

Duplicates are calculated as Relative Percentage Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Volatile Petroleum Hydrocarbons in Soil (continued)

Method: ME-(AU)-[ENV]AN433

Original	Duplicate	Parameter	Units	LOR	Original	Duplicate	Criteria %	RPD %
SE186821.009	LB162708.026	TRH C6-C10	mg/kg	25	0	0	200	0
		TRH C6-C9	mg/kg	20	0	0	200	0
		Surrogates						
		Dibromofluoromethane (Surrogate)	mg/kg	-	3.53	3.88	30	9
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	4.14	3.77	30	9
		d8-toluene (Surrogate)	mg/kg	-	3.62	3.91	30	8
		Bromofluorobenzene (Surrogate)	mg/kg	-	3.68	3.66	30	1
		VPH F Bands						
		Benzene (F0)	mg/kg	0.1	0	0	200	0
		TRH C6-C10 minus BTEX (F1)	mg/kg	25	0	0	200	0

Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (Ref: MP-(AU)-(ENV)QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Conductivity and TDS by Calculation - Soil

Method: ME-(AU)-(ENV)AN106

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162678.002	Conductivity of Extract (1:5 as received)	µS/cm	1	310	303	85 - 115	101

Exchangeable Cations and Cation Exchange Capacity (CEC/ESP/SAR)

Method: ME-(AU)-(ENV)AN122

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162596.002	Exchangeable Sodium, Na	mg/kg	2	NA	72.68	80 - 120	97
	Exchangeable Potassium, K	mg/kg	2	NA	238.12	80 - 120	87
	Exchangeable Calcium, Ca	mg/kg	2	NA	692	80 - 120	89
	Exchangeable Magnesium, Mg	mg/kg	2	NA	134.2	80 - 120	90

Mercury in Soil

Method: ME-(AU)-(ENV)AN312

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162593.002	Mercury	mg/kg	0.05	0.17	0.2	70 - 130	83

OC Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162589.002	Heptachlor	mg/kg	0.1	0.2	0.2	60 - 140	80
	Aldrin	mg/kg	0.1	0.2	0.2	60 - 140	78
	Delta BHC	mg/kg	0.1	0.2	0.2	60 - 140	96
	Dieldrin	mg/kg	0.2	<0.2	0.2	60 - 140	87
	Endrin	mg/kg	0.2	<0.2	0.2	60 - 140	81
	p,p'-DDT	mg/kg	0.1	0.2	0.2	60 - 140	77
	Surrogates	Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	0.15	40 - 130

OP Pesticides in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162589.002	Dichlorvos	mg/kg	0.5	1.7	2	60 - 140	83
	Diazinon (Dimpylate)	mg/kg	0.5	2.4	2	60 - 140	119
	Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	2.3	2	60 - 140	114
	Ethion	mg/kg	0.2	2.2	2	60 - 140	109
Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94

PAH (Polynuclear Aromatic Hydrocarbons) in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162589.002	Naphthalene	mg/kg	0.1	4.5	4	60 - 140	113
	Acenaphthylene	mg/kg	0.1	4.7	4	60 - 140	118
	Acenaphthene	mg/kg	0.1	4.6	4	60 - 140	115
	Phenanthrene	mg/kg	0.1	4.6	4	60 - 140	114
	Anthracene	mg/kg	0.1	4.4	4	60 - 140	111
	Fluoranthene	mg/kg	0.1	4.4	4	60 - 140	109
	Pyrene	mg/kg	0.1	4.6	4	60 - 140	115
	Benzo(a)pyrene	mg/kg	0.1	4.8	4	60 - 140	119
Surrogates	d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	100
	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	96
	d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	0.5	40 - 130	94

PCBs in Soil

Method: ME-(AU)-(ENV)AN420

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162589.002	Arochlor 1260	mg/kg	0.2	0.4	0.4	60 - 140	107

pH in soil (1:5)

Method: ME-(AU)-(ENV)AN101

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162678.003	pH	pH Units	0.1	7.4	7.415	98 - 102	99

Soluble Anions (1:5) in Soil by Ion Chromatography

Method: ME-(AU)-(ENV)AN245

Sample Number	Parameter	Units	LOR
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Laboratory Control Standard (LCS) results are evaluated against an expected result, typically the concentration of analyte spiked into the control during the sample preparation stage, producing a percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (Ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended dagger symbol (†) when outside suggested criteria.

Soluble Anions (1:5) in Soil by Ion Chromatography (continued)

Method: ME-(AU)-[ENV]AN245

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162649.002	Chloride	mg/kg	0.25	110	100	70 - 130	106
	Sulfate	mg/kg	5	100	100	70 - 130	105

Total Recoverable Elements in Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162591.002	Arsenic, As	mg/kg	1	330	336.32	79 - 120	99
	Cadmium, Cd	mg/kg	0.3	420	416.6	69 - 131	100
	Chromium, Cr	mg/kg	0.3	34	35.2	80 - 120	96
	Copper, Cu	mg/kg	0.5	330	370.46	80 - 120	90
	Nickel, Ni	mg/kg	0.5	190	210.88	79 - 120	89
	Lead, Pb	mg/kg	1	95	107.87	79 - 120	88
	Zinc, Zn	mg/kg	2	290	301.27	80 - 121	95

TRH (Total Recoverable Hydrocarbons) in Soil

Method: ME-(AU)-[ENV]AN403

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162589.002	TRH C10-C14	mg/kg	20	43	40	60 - 140	108
	TRH C15-C28	mg/kg	45	<45	40	60 - 140	100
	TRH C29-C36	mg/kg	45	<45	40	60 - 140	83
	TRH F Bands						
	TRH >C10-C16	mg/kg	25	42	40	60 - 140	105
	TRH >C16-C34 (F3)	mg/kg	90	<90	40	60 - 140	90
	TRH >C34-C40 (F4)	mg/kg	120	<120	20	60 - 140	85

VOC's in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %	
LB162708.002	Monocyclic	Benzene	mg/kg	0.1	2.3	2.9	60 - 140	79
	Aromatic	Toluene	mg/kg	0.1	2.1	2.9	60 - 140	71
		Ethylbenzene	mg/kg	0.1	2.3	2.9	60 - 140	78
		m/p-xylene	mg/kg	0.2	4.8	5.8	60 - 140	83
		o-xylene	mg/kg	0.1	2.2	2.9	60 - 140	77
	Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	3.6	5	60 - 140	73
		d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.7	5	60 - 140	74
		d8-toluene (Surrogate)	mg/kg	-	4.0	5	60 - 140	80
		Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	5	60 - 140	85

Volatile Petroleum Hydrocarbons in Soil

Method: ME-(AU)-[ENV]AN433

Sample Number	Parameter	Units	LOR	Result	Expected	Criteria %	Recovery %
LB162708.002	TRH C6-C10	mg/kg	25	<25	24.65	60 - 140	88
	TRH C6-C9	mg/kg	20	<20	23.2	60 - 140	84
	Surrogates						
	Dibromofluoromethane (Surrogate)	mg/kg	-	3.6	5	60 - 140	73
	d4-1,2-dichloroethane (Surrogate)	mg/kg	-	3.7	5	60 - 140	74
	d8-toluene (Surrogate)	mg/kg	-	4.0	5	60 - 140	80
	Bromofluorobenzene (Surrogate)	mg/kg	-	4.3	5	60 - 140	85
VPH F Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	<25	7.25	60 - 140	110

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

Mercury In Soil

Method: ME-(AU)-[ENV]AN312

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE186873.001	LB162593.004	Mercury	mg/kg	0.05	0.19	<0.05	0.2	91

OC Pesticides In Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	Hexachlorobenzene (HCB)	mg/kg	0.1	<0.1	-	-
		Alpha BHC	mg/kg	0.1	<0.1	-	-
		Lindane	mg/kg	0.1	<0.1	-	-
		Heptachlor	mg/kg	0.1	<0.1	0.2	87
		Aldrin	mg/kg	0.1	<0.1	0.2	85
		Beta BHC	mg/kg	0.1	<0.1	-	-
		Delta BHC	mg/kg	0.1	<0.1	0.2	105
		Heptachlor epoxide	mg/kg	0.1	<0.1	-	-
		o,p'-DDE	mg/kg	0.1	<0.1	-	-
		Alpha Endosulfan	mg/kg	0.2	<0.2	-	-
		Gamma Chlordane	mg/kg	0.1	<0.1	-	-
		Alpha Chlordane	mg/kg	0.1	<0.1	-	-
		trans-Nonachlor	mg/kg	0.1	<0.1	-	-
		p,p'-DDE	mg/kg	0.1	<0.1	-	-
		Dieldrin	mg/kg	0.2	<0.2	0.2	95
		Endrin	mg/kg	0.2	<0.2	0.2	87
		o,p'-DDD	mg/kg	0.1	<0.1	-	-
		o,p'-DDT	mg/kg	0.1	<0.1	-	-
		Beta Endosulfan	mg/kg	0.2	<0.2	-	-
		p,p'-DDD	mg/kg	0.1	<0.1	-	-
		p,p'-DDT	mg/kg	0.1	<0.1	0.2	78
		Endosulfan sulphate	mg/kg	0.1	<0.1	-	-
		Endrin Aldehyde	mg/kg	0.1	<0.1	-	-
		Methoxychlor	mg/kg	0.1	<0.1	-	-
		Endrin Ketone	mg/kg	0.1	<0.1	-	-
		Isodrin	mg/kg	0.1	<0.1	-	-
		Mirex	mg/kg	0.1	<0.1	-	-
				Total CLP OC Pesticides	mg/kg	1	<1
Surrogates		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0.14	-	95

OP Pesticides In Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	Dichlorvos	mg/kg	0.5	<0.5	2	92
		Dimethoate	mg/kg	0.5	<0.5	-	-
		Diazinon (Dimpylate)	mg/kg	0.5	<0.5	2	121
		Fenitrothion	mg/kg	0.2	<0.2	-	-
		Malathion	mg/kg	0.2	<0.2	-	-
		Chlorpyrifos (Chlorpyrifos Ethyl)	mg/kg	0.2	<0.2	2	116
		Parathion-ethyl (Parathion)	mg/kg	0.2	<0.2	-	-
		Bromophos Ethyl	mg/kg	0.2	<0.2	-	-
		Methidathion	mg/kg	0.5	<0.5	-	-
		Ethion	mg/kg	0.2	<0.2	2	108
		Azinphos-methyl (Guthion)	mg/kg	0.2	<0.2	-	-
		Total OP Pesticides*	mg/kg	1.7	<1.7	-	-
		Surrogates	2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	98
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	94

PAH (Polynuclear Aromatic Hydrocarbons) In Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	Naphthalene	mg/kg	0.1	<0.1	4	111
		2-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		1-methylnaphthalene	mg/kg	0.1	<0.1	-	-
		Acenaphthylene	mg/kg	0.1	<0.1	4	117
		Acenaphthene	mg/kg	0.1	<0.1	4	113
		Fluorene	mg/kg	0.1	<0.1	-	-
		Phenanthrene	mg/kg	0.1	<0.1	4	112

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-[ENV]QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

PAH (Polynuclear Aromatic Hydrocarbons) In Soil (continued)

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	Anthracene	mg/kg	0.1	<0.1	4	109
		Fluoranthene	mg/kg	0.1	<0.1	4	106
		Pyrene	mg/kg	0.1	<0.1	4	113
		Benzo(a)anthracene	mg/kg	0.1	<0.1	-	-
		Chrysene	mg/kg	0.1	<0.1	-	-
		Benzo(b&j)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(k)fluoranthene	mg/kg	0.1	<0.1	-	-
		Benzo(a)pyrene	mg/kg	0.1	<0.1	4	116
		Indeno(1,2,3-cd)pyrene	mg/kg	0.1	<0.1	-	-
		Dibenzo(ah)anthracene	mg/kg	0.1	<0.1	-	-
		Benzo(ghi)perylene	mg/kg	0.1	<0.1	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=0	TEQ (mg/kg)	0.2	<0.2	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR	TEQ (mg/kg)	0.3	<0.3	-	-
		Carcinogenic PAHs, BaP TEQ <LOR=LOR/2	TEQ (mg/kg)	0.2	<0.2	-	-
		Total PAH (18)	mg/kg	0.8	<0.8	-	-
		Surrogates					
		d5-nitrobenzene (Surrogate)	mg/kg	-	0.5	-	100
		2-fluorobiphenyl (Surrogate)	mg/kg	-	0.5	-	98
		d14-p-terphenyl (Surrogate)	mg/kg	-	0.5	-	94

PCBs In Soil

Method: ME-(AU)-[ENV]AN420

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	Arochlor 1016	mg/kg	0.2	<0.2	-	-
		Arochlor 1221	mg/kg	0.2	<0.2	-	-
		Arochlor 1232	mg/kg	0.2	<0.2	-	-
		Arochlor 1242	mg/kg	0.2	<0.2	-	-
		Arochlor 1248	mg/kg	0.2	<0.2	-	-
		Arochlor 1254	mg/kg	0.2	<0.2	-	-
		Arochlor 1260	mg/kg	0.2	<0.2	0.4	114
		Arochlor 1262	mg/kg	0.2	<0.2	-	-
		Arochlor 1268	mg/kg	0.2	<0.2	-	-
		Total PCBs (Arochlors)	mg/kg	1	<1	-	-
		Surrogates					
		Tetrachloro-m-xylene (TCMX) (Surrogate)	mg/kg	-	0	-	94

Total Recoverable Elements In Soil/Waste Solids/Materials by ICPOES

Method: ME-(AU)-[ENV]AN040/AN320

QC Sample	Sample Number	Parameter	Units	LOR	Result	Original	Spike	Recovery%
SE186873.001	LB162591.004	Arsenic, As	mg/kg	1	35	6	50	57 Ⓢ
		Cadmium, Cd	mg/kg	0.3	48	<0.3	50	96
		Chromium, Cr	mg/kg	0.3	63	20	50	86
		Copper, Cu	mg/kg	0.5	52	3.2	50	98
		Nickel, Ni	mg/kg	0.5	48	1.9	50	92
		Lead, Pb	mg/kg	1	54	12	50	85
		Zinc, Zn	mg/kg	2	53	6.5	50	94

TRH (Total Recoverable Hydrocarbons) In Soil

Method: ME-(AU)-[ENV]AN403

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186873.001	LB162589.019	TRH C10-C14	mg/kg	20	<20	40	138
		TRH C15-C28	mg/kg	45	<45	40	123
		TRH C29-C36	mg/kg	45	<45	40	105
		TRH C37-C40	mg/kg	100	<100	-	-
		TRH C10-C36 Total	mg/kg	110	<110	-	-
		TRH C10-C40 Total (F bands)	mg/kg	210	<210	-	-
		TRH F Bands					
		TRH >C10-C16	mg/kg	25	<25	40	133
		TRH >C10-C16 - Naphthalene (F2)	mg/kg	25	<25	-	-
		TRH >C16-C34 (F3)	mg/kg	90	<90	40	110
		TRH >C34-C40 (F4)	mg/kg	120	<120	-	-

VOC's In Soil

Method: ME-(AU)-[ENV]AN433

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186821.001	LB162708.025	Monocyclic					
		Aromatic					
		Benzene	mg/kg	0.1	0	2.9	84
		Toluene	mg/kg	0.1	0	2.9	77
		Ethylbenzene	mg/kg	0.1	0	2.9	72
		m/p-xylene	mg/kg	0.2	0.01	5.8	79
		o-xylene	mg/kg	0.1	0	2.9	75

Matrix Spike (MS) results are evaluated as the percentage recovery of an expected result, typically the concentration of analyte spiked into a field sub-sample during the sample preparation stage. The original sample's result is subtracted from the sub-sample result before determining the percentage recovery. The criteria applied to the percentage recovery is established in the SGS QA/QC plan (ref: MP-(AU)-(ENV)QU-022). For more information refer to the footnotes in the concluding page of this report.

Recovery is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

VOC's In Soil (continued)

Method: ME-(AU)-(ENV)AN433

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186821.001	LB162708.025	Polycyclic	Naphthalene	mg/kg	0.1	0	-
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.81	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.42	-
			d8-toluene (Surrogate)	mg/kg	-	6.24	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.26	-
			Total Xylenes	mg/kg	0.3	0.01	-
		Totals	Total BTEX	mg/kg	0.6	0.01	-

Volatile Petroleum Hydrocarbons In Soil

Method: ME-(AU)-(ENV)AN433

QC Sample	Sample Number	Parameter	Units	LOR	Original	Spike	Recovery%
SE186821.001	LB162708.025	TRH C6-C10	mg/kg	25	0	24.65	92
			mg/kg	20	0	23.2	86
		Surrogates	Dibromofluoromethane (Surrogate)	mg/kg	-	4.81	-
			d4-1,2-dichloroethane (Surrogate)	mg/kg	-	6.42	-
			d8-toluene (Surrogate)	mg/kg	-	6.24	-
			Bromofluorobenzene (Surrogate)	mg/kg	-	6.26	-
		VPH F	Benzene (F0)	mg/kg	0.1	0	-
		Bands	TRH C6-C10 minus BTEX (F1)	mg/kg	25	-0.01	7.25
							126

Matrix spike duplicates are calculated as Relative Percent Difference (RPD) using the formula: $RPD = | \text{OriginalResult} - \text{ReplicateResult} | \times 100 / \text{Mean}$

The original result is the analyte concentration of the matrix spike. The Duplicate result is the analyte concentration of the matrix spike duplicate.

The RPD is evaluated against the Maximum Allowable Difference (MAD) criteria and can be graphically represented by a curve calculated from the Statistical Detection Limit (SDL) and Limiting Repeatability (LR) using the formula: $MAD = 100 \times \text{SDL} / \text{Mean} + \text{LR}$

Where the Maximum Allowable Difference evaluates to a number larger than 200 it is displayed as 200.

RPD is shown in **Green** when within suggested criteria or **Red** with an appended reason identifier when outside suggested criteria. Refer to the footnotes section at the end of this report for failure reasons.

No matrix spike duplicates were required for this job.

Samples analysed as received.

Solid samples expressed on a dry weight basis.

QC criteria are subject to internal review according to the SGS QA/QC plan and may be provided on request or alternatively can be found here: <https://www.sgs.com.au/~media/Local/Australia/Documents/Technical Documents/MP-AU-ENV-QU-022 QA QC Plan.pdf>

- * NATA accreditation does not cover the performance of this service.
 - ** Indicative data, theoretical holding time exceeded.
 - Sample not analysed for this analyte.
 - IS Insufficient sample for analysis.
 - LNR Sample listed, but not received.
 - LOR Limit of reporting.
 - QFH QC result is above the upper tolerance.
 - QFL QC result is below the lower tolerance.
-
- ① At least 2 of 3 surrogates are within acceptance criteria.
 - ② RPD failed acceptance criteria due to sample heterogeneity.
 - ③ Results less than 5 times LOR preclude acceptance criteria for RPD.
 - ④ Recovery failed acceptance criteria due to matrix interference.
 - ⑤ Recovery failed acceptance criteria due to the presence of significant concentration of analyte (i.e. the concentration of analyte exceeds the spike level).
 - ⑥ LOR was raised due to sample matrix interference.
 - ⑦ LOR was raised due to dilution of significantly high concentration of analyte in sample.
 - ⑧ Reanalysis of sample in duplicate confirmed sample heterogeneity and inconsistency of results.
 - ⑨ Recovery failed acceptance criteria due to sample heterogeneity.
 - ⑩ LOR was raised due to high conductivity of the sample (required dilution).
 - † Refer to Analytical Report comments for further information.

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CLIENT DETAILS

Contact Lan Ye
 Client EI AUSTRALIA
 Address SUITE 6.01
 55 MILLER STREET
 PYRMONT NSW 2009

Telephone 61 2 95160722
 Facsimile (Not specified)
 Email Lan.ye@eiaustralia.com.au

Project **E24084-E05 Arbutus&Cambridge Canley Hts**
 Order Number **E24084-E05**
 Samples 6

LABORATORY DETAILS

Manager Huong Crawford
 Laboratory SGS Alexandria Environmental
 Address Unit 16, 33 Maddox St
 Alexandria NSW 2015

Telephone +61 2 8594 0400
 Facsimile +61 2 8594 0499
 Email au.environmental.sydney@sgs.com

SGS Reference **SE186873 R0**
 Date Received 30 Nov 2018
 Date Reported 05 Dec 2018

COMMENTS

Accredited for compliance with ISO/IEC 17025 - Testing. NATA accredited laboratory 2562(4354).

No respirable fibres detected in all soil samples using trace analysis technique.

Asbestos analysed by Approved Identifier Ravee Sivasubramaniam.

SIGNATORIES



Akheeque Beniamen
Chemist



Bennet Lo
Senior Organic Chemist/Metals Chemis



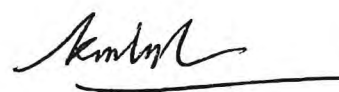
Dong Liang
Metals/Inorganics Team Leader



Huong Crawford
Production Manager



Kamrul Ahsan
Senior Chemist



Ly Kim Ha
Organic Section Head



ANALYTICAL REPORT

SE186873 R0

RESULTS

Fibre Identification in soil

Method AN602

Laboratory Reference	Client Reference	Matrix	Sample Description	Date Sampled	Fibre Identification	Est.%w/w*
SE186873.001	TP1_0.3-0.4	Soil	162g Clay	30 Nov 2018	No Asbestos Found	<0.01
SE186873.002	TP2_0.2-0.3	Soil	169g Clay	30 Nov 2018	No Asbestos Found	<0.01
SE186873.004	TP3_0.9-1.0	Soil	221g Clay	30 Nov 2018	No Asbestos Found	<0.01
SE186873.005	TP4_0.3-0.4	Soil	190g Clay	30 Nov 2018	No Asbestos Found	<0.01
SE186873.006	TP5_0.5-0.6	Soil	229g Clay	30 Nov 2018	No Asbestos Found	<0.01
SE186873.007	TP6_0.6-0.7	Soil	226g Clay	30 Nov 2018	No Asbestos Found	<0.01

METHOD

METHODOLOGY SUMMARY

- AN602 Qualitative identification of chrysotile, amosite and crocidolite in bulk samples by polarised light microscopy (PLM) in conjunction with dispersion staining (DS). AS4964 provides the basis for this document. Unequivocal identification of the asbestos minerals present is made by obtaining sufficient diagnostic 'clues', which provide a reasonable degree of certainty, dispersion staining is a mandatory 'clue' for positive identification. If sufficient 'clues' are absent, then positive identification of asbestos is not possible. This procedure requires removal of suspect fibres/bundles from the sample which cannot be returned.
- AN602 Fibres/material that cannot be unequivocally identified as one of the three asbestos forms, will be reported as unknown mineral fibres (umf). The fibres detected may or may not be asbestos fibres.
- AN602 AS4964.2004 Method for the Qualitative Identification of Asbestos in Bulk Samples, Section 8.4, Trace Analysis Criteria, Note 4 states: "Depending upon sample condition and fibre type, the detection limit of this technique has been found to lie generally in the range of 1 in 1,000 to 1 in 10,000 parts by weight, equivalent to 1 to 0.1 g/kg."
- AN602 The sample can be reported "no asbestos found at the reporting limit of 0.1 g/kg" (<0.01%w/w) where AN602 section 4.5 of this method has been followed, and if-
- (a) no trace asbestos fibres have been detected (i.e. no 'respirable' fibres);
 - (b) the estimated weight of non-respirable asbestos fibre bundles and/or the estimated weight of asbestos in asbestos-containing materials are found to be less than 0.1g/kg; and
 - (c) these non-respirable asbestos fibre bundles and/or the asbestos containing materials are only visible under stereo-microscope viewing conditions.

FOOTNOTES

Amosite	-	Brown Asbestos	NA	-	Not Analysed
Chrysotile	-	White Asbestos	LNR	-	Listed, Not Required
Crocidolite	-	Blue Asbestos	*	-	NATA accreditation does not cover the performance of this service.
Amphiboles	-	Amosite and/or Crocidolite	**	-	Indicative data, theoretical holding time exceeded.

(In reference to soil samples only) This report does not comply with the analytical reporting recommendations in the Western Australian Department of Health Guidelines for the Assessment and Remediation and Management of Asbestos Contaminated sites in Western Australia - May 2009.

Sampled by the client.

Where reported: 'Asbestos Detected': Asbestos detected by polarised light microscopy, including dispersion staining.

Where reported: 'No Asbestos Found': No Asbestos Found by polarised light microscopy, including dispersion staining.

Where reported: 'UMF Detected': Mineral fibres of unknown type detected by polarised light microscopy, including dispersion staining. Confirmation by another independent analytical technique may be necessary.

Even after disintegration it can be very difficult, or impossible, to detect the presence of asbestos in some asbestos-containing bulk materials using polarised light microscopy. This is due to the low grade or small length or diameter of asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials.

The QC criteria are subject to internal review according to the SGS QAQC plan and may be provided on request or alternatively can be found here : <http://www.sgs.com.au/~media/Local/Australia/Documents/Technical%20Documents/MP-AU-ENV-QU-022%20QA%20QC%20Plan.pdf>

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EM-11173 & 3-04

Sheet 1 of 1

Site: 121 Pitt Street, 13-136 Cambridge St, City Heights.
Project No: 114000, 3-04

Laboratory: SGS Australia
Unit 16, 33 Maddox Street,
ALEXANDRIA NSW 2015
P: 02 8594 0400 F: 02 8594 0499

Sample ID	Laboratory ID	Container Type	Sampling	
			Date	Time
TP1-03-04	1	J. 203	30/11/18	A.M.
TP2-02-03	2			
TP3-04-05	3			
TP4-03-04	4			
TP5-05-06	5			
TP6-06-07	6			
	7			

Container Type:
J= solvent washed, and rinsed, Teflon sealed, glass jar
S= solvent washed, acid rinsed glass bottle
P= natural HDPE plastic bottle
VC= glass vial, Teflon Septum
ZLB= Zip-Lock Bag

Suite 6.01, 55 Miller Street,
PYRMONT NSW 2009
Ph: 9516 0722
eiaustralia
100 Macquarie Street, Sydney
100 Macquarie Street, Sydney

Sample Matrix			Analysis												Comments			
		OTHERS (ie. Fibre, Paint, etc.)	HM & TRH BTEX/PAHs	OCP/OP/PCB/Asbestos	HM & TRH BTEX/PAHs	BTEX	VOCs	Asbestos	Asbestos Quantification	PH / GEO (ion exchange)	PH / EC (electrical conductivity)	Dewatering Suite	SPOCAS	PFAS	PAH, PCB, CHLORIDE	TCRP HM & PAH	LABORATORY TURNAROUND Standard 24 hours 48 hours 72 hours 104 hours	
		SOIL	X	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
		WATER	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓
			✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓		✓

SGS EHS Alexandria Laboratory
SE186873 COC
Received: 30 - Nov - 2018

Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.

Sampler's Name (EI):
Print: Ian Ye
Signature: Ian Ye
Date: 30/11/18
Received by (SGS):
Print: Suha
Signature: Suha
Date: 30/11/18

Report with EI Waste Classification Table X

Sample's Comments:



SAMPLE RECEIPT ADVICE

SE186873

CLIENT DETAILS

Contact Lan Ye
Client EI AUSTRALIA
Address SUITE 6.01
55 MILLER STREET
PYRMONT NSW 2009

Telephone 61 2 95160722
Facsimile (Not specified)
Email Lan.ye@eiaustralia.com.au

Project **E24084-E05 Arbutus&Cambridge Canley Hts**
Order Number **E24084-E05**
Samples 7

LABORATORY DETAILS

Manager Huong Crawford
Laboratory SGS Alexandria Environmental
Address Unit 16, 33 Maddox St
Alexandria NSW 2015

Telephone +61 2 8594 0400
Facsimile +61 2 8594 0499
Email au.environmental.sydney@sgs.com

Samples Received Fri 30/11/2018
Report Due Wed 5/12/2018
SGS Reference **SE186873**

SUBMISSION DETAILS

This is to confirm that 7 samples were received on Friday 30/11/2018. Results are expected to be ready by COB Wednesday 5/12/2018. Please quote SGS reference SE186873 when making enquiries. Refer below for details relating to sample integrity upon receipt.

Samples clearly labelled	Yes	Complete documentation received	Yes
Sample container provider	SGS	Sample cooling method	Ice Bricks
Samples received in correct containers	Yes	Sample counts by matrix	7 Soil
Date documentation received	30/11/2018@3:24pm	Type of documentation received	COC
Samples received in good order	Yes	Samples received without headspace	Yes
Sample temperature upon receipt	8.3°C	Sufficient sample for analysis	Yes
Turnaround time requested	Three Days		

Unless otherwise instructed, water and bulk samples will be held for one month from date of report, and soil samples will be held for two months.

COMMENTS

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SAMPLE RECEIPT ADVICE

SE186873

CLIENT DETAILS

Client EI AUSTRALIA

Project E24084-E05 Arbutus&Cambridge Canley Hts

SUMMARY OF ANALYSIS

No.	Sample ID	OC Pesticides in Soil	OP Pesticides in Soil	PAH (Polynuclear Aromatic Hydrocarbons) in Soil	PCBs in Soil	pH in soil (1:5)	TRH (Total Recoverable Hydrocarbons) in Soil	VOC's in Soil	Volatile Petroleum Hydrocarbons in Soil
001	TP1_0.3-0.4	29	14	26	11	1	10	12	8
002	TP2_0.2-0.3	29	14	26	11	-	10	12	8
003	TP3_0.4-0.5	-	-	-	-	1	-	-	-
004	TP3_0.9-1.0	29	14	26	11	1	10	12	8
005	TP4_0.3-0.4	29	14	26	11	-	10	12	8
006	TP5_0.5-0.6	29	14	26	11	-	10	12	8
007	TP6_0.6-0.7	29	14	26	11	1	10	12	8

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.

The numbers shown in the table indicate the number of results requested in each package.

Please indicate as soon as possible should your request differ from these details.

Testing as per this table shall commence immediately unless the client intervenes with a correction.



SAMPLE RECEIPT ADVICE

SE186873

CLIENT DETAILS

Client EI AUSTRALIA

Project E24084-E05 Arbutus&Cambridge Canley Hts

SUMMARY OF ANALYSIS

No.	Sample ID	Conductivity and TDS by Calculation - Soil	Exchangeable Cations and Cation Exchange Capacity	Mercury in Soil	Moisture Content	Soil Texture (AS4419)	Soluble Anions (1:5) in Soil by Ion Chromatography	Total Recoverable Elements in Soil/Waste
001	TP1_0.3-0.4	1	13	1	1	1	-	7
002	TP2_0.2-0.3	-	-	1	1	-	-	7
003	TP3_0.4-0.5	1	13	-	1	1	2	-
004	TP3_0.9-1.0	1	13	1	1	1	2	7
005	TP4_0.3-0.4	-	-	1	1	-	-	7
006	TP5_0.5-0.6	-	-	1	1	-	-	7
007	TP6_0.6-0.7	1	13	1	1	1	-	7

CONTINUED OVERLEAF

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction.



SAMPLE RECEIPT ADVICE

SE186873

CLIENT DETAILS

Client EI AUSTRALIA

Project E24084-E05 Arbutus&Cambridge Canley Hts

SUMMARY OF ANALYSIS

No.	Sample ID	Fibre Identification in soil
001	TP1_0.3-0.4	2
002	TP2_0.2-0.3	2
004	TP3_0.9-1.0	2
005	TP4_0.3-0.4	2
006	TP5_0.5-0.6	2
007	TP6_0.6-0.7	2

The above table represents SGS' interpretation of the client-supplied Chain Of Custody document.
The numbers shown in the table indicate the number of results requested in each package.
Please indicate as soon as possible should your request differ from these details.
Testing as per this table shall commence immediately unless the client intervenes with a correction .

WASTE CLASSIFICATION CERTIFICATE

EI Document Ref: E24107.E05.002.Rev0



PROJECT NO: E24107

CLIENT Details:

MOITS Pty Ltd
142 Wicks Road,
Macquarie Park 2113

Project Name: E24107 - Hurstville

Work Phase: Waste Classification

Client Contact: Mr Mohammad Elmadhoun

Certificate Date: 15-January-2019

LOCATION (where waste was generated):

Site Address: 6-8 Cross Street, Hurstville Lot / DP: 100/1230046

LGA: Georges River Council

Current Zoning: B3 Commercial Core Site Map Attached: Yes ☒ No ☐

Site History & Observations: The site was previously occupied by an ANZ Bank. Based on the 1943 aerial photograph (the site (SixMaps)), the site was then occupied by two residential dwellings. An on-line search of the contaminated land public record of EPA Notices was conducted on 15 January 2019. The search confirmed that the site known as 6-8 Cross Street, Hurstville NSW and lands in its close proximity (≤500 m), are not subject to any regulatory notices issued by the NSW EPA. The search through the List of NSW Contaminated Sites notified to the EPA under Section 60 of the CLM Act 1997 confirmed that the site has not been notified as contaminated to the EPA. The search of the Protection of the Environment Operations (POEO) Act public register did not identify any record for the site and lands in its close proximity (≤500 m). During this investigation all former structures had been demolished and cleared. Excavation works had commenced and the majority of the site was on natural SHALE.

Surrounding land use: The surrounding land uses include:
North: Residential apartment building and commercial property (office);
East: Commercial property and residential apartment building (office);
South: Cross Street, followed by commercial property (shopping centre); and
West: Commercial property (club), followed by Crofts Avenue.

Acid Sulfate Soil Risk: With reference to the Botany Bay Acid Sulfate Soil Risk Map (1:25,000 scale; Murphy, 1997), the subject land lies within the map class description of No Known Occurrence. In such cases, acid sulphate soils (ASS) are not known or expected to occur and 'land management activities are not likely to be affected by ASS materials'. The Hurstville Local Environmental Plan 2012- Acid Sulfate Soils Risk Class 1:10,000 scale Map lists the site as not being impacted with acid sulfate soils.

Proposed site use: Proposed redevelopment of the site includes the demolition of previous structures and construction of a multi-storey mixed residential and commercial building over five levels of basement car parking. The basement excavation will encompass the majority of the site footprint and will extend to approximately 15m from original ground level.

MATERIAL SOURCE: In-situ natural material to be excavated as part of the proposed the basement excavation, as shown in Figure 2.

MATERIAL CHARACTERISATION:

Material Description: SHALE; slightly weathered, grey mottled red, dry, no odour.

Sampling method: Manual grab samples from a client supplied excavator at 1 test pit location (TP101) and from the near surface validation samples (SV1 to SV7) distributed across the site within the basement excavation footprint, as shown in Figure 2.

Volume: 18000 m³ (approx.)
Tonnage: 32400 Tonnes (approx.)
Bulk density taken as 1.8 t/m³ for clay (Look, 2014)²

Tested Sample(s):³ EI Australia
TP101_0.6-0.7, SV1 to SV7

Sampling procedure and Quality Assurance / Control: All samples were collected by a suitably qualified, trained and experienced environmental engineer in asbestos identification in accordance with EPA requirements. Soil samples were collected using an unused/dedicated nitrile gloves & placed into 250g laboratory-prepared glass jars, which were capped using Teflon-sealed, screw caps and immediately refrigerated prior to being delivered to the contract environmental laboratory under strict Chain-of-Custody conditions.

Sampling Date: 9/1/2019 Sample Nos: 6
Primary Laboratory: Eurofins, Lane Cove West NSW
Secondary Laboratory:

EPA (2014) Waste classification steps

Step 1 - Visual evidence Special Waste	Yes	☐	No	☒
Step 2 - Is the waste liquid waste	Yes	☐	No	☒
Step 3 - Is the waste Pre-classified	Yes	☐	No	☒
Step 4 - Are hazardous substances present	Yes	☐	No	☒
Step 5 - Is chemical assessment required	Yes	☒	No	☐
Analytical Data Attached:	Yes	☒		

Note: Only data for above-listed samples tested are representative of classified material

MATERIAL SUITABILITY FOR BENEFICIAL ONSITE RE-USE AT: 6-8 CROSS STREET, HURSTVILLE

Material meets Site Acceptance Criteria⁴ of:

Yes ☐ No ☐

Comment:

This material has not been assessed for onsite re-use.

CLASSIFICATION FOR OFF-SITE DISPOSAL

Waste Classification:⁵ Assessed class.:

Special Waste:

Scheduled Waste:

VIRGIN EXCAVATED NATURAL MATERIAL (VENM)¹⁰

Not Applicable

NO

Classification Comments:⁶

The material delivered must be consistent with the description given in the Material Characterisation section above. This waste classification is only applicable to in-situ natural material to be excavated during the proposed basement excavation and described in the material description section above, as shown in Figure 2. The Waste Management Facility must satisfy itself that it is appropriately licensed to receive the material described in this certificate, Table 1 and attachments. The waste must be removed from the site and disposed to a facility licensed to accept this type of waste, in accordance with the Protection of the Environment Operations (Waste) Regulation 2014.

Disposal Options:^{7,8}

Suitable for disposal at facility licensed to receive:
VIRGIN EXCAVATED NATURAL MATERIAL (VENM)¹⁰

Author:

Reviewer:

Sharon Li
Environmental/ Geotechnical Engineer

Emmanuel Woelders
Environmental Scientist - Project Manager

WASTE CLASSIFICATION CERTIFICATE - Important Notes and Comments

- 1: Zoning as per the Hurstville Local Environmental Plan 2012.
- 2: Look, B. (2014), Handbook of Geotechnical Investigation and Design Tables, CRC Press.
- 3: Sampling conducted in accordance with EI Australia *Standard Operating Procedure for Waste Characterisation Sampling*, NSW EPA Contaminated Sites: *Sampling Design Guidelines*, 1995 and the National Environmental Protection Measure (1999) Amendment (2013) Schedule B2 Site Characterisation.
- 4: Site Acceptance Criteria as listed in National Environment Protection (Assessment of Site Contamination) Measure 1999, Amendment 2013, Schedule B(2).
- 5: Classification in Accordance with Tables 1 and 2 of the NSW Environment Protection Authority (EPA) *Waste Classification Guidelines, Part 1: Classifying waste*, November 2014.
- 6: The Waste Management Facility must satisfy itself that it is appropriately licensed to receive the material described in this certificate, Table 1 and attachments.
- 7: The Protection of the Environment Operations (POEO) Act 1997 Section 143 states that if waste is transported to a facility not lawfully authorised as a waste facility for that waste, the owner, transporter and receiver of the waste are each guilty of an offence. The owner of waste includes, in relation to waste that has been transported, the person who was the owner of the waste immediately before it was transported. It should be noted that under the POEO (waste) Regulation 2014, Part 6, a person must not transport waste that is generated in NSW to any place in or outside of NSW, which is greater than 150 km from the source site. Pre acceptance of waste by the receiving disposal operator is recommended.
- 8: Under Section 144AA of the POEO Act it is an offence to supply information, or cause or permit information to be supplied, "that is false or misleading in a material respect about waste, to another person in the course of dealing with the waste".
- 9: Generators and transporters of Asbestos Waste have a legal obligation to ensure their waste goes to a lawful place. Under Clauses 76 and 79 of the Protection of the Environment (Waste) Regulation 2014 and the NSW EPA 2015 Asbestos and Waste Tyres Guidelines, consignors and transporters of Asbestos Waste, and facilities receiving these wastes, must use "WasteLocate" to provide information to the EPA regarding their movement within NSW. Further information about the "WasteLocate" system is available online from the NSW EPA Website at: <http://www.epa.nsw.gov.au/publications/waste/150702-asbestos-waste-tyres.htm>
- 10: Virgin excavated natural material (VENM) is a waste that has been pre-classified as general solid waste (non-putrescible). Under the PoEO Act 1997, virgin excavated natural material (VENM) is, 'natural material (such as clay, gravel, sand, soil or rock fines), that has been excavated or quarried from areas that are not contaminated with manufactured chemicals, or with process residues, as a result of industrial, commercial, mining or agricultural activities and does not contain any sulfidic ores or soils or any other waste. .

STATEMENT OF LIMITATIONS

This report was prepared for the exclusive use of Moits Pty Ltd (the client), who is the only intended beneficiary of EI's work. The scope of the works carried out for the purpose of this waste classification certificate is limited to those agreed with the client.

No other party should rely on this document without the prior written consent of EI, and EI undertakes no duty, or accepts any responsibility or liability, to any third party who purports to rely upon this document without EI's approval.

EI has used a degree of care and skill ordinarily exercised in similar investigations by reputable members of the environmental industry in Australia as at the date of this document. No other warranty, expressed or implied, is made or intended. Each section of this report must be read in conjunction with the whole of this report, including its appendices and attachments.

The conclusions presented in this waste classification are based on a limited investigation of conditions, with specific sampling locations chosen to be as representative as possible under the given circumstances.

EI's professional opinions are reasonable and based on its professional judgment, experience, training and results from analytical data. EI may also have relied upon information provided by the Client and other third parties to prepare this document, some of which may not have been verified by EI.

EI's professional opinions contained in this document are subject to modification if materials are added to the previously characterised waste soil stockpile. In such cases, further testing and analysis will be required, which may result in a further waste classification certificate with different conclusions.

PHOTO LOG:



Photo 1: TP101 (09/01/2019)



Photo 2: General site condition, looking southwest (09/01/2019)



Photo 3: General site condition, looking southwest (09/01/2019)

Table 1. Summary of Laboratory Analytical Results

Sample ID	Sampling date	Heavy Metals						PAHs		BTEX				TRHs		OCPs	OPP	Total PCBs	pH	Asbestos
		As	Cd	Cu ²⁺	Pb	Ni	Hg	Benzo(a)pyrene	Total PAHs	Benzene	Toluene	Ethylbenzene	Total Xylenes	C ₆ -C ₉	C ₁₀ -C ₃₆					
Waste Classification Assessment Criteria	NSW EPA 2014 General Solid Waste	CT1 (mg/kg) ¹	100	20	100 ⁵	100	40	4	0.8	10	268	600	1,000	650	10,000	<50	250	<50	NR	NR
		TCLP1 (mg/L)	5	1	5	5	2	0.2	0.04	0.5	14.4	30	50	NR	NR	NR	NR	NR	NR	NR
		SCC1 (mg/kg) ²	500	100	1,500	1,500	1,050	50	10	18	518	1,080	1,800	650	10,000	<50	250	<50	NR	NR
	NSW EPA 2014 Restricted Solid Waste	CT2 (mg/kg) ³	400	80	400 ⁵	400	160	16	3.2	40	1,152	2,400	4,000	2,600	40,000	1000	1000	<50	NR	NR
		TCLP2 (mg/L)	20	4	20	20	8	0.8	0.16	2	58	120	200	NR	NR	NR	NR	NR	NR	NR
Special Waste / Scheduled Waste		SCC2 (mg/kg) ⁴	2,000	400	7,600	6,000	4,200	200	23	72	2,073	4,320	7,200	2,600	40,000	<50	1000	<50	NR	NR
Waste Classification	SV1		13	< 0.4	7.2	24	<5	<0.1	<0.5	<0.2	<0.2	<0.2	<0.6	< 40	<50	<0.1	ND	<0.1	6.4	No
	SV2		21	< 0.4	5.7	22	<5	<0.1	<0.5	<0.2	<0.2	<0.2	<0.6	< 40	<50	<0.1	ND	<0.1	6.4	No
	SV3		18	< 0.4	11	27	<5	<0.1	<0.5	<0.1	<0.1	<0.1	<0.3	< 20	<50	<0.1	ND	<0.1	5.6	No
	SV4		9.8	< 0.4	11	27	<5	<0.1	<0.5	<0.2	<0.2	<0.2	<0.6	< 40	<50	<0.1	ND	<0.1	6.2	No
	SV5		5.6	< 0.4	6.9	25	<5	<0.1	<0.5	<0.1	<0.1	<0.1	<0.3	< 20	<50	<0.1	ND	<0.1	6.7	No
	SV6		22	< 0.4	14	25	<5	<0.1	<0.5	<0.1	<0.1	<0.1	<0.3	< 20	<50	<0.1	ND	<0.1	6.5	No
	SV7		17	< 0.4	12	23	<5	<0.1	<0.5	<0.1	<0.1	<0.1	<0.3	< 20	<50	<0.1	ND	<0.1	9	No
	TP101_0.6-0.7		9.4	< 0.4	10	33	<5	<0.1	<0.5	<0.2	<0.2	<0.2	<0.6	< 40	<50	<0.1	ND	<0.1	5.8	No
	95% UCL ⁷		NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC	NC

Note:

NA Not Analysed

NC Not Calculated

NR No reference criteria available in current regulatory tools.

ND Not detected

Scheduled Chemicals: Where none detected the LOR has been used to sum

** Moderately Harmful Pesticides

1 NSW EPA 2014 CT1 General Solid Waste Thresholds (without leachate test), in Waste Classification Guidelines, Table 1

2 NSW EPA 2014 CT2 Maximum values for Leachable concentration and specific contaminant concentration for Restricted Solid Waste Thresholds, Waste Classification Guidelines Table 1

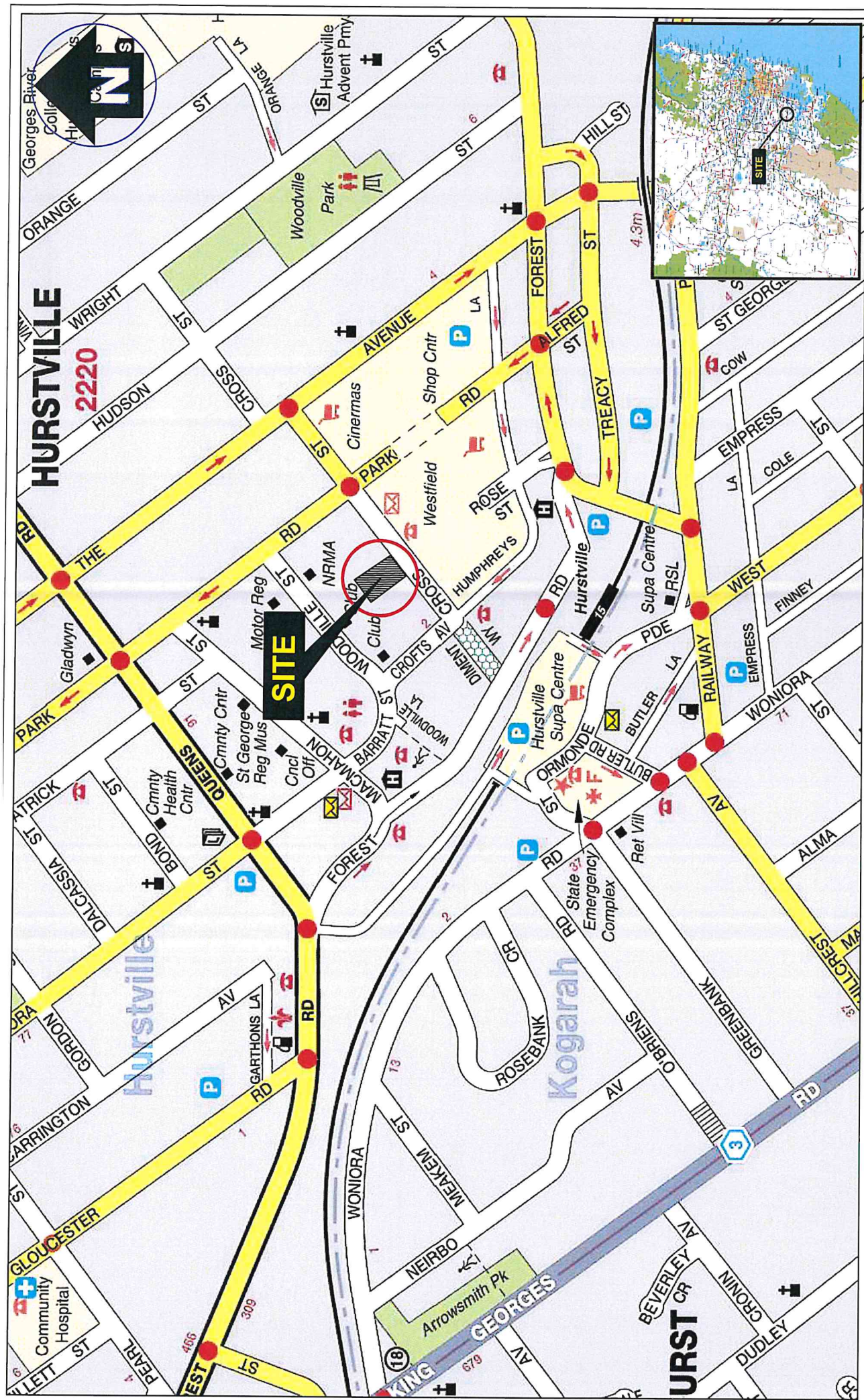
3 NSW EPA 2014 TCLP1/ISCC1 General Solid Waste Thresholds (leachable concentration and total concentration when used together), in Waste Classification Guidelines Table 2

4 NSW EPA 2014 CT1 Maximum values for Leachable concentration and specific contaminant concentration for Restricted Solid Waste Thresholds, Waste Classification Guidelines Table 2

5 NSW EPA Scheduled Chemicals Chemical Control Order 2004, Section 4.14

6 NSW EPA Polychlorinated Biphenyl (PCB) Chemical Control Order 1997. Where PCBs are reported at concentrations >2 mg/kg and <50 mg/kg, material is non-scheduled PCB waste. Where PCBs are reported at concentrations >50 mg/kg, material is scheduled PCB waste.

7 95% UCL only performed for analyte where soil concentrations exceed waste classification criteria in samples





Contamination | Remediation | Geotechnical

Suite 6.01, 55 Miller Street, PYRMONT 2009
Ph (02) 9516 0722 Fax (02) 9518 5088

MOITS Pty Ltd

Waste Classification Certificate

6-8 Cross Street, Hurstville NSW

Site Locality Plan

Figure:

1

Drawn:	L.C.		
Approved:	-		
Date:	-		
Scale:	Not To Scale		



Map Source: Six Maps Dated: 07-04-2018

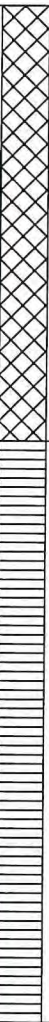
LEGEND --- Approximate site boundary ▲ Approximate surface validation sampling location ■ Approximate test pit location		eiaustralia Contamination Remediation Geotechnical Suite 6.01, 55 Miller Street, PYRMONT 2009 Ph (02) 9518 0722 Fax (02) 9518 5086		Drawn: - Approved: - Date: -	L.C.	MOITS Pty Ltd Waste Classification Certificate 6-8 Cross Street, Hurstville NSW Sampling Location Plan	Figure: 2	Project: E24107 E05.002
---	--	--	--	---	-------------	---	-------------------------	--------------------------------

Project Waste Classification Certificate
 Location 6-8 Cross Street, Hurstville NSW
 Position Refer to figure 2
 Job No. E24107.E05
 Client MOITS Pty Ltd

Contractor MOITS Pty Ltd
 Machine Excavator

TEST PIT: TP101

Sheet 1 OF 1
 Date 9/1/18
 Logged SL
 Checked

Excavation					Sampling		Field Material Description				
METHOD	EXCAVATION RESISTANCE	WATER	DEPTH (metres)	DEPTH RL	SAMPLE OR FIELD TEST	RECOVERED GRAPHIC LOG	USCS SYMBOL	SOIL/ROCK MATERIAL DESCRIPTION	MOISTURE CONDITION	CONSISTENCY	STRUCTURE AND ADDITIONAL OBSERVATIONS
Ex	-	GWNE	0.0		TP101_0.1-0.2 ES			- Sandy CLAY; medium to high plasticity, brown, no odour.	M	D	FILL
			0.30					- SHALE: weathered rock, grey mottled red, no odour.			BEDROCK
			0.70		TP101_0.6-0.7 ES			Hole Terminated at 0.70 mBGL; Target depth reached			
			1.0								

This borehole log should be read in conjunction with EI Australia's accompanying standard notes.

Sheet <u>1</u> of <u>1</u>		Project No: <u>F24107</u>		Sample Matrix		Analysis										Comments								
Site: <u>6-8 Gross Sts</u> <u>Hurstville NSW</u>		Laboratory: <u>Eurofins Environment Testing Aust. P/L</u> <u>6 / 16 Mars Road,</u> <u>Lane Cove NSW 2066</u> <u>P: 02 9900 8400</u>		WATER		SOIL		OTHERS (i.e. Fibro, Paint, etc.)		HM Δ / TRH/BTEX/PAHs	HM Δ / TRH/BTEX/PAHs	HM Δ / TRH/BTEX	BTEX	VOCs	Asbestos	Asbestos Quantification	pH / CEC (cation exchange)	pH / EC (electrical conductivity)	Dewatering Suite	sPOCAS	PFAS	PH	TCLP HM Δ / PAH	Comments
Sample ID	Laboratory ID	Container Type	Sampling																					
			Date	Time																				
SV1		J, ZLB	9/1/2019	AM		X																		
2																								
3																								
4																								
5																								
6																								
7																								
TP101 - 0.6-07		J, ZLB	9/1/2019	AM		X																		
Container type: J= solvent washed, acid rinsed, Teflon sealed, glass jar S= solvent washed, acid rinsed glass bottle P= natural HDPE plastic bottle VC= glass vial, Teflon Septum ZLB = Zip-Lock Bag																								
Investigator: I attest that these samples were collected in accordance with standard EI field sampling procedures.																								
Report with EI Waste Classification Table ☒																								
Laboratory Turnaround: ☒ Standard ☐ 24 Hours ☐ 48 Hours ☐ 72 Hours ☐ Other																								
Sampler's Name (EI): <u>SL</u> Received by (Eurofins): <u>Ullrich</u> Signature: <u>SL</u> Signature: <u>Ullrich</u> Date: <u>9/1/2019</u> Date: <u>09/01/19 3:35 PM</u> IMPORTANT: Please e-mail laboratory results to: <u>lab@eiaustralia.com.au</u>																								
Please email results to: <u>emmanuel.woelders@eiaustralia.com.au</u> #635111																								

Sample Receipt Advice

Company name: EI Australia
Contact name: Emmanuel Woelders
Project name: 6-8 CROSS ST HURSTVILLE NSW
Project ID: E24107
COC number: Not provided
Turn around time: 3 Day
Date/Time received: Jan 9, 2019 3:35 PM
Eurofins | mgt reference: 635111

Sample information

- ☒ A detailed list of analytes logged into our LIMS, is included in the attached summary table.
- ☒ All samples have been received as described on the above COC.
- ☒ COC has been completed correctly.
- ☒ Attempt to chill was evident.
- ☒ Appropriately preserved sample containers have been used.
- ☒ All samples were received in good condition.
- ☒ Samples have been provided with adequate time to commence analysis in accordance with the relevant holding times.
- ☒ Appropriate sample containers have been used.
- ☒ Split sample sent to requested external lab.
- ☒ Some samples have been subcontracted.
- N/A Custody Seals intact (if used).

Notes

Extra Jar and Bag received for sample TP101_0.1-0.2, placed on hold.

Contact notes

If you have any questions with respect to these samples please contact:

Nibha Vaidya on Phone : +61 (2) 9900 8415 or by e.mail: NibhaVaidya@eurofins.com

Results will be delivered electronically via e.mail to Emmanuel Woelders - emmanuel.woelders@eiaustralia.com.au.

ABN- 50 005 085 521
e.mail : EnviroSales@eurofins.com
web : www.eurofins.com.au

Melbourne
2-5 Kingston Town Close
Oakleigh VIC 3166
Phone : +61 3 8564 5000
NATA # 1261
Site # 1254 & 14271

Sydney
Unit F3, Building F
16 Mars Road
Lane Cove West NSW 2066
Phone : +61 2 9500 8400
NATA # 1261 Site # 18217

Brisbane
1721 Smallwood Place
Murrarie QLD 4172
Phone : +61 7 3902 4600
NATA # 1261 Site # 20794

Perth
2/91 Leach Highway
Kewdale WA 6105
Phone : +61 8 9251 9600
NATA # 1261
Site # 23736

Company Name:

EI Australia

Address: Suite 6.01, 55 Miller Street

Pymont

NSW 2009

Project Name: 6-8 CROSS ST HURSTVILLE NSW

Project ID: E24107

Order No.:

635111

Report #:

02 9516 0722

Phone:

Fax:

Received: Jan 9, 2019 3:35 PM

Due: Jan 15, 2019

Priority: 3 Day

Contact Name: Emmanuel Woelders

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail

					Asbestos - AS4964	HOLD	pH (1:5 Aqueous extract at 25°C as rec.)	Eurofins mgt Suite B15	Moisture Set	Eurofins mgt Suite B7
					X	X	X	X	X	X
External Laboratory										
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID					
1	SV1	Jan 09, 2019		Soil	S19-Ja03057	X	X	X	X	X
2	SV2	Jan 09, 2019		Soil	S19-Ja03058	X	X	X	X	X
3	SV3	Jan 09, 2019		Soil	S19-Ja03059	X	X	X	X	X
4	SV4	Jan 09, 2019		Soil	S19-Ja03060	X	X	X	X	X
5	SV5	Jan 09, 2019		Soil	S19-Ja03061	X	X	X	X	X
6	SV6	Jan 09, 2019		Soil	S19-Ja03062	X	X	X	X	X
7	SV7	Jan 09, 2019		Soil	S19-Ja03063	X	X	X	X	X
8	TP101_0.6-0.7	Jan 09, 2019		Soil	S19-Ja03064	X	X	X	X	X
9	TP101_0.1-0.2	Jan 09, 2019		Soil	S19-Ja03065		X			

Company Name:

EI Australia

Address:

Suite 6.01, 55 Miller Street

Pymont

NSW 2009

Project Name:

6-8 CROSS ST HURSTVILLE NSW

Project ID:

E24107

Order No.:

635111

Report #:

02 9516 0722

Phone:

Fax:

Received:

Jan 9, 2019 3:35 PM

Due:

Jan 15, 2019

Priority:

3 Day

Contact Name:

Emmanuel Woelders

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail					
	Eurofins mgt Suite B7	X			8
	Moisture Set	X			8
	Eurofins mgt Suite B15	X			8
	pH (1:5 Aqueous extract at 25°C as rec.)	X			8
	HOLD	X			1
	Asbestos - AS4964		X		8
Melbourne Laboratory - NATA Site # 1254 & 14271					
Sydney Laboratory - NATA Site # 18217					
Brisbane Laboratory - NATA Site # 20794					
Perth Laboratory - NATA Site # 23736					
Test Counts					

El Australia
Suite 6.01, 55 Miller Street
Pymont
NSW 2009



NATA Accredited
Accreditation Number 1261
Site Number 18217

Accredited for compliance with ISO/IEC 17025-Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Emmanuel Woelders
Report 635111-AID
Project Name 6-8 CROSS ST HURSTVILLE NSW
Project ID E24107
Received Date Jan 09, 2019
Date Reported Jan 14, 2019

Methodology:

Asbestos Fibre Identification

Conducted in accordance with the Australian Standard AS 4964 – 2004: Method for the Qualitative Identification of Asbestos in Bulk Samples and in-house Method LTM-ASB-8020 by polarised light microscopy (PLM) and dispersion staining (DS) techniques.

NOTE: Positive Trace Analysis results indicate the sample contains detectable respirable fibres.

Unknown Mineral Fibres

Mineral fibres of unknown type, as determined by PLM with DS, may require another analytical technique, such as Electron Microscopy, to confirm unequivocal identity.

NOTE: While Actinolite, Anthophyllite and Tremolite asbestos may be detected by PLM with DS, due to variability in the optical properties of these materials, AS4964 requires that these are reported as UMF unless confirmed by an independent technique.

Subsampling Soil Samples

The whole sample submitted is first dried and then passed through a 10mm sieve followed by a 2mm sieve. All fibrous matter greater than 10mm, greater than 2mm as well as the material passing through the 2mm sieve are retained and analysed for the presence of asbestos. If the sub 2mm fraction is greater than approximately 30 to 60g then a sub-sampling routine based on ISO 3082:2009(E) is employed.

NOTE: Depending on the nature and size of the soil sample, the sub-2 mm residue material may need to be sub-sampled for trace analysis, in accordance with AS 4964-2004.

Bonded asbestos-containing material (ACM)

The material is first examined and any fibres isolated for identification by PLM and DS. Where required, interfering matrices may be removed by disintegration using a range of heat, chemical or physical treatments, possibly in combination. The resultant material is then further examined in accordance with AS 4964 - 2004.

NOTE: Even after disintegration it may be difficult to detect the presence of asbestos in some asbestos-containing bulk materials using PLM and DS. This is due to the low grade or small length or diameter of the asbestos fibres present in the material, or to the fact that very fine fibres have been distributed intimately throughout the materials. Vinyl/asbestos floor tiles, some asbestos-containing sealants and mastics, asbestos-containing epoxy resins and some ore samples are examples of these types of material, which are difficult to analyse.

Limit of Reporting

The performance limitation of the AS 4964 (2004) method for non-homogeneous samples is around 0.1 g/kg (equivalent to 0.01% (w/w)). Where no asbestos is found by PLM and DS, including Trace Analysis, this is considered to be at the nominal reporting limit of 0.01% (w/w).

The NEPM screening level of 0.001% (w/w) is intended as an on-site determination, not a laboratory Limit of Reporting (LOR), per se. Examination of a large sample size (e.g. 500 mL) may improve the likelihood of detecting asbestos, particularly AF, to aid assessment against the NEPM criteria. Gravimetric determinations to this level of accuracy are outside of AS 4964 and hence NATA Accreditation does not cover the performance of this service (non-NATA results shown with an asterisk).

NOTE: NATA News March 2014, p.7, states in relation to AS 4964: "This is a qualitative method with a nominal reporting limit of 0.01 % " and that currently in Australia "there is no validated method available for the quantification of asbestos". This report is consistent with the analytical procedures and reporting recommendations in the NEPM and the WA DoH.

Project Name 6-8 CROSS ST HURSTVILLE NSW
Project ID E24107
Date Sampled Jan 09, 2019
Report 635111-AID

Client Sample ID	Eurofins mgt Sample No.	Date Sampled	Sample Description	Result
SV1	19-Ja03057	Jan 09, 2019	Approximate Sample 250g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV2	19-Ja03058	Jan 09, 2019	Approximate Sample 196g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV3	19-Ja03059	Jan 09, 2019	Approximate Sample 215g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV4	19-Ja03060	Jan 09, 2019	Approximate Sample 170g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV5	19-Ja03061	Jan 09, 2019	Approximate Sample 185g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV6	19-Ja03062	Jan 09, 2019	Approximate Sample 148g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
SV7	19-Ja03063	Jan 09, 2019	Approximate Sample 218g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.
TP101_0.6-0.7	19-Ja03064	Jan 09, 2019	Approximate Sample 230g Sample consisted of: Grey coarse-grained clayey soil and rocks	No asbestos detected at the reporting limit of 0.01% w/w. Organic fibre detected. No respirable fibres detected.

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported. A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Asbestos - LTM-ASB-8020	Sydney	Jan 09, 2019	Indefinite

Company Name: EI Australia
Address: Suite 6.01, 55 Miller Street
 Pyrmont
 NSW 2009
Project Name: 6-8 CROSS ST HURSTVILLE NSW
Project ID: E24107

Order No.: 635111
Report #: 02 9516 0722
Phone:
Fax:

Received: Jan 9, 2019 3:35 PM
Due: Jan 15, 2019
Priority: 3 Day
Contact Name: Emmanuel Woelders

Eurofins | mgt Analytical Services Manager : Nibha Vaidya

Sample Detail

Eurofins mgt Suite B7				Eurofins mgt Suite B15			
Moisture Set				pH (1:5 Aqueous extract at 25°C as rec.)			
HOLD				Asbestos - AS4964			
No	Sample ID	Sample Date	Sampling Time	Matrix	LAB ID		
1	SV1	Jan 09, 2019		Soil	S19-Ja03057	X	X
2	SV2	Jan 09, 2019		Soil	S19-Ja03058	X	X
3	SV3	Jan 09, 2019		Soil	S19-Ja03059	X	X
4	SV4	Jan 09, 2019		Soil	S19-Ja03060	X	X
5	SV5	Jan 09, 2019		Soil	S19-Ja03061	X	X
6	SV6	Jan 09, 2019		Soil	S19-Ja03062	X	X
7	SV7	Jan 09, 2019		Soil	S19-Ja03063	X	X
8	TP101_0.6-0.7	Jan 09, 2019		Soil	S19-Ja03064	X	X
9	TP101_0.1-0.2	Jan 09, 2019		Soil	S19-Ja03065	X	X

Melbourne Laboratory - NATA Site # 1254 & 14271

Sydney Laboratory - NATA Site # 18217

Brisbane Laboratory - NATA Site # 20794

Perth Laboratory - NATA Site # 23736

External Laboratory

Sample Detail

Internal Quality Control Review and Glossary

General

1. QC data may be available on request.
2. All soil results are reported on a dry basis, unless otherwise stated.
3. Samples were analysed on an 'as received' basis.
4. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the Sample Receipt Advice.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

Units

% w/w: weight for weight basis

Filter loading:

Reported Concentration:

Flowrate:

grams per kilogram

fibres/100 graticule areas

fibres/mL

L/min

Terms

Dry	Sample is dried by heating prior to analysis
LOR	Limit of Reporting
COC	Chain of Custody
SRA	Sample Receipt Advice
ISO	International Standards Organisation
AS	Australian Standards
WA DOH	Reference document for the NEPM. Government of Western Australia, Guidelines for the Assessment, Remediation and Management of Asbestos-Contaminated Sites in Western Australia (2009), including supporting document Recommended Procedures for Laboratory Analysis of Asbestos in Soil (2011)
NEPM	National Environment Protection (Assessment of Site Contamination) Measure, 2013 (as amended)
ACM	Asbestos Containing Materials. Asbestos contained within a non-asbestos matrix, typically presented in bonded and/or sound condition. For the purposes of the NEPM, ACM is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
AF	Asbestos Fines. Asbestos containing materials, including friable, weathered and bonded materials, able to pass a 7mm x 7mm sieve. Considered under the NEPM as equivalent to "non-bonded / friable".
FA	Fibrous Asbestos. Asbestos containing materials in a friable and/or severely weathered condition. For the purposes of the NEPM, FA is generally restricted to those materials that do not pass a 7mm x 7mm sieve.
Friable	Asbestos-containing materials of any size that may be broken or crumbled by hand pressure. For the purposes of the NEPM, this includes both AF and FA. It is outside of the laboratory's remit to assess degree of friability.
Trace Analysis	Analytical procedure used to detect the presence of respirable fibres in the matrix.

Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
N/A	Not applicable

Asbestos Counter/Identifier:

Karthik Surisetty Senior Analyst-Asbestos (NSW)

Authorised by:

Sayeed Abu Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final Report – this report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

Eurofins | mgt shall not be liable for loss, cost, damages or expenses incurred by the client, or any other person or company, resulting from the use of any information or interpretation given in this report. In no case shall Eurofins | mgt be liable for consequential damages including, but not limited to, lost profits, damages for failure to meet deadlines and lost production arising from this report. This document shall not be reproduced except in full and relates only to the items tested. Unless indicated otherwise, the tests were performed on the samples as received.

EI Australia
 Suite 6.01, 55 Miller Street
 Pyrmont
 NSW 2009



NATA Accredited
 Accreditation Number 1261
 Site Number 18217

Accredited for compliance with ISO/IEC 17025 – Testing
 The results of the tests, calibrations and/or
 measurements included in this document are traceable
 to Australian/national standards.

Attention: Emmanuel Woelders

Report 635111-S
 Project name 6-8 CROSS ST HURSTVILLE NSW
 Project ID E24107
 Received Date Jan 09, 2019

Client Sample ID			G01SV1	G01SV2	SV3	G01SV4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S19-Ja03057	S19-Ja03058	S19-Ja03059	S19-Ja03060
Date Sampled			Jan 09, 2019	Jan 09, 2019	Jan 09, 2019	Jan 09, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 40	< 40	< 20	< 40
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.2	< 0.2	< 0.1	< 0.2
Toluene	0.1	mg/kg	< 0.2	< 0.2	< 0.1	< 0.2
Ethylbenzene	0.1	mg/kg	< 0.2	< 0.2	< 0.1	< 0.2
m&p-Xylenes	0.2	mg/kg	< 0.4	< 0.4	< 0.2	< 0.4
o-Xylene	0.1	mg/kg	< 0.2	< 0.2	< 0.1	< 0.2
Xylenes - Total	0.3	mg/kg	< 0.6	< 0.6	< 0.3	< 0.6
4-Bromofluorobenzene (surr.)	1	%	64	59	108	95
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 1	< 1	< 0.5	< 1
TRH C6-C10	20	mg/kg	< 40	< 40	< 20	< 40
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 40	< 40	< 20	< 40
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5

Client Sample ID			G01SV1	G01SV2	SV3	G01SV4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S19-Ja03057	S19-Ja03058	S19-Ja03059	S19-Ja03060
Date Sampled			Jan 09, 2019	Jan 09, 2019	Jan 09, 2019	Jan 09, 2019
Test/Reference	LOR	Unit				
Polycyclic Aromatic Hydrocarbons						
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1.2.3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	115	97	101	122
p-Terphenyl-d14 (surr.)	1	%	100	69	67	116
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	101	76	52	107
Tetrachloro-m-xylene (surr.)	1	%	65	52	55	64
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			G01SV1	G01SV2	SV3	G01SV4
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S19-Ja03057	S19-Ja03058	S19-Ja03059	S19-Ja03060
Date Sampled			Jan 09, 2019	Jan 09, 2019	Jan 09, 2019	Jan 09, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	92	66	66	79
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	101	76	52	107
Tetrachloro-m-xylene (surr.)	1	%	65	52	55	64
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.4	6.4	5.6	6.2
% Moisture	1	%	14	14	12	18
Heavy Metals						
Arsenic	2	mg/kg	13	21	18	9.8
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	7.2	5.7	11	11
Copper	5	mg/kg	12	9.9	19	39
Lead	5	mg/kg	24	22	27	27
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	< 5	< 5	< 5

Client Sample ID			SV5	SV6	SV7	G01-TP101_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S19-Ja03061	S19-Ja03062	S19-Ja03063	S19-Ja03064
Date Sampled			Jan 09, 2019	Jan 09, 2019	Jan 09, 2019	Jan 09, 2019
Test/Reference	LOR	Unit				
Total Recoverable Hydrocarbons - 1999 NEPM Fractions						
TRH C6-C9	20	mg/kg	< 20	< 20	< 20	< 40
TRH C10-C14	20	mg/kg	< 20	< 20	< 20	< 20
TRH C15-C28	50	mg/kg	< 50	< 50	< 50	< 50
TRH C29-C36	50	mg/kg	< 50	< 50	< 50	< 50
TRH C10-36 (Total)	50	mg/kg	< 50	< 50	< 50	< 50
BTEX						
Benzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.2
Toluene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.2
Ethylbenzene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.2
m&p-Xylenes	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.4
o-Xylene	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.2
Xylenes - Total	0.3	mg/kg	< 0.3	< 0.3	< 0.3	< 0.6
4-Bromofluorobenzene (surr.)	1	%	129	88	91	89
Total Recoverable Hydrocarbons - 2013 NEPM Fractions						
Naphthalene ^{N02}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 1
TRH C6-C10	20	mg/kg	< 20	< 20	< 20	< 40
TRH C6-C10 less BTEX (F1) ^{N04}	20	mg/kg	< 20	< 20	< 20	< 40
TRH >C10-C16	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C10-C16 less Naphthalene (F2) ^{N01}	50	mg/kg	< 50	< 50	< 50	< 50
TRH >C16-C34	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C34-C40	100	mg/kg	< 100	< 100	< 100	< 100
TRH >C10-C40 (total)*	100	mg/kg	< 100	< 100	< 100	< 100
Polycyclic Aromatic Hydrocarbons						
Benzo(a)pyrene TEQ (lower bound) *	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene TEQ (medium bound) *	0.5	mg/kg	0.6	0.6	0.6	0.6
Benzo(a)pyrene TEQ (upper bound) *	0.5	mg/kg	1.2	1.2	1.2	1.2
Acenaphthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Acenaphthylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benz(a)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(a)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(b&j)fluoranthene ^{N07}	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(g,h,i)perylene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Benzo(k)fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Chrysene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Dibenz(a,h)anthracene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluoranthene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Fluorene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Indeno(1,2,3-cd)pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Naphthalene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Phenanthrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Pyrene	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
Total PAH*	0.5	mg/kg	< 0.5	< 0.5	< 0.5	< 0.5
2-Fluorobiphenyl (surr.)	1	%	52	62	66	50
p-Terphenyl-d14 (surr.)	1	%	62	71	69	70

Client Sample ID			SV5 Soil S19-Ja03061 Jan 09, 2019	SV6 Soil S19-Ja03062 Jan 09, 2019	SV7 Soil S19-Ja03063 Jan 09, 2019	G01-TP101_0.6-0.7 Soil S19-Ja03064 Jan 09, 2019
Sample Matrix						
Eurofins mgt Sample No.						
Date Sampled						
Test/Reference	LOR	Unit				
Organochlorine Pesticides						
Chlordanes - Total	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
4,4'-DDD	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDE	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
4,4'-DDT	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
a-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Aldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
b-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
d-BHC	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Dieldrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan I	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan II	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endosulfan sulphate	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin aldehyde	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Endrin ketone	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
g-BHC (Lindane)	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Heptachlor epoxide	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Hexachlorobenzene	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Methoxychlor	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Toxaphene	1	mg/kg	< 1	< 1	< 1	< 1
Aldrin and Dieldrin (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
DDT + DDE + DDD (Total)*	0.05	mg/kg	< 0.05	< 0.05	< 0.05	< 0.05
Vic EPA IWRG 621 OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Vic EPA IWRG 621 Other OCP (Total)*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchloroendate (surr.)	1	%	77	84	83	84
Tetrachloro-m-xylene (surr.)	1	%	82	75	72	80
Organophosphorus Pesticides						
Azinphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Bolstar	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorfenvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Chlorpyrifos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Coumaphos	2	mg/kg	< 2	< 2	< 2	< 2
Demeton-S	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Demeton-O	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Diazinon	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dichlorvos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Dimethoate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Disulfoton	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
EPN	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethoprop	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ethyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenitrothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fensulfothion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Fenthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Malathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Merphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2

Client Sample ID			SV5	SV6	SV7	G01TP101_0.6-0.7
Sample Matrix			Soil	Soil	Soil	Soil
Eurofins mgt Sample No.			S19-Ja03061	S19-Ja03062	S19-Ja03063	S19-Ja03064
Date Sampled			Jan 09, 2019	Jan 09, 2019	Jan 09, 2019	Jan 09, 2019
Test/Reference	LOR	Unit				
Organophosphorus Pesticides						
Methyl parathion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Mevinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Monocrotophos	2	mg/kg	< 2	< 2	< 2	< 2
Naled	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Omethoate	2	mg/kg	< 2	< 2	< 2	< 2
Phorate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pirimiphos-methyl	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Pyrazophos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Ronnel	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Terbufos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tetrachlorvinphos	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Tokuthion	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Trichloronate	0.2	mg/kg	< 0.2	< 0.2	< 0.2	< 0.2
Triphenylphosphate (surr.)	1	%	76	61	52	63
Polychlorinated Biphenyls						
Aroclor-1016	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1221	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1232	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1242	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1248	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1254	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Aroclor-1260	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Total PCB*	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Dibutylchlorendate (surr.)	1	%	77	84	83	84
Tetrachloro-m-xylene (surr.)	1	%	82	75	72	80
pH (1:5 Aqueous extract at 25°C as rec.)	0.1	pH Units	6.7	6.5	9.0	5.8
% Moisture	1	%	13	11	12	13
Heavy Metals						
Arsenic	2	mg/kg	5.6	22	17	9.4
Cadmium	0.4	mg/kg	< 0.4	< 0.4	< 0.4	< 0.4
Chromium	5	mg/kg	6.9	14	12	10
Copper	5	mg/kg	7.4	11	9.4	7.1
Lead	5	mg/kg	25	25	23	33
Mercury	0.1	mg/kg	< 0.1	< 0.1	< 0.1	< 0.1
Nickel	5	mg/kg	< 5	< 5	< 5	< 5
Zinc	5	mg/kg	< 5	< 5	< 5	< 5

Sample History

Where samples are submitted/analysed over several days, the last date of extraction and analysis is reported.
A recent review of our LIMS has resulted in the correction or clarification of some method identifications. Due to this, some of the method reference information on reports has changed. However, no substantive change has been made to our laboratory methods, and as such there is no change in the validity of current or previous results (regarding both quality and NATA accreditation).

If the date and time of sampling are not provided, the Laboratory will not be responsible for compromised results should testing be performed outside the recommended holding time.

Description	Testing Site	Extracted	Holding Time
Eurofins mgt Suite B7			
Total Recoverable Hydrocarbons - 1999 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jan 14, 2019	14 Day
BTEX - Method: LTM-ORG-2150 VOCs in Soils Liquid and other Aqueous Matrices	Melbourne	Jan 14, 2019	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jan 14, 2019	14 Day
Total Recoverable Hydrocarbons - 2013 NEPM Fractions - Method: LTM-ORG-2010 TRH C6-C40	Melbourne	Jan 14, 2019	14 Day
Polycyclic Aromatic Hydrocarbons - Method: LTM-ORG-2130 PAH and Phenols in Soil and Water	Melbourne	Jan 14, 2019	14 Day
Metals M8 - Method: LTM-MET-3040 Metals in Waters, Soils & Sediments by ICP-MS	Melbourne	Jan 14, 2019	28 Days
Eurofins mgt Suite B15			
Organochlorine Pesticides - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Melbourne	Jan 14, 2019	14 Day
Organophosphorus Pesticides - Method: LTM-ORG-2200 Organophosphorus Pesticides by GC-MS	Melbourne	Jan 14, 2019	14 Day
Polychlorinated Biphenyls - Method: LTM-ORG-2220 OCP & PCB in Soil and Water	Melbourne	Jan 14, 2019	28 Days
pH (1:5 Aqueous extract at 25°C as rec.) - Method: LTM-GEN-7090 pH in soil by ISE	Melbourne	Jan 14, 2019	7 Day
% Moisture - Method: LTM-GEN-7080 Moisture	Melbourne	Jan 09, 2019	14 Day

Internal Quality Control Review and Glossary

General

1. Laboratory QC results for Method Blanks, Duplicates, Matrix Spikes, and Laboratory Control Samples follows guidelines delineated in the National Environment Protection (Assessment of Site Contamination) Measure, April 2011 and are included in this QC report where applicable. Additional QC data may be available on request.
2. All soil/sediment/solid results are reported on a dry basis, unless otherwise stated.
3. All biota/food results are reported on a wet weight basis on the edible portion, unless otherwise stated.
4. Actual LORs are matrix dependant. Quoted LORs may be raised where sample extracts are diluted due to interferences.
5. Results are uncorrected for matrix spikes or surrogate recoveries except for PFAS compounds.
6. SVOC analysis on waters are performed on homogenised, unfiltered samples, unless noted otherwise.
7. Samples were analysed on an 'as received' basis.
8. This report replaces any interim results previously issued.

Holding Times

Please refer to 'Sample Preservation and Container Guide' for holding times (QS3001).

For samples received on the last day of holding time, notification of testing requirements should have been received at least 6 hours prior to sample receipt deadlines as stated on the SRA.

If the Laboratory did not receive the information in the required timeframe, and regardless of any other integrity issues, suitably qualified results may still be reported.

Holding times apply from the date of sampling, therefore compliance to these may be outside the laboratory's control.

For VOCs containing vinyl chloride, styrene and 2-chloroethyl vinyl ether the holding time is 7 days however for all other VOCs such as BTEX or C6-10 TRH then the holding time is 14 days.

****NOTE:** pH duplicates are reported as a range NOT as RPD

Units

mg/kg: milligrams per kilogram

mg/L: milligrams per litre

ug/L: micrograms per litre

ppm: Parts per million

ppb: Parts per billion

%: Percentage

org/100mL: Organisms per 100 millilitres

NTU: Nephelometric Turbidity Units

MPN/100mL: Most Probable Number of organisms per 100 millilitres

Terms

Dry	Where a moisture has been determined on a solid sample the result is expressed on a dry basis.
LOR	Limit of Reporting.
SPIKE	Addition of the analyte to the sample and reported as percentage recovery.
RPD	Relative Percent Difference between two Duplicate pieces of analysis.
LCS	Laboratory Control Sample - reported as percent recovery.
CRM	Certified Reference Material - reported as percent recovery.
Method Blank	In the case of solid samples these are performed on laboratory certified clean sands and in the case of water samples these are performed on de-ionised water.
Surr - Surrogate	The addition of a like compound to the analyte target and reported as percentage recovery.
Duplicate	A second piece of analysis from the same sample and reported in the same units as the result to show comparison.
USEPA	United States Environmental Protection Agency
APHA	American Public Health Association
TCLP	Toxicity Characteristic Leaching Procedure
COC	Chain of Custody
SRA	Sample Receipt Advice
QSM	US Department of Defense Quality Systems Manual Version 5.2 2018
CP	Client Parent - QC was performed on samples pertaining to this report
NCP	Non-Client Parent - QC performed on samples not pertaining to this report, QC is representative of the sequence or batch that client samples were analysed within.
TEQ	Toxic Equivalency Quotient

QC - Acceptance Criteria

RPD Duplicates: Global RPD Duplicates Acceptance Criteria is 30% however the following acceptance guidelines are equally applicable:

Results <10 times the LOR : No Limit

Results between 10-20 times the LOR : RPD must lie between 0-50%

Results >20 times the LOR : RPD must lie between 0-30%

Surrogate Recoveries: Recoveries must lie between 50-150%-Phenols & PFASs

PFAS field samples that contain surrogate recoveries in excess of the QC limit designated in QSM 5.2 where no positive PFAS results have been reported have been reviewed and no data was affected.

WA DWER (n=10): PFBA, PFPeA, PFHxA, PFHpA, PFOA, PFBS, PFHxS, PFOS, 6:2 FTSA, 8:2 FTSA

QC Data General Comments

1. Where a result is reported as a less than (<), higher than the nominated LOR, this is due to either matrix interference, extract dilution required due to interferences or contaminant levels within the sample, high moisture content or insufficient sample provided.
2. Duplicate data shown within this report that states the word "BATCH" is a Batch Duplicate from outside of your sample batch, but within the laboratory sample batch at a 1:10 ratio. The Parent and Duplicate data shown is not data from your samples.
3. Organochlorine Pesticide analysis - where reporting LCS data, Toxaphene & Chlordane are not added to the LCS.
4. Organochlorine Pesticide analysis - where reporting Spike data, Toxaphene is not added to the Spike.
5. Total Recoverable Hydrocarbons - where reporting Spike & LCS data, a single spike of commercial Hydrocarbon products in the range of C12-C30 is added and it's Total Recovery is reported in the C10-C14 cell of the Report.
6. pH and Free Chlorine analysed in the laboratory - Analysis on this test must begin within 30 minutes of sampling. Therefore laboratory analysis is unlikely to be completed within holding time. Analysis will begin as soon as possible after sample receipt.
7. Recovery Data (Spikes & Surrogates) - where chromatographic interference does not allow the determination of Recovery the term "INT" appears against that analyte.
8. Polychlorinated Biphenyls are spiked only using Aroclor 1260 in Matrix Spikes and LCS.
9. For Matrix Spikes and LCS results a dash " - " in the report means that the specific analyte was not added to the QC sample.
10. Duplicate RPDs are calculated from raw analytical data thus it is possible to have two sets of data.

Quality Control Results

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Method Blank							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	mg/kg	< 20			20	Pass	
TRH C10-C14	mg/kg	< 20			20	Pass	
TRH C15-C28	mg/kg	< 50			50	Pass	
TRH C29-C36	mg/kg	< 50			50	Pass	
Method Blank							
BTEX							
Benzene	mg/kg	< 0.1			0.1	Pass	
Toluene	mg/kg	< 0.1			0.1	Pass	
Ethylbenzene	mg/kg	< 0.1			0.1	Pass	
m&p-Xylenes	mg/kg	< 0.2			0.2	Pass	
o-Xylene	mg/kg	< 0.1			0.1	Pass	
Xylenes - Total	mg/kg	< 0.3			0.3	Pass	
Method Blank							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	mg/kg	< 0.5			0.5	Pass	
TRH C6-C10	mg/kg	< 20			20	Pass	
TRH >C10-C16	mg/kg	< 50			50	Pass	
TRH >C16-C34	mg/kg	< 100			100	Pass	
TRH >C34-C40	mg/kg	< 100			100	Pass	
Method Blank							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	mg/kg	< 0.5			0.5	Pass	
Acenaphthylene	mg/kg	< 0.5			0.5	Pass	
Anthracene	mg/kg	< 0.5			0.5	Pass	
Benz(a)anthracene	mg/kg	< 0.5			0.5	Pass	
Benzo(a)pyrene	mg/kg	< 0.5			0.5	Pass	
Benzo(b&j)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Benzo(g,h,i)perylene	mg/kg	< 0.5			0.5	Pass	
Benzo(k)fluoranthene	mg/kg	< 0.5			0.5	Pass	
Chrysene	mg/kg	< 0.5			0.5	Pass	
Dibenz(a,h)anthracene	mg/kg	< 0.5			0.5	Pass	
Fluoranthene	mg/kg	< 0.5			0.5	Pass	
Fluorene	mg/kg	< 0.5			0.5	Pass	
Indeno(1,2,3-cd)pyrene	mg/kg	< 0.5			0.5	Pass	
Naphthalene	mg/kg	< 0.5			0.5	Pass	
Phenanthrene	mg/kg	< 0.5			0.5	Pass	
Pyrene	mg/kg	< 0.5			0.5	Pass	
Method Blank							
Organochlorine Pesticides							
Chlordanes - Total	mg/kg	< 0.1			0.1	Pass	
4,4'-DDD	mg/kg	< 0.05			0.05	Pass	
4,4'-DDE	mg/kg	< 0.05			0.05	Pass	
4,4'-DDT	mg/kg	< 0.05			0.05	Pass	
a-BHC	mg/kg	< 0.05			0.05	Pass	
Aldrin	mg/kg	< 0.05			0.05	Pass	
b-BHC	mg/kg	< 0.05			0.05	Pass	
d-BHC	mg/kg	< 0.05			0.05	Pass	
Dieldrin	mg/kg	< 0.05			0.05	Pass	
Endosulfan I	mg/kg	< 0.05			0.05	Pass	
Endosulfan II	mg/kg	< 0.05			0.05	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Endosulfan sulphate	mg/kg	< 0.05			0.05	Pass	
Endrin	mg/kg	< 0.05			0.05	Pass	
Endrin aldehyde	mg/kg	< 0.05			0.05	Pass	
Endrin ketone	mg/kg	< 0.05			0.05	Pass	
g-BHC (Lindane)	mg/kg	< 0.05			0.05	Pass	
Heptachlor	mg/kg	< 0.05			0.05	Pass	
Heptachlor epoxide	mg/kg	< 0.05			0.05	Pass	
Hexachlorobenzene	mg/kg	< 0.05			0.05	Pass	
Methoxychlor	mg/kg	< 0.05			0.05	Pass	
Toxaphene	mg/kg	< 1			1	Pass	
Method Blank							
Organophosphorus Pesticides							
Azinphos-methyl	mg/kg	< 0.2			0.2	Pass	
Bolstar	mg/kg	< 0.2			0.2	Pass	
Chlorfenvinphos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos	mg/kg	< 0.2			0.2	Pass	
Chlorpyrifos-methyl	mg/kg	< 0.2			0.2	Pass	
Coumaphos	mg/kg	< 2			2	Pass	
Demeton-S	mg/kg	< 0.2			0.2	Pass	
Demeton-O	mg/kg	< 0.2			0.2	Pass	
Diazinon	mg/kg	< 0.2			0.2	Pass	
Dichlorvos	mg/kg	< 0.2			0.2	Pass	
Dimethoate	mg/kg	< 0.2			0.2	Pass	
Disulfoton	mg/kg	< 0.2			0.2	Pass	
EPN	mg/kg	< 0.2			0.2	Pass	
Ethion	mg/kg	< 0.2			0.2	Pass	
Ethoprop	mg/kg	< 0.2			0.2	Pass	
Ethyl parathion	mg/kg	< 0.2			0.2	Pass	
Fenitrothion	mg/kg	< 0.2			0.2	Pass	
Fensulfothion	mg/kg	< 0.2			0.2	Pass	
Fenthion	mg/kg	< 0.2			0.2	Pass	
Malathion	mg/kg	< 0.2			0.2	Pass	
Merphos	mg/kg	< 0.2			0.2	Pass	
Methyl parathion	mg/kg	< 0.2			0.2	Pass	
Mevinphos	mg/kg	< 0.2			0.2	Pass	
Monocrotophos	mg/kg	< 2			2	Pass	
Naled	mg/kg	< 0.2			0.2	Pass	
Omethoate	mg/kg	< 2			2	Pass	
Phorate	mg/kg	< 0.2			0.2	Pass	
Pirimiphos-methyl	mg/kg	< 0.2			0.2	Pass	
Pyrazophos	mg/kg	< 0.2			0.2	Pass	
Ronnel	mg/kg	< 0.2			0.2	Pass	
Terbufos	mg/kg	< 0.2			0.2	Pass	
Tetrachlorvinphos	mg/kg	< 0.2			0.2	Pass	
Tokuthion	mg/kg	< 0.2			0.2	Pass	
Trichloronate	mg/kg	< 0.2			0.2	Pass	
Method Blank							
Polychlorinated Biphenyls							
Aroclor-1016	mg/kg	< 0.1			0.1	Pass	
Aroclor-1221	mg/kg	< 0.1			0.1	Pass	
Aroclor-1232	mg/kg	< 0.1			0.1	Pass	
Aroclor-1242	mg/kg	< 0.1			0.1	Pass	
Aroclor-1248	mg/kg	< 0.1			0.1	Pass	
Aroclor-1254	mg/kg	< 0.1			0.1	Pass	

Test	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Aroclor-1260	mg/kg	< 0.1			0.1	Pass	
Total PCB*	mg/kg	< 0.1			0.1	Pass	
Method Blank							
Heavy Metals							
Arsenic	mg/kg	< 2			2	Pass	
Cadmium	mg/kg	< 0.4			0.4	Pass	
Chromium	mg/kg	< 5			5	Pass	
Copper	mg/kg	< 5			5	Pass	
Lead	mg/kg	< 5			5	Pass	
Mercury	mg/kg	< 0.1			0.1	Pass	
Nickel	mg/kg	< 5			5	Pass	
Zinc	mg/kg	< 5			5	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 1999 NEPM Fractions							
TRH C6-C9	%	92			70-130	Pass	
TRH C10-C14	%	79			70-130	Pass	
LCS - % Recovery							
BTEX							
Benzene	%	88			70-130	Pass	
Toluene	%	95			70-130	Pass	
Ethylbenzene	%	109			70-130	Pass	
m&p-Xylenes	%	109			70-130	Pass	
Xylenes - Total	%	107			70-130	Pass	
LCS - % Recovery							
Total Recoverable Hydrocarbons - 2013 NEPM Fractions							
Naphthalene	%	93			70-130	Pass	
TRH C6-C10	%	95			70-130	Pass	
TRH >C10-C16	%	81			70-130	Pass	
LCS - % Recovery							
Polycyclic Aromatic Hydrocarbons							
Acenaphthene	%	117			70-130	Pass	
Acenaphthylene	%	112			70-130	Pass	
Anthracene	%	119			70-130	Pass	
Benz(a)anthracene	%	102			70-130	Pass	
Benzo(a)pyrene	%	104			70-130	Pass	
Benzo(b&j)fluoranthene	%	89			70-130	Pass	
Benzo(g,h,i)perylene	%	79			70-130	Pass	
Benzo(k)fluoranthene	%	113			70-130	Pass	
Chrysene	%	120			70-130	Pass	
Dibenz(a,h)anthracene	%	121			70-130	Pass	
Fluoranthene	%	97			70-130	Pass	
Fluorene	%	114			70-130	Pass	
Indeno(1.2.3-cd)pyrene	%	98			70-130	Pass	
Naphthalene	%	121			70-130	Pass	
Phenanthrene	%	119			70-130	Pass	
Pyrene	%	104			70-130	Pass	
LCS - % Recovery							
Organochlorine Pesticides							
Chlordanes - Total	%	85			70-130	Pass	
4,4'-DDD	%	76			70-130	Pass	
4,4'-DDE	%	81			70-130	Pass	
a-BHC	%	99			70-130	Pass	
Aldrin	%	98			70-130	Pass	
b-BHC	%	86			70-130	Pass	

Test			Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
d-BHC			%	92		70-130	Pass	
Dieldrin			%	90		70-130	Pass	
Endosulfan I			%	86		70-130	Pass	
Endosulfan II			%	84		70-130	Pass	
Endrin			%	70		70-130	Pass	
Endrin ketone			%	78		70-130	Pass	
g-BHC (Lindane)			%	103		70-130	Pass	
Heptachlor			%	82		70-130	Pass	
Heptachlor epoxide			%	79		70-130	Pass	
Hexachlorobenzene			%	112		70-130	Pass	
LCS - % Recovery								
Organophosphorus Pesticides								
Diazinon			%	111		70-130	Pass	
Dimethoate			%	78		70-130	Pass	
Ethion			%	119		70-130	Pass	
Fenitrothion			%	117		70-130	Pass	
Methyl parathion			%	120		70-130	Pass	
Mevinphos			%	104		70-130	Pass	
LCS - % Recovery								
Heavy Metals								
Arsenic			%	111		80-120	Pass	
Cadmium			%	103		80-120	Pass	
Chromium			%	114		80-120	Pass	
Copper			%	115		80-120	Pass	
Lead			%	113		80-120	Pass	
Mercury			%	118		75-125	Pass	
Nickel			%	112		80-120	Pass	
Zinc			%	109		80-120	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1		Acceptance Limits	Pass Limits	Qualifying Code
Spike - % Recovery								
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1				
TRH C6-C9	S19-Ja02524	NCP	%	102		70-130	Pass	
TRH C10-C14	M19-Ja03400	NCP	%	83		70-130	Pass	
Spike - % Recovery								
BTEX				Result 1				
Benzene	S19-Ja02524	NCP	%	79		70-130	Pass	
Toluene	S19-Ja02524	NCP	%	93		70-130	Pass	
Ethylbenzene	S19-Ja02524	NCP	%	105		70-130	Pass	
m&p-Xylenes	S19-Ja02524	NCP	%	104		70-130	Pass	
o-Xylene	S19-Ja02524	NCP	%	99		70-130	Pass	
Xylenes - Total	S19-Ja02524	NCP	%	102		70-130	Pass	
Spike - % Recovery								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1				
Naphthalene	S19-Ja02524	NCP	%	80		70-130	Pass	
TRH C6-C10	S19-Ja02524	NCP	%	100		70-130	Pass	
TRH >C10-C16	M19-Ja03400	NCP	%	87		70-130	Pass	
Spike - % Recovery								
Polycyclic Aromatic Hydrocarbons				Result 1				
Acenaphthene	M19-Ja05261	NCP	%	124		70-130	Pass	
Acenaphthylene	M19-Ja05261	NCP	%	122		70-130	Pass	
Anthracene	M19-Ja05261	NCP	%	111		70-130	Pass	
Benz(a)anthracene	M19-Ja05261	NCP	%	125		70-130	Pass	
Benzo(a)pyrene	M19-Ja05261	NCP	%	113		70-130	Pass	
Benzo(b&j)fluoranthene	M19-Ja05261	NCP	%	115		70-130	Pass	

Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Benzo(g,h,i)perylene	M19-Ja05261	NCP	%	116			70-130	Pass	
Benzo(k)fluoranthene	M19-Ja05261	NCP	%	108			70-130	Pass	
Chrysene	M19-Ja05261	NCP	%	121			70-130	Pass	
Dibenz(a,h)anthracene	M19-Ja05261	NCP	%	129			70-130	Pass	
Fluoranthene	M19-Ja05261	NCP	%	124			70-130	Pass	
Fluorene	M19-Ja05261	NCP	%	120			70-130	Pass	
Indeno(1,2,3-cd)pyrene	M19-Ja05261	NCP	%	97			70-130	Pass	
Naphthalene	M19-Ja05261	NCP	%	128			70-130	Pass	
Phenanthrene	M19-Ja05261	NCP	%	129			70-130	Pass	
Pyrene	M19-Ja05261	NCP	%	127			70-130	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
Chlordanes - Total	M19-Ja04325	NCP	%	82			70-130	Pass	
4,4'-DDE	M19-Ja04325	NCP	%	91			70-130	Pass	
a-BHC	M19-Ja04325	NCP	%	81			70-130	Pass	
Aldrin	M19-Ja04325	NCP	%	87			70-130	Pass	
b-BHC	M19-Ja04325	NCP	%	90			70-130	Pass	
d-BHC	M19-Ja04325	NCP	%	71			70-130	Pass	
Dieldrin	M19-Ja04325	NCP	%	92			70-130	Pass	
Endosulfan I	M19-Ja04325	NCP	%	82			70-130	Pass	
Endosulfan II	M19-Ja04325	NCP	%	92			70-130	Pass	
Endrin aldehyde	M19-Ja04325	NCP	%	76			70-130	Pass	
g-BHC (Lindane)	M19-Ja04325	NCP	%	83			70-130	Pass	
Heptachlor epoxide	M19-Ja04325	NCP	%	79			70-130	Pass	
Hexachlorobenzene	M19-Ja04325	NCP	%	100			70-130	Pass	
Spike - % Recovery									
Heavy Metals				Result 1					
Arsenic	B18-De31187	NCP	%	93			75-125	Pass	
Cadmium	B18-De31187	NCP	%	103			75-125	Pass	
Chromium	B18-De31187	NCP	%	107			75-125	Pass	
Copper	B18-De31187	NCP	%	92			75-125	Pass	
Lead	B18-De31187	NCP	%	92			75-125	Pass	
Mercury	B18-De31187	NCP	%	115			70-130	Pass	
Nickel	B18-De31187	NCP	%	92			75-125	Pass	
Zinc	B18-De31187	NCP	%	98			75-125	Pass	
Spike - % Recovery									
Organochlorine Pesticides				Result 1					
4,4'-DDD	M19-Ja02452	NCP	%	81			70-130	Pass	
Endrin ketone	M19-Ja03939	NCP	%	74			70-130	Pass	
Spike - % Recovery									
Polychlorinated Biphenyls				Result 1					
Aroclor-1260	M19-Ja02452	NCP	%	84			70-130	Pass	
Test	Lab Sample ID	QA Source	Units	Result 1			Acceptance Limits	Pass Limits	Qualifying Code
Duplicate									
Total Recoverable Hydrocarbons - 1999 NEPM Fractions				Result 1	Result 2	RPD			
TRH C6-C9	M19-Ja06268	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C10-C14	M19-Ja05249	NCP	mg/kg	< 20	< 20	<1	30%	Pass	
TRH C15-C28	M19-Ja05249	NCP	mg/kg	< 50	< 50	<1	30%	Pass	
TRH C29-C36	M19-Ja05249	NCP	mg/kg	< 50	< 50	<1	30%	Pass	

Duplicate								
BTEX				Result 1	Result 2	RPD		
Benzene	M19-Ja06268	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Toluene	M19-Ja06268	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Ethylbenzene	M19-Ja06268	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
m&p-Xylenes	M19-Ja06268	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
o-Xylene	M19-Ja06268	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Xylenes - Total	M19-Ja06268	NCP	mg/kg	< 0.3	< 0.3	<1	30%	Pass
Duplicate								
Total Recoverable Hydrocarbons - 2013 NEPM Fractions				Result 1	Result 2	RPD		
Naphthalene	M19-Ja06268	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
TRH C6-C10	M19-Ja06268	NCP	mg/kg	< 20	< 20	<1	30%	Pass
TRH >C10-C16	M19-Ja05249	NCP	mg/kg	< 50	< 50	<1	30%	Pass
Duplicate								
Polycyclic Aromatic Hydrocarbons				Result 1	Result 2	RPD		
Acenaphthene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Acenaphthylene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Anthracene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Benz(a)anthracene	M19-Ja04324	NCP	mg/kg	1.6	1.3	22	30%	Pass
Benzo(a)pyrene	M19-Ja04324	NCP	mg/kg	2.6	2.2	15	30%	Pass
Benzo(b&j)fluoranthene	M19-Ja04324	NCP	mg/kg	1.4	1.4	1.0	30%	Pass
Benzo(g,h,i)perylene	M19-Ja04324	NCP	mg/kg	0.7	0.7	7.0	30%	Pass
Benzo(k)fluoranthene	M19-Ja04324	NCP	mg/kg	1.7	1.6	4.0	30%	Pass
Chrysene	M19-Ja04324	NCP	mg/kg	2.0	1.8	12	30%	Pass
Dibenz(a,h)anthracene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Fluoranthene	M19-Ja04324	NCP	mg/kg	3.0	2.5	19	30%	Pass
Fluorene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Indeno(1,2,3-cd)pyrene	M19-Ja04324	NCP	mg/kg	1.8	1.6	11	30%	Pass
Naphthalene	M19-Ja04324	NCP	mg/kg	< 0.5	< 0.5	<1	30%	Pass
Phenanthrene	M19-Ja04324	NCP	mg/kg	1.2	0.7	47	30%	Fail
Pyrene	M19-Ja04324	NCP	mg/kg	3.4	2.8	18	30%	Pass
Duplicate								
Organochlorine Pesticides				Result 1	Result 2	RPD		
Chlordanes - Total	M19-Ja04324	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
4,4'-DDD	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDE	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
4,4'-DDT	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
a-BHC	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Aldrin	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
b-BHC	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
d-BHC	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Dieldrin	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan I	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan II	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endosulfan sulphate	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin aldehyde	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Endrin ketone	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
g-BHC (Lindane)	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Heptachlor epoxide	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Hexachlorobenzene	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass
Methoxychlor	M19-Ja04324	NCP	mg/kg	< 0.05	< 0.05	<1	30%	Pass

Duplicate								
Organophosphorus Pesticides				Result 1	Result 2	RPD		
Azinphos-methyl	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Bolstar	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorfenvinphos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Chlorpyrifos-methyl	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Coumaphos	M19-Ja04324	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Demeton-S	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Demeton-O	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Diazinon	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dichlorvos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Dimethoate	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Disulfoton	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
EPN	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethoprop	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ethyl parathion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenitrothion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fensulfothion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Fenthion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Malathion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Merphos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Methyl parathion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Mevinphos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Monocrotophos	M19-Ja04324	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Naled	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Omethoate	M19-Ja04324	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Phorate	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pirimiphos-methyl	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Pyrazophos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Ronnel	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Terbufos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tetrachlorvinphos	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Tokuthion	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Trichloronate	M19-Ja04324	NCP	mg/kg	< 0.2	< 0.2	<1	30%	Pass
Duplicate								
				Result 1	Result 2	RPD		
pH (1:5 Aqueous extract at 25°C as rec.)	M19-Ja05136	NCP	pH Units	7.7	7.6	pass	30%	Pass
% Moisture	B18-De31187	NCP	%	15	14	5.0	30%	Pass
Duplicate								
Heavy Metals				Result 1	Result 2	RPD		
Arsenic	B18-De31187	NCP	mg/kg	< 2	< 2	<1	30%	Pass
Cadmium	B18-De31187	NCP	mg/kg	< 0.4	< 0.4	<1	30%	Pass
Chromium	B18-De31187	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Copper	B18-De31187	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Lead	B18-De31187	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Mercury	B18-De31187	NCP	mg/kg	< 0.1	< 0.1	<1	30%	Pass
Nickel	B18-De31187	NCP	mg/kg	< 5	< 5	<1	30%	Pass
Zinc	B18-De31187	NCP	mg/kg	12	13	2.0	30%	Pass

Comments

Eurofins | mgt accreditation number 1261, corporate site 1254 and 14271 is currently in progress of a controlled transition to a new custom built location at 6 Monterey Road, Dandenong South, Victoria 3175. All results on this report denoted as being performed by Eurofins | mgt 2-5 Kingston Town Close, Oakleigh Victoria 3166 corporate site 1254, will have been performed on either Oakleigh or new Dandenong South site.

Sample Integrity

Custody Seals Intact (if used)	N/A
Attempt to Chill was evident	Yes
Sample correctly preserved	Yes
Appropriate sample containers have been used	Yes
Sample containers for volatile analysis received with minimal headspace	Yes
Samples received within HoldingTime	Yes
Some samples have been subcontracted	No

Qualifier Codes/Comments

Code	Description
G01	The LORs have been raised due to matrix interference
N01	F2 is determined by arithmetically subtracting the "naphthalene" value from the ">C10-C16" value. The naphthalene value used in this calculation is obtained from volatiles (Purge & Trap analysis).
N02	Where we have reported both volatile (P&T GCMS) and semivolatile (GCMS) naphthalene data, results may not be identical. Provided correct sample handling protocols have been followed, any observed differences in results are likely to be due to procedural differences within each methodology. Results determined by both techniques have passed all QAQC acceptance criteria, and are entirely technically valid.
N04	F1 is determined by arithmetically subtracting the "Total BTEX" value from the "C6-C10" value. The "Total BTEX" value is obtained by summing the concentrations of BTEX analytes. The "C6-C10" value is obtained by quantitating against a standard of mixed aromatic/aliphatic analytes.
N07	Please note:- These two PAH isomers closely co-elute using the most contemporary analytical methods and both the reported concentration (and the TEQ) apply specifically to the total of the two co-eluting PAHs
Q15	The RPD reported passes Eurofins mgt's QC - Acceptance Criteria as defined in the Internal Quality Control Review and Glossary page of this report.

Authorised By

Nibha Vaidya	Analytical Services Manager
Chris Bennett	Senior Analyst-Metal (VIC)
Harry Bacalis	Senior Analyst-Volatile (VIC)
Joseph Edouard	Senior Analyst-Organic (VIC)
Julie Kay	Senior Analyst-Inorganic (VIC)
Nibha Vaidya	Senior Analyst-Asbestos (NSW)



Glenn Jackson
General Manager

Final report - this Report replaces any previously issued Report

- Indicates Not Requested

* Indicates NATA accreditation does not cover the performance of this service

Measurement uncertainty of test data is available on request or please [click here](#).

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Malcolm Murray & Associates

FILE NOTE

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Page 1 2 3
Fax: 02-4732 4788

Date: 2020	Time Start: am/pm	Where: Office Court
Units: (1Unit = 6 minutes)	Time End: am/pm	Other:
Matter Description: Debtor Code:		Client Code:
Type of Attendance: Conference Telephone Court Other		
By Malcolm	On Whom: Client O/Solr Barrister Agent Pro Collect	Debtor Court
Other:.....	Other	

① Eastwood - 5/2/19
~~was~~ going to

40000 m³

② Belfield 20/12/18

8000 m³

③ Canby Heights 5/11/18

5700 m³

④ St Leonards

5000 m³

⑤ Rhodes

170,000 m³

⑥ Hornbeest / hidrocoito

?

⑦ Herstveit

18000 m³

⑧ Penanatto

50,000 m³

⑨ Auburn

30,000 m³

⑩ Gladesville

9,000 m³

Load count summary tipped at 50 Peter Brock Drv, Eastern Creek						
	2018	2018 Total	2019		2019 Total	Grand Total
13 GLEN ST EASTWOOD			14		14	14
39 PUNCHBOWL ROAD BELFIELD			103	18	121	121
134 CAMBRIDGE ST CANLEY HIGHTS			122		122	122
1 RESERVE RD ST LEONARDS *			47		47	47
23 MARQUET ST, RHODES *	8	200	208			208
5 UHRIG ROAD HOMEBUSH *		72	72		65	137
6-8 CROSS ST HURSTVILLE *			33		33	33
88 CHURCH ST, PARRAMATTA *		318	318		133	451
13-19 MARY ST AUBURN			63		63	63
6A-8 MONASH ROAD GLADESVILLE				22	22	22
						1218

~~VENUM~~ only

Virginia Excavated Natural
Material