S	[NT]	[NT]	[NT]	[NT]
Fineness Factor	-	1.5	1.5	1.5	1.5
a-Net Acidity	moles H ⁺ /t	<5	<5	16	<5
s-Net Acidity	%w/w S	<0.01	<0.01	0.03	<0.01
Liming rate	kg CaCO ₃ /t	<0.75	<0.75	1.2	<0.75
s-Net Acidity without -ANCE	%w/w S	<0.01	0.013	[NT]	<0.01
a-Net Acidity without ANCE	moles H ⁺ /t	<5	8.0	[NT]	<5
Liming rate without ANCE	kg CaCO ₃ /t	<0.75	<0.75	[NT]	<0.75

Method ID	Methodology Summary
Inorg-064	sPOCAS determined using titrimetric and ICP-AES techniques. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			16/08/2019	9	16/08/2019	16/08/2019		16/08/2019	[NT]
Date analysed	-			16/08/2019	9	16/08/2019	16/08/2019		16/08/2019	[NT]
pH _{KCl}	pH units		Inorg-064	[NT]	9	6.7	6.6	2	89	[NT]
TAA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	9	<5	<5	0	95	[NT]
s-TAA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	9	<0.01	<0.01	0	[NT]	[NT]
pH _{Ox}	pH units		Inorg-064	[NT]	9	6.4	6.3	2	86	[NT]
TPA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	9	<5	<5	0	110	[NT]
s-TPA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	9	<0.01	<0.01	0	[NT]	[NT]
TSA pH 6.5	moles H ⁺ /t	5	Inorg-064	<5	9	<5	<5	0	[NT]	[NT]
s-TSA pH 6.5	%w/w S	0.01	Inorg-064	<0.01	9	<0.01	<0.01	0	[NT]	[NT]
ANC _E	% CaCO ₃	0.05	Inorg-064	<0.05	9	[NT]	[NT]		[NT]	[NT]
a-ANC _E	moles H ⁺ /t	5	Inorg-064	<5	9	[NT]	[NT]		[NT]	[NT]
s-ANC _E	%w/w S	0.05	Inorg-064	<0.05	9	[NT]	[NT]		[NT]	[NT]
S _{KCl}	%w/w S	0.005	Inorg-064	<0.005	9	<0.005	<0.005	0	[NT]	[NT]
S _P	%w/w	0.005	Inorg-064	<0.005	9	<0.005	<0.005	0	[NT]	[NT]
S _{POS}	%w/w	0.005	Inorg-064	<0.005	9	<0.005	<0.005	0	[NT]	[NT]
a-S _{POS}	moles H ⁺ /t	5	Inorg-064	<5	9	<5	<5	0	[NT]	[NT]
Ca _{KCl}	%w/w	0.005	Inorg-064	<0.005	9	0.009	0.01	11	[NT]	[NT]
Ca _P	%w/w	0.005	Inorg-064	<0.005	9	0.01	0.01	0	[NT]	[NT]
Ca _A	%w/w	0.005	Inorg-064	<0.005	9	<0.005	<0.005	0	[NT]	[NT]
Mg _{KCl}	%w/w	0.005	Inorg-064	<0.005	9	0.051	0.052	2	[NT]	[NT]
Mg _P	%w/w	0.005	Inorg-064	<0.005	9	0.055	0.053	4	[NT]	[NT]
Mg _A	%w/w	0.005	Inorg-064	<0.005	9	<0.005	<0.005	0	[NT]	[NT]
S _{HCl}	%w/w S	0.005	Inorg-064	<0.005	9	[NT]	[NT]		[NT]	[NT]
S _{NAS}	%w/w S	0.005	Inorg-064	<0.005	9	[NT]	[NT]		[NT]	[NT]
a-S _{NAS}	moles H ⁺ /t	5	Inorg-064	<5	9	[NT]	[NT]		[NT]	[NT]
s-S _{NAS}	%w/w S	0.01	Inorg-064	<0.01	9	[NT]	[NT]		[NT]	[NT]
Fineness Factor	-	1.5	Inorg-064	<1.5	9	1.5	1.5	0	[NT]	[NT]
a-Net Acidity	moles H ⁺ /t	5	Inorg-064	<5	9	<5	<5	0	[NT]	[NT]
s-Net Acidity	%w/w S	0.01	Inorg-064	<0.01	9	<0.01	<0.01	0	[NT]	[NT]
Liming rate	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	9	<0.75	<0.75	0	[NT]	[NT]
s-Net Acidity without -ANCE	%w/w S	0.01	Inorg-064	<0.01	9	[NT]	[NT]		[NT]	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: sPOCAS + %S w/w						Duplicate		Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
a-Net Acidity without ANCE	moles H ⁺ /t	5	Inorg-064	<5	9	[NT]	[NT]		[NT]	[NT]
Liming rate without ANCE	kg CaCO ₃ /t	0.75	Inorg-064	<0.75	9	[NT]	[NT]		[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223772
Date Sample Received	13/08/2019
Date Instructions Received	13/08/2019
Date Results Expected to be Reported	20/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	54 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	sPOCAS + %S w/w	On Hold
JKE116-0.6-0.8		✓
JKE116-1.5-1.95		✓
JKE116-3.1-3.3		✓
JKE116-3.3-3.7		✓
JKE116-4.5-4.95		✓
JKE116-5.3-5.6		✓
JKE116-6.1-6.35		✓
JKE116-7.2-7.4		✓
JKE116-7.6-7.95	✓	
JKE116-8.3-8.6	✓	
JKE116-90-9.45		✓
JKE116-10.5-10.95		✓
JKE116-12.9-13.4		✓
JKE116-13.5-13.95		✓
JKE116-15.4-15.6	✓	
JKE122-1.5-1.95		✓
JKE122-2.3-2.6		✓
JKE122-3.0-3.45		✓
JKE122-3.9-4.1		✓
JKE122-4.5-4.95		✓
JKE122-5.3-5.6		✓
JKE122-6.0-6.45		✓
JKE122-6.6-7.0		✓
JKE122-7.5-7.95		✓
JKE122-8.5-8.8	✓	
JKE122-9.0-9.45	✓	
JKE126-0.5-0.95		✓
JKE126-1.5-1.95		✓
JKE126-2.0-2.4		✓
JKE126-3.0-3.45		✓
JKE126-3.8-4.2		✓
JKE126-4.5-4.95		✓



Sample ID	sPOCAS + %S w/w	On Hold
JKE126-5.0-5.4		✓
JKE126-6.0-6.45		✓
JKE126-6.8-7.2		✓
JKE126-7.5-7.95		✓
JKE126-8.3-8.6		✓
JKE126-9.0-9.4		✓
JKE126-9.4-9.45		✓
JKE126-10.5-10.95		✓
JKE126-12.5-13.0	✓	
JKE126-13.5-13.75	✓	
JKE135-0.6-0.8		✓
JKE135-1.7-1.95	✓	
JKE135-2.3-2.6		✓
JKE135-3.0-3.45		✓
JKE135-3.8-4.2		✓
JKE135-4.5-4.95		✓
JKE135-5.3-5.6		✓
JKE135-6.0-6.45		✓
JKE135-6.8-7.2		✓
JKE135-7.5-7.95		✓
JKE135-8.4-8.6		✓
JKE135-9.1-9.45	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: <u>E32465BD</u> Date Results Required: <u>STANDARD</u> Page: <u>1/3</u>	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
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Location:	Liverpool	Sample Preserved in Esky on Ice
Sampler:	AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	sPOCAs	pH (1:5 water)	CEC										
5.8.19	1	JKE116	0.6-0.8	P	Silty Clay													
5.8.19	2	JKE116	1.5-1.95	P	Silty Clay													
5.8.19	3	JKE116	3.1-3.3	P	Sand													
5.8.19	4	JKE116	3.3-3.7	P	Sandy Clay													
5.8.19	5	JKE116	4.5-4.45	P	Sandy Clay													
5.8.19	6	JKE116	5.3-5.6	P	Sandy Clay													
5.8.19	7	JKE116	6.1-6.35	P	Silty Clay													
5.8.19	8	JKE116	7.2-7.4	P	Silty Clay													
5.8.19	9	JKE116	7.6-7.95	P	Silty Clay	X												
5.8.19	10	JKE116	8.3-8.6	P	Sandy Clay	X												
5.8.19	11	JKE116	9.0-9.45	P	Silty Clay													
5.8.19	12	JKE116	10.5-10.95	P	Sandy Clay													
5.8.19	13	JKE116	12.9-13.4	P	Sandy Clay													
5.8.19	14	JKE116	13.5-13.95	P	Sandy Clay													
5.8.19	15	JKE116	15.4-15.6	P	Siltstone	X												
6.8.19	16	JKE122	1.5-1.95	P	Silty Clay													
6.8.19	17	JKE122	2.3-2.6	P	Silty Clay													
6.8.19	18	JKE122	3.0-3.45	P	Silty Clay													
6.8.19	19	JKE122	3.9-4.1	P	Silty Clay													
6.8.19	20	JKE122	4.5-4.95	P	Silty Clay													
6.8.19	21	JKE122	5.3-5.6	P	Silty Clay													
6.8.19	22	JKE122	6.0-6.45	P	Clayey Sand													
6.8.19	23	JKE122	6.6-7.0	P	Silty Clay													
6.8.19	24	JKE122	7.5-7.95	P	Silty Clay													
6.8.19	25	JKE122	8.5-8.8	P	Silty Clay	X												

Remarks (comments/detection limits required):	Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag
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Relinquished By: <u>MD</u>	Date: <u>13/8/19</u>	Time:	Received By: <u>WP</u>	Date: <u>12/8/19</u>
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CERTIFICATE OF ANALYSIS 223772-A

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	54 soil
Date samples received	13/08/2019
Date completed instructions received	21/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
Samples were analysed as received from the client. Results relate specifically to the samples as received.
Results are reported on a dry weight basis for solids and on an as received basis for other matrices.

Report Details

Date results requested by	28/08/2019
Date of Issue	23/08/2019
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Results Approved By

Priya Samarawickrama, Senior Chemist

Authorised By

Nancy Zhang, Laboratory Manager

SCr		
Our Reference		223772-A-15
Your Reference	UNITS	JKE116
Depth		15.4-15.6
Date Sampled		05/08/2019
Type of sample		soil
Date prepared	-	22/08/2019
Date analysed	-	22/08/2019
Chromium Reducible Sulfur	%w/w	0.17
a-Chromium Reducible Sulfur	moles H ⁺ /t	100

Method ID	Methodology Summary
Inorg-068	Chromium Reducible Sulfur - Hydrogen Sulfide is quantified by iodometric titration after distillation to determine potential acidity. Based on Acid Sulfate Soils Laboratory Methods Guidelines, Version 2.1 - June 2004.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: SCr				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			22/08/2019	[NT]	[NT]	[NT]	[NT]	22/08/2019	[NT]
Date analysed	-			22/08/2019	[NT]	[NT]	[NT]	[NT]	22/08/2019	[NT]
Chromium Reducible Sulfur	%w/w	0.005	Inorg-068	<0.005	[NT]	[NT]	[NT]	[NT]	[NT]	[NT]
a-Chromium Reducible Sulfur	moles H ⁺ /t	3	Inorg-068	<3	[NT]	[NT]	[NT]	[NT]	98	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.

Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223772-A
Date Sample Received	13/08/2019
Date Instructions Received	21/08/2019
Date Results Expected to be Reported	28/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	54 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	13.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	Scr	On Hold
JKE116-0.6-0.8		✓
JKE116-1.5-1.95		✓
JKE116-3.1-3.3		✓
JKE116-3.3-3.7		✓
JKE116-4.5-4.95		✓
JKE116-5.3-5.6		✓
JKE116-6.1-6.35		✓
JKE116-7.2-7.4		✓
JKE116-7.6-7.95		✓
JKE116-8.3-8.6		✓
JKE116-90-9.45		✓
JKE116-10.5-10.95		✓
JKE116-12.9-13.4		✓
JKE116-13.5-13.95		✓
JKE116-15.4-15.6	✓	
JKE122-1.5-1.95		✓
JKE122-2.3-2.6		✓
JKE122-3.0-3.45		✓
JKE122-3.9-4.1		✓
JKE122-4.5-4.95		✓
JKE122-5.3-5.6		✓
JKE122-6.0-6.45		✓
JKE122-6.6-7.0		✓
JKE122-7.5-7.95		✓
JKE122-8.5-8.8		✓
JKE122-9.0-9.45		✓
JKE126-0.5-0.95		✓
JKE126-1.5-1.95		✓
JKE126-2.0-2.4		✓
JKE126-3.0-3.45		✓
JKE126-3.8-4.2		✓
JKE126-4.5-4.95		✓



Sample ID	Scr	On Hold
JKE126-5.0-5.4		✓
JKE126-6.0-6.45		✓
JKE126-6.8-7.2		✓
JKE126-7.5-7.95		✓
JKE126-8.3-8.6		✓
JKE126-9.0-9.4		✓
JKE126-9.4-9.45		✓
JKE126-10.5-10.95		✓
JKE126-12.5-13.0		✓
JKE126-13.5-13.75		✓
JKE135-0.6-0.8		✓
JKE135-1.7-1.95		✓
JKE135-2.3-2.6		✓
JKE135-3.0-3.45		✓
JKE135-3.8-4.2		✓
JKE135-4.5-4.95		✓
JKE135-5.3-5.6		✓
JKE135-6.0-6.45		✓
JKE135-6.8-7.2		✓
JKE135-7.5-7.95		✓
JKE135-8.4-8.6		✓
JKE135-9.1-9.45		✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

Andrew Fitzsimons

From: Mitchell Delaney <MDelaney@jkenvironments.com.au>
Sent: Wednesday, 21 August 2019 4:58 PM
To: Samplereceipt
Subject: Additional Analysis Request 223772

Follow Up Flag: Follow up
Flag Status: Flagged

Ref: 223772-A
TAT: std
Due: 28/8/19
FAZ

Hi,

#15

Can I please schedule SCr analysis on the sample JKE116 (15.4-15.6).

Standard TA please.

Many thanks.

Regards
Mitchell Delaney
Senior Associate | Environmental Scientist



T: +612 9888 5000
E: MDelaney@jkenvironments.com.au
www.jkenvironments.com.au

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JK Environments

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CERTIFICATE OF ANALYSIS 223298

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	26 soil
Date samples received	06/08/2019
Date completed instructions received	06/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	14/08/2019
Date of Issue	14/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Diego Bigolin, Team Leader, Inorganics
 Loren Bardwell, Senior Chemist
 Nick Sarlamis, Inorganics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

CEC			
Our Reference		223298-5	223298-18
Your Reference	UNITS	JKE102	JKE108
Depth		3.25-3.45	3.0-3.45
Date Sampled		31/07/2019	31/07/2019
Type of sample		soil	soil
Date prepared	-	13/08/2019	13/08/2019
Date analysed	-	13/08/2019	13/08/2019
Exchangeable Ca	meq/100g	1.1	7.6
Exchangeable K	meq/100g	<0.1	0.2
Exchangeable Mg	meq/100g	2.8	3.8
Exchangeable Na	meq/100g	1.2	1.2
Cation Exchange Capacity	meq/100g	5.2	13

Client Reference: E32465BD, Liverpool

Texture and Salinity*						
Our Reference		223298-5	223298-16	223298-18	223298-22	223298-24
Your Reference	UNITS	JKE102	JKE102	JKE108	JKE108	JKE108
Depth		3.25-3.45	9.8-10.0	3.0-3.45	7.5-7.95	9.2-9.45
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Electrical Conductivity 1:5 soil:water	µS/cm	260	460	340	250	230
Texture Value	-	7.0	8.0	7.0	14	9.0
Texture		MEDIUM CLAY	LIGHT MEDIUM CLAY	MEDIUM CLAY	SANDY LOAM	CLAY LOAM
ECe	dS/m	<2	3.7	2.4	3.5	2.1
Class		NON SALINE	SLIGHTLY SALINE	SLIGHTLY SALINE	SLIGHTLY SALINE	SLIGHTLY SALINE

Misc Inorg - Soil						
Our Reference		223298-5	223298-16	223298-18	223298-22	223298-24
Your Reference	UNITS	JKE102	JKE102	JKE108	JKE108	JKE108
Depth		3.25-3.45	9.8-10.0	3.0-3.45	7.5-7.95	9.2-9.45
Date Sampled		31/07/2019	31/07/2019	31/07/2019	31/07/2019	31/07/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
Date analysed	-	08/08/2019	08/08/2019	08/08/2019	08/08/2019	08/08/2019
pH 1:5 soil:water	pH Units	7.7	8.9	7.6	6.7	7.8
Chloride, Cl 1:5 soil:water	mg/kg	230	490	230	300	280
Sulphate, SO ₄ 1:5 soil:water	mg/kg	200	86	310	68	30
Resistivity in soil*	ohm m	39	22	29	40	44

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25oC in accordance with APHA 22nd ED 2510 and Rayment & Lyons. Resistivity is calculated from Conductivity (non NATA). Resistivity (calculated) may not correlate with results otherwise obtained using Resistivity-Current method, depending on the nature of the soil being analysed.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
INORG-123	Determined using a "Texture by Feel" method.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: CEC				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			13/08/2019	[NT]	[NT]	[NT]	[NT]	13/08/2019	[NT]
Date analysed	-			13/08/2019	[NT]	[NT]	[NT]	[NT]	13/08/2019	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	92	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	96	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	93	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	[NT]	[NT]	[NT]	[NT]	105	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Texture and Salinity*				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Date analysed	-			08/08/2019	[NT]	[NT]	[NT]	[NT]	08/08/2019	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	102	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Misc Inorg - Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	223298-16
Date prepared	-			08/08/2019	5	08/08/2019	08/08/2019		08/08/2019	08/08/2019
Date analysed	-			08/08/2019	5	08/08/2019	08/08/2019		08/08/2019	08/08/2019
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	5	7.7	7.8	1	102	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	5	230	[NT]		91	#
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	5	200	[NT]		96	114
Resistivity in soil*	ohm m	1	Inorg-002	<1	5	39	31	23	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
<p>Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.</p>	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

MISC_INORG_DRY: CHLORIDE # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223298
Date Sample Received	06/08/2019
Date Instructions Received	06/08/2019
Date Results Expected to be Reported	14/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	26 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	14.1
Cooling Method	Ice
Sampling Date Provided	YES

Comments

MISSING JKE102 0.3-0.5

EXTRA
 JKE102 4.0-4.2
 JKE102 4.7-4.95

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	CEC	Texture and Salinity*	Misc Inorg - Soil	On Hold
JKE102-0.1-0.3				✓
JKE102-1.2-1.6				✓
JKE102-1.6-2.0				✓
JKE102-2.8-3.0				✓
JKE102-3.25-3.45	✓	✓	✓	
JKE102-4.4-4.5				✓
JKE102-5.0-5.4				✓
JKE102-5.8-6.0				✓
JKE102-6.2-6.4				✓
JKE102-6.4-6.45				✓
JKE102-6.7-7.0				✓
JKE102-7.3-7.5				✓
JKE102-7.75-7.95				✓
JKE102-8.4-8.6				✓
JKE102-9.0-9.45				✓
JKE102-9.8-10.0		✓	✓	
JKE108-0.5-0.95				✓
JKE108-3.0-3.45	✓	✓	✓	
JKE108-4.0-4.3				✓
JKE108-4.8-4.95				✓
JKE108-6.0-6.45				✓
JKE108-7.5-7.95		✓	✓	
JKE108-8.4-8.8				✓
JKE108-9.2-9.45		✓	✓	
JKE102-4.0-4.2				✓
JKE102-4.7-4.95				✓

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Additional Info

Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: <u>E32465BD</u> Date Results Required: <u>STANDARD</u> Page: <u>1 of 1</u>	FROM: JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitch Delaney mdelaney@jkenvironments.com.au
---	--	---

Location:	Liverpool	Sample Preserved in Esky on Ice
Sampler:	AM	Tests Required

Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	PH	EC	Ece (texture)	Sulphate	Chloride	Resistivity	CEC
31/7/19	1	JKE102	0.1-0.3	P	F: Gravel sand							
	NR 3	NR	0.3-0.5		F: SILTY CLAY							
	2 3		1.2-1.6		↓							
	3 4		1.6-2.0		SILTY CLAY							
	4 5		2.8-3.0									
	5 6		3.25-3.45			X	X	X	X	X	X	X
	6 7		4.4-4.5		↓							
	7 8		5.0-5.4		SILTY clay sand							
	8 9		5.8-6.0		SAND							
	9 10		6.2-6.4		SILTY SAND							
	10 11		6.4-6.95		SILTY CLAY							
	11 12	11/12/19	6.7-7.0									
	12 13	6/13/19	7.3-7.5									
	13 14		7.75-7.95									
	14 15		8.4-8.6									
	15 16		2x 9.0-9.45									
	↓ 16 17	↓	9.8-10.0		↓	X	X	X	X	X	X	X
17	11/8/19	18	JKE108		F: SILTY clay							
	18 19		3.0-3.45		SILTY CLAY	X	X	X	X	X	X	X
	19 20	on box (JKE102)	4.0-4.3									
	20 21		4.8-4.95									
	21 22		6.0-6.45									
	22 23		7.5-7.95			X	X	X	X	X	X	X
	23 24		8.4-8.8									
	↓ 24 25	↓	9.2-9.45	↓	↓	X	X	X	X	X	X	X

EnviroLab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200

Job No: 223298
 Date Received: 6/8/2019
 Time Received: 1530
 Received by: PLQj
 Temp: COOL
 Coding: Intact
 Security: Intact/Broken/None

Remarks (comments/detection limits required): 25 26 extra - JKE 102 4.0 - 4.2 26 27 - JKE 102 4.7 - 4.95		Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag	
Relinquished By: <u>MD</u>	Date: <u>6/8/19</u>	Time: <u>1530</u>	Received By: <u>PLQj</u>
			Date: <u>6/8/2019</u>

CERTIFICATE OF ANALYSIS 223787

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney
Address	PO Box 976, North Ryde BC, NSW, 1670

Sample Details

Your Reference	<u>E32465BD, Liverpool</u>
Number of Samples	52 soil
Date samples received	13/08/2019
Date completed instructions received	13/08/2019

Analysis Details

Please refer to the following pages for results, methodology summary and quality control data.
 Samples were analysed as received from the client. Results relate specifically to the samples as received.
 Results are reported on a dry weight basis for solids and on an as received basis for other matrices.
Please refer to the last page of this report for any comments relating to the results.

Report Details

Date results requested by	20/08/2019
Date of Issue	20/08/2019
NATA Accreditation Number 2901. This document shall not be reproduced except in full.	
Accredited for compliance with ISO/IEC 17025 - Testing. Tests not covered by NATA are denoted with *	

Results Approved By

Diego Bigolin, Team Leader, Inorganics
 Jaimie Loa-Kum-Cheung, Metals Supervisor
 Nick Sarlamis, Inorganics Supervisor

Authorised By



Nancy Zhang, Laboratory Manager

CEC						
Our Reference		223787-1	223787-14	223787-16	223787-22	223787-26
Your Reference	UNITS	JKE116	JKE116	JKE122	JKE122	JKE126
Depth		0.6-0.8	15.4-15.6	2.3-2.6	6.6-7.0	0.5-0.95
Date Sampled		05/08/2019	05/08/2019	06/08/2019	06/08/2019	07/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
Date analysed	-	16/08/2019	16/08/2019	16/08/2019	16/08/2019	16/08/2019
Exchangeable Ca	meq/100g	7.3	0.7	2.1	1.6	5.8
Exchangeable K	meq/100g	0.1	0.3	<0.1	<0.1	0.4
Exchangeable Mg	meq/100g	9.9	2.3	4.5	2.2	6.3
Exchangeable Na	meq/100g	1.9	0.57	1.3	0.83	0.60
Cation Exchange Capacity	meq/100g	19	3.8	8.1	4.7	13

CEC		
Our Reference		223787-44
Your Reference	UNITS	JKE135
Depth		3.0-3.45
Date Sampled		08/08/2019
Type of sample		soil
Date prepared	-	16/08/2019
Date analysed	-	16/08/2019
Exchangeable Ca	meq/100g	<0.1
Exchangeable K	meq/100g	<0.1
Exchangeable Mg	meq/100g	1.6
Exchangeable Na	meq/100g	1.1
Cation Exchange Capacity	meq/100g	2.7

Texture and Salinity*						
Our Reference		223787-1	223787-8	223787-14	223787-16	223787-22
Your Reference	UNITS	JKE116	JKE116	JKE116	JKE122	JKE122
Depth		0.6-0.8	7.6-7.95	15.4-15.6	2.3-2.6	6.6-7.0
Date Sampled		05/08/2019	05/08/2019	05/08/2019	06/08/2019	06/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Electrical Conductivity 1:5 soil:water	µS/cm	460	520	540	390	470
Texture Value	-	7.0	8.0	8.5	8.0	8.0
Texture		MEDIUM CLAY	LIGHT MEDIUM CLAY	LIGHT CLAY	LIGHT MEDIUM CLAY	LIGHT MEDIUM CLAY
ECe	dS/m	3.2	4.1	4.6	3.1	3.7
Class		SLIGHTLY SALINE	MODERATELY SALINE	MODERATELY SALINE	SLIGHTLY SALINE	SLIGHTLY SALINE

Texture and Salinity*					
Our Reference		223787-26	223787-40	223787-44	223787-52
Your Reference	UNITS	JKE126	JKE126	JKE135	JKE135
Depth		0.5-0.95	13.5-13.75	3.0-3.45	9.1-9.45
Date Sampled		07/08/2019	07/08/2019	08/08/2019	08/08/2019
Type of sample		soil	soil	soil	soil
Date prepared	-	15/08/2019	16/08/2019	16/08/2019	16/08/2019
Date analysed	-	15/08/2019	16/08/2019	16/08/2019	16/08/2019
Electrical Conductivity 1:5 soil:water	µS/cm	190	710	210	780
Texture Value	-	7.0	9.0	7.0	8.5
Texture		MEDIUM CLAY	CLAY LOAM	MEDIUM CLAY	LIGHT CLAY
ECe	dS/m	<2	6.4	<2	6.7
Class		NON SALINE	MODERATELY SALINE	NON SALINE	MODERATELY SALINE

Misc Inorg - Soil						
Our Reference		223787-1	223787-8	223787-14	223787-16	223787-22
Your Reference	UNITS	JKE116	JKE116	JKE116	JKE122	JKE122
Depth		0.6-0.8	7.6-7.95	15.4-15.6	2.3-2.6	6.6-7.0
Date Sampled		05/08/2019	05/08/2019	05/08/2019	06/08/2019	06/08/2019
Type of sample		soil	soil	soil	soil	soil
Date prepared	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019	15/08/2019
pH 1:5 soil:water	pH Units	7.9	8.2	8.0	6.3	7.8
Chloride, Cl 1:5 soil:water	mg/kg	390	790	690	140	420
Sulphate, SO4 1:5 soil:water	mg/kg	300	50	160	530	300
Resistivity in soil*	ohm m	22	19	19	26	21

Misc Inorg - Soil					
Our Reference		223787-26	223787-40	223787-44	223787-52
Your Reference	UNITS	JKE126	JKE126	JKE135	JKE135
Depth		0.5-0.95	13.5-13.75	3.0-3.45	9.1-9.45
Date Sampled		07/08/2019	07/08/2019	08/08/2019	08/08/2019
Type of sample		soil	soil	soil	soil
Date prepared	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019
Date analysed	-	15/08/2019	15/08/2019	15/08/2019	15/08/2019
pH 1:5 soil:water	pH Units	8.2	8.6	5.5	8.6
Chloride, Cl 1:5 soil:water	mg/kg	62	840	200	970
Sulphate, SO4 1:5 soil:water	mg/kg	210	110	110	140
Resistivity in soil*	ohm m	54	14	49	13

Method ID	Methodology Summary
Inorg-001	pH - Measured using pH meter and electrode in accordance with APHA latest edition, 4500-H+. Please note that the results for water analyses are indicative only, as analysis outside of the APHA storage times.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25°C in accordance with APHA latest edition 2510 and Rayment & Lyons.
Inorg-002	Conductivity and Salinity - measured using a conductivity cell at 25oC in accordance with APHA 22nd ED 2510 and Rayment & Lyons. Resistivity is calculated from Conductivity (non NATA). Resistivity (calculated) may not correlate with results otherwise obtained using Resistivity-Current method, depending on the nature of the soil being analysed.
Inorg-081	Anions - a range of Anions are determined by Ion Chromatography, in accordance with APHA latest edition, 4110-B. Waters samples are filtered on receipt prior to analysis. Alternatively determined by colourimetry/turbidity using Discrete Analyser.
INORG-123	Determined using a "Texture by Feel" method.
Metals-009	Determination of exchangeable cations and cation exchange capacity in soils using 1M Ammonium Chloride exchange and ICP-AES analytical finish.

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: CEC				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			16/08/2019	14	16/08/2019	16/08/2019		16/08/2019	[NT]
Date analysed	-			16/08/2019	14	16/08/2019	16/08/2019		16/08/2019	[NT]
Exchangeable Ca	meq/100g	0.1	Metals-009	<0.1	14	0.7	0.7	0	107	[NT]
Exchangeable K	meq/100g	0.1	Metals-009	<0.1	14	0.3	0.3	0	103	[NT]
Exchangeable Mg	meq/100g	0.1	Metals-009	<0.1	14	2.3	2.4	4	104	[NT]
Exchangeable Na	meq/100g	0.1	Metals-009	<0.1	14	0.57	0.56	2	107	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Texture and Salinity*				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	[NT]
Date prepared	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Date analysed	-			15/08/2019	[NT]	[NT]	[NT]	[NT]	15/08/2019	[NT]
Electrical Conductivity 1:5 soil:water	µS/cm	1	Inorg-002	<1	[NT]	[NT]	[NT]	[NT]	100	[NT]

Client Reference: E32465BD, Liverpool

QUALITY CONTROL: Misc Inorg - Soil				Duplicate				Spike Recovery %		
Test Description	Units	PQL	Method	Blank	#	Base	Dup.	RPD	LCS-1	223787-26
Date prepared	-			15/08/2019	8	15/08/2019	15/08/2019		15/08/2019	15/08/2019
Date analysed	-			15/08/2019	8	15/08/2019	15/08/2019		15/08/2019	15/08/2019
pH 1:5 soil:water	pH Units		Inorg-001	[NT]	8	8.2	8.3	1	102	[NT]
Chloride, Cl 1:5 soil:water	mg/kg	10	Inorg-081	<10	8	790	700	12	95	74
Sulphate, SO4 1:5 soil:water	mg/kg	10	Inorg-081	<10	8	50	48	4	99	70
Resistivity in soil*	ohm m	1	Inorg-002	<1	8	19	20	5	[NT]	[NT]

Result Definitions

NT	Not tested
NA	Test not required
INS	Insufficient sample for this test
PQL	Practical Quantitation Limit
<	Less than
>	Greater than
RPD	Relative Percent Difference
LCS	Laboratory Control Sample
NS	Not specified
NEPM	National Environmental Protection Measure
NR	Not Reported

Quality Control Definitions

Blank	This is the component of the analytical signal which is not derived from the sample but from reagents, glassware etc, can be determined by processing solvents and reagents in exactly the same manner as for samples.
Duplicate	This is the complete duplicate analysis of a sample from the process batch. If possible, the sample selected should be one where the analyte concentration is easily measurable.
Matrix Spike	A portion of the sample is spiked with a known concentration of target analyte. The purpose of the matrix spike is to monitor the performance of the analytical method used and to determine whether matrix interferences exist.
LCS (Laboratory Control Sample)	This comprises either a standard reference material or a control matrix (such as a blank sand or water) fortified with analytes representative of the analyte class. It is simply a check sample.
Surrogate Spike	Surrogates are known additions to each sample, blank, matrix spike and LCS in a batch, of compounds which are similar to the analyte of interest, however are not expected to be found in real samples.
<p>Australian Drinking Water Guidelines recommend that Thermotolerant Coliform, Faecal Enterococci, & E.Coli levels are less than 1cfu/100mL. The recommended maximums are taken from "Australian Drinking Water Guidelines", published by NHMRC & ARMC 2011.</p>	

Laboratory Acceptance Criteria

Duplicate sample and matrix spike recoveries may not be reported on smaller jobs, however, were analysed at a frequency to meet or exceed NEPM requirements. All samples are tested in batches of 20. The duplicate sample RPD and matrix spike recoveries for the batch were within the laboratory acceptance criteria.

Filters, swabs, wipes, tubes and badges will not have duplicate data as the whole sample is generally extracted during sample extraction.

Spikes for Physical and Aggregate Tests are not applicable.

For VOCs in water samples, three vials are required for duplicate or spike analysis.

Duplicates: >10xPQL - RPD acceptance criteria will vary depending on the analytes and the analytical techniques but is typically in the range 20%-50% – see ELN-P05 QA/QC tables for details; <10xPQL - RPD are higher as the results approach PQL and the estimated measurement uncertainty will statistically increase.

Matrix Spikes, LCS and Surrogate recoveries: Generally 70-130% for inorganics/metals; 60-140% for organics (+/-50% surrogates) and 10-140% for labile SVOCs (including labile surrogates), ultra trace organics and speciated phenols is acceptable.

In circumstances where no duplicate and/or sample spike has been reported at 1 in 10 and/or 1 in 20 samples respectively, the sample volume submitted was insufficient in order to satisfy laboratory QA/QC protocols.

When samples are received where certain analytes are outside of recommended technical holding times (THTs), the analysis has proceeded. Where analytes are on the verge of breaching THTs, every effort will be made to analyse within the THT or as soon as practicable.

Where sampling dates are not provided, Envirolab are not in a position to comment on the validity of the analysis where recommended technical holding times may have been breached.

Measurement Uncertainty estimates are available for most tests upon request.

Analysis of aqueous samples typically involves the extraction/digestion and/or analysis of the liquid phase only (i.e. NOT any settled sediment phase but inclusive of suspended particles if present), unless stipulated on the Envirolab COC and/or by correspondence. Notable exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, total recoverable metals and PFAS where solids are included by default.

Report Comments

MISC_INORG_DRY:SULPHATE # Percent recovery is not possible to report due to the high concentration of the element/s in the sample/s. However an acceptable recovery was obtained for the LCS.

SAMPLE RECEIPT ADVICE

Client Details

Client	Environmental Investigation Services
Attention	Mitchell Delaney

Sample Login Details

Your reference	E32465BD, Liverpool
Envirolab Reference	223787
Date Sample Received	13/08/2019
Date Instructions Received	13/08/2019
Date Results Expected to be Reported	20/08/2019

Sample Condition

Samples received in appropriate condition for analysis	Yes
No. of Samples Provided	52 soil
Turnaround Time Requested	Standard
Temperature on Receipt (°C)	16.4
Cooling Method	Ice
Sampling Date Provided	YES

Comments

Nil

Please direct any queries to:

Aileen Hie

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: ahie@envirolab.com.au

Jacinta Hurst

Phone: 02 9910 6200
Fax: 02 9910 6201
Email: jhurst@envirolab.com.au

Analysis Underway, details on the following page:



Envirolab Services Pty Ltd

ABN 37 112 535 645

12 Ashley St Chatswood NSW 2067

ph 02 9910 6200 fax 02 9910 6201

customerservice@envirolab.com.au

www.envirolab.com.au

Sample ID	CEC	Texture and Salinity*	Misc Inorg - Soil	On Hold
JKE116-0.6-0.8	✓	✓	✓	
JKE116-1.5-1.95				✓
JKE116-3.3-3.7				✓
JKE116-4.5-4.95				✓
JKE116-5.3-5.6				✓
JKE116-6.1-6.35				✓
JKE116-7.2-7.4				✓
JKE116-7.6-7.95		✓	✓	
JKE116-8.3-8.6				✓
JKE116-9.0-9.45				✓
JKE116-10.5-10.95				✓
JKE116-12.9-13.4				✓
JKE116-13.5-13.95				✓
JKE116-15.4-15.6	✓	✓	✓	
JKE122-1.5-1.95				✓
JKE122-2.3-2.6	✓	✓	✓	
JKE122-3.0-3.45				✓
JKE122-3.9-4.1				✓
JKE122-4.5-4.95				✓
JKE122-5.3-5.6				✓
JKE122-6.0-6.45				✓
JKE122-6.6-7.0	✓	✓	✓	
JKE122-7.5-7.95				✓
JKE122-8.5-8.8				✓
JKE122-9.0-9.45				✓
JKE126-0.5-0.95	✓	✓	✓	
JKE126-1.5-1.95				✓
JKE126-2.0-2.4				✓
JKE126-3.0-3.45				✓
JKE126-3.8-4.2				✓
JKE126-4.5-4.95				✓
JKE126-5.0-5.4				✓



Sample ID	CEC	Texture and Salinity*	Misc Inorg - Soil	On Hold
JKE126-6.0-6.45				✓
JKE126-6.8-7.2				✓
JKE126-7.5-7.95				✓
JKE126-8.3-8.6				✓
JKE126-9.0-9.4				✓
JKE126-105-10.95				✓
JKE126-12.5-13.0				✓
JKE126-13.5-13.75		✓	✓	
JKE135-0.6-0.8				✓
JKE135-1.7-1.95				✓
JKE135-2.3-2.6				✓
JKE135-3.0-3.45	✓	✓	✓	
JKE135-3.8-4.2				✓
JKE135-4.5-4.95				✓
JKE135-5.3-5.6				✓
JKE135-6.0-6.45				✓
JKE135-6.8-7.2				✓
JKE135-7.5-7.95				✓
JKE135-8.4-8.6				✓
JKE135-9.1-9.45		✓	✓	

The '✓' indicates the testing you have requested. **THIS IS NOT A REPORT OF THE RESULTS.**

Additional Info


Sample storage - Waters are routinely disposed of approximately 1 month and soils approximately 2 months from receipt.

Requests for longer term sample storage must be received in writing.

Please contact the laboratory immediately if observed settled sediment present in water samples is to be included in the extraction and/or analysis (exceptions include certain Physical Tests (pH/EC/BOD/COD/Apparent Colour etc.), Solids testing, Total Recoverable metals and PFAS analysis where solids are included by default.

TAT for Micro is dependent on incubation. This varies from 3 to 6 days.

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 1/3	FROM:  JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
---	---	---


Location:		Liverpool				Sample Preserved in Esky on Ice															
Sampler:		AM				Tests Required															
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	pH	EC	ECe (texture)	Sulphate	Chloride	Resistivity	CEC									
5.8.19	1	JKE116	0.6-0.8	P	Silty Clay	X	X	X	X	X	X	X									
5.8.19	2	JKE116	1.5-1.95	P	Silty Clay																
5.8.19	3	JKE116	3.3-3.7	P	Sandy Clay																
5.8.19	4	JKE116	4.5-4.45	P	Sandy Clay																
5.8.19	5	JKE116	5.3-5.6	P	Sandy Clay																
5.8.19	6	JKE116	6.1-6.35	P	Silty Clay																
5.8.19	7	JKE116	7.2-7.4	P	Silty Clay																
5.8.19	8	JKE116	7.6-7.95	P	Silty Clay	X	X	X	X	X	X	X									
5.8.19	9	JKE116	8.3-8.6	P	Sandy Clay																
5.8.19	10	JKE116	9.0-9.45	P	Silty Clay																
5.8.19	11	JKE116	10.5-10.95	P	Sandy Clay																
5.8.19	12	JKE116	12.9-13.4	P	Sandy Clay																
5.8.19	13	JKE116	13.5-13.95	P	Sandy Clay																
5.8.19	14	JKE116	15.4-15.6	P	Siltstone	X	X	X	X	X	X	X									
6.8.19	15	JKE122	1.5-1.95	P	Silty Clay																
6.8.19	16	JKE122	2.3-2.6	P	Silty Clay	X	X	X	X	X	X	X									
6.8.19	17	JKE122	3.0-3.45	P	Silty Clay																
6.8.19	18	JKE122	3.9-4.1	P	Silty Clay																
6.8.19	19	JKE122	4.5-4.95	P	Silty Clay																
6.8.19	20	JKE122	5.3-5.6	P	Silty Clay																
6.8.19	21	JKE122	6.0-6.45	P	Clayey Sand																
6.8.19	22	JKE122	6.6-7.0	P	Silty Clay	X	X	X	X	X	X	X									
6.8.19	23	JKE122	7.5-7.95	P	Silty Clay																
6.8.19	24	JKE122	8.5-8.8	P	Silty Clay																
6.8.19	25	JKE122	9.0-9.45	P	Silty Clayey Sand																

ENVIROLAB
 EnviroLab Services
 12 Ashley St
 Chatswood NSW 2067
 Ph: (02) 9910 6200

 Job No: 223787
 Date Received: 13-08-19
 Time Received: 14:00
 Received by: KE
 Temp: 20°C Ambient
 Cooling: ice/ice pack
 Security: intact Broken/None

Remarks (comments/detection limits required):		Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag			
Relinquished By: <i>MD</i>	Date: 13/8/19	Time: 4:20	Received By: <i>BM</i>	Date: 13/8	

SAMPLE AND CHAIN OF CUSTODY FORM

TO: ENVIROLAB SERVICES PTY LTD 12 ASHLEY STREET CHATSWOOD NSW 2067 P: (02) 99106200 F: (02) 99106201 Attention: Aileen	EIS Job Number: E32465BD Date Results Required: STANDARD Page: 2/3	FROM:  JK Environments REAR OF 115 WICKS ROAD MACQUARIE PARK, NSW 2113 P: 02-9888 5000 F: 02-9888 5001 Attention: Mitchell Delaney
---	---	---

Location:		Liverpool				Sample Preserved in Esky on Ice													
Sampler:		AM				Tests Required													
Date Sampled	Lab Ref:	Sample Number	Depth (m)	Sample Container	Sample Description	pH	EC	ECe (texture)	Sulphate	Chloride	Resistivity	CEC							
7.8.19	26	JKE126	0.5-0.95	P	Silty Clay	X	X	X	X	X	X	X							
7.8.19	27	JKE126	1.5-1.95	P	Silty Clay														
7.8.19	28	JKE126	2.0-2.4	P	Silty Sandy Clay														
7.8.19	29	JKE126	3.0-3.45	P	Silty Sandy Clay														
7.8.19	30	JKE126	3.8-4.2	P	Silty Clay														
7.8.19	31	JKE126	4.5-4.95	P	Sandy Clay														
7.8.19	32	JKE126	5.0-5.4	P	Silty Sand														
7.8.19	33	JKE126	6.0-6.45	P	Silty Sand														
7.8.19	34	JKE126	6.8-7.2	P	Silty Clayey Sand														
7.8.19	35	JKE126	7.5-7.95	P	Silty Clayey Sand														
7.8.19	36	JKE126	8.3-8.6	P	Silty Sand														
7.8.19	37	JKE126	9.0-9.4	P	Silty Sand														
7.8.19	38	JKE126	10.5-10.95	P	Silty Clay														
7.8.19	39	JKE126	12.5-13.0	P	Silty Clay														
7.8.19	40	JKE126	13.5-13.75	P	Siltstone	X	X	X	X	X	X	X							
8.8.19	41	JKE135	0.6-0.8	P	Fill: Silty Clay														
8.8.19	42	JKE135	1.7-1.95	P	Silty Clay														
8.8.19	43	JKE135	2.3-2.6	P	Silty Clay														
8.8.19	44	JKE135	3.0-3.45	P	Silty Clay	X	X	X	X	X	X	X							
8.8.19	45	JKE135	3.8-4.2	P	Silty Clay														
8.8.19	46	JKE135	4.5-4.95	P	Silty Clay														
8.8.19	47	JKE135	5.3-5.6	P	Silty Clay														
8.8.19	48	JKE135	6.0-6.45	P	Silty Clay														
8.8.19	49	JKE135	6.8-7.2	P	Silty Clay														
8.8.19	50	JKE135	7.5-7.95	P	Silty Clay														

Remarks (comments/detection limits required):				Sample Containers: G - 250mg Glass Jar A - Ziplock Asbestos Bag P - Plastic Bag			
Relinquished By: MD	Date: 13/8/19	Time: 4:20	Received By: Alex BM	Date: 13/8			

223787



Appendix F: Report Explanatory Notes



Standard Sampling Procedure

These protocols specify the basic procedures to be used when sampling soils or groundwater for environmental site assessments undertaken by JKE. The purpose of these protocols is to provide standard methods for: sampling, decontamination procedures for sampling equipment, sample preservation, sample storage and sample handling. Deviations from these procedures must be recorded.

A. Soil Sampling

- Prepare a borehole/test pit log or made a note of the sample description for stockpiles.
- Layout sampling equipment on clean plastic sheeting to prevent direct contact with ground surface. The work area should be at a distance from the drill rig/excavator such that the machine can operate in a safe manner.
- Ensure all sampling equipment has been decontaminated prior to use.
- Remove any surface debris from the immediate area of the sampling location.
- Collect samples and place in glass jar with a Teflon seal. This should be undertaken as quickly as possible to prevent the loss of any volatiles. If possible, fill the glass jars completely.
- Collect samples for asbestos analysis and place in a zip-lock plastic bag.
- Label the sampling containers with the JKE job number, sample location (eg. BH1), sampling depth interval and date. If more than one sample container is used, this should also be indicated (eg. 2 = Sample jar 1 of 2 jars).
- Photoionisation detector (PID) screening of volatile organic compounds (VOCs) should be undertaken on samples using the soil sample headspace method. Headspace measurements are taken following equilibration of the headspace gasses in partly filled zip-lock plastic bags. PID headspace data is recorded on the borehole/test pit log and the chain of custody forms.
- Record the lithology of the sample and sample depth on the borehole/test pit log generally in accordance with AS1726-2017³³.
- Store the sample in a sample container cooled with ice or chill packs. On completion of the sampling the sample container should be delivered to the lab immediately or stored in the refrigerator prior to delivery to the lab. All samples are preserved in accordance with the standards outlined in the report.
- Check for the presence of groundwater after completion of each borehole using an electronic dip metre or water whistle. Boreholes should be left open until the end of fieldwork where it is safe to do so. All groundwater levels in the boreholes should be rechecked on the completion of the fieldwork.
- Backfill the boreholes/test pits with the excavation cuttings or clean sand prior to leaving the site.

B. Decontamination Procedures for Soil Sampling Equipment

- All sampling equipment should be decontaminated between every sampling location. This excludes single use PVC tubing used for push tubes etc. Equipment and materials required for the decontamination include:
 - Phosphate free detergent (Decon 90);
 - Potable water;
 - Stiff brushes; and
 - Plastic sheets.
- Ensure the decontamination materials are clean prior to proceeding with the decontamination.
- Fill both buckets with clean potable water and add phosphate free detergent to one bucket.
- In the bucket containing the detergent, scrub the sampling equipment until all the material attached to the equipment has been removed.
- Rinse sampling equipment in the bucket containing potable water.

³³ Standards Australia, (2017), *Geotechnical Site Investigations*. (AS1726-2017)



- Place cleaned equipment on clean plastic sheets.

If all materials are not removed by this procedure, high-pressure water cleaning is recommended. If any equipment is not completely decontaminated by both these processes, then the equipment should not be used until it has been thoroughly cleaned.

C. Groundwater Sampling

Groundwater samples are more sensitive to contamination than soil samples and therefore adherence to this protocol is particularly important to obtain reliable, reproducible results. The recommendations detailed in AS/NZS 5667.1:1998 are considered to form a minimum standard.

The basis of this protocol is to maintain the security of the borehole and obtain accurate and representative groundwater samples. The following procedure should be used for collection of groundwater samples from previously installed groundwater monitoring wells.

- After monitoring well installation, at least three bore volumes should be pumped from the monitoring wells (well development) to remove any water introduced during the drilling process and/or the water that is disturbed during installation of the monitoring well. This should be completed prior to purging and sampling.
- Groundwater monitoring wells should then be left to recharge for at least three days before purging and sampling. Prior to purging or sampling, the condition of each well should be observed and any anomalies recorded on the field data sheets. The following information should be noted: the condition of the well, noting any signs of damage, tampering or complete destruction; the condition and operation of the well lock; the condition of the protective casing and the cement footing (raised or cracked); and, the presence of water between protective casing and well.
- Measure the groundwater level from the collar of the piezometer/monitoring well using an electronic dip meter. The collar level should be taken (if required) during the site visit using a dumpy level and staff.
- Purging and sampling of piezometers/monitoring wells is done on the same site visit when using micro-purge (or other low flow) techniques.
- Layout and organize all equipment associated with groundwater sampling in a location where they will not interfere with the sampling procedure and will not pose a risk of contaminating samples. Equipment generally required includes:
 - Stericup single-use filters (for heavy metals samples);
 - Bucket with volume increments;
 - Sample containers: teflon bottles with 1 ml nitric acid, 75mL glass vials with 1 mL hydrochloric acid, 1 L amber glass bottles;
 - Bucket with volume increments;
 - Flow cell;
 - pH/EC/Eh/Temperature meters;
 - Plastic drums used for transportation of purged water;
 - Esky and ice;
 - Nitrile gloves;
 - Distilled water (for cleaning);
 - Electronic dip meter;
 - Low flow peristaltic pump and associated tubing; and
 - Groundwater sampling forms.
- Ensure all non-disposable sampling equipment is decontaminated or that new disposable equipment is available prior to any work commencing at a new location. The procedure for decontamination of groundwater equipment is outlined at the end of this section.



- Disposable gloves should be used whenever samples are taken to protect the sampler and to assist in avoidance of contamination.
- Groundwater samples are obtained from the monitoring wells using low flow sampling equipment to reduce the disturbance of the water column and loss of volatiles.
- During pumping to purge the well, the pH, temperature, conductivity, dissolved oxygen, redox potential and groundwater levels are monitored (where possible) using calibrated field instruments to assess the development of steady state conditions. Steady state conditions are generally considered to have been achieved when the difference in the pH measurements is less than 0.2 units, the difference in conductivity is less than 10% and whilst the well is no longer in draw-down.
- All measurements are recorded on specific data sheets.
- Once steady state conditions are considered to have been achieved, groundwater samples are obtained directly from the pump tubing and placed in appropriate glass bottles, BTEX vials or plastic bottles.
- All samples are preserved in accordance with water sampling requirements specified by the laboratory and placed in an insulated container with ice. Groundwater samples are preserved by immediate storage in an insulated sample container with ice.
- At the end of each water sampling complete a chain of custody form for samples being sent to the laboratory.

D. Decontamination Procedures for Groundwater Sampling Equipment

- All equipment associated with the groundwater sampling procedure (other than single-use items) are decontaminated between every sampling location.
- The following equipment and materials are required for the decontamination procedure:
 - Phosphate free detergent;
 - Potable water;
 - Distilled water; and
 - Plastic Sheets or bulk bags (plastic bags).
- Fill one bucket with clean potable water and phosphate free detergent, and one bucket with distilled water.
- Flush potable water and detergent through pump head. Wash sampling equipment and pump head using brushes in the bucket containing detergent until all materials attached to the equipment are removed.
- Flush pump head with distilled water.
- Change water and detergent solution after each sampling location.
- Rinse sampling equipment in the bucket containing distilled water.
- Place cleaned equipment on clean plastic sheets.
- If all materials are not removed by this procedure that equipment should not be used until it has been thoroughly cleaned



QA/QC Definitions

The QA/QC terms used in this report are defined below. The definitions are in accordance with US EPA publication SW-846, entitled *Test Methods for Evaluating Solid Waste, Physical/Chemical Methods* (1994)³⁴ methods and those described in *Environmental Sampling and Analysis, A Practical Guide*, (1991)³⁵. The NEPM (2013) is consistent with these documents.

A. Practical Quantitation Limit (PQL), Limit of Reporting (LOR) & Estimated Quantitation Limit (EQL)

These terms all refer to the concentration above which results can be expressed with a minimum 95% confidence level. The laboratory reporting limits are generally set at ten times the standard deviation for the Method Detection Limit for each specific analyte. For the purposes of this report the LOR, PQL, and EQL are considered to be equivalent.

When assessing laboratory data it should be borne in mind that values at or near the PQL have two important limitations: *“The uncertainty of the measurement value can approach, and even equal, the reported value. Secondly, confirmation of the analytes reported is virtually impossible unless identification uses highly selective methods. These issues diminish when reliably measurable amounts of analytes are present. Accordingly, legal and regulatory actions should be limited to data at or above the reliable detection limit”* (Keith, 1991).

B. Precision

The degree to which data generated from repeated measurements differ from one another due to random errors. Precision is measured using the standard deviation or Relative Percent Difference (RPD).

C. Accuracy

Accuracy is a measure of the agreement between an experimental result and the true value of the parameter being measured (i.e. the proximity of an averaged result to the true value, where all random errors have been statistically removed). The assessment of accuracy for an analysis can be achieved through the analysis of known reference materials or assessed by the analysis of surrogates, field blanks, trip spikes and matrix spikes. Accuracy is typically reported as percent recovery.

D. Representativeness

Representativeness expresses the degree to which sample data accurately and precisely represents a characteristic of a population, parameter variations at a sampling point, or an environmental condition. Representativeness is primarily dependent upon the design and implementation of the sampling program. Representativeness of the data is partially ensured by the avoidance of contamination, adherence to sample handling and analysis protocols and use of proper chain-of-custody and documentation procedures.

E. Completeness

Completeness is a measure of the number of valid measurements in a data set compared to the total number of measurements made and overall performance against DQIs. The following information is assessed for completeness:

- Chain-of-custody forms;
- Sample receipt form;
- All sample results reported;

³⁴ US EPA, (1994). *SW-846: Test Methods for Evaluating Solid Waste, Physical/Chemical Methods*. (US EPA SW-846)

³⁵ Keith., H, (1991). *Environmental Sampling and Analysis, A Practical Guide*.



- All blank data reported;
- All laboratory duplicate and RPDs calculated;
- All surrogate spike data reported;
- All matrix spike and lab control spike (LCS) data reported and RPDs calculated;
- Spike recovery acceptable limits reported; and
- NATA stamp on reports.

F. **Comparability**

Comparability is the evaluation of the similarity of conditions (e.g. sample depth, sample homogeneity) under which separate sets of data are produced. Data comparability checks include a bias assessment that may arise from the following sources:

- Collection and analysis of samples by different personnel; Use of different techniques;
- Collection and analysis by the same personnel using the same methods but at different times; and
- Spatial and temporal changes (due to environmental dynamics).

G. **Blanks**

The purpose of laboratory and field blanks is to check for artefacts and interferences that may arise during sampling, transport and analysis.

H. **Matrix Spikes**

Samples are spiked with laboratory grade standards to detect interactive effects between the sample matrix and the analytes being measured. Matrix Spikes are reported as a percent recovery and are prepared for 1 in every 20 samples. Sample batches that contain less than 20 samples may be reported with a Matrix Spike from another batch. The percent recovery is calculated using the formula below. Acceptable recovery limits are 70% to 130%.

$$\frac{(\text{Spike Sample Result} - \text{Sample Result}) \times 100}{\text{Concentration of Spike Added}}$$

I. **Surrogate Spikes**

Samples are spiked with a known concentration of compounds that are chemically related to the analyte being investigated but unlikely to be detected in the environment. The purpose of the Surrogate Spikes is to check the accuracy of the analytical technique. Surrogate Spikes are reported as percent recovery.

J. **Duplicates**

Laboratory duplicates measure precision, expressed as Relative Percent Difference. Duplicates are prepared from a single field sample and analysed as two separate extraction procedures in the laboratory. The RPD is calculated using the formula where D1 is the sample concentration and D2 is the duplicate sample concentration:

$$\frac{(D1 - D2) \times 100}{\{(D1 + D2)/2\}}$$



Appendix G: Data (QA/QC) Evaluation



Data (QA/QC) Evaluation

A. INTRODUCTION

This Data (QA/QC) Evaluation forms part of the validation process for the DQOs documented in Section 5.1 of this report. Checks were made to assess the data in terms of precision, accuracy, representativeness, comparability and completeness. These 'PARCC' parameters are referred to collectively as DQIs and are defined in the Report Explanatory Notes attached in the report appendices.

1. Field and Laboratory Considerations

The quality of the analytical data produced for this project has been considered in relation to the following:

- Sample collection, storage, transport and analysis;
- Laboratory PQLs;
- Field QA/QC results; and
- Laboratory QA/QC results.

2. Field QA/QC Samples and Analysis

A summary of the field QA/QC samples collected and analysed for this assessment is provided in the following table:

Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
Intra-laboratory duplicates (soil)	<ul style="list-style-type: none">• DUPAM101 (primary sample JKE102 (0.1-0.3m));• DUPAM102 (primary sample JKE105 (0-0.1m));• DUPAM104 (primary sample JKE109 (0.045-0.2m));• DUPAM108 (primary sample JKE133 (0.08-0.2m)); and• DUPAM201 (primary sample JKE139 (0-0.2m)).	Approximately 6.5% of primary samples	Heavy metals, TRH/BTEX, PAHs, OCPs, OPPs and PCBs
Inter-laboratory duplicate (soil)	<ul style="list-style-type: none">• DUPAM103 (primary sample JKE111 (0-0.2m));• DUPAM106 (primary sample JKE124 (0.05-0.2m));• DUPAM107 (primary sample JKE136 (0.05-0.2m));	Approximately 3.8% of primary samples	Heavy metals, TRH/BTEX, PAHs



Sample Type	Sample Identification	Frequency (of Sample Type)	Analysis Performed
	<ul style="list-style-type: none">DUPAM108 (primary sample JKE133 (0.08-0.2m)); andDUPAM201 (primary sample JKE139)0-0.2m)).		
Trip spike (soil)	<ul style="list-style-type: none">T1 (31-7-19); andTS2 (9-8-19).	One for the assessment to demonstrate adequacy of preservation, storage and transport methods	BTEX
Trip spike (water)	TSW1 (21-8-19)	One for the assessment to demonstrate adequacy of preservation, storage and transport methods	BTEX
Trip blank (soil)	<ul style="list-style-type: none">TB4 (2-8-19); andTB4 (9-8-19).	One for the assessment to demonstrate adequacy of storage and transport methods	BTEX
Trip blank (soil)	TBW1 (16-8-19)	One for the assessment to demonstrate adequacy of storage and transport methods	BTEX
Rinsate (soil SPT)	<ul style="list-style-type: none">FRAM101 (6-8-19);FRRK1 (9-8-19); andFRAM201 (30-8-19).	One for the assessment to demonstrate adequacy of decontamination methods	BTEX

The results for the field QA/QC samples are detailed in the laboratory summary tables (Table M-1 to Table Q inclusive) attached to the assessment report and are discussed in the subsequent sections of this Data (QA/QC) Evaluation report.

3. Data Assessment Criteria

JKE adopted the following criteria for assessing the field and laboratory QA/QC analytical results:

Field Duplicates

Acceptable targets for precision of field duplicates in this report will be 30% or less, consistent with NEPM (2013). RPD failures will be considered qualitatively on a case-by-case basis taking into account factors such as the concentrations used to calculate the RPD (i.e. RPD exceedance where concentrations are close to the PQL are typically not as significant as those where concentrations are reported at least five or 10 times the PQL), sample type, collection methods and the specific analyte where the RPD exceedance was reported.



Field Blanks and Rinsates

Acceptable targets for field blank and rinsate samples in this report will be less than the PQL for organic analytes. Metals will be considered on a case-by-case basis with regards to typical background concentrations in soils and published drinking water guidelines for waters.

Trip Spikes

Acceptable targets for trip spike samples in this report will be 70% to 130%. This is in line with spike recovery limits adopted by the laboratory for organic analysis.

Laboratory QA/QC

The suitability of the laboratory data is assessed against the laboratory QA/QC criteria which is outlined in the laboratory reports. These criteria were developed and implemented in accordance with the laboratory's NATA accreditation and align with the acceptable limits for QA/QC samples as outlined in NEPM (2013) and other relevant guidelines.

A summary of the acceptable limits adopted by the primary laboratory (Envirolab) is provided below:

RPDs

- Results that are <5 times the PQL, any RPD is acceptable; and
- Results >5 times the PQL, RPDs between 0-50% are acceptable.

Laboratory Control Samples (LCS) and Matrix Spikes

- 70-130% recovery acceptable for metals and inorganics;
- 60-140% recovery acceptable for organics; and
- 10-140% recovery acceptable for VOCs.

Surrogate Spikes

- 60-140% recovery acceptable for general organics; and
- 10-140% recovery acceptable for VOCs.

Method Blanks

- All results less than PQL.

B. DATA EVALUATION

1. Sample Collection, Storage, Transport and Analysis

Samples were collected by trained field staff in accordance with the JKE SSP. The SSP was developed to be consistent with relevant guidelines, including NEPM (2013) and other guidelines made under the CLM Act 1997.

Appropriate sample preservation, handling and storage procedures were adopted. Laboratory analysis was undertaken within specified holding times in accordance with Schedule B(3) of NEPM (2013) and the laboratory NATA accredited methodologies.



JKE note that the temperature on receipt of soil samples was reported to range from 8.6°C to 18.1°C. JKE understand that the temperature is measured at the laboratory using an infrared temperature probe by scanning the outside of the sample container (i.e. one sample jar/container at the time of registering the samples). This procedure is not considered to be robust as there is a potential for the outside of the jar to warm to ambient temperature, or at least to increase from that of the internal contents, relatively quickly. On this basis, JKE are of the opinion that the temperatures reported on the Sample Receipts are unlikely to be reliable or representative of the overall batch. This is further supported by the trip spike recovery results (discussed further below) which reported adequate recovery in the range of 83% to 123%.

EnviroLab noted that the asbestos results were reported to be consistent with the recommendations in NEPM (2013), however this level of reporting is outside the scope of their NATA accreditation. In the absence of other available analytical methods for asbestos, this was found to be acceptable for the purpose of this assessment.

Review of the project data also indicated that:

- COC documentation was adequately maintained;
- Sample receipt advice documentation was provided for all sample batches;
- All analytical results were reported; and
- Consistent units were used to report the analysis results.

2. Laboratory PQLs

Appropriate PQLs were adopted for the analysis. Some of the PQLs were above the SAC and have been highlighted on the appropriate report tables attached in the appendices. In light of the concentrations reported for soil and groundwater, JKE are of the opinion that this is not significant, and it does not affect the quality of the dataset as a whole or the outcome of the assessment.

3. Field QA/QC Sample Results

Field Duplicates

The results indicated that field precision was acceptable. RPD non-conformances were reported for some analytes as discussed below:

- Elevated RPDs were reported for several TRH (F2) compounds in DUPAM101/JKE102 (0.1-0.3m);
- Elevated RPDs were reported for mercury, several PAH compounds and TRH (F2, F3 and F4) in DUPAM102/JKE105 (0-0.1m);
- Elevated RPDs were reported for five individual metals, several PAH compounds and TRH (F3 and F4) in DUPAM104/JKE109 (0.045-0.2m);
- An elevated RPD was reported for lead in DUPAM108/JKE133 (0.08-0.2m);
- Elevated RPDs were reported for three individual metals in DUPAM201/JKE139 (0-0.2m);
- Elevated RPDs were reported for chromium, several PAH compounds and TRH (F2, F3 and F4) in DUPAM103/JKE111 (0-0.2m);
- An elevated RPD was reported for lead in DUPAM106/JKE124 (0.05-0.2m);
- An elevated RPD was reported for benzo(a)pyrene in DUPAM107/JKE136 (0.05-0.2m); and



- An elevated RPD was reported for nickel in DUPMP2/MEJKE135.

Values outside the acceptable limits have been attributed to sample heterogeneity and the difficulties associated with obtaining homogenous duplicate samples of heterogeneous matrices. Many of the outliers are due to values detected very close to the PQLs. All results have been assessed against the SAC adopted for the assessment.

Field Blanks

During the investigation, trip blanks was placed in the esky during sampling and transported back to the laboratory. The majority of the results were all less than the PQLs. Water trip blank TBW1 (16-08-2019) detected a slight concentration of toluene of 3µg/L. The detectable concentration of toluene is most likely attributed to Trihalomethanes. These compounds are breakdown products from the chlorination process and are common in potable water at the concentration reported (the Australian drinking water guideline for total trihalomethanes is 250µg/L).

Based on the above results, JKE are of the opinion that cross contamination between samples that may have significance for data validity did not occur.

Rinsates

All field rinsate result for FR1 was below the PQL. Three field rinsate samples (FR1 (31-07-2019), FRRK1 (9-08-2019), FRAM201 (30-08-2019)) detected a slight concentration of toluene of up to 2µg/L. This is also most likely attributed to Trihalomethanes. These compounds are breakdown products from the chlorination process and are common in potable water at the concentration reported (the Australian drinking water guideline for total trihalomethanes is 250µg/L).

The results indicate that cross-contamination artefacts associated with sampling equipment were not present and the potential for cross-contamination to have occurred was low.

Trip Spikes

The results ranged from 83% to 123% and indicated that field preservation methods were appropriate.

4. Laboratory QA/QC

The analytical methods implemented by the laboratory were performed in accordance with their NATA accreditation and were consistent with Schedule B(3) of NEPM (2013). The frequency of data reported for the laboratory QA/QC (i.e. duplicates, spikes, blanks, LCS) was considered to be acceptable for the purpose of this assessment. JKE note that due to the limited number of samples submitted for analysis, duplicates and matrix spikes were not reported. This is not considered to have an impact on the data quality for this assessment.

A review of the laboratory QA/QC data identified the following minor non-conformances:

- Lab Report – 223302:
 - Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria exceeded for 223302-51 for Ni. Therefore, a triplicate result was issued as laboratory sample number 223302-61;



- TRH soil C10-C40 NEPM - # Percent recovery for the surrogate/matrix spike was not possible to report as the high concentration of analytes in sample 223302-9 and 38 caused interference;
- PAHs in Soil - The RPD for duplicate results was accepted due to the non-homogenous nature of samples 223302-15;
- Asbestos-ID in soil, NEPM: All samples were analysed as received. However, samples 223301-11, 16, 26, 30, 42 and 48 were below the minimum 500ml sample volume.
- Lab Report – 223302:
 - Asbestos-ID in soil, NEPM: All samples were analysed as received. However, samples 223661-35 and 64 were below the minimum 500ml sample volume;
 - Acid Extractable Metals in Soil: The laboratory RPD acceptance criteria exceeded for 223661-17 for Cr. Therefore, a triplicate result was issued as laboratory sample number 223661-77. The laboratory RPD acceptance criteria exceeded for 223661-28 for Pb. Therefore, a triplicate result was issued as laboratory sample number 223661-78. The laboratory RPD acceptance criteria exceeded for 223661-41 for Cu and Ni. Therefore, a triplicate result was issued as laboratory sample number 223661-79. The triplicate values were assessed against the SAC;
 - Acid Extractable Metals in Soil: # Percent recovery was not possible due to the inhomogeneous nature of the element/s in the sample/s. However, an acceptable recovery was obtained from the LCS;
 - TRH soil C10-C40 NEPM - The RPD for duplicate results was accepted due to the non-homogenous nature of sample 223661-17; and
 - BTEX in Water - Only one vial was supplied for analysis. Envirolab recommends that two 40ml VOA vials preserved with Hydrochloric Acid (HCl) or similar are supplied for the analysis of VOC/BTEX.
- Lab Report – 225210:
 - Asbestos-ID in soil, NEPM: All samples were analysed as received. However, sample 225210-1 was below the minimum 500ml sample volume; and
 - BTEX in Water - Only one vial was supplied for analysis. Envirolab recommends that two 40ml VOA vials preserved with Hydrochloric Acid (HCl) or similar are supplied for the analysis of VOC/BTEX.
- Lab Report – 224207:
 - Tests/analytes pH exceeded the recommended technical holding times.

C. DATA QUALITY SUMMARY

JKE are of the opinion that the data are adequately precise, accurate, representative, comparable and complete to serve as a basis for interpretation to achieve the investigation objectives.

Non-conformances were reported for some field QA/QC samples and laboratory QA/QC analysis. These non-conformances were considered to be sporadic and minor, and were not considered to be indicative of systematic sampling or analytical errors. On this basis, these non-conformances are not considered to materially impact the report findings.



There was only one groundwater monitoring event undertaken for the assessment. On this basis there is some uncertainty around the representativeness of the groundwater data, particularly during different climatic conditions and after wet/dry periods. However, given the low contaminant concentrations reported, the site history and the surrounding land uses, this is not considered to alter the conclusions of the assessment.



Appendix H: Field Work Documents and Calibration Documentation

JOB NO: E32465BD
 LOCATION: Liverpool Hospital

FIELD CALIBRATION FORM

PID			
Make: MiniRAE	Model: 2000	Unit: <i>green</i>	Date of last factory calibration: <i>17/7/19</i>
Date of calibration: <i>8/8/19</i>		Name of Calibrator: <i>MP</i>	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: <i>100</i> ppm		Error in measured reading: \pm <i>0</i> ppm	
Measured reading Acceptable (Yes/No): <i>Yes</i>			
DISSOLVED OXYGEN			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>9/8/19</i>		Name of Calibrator: <i>MP</i>	
Span value: 70% to 130%%			
Measured value: <i>98%</i>			
Measured reading Acceptable (Yes/No): <i>Y</i>			
pH METER			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>9/8/19</i>		Name of Calibrator: <i>MP</i>	
Buffer 1: Theoretical pH = 7.01 ± 0.01		Expiry date: <i>Oct 2020</i>	Lot No: <i>324986</i>
Buffer 2: Theoretical pH = 4.01 ± 0.01		Expiry date: <i>Oct 2020</i>	Lot No: <i>322843</i>
Measured reading of Buffer 1: <i>7.37</i>			
Measured reading of Buffer 2: <i>4.07</i>			
Slope: <i>-</i>		Measured reading Acceptable (Yes/No): <i>Yes</i>	
CONDUCTIVITY METER			
Make: YSI		Model: <i>-</i>	
Date: <i>9/8/19</i>	Name of Calibrator: <i>MP</i>		Temperature: <i>15.4</i> °C
Calibration solution: <i>STANDARD</i>		Expiry date: <i>Dec 2020</i>	Lot No: <i>316816</i>
Theoretical conductivity at temperature (see solution container): <i>1,170</i> μ S/cm			
Measured conductivity: <i>1262</i> μ S/cm		Measured reading Acceptable (Yes/No): <i>Yes</i>	
REDOX METER			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>9/8/19</i>		Name of Calibrator: <i>MP</i>	
Calibration solution: <i>ORP TEST</i>		Expiry date: <i>Nov 2023</i>	Lot No: <i>3640</i>
Theoretical redox value: 240mV			
Measured redox reading: <i>222.2</i> mV		Measured reading Acceptable (Yes/No): <i>Yes</i>	

JOB NO: E32465BD
 LOCATION: Liverpool Hospital

FIELD CALIBRATION FORM

PID			
Make: MiniRAE	Model: 2000	Unit: <i>green</i>	Date of last factory calibration:
Date of calibration: <i>16/8/19</i>		Name of Calibrator: <i>MP</i>	
Calibration gas: Iso-butylene		Calibration Gas Concentration: 100.0 ppm	
Measured reading: <i>100</i> ppm		Error in measured reading: \pm <i>0</i> ppm	
Measured reading Acceptable (<input checked="" type="radio"/> Yes/No):			
DISSOLVED OXYGEN			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>16/8/19</i>		Name of Calibrator: <i>MP</i>	
Span value: 70% to 130%%			
Measured value: <i>100%</i>			
Measured reading Acceptable (<input checked="" type="radio"/> Yes/No):			
pH METER			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>16/8/19</i>		Name of Calibrator: <i>MP</i>	
Buffer 1: Theoretical pH = 7.01 \pm 0.01		Expiry date: <i>oct 2019</i>	Lot No: <i>324986</i>
Buffer 2: Theoretical pH = 4.01 \pm 0.01		Expiry date: <i>oct 2019</i>	Lot No: <i>322883</i>
Measured reading of Buffer 1: <i>7.11</i>			
Measured reading of Buffer 2: <i>4.15</i>			
Slope: <i>-</i>		Measured reading Acceptable (<input checked="" type="radio"/> Yes/No):	
CONDUCTIVITY METER			
Make: YSI		Model: <i>-</i>	
Date: <i>16/8/19</i>	Name of Calibrator: <i>MP</i>	Temperature: $^{\circ}$ C	
Calibration solution: <i>STANDARD</i>	Expiry date: <i>DEC 2020</i>	Lot No: <i>316816</i>	
Theoretical conductivity at temperature (see solution container): <i>1197</i> μ S/cm			
Measured conductivity: <i>1190</i> μ S/cm		Measured reading Acceptable (<input checked="" type="radio"/> Yes/No):	
REDOX METER			
Make: YSI		Model: <i>-</i>	
Date of calibration: <i>16/8/19</i>		Name of Calibrator: <i>MP</i>	
Calibration solution: <i>ORP</i>		Expiry date: <i>NOV 2033</i>	Lot No: <i>3640</i>
Theoretical redox value: 240mV			
Measured redox reading: <i>235.7</i> mV		Measured reading Acceptable (<input checked="" type="radio"/> Yes/No):	



Groundwater Development Sheets, Sampling Sheets and Calibration Documentation

JK Environments



Client: Johnstaff Projects Pty Ltd **Job No.:** E32465BD
Project: Planning Pathways **Well No.:** Wulk 102
Location: Liverpool Health Academic Precinct, Elizabeth Street, LIVERPOOL **Depth (m):** 25
HOSPITAL NSW

WELL FINISH DETAILS

Gatic Cover Standpipe Other (describe)

WELL DEVELOPMENT DETAILS

Method: Dev Pump **SWL - Before (m):** 42
Date: 9/8/19 **Time - Before:** 0930
Undertaken By: MW **SWL - After (m):** Dry
Total Vol. Removed: 11 **Time - After:** 0950
PID Reading (ppm): 6.7

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
1	14.7	9.5	482.2	7.95	166.0
2	20.5	3.5	1041.2	7.82	157.2
3	20.4	3.9	983.7	7.25	149.1
4	20.5	4.5	936.3	7.24	146.3
5	20.7	4.7	949.6	7.16	145.5
6	20.8	4.0	1048.9	7.07	146.9
7	20.6	1.7	1145.4	6.85	147.7
8	20.6	4.8	1187.0	6.97	149.5
9	20.7	3.9	1223.6	6.95	148.9
10	20.4	4.2	1198.0	6.96	147.0
Dry					

Comments: Odours (YES / NO), NAPL/PSH (YES / NO), Sheen (YES / NO), Steady State Achieved (YES / NO)

YSI Used: 3

slow recharge

Tested By: MW **Remarks:**
Date Tested: 9/8/19 - Steady state conditions
- Difference in the pH less than 0.2 units, difference in the conductivity less than 10% and SWL stable/not in drawdown
Checked By: MW - Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date: 19/9/19

JK Environments



Client: Johnstaff Projects Pty Ltd	Job No.: E32465BD
Project: Planning Pathways	Well No.: MURKEIB5
Location: LIVERPOOL HEALTH & ACADEMIC PRECINCT, ELIZABETH STREET, LIVERPOOL HOSPITAL NSW	Depth (m): 10.35

WELL FINISH DETAILS

Gatic Cover <input checked="" type="checkbox"/>	Standpipe <input type="checkbox"/>	Other (describe) <input type="checkbox"/>
--	---	--

WELL DEVELOPMENT DETAILS

Method: Dry Pump	SWL - Before (m): 7.95
Date: 9/11/19	Time - Before: 0900
Undertaken By: MHP	SWL - After (m): Dry
Total Vol. Removed: 7	Time - After: 0915
PID Reading (ppm): 2.8	

Comments:

DEVELOPMENT MEASUREMENTS

Volume Removed (L)	Temp (°C)	DO (mg/L)	EC (µS/m)	pH	Eh (mV)
1	18.4	1.7	6294	7.79	166.3
2	20.1	2.5	9921	7.33	151.7
3	20.5	2.4	10396	7.17	144.3
4	20.7	2.4	10467	7.05	139.4
5	20.8	2.7	10335	6.98	137.0
6	20.8	2.7	10334	6.94	121.7
7	20.5	2.8	10263	6.88	126.1
Dry.					

Comments: Odours (YES / NO) NAPL/PSH (YES / NO) Sheen (YES / NO) Steady State Achieved (YES / NO)

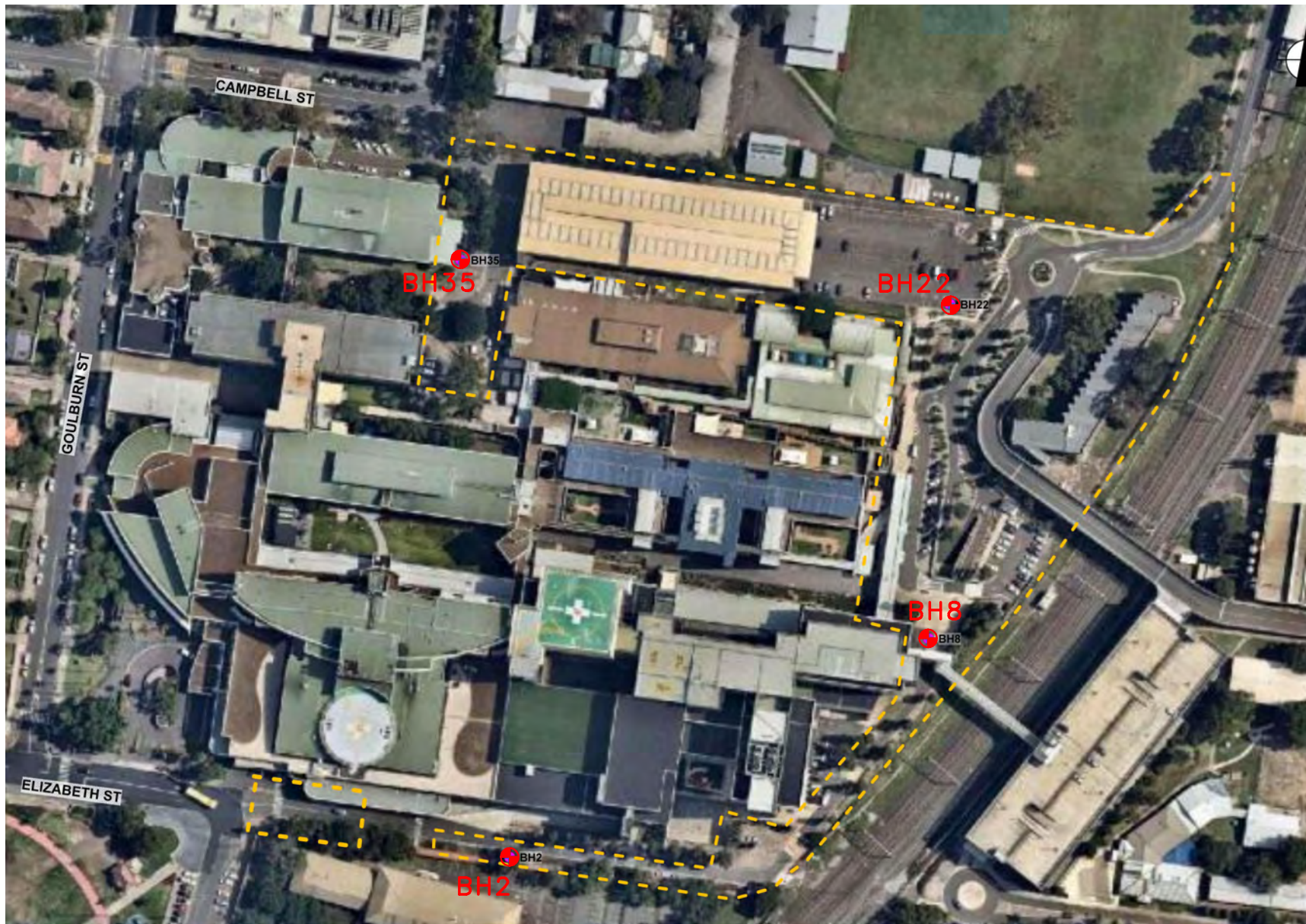
YSI Used: 3

slow recharge

Tested By: MHP	Remarks: - Steady state conditions - Difference in the pH less than 0.2 units, difference in the conductivity less than 10% and SWL stable/not in drawdown - Minimum 3 monitoring well volumes purged, unless well purged until it is effectively dry
Date Tested: 9/11/19	
Checked By: MHP	
Date: 9/11/19	



Appendix I: Groundwater Monitoring Well Survey



NOTE
 RLs RELATE TO SYDNEY CORS NET AND ARE AHD
 RLs TAKEN AT TOP OF CASING.
 MGA COORDS RELATE TO SYDNEY CORS NET

MONITORING WELL CO-ORDINATES (MGA)

Reference	East	North	Elevation	Description
BH2	308683.050	6244662.995	11.085	MONITORING WELL
BH8	308864.998	6244752.444	11.769	MONITORING WELL
BH22	308861.026	6244870.425	9.902	MONITORING WELL
BH35	308677.330	6244881.046	10.846	MONITORING WELL

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 FRENCHS FOREST NSW 2086

MOBILE: 0412 423 949
 PHONE: 02 9453 0100

SCALE	NTS	CLIENT	JK ENVIRONMENTS
GRID	NA	PROJECT	MONITORING WELL SURVEY LIVERPOOL HOSPITAL LIVERPOOL NSW
DRAWN	MF	DATE ISSUED	09/09/2019
		DRAWING No	1603G-SKT- 01 SHEET 1 of 1



Appendix J: Interim Asbestos Control Documentation



Asbestos Air Fibre Monitoring Results

TEST REPORT

September 3, 2019

South Western Sydney Local Health District

Locked Bag 7279
LIVERPOOL BC, NSW 1871

Your Reference: Liverpool Hospital - 1-5 Campbell Street, Liverpool
Job Number: 47292

Attention: David Ryan

Dear David

In accordance with your instructions, Airsafe conducted air monitoring for airborne asbestos fibres at the above site.

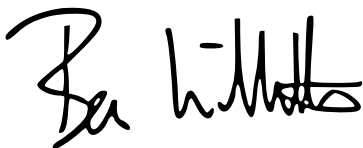
The following samples were processed on the dates indicated.

Samples:	2 Filters
Date of Sampling:	02/09/19
Date of Analysis:	03/09/19
Date of Preliminary Report Sent:	Not Issued

The results are contained in the following pages of this report.

Should you have any queries regarding this report please contact the undersigned.

Yours faithfully
AIRSAFE OHC PTY LTD



Benjamin Willetts
Approved Counter and Signatory

PROJECT: Liverpool Hospital – 1-5 Campbell Street, Liverpool

JOB NO: 47292

Sample No	Location/Reference	Time		Total Time [min]	Air Flow Average [L/min]	Fields	Fibres	Concentration (Fibres/mL)
		On	Off					
47292-1	Temporary barrier fence – south side	0944	1514	330	2.0	100	0	<0.01
47292-2	Temporary barrier fence – north side	0945	1515	330	2.0	100	0	<0.01

Method: Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)] and in-house method AS101 – Membrane Filter Method for Estimating Airborne Asbestos Fibres.

Sampling: All samples have been taken by Airsafe personnel in accordance with the sampling plan detailed in method AS101.

Quality Control: A field blank is taken and analysed for each batch of samples.

Note: Times are provided for customer reference only and do not form part of the facility's accreditation for volume measurement.

The results relate only to the samples tested. The results of the tests, calibrations and/or measurements included in this document are traceable to Australian/national standards.

Environmental Conditions: Background air monitoring around sidewalk on south side of parking lot P2.

Comment: These calculated concentrations are less than the reporting limit of 0.01 fibres/mL for control and exposure monitoring as stated in the Guidance Note on the Membrane Filter Method for Estimating Airborne Asbestos Fibres [NOHSC: 3003 (2005)].

Disclaimer: N/A



Photograph Showing Temporary Capping Barrier



Note: Photograph provided by South Western Sydney Local Health District and showing the barricading and temporary capping of the formerly exposed soils in the area surrounding sampling location JKE136.



Appendix K: Information on Acid Sulfate Soils



A. Background

Acid Sulfate Soil (ASS) is formed from iron rich alluvial sediments and sulfate (found in seawater) in the presence of sulfate reducing bacteria and plentiful organic matter. These conditions are generally found in mangroves, salt marsh vegetation or tidal areas and at the bottom of coastal rivers and lakes. These soils include those that are producing acid (termed actual ASS) and those that can become acid producing (termed potential ASS or 'PASS'). PASS are naturally occurring soils and sediment that contain iron sulfides (pyrite) which, when exposed to oxygen generate sulfuric acid.

B. The ASS Management Advisory Committee (ASSMAC)

The NSW government in 1994 formed the ASSMAC to coordinate a response to ASS issues. In 1998 this group released the Acid Sulfate Soil Manual³⁶ providing best practice advice for planning, assessment, management, laboratory methods, drainage, groundwater and the preparation of ASS management plans (ASSMP).

In 1997 the Department of Land and Soil Conservation (now part of the Office of Environment and Heritage³⁷) developed two series of maps with respect to ASS for use by council and technical staff implementing the ASS Manual 1998:

- ASS Planning Maps – issued to councils and government units; and
- ASS Risk Maps – issued to interested parties.

C. The ASS Planning Maps

The ASS planning maps provide an indication of the relative potential for disturbance of ASS to occur at locations within the council area. These maps do not provide an indication of the actual occurrence of ASS at a site or the likely severity of the conditions.

The maps are divided into five classes dependent upon the type of activities/works that if undertaken, may represent an environmental risk through the development of acidic conditions associated with ASS:

Table: Risk Classes

Risk Class	Description
Class 1	All works.
Class 2	All works below existing ground level and works by which the water table is likely to be lowered.
Class 3	Works at depths beyond 1m below existing ground level or works by which the water table is likely to be lowered beyond 1m below existing ground level.
Class 4	Works at depths beyond 2m below existing ground level or works by which the water table is likely to be lowered beyond 2m below existing ground level.

³⁶ Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). *Acid Sulfate Soils Manual* (ASS Manual 1998)

³⁷ <http://www.environment.nsw.gov.au/acidsulfatesoil/index.htm>



Class 5	Works within 500m of adjacent Class 1,2,3,4 land which are likely to lower the water table below 1m AHD on the adjacent land.

D. The ASS Risk Maps

The ASS risk maps provide an indication of the probability of occurrence of PASS at a particular location based on interpretation from geological and soil landscape maps. The maps provide classes based on high probability, low probability, no known occurrence and areas of disturbed terrain (site specific assessment necessary) and the likely depth at which ASS are likely to be encountered.

E. Investigation and Laboratory Testing for ASS

The ASS Manual 1998 includes information on assessment of the likelihood of PASS, the need for an ASSMP, and the development of mitigation measures for a proposed development located in PASS risk areas.

The ASS Manual 1998 recommends a minimum of four sampling locations for a site with an area up to 1ha. For sites greater than 4ha, the manual recommends the use of a reduced density of two locations per hectare subject to the proposed development. For lineal investigations, the manual recommends sampling every 50-100m.

The sampling locations should include all areas where significant disturbance of soils will occur and/or areas with a high environmental sensitivity. In some instances a varied sampling plan may be more suitable, particularly for sites less than 1,000m² in area.

The depth of investigation should extend to at least 1m beyond the depth of proposed excavation/disturbance or estimated drop in water table height, or to a minimum of 2m below existing ground level, whichever is greatest.

Standard methods for the laboratory analysis of samples are presented in the Australian Standard AS4969-2008/09³⁸ (part 1 to 14). The principal analytical method is suspension Peroxide Oxidation Combined Acidity and Sulfur (sPOCAS).

The sPOCAS method specified in AS4969-2008/09 supersedes the POCAS method specified in the ASS Manual 1998. When S_{POS} (peroxide oxidisable sulfur) values are close to the action criteria confirmation of the result can be undertaken by the chromium reducible sulfur (S_{CR}) method.

The endpoint for the pH titration in AS4969-2008/09 is pH6.5 as opposed to pH5.5 adopted in the ASS Manual. Therefore the values for Total Actual Acidity (TAA), Total Sulfide Acidity (TSA) and Total Potential Acidity (TPA) will more conservative when analysed using the sPOCAS method specified in AS4969-2008/09.

³⁸ Standards Australia, (2008/2009). *Analysis of acid sulfate soil – Dried samples – Methods of test, Parts 1 to 14.* (AS4969-2008/09)



Appendix L: Guidelines and Reference Documents



Acid Sulfate Soils Management Advisory Committee (ASSMAC), (1998). Acid Sulfate Soils Manual

Australian and New Zealand Environment Conservation Council (ANZECC), (2000). Australian and New Zealand Guidelines for Fresh and Marine Water Quality

Canadian Council of Ministers of the Environment, (1999). Canadian soil quality guidelines for the protection of environmental and human health: Benzo(a)Pyrene (1997)

CRC Care, (2011). Technical Report No. 10 – Health screening levels for hydrocarbons in soil and groundwater Part 1: Technical development document

Contaminated Land Management Act 1997 (NSW)

Department of Land and Water Conservation, (1997). 1:25,000 Acid Sulfate Soil Risk Map Series

Managing Land Contamination, Planning Guidelines SEPP55 – Remediation of Land (1998)

National Health and Medical Research Council (NHMRC), (2018). National Water Quality Management Strategy, Australian Drinking Water Guidelines 2011

NSW Department of Environment and Conservation, (2007). Guidelines for the Assessment and Management of Groundwater Contamination

NSW EPA, (1995). Contaminated Sites Sampling Design Guidelines

NSW EPA, (2014). Waste Classification Guidelines - Part 1: Classifying Waste

NSW EPA, (2015). Guidelines on the Duty to Report Contamination under Section 60 of the CLM Act 1997

NSW EPA, (2017). Guidelines for the NSW Site Auditor Scheme, 3rd Edition

National Environment Protection Council (NEPC), (2013). National Environmental Protection (Assessment of Site Contamination) Measure 1999 as amended (2013)

Olszowy, H., Torr, P., and Imray, P., (1995). Trace Element Concentrations in Soils from Rural and Urban Areas of Australia. Contaminated Sites Monograph Series No. 4. Department of Human Services and Health, Environment Protection Agency, and South Australian Health Commission

Protection of the Environment Operations Act 1997 (NSW)

State Environmental Planning Policy No.55 – Remediation of Land 1998 (NSW)

World Health Organisation (WHO), (2008). Petroleum Products in Drinking-water, Background document for the development of WHO Guidelines for Drinking Water Quality

Western Australia Department of Health, (2009). Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia

Western Sydney Regional Organisation of Councils (WSROC) and Department of Infrastructure, Planning and Natural Resources (DIPNR), (2003 amended 2004). *Western Sydney Salinity Code of Practice* (referred to as Salinity Code of Practice)